UTS UNIVERSITY OF TECHNOLOGY SYDNEY

The Roles of Narrative in Community Resilience: A Framework for Understanding and Action

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Thesis submitted in fulfilment of the requirements for the degree of

Doctor of Philosophy

under the supervision of Alex Baumber, Ece Kaya and Fanny Salignac

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Certificate of Original Authorship

I, Julia Fernandez de Casas, declare that this thesis is submitted in fulfilment of the requirements for the award of Doctor of Philosophy in the Transdisciplinary School at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise referenced or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

This document has not been submitted for qualifications at any other academic institution.

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This research was undertaken on the unceded lands of the Gadigal people of the Eora Nation, upon which the University of Technology Sydney now stands, and on the lands of the Darkinjung people, custodians of the area now known as Narara. I pay my respects to Elders past and present and acknowledge their enduring connections to Country, culture, and community, and their continuing stories of resilience and care. I am grateful for the opportunity to conduct research within these landscapes and for the deep cultural and ecological knowledges that continue to shape them.

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“The work of the eyes is done. Go now and do the heart-work on the images imprisoned within you.”
Rainer Maria Rilke

Statement Indicating Thesis Format

This thesis is presented as a thesis by compilation in accordance with the University of Technology Sydney's Graduate Research Candidature Management, Thesis Preparation and Submission Procedures. It comprises an introductory chapter, a review of theoretical foundations, a methodology chapter, three research papers developed during my candidature, and a final synthesis and conclusion chapter. These papers have been submitted to peer-reviewed outlets, and their publication status may change during the examination process. They are integrated with linking text to demonstrate their coherence and collective contribution to the overarching research.

In accordance with UTS guidelines, each paper is reproduced in its original Word-processed form, with figure and table numbering adapted to ensure consistency within the thesis.

List of Papers Included in this Thesis

The following papers, prepared during my candidature, are included as part of this thesis by compilation.

1. Fernandez, J., Baumber, A., Salignac, F., & Kaya, E. (under review-a). *The Role of Narratives in Community Resilience: A Framework for Understanding and Action*
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2. Fernandez, J., Baumber, A., Salignac, F., & Kaya, E. (under review-b). *Narrative Plasticity and the Dynamics of Community Resilience*
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3. Fernandez, J., Baumber, A., Salignac, F., & Kaya, E. (under review-c). *Narrative Plasticity and Structural Conditions: Participatory Refinement of a Community Resilience Framework.*
   – Status: Submitted for publication to Ecology and Society

Statement of Contribution of Authors

The following papers are co-authored. I am the primary author of each work and led the conceptual development, analysis, and writing. The specific contributions of each author are detailed below using the Contributor Roles Taxonomy (CRediT).

Paper 1: The Role of Narratives in Community Resilience: A Framework for Understanding and Action

Author's Name	Contribution	% of contribution
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Fanny Salignac	Supervision; Conceptualisation; Writing: review & editing	10
Ece Kaya	Supervision; Writing: review & editing	10

Paper 2: Narrative Plasticity and the Dynamics of Community Resilience

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Fanny Salignac	Supervision; Conceptualisation; Writing: review & editing	20
Ece Kaya	Supervision; Writing: review & editing	10

Paper 3: Narrative Plasticity and Structural Conditions: Participatory Refinement of a Community Resilience Framework

Author's Name	Contribution	% of contribution
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Fanny Salignac	Supervision; Writing: review & editing	10
Ece Kaya	Supervision; Writing: review & editing	10

All authors have reviewed and approved this statement of contribution.

Preface

"Between the disciplines lies the possibility of discovery, because that is where life itself happens, in between."
Nora Bateson

The idea for this research emerged in early 2020, a moment marked by both renewal and rupture. After twelve years working as an innovation project manager in the energy, transport, and infrastructure sectors, I felt a growing need to pause and think differently. My training in chemical engineering, and my years in industry, shaped a strong problem-solving mindset. They also taught me the value of clear communication and of turning ideas into practical results. Yet technical fields often treat problems as though they exist apart from the social and ecological worlds in which they unfold. Questions of meaning, ethics, and connection often sat at the margins of that work.

When I applied for the PhD at the University of Technology Sydney, the Transdisciplinary School felt like the right place to bring together the diverse perspectives I had long been drawn to. Just as this transition took shape, the world changed. The COVID-19 pandemic brought months of lockdown in Madrid, where I was living at the time. The stillness that followed—empty streets, clear skies, and the return of the sounds of local wildlife—was both unsettling and illuminating. This period revealed the fragility and interdependence of the systems we inhabit—ecological, technological, and social—and prompted reflection on what allows societies to endure and adapt under pressure and change. The idea of adaptive capacity – later framed as resilience- surfaced during that time, not just as a technical term but as a question about how life continues amid disruption.

When I began my research in 2022, I approached resilience as something that could be modelled, perhaps even optimised. My analytical mindset sought equations and neat formulations. Yet the deeper I went, the more resilience revealed itself as irreducibly complex: not a fixed property, but a living process. It also became clear that cultural,

relational, and interpretive dimensions—how people make sense of change—are inseparable from material and institutional ones. This realisation shifted both my research and my worldview. Enhancing resilience was emerging as a wicked problem, one that demanded knowledge across disciplines and reflexivity about one's own assumptions.

This insight opened the door to narratives: the stories through which people interpret disruption, imagine futures, and act collectively. Narratives are not just reflections of experience; they shape the conditions of adaptability itself. From this recognition emerged the guiding question of the thesis: What role do narratives play in community resilience?

Exploring this question became both an academic pursuit and a personal evolution. The movement from a technical background toward an approach that attends to meaning-making mirrored a broader shift—from seeking control over complex systems to seeking to understand how people live within them. Narratives offered a bridge between technical systems and lived experience. Ecovillages provided a rich context for examining these dynamics: communities that experiment with new forms of living, integrate ecological and social systems, and navigate real-world disturbances while attempting to align inner transformation with collective adaptation.

This inquiry unfolded within a wider recognition that crises—climatic, social, and economic—are interconnected. The pandemic became more than background; it symbolised shared vulnerability and interdependence. It reminded us that resilience depends not only on infrastructure or governance but also on how people frame change, how they care for one another, and how they imagine possibility. Understanding resilience, therefore, required paying close attention to how people story their experiences, values, and futures. It also meant examining the structural, ecological, and institutional conditions that shape and are shaped by those stories. This journey is shaped by my own positionality: as a trained engineer working across resilience practice, and as a researcher navigating between technical and interpretive traditions. My background inevitably informs the questions I ask, the methods I choose, and the interpretations I privilege.

The chapters that follow trace this journey from early curiosity to conceptual and empirical synthesis. They chart an evolution from technical certainty toward a deeper appreciation of the cultural and narrative dimensions of transformation. Through

theoretical exploration, fieldwork, and participatory engagement, the thesis examines how stories shape and express resilience, functioning both as mirrors of collective experience and as tools communities use to make sense of change. In doing so, it contributes to a more relational and grounded understanding of resilience as an emergent, co-created process.

This research was undertaken in part on the unceded lands of the Gadigal people of the Eora Nation, upon which the University of Technology Sydney now stands, and on the lands of the Darkinjung people, custodians of the area now known as Narara. I acknowledge their enduring connection to Country, culture, and community, and their continuing stories of resilience and care.

Ultimately, this journey has revealed that resilience is not the absence of fragility but the deep acceptance of interdependence. Every system encounters disruption, yet renewal becomes possible through humility, connection, and imagination. As Arne Næss observed, it is in recognising our smallness within the vastness of life that we truly participate in its greatness.

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Glossary

There are several terms used in this study which should be defined so that my interpretation and perspective can be explicit.

- **Adaptation / Adaptive capacity**

Adaptation refers to the process through which systems learn from and adjust to changing internal dynamics and external drivers. Adaptive capacity describes the ability of a system to make adjustments that maintain its overall function and structure in the face of change (Folke et al., 2002).

- **Archetype figures**

Symbolic character patterns that help communities recognise recurring roles in their shared stories. Archetypes provide culturally familiar figures that simplify complex experiences and support intuitive sensemaking.

- **Co-production of knowledge**

A collaborative process in which researchers, practitioners, and community actors jointly define problems, generate knowledge, and develop solutions. Effective co-production emphasises contextual relevance, inclusivity, reflexivity, and sustained relational engagement (Norström et al., 2020).

- **Community**

A group of people connected through shared practices, resources, values, or exposures to common risks, regardless of whether they share a geographic location (IFRC, 2021).

- **Decision circles**

Structured groups that hold authority over specific domains of community life and make decisions through consent-based, feedback-oriented processes, forming a core component of sociocratic governance (Buck & Villines, 2007).

- **Demonstration narratives**

Stories that gain credibility because they are embodied in visible practices or behaviours. Demonstration narratives can illustrate successes, failures, experiments, or tensions, grounding abstract values in everyday action.

- **Discourse**

A system of interrelated meanings that shapes culture, identity, institutions, technologies, and social practices. Discourses provide interpretive frameworks through which people understand complex realities (Riedy, 2020).

- **Disturbance**

An internal or external phenomenon, factor, or process that introduces stress to a system. Disturbances vary in type, frequency, intensity, and duration relative to the system's reference state (Glunchensko, 2012).

- **Ecovillage**

A consciously designed community that integrates ecological, economic, social, and cultural dimensions of sustainability through participatory processes and shared values, often functioning as experimental sites for social–ecological resilience (Jackson & Svensson, 2002).

- **General resilience**

The capacity of a system to cope with a broad range of shocks, stresses, and uncertainties, rather than resilience to specific disturbances (Folke et al., 2010).

- **Intentional community**

A group that forms through a deliberate commitment to a shared, often alternative, way of life that differs from mainstream society (Meijering et al., 2007).

- **Meaning-making.**

The cognitive and emotional process through which individuals or groups interpret experiences and create coherence and significance. Meaning-making underlies the formation and revision of narratives (Weick, 1995).

- **Narrative ecology**

The dynamic system of stories circulating within a community, including narrative roles, types, and archetypes. Narrative ecologies are diverse and adaptive, with stories that coexist, reinforce, or contest one another to support stability and flexibility during change (Dobrin & Weisser, 2002).

- **Narrative plasticity**

The capacity of a community's shared stories to adapt, evolve, and be reinterpreted in response to disruption while retaining coherence sufficient for collective meaning and

action. The concept extends Clark's (2020) individual-level definition to the community scale.

- **Narrative roles**

The distinct functions that stories perform within a community, such as shaping identity, making sense of disruption, transmitting knowledge, motivating agency, building cohesion, and enabling reflexive adaptation.

- **Narrative types**

Recurring story patterns that organise how communities interpret events over time. These templates—such as regenerative, transformative, or intergenerational stories—shape shared meaning and guide responses to change.

- **Narratives**

Relational meaning-making structures that organise events, identities, and values into coherent interpretations across time. Narratives link characters, plots, and moral orientations in ways that shape collective understanding and action. Unlike individual stories, narratives operate at a broader structural level, configuring how experiences are connected and interpreted (Somers, 1994; Simoens et al., 2022).

- **Participatory validation**

A collaborative process in which participants and researchers co-interpret findings or frameworks, assessing their clarity, relevance, and usefulness through dialogue. It emphasises co-creation and shared meaning-making rather than verification of accuracy (Bradbury et al., 2019).

- **Polycrisis**

A condition in which multiple global crises become causally entangled, producing compounded impacts that exceed the effects of each crisis in isolation (Lawrence et al., 2022).

- **Regenerative**

An approach that seeks to produce net-positive ecological and social outcomes, moving beyond sustaining existing systems to restoring and enhancing their vitality (Buckton et al., 2023).

- **Reflexive practice / Reflexivity**

The ongoing capacity to critically examine one's assumptions, narratives, and actions and to adjust them in response to new insights or changing conditions. Reflexivity supports adaptive and transformative change (Dryzek & Pickering, 2019).

- **Resilience**

The capacity of a system to absorb disturbance, reorganise, adapt, and potentially transform while undergoing change, in ways that sustain or reconfigure its core functions, identity, and relationships over time (adapted from Walker et al., 2004, 2012; IPCC, 2022).

- **Resilience-enabling factors**

The structural, relational, and institutional conditions that support a community's ability to absorb disturbance, adapt, and transform. Key factors include diversity, connectivity, adaptability, transformability, and social capital.

- **Resilience – structural dimension**

The social, institutional, ecological, and material conditions that shape how resilience is organised and enacted. These represent the relatively stable, patterned, or systemic features of a community, the underlying architecture within which narrative processes unfold.

- **Resilience – relational dimensions**

The interpersonal, social, and collective relationships through which communities build trust, exchange support, collaborate, and coordinate action. These interactions shape cooperation, mutual aid, informal leadership, and practices of care.

- **Resilience – cultural dimensions**

The shared meanings, identities, values, traditions, and narrative practices through which communities interpret change, make sense of disturbance, and imagine futures. Cultural dimensions reveal how coherence, belonging, and collective purpose are maintained and how stories guide responses to uncertainty.

- **Semi-permeable governance**

A governance condition characterised by openness to new members, ideas, and perspectives while maintaining enough structure to support coherence and accountability. Semi-permeable boundaries support narrative diversity and plasticity.

- **Social capital**

The relational qualities—such as trust, reciprocity, and cooperation—that enable collective action, strengthen problem-solving capacity, and support community resilience (Aldrich & Meyer, 2015).

- **Sociocracy**

A governance model grounded in consent-based decision-making, interlinked circles, double-linking between organisational levels, and role selection by consent (Romme, 1995).

- **Story**

A specific account or episode recounting events, experiences, or actions. Stories provide the empirical material through which broader narratives are expressed, reinforced, or contested.

- **Sustainability**

The pursuit of meeting present needs without compromising the ability of future generations to meet their own, aiming for ecological, economic, and social balance (UN Sustainable Development Goals, n.d.).

- **Transdisciplinary research**

An approach to research that integrates knowledge across disciplinary boundaries and engages non-academic actors in the co-production of solutions to complex, real-world problems. Transdisciplinary inquiry is problem-oriented, reflexive, and oriented toward social relevance, seeking to generate knowledge that is both scientifically rigorous and societally robust (Lang et al., 2012; Pohl & Hirsch Hadorn, 2007).

- **Transformation**

The capacity to fundamentally alter a system's structure, feedbacks, and functions, resulting in a new configuration that differs from the prior system (Walker et al., 2002).

- **Vulnerability**

Vulnerability refers to the propensity or predisposition to be adversely affected. It encompasses sensitivity or susceptibility to harm and the capacity to cope and adapt (IPCC, 2022).

Abstract

This thesis argues that narratives form a crucial yet under-recognised dimension of community resilience. It develops and tests a narrative–resilience framework that explains how narratives interact with structural, ecological, and relational conditions to shape how communities anticipate, absorb, and adapt to change. Rather than viewing resilience as a fixed capacity, the research positions it as an emergent process shaped by the interplay between structural conditions and narrative practices, where dialogue, identity work, and collective sensemaking play an important role.

While resilience scholarship has produced extensive frameworks for assessing structural capacities such as governance, networks, and resource diversity, the cultural and interpretive processes through which communities make sense of disruption remain less systematically integrated into these models. Addressing this gap, the thesis proposes an integrated framework that links narrative processes with resilience-enabling factors, demonstrating how resilience emerges through the ongoing interaction between interpretive meaning-making and the social, ecological, and institutional conditions that support or constrain community capacities for adaptation and transformation.

The research follows a three-stage, mixed-qualitative design. First, a conceptual synthesis integrates resilience theory, systems thinking, and narrative studies to identify key resilience-enabling factors and six narrative roles involved in how communities interpret change. Second, comparative case studies of Findhorn and Narara Ecovillages examine how community narratives emerge, evolve, and interact with governance arrangements, social capital, diversity, and everyday practices. This stage introduces two central concepts: narrative plasticity, the capacity of stories to flex and recombine while retaining coherence; and narrative ecology, the dynamic system of interacting stories that supports learning, adaptation, and continuity. Third, participatory validation sessions engage community members in refining the framework and identifying additional narrative dynamics, including demonstration narratives and a new archetypal figure.

Across these stages, the thesis shows that resilience emerges not from narrative processes or structural conditions alone, but from their continual interaction. Narratives gain traction when supported by governance arrangements, leadership configurations, and relational infrastructures that shape how stories circulate, are contested, and become

institutionalised. In this sense, resilience operates not only as a structural capacity but also as an interpretive and relational process enacted through evolving narrative systems that influence how communities adapt and, at times, pursue transformation in response to change.

Communities cultivate resilience when they sustain diverse yet coherent narrative configurations that support trust, belonging, and shared purpose, while retaining the flexibility to revise these stories as conditions evolve. Ecovillages make these dynamics particularly visible, but the mechanisms identified extend beyond intentional communities to broader contexts marked by ecological, social, and economic uncertainty.

The thesis contributes new concepts, methods, and practical tools for integrating narrative practices into community development, governance, and resilience practice. It offers a transferable framework that supports collaborative reflection and decision-making, highlighting how shared narratives can help communities interpret disruption, coordinate responses, and navigate uncertainty and transformation.

PART I: CONTEXT, THEORY, AND METHODS

"But early in the twenty-first century it became clear that the planet was incapable of sustaining everyone alive at western levels, and at that point the richest pulled away into their fortress mansions, bought the governments or disabled them from action against them, and bolted their doors to wait it out until some poorly theorised better time, which really came down to just the remainder of their lives, and perhaps the lives of their children if they were feeling optimistic; beyond that, après moi le déluge."

Kim Stanley Robinson, The Ministry for the Future

Part I establishes the conceptual, theoretical, and methodological foundations of the thesis. It explains why questions of narrative and resilience matter at this historical moment and why understanding how communities interpret and navigate change is essential within broader sustainability transitions. The chapters in this part introduce the research aim, rationale, and guiding questions, and situate the study within contemporary debates in resilience theory and community-based adaptation.

This section also outlines the integrative approach taken in the thesis. While acknowledging that transdisciplinarity has multiple interpretations, the research adopts a reflexive orientation grounded in shared principles: integrating diverse knowledge systems, working collaboratively across boundaries, and engaging with real-world problems that are inherently complex. The study does not claim to be fully transdisciplinary in practice, but it draws on this orientation by involving different groups in the research process and by remaining attentive to the assumptions, perspectives, and biases that shape both scientific and lived understandings of resilience.

- **Chapter 1** provides the overall framing, including the background, motivation, aims, research questions, and structure of the thesis.

- **Chapter 2** synthesises key theoretical traditions—resilience theory, complex systems thinking, transformation and transition studies, and discursive perspectives—to develop the conceptual framework that informs the rest of the work.
- **Chapter 3** details the qualitative and reflexive methodology used across the three papers, including research design, analytical strategies, and ethical considerations, as well as the researcher's positionality.

Together, these chapters form the foundation for Part II, which presents the three research papers that develop, apply, and refine the narrative–resilience framework, and for Part III, which integrates their insights to discuss the theoretical, methodological, and practical contributions of the thesis.

Chapter 1: Introduction

1.1 Overview

Over the past decade, hundreds of thousands of academic publications have invoked the term resilience, spanning fields as varied as ecology, engineering, psychology, and sustainability science. Its rapid diffusion into global policy frameworks—from the Sendai Framework for Disaster Risk Reduction (UNDRR, 2015) to national climate adaptation plans (UNFCCC, 2012)—signals its growing influence as societies grapple with uncertainty and accelerating change. Few concepts have travelled so widely or accumulated so many meanings, evolving from a technical descriptor into a guiding ideal for how individuals, communities, institutions, and systems might endure and adapt.

Yet this widespread uptake has also generated sustained critique. In many policy contexts, resilience is framed as the capacity to "bounce back" to a prior state, reinforcing assumptions of stability rather than questioning whether pre-existing systems were equitable or sustainable (Davoudi, 2012; Joseph, 2013). Such interpretations risk privileging system maintenance over transformation and may obscure the structural conditions that produce vulnerability in the first place (Cretney, 2014). Moreover, resilience can function as a normative or political framing: characterising communities as inherently resilient may unintentionally shift responsibility away from governments and international actors, implying that adaptation should occur locally without adequate structural support (Chandler, 2014; Joseph, 2013). The relationship between resilience and climate adaptation is therefore not straightforward. While resilience can support transformative change, it may also stabilise existing power relations if critically unexamined (Nalau & Handmer, 2015; Pelling, 2011).

Rather than treating resilience as an unquestioned good, this thesis engages directly with these tensions. It examines how resilience is interpreted, enacted, and narrated within specific communities, and how narratives shape whether resilience reinforces existing systems or opens space for more just and transformative futures.

The prominence of resilience reflects the scale and complexity of the interlinked disruptions confronting contemporary societies, from climate change and biodiversity loss to socio-political instability and economic uncertainty (Béné et al., 2016; Folke, 2016). Within this context, the thesis focuses on general resilience: the broader capacity

to navigate uncertainty and emergent change, as distinct from specified resilience directed at known risks such as seasonal flooding or bushfire (Carpenter et al., 2012).

This study explores how such capacity manifests in human collectives, particularly in communities that intentionally design their social and ecological relationships, such as ecovillages. Integrating perspectives from social–ecological systems thinking, narrative inquiry, and transformative adaptation, it examines the structural and social conditions that support resilience—including diversity, learning, leadership, equity, and trust—while foregrounding the role of narratives. Narratives are understood not only as representations of resilience but as generative forces (those that open space for learning, experimentation, and collaboration (Gergen, 2009)) that shape meaning, identity, and collective action. In turn, lived experiences of resilience influence the stories communities tell, suggesting a reciprocal relationship between narrative and system that this thesis seeks to illuminate.

By weaving these conceptual strands together through a transdisciplinary lens, the research deepens understanding of how resilience is co-produced in context and how stories and imaginaries can inform more adaptive, reflexive, and transformative forms of living. This chapter outlines the conceptual foundations of the study, introduces the research problem and rationale, and presents the aims, questions, and overall structure of the thesis.

1.2 Background and Context

In the context of accelerating global disruption, recent crises including pandemics, extreme weather events, economic instability, and geopolitical conflict have underscored the growing importance of resilience across societies. These overlapping disturbances have tested the adaptive capacity of health systems, economies, and infrastructure, while exposing deep vulnerabilities in communities (Macy, 1998; Walker & Salt, 2012). They illustrate the convergence of ecological limits, technological interdependence, and cultural fragility that characterises the present era (Folke et al., 2021; Riedy & Waddock, 2022). Within this context, resilience has become a central concept for understanding how societies navigate uncertainty, sustain core functions, and adapt to change while fostering the capacity for transformation.

Australia, where part of this research takes place, offers a clear illustration of these dynamics. New South Wales experienced the worst bushfires on record from 2019 to 2020, followed by severe flooding in 2021 and 2022. The February 2022 disaster declaration affected 98 local government areas, with almost 5,000 homes rendered uninhabitable and more than 8,000 people displaced into emergency housing (NSW Independent Flood Inquiry, n.d.). These local crises unfolded amid global disruptions, including the COVID-19 pandemic and intensifying geopolitical tensions, for example, the Russian invasion of Ukraine and escalating conflict in the Middle East, which have disrupted supply chains, energy systems, and food markets worldwide. In Australia, inflation exceeded 7% in 2022, the highest rate in more than three decades, and has remained elevated since (Australian Bureau of Statistics, 2023).

Comparable patterns are evident across the Western world, where climatic extremes, economic volatility, and socio-political tensions increasingly intersect (Folke et al., 2021; IPCC, 2023; OECD, 2023). Europe and North America have faced unprecedented heatwaves, wildfires, and flooding, alongside rising inflation, energy insecurity, and growing political polarisation. Similar dynamics shape conditions across the Global South, where climate extremes, economic shocks, and political instability interact with long-standing structural vulnerabilities. Many low- and middle-income countries face disproportionate exposure to climate impacts such as intensified cyclones, droughts, and flooding while contending with limited social protection systems, resource dependencies, and uneven access to global markets (Pelling & Garschagen, 2019; Ribot, 2014). These interacting pressures highlight how resilience challenges are globally distributed yet experienced in unequal ways.

Such cascading and compounding disturbances are no longer anomalies but indicators of a rapidly changing world shaped by ecological degradation, accelerating technological development, and growing pressures on global energy and resource systems (Steffen et al., 2015; Wamsler, 2014). The IPCC's Sixth Assessment Synthesis Report highlights with very high confidence that climate-related hazards are becoming more frequent and severe, and that their cascading impacts increasingly disrupt ecosystems, economies, and human wellbeing worldwide (IPCC, 2023). Recent assessments also demonstrate that adaptation efforts are not keeping pace with escalating climate risks. The UNEP Adaptation Gap Report 2024 shows that adaptation finance remains significantly below estimated needs,

and that implementation gaps persist across regions, particularly in vulnerable countries (United Nations Environment Programme, 2024).

Recent global assessments echo these warnings. The Emissions Gap Report 2024 concludes that current national commitments remain insufficient to limit warming to 1.5 °C, signalling a widening gap between climate pledges and actual emissions trajectories (United Nations Environment Programme, 2024). Similarly, the Sustainable Development Goals Report 2024 finds that interconnected crises are reversing progress across multiple goals, amplifying risks to social and ecological resilience (United Nations, 2024).

These assessments underscore that responding to escalating socio-ecological crises requires more than technical fixes or incremental policy adjustments. Confronting these complex realities demands approaches that are adaptive, systemic, and attentive to the lived experiences of communities.

1.2.1 From Ecological to Socio-Cultural Resilience

The growing complexity of contemporary crises has prompted scholars and practitioners to seek frameworks capable of engaging with uncertainty, interdependence, and transformation. Resilience has emerged as one of the most influential, yet increasingly overused, concepts for understanding and navigating such dynamics. Its widespread adoption across disciplines and policy domains has sometimes reduced definitional clarity, leading to calls for renewed conceptual precision (Brand & Jax, 2007; Olsson et al., 2014).

Olsson et al. (2014) argue that resilience risks becoming a catch-all term rather than a clearly defined scientific concept. They note that its original analytical precision lay in ecology, where it referred to quantifiable system properties. Over time, this perspective expanded into the study of social–ecological systems (SES): integrated systems in which human and environmental processes are dynamically interlinked (Berkes & Folke, 1998; Folke et al., 2010). To strengthen its usefulness, these authors propose revisiting the underlying assumptions that shape how resilience is conceptualised and applied and emphasise the need to distinguish descriptive uses of resilience from normative ones, while engaging more directly with issues of power, agency, and justice. Over the past decades, the concept has evolved from ecological models of stability toward more

relational and socio-cultural interpretations that emphasise learning, adaptation, and transformation.

This evolution is visible in Australian resilience and adaptation policy. The National Adaptation Plan (Department of Climate Change, Energy, the Environment and Water, 2023) establishes a coordinated national framework for climate adaptation, aligning sectoral strategies and strengthening institutional capacity. Earlier initiatives such as the National Strategy for Disaster Resilience (Attorney-General's Department, 2011) introduced a shared-responsibility model encompassing government, communities, businesses, and individuals. The National Disaster Risk Reduction Framework (Department of Home Affairs, 2019) further emphasised systemic risk reduction and the integration of resilience across sectors. Most recently, the National Climate Resilience and Adaptation Strategy (Department of Climate Change, Energy, the Environment and Water, 2025) outlines a whole-of-society approach to climate adaptation, highlighting collaboration among governments, First Nations peoples, communities, and industry.

Globally, resilience has become a guiding principle in policy and planning, shaping agendas in urban design, disaster risk reduction, and sustainability governance. Recent analyses highlight how resilience is now framed as a multidimensional governance challenge spanning ecological, economic, social, and institutional domains (Abdillah et al., 2025; Kharrazi et al., 2020). This is reflected in the UN Sustainable Development Goals, which embed resilience explicitly in targets such as SDG 11 (Sustainable Cities and Communities) and SDG 13 (Climate Action), emphasising institutional, ecological, and community resilience. This global shift recognises that fostering resilience requires coordinated action across scales and sectors, linking local adaptation efforts with broader sustainability transitions. Yet many applications remain centred on infrastructure, technology, or emergency management, often overlooking the social and cultural processes that shape how communities experience, understand, and respond to disturbance.

This thesis builds on the recognition that community responses to disturbance are not merely reactive but can be transformative. Rather than asking how communities simply recover or "bounce back," it examines how they interpret disruption, envision alternatives, and develop the collective capacities needed to adapt and evolve in rapidly changing conditions. As O'Brien and Sygna (2013) emphasise, enduring transformation "needs to come from the inside out," drawing on emotional, relational, and cultural

resources alongside material and institutional ones. This view highlights that community resilience depends on the interplay between internal processes such as meaning-making, reflection, and shared identity and external supports, including governance structures, planning systems, and broader socio-political contexts. Understanding this interplay requires attention to the cultural and narrative dimensions through which communities make sense of change and mobilise collective responses.

1.2.2 The Interpretative and Inner Dimensions of Resilience

The contemporary polycrisis highlights that resilience must be understood across multiple dimensions. It cannot be reduced to institutional or technical capacities; it is also shaped through interpretive processes — including shared narratives, collective identity, and meaning-making — that influence how communities perceive and respond to change (Carpenter et al., 2012; Kemp et al., 2022).

Numerous cases illustrate how focusing solely on material or organisational dimensions fails to produce lasting adaptive capacity. In post-Katrina New Orleans, large-scale engineering projects restored physical protection but deepened social inequality and eroded community trust (Gotham & Campanella, 2013). Following the 2011 Queensland floods, significant investment in flood-mitigation infrastructure and emergency response systems improved physical safety but had limited impact on social cohesion or psychosocial recovery. Evaluations show that the absence of community participation and local knowledge restricted adaptive learning and long-term preparedness (Booth & Harvey, 2013; Morrison et al., 2019).

Recognising the interplay between structural and narrative capacities aligns resilience with broader discussions on transformation and sustainability transitions. It highlights the importance of meaning-making: the interpretive processes through which communities construct coherence and significance in times of crisis. Understanding how meaning is created, negotiated, and shared offers insight into how resilience is enacted and sustained in practice. Ecovillages provide one such context, offering real-world settings where these structural and interpretive dimensions of resilience can be observed in everyday life.

1.2.3 Ecovillages as Sites of Living Practice for Resilience

The term ecovillage, first introduced by Gilman and Gilman (1991), initially referred to small-scale communities seeking to integrate human and natural systems in mutually supportive ways. Emerging from earlier movements including spiritual communes, appropriate technology initiatives, and the back-to-the-land experiments of the 1970s (Dawson, 2006), contemporary ecovillages operate as intentional communities that actively experiment with sustainability and social transformation. These communities seek to embody regenerative principles across social, ecological, and economic domains, managing interconnected systems of food, water, energy, governance, and wellbeing (Fonseca et al., 2022; Ulug et al., 2021). Through their everyday practices, they offer situated examples of deliberate transformation, not only through structural or technological innovation but also through shifts in values, identities, and ways of being (Daloz, 2004; Newman, 2012, 2014).

Ecovillages are not isolated utopias. They encounter many of the same tensions and systemic challenges present in the broader society. As Dawson (2006) observes, they often "mirror and magnify" wider social contradictions, acting as living laboratories where adaptive management, participatory governance, and holistic worldviews are continually tested. Research also indicates recurring vulnerabilities. Communities lacking clearly documented values or shared vision often struggle to maintain cohesion, leading to fragmentation and declining trust (Baumber et al., 2022; Christian, 2003). Other challenges include inconsistent decision-making practices, financial fragility, leadership turnover, internal conflict, and limited adaptive capacity. Weak external networks, difficulties integrating new members, and the erosion of a creative or experimental ethos further undermine long-term viability (Baumber et al., 2022).

Despite critiques of limited scale and marginal policy visibility (Litfin, 2009; Princen et al., 2002), ecovillages offer important empirical insights. Through networks such as the Global Ecovillage Network (GEN), thousands of communities share knowledge, practices, and resources, forming distributed infrastructures for experimentation and mutual learning (Litfin, 2009). These collective efforts present grounded alternatives that broaden what is considered possible in wider sustainability transitions.

Ecovillages are not inherently resilient; resilience must be continually cultivated. This raises questions about how intentional communities can strengthen their capacity to

endure, adapt, and thrive despite structural vulnerabilities, and how they can maintain the conditions that allow them to operate as sites of deliberate transformation. Their value as experimental grounds depends on their ability to navigate internal challenges while modelling practices, worldviews, and governance arrangements that can inspire broader societal change.

The two ecovillages examined in this research, Findhorn in Scotland and Narara in Australia, offer rich contexts for exploring these dynamics. They provide opportunities to observe how place-based, narrative-rich communities engage with the conditions that underpin resilience and transformative potential, where ecological realities, shared histories, and situated practices shape how change is interpreted and enacted. Like any community, they respond to disruptions, but they also explore future possibilities through ongoing experimentation with new practices and evolving ways of thinking. The extent to which these efforts strengthen resilience is still emerging. Their practices offer insight into how resilience can be developed in community settings while also highlighting the need for adequate structural, organisational, and material capacities to sustain such efforts over time.

1.2.4 The Role of Narrative in Community Resilience

Understanding and strengthening community resilience requires attention not only to institutional capacities but also to the social and narrative processes through which communities interpret change and reorganise in the face of disruption (Brown, 2016). Numerous frameworks have sought to conceptualise and assess community resilience, ranging from theoretical models to practical tools for disaster management and service delivery (Carpenter et al., 2012; Cafer et al., 2019). These approaches typically identify key factors such as resources, infrastructure, learning capacity, or social capital, and develop indicators to guide planning and measure progress over time. While such frameworks clarify core dimensions and support cross-sector collaboration, critics argue that many remain overly technocratic or reductionist, often overlooking the complexity and diversity of lived experience (Cote & Nightingale, 2012; Meerow et al., 2019). Few account for how different factors interact, how communities navigate trade-offs across resilience strategies, or how structural inequalities shape adaptive capacity (Baumber, 2022).

Within this landscape, narratives offer crucial insight into how resilience is understood and enacted. Narratives shape how people interpret vulnerability, inequality, and possibilities for change, concerns echoed in analyses of climate vulnerability and social transformation (Tschakert et al., 2013). They influence identity, values, and motivation, shaping how communities and institutions frame experience, construct meaning, and design responses that support adaptive and transformative governance (Pahl-Wostl, 2009; Denton, 2017; Krauß & Bremer, 2020; Koch et al., 2023). At the same time, dominant narratives can normalise particular responsibilities, silence alternative perspectives, or constrain collective imagination, thereby limiting adaptive or transformative potential.

Modern resilience governance across disaster risk reduction, community development, and sustainability transitions increasingly assumes that communities must self-organise, develop local capacities, and adapt with limited reliance on state intervention (Cote & Nightingale, 2012; Berkes & Ross, 2013). Such framings risk shifting responsibility onto communities without sufficient attention to structural inequalities, resource asymmetries, or the ongoing role of state and institutional support. In this context, examining how resilience is imagined, narrated, and enacted becomes essential for advancing both theory and practice (Brown, 2014; Cafer et al., 2019). This thesis positions narrative as a critical bridge between the structural and cultural dimensions of resilience, recognising both its enabling and constraining capacities.

1.2.5 Research Problem and Rationale

Despite growing recognition that resilience entails more than recovery from disturbance, existing frameworks often struggle to engage the interpretive dimensions through which communities understand and respond to change (Walker et al., 2004; Folke et al., 2010). Addressing this limitation requires approaches that consider how meaning, identity, and imagination influence adaptive and transformative capacity (Carpenter et al., 2012; Baumber et al., 2020). This research responds to that need by examining the role of narrative in shaping community resilience.

Aligned with established principles for high-quality transdisciplinary research (Lang et al., 2012; Pohl & Hirsch Hadorn, 2007), this thesis adopts a collaborative approach that brings together academic researchers and community actors to co-produce knowledge about resilience. Transdisciplinarity is understood here as a reflexive and problem-

oriented mode of inquiry that integrates diverse forms of expertise, fosters mutual learning, and enables the joint framing of challenges and pathways for action (Jahn et al., 2012). Through iterative cycles of dialogue, co-production, and reflection, this orientation supports the integration of structural and narrative dimensions of resilience. It ensures that the insights generated are not only theoretically rigorous but also actionable, context-sensitive, and grounded in sustained relationships with the communities at the centre of this inquiry.

The following section outlines the specific theoretical and empirical gaps that this study seeks to address.

1.2.6 Gaps in the Resilience Literature

Resilience scholarship has evolved significantly over the past decades, moving from ecological notions of system stability toward more integrated understandings of adaptation and transformation within social–ecological systems (Folke et al., 2010; Walker et al., 2004). Contemporary research increasingly recognises resilience as dynamic, relational, and embedded within governance processes and cross-scalar interactions (Berkes & Ross, 2013; Folke et al., 2010). Despite this conceptual expansion, important theoretical and normative tensions persist.

A central limitation concerns the absence of an integrated account of how cultural and interpretive processes interact with material and institutional conditions in shaping community resilience. While resilience frameworks increasingly incorporate governance, participation, and adaptive capacity, they often under-theorise how meaning-making, power, and narrative processes influence what is sustained, transformed, or contested in practice. In this sense, resilience is frequently treated as a structural or functional property of systems, while the cultural processes through which communities interpret disruption and coordinate action remain comparatively less studied.

This overarching limitation manifests in several interrelated tensions.

First, resilience continues to face ambiguity in its normative orientation. In some contexts, it is framed as the capacity to “bounce back,” implicitly privileging the maintenance of existing structures without interrogating whether those structures reproduce inequity or ecological degradation (Brown, 2014; Cote & Nightingale, 2012; MacKinnon &

Derickson, 2013). Without explicit attention to power and distribution, resilience may stabilise undesirable systems rather than enable transformative change.

Second, resilience scholarship frequently oscillates between persistence and transformation. Although adaptation research distinguishes between incremental adjustments and structural reconfiguration (IPCC, 2022; O'Brien, 2012), resilience theory often lacks conceptual clarity regarding how these processes relate, particularly at community scales (Folke et al., 2010; Walker et al., 2004). This ambiguity raises questions about how resilience is enacted in practice and how communities navigate tensions between continuity and change.

Third, although social–ecological systems frameworks emphasise complexity and feedback, comparatively limited attention has been given to the cultural and narrative ecologies through which communities interpret disruption, negotiate identity, and imagine possible futures. If resilience involves navigating uncertainty, contestation, and transformation, then the stories communities tell become constitutive rather than peripheral**.**

These tensions are embedded within a broader landscape of debates in contemporary resilience scholarship. They can be grouped into six interrelated domains within which the central limitation (the insufficient integration of cultural and narrative processes) becomes visible.

1. **Specified and general resilience**

Most resilience research remains focused on specified resilience: the capacity to manage particular shocks such as seasonal floods, fires, or disease outbreaks. Less attention has been given to general resilience, the broader capacity of systems to absorb unexpected, multiple, and interacting disturbances (Carpenter et al., 2012; Walker & Salt, 2012). Understanding general resilience is increasingly important in an era of compounding crises and systemic uncertainty (IPCC, 2023).

2. **Dynamic interactions and systemic complexity**

Although social–ecological systems frameworks emphasise feedbacks and cross-scale dynamics, resilience is often operationalised as a checklist rather than as an evolving configuration of interacting factors (Baumber et al., 2022; Erol et al., 2020; Iwaniec et al., 2020). Greater attention to relational dynamics and trade-offs remains necessary.

3. **Cultural and interpretive dimensions**.

Despite increasing attention to relational governance processes, resilience scholarship has been critiqued for under-theorising cultural, interpretive, and meaning-making dimensions (Brown, 2014; Cote & Nightingale, 2012; Davidson, 2010). While community resilience frameworks acknowledge social capital, institutions, and governance structures, comparatively limited attention has been given to the narrative ecologies through which communities interpret disruption, negotiate identity, and imagine possible futures. As several scholars argue, resilience research has yet to fully integrate discourse, power, and identity into its analytical core (MacKinnon & Derickson, 2013; Tschakert et al., 2013). Consequently, meaning-making processes remain insufficiently conceptualised within many dominant resilience frameworks.

4. **Justice and uneven vulnerability**

Scholars emphasise that resilience is unevenly distributed and may reproduce structural inequities if questions of power and recognition are not explicitly addressed (Cote & Nightingale, 2012; Meerow et al., 2019). Normative commitments therefore shape what resilience sustains or transforms.

5. **Integration of local and Indigenous knowledge**

Calls for plural epistemologies highlight the need to move beyond tokenistic inclusion of Indigenous and local knowledge systems and toward more context-sensitive and relational approaches to resilience governance (Bohensky et al., 2013; IPCC, 2022).

6. **Anticipation and foresight**

Scholarship in climate adaptation, resilience governance, and sustainability transitions underscores the importance of anticipatory capacities and transformative adaptation in responding to accelerating socio-ecological change (Boyd et al., 2015; IPCC, 2022; O'Brien, 2012; Pelling, 2011) yet cultural processes through which communities envision and negotiate such futures remain comparatively underexplored.

These domains reveal an ongoing effort to reconcile structural, relational, cultural, and normative dimensions within resilience theory. This thesis does not seek to resolve all six domains. Rather, it concentrates primarily on Domain 3: the cultural and narrative dimensions of resilience—and examines how narrative processes interact with structural and relational capacities across community contexts. The discussion of justice,

Indigenous knowledge, and anticipation provides important contextual grounding for the normative and epistemological landscape in which resilience is debated, but they are not the central empirical focus of this study. Rather, they highlight the broader stakes of how resilience is framed and enacted.

Figure 1.1. Current state and remaining gaps in resilience scholarship.

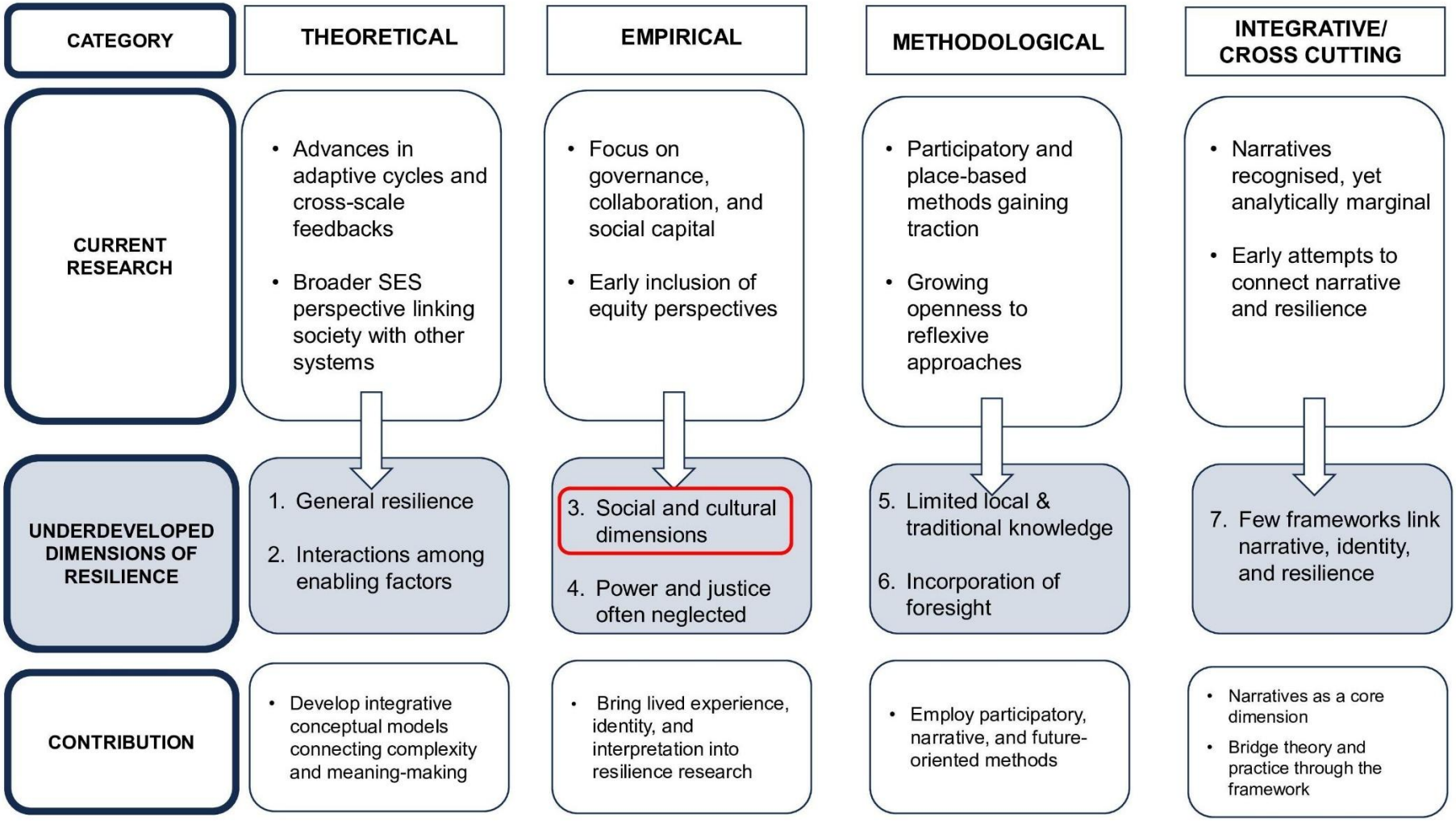


Figure 1.1 Advances and underdeveloped dimensions in resilience scholarship**.**

These interrelated tensions point toward a broader need to integrate structural, relational, and narrative dimensions within resilience theory and practice. This thesis contributes to that integration by developing and empirically examining a framework that conceptualises narrative processes as a constitutive and interacting dimension of community resilience.

1.2.7 Theoretical and empirical rationale

In light of these underdeveloped dimensions in resilience scholarship, greater attention must be given to the relational and interpretive processes through which resilience unfolds, rather than privileging structural or material capacities alone. Resilience scholarship has tended to foreground institutional arrangements and system properties, yet it must more fully engage with the dynamic interactions among ecological systems, governance structures, and human meaning-making. As Jozaei et al. (2022) and Folke et al. (2016) emphasise, resilience emerges from dynamic system interactions shaped by adaptation, learning, and reorganisation. This relational perspective aligns with complexity theory and underscores the need to integrate systems thinking with social and cultural inquiry (Gunderson & Holling, 2002; Iwaniec et al., 2020).

Despite increasing recognition of community resilience, many existing frameworks continue to privilege structural indicators such as infrastructure, economic diversity, or governance capacity, while comparatively under-theorising the interpretive and cultural dimensions through which communities experience and enact resilience. As Cote and Nightingale (2012) caution, approaches that overlook meaning-making and power risk producing partial or technocratic understandings of resilience practice.

Responding to this limitation, this research adopts a transdisciplinary approach that bridges systems thinking, narrative inquiry, and transformation scholarship. Its transdisciplinary orientation lies not only in integrating perspectives from different disciplinary traditions but also in engaging community actors as knowledge contributors within the systems under study. Guided by principles of epistemic pluralism, collaboration, and reflexivity, the study conceptualises resilience as a co-produced process shaped by both structural conditions and narrative ecologies.

To explore these dynamics empirically, the thesis focuses on two ecovillage communities as situated sites of experimentation in sustainable living. Although narratives are

increasingly recognised as influential in shaping collective action, there remains limited empirical research examining how narrative processes interact with resilience-enabling factors in lived community contexts. Ecovillages provide a particularly rich setting in which systemic conditions, governance structures, social practices, and shared meanings intersect. Their intentional orientation toward sustainability allows for close examination of how resilience is enacted, negotiated, and transformed through collective narrative processes and institutional practice.

1.2.8 Research rationale and contribution

Although cultural dimensions of resilience are receiving increasing attention, the field still lacks an integrated account of how narrative contributes to resilience processes. While resilience thinking has evolved to incorporate governance, equity, and transformation debates (Folke et al., 2021; IPCC, 2023), most operational community resilience frameworks continue to prioritise structural, institutional, and resource-based indicators such as infrastructure robustness, social capital, economic diversity, and emergency preparedness, over interpretive or narrative processes (Cafer et al., 2019; Cutter et al., 2008; Meerow et al., 2019). Even widely cited frameworks for assessing community resilience tend to conceptualise resilience through measurable system properties, offering limited explicit engagement with how shared stories shape meaning, identity, and collective mobilisation.

At the same time, resilience has become a defining concept in sustainability research and policy, with growing recognition that it involves practices of meaning-making as much as system properties (Berkes & Ross, 2013; Folke et al., 2021; Tschakert et al., 2013). What remains underdeveloped are conceptual tools for examining how communities interpret change, mobilise action, and coordinate around shared futures through story.

This thesis does not seek to rank narrative processes above structural or ecological factors. Rather, it demonstrates how narratives interact with governance arrangements, resource dynamics, community diversity, trust, and learning. In doing so, it advances a relational understanding of resilience in which meaning-making operates alongside material and institutional conditions.

Accordingly, the study addresses the need for an integrative account of how narratives shape community resilience within social–ecological systems. It examines how shared stories influence identity and collective sensemaking in contexts of complex change, and how these stories can enable or constrain resilience through their interaction with structural and relational dynamics. By analysing how ecovillage members intentionally engage with resilience in everyday life, the research generates insights into strengthening general resilience through both inner and outer processes of transformation..

The study contributes to resilience scholarship in three ways:

1. **Conceptually**, it connects narrative processes with resilience-enabling factors (Chapter 2 and Chapter 4), analysing how their interplay varies across time, disturbance cycles, and social–ecological contexts.
2. **Empirically**, it demonstrates how these interactions manifest within communities actively experimenting with transformation (Chapter 5 and Chapter 6).
3. **Practically**, it offers insights for policymakers, planners, and practitioners seeking to support community-based resilience strategies that honour both material and cultural dimensions. The framework is translated into governance, planning, and policy contexts. (Chapter 5 and Chapter 7).

Ultimately, this research responds to a central gap in the literature: the need for a more holistic understanding of resilience that accounts for the narratives through which people interpret, enact, and transform their relationships with one another and with the living world. In doing so, it reframes resilience not merely as recovery, but as an ongoing, meaning-rich practice of adaptation, regeneration, and renewal.

1.3 Research Question and Sub-Questions

This study is guided by the central research question (RQ): *What role do narratives play in community resilience?* In addressing this question, the thesis investigates how shared stories and meaning-making processes influence the ways communities interpret disruption, mobilise collective action, and envision more resilient futures within social–ecological systems.

This inquiry responds to a broader gap in resilience scholarship: while structural and institutional dimensions of resilience have been extensively theorised, there remains

limited integration of narrative processes within established resilience frameworks. Specifically, the field lacks a systematic account of how narrative meaning-making interacts with recognised resilience-enabling factors in practice. This thesis addresses that gap by examining resilience as an evolving process shaped through the dynamic interplay between structural conditions and diverse narratives.

Underlying this investigation is the proposition that resilience is not a fixed state but an ongoing, relational process. While emerging scholarship suggests that narratives influence how communities make sense of and respond to change, this thesis examines that proposition empirically and explores the specific mechanisms through which narrative processes enable, constrain, or reconfigure resilience capacities.

To operationalise the central research question, the study is structured around seven interrelated research sub-questions (RSQs):

- **RSQ1. What types of narratives** emerge in response to disruption, and how do they shape community identity, learning, and collective action?
- **RSQ2. Who contributes** to these narratives, and what forms of knowledge and information are prioritised?
- **RSQ3. How** are community **narratives constructed** and **how do they evolve over time** in response to disruption and transformation?
- **RSQ4. How do narratives vary** across contexts, geographies, and organisational structures?
- **RSQ5. Which resilience-enabling factors are most prominent**, and how do they interact within community systems?
- **RSQ6. How do narrative roles** and resilience-enabling **factors interact** in practice?
- **RSQ7. How** are community resilience **narratives connected to** broader processes of social and **systemic transformation?**

These sub-questions progress analytically from micro-level narrative dynamics to meso-level interaction with structural enabling factors, and finally to macro-level implications for transformation and cross-scale influence. In this way, questions of scaling are embedded within the research design rather than treated as a separate analytical domain.

The first four sub-questions (RSQs 1–4) examine narrative processes within communities, focusing on meaning-making, authorship, evolution, and contextual variation. RSQs 5–6 shift attention to the interaction between narrative elements and resilience-enabling conditions, integrating interpretive and structural dimensions. RSQ7 extends the analysis outward, considering how community narratives travel across scales and connect to wider processes of institutional, cultural, and societal change.

While the primary empirical focus of this research is at the community level, the analysis also considers how narrative–resilience interactions influence governance networks and broader transformation processes beyond the local scale. The scaling dimension of resilience is synthesised more explicitly in Chapter 7.

1.4 Aim and Objectives

The aim of this research is to deepen understanding of how general resilience (the capacity to navigate uncertainty and change) is interpreted, enabled, and enacted within communities, with particular attention to the role of narratives in resilience-building processes in ecovillage contexts. This study develops, applies, and validates a narrative–resilience framework. Ultimately, it seeks to advance both theoretical and methodological tools for integrating narrative practice into resilience thinking, governance, and community transformation.

The objectives are presented below:

- **Develop a conceptual framework** that integrates structural attributes, enabling social conditions, and narrative processes to understand community resilience within complex systems.
- **Explore the lived experience of resilience** in selected ecovillages, examining how members interpret, organise, and respond to disruption, uncertainty, and change.
- **Investigate the role of narratives** in shaping collective identity, agency, sensemaking, and coordinated action in resilience-building practices.
- **Examine how resilience-enabling factors** interact and influence adaptive and transformative pathways.

- **Synthesize theoretical and practical insights** to identify how communities anticipate, navigate, and co-create regenerative ways of living, and outline mechanisms through which these findings can inform broader applications of general resilience.

1.5 Structure of the Thesis

This thesis adopts a three-part structure in which contextual chapters (Part I) frame the three core papers (Part II), and a set of integrative chapters (Part III) synthesises their contributions to answer the central research question: What role do narratives play in community resilience?

The structure reflects the iterative and transdisciplinary nature of the research, moving from conceptual development to empirical exploration and participatory validation. Each paper addresses distinct but overlapping sub-question (as shown in Figure 1.2), contributing to a cumulative understanding of how narrative processes shape, express, and sustain resilience within community contexts.

- **Part I** establishes the conceptual and methodological foundations. Chapter 1 introduces the research background, rationale, aims, and objectives, outlining the motivation for examining the relationship between narrative and resilience. Chapter 2 reviews key literature from resilience theory, systems thinking, and narrative studies, identifying conceptual gaps and grounding the theoretical synthesis. Chapter 3 details the methodological orientation and research design, including the integrative framework shown in Figure 1.2, which connects the three papers with their respective research questions, data sources, and purposes in the broader inquiry.
- Part **II** presents the three interlinked papers that form the core of the thesis.
    - **Paper 1** develops the conceptual foundations by synthesising literature on social–ecological resilience and narrative inquiry to propose a narrative–resilience framework. It addresses early research questions concerning how resilience is defined and operationalised, the potential role of narratives within resilience theory, and the relationship between enabling factors and narrative elements. The purpose of this first study is to **provide**

a **theoretical bridge** between narrative and resilience scholarship, establishing the foundation for subsequent empirical investigation.

- **Paper 2** applies and refines this framework through comparative case studies of Findhorn and Narara Ecovillages. Drawing on interviews, field observations, and community media, it addresses questions about the types of narratives that emerge in response to disruption, who contributes to them, how they evolve over time, and how they vary across context and governance structures. This paper also examines the interaction between narrative elements and resilience-enabling factors. Its purpose is to **explore** how narratives **function in practice** within intentional communities facing complex change.
- **Paper 3** extends the investigation through validation sessions engaging community members in validating and refining the proposed framework. It addresses questions related to how different community members perceive the relevance and clarity of the framework, what feedback and adaptations emerge, and how the framework can support resilience-building across diverse contexts. The purpose of this third paper is to **ensure** that the model is both **theoretically robust and practically applicable**, linking local narrative practice to broader processes of social transformation and knowledge co-production.

- **Part III** synthesises insights across all three studies. Chapter 7 integrates their findings, revisiting the overarching research question and demonstrating how narrative processes contribute to community resilience through meaning-making, identity formation, learning, and collective action. This synthesis chapter also discusses the theoretical, methodological, and practical contributions of the research, most notably the introduction of the concepts of narrative plasticity and narrative ecology, and reflects on implications for resilience governance, participatory practice, and future research.

Figure 1.2 (below) visually summarises how the three parts align with the chapters, articles and research questions and sub-questions. Although each paper focuses on a different aspect of the inquiry, together they contribute to a shared understanding of

community resilience as a living process shaped by the interaction between stories, relationships, and structures.

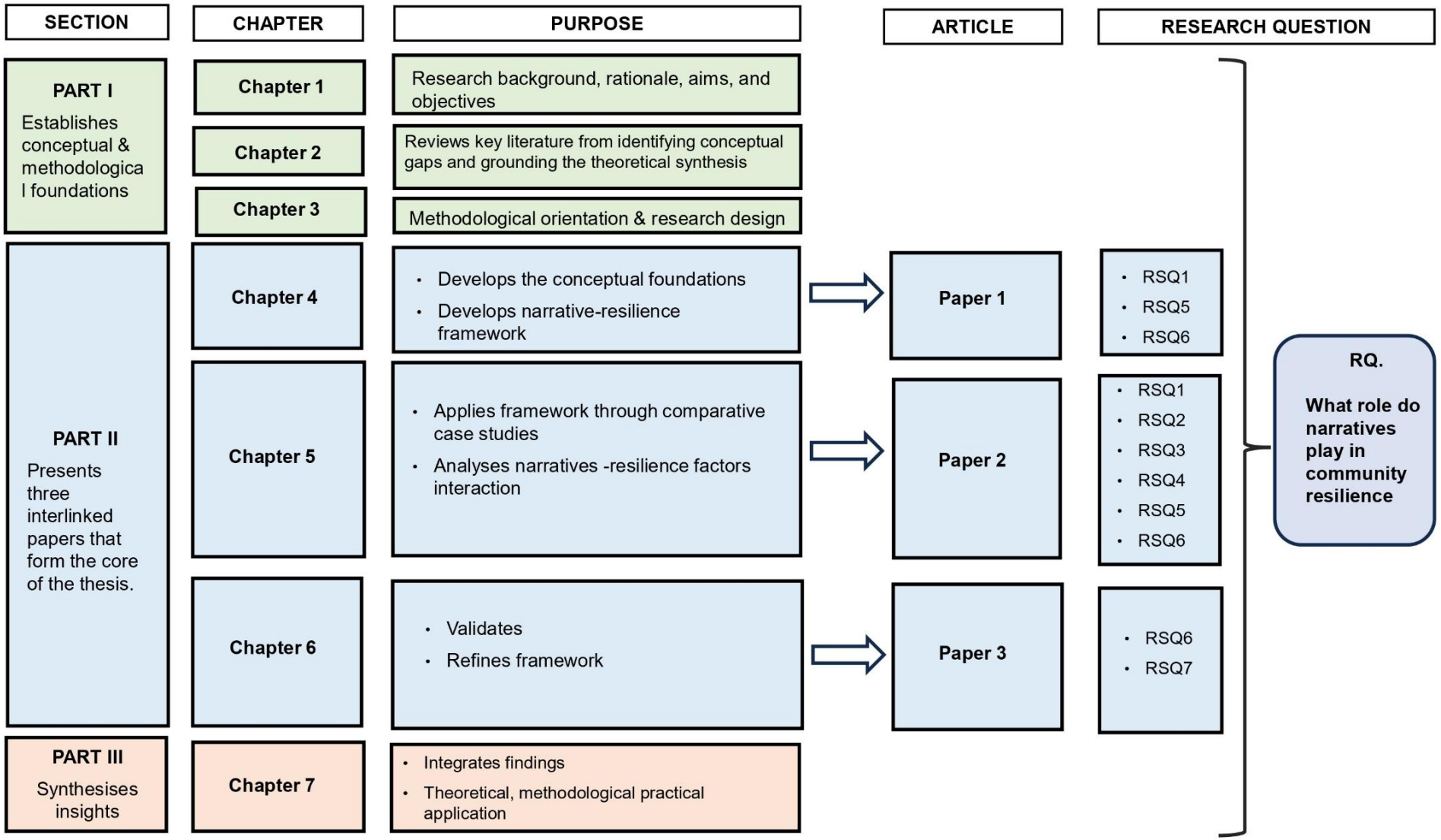


Figure 1.2 Diagram of thesis structure

1.6 Chapter Overview

The thesis is organised into seven chapters that guide the reader from conceptual foundations through empirical investigation to final synthesis.

- **Chapter 1** introduces the study, outlines the rationale, and presents the research aim, objectives, and questions.
- **Chapter 2** develops the theoretical foundations by reviewing key literature in resilience studies, systems thinking, and narrative theory. It identifies the conceptual gaps that motivate the research and establishes the basis for the framework developed in the papers that follow.
- **Chapter 3** outlines the methodological design and philosophical orientation of the study. It explains the transdisciplinary and interpretive approach, details the comparative case study and narrative methods, and clarifies how the three papers are situated within the overarching research design.
- **Chapters 4, 5,** and **6** present the three papers that form the core of the thesis.
- **Chapter 7** synthesises insights from these papers and revisits the central research question. It discusses how narratives contribute to resilience as an ongoing, meaning-rich process and outlines the theoretical, methodological, and practical contributions of the research, along with directions for future work.

1.7 Overview of Research Contributions

This thesis addresses a critical gap in resilience scholarship by examining how narrative processes interact with the structural, relational, and ecological conditions that shape community resilience. It contributes to theory, methodology, and practice through the development, application, and validation of a narrative–resilience framework that positions narrative processes as one dimension of resilience, a form of cultural infrastructure that influences how communities interpret, navigate, and respond to change.

Conceptually, the research develops a framework for identifying the types of narratives that emerge in response to disruption, understanding who constructs and circulates them, and tracing how they evolve across time and context. By applying this framework to comparative case studies, the thesis demonstrates how narratives interact with everyday practices, collective identities, and governance arrangements to enable or constrain resilience. It introduces two central concepts: narrative plasticity (the capacity to adapt, recombine, and reinterpret narratives as conditions change) and narrative ecology (the diversity and interconnection of community narratives that sustain shared meaning). Together, these concepts offer new ways to understand how meaning-making intersects with general resilience—the capacity to respond to the unexpected and the unknown.

Methodologically, the thesis advances a reflexive, multi-method design that integrates conceptual synthesis, narrative inquiry, phenomenological analysis, and participatory validation. This approach demonstrates how narrative and interpretive methods can complement conventional resilience assessments by illuminating the cultural, relational, and affective dimensions of adaptive capacity. It further shows how participatory validation can function as a resilience practice in its own right, enabling communities to surface, interrogate, and revise shared narratives.

Practically, the framework offers communities, educators, and practitioners' accessible tools—including narrative mapping, re-storying processes, and diagnostic assessments of narrative roles—that support collective reflection, learning, and decision-making. These tools can be adapted to governance, planning, education, and community development contexts, helping groups recognise enabling narratives, identify tensions, and cultivate more inclusive and reflexive narrative ecologies. The inclusion of demonstration

narratives within the framework further illustrates how everyday practices make resilience visible, relational, and meaningful.

Beyond local practice, the research has relevance for organisations and networks working on sustainability transitions and cultural transformation. The framework and participatory methods can support collaborative learning within networks such as the Global Ecovillage Network (GEN), ECOLISE, and the Transition Network, and align with emerging international dialogues at the Stockholm Resilience Centre, the Resilience Alliance, Future Earth, the UNESCO Futures Literacy Network, and the Wellbeing Economy Alliance. These potential applications highlight how narrative-informed approaches can strengthen cross-scale connections between local experimentation and broader efforts to cultivate regenerative, equitable, and meaning-rich futures.

This chapter has outlined the rationale, aims, and contributions of the thesis. Chapter 2 now develops the theoretical foundations and conceptual framework that guide the analysis, integrating resilience theory, systems thinking, and narrative perspectives.

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Chapter 2: Theoretical Foundations and Conceptual Framework

2.1 Overview

This chapter establishes the theoretical and methodological foundations guiding the research. It synthesises scholarship from resilience studies, complex systems thinking, transformation and transition research, and narrative perspectives to develop an integrative conceptual framework for analysing community resilience. Rather than treating these traditions as separate strands, the chapter brings them into dialogue to examine how structural conditions, relational dynamics, and meaning-making processes interact in shaping collective responses to disruption.

The review traces the evolution of resilience theory, including critiques of equilibrium-based and technocratic interpretations, and identifies enduring gaps concerning power, values, and the cultural dimensions of change. It situates resilience within community and place-based contexts, emphasising how social–ecological relations, governance practices, and situated agency influence adaptive and transformative potential.

Building on these foundations, the chapter advances a relational understanding of resilience in which systems, diverse narratives, and agency are mutually constitutive rather than hierarchically ordered. These insights inform the development of the Narrative–Resilience Framework presented later in the chapter and provide the conceptual grounding for the empirical and participatory analyses that follow.

2.2 Introduction

This section engages the major strands of scholarship shaping contemporary understandings of resilience and identifies the conceptual tensions that motivate this study. Drawing on social–ecological resilience theory, complex systems thinking, transformation and transition studies, and cultural and narrative traditions, it critically synthesises insights that have often been treated in isolation.

The discussion begins by outlining the epistemological and ontological foundations underlying resilience scholarship. It reviews critiques of entrenched nature–culture dualisms and engages with relational interpretations of human–nature systems that

conceptualise social and ecological processes as co-constituted rather than separable (Cote & Nightingale, 2012; Ives et al., 2018; West et al., 2020).

The chapter then examines contributions from transformation and transition research alongside discursive and cultural perspectives, demonstrating how power, meaning, and emotion shape collective responses to change. Although the thesis engages interpretive and relational traditions (including post-structuralist, constructivist, and post-normal science perspectives; Funtowicz & Ravetz, 1993), it does not assume that social–ecological realities are purely discursive or infinitely malleable. Material conditions and ecological processes exert real constraints. The analysis therefore aligns with a relational and critical realist orientation in which meanings and narratives influence action while remaining entangled with biophysical realities (Bhaskar, 1978; Sayer, 2000).

The section concludes by turning to community and place-based perspectives, emphasising how lived experience and situated agency shape adaptive and transformative potential. These strands prepare the ground for the articulation of the Narrative–Resilience Framework presented later in the chapter.

2.3 Structure and Logic of the Conceptual Framework

This section outlines the organisation of the chapter and the progression of the conceptual framework. It brings together structural, relational, and narrative dimensions of resilience in four interrelated components.

The first component, Theoretical Foundations, traces the evolution of resilience across disciplines and introduces key concepts from social–ecological resilience theory, complex systems thinking, and transformation and transition studies. These strands establish the structural and systemic basis for the framework while engaging critiques of dualism and reductionism that open space for relational and interpretive perspectives.

The second component, Cultural and Contextual Foundations, situates resilience within community and place-based systems, examining how governance practices, ecological relations, and meaning-making processes shape lived expressions of resilience. Drawing on ecovillages as illustrative contexts, this section emphasises how narratives contribute to identity formation, interpretation, and collective action.

The third component, Conceptual Framework, integrates these strands into an analytical model positioning resilience at the intersection of systems, narratives, and situated agency. Narrative is treated as a constitutive organising dimension interacting with structural and relational capacities rather than as a separate discursive layer. In this thesis, resilience is understood to emerge through the dynamic interplay between structural capacities (material resources, governance arrangements, and institutional configurations) and narrative capacities (shared meanings, identity, interpretive frames, and collective sensemaking). Dynamic interplay refers to the mutually constitutive relationship between these dimensions: structural conditions shape which narratives emerge, circulate, and gain legitimacy, while narratives influence how structural capacities are interpreted, coordinated, reinforced, or transformed in practice.

The fourth component, Methodological Foundations, outlines the transdisciplinary and reflexive approach guiding the research design. It emphasises co-production, dialogue, and the integration of diverse forms of knowledge, aligning methodological choices with the conceptual commitments developed in the preceding sections.

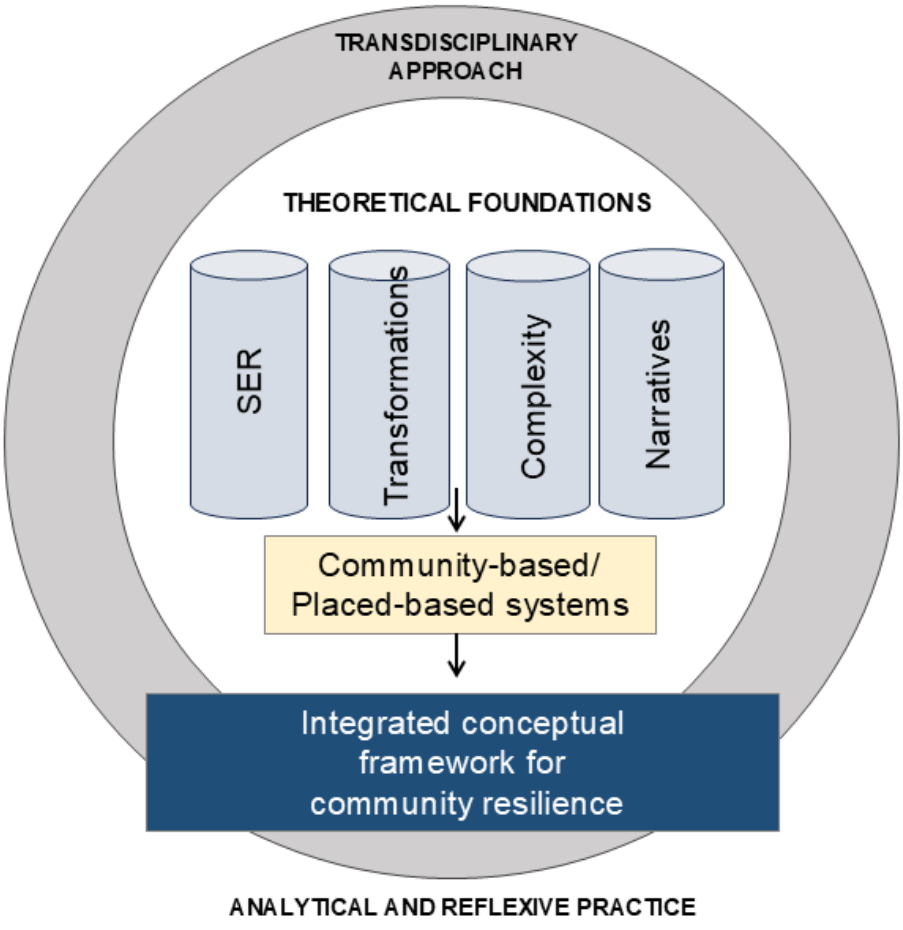


Figure 2.1 Structure of the integrated conceptual framework for community resilience

Figure 2.1 illustrates how these components form a coherent conceptual logic: resilience is first understood as a dynamic property of social–ecological systems, then as a relational and narrative process enacted through meaning-making and governance, and finally as a participatory, transdisciplinary endeavour embedded in practice.

2.3.1 Resilience Theory

Building on the overview above, this section traces key strands of resilience scholarship in relation to one another, highlighting intersections and tensions that shape contemporary understandings of community resilience. It reflects the view that resilience is not only a system property but also a socially constructed and culturally mediated process shaped by meaning, identity, and power (Brown, 2016; Coulthard, 2012; Davidson, 2010).

Across disciplines concerned with disturbance and change, resilience has become both a unifying and contested concept. As it expanded from early emphases on stability and recovery towards adaptability, learning, and transformability, it also accrued normative ambiguity—at times privileging persistence and continuity, and at others supporting transformation when existing configurations become untenable or unjust (Folke et al., 2010; O'Brien, 2012; Walker et al., 2004).

These tensions are especially salient in community contexts, where questions of "resilience of what, to what, and for whom" bring power and distribution to the foreground (Carpenter et al., 2001; Cote & Nightingale, 2012; MacKinnon & Derickson, 2013). Without explicit attention to these dimensions, resilience discourse can depoliticise vulnerability by emphasising adaptation over structural change (Cote & Nightingale, 2012).

Resilience is also closely entangled with adaptation debates, including distinctions between incremental change and transformational adaptation that reconfigures underlying assumptions, institutions, and worldviews (IPCC, 2022; O'Brien, 2012). These debates motivate the discussion that follows, which traces the evolution of resilience across fields, clarifies key distinctions used in contemporary resilience thinking, and synthesises critiques that are particularly relevant to community-scale research.

2.3.1.1 Origins and Evolution of Resilience

The concept of resilience has evolved across disciplines, reflecting a gradual shift from stability and control toward adaptability and transformation. Table 2.1 provides a cross-disciplinary snapshot of how resilience has been defined and operationalised across material, technical, ecological, and social domains. Rather than presenting a strictly linear chronology, it illustrates how assumptions about systems, disturbance, and recovery have expanded over time..

Table 2.1. Comparative Cross-Disciplinary Perspectives on Resilience

Field	Core definition	Type of Disturbance	Unit of analysis	Key assumptions
Structural & Materials Engineering	Ability of a material to absorb energy when deformed and return to its original form (Tredgold, 1818; Mallet, 1856)	Elastic deformation	Material	Assumes a single desirable state; recovery measured as return to form
Systems & Resilience Engineering	Capacity of engineered systems to maintain function or recover rapidly following disruption (Hollnagel et al., 2006; Fiksel, 2006)	System failure or operational disruption	Engineered system	Prioritises robustness, redundancy, control, and continuity of function
Information & Communication Systems	Ability to maintain acceptable service levels during/after faults (Bruneau et al., 2003)	Service interruption	Network	Focus on service continuity and fault tolerance
Ecology	Capacity to absorb disturbance and reorganise while retaining key functions and structures (Holling, 1973; Holling et al., 2017)	Environmental disruption	Ecosystem	Persistence of functions within changing structure; emphasis on thresholds and non-linearity
Social–Ecological Systems	Capacity of linked human and natural systems to absorb disturbance, reorganise, and adapt while sustaining development pathways and system identity (Folke, 2006; Walker et al., 2004)	Social–ecological disruption (e.g., climate change, governance shifts, resource shocks)	Coupled human–natural system	Emphasises interdependence, cross-scale dynamics, adaptive governance, and co-evolution of social and ecological processes
Business & organisational studies	Ability to adjust and emerge stronger after disruption (Erol et al., 2010)	Market or organisational challenges	Organisation	Emphasises learning, adaptability, and long-term competitiveness

Field	Core definition	Type of Disturbance	Unit of analysis	Key assumptions
Psychology	Process enabling positive adaptation despite adversity (Masten et al., 1990)	Stress or adverse life events	Individual	Focus on coping, internal capacity, and developmental growth

While these definitions emerged in different historical moments, they also reflect an underlying shift in how systems are conceptualised, from equilibrium and return to form, toward complexity, adaptation, and transformation.

Early formulations of resilience emerged in structural and materials engineering in the nineteenth century, where resilience referred to a material's capacity to absorb energy when deformed and return to its original state (Tredgold, 1818; Mallet, 1856). These equilibrium-based understandings emphasised efficiency, predictability, and recovery to a single desirable state.

In the mid-twentieth century, the development of systems and resilience engineering extended these equilibrium assumptions to increasingly complex technical systems. Drawing on cybernetics, control theory, and systems analysis, these approaches prioritised robustness, redundancy, and rapid restoration of function following disruption (Hollnagel et al., 2006; Fiksel, 2006). Although more sophisticated in design logic, they largely retained a control-oriented orientation centred on maintaining system performance and returning to predefined operating conditions.

By the late 1960s and early 1970s, developments in systems ecology and complexity science began challenging equilibrium-based assumptions. Within this intellectual context, Holling's (1973) distinction between engineering and ecological resilience marked a significant conceptual turning point. Rather than equating resilience with return to equilibrium, ecological resilience emphasised the capacity of ecosystems to absorb disturbance, reorganise, and persist amid change. Ecosystems were understood as dynamic, non-linear systems characterised by feedbacks, thresholds, cross-scale interactions, and multiple potential equilibria (Holling, 1973; Holling et al., 2017). Variability and disturbance were reframed not as deviations from stability but as intrinsic properties of complex adaptive systems.

This reconceptualisation laid the groundwork for social–ecological resilience, which recognises the interdependence and co-evolution of human and natural systems (Folke,

2006; Walker et al., 2004). Empirical case studies synthesised by Berkes et al. (2003), including coral reef and coastal fisheries governance, demonstrated how adaptive institutions, local knowledge systems, and cross-scale collaboration contribute to resilience in coupled systems. These studies highlighted that resilience depends not only on ecological properties but also on governance arrangements, collective learning, and institutional flexibility.

Tracing this evolution clarifies why resilience in community contexts cannot be reduced to system persistence alone. It reflects an ongoing shift from mechanical stability toward relational adaptation, learning, and transformation—an expansion that provides the conceptual foundation for examining resilience as both structurally embedded and culturally mediated.

2.3.1.2 Specified and General Resilience

Building on ecological and social–ecological foundations, resilience scholarship increasingly sought to clarify what, precisely, is being sustained and under what conditions. Carpenter et al. (2001) called for moving "from metaphor to measurement," proposing operational distinctions that could make resilience analytically tractable across systems. Subsequent work distinguished between adaptability (the capacity of actors to influence resilience within an existing system configuration) and transformability (the capacity to create a fundamentally new system when ecological, economic, or social structures become untenable) (Folke et al., 2010).

Within this expanding framework, scholars introduced a key distinction between specified and general resilience. Specified resilience refers to preparedness for particular, known disturbances—for example, a coastal community's capacity to withstand recurrent cyclones. General resilience, by contrast, concerns the capacity to cope with uncertain, novel, or interacting shocks whose timing, magnitude, or nature cannot be predicted (Carpenter et al., 2012, 2016). While this distinction emerged over a decade ago, it has gained renewed relevance in light of cascading climate risks, systemic interdependence, and what some scholars describe as an era of "polycrisis" (Biggs et al., 2021; Folke et al., 2021).

Recent scholarship further emphasises that general resilience is not only a property of ecological structure but also of governance, learning systems, and social relations,

including issues of equity and power (Eriksen et al., 2021; IPCC, 2023). Strengthening general resilience therefore involves cultivating capacities such as diversity, reflexivity, cross-scale coordination, and institutional flexibility that enable systems to reorganise without collapsing under compound pressures (Carpenter et al., 2012; Folke et al., 2010; Folke et al., 2021).

This distinction shifts attention from narrowly optimising performance under anticipated stressors toward cultivating broader capacities that enable learning, flexibility, and cross-scale adaptation. While specified resilience can be enhanced through targeted interventions and technical preparedness, general resilience depends on more diffuse system properties—such as diversity, modularity, learning capacity, and institutional flexibility—that allow systems to reorganise without collapsing (Carpenter et al., 2012; Folke et al., 2010).

The implications for community contexts are significant. Communities rarely face isolated disturbances; rather, they navigate overlapping ecological, economic, and social pressures that interact in unpredictable ways. Understanding resilience at this level therefore requires attention not only to hazard-specific capacities but also to the underlying conditions that enable collective adaptation over time.

2.3.1.3 Comparative Approaches and Dimensions

Comparative analyses of resilience across domains reveal how assumptions about equilibrium, purpose, and system boundaries shape both theory and practice. While engineering resilience emphasises restoration to a single equilibrium, ecological resilience foregrounds reorganisation within multiple equilibria, and social–ecological resilience highlights learning and transformation within dynamic human–environment systems. Table 2.2 summarises these distinctions.

Table 2.2. Comparative Dimensions of Resilience across System Types

Dimension	Engineering	Ecology	Socio-ecology
Context	Mechanical systems	Ecosystems	Linked human-natural system
Equilibrium state	Single	Multiple possible	None (dynamic adaptation)
Aim	Return to original state	Preserve function, reorganise	Learn, adapt, transform
Focus	Bounce back	Bounce forward	System's capacity for adaptation and learning

These differences matter because resilience is not a neutral descriptor; it embeds normative assumptions about what should persist, adapt, or transform. Building on Carpenter et al.'s (2001) foundational question of "resilience of what, to what," Meerow et al. (2019) expand this inquiry to include "for whom, when, where, and why," foregrounding trade-offs, scale, and power asymmetries in resilience-building efforts.

Table 2.3 synthesises influential definitions across ecological, social–ecological, and community contexts, highlighting both conceptual evolution and persistent limitations.

Table 2.3. Key Contributions to Resilience Scholarship and their Implications

Author(s)	Definition	Main Limitations	Ways to Strengthen
Holling (1973)	Ecosystems' capacity to absorb disturbance and reorganise while maintaining core functions.	Focus on ecology; limited attention to social dynamics.	Incorporate cross-scale and human influences.
Folke et al. (2010)	Linked social–ecological systems can adapt or transform while sustaining ecosystem services and wellbeing.	Conceptually complex; difficult empirical application.	Promote adaptive governance, learning, and social capital.
Carpenter et al. (2012)	General resilience: capacity to adapt or transform amid unfamiliar shocks.	Too broad; lacks clear operational steps.	Identify enabling conditions (diversity, connectivity, learning).
Cote & Nightingale (2012)	Social resilience: social processes that maintain feedbacks and functions through change.	Narrow focus; overlooks power and governance.	Integrate equity, governance, and power analysis.
Walker et al. (2012)	Systems absorb disturbance and reorganise while retaining identity and feedbacks.	Limited capacity before loss of system identity.	Support smaller-scale resilience; enable deliberate transformation.
Cafer et al. (2019)	Communities absorb, mitigate, and transform stressors systematically and empirically.	Needs stronger empirical and methodological grounding.	Combine Sustainable Livelihoods (SLA) and Community Capitals (CCF) frameworks.

Across these definitions, resilience shifts from a descriptive systems property toward a normative and operational framework guiding intervention in social–ecological systems. This shift requires distinguishing between resilience as an overarching system capacity and the enabling conditions that support adaptive capacity within it.

Adaptive capacity refers to the ability of individuals, institutions, and systems to adjust to disturbance, moderate potential damages, and respond flexibly under uncertainty (Folke et al., 2010; IPCC, 2022). Resilience, by contrast, encompasses not only adaptation

but also persistence, reorganisation, and, where necessary, transformation. Enabling factors therefore operate as structural, relational, and institutional conditions that strengthen adaptive capacity and thereby contribute to the broader resilience of social–ecological systems.

In community contexts, such enabling factors include diversity, connectivity, learning, trust, leadership, participation, and social capital (Berkes & Ross, 2013; Biggs et al., 2015; Folke et al., 2010). Diversity broadens adaptive options and reduces systemic vulnerability; learning and reflexivity support adjustment under uncertainty; trust and leadership facilitate coordination; and participatory networks distribute knowledge and agency across scales.

Empirical studies further differentiate these dimensions. Cutter et al. (2008), for example, focus primarily on adaptive capacity, identifying institutional and infrastructural characteristics—such as governance quality, access to information, and robust physical systems—that shape preparedness and response capacity. In contrast, Berkes and Ross (2013) conceptualise community resilience more broadly, emphasising relational attributes such as shared identity, trust, leadership, and adaptive learning as integral to sustaining collective resilience over time. Together, these strands suggest that resilience emerges from the interaction of structural conditions and relational dynamics, rather than from any single factor in isolation.

Table 2.4 summarises key frameworks developed between 2010 and 2022 that operationalise resilience-enabling factors across organisational, agricultural, urban, and community systems. Most resilience frameworks do not measure resilience directly. Instead, they identify enabling factors or capacities that strengthen systems' ability to adapt, reorganise, and transform. Table 2.4 therefore summarises frameworks that operationalise resilience through sets of resilience-enabling capacities across different domains. While these frameworks vary in scope and emphasis, they converge around a recurring set of enabling conditions that underpin adaptive and transformative capacity.

Table 2.4 Frameworks and Enabling Factors supporting Resilience (2010–2022)

Author(s)	Year	Field / Context	Framework / Approach	Key Enabling Factors	Main Insights / Limitations
Erol et al. – Extended Enterprise Resilience	2010	Organisational / enterprise systems	Enterprise Resilience Framework	Vulnerability; flexibility; adaptability; agility	Highlights connectivity among people, processes, and IT; requires empirical validation in practice.
Suarez et al. Urban Resilience	2016	Urban systems (Spain)	Urban Resilience Framework	Diversity; modularity; feedback; social cohesion; learning; innovation	Offers multidimensional view of resilience. limited integration among identified factors.
Cafer et al. – A Community Resilience Framework for Practitioners	2019	Community development (USA)	Community Resilience Framework (CRF)	Natural, cultural, human, social, political, financial, and built capital	Integrates vulnerability across timescales. limited focus on infrastructure links
Meuwissen et al. – Resilience of Farming Systems	2019	Agricultural systems (Europe)	Resilience Assessment Framework	Robustness; adaptability; transformability; diversity; modularity; reserves	Considers temporal evolution; lacks explanation of how factors interact across scales.
Iwaniec et al. – Co-produced Sustainable Future Scenarios	2020	Sustainability transitions (USA)	Sustainable Futures Scenarios (SFS) Framework	Adaptive learning; diversity; redundancy; specified adaptive capacities	Incorporates trade-offs among pathways. focuses more on specified than general resilience.
Baumber et al. – Resilient Utopias	2022	Ecology and society (Australia / India)	Utopian Resilience Model	Diversity; reserves; nestedness; semi-permeability; creativity; leadership; communication; unity of purpose; spiritual capital	Adds cultural and relational dimensions to resilience. based on limited actor perspectives.

Across these frameworks, several patterns recur: diversity, modularity, learning, participation, and leadership are consistently associated with resilience capacity. However, shared limitations persist. Integration among enabling factors is often weak; cultural and narrative dimensions remain underdeveloped; and translating conceptual models into practice remains challenging.

In response to these limitations, resilience scholarship over the past decade has increasingly foregrounded cultural and relational domains as central, rather than peripheral, to adaptive capacity (Berkes & Ross, 2013; Brown, 2016; Ives et al., 2018; Ives et al., 2023; Wamsler, 2022). Relational approaches emphasise that resilience is not only a function of structural diversity, modularity, or institutional design, but also of meaning-making processes, identity, values, emotions, and power relations embedded within social systems. For example, studies of climate adaptation have shown that communities' responses are shaped not only by material resources but by shared identities, collective memory, and relational trust, which influence whether change is perceived as threat, opportunity, or injustice. This relational turn reframes resilience from a property of systems to a practice enacted through relationships, discourse, and situated agency. In doing so, it opens space to consider how cultural infrastructures (including narratives) condition the possibilities for adaptation and transformation.

2.3.1.4 Critiques and Conceptual Tensions

Despite its widespread adoption, resilience theory has attracted sustained critique. A central concern is its normative ambiguity. High resilience can sustain both desirable and undesirable regimes, depending on what is being maintained (Walker, 2020). Authoritarian governance systems, fossil-fuel-dependent economies, or entrenched inequalities may all exhibit strong internal feedbacks that reinforce persistence. Resilience therefore denotes capacity to endure, not moral worth. This insight reinforces the need to ask "resilience of what, to what, and for whom?" (Carpenter et al., 2001), foregrounding distribution, power, and justice in resilience debates.

A related line of critique highlights how resilience has been appropriated within technocratic or neoliberal governance frameworks. In some policy contexts, resilience is framed as self-reliance and local responsibility rather than structural transformation (Joseph, 2013; MacKinnon & Derickson, 2013; Welsh, 2014). Urban and austerity policies have invoked community resilience to justify the withdrawal of state support,

shifting responsibility for risk management onto local actors while leaving structural drivers unaddressed (MacKinnon & Derickson, 2013). Such framings risk normalising crisis and recasting adaptation as a moral obligation rather than a political issue (Joseph, 2013; Welsh, 2014).

Measurement frameworks and resilience indices have also generated debate. Numerous tools have been developed to operationalise community resilience, yet many rely on top-down indicator models that prioritise quantifiable variables over lived experience and contextual knowledge (Tate, 2012; Turner, 2014). Composite indices are particularly sensitive to methodological assumptions: small changes in indicator weighting or aggregation can significantly alter outcomes (Tate, 2012). Moreover, resilience metrics often embed normative assumptions—such as equating higher income or infrastructure with adaptive capacity—while overlooking relational and cultural dimensions (Carpenter et al., 2012; Cote & Nightingale, 2012). As a result, measured resilience may reflect model design as much as social reality.

Another critique concerns the uncritical transfer of ecological metaphors into social contexts. Adaptive-cycle models and ecosystem analogies can naturalise social crises by portraying them as cyclical or inevitable phases of renewal (Evans, 2011). When applied to community decline, unemployment, or housing crises, such metaphors risk obscuring political, institutional, and historical drivers of vulnerability (Cote & Nightingale, 2012; Evans, 2011). Without attention to power and inequality, resilience discourse may depoliticise structural injustice.

A further conceptual tension involves trade-offs among enabling factors. Resilience is not maximised by indefinitely increasing diversity, connectivity, or reserves. As Walker and Salt (2012) note, trade-offs are context-dependent. In highly interconnected systems, greater connectivity can enhance redundancy but also transmit cascading shocks (Buldyrev et al., 2010; Dobson et al., 2007). Conversely, modularity may strengthen autonomy but reduce efficiency. Similar tensions emerge at the community scale, where openness, cohesion, and flexibility must be continually balanced.

Collectively, these critiques underscore that resilience is neither inherently desirable nor straightforward to operationalise. They highlight the need for approaches that attend to power, inequality, contextual specificity, and the lived interplay between structural conditions and social meaning. These tensions provide the backdrop for reframing

resilience beyond a systems property toward a relational and socio–cultural process. These critiques are not merely theoretical. As later chapters demonstrate, resilience language can also function narratively within communities, shaping whose experiences are foregrounded and whose concerns remain marginalised.

2.3.1.5 From Systems Property to Social–Cultural Process

In response to these critiques, recent scholarship has broadened resilience beyond a systems property toward a relational and socio–cultural process. Increasingly, resilience is understood not only in terms of structural robustness or adaptive capacity, but also through shared meanings, collective identity, and relational dynamics (Brown et al., 2017; Davidson, 2010; Krauß & Bremer, 2020; Veland & Lynch, 2016).

Empirical studies illustrate this shift. Davidson (2010) shows how rural Canadian communities navigating resource collapse drew resilience from collective identity and moral purpose as much as from economic diversification. Similarly, Brown et al. (2017) demonstrate that participatory storytelling and arts-based engagement can strengthen trust and empathy, enabling communities to confront loss while imagining sustainable futures. Such findings underscore that resilience in social systems is mediated by interpretation, emotion, and shared narrative, not solely by infrastructure or institutional design.

This broader orientation aligns with what has been described as a relational turn in environmental social science. Rather than treating ecological, institutional, and cultural dimensions as separable layers, relational perspectives emphasise interdependence and co-production (Cote & Nightingale, 2012; Meerow et al., 2019). Structural conditions—such as governance arrangements, leadership configurations, communication infrastructures, and demographic diversity—shape how communities respond to disturbance. Yet these structures do not operate independently of meaning and identity; they are enacted, interpreted, and contested through narrative processes.

Resilience therefore operates through a dual logic. On one level, enabling factors function as material and institutional conditions that directly shape adaptive capacity. On another level, these same conditions influence which narratives emerge, circulate, and gain legitimacy within a community. Narratives of trust, decentralisation, fairness, or collective purpose can reinforce structural arrangements, while dominant or exclusionary

stories may constrain transformation. Structural and narrative dimensions are thus mutually constitutive rather than hierarchically ordered.

The trajectory traced across resilience scholarship—from stability and recovery toward adaptation, transformation, and social–ecological integration—is summarised in Figure 2.2.

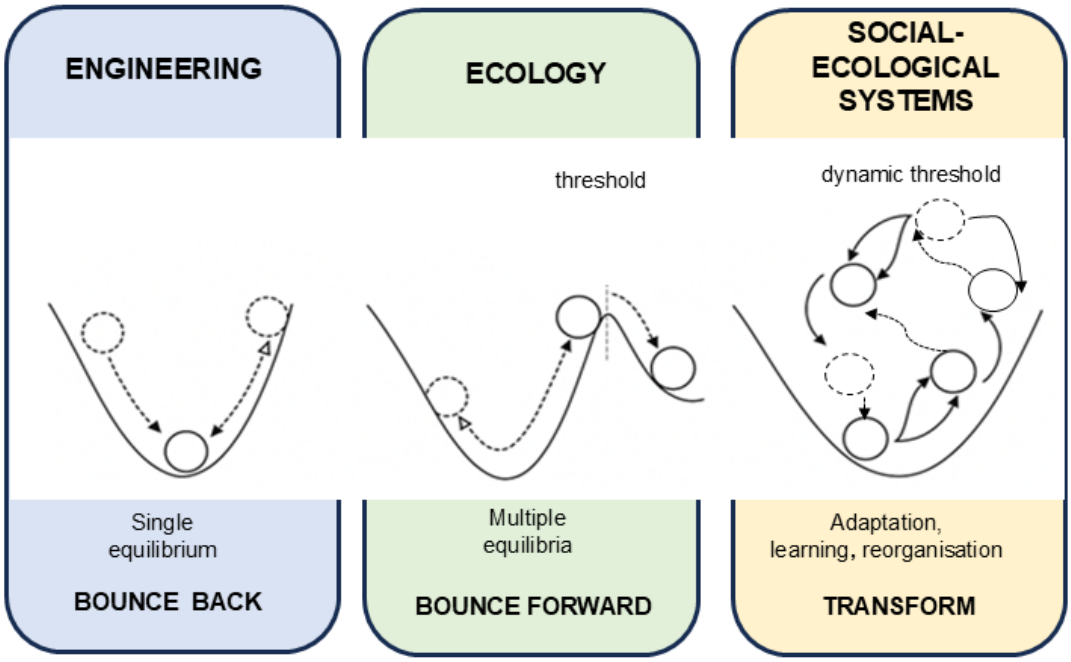


Figure 2.2. Evolution of resilience thinking from equilibrium-based recovery toward adaptive, transformative, and relational perspectives that integrate structural and cultural dimensions.

Understanding resilience as relational does not diminish the importance of structural foundations. Rather, it clarifies that adaptive capacity in human systems emerges through the interaction between institutional architectures and the interpretive practices through which communities make sense of change. Resilience becomes a living process shaped by feedback among material conditions, social relationships, and shared narratives.

This shift parallels a broader relational turn across environmental social sciences and sustainability research, where scholars increasingly emphasise co-production, interdependence, relational values, and situated knowledge over dualistic or reductionist framings of human–nature systems (Cote & Nightingale, 2012; Ives et al., 2018; West et al., 2020). This relational conceptualisation provides the foundation for engaging

complex systems thinking, which offers analytical tools for examining how structural feedbacks and cultural–narrative processes interact across scales.

2.3.2 Complex Systems Thinking

Complex systems thinking provides analytical tools for understanding interdependence, feedback, and non-linearity within social–ecological systems. Rather than treating systems as predictable and controllable, complexity theory highlights emergence, path dependency, thresholds, cross-scale dynamics, and trade-offs (Arnold et al., 2015; Capra & Luisi, 2014). From this perspective, resilience is best understood as an emergent property arising from relationships among system components rather than as a characteristic of isolated parts (Carpenter et al., 2012; Gibbs, 2007).

Key features of complex systems—including feedback loops, self-organisation, tipping points, and cascading effects—complicate linear models of planning and intervention (Carpenter et al., 2012; Schoenmakers & Feudel, 2021). Small localised changes may propagate through networks to produce delayed or disproportionate impacts, while tightly coupled systems may transmit shocks across scales (Centeno et al., 2015; Levin et al., 2013). In an era marked by ecological limits, technological interdependence, and systemic risk, understanding these dynamics becomes essential (Homer-Dixon et al., 2015).

Figure 2.3 illustrates this core principle: how small, local interventions can cascade through interconnected systems via feedback loops, generating amplified or delayed consequences across multiple scales.

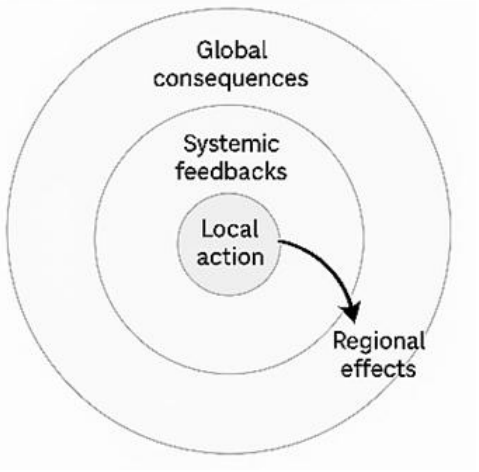


Figure 2.3. Principle of systems thinking: small, local changes can propagate through feedback loops to produce large or delayed effects across interconnected scales.

Systems thinking also highlights potential leverage points for intervention. Meadows (1999) argues that transformative change often occurs not through surface-level adjustments but by altering deeper system parameters, such as information flows, institutional rules, or underlying paradigms. This insight complements resilience scholarship by emphasising adaptive governance, cross-scale coordination, and the capacity to reorganise under uncertainty.

However, complexity approaches are not without critique. When applied narrowly, systems thinking can become abstract, technocratic, or detached from lived experience (Burns & Worsley, 2015; Midgley, 2000). Community contexts often require participatory and reflexive methods that integrate local knowledge and relational dynamics rather than privileging formal modelling alone. Contemporary scholarship therefore calls for combining systems approaches with qualitative, dialogical, and transdisciplinary practices (Fazey et al., 2018; Westley et al., 2013).

Taken together, complex systems thinking reinforces the view that resilience emerges through dynamic interaction rather than static capacity. Yet it also highlights the limits of purely structural analysis. Understanding how communities navigate complexity requires attention not only to feedbacks and thresholds but also to how change is interpreted, narrated, and coordinated in practice. This insight provides a bridge to the next section on transformation and transition studies.

2.3.3 Transformation and Transition Studies

Addressing escalating socio-ecological crises requires more than technical solutions or incremental policy adjustments. Many scholars argue that contemporary challenges are rooted in deeper structural and cultural configurations—such as persistent human–nature dualisms, institutional lock-ins, and dominant imaginaries of progress—that constrain society's capacity to respond adaptively and ethically to change (Escobar, 2018; Leach et al., 2010; Meadowcroft, 2011; O'Brien, 2018). These configurations shape not only which solutions are considered viable, but also whose perspectives are recognised and how responsibility is distributed across scales (Jasanoff, 2004; Stirling, 2014). This perspective provides a bridge from resilience to broader debates on transformation. Whereas resilience scholarship emphasises how systems and communities adapt within changing conditions, transformation and transition studies examine how more

fundamental shifts occur when prevailing institutions, norms, or narratives no longer sustain wellbeing. Transition studies focus primarily on changes in technological and institutional systems toward sustainability (Geels, 2002; Rotmans & Loorbach, 2010), while transformation studies foreground social, cultural, and political reconfigurations that reshape identities, values, and power relations (O'Brien, 2013; Pelling, 2011).

Across these literatures, a central distinction is drawn between incremental adaptation—adjustments that preserve existing structures—and transformational change, which reconfigures underlying relationships, worldviews, and governance arrangements (Fedele et al., 2019; O'Brien, 2013). Transformation unfolds across technological, institutional, behavioural, and cultural dimensions as societies experiment, exercise agency, and reimagine possible futures (O'Brien, 2018; Westley et al., 2013). However, such shifts are frequently constrained by entrenched practices, path dependencies, and dominant narratives that reproduce unsustainable trajectories (Geels, 2005; Tschakert & Tuana, 2013). Periods of crisis can open "windows of opportunity" for reorganisation, enabling alternative governance arrangements and collective imaginaries to emerge (Pereira et al., 2020).

Recent assessments by the Intergovernmental Panel on Climate Change further consolidate these distinctions. The IPCC Working Group II Sixth Assessment Report defines transformational adaptation as adaptation that fundamentally alters system attributes in response to climate risk, often involving shifts in governance, values, or development pathways (IPCC, 2022). The report emphasises that transformational change may be required where incremental adaptation reaches its limits, and highlights that such transformations are shaped by power dynamics, equity considerations, and institutional capacity. The IPCC recognises that transformation is context-specific and may involve both structural reconfiguration and shifts in social meaning, reinforcing the need to examine how change is interpreted and enacted within communities.

Transformation is increasingly understood as extending beyond material or institutional restructuring to include shifts in perception, values, and relational orientations. Such inner–outer interdependencies—identified in resilience, adaptation, and sustainability research (Cote & Nightingale, 2012; Ives et al., 2019; O'Brien, 2018; Wamsler, 2022; IPCC, 2022)—underscore that sustainable transitions depend not only on infrastructural or governance reform, but also on changes in meaning-making, identity, relational trust,

and collective imaginaries. Social transformation is therefore inseparable from shifts in lived practice and cultural orientation.

At the same time, scholars caution that the language of "transformation" is not universally emancipatory. For many Indigenous and place-based communities, externally driven transformation has historically been associated with dispossession, cultural erasure, or imposed development agendas (Pelling, 2011; Tschakert & Tuana, 2013). In such contexts, resilience may be expressed not through radical restructuring but through continuity, relational renewal, and the maintenance of reciprocal relationships with land and community. The IPCC (2022) increasingly recognises Indigenous and local knowledge systems as distinct and legitimate knowledge traditions, emphasising their role in adaptive governance and climate response. Attending to these perspectives complicates linear narratives of transformation and reinforces the need to examine how change is interpreted, negotiated, and narrated within specific cultural contexts

A growing consensus recognises that sustainable futures are co-produced through iterative and inclusive processes involving diverse actors across scales (Chambers et al., 2022; Djenontin & Meadow, 2018; Iwaniec et al., 2020; Norström et al., 2020; Schneider et al., 2021). Participatory and transdisciplinary approaches—such as scenario planning, co-designed visioning, and place-based experimentation—ground transformation in lived realities and local aspirations rather than in technocratic prescriptions (Iwaniec et al., 2020). These approaches strengthen systems awareness, collective learning, and collaborative governance, conditions frequently associated with transformative capacity (Olsson et al., 2014; Pelling et al., 2015).

Despite this expanding theoretical foundation, fewer empirical studies examine how communities themselves initiate, interpret, and sustain processes of transformation. This gap becomes particularly salient when considering the role of meaning and narrative in shaping collective change. Resilience and transformation are not treated here as separate or sequential processes. Transformation can be understood as one trajectory of resilience under conditions where existing configurations become untenable. Within this continuum, narratives operate across both domains: they shape how disturbances are interpreted in resilience processes and how deeper reconfigurations are imagined and enacted in transformation.

While transformation and transition studies illuminate structural shifts in institutions, technologies, and governance systems, they leave comparatively less attention to the interpretive processes through which such shifts are understood, legitimised, and enacted. To address this dimension, the thesis now engages more directly with the narrative and discursive foundations of resilience.

2.3.4 Narrative and Discursive Dimensions of Resilience

Increasingly, resilience scholarship has recognised that adaptive and transformative processes are shaped not only by material and institutional arrangements, but also by interpretive, cultural, and normative dynamics (Cote & Nightingale, 2012; Folke et al., 2021; IPCC, 2023). While early resilience research prioritised systems properties and ecological thresholds, subsequent work has emphasised that resilience is mediated through meaning, power, and framing. Discursive and critical perspectives therefore extend resilience thinking by interrogating how knowledge is constructed, how legitimacy is negotiated, and how alternative futures are imagined within particular socio-political contexts.

To clarify the conceptual distinctions used throughout this thesis, Figure 2.4 presents a hierarchical representation of the interpretive architecture underpinning resilience practice. At the broadest level, culture refers to the shared symbolic horizon of values, imaginaries, and interpretive orientations that shape what is considered meaningful, legitimate, or possible. Within this field, discourse denotes institutionalised systems of meaning embedded in governance arrangements, policy frameworks, and dominant societal logics (Hajer & Versteeg, 2006). Discourses structure authority and legitimacy across scales, influencing which forms of knowledge are recognised and which futures are considered plausible.

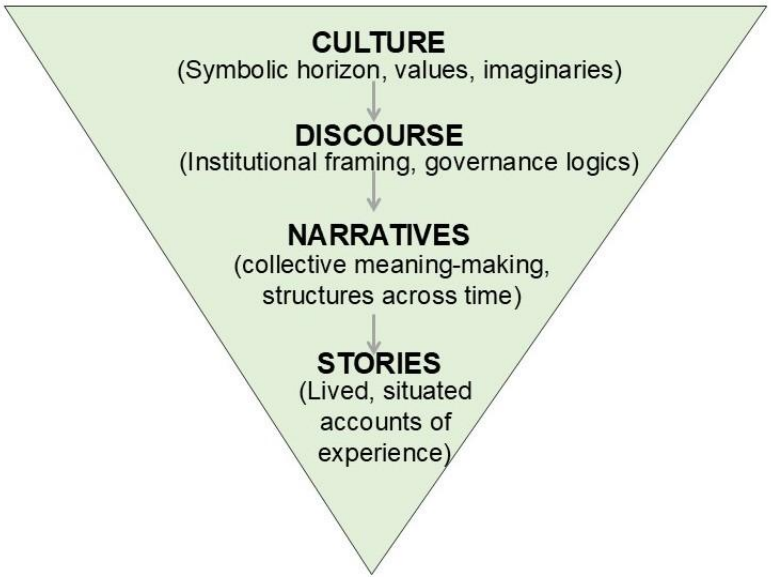


Figure 2.4. Hierarchical structure of interpretive dimensions in resilience practice

Narratives operate within and across these discursive contexts as relational meaning-making structures that organise events, identities, and values into coherent interpretations across time (Somers, 1994). Narratives link characters, plots, and moral orientations in ways that shape collective understanding and coordinate action. Unlike individual stories, narratives operate at a broader structural level, configuring how experiences are interpreted, how identities are stabilised or contested, and how futures are imagined within a community. Stories, by contrast, are situated and often experiential accounts of events told by individuals or groups. They convey specific lived experiences and sequences of events, while broader narratives provide the interpretive structures that organise those experiences into shared meaning (Polkinghorne, 1988; Somers, 1994).

This hierarchy enables analytical precision in examining how structural and narrative capacities interact in resilience practice. Resilience thinking is not only a systems-based analytical framework; it is enacted within layered narrative and discursive environments that shape how disruption is recognised, how responses are coordinated, and how transformation is imagined. Narrative processes organise lived experience into shared meaning, while discursive formations influence what can be articulated, whose knowledge is legitimised, and which pathways of change gain traction.

This section therefore examines how epistemological assumptions, narrative practices, and discursive power co-shape resilience thinking and its practical enactment. By distinguishing between narrative as a community-level mechanism of meaning-making

and discourse as a broader institutional field of power and legitimacy, the analysis clarifies how resilience emerges not only from structural capacities, but from the interpretive processes that activate, stabilise, or reconfigure them.

2.3.4.1 *Ontological and Epistemological Foundations Resilience*

Discursive and critical perspectives interrogate the epistemological and ontological assumptions that underpin resilience thinking. They argue that how we conceive of the world—what we believe exists, how relationships are understood, and whose knowledge counts—shapes what forms of resilience become visible, measurable, and actionable. Resilience is therefore not only analysed as a property of systems but also understood through particular ways of knowing and being.

Much contemporary resilience scholarship has developed alongside critiques of modernity's dualisms: separations between humans and nature, society and ecology, mind and body, and expert and lay knowledge (Plumwood, 1993). These divisions fragment understanding and obscure the relational entanglements that characterise social–ecological life. In the Anthropocene, where human and more-than-human systems are deeply intertwined, such separations become increasingly untenable (Chandler, 2018; Haraway, 2016; Latour, 2017). A relational ontology therefore challenges the assumption that systems can be treated as discrete, bounded entities detached from culture and power.

From this perspective, resilience emerges through dynamic relations among ecological processes, institutional arrangements, and cultural meanings. Relational approaches do not deny material constraints; rather, they emphasise that material and interpretive dimensions co-evolve. This orientation deepens the conceptual move introduced earlier: resilience is not merely a technical capacity but a culturally and philosophically situated process shaped by how communities understand their place within interdependent social–ecological systems.

2.3.4.2 *Narrative Processes as Mechanisms of Resilience*

Resilience thinking is not only structured by epistemological assumptions; it is also enacted through narrative processes. Narrative refers here to patterned modes of meaning-making through which communities interpret disruption, articulate collective identities, and orient action toward possible futures. Even when resilience is framed in technical or

systems-based terms, narrative logics underpin how uncertainty is translated into shared understanding and coordinated response.

Resilience frameworks and outcomes are shaped by the values and worldviews of those who design and apply them (Carpenter et al., 2012; Ulug et al., 2021). Indicators frequently privilege ecological or biophysical variables such as diversity, redundancy, and adaptive capacity, reflecting particular epistemological orientations (Carpenter et al., 2012). When operationalised in governance settings, resilience concepts tend to reproduce institutional logics: engineering agencies emphasise stability and control, whereas social planners foreground participation, equity, and wellbeing (Suarez et al., 2016). These differences demonstrate that resilience practice is mediated through interpretive frames.

Narrative dynamics become especially visible in scenario planning, where uncertainty is translated into structured accounts of alternative futures (Carpenter et al., 2012). Participatory future visioning similarly draws on narrative forms to enable communities to articulate desired trajectories rather than merely anticipate probable ones (Comelli et al., 2024). In these contexts, narrative functions as a mechanism for organising experience, negotiating values, and aligning collective action.

Narrative processes shape not only cognition but also emotion and agency. Shared narrative accounts of disruption can foster coherence, transforming dispersed experiences into collectively intelligible meaning (Boon et al., 2016). This interpretive coherence strengthens relational bonds and nurtures a sense of collective efficacy, as individuals recognise their capacity to influence outcomes rather than remain passive in the face of uncertainty (Schwab & Roysen, 2022). In this way, narrative contributes to adaptive capacity cognitively, affectively, and socially.

Narrative framing also influences the direction of change. Emotionally resonant collective narratives can translate abstract sustainability goals into shared imaginaries that inspire engagement and hope (Riedy, 2022). Conversely, crisis-oriented framings may heighten awareness while risking paralysis or eco-anxiety (Ojala et al., 2021; Pihkala, 2020). The transformative potential of resilience is therefore shaped in part by how challenges are narratively configured—whether as inevitable decline, technical malfunction, or opportunities for collective reorientation.

Under conditions of uncertainty, the capacity to reinterpret and recombine shared meanings becomes especially significant. The flexibility of narrative configurations influences whether resilience reinforces established trajectories or supports more reflexive forms of adaptation. Narrative processes do not substitute for structural capacities; rather, they shape how those capacities are understood, coordinated, and mobilised in practice.

2.3.4.3 Discursive Governance and the Politics of Resilience

While narrative processes operate within communities and resilience practice, discourse functions at broader institutional and political scales. Discourse refers to relatively stabilised systems of meaning that structure what can be said, who is authorised to speak, and which interpretations become legitimate within governance arenas (Hajer & Versteeg, 2006). Through discourse, particular framings of resilience are normalised, institutionalised, and reproduced across policy, planning, and scientific practice.

Environmental governance scholarship has long demonstrated that political debates are organised through competing discourses that embody distinct assumptions about nature, economy, and social order. In The Politics of the Earth, Dryzek (1997) showed how environmental politics is structured by discursive formations—such as administrative rationalism, democratic pragmatism, and ecological modernisation—that frame both environmental problems and their acceptable solutions. These discourses do not merely describe ecological realities; they shape institutional responses, allocate authority, and define the boundaries of legitimate action.

Resilience has similarly evolved as a powerful governance discourse. As the concept has travelled from ecology into development policy, urban governance, climate adaptation, and sustainability planning, it has acquired normative and institutional weight. When embedded within technocratic or managerial framings, resilience may privilege optimisation, stability, and expert-led intervention. Such framings often foreground measurable indicators and system control, potentially marginalising experiential, relational, or locally grounded knowledges (Krauß & Bremer, 2020; Saltelli et al., 2020; Veland & Lynch, 2016). In this sense, resilience discourse can stabilise particular system configurations while obscuring political and ethical tensions.

Critical scholarship has therefore cautioned against depoliticised or universalised applications of resilience (Cote & Nightingale, 2012; Davoudi, 2012). Framing resilience as an unquestioned objective risks masking conflicts over distribution, responsibility, and power. Discursive configurations influence whose vulnerabilities are prioritised, which futures are deemed desirable, and how transformation is defined. Resilience becomes not only a descriptive concept but a normative terrain shaped by institutional histories, regulatory pressures, and political interests.

Plurality within the discursive field is therefore central. Where multiple interpretive frames coexist, communities and institutions may negotiate divergent understandings of change and possibility. Where a single dominant discourse prevails, alternative imaginaries may be marginalised. Recognising discursive plurality highlights that resilience is shaped by struggles over meaning as much as by material constraints.

One illustration of how alternative discursive configurations reshape resilience imaginaries is provided by regenerative and sustainability-oriented framings that emphasise relationality, cooperation, justice, and ethical inclusion. These discourses move beyond mechanistic or optimisation-oriented assumptions by situating human systems within interdependent ecological and moral fields.

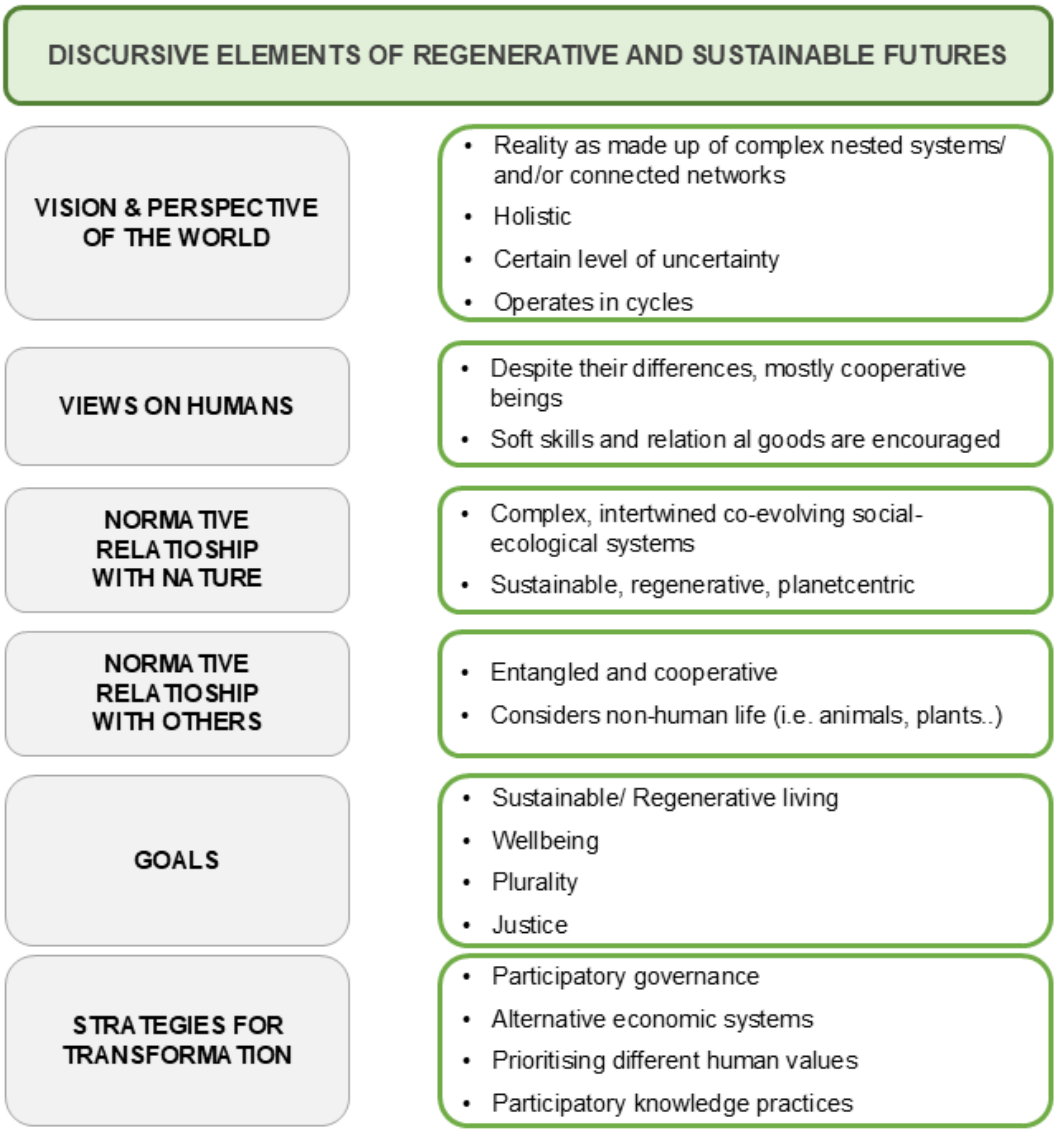


Figure 2.5 Core discursive elements of regenerative and sustainable futures.

Recognising discursive asymmetries highlights that fostering resilience involves more than learning or adaptation; it requires creating space for diverse narratives, epistemologies, and worldviews to coexist. A plural discursive field enables communities to negotiate meaning, explore divergent futures, and acknowledge multiple forms of knowledge. Without such plurality, resilience risks becoming a stabilising narrative that marginalises dissenting perspectives or alternative imaginaries.

This emphasis on pluralism resonates with Veland and Lynch's (2016) argument that stories of the Anthropocene expose deeper ontological and epistemic divides—between linear, authoritative accounts of progress and more relational narratives of coexistence and reciprocity. Similarly, Riedy (2022) demonstrates how contemporary change agents

struggle to articulate social imaginaries capable of challenging neoliberal capitalism, a dominant paradigm that privileges market logics, competition, and individualism over collective wellbeing and ecological balance. These tensions illustrate that resilience is always embedded within broader cultural narratives about economy, governance, and human–nature relations.

Discursive and narrative pluralism—the coexistence of multiple worldviews, timescales, and relational understandings—therefore becomes foundational for resilience conceived as a culturally, politically, and ethically situated process. In this framing, resilience is not a neutral technical capacity but a contested terrain in which meaning, power, and transformation are continuously negotiated.

2.3.4.4 Values, Framing, and Inner Dimensions of Resilience

Decisions about resilience are shaped not only by instrumental reasoning or institutional design but also by the values and moral commitments that guide how people relate to one another and to the more-than-human world. Relational values—such as care, reciprocity, responsibility, and belonging—play a central role in shaping adaptive capacity by grounding resilience in lived ethical practices rather than purely technical considerations (van Noordwijk et al., 2023). Recognising these relational orientations expands resilience beyond logics of efficiency and optimisation, foregrounding the moral and cultural dimensions through which communities interpret change.

Meaning-making is central to this process. It refers to the interpretive work through which individuals and groups construct coherence, significance, and purpose in the face of uncertainty. Scholars across resilience and sustainability research argue that meaning-making shapes how people perceive risk, evaluate trade-offs, and determine what is worth sustaining or transforming (Cote & Nightingale, 2012; Fisher et al., 2022). Vulnerability and inequality are therefore not only material conditions but also culturally mediated realities, shaped by how societies assign value, recognise suffering, and distribute responsibility (Tschakert et al., 2013).

Framing mediates between structural conditions and lived experience. The way disruptions are interpreted influences whether resilience reinforces existing arrangements or opens space for change. Cultural narratives of progress, security, inevitability, or decline shape collective orientations toward the future (Macy, 1998; Maiteny, 2002;

O'Brien, 2012). Some framings constrain agency by reinforcing resignation or fear; others cultivate connection, ethical reflection, and moral imagination.

These dynamics connect closely with emerging work on the "inner" and "outer" dimensions of resilience. Outer dimensions encompass material infrastructures, governance systems, and institutional arrangements. Inner dimensions refer to worldviews, values, emotions, and forms of consciousness that influence how individuals and communities interpret and engage with change (Cote & Nightingale, 2012; Fisher et al., 2022). The interaction between these dimensions highlights that resilience is mediated through meaning: structural capacities are interpreted, activated, or constrained through cultural and ethical frames.

Ecovillages provide a valuable empirical lens onto these dynamics. By embedding relational values—such as cooperation, ecological embeddedness, and participatory governance—into everyday practice, they illustrate how alternative framings of wellbeing and interdependence can support more reflexive forms of resilience. Their practices demonstrate how values, meanings, and institutional arrangements co-evolve within specific ecological and social contexts. In this way, resilience is enacted not only through structural capacities but through shared moral orientations that guide collective action.

2.3.4.5 Reflexive and Generative Approaches to Resilience

Building on the ontological, narrative, and discursive dimensions outlined above, reflexive and generative approaches to resilience emphasise the critical examination of dominant framings and the cultivation of alternative futures. Drawing on relational perspectives on generative discourse (Gergen, 2009), generativity refers to the capacity to expand interpretive possibilities and open space for new forms of collective action. Rather than treating resilience as a fixed or neutral capacity, these perspectives foreground dialogue, reflexivity, and ethical engagement as integral to adaptive and transformative practice (Folke et al., 2016). Reflexivity involves recognising that resilience framings are situated within particular cultural and institutional contexts. It requires questioning which assumptions guide problem definitions, whose knowledge is prioritised, and how responsibility is distributed. Without such reflexive attention, resilience risks becoming a stabilising language that accommodates disruption without addressing structural drivers or normative tensions (Coulthard, 2012; Davoudi, 2012).

Generative discourses extend this reflexive stance by fostering conditions in which new meanings, imaginaries, and relational commitments can emerge. Dialogical and participatory practices—such as collaborative storytelling, place-based engagement, and arts-based inquiry—have been shown to cultivate empathy, inclusivity, and what Werhane (1999) terms moral imagination: the capacity to envision courses of action that integrate ecological, social, and ethical considerations (Brown et al., 2017; Hajer, 2005). These approaches do not replace structural interventions but complement them by expanding the interpretive space within which change is negotiated.

Discursive dynamics are intertwined with material conditions. Resource distribution, governance arrangements, spatial design, and communication infrastructures shape which interpretations gain traction and which remain marginal. External regulatory pressures may constrain community agency, while narratives of legitimacy, belonging, or decentralised authority can gradually reshape institutional configurations. Adaptive capacity therefore unfolds through the ongoing interaction of structural arrangements and interpretive processes (Bevir & Rhodes, 2010; Cote & Nightingale, 2012).

Taken together, these perspectives underscore that resilience is enacted within lived contexts where meaning, power, and structure interact. Its trajectory—whether stabilising or transformative—depends on how communities navigate plural interpretations within structural constraints. Recognising this interplay provides a foundation for examining resilience not only as a systems property but as a situated practice shaped by narrative framing, discursive negotiation, and ethical orientation. The following section grounds these theoretical insights in community and place-based systems, exploring how spatial, institutional, and relational contexts condition the practices through which resilience emerges.

2.4 Contextual Foundations: Community and Place-Based Systems

Communities are not only social groupings but complex social–ecological systems shaped by place, identity, governance, and shared meaning. Understanding resilience therefore requires attention to the contextual foundations through which communities organise life, manage interdependencies, and cultivate forms of belonging and collective

purpose. Place-based relationships, ecological settings, and local histories influence how resilience is enacted, while some communities—such as ecovillages—actively experiment with alternative imaginaries, governance structures, and socio-ecological practices. These contexts show how structural, cultural, and relational dimensions co-produce the conditions for transformation. This section examines community as a social–ecological system, explores the role of place and lived experience, considers communities as sites of experimentation and transformation, and concludes by showing why narrative offers a crucial bridge connecting governance, identity, and meaning within these systems.

2.4.1 Community as a Social–Ecological System

Communities occupy a critical position in resilience thinking as both social networks and systems of interdependence embedded within specific ecological contexts. They represent the scale at which collective capacities such as trust, reciprocity, leadership, and shared purpose become tangible and actionable (Norris et al., 2008; Magis, 2010). From a systems perspective, communities can be understood as adaptive units composed of interacting human and non-human components: individuals, institutions, ecosystems, infrastructures, and material flows. These components are linked through feedback processes that shape how people interpret and respond to change, reflecting the social–ecological systems (SES) view that human and environmental processes are co-evolving rather than separate domains (Folke et al., 2010).

Yet communities are more than the sum of their functional interdependencies. They are relational formations grounded in shared identity, belonging, and meaning. These social and affective dimensions underpin resilience by fostering cooperation, mutual care, and collective action (Berkes & Ross, 201; Ross et al., 2010). In practice, community resilience emerges through the interplay of tangible resources—knowledge, skills, infrastructures—and intangible ones such as trust, values, memory, and collective purpose. This dual material–symbolic nature of community life highlights that resilience is not solely determined by external capacities or governance structures but also by the ways in which people imagine, negotiate, and sustain their relationships with one another and with their environment.

Ecovillages exemplify this integrated perspective. As intentional, place-based communities, they manage food, energy, water, and governance interdependently, often experimenting with socio-ecological arrangements that foreground reciprocity, low-impact living, and shared decision-making. In doing so, they offer insight into how social and ecological relationships are co-produced at community scale, and how resilience emerges from ongoing interactions between material infrastructures, ecological contexts, and relational-cultural dynamics.

2.4.2 Place-Based Perspectives and Sense of Place

Resilience is inseparable from place. Place provides not only the physical setting within which social–ecological processes unfold but also the symbolic, emotional, and cultural foundations through which people construct meaning and belonging. From a phenomenological perspective, place is understood as lived experience—a nexus of relationships, memories, and embodied practices that connect individuals and communities to their environments (Relph, 1976; Tuan, 1977). Ingold's (2000) "dwelling perspective" similarly emphasises place as an ongoing process of engagement rather than a static location, foregrounding how people inhabit and co-create their worlds through everyday interactions with both material conditions and social relations.

A relational view of place expands this understanding by highlighting that places are constituted through networks of relationships that stretch across scales, histories, and ecological flows (Massey, 2005). In this view, place is dynamic and plural, shaped by movements of people, knowledge, culture, and more-than-human life rather than by bounded geography. Within resilience thinking, this relationality underlines how local systems are continually shaped by external drivers—economic, climatic, political—while retaining distinctive identities grounded in lived experience and situated knowledge (Chapin et al., 2010). Sense of place therefore becomes a critical foundation of community resilience: it anchors collective identity, motivates stewardship, and sustains meaning in the face of change (Manzo & Perkins, 2006; Masterson et al., 2017).

Place-based resilience cannot be fully understood without acknowledging Indigenous ontologies that conceive land not as resource but as relation. In many Indigenous knowledge systems, place is inseparable from identity, responsibility, and intergenerational continuity. Land is not simply inhabited but lived with, and resilience is

expressed through stewardship, reciprocity, and relational accountability rather than managerial adaptation. Efforts to integrate diverse epistemologies increasingly emphasise "weaving" knowledge systems in ways that respect difference while enabling collaboration (Tengö et al., 2017). The IPCC (2022) similarly recognises Indigenous and local knowledge as essential for adaptive governance and climate response. Attending to these perspectives reinforces the relational framing advanced here and underscores that resilience is also culturally mediated through narrative, value, and place-based meaning.

Ecovillages such as Findhorn and Narara exemplify these dynamics. As intentional, place-based experiments, they cultivate strong senses of place through shared histories, ecological practices, and participatory governance, while also engaging with broader networks and external pressures. Although the specific details of these communities are discussed in Chapter 1, their examples illustrate how place shapes identity, belonging, and the capacity to navigate uncertainty.

This relational understanding of place sets the stage for examining how narratives mediate these connections, shaping perceptions of change, informing collective purpose, and opening possibilities for transformation.

2.4.3 Communities as Contexts for Transformation

The community level represents a critical scale for observing and enabling transformation within social–ecological systems. While individual actions and national policies each shape resilience, it is often at the community scale that adaptation, experimentation, and collective learning become most tangible (Folke et al., 2010; Westley et al., 2011). Communities function as meso-level systems situated between individuals and broader institutional structures, where local knowledge, shared norms, and collaborative practices converge to generate pathways for change. This level of organisation provides both the social cohesion required to coordinate responses to disturbance and the diversity necessary for innovation and evolution (Biggs et al., 2015; Olsson et al., 2014).

Crucially, the community scale allows learning and transformation to become integrated processes. Through iterative cycles of reflection, dialogue, and experimentation, communities translate values and ideas into concrete practices that reshape social and ecological relations (Meadowcroft, 2009; Pelling et al., 2015). Such processes often emerge in response to disturbances that challenge established norms or institutional

arrangements, opening opportunities for reconfiguration and renewal. Transformation at this scale is therefore not only structural but relational and cultural, grounded in the meanings and shared commitments that anchor collective action.

Intentional communities such as ecovillages exemplify these dynamics. They serve as living laboratories where social innovation, ecological design, and participatory governance co-evolve at the community level (Litfin, 2014; Lockyer & Veteto, 2013). By experimenting with cooperative forms of living, regenerative practices, and alternative economic and governance systems, ecovillages present alternative imaginaries that challenge dominant narratives of progress and development. These communities demonstrate how new social–ecological configurations can be enacted in situ, offering insight into the conditions that enable or constrain community-scale transformation.

Yet their experiences also reveal the inherent vulnerabilities of community-based initiatives. Many intentional communities struggle to endure due to pressures such as unclear shared values, structural conflict, limited financial resources, and fragile governance arrangements (Baumber et al., 2022; Christian, 2003). These challenges highlight that transformation is neither automatic nor guaranteed: it must be intentionally cultivated, supported by robust organisational, social, and material foundations. When these conditions are present, however, community contexts can preserve essential functions while continually reimagining the social–ecological relationships that sustain them.

These dynamics suggest that communities constitute meaningful sites for understanding and nurturing the adaptive and transformative capacities needed to navigate an era of systemic uncertainty. They offer grounded examples of how values, governance, ecological practices, and collective identities coalesce to support resilience and transformation at the scales where people live their everyday lives.

2.4.4 Synthesis: Narrative as a Bridge Between Structure, Culture, and Governance

Understanding resilience through the lenses of community and place reveals that adaptive capacity is not simply a matter of managing ecological variables or institutional arrangements; it is also a relational and interpretive process. Communities function as living systems that generate diverse pathways of adaptation and transformation. Within

these systems, place provides the emotional and symbolic grounding that sustains belonging and collective identity, while community offers the organisational scale through which learning, coordination, and innovation are enacted.

Yet the relationships that constitute community and place are not static. They are continually negotiated and redefined through the stories people tell about who they are, where they belong, and what futures they seek to create. Narratives give coherence to experience, allowing communities to interpret disturbance, integrate memory with anticipation, and construct shared meaning. Through narrative processes, groups articulate values, define boundaries, and invoke collective purpose, making visible the cultural and relational foundations that underpin resilience.

Recognising this interpretive dimension is essential for understanding how resilience is enacted and transformed in practice. Narratives operate as bridges between structure and culture: they translate ecological and institutional realities into lived meaning, and they shape how governance systems respond to uncertainty, opportunity, and change. They also mediate agency by influencing how individuals and groups perceive their capacity to act, what they consider possible, and the kinds of futures they strive to realise.

The following section therefore examines the role of narratives and situated agency as key mechanisms through which communities make sense of change, mobilise collective action, and sustain the ongoing dialogue between continuity and transformation. By foregrounding narrative as both a generative and analytical lens, the thesis explores how patterned meaning-making processes both reflect and reshape the social–ecological relationships at the heart of community resilience.

2.5 Development of the Conceptual Framework

Building on the synthesis developed in Sections 2.2–2.3, this section formalises the conceptual framework guiding the study. The framework integrates insights from systems thinking, narrative and discursive perspectives, and theories of situated agency to explain how community resilience emerges through the interaction of structural, interpretive, and practical dimensions. Rather than privileging any single domain, it proposes that resilience unfolds through ongoing feedback among systemic properties, narrative meaning-making, and situated forms of action.

Figure 2.6 visualises this integrative logic by positioning community resilience at the intersection of three interdependent domains: systems, narratives, and situated agency. Each domain contributes distinct yet overlapping insights into how communities interpret change, mobilise collective responses, and sustain adaptive capacity over time. Their interaction forms the analytical foundation for the empirical chapters that follow.

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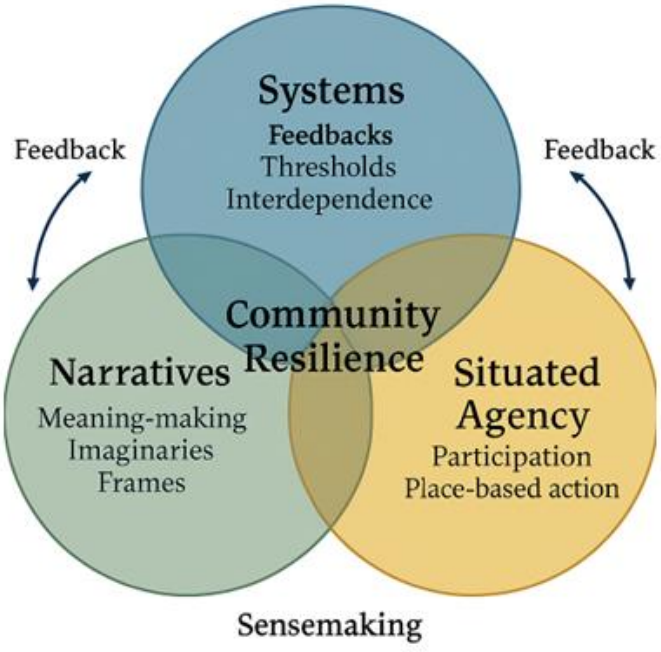


Figure 2.6 Theoretical foundations and conceptual framework: interplay of systems, stories and situated agency.

2.5.1 Systems

This domain encompasses the structural and dynamic properties that underpin the functioning and adaptability of social–ecological systems. It includes well-established attributes such as diversity, modularity, feedbacks, redundancy, and adaptability (Biggs et al., 2012; Folke et al., 2021; Walker & Salt, 2006). These attributes influence how systems absorb shocks, reorganise, and learn across disturbance cycles.

While systems theory provides a robust account of structural dynamics, it often abstracts from the lived and interpretive dimensions of community life. Within the present framework, systems are therefore understood not as mechanistic entities but as evolving relational configurations whose stability and transformation depend on ongoing

interaction with meaning-making and practice. Structural conditions shape possibilities for action, yet their significance is mediated through interpretation and enactment.

This domain establishes the structural conditions within which narrative processes and situated agency unfold. The following section therefore examines how narratives mediate between systemic dynamics and collective action.

2.5.2 Narratives

Narratives occupy a mediating position between systemic processes and situated action. In this thesis, a distinction is made between stories and narratives. Stories refer to particular accounts or episodes, whereas narratives denote broader relational structures that organise events, identities, and values into coherent interpretations across time (Somers, 1994). Narratives shape how communities interpret disturbance, assign value, and imagine desirable futures (Bruner, 1991).

Rather than treating narratives as passive reflections of structural conditions, this framework conceptualises them as dynamic processes that participate in shaping resilience trajectories. Narratives influence how disturbances are perceived, which responses are considered legitimate, and how collective identities are configured (Czarniawska, 2004; Paschen & Ison, 2014). Through cognitive, emotional, relational, and symbolic dimensions, they support coherence during uncertainty and help align collective action (Krauß & Bremer, 2020; Riessman, 2008).

At the same time, narrative processes are conditioned by structural and institutional contexts. Governance arrangements, resource distributions, ecological settings, and historical legacies influence which narratives circulate and gain traction (Berkes & Ross, 2013; Folke et al., 2010). Narratives thus operate neither independently of systems nor reducible to them; they mediate between structural conditions and lived experience.

Yet narratives require enactment. Their influence materialises through practices embedded within specific social–ecological contexts. The next section therefore turns to situated agency as the domain through which resilience is performed and negotiated in practice).

2.5.3 Situated Agency

Situated agency refers to the capacity of individuals and groups to act, learn, and transform within specific social–ecological contexts. It is understood here as "the capacity to make choices and to act upon them within the opportunities and constraints of their social–ecological context" (Coulthard, 2012). Agency is relational and embedded: it emerges through interactions among institutional arrangements, material conditions, and cultural narratives that simultaneously constrain and enable action.

Within this framework, situated agency foregrounds the lived practices through which resilience is enacted—collaboration, local governance, experimentation, care, and everyday sensemaking. Structural conditions such as resource availability, communication infrastructures, and institutional design shape the scope of possible action, while narrative framings of identity, belonging, and legitimacy influence how these conditions are interpreted and mobilised.

Agency expresses itself as both adaptation and transformation. Communities may maintain continuity where existing arrangements remain viable, or reconfigure systems when established patterns become untenable. Resilience, from this perspective, is not an abstract property but an ongoing practice performed within the dynamic interplay of structure and meaning. It is through situated action that systemic capacities and narrative interpretations converge and are continuously renegotiated..

2.5.4 Integration and Application of the Conceptual Frameworks

The conceptual framework developed in this chapter provides the analytical foundation for the three papers that comprise this thesis. It was constructed through an iterative process of theoretical synthesis, empirical application, and participatory validation.

In the first paper (Chapter 4), the framework is developed through a critical review of resilience and narrative scholarship, integrating structural conditions, relational dynamics, and meaning-making processes. In the second paper (Chapter 5), it is applied empirically through comparative case studies of two ecovillages, examining how community narratives interact with resilience-enabling factors such as governance, diversity, social capital, and adaptive practices. In the third paper (Chapter 6), the

framework is refined through participatory engagement with community members and expert stakeholders, assessing its resonance, usefulness, and adaptability across contexts.

Through this iterative development, the framework evolves from a theoretical construct into a practical tool. Rather than positioning narrative as a replacement for structural perspectives, the framework clarifies how resilience arises from the interplay between systemic foundations and narrative–relational processes. It offers both an analytical lens for understanding how communities interpret and enact resilience, and a methodological guide for supporting inclusive, reflexive, and transformative practice.

2.6 Transdisciplinary Orientation

The preceding sections have outlined the theoretical foundations of this research: resilience as adaptive and transformative capacity, the dynamic interdependencies of social–ecological systems, and the discursive processes through which meaning and power shape collective action. Taken together, these perspectives imply that resilience cannot be adequately understood through single-discipline analysis alone. The complexity, uncertainty, and normative dimensions of socio-ecological change require integrative approaches capable of engaging multiple forms of knowledge.

Transdisciplinarity provides such an orientation. Transdisciplinary research is defined as a collaborative mode of inquiry that integrates academic and non-academic knowledge in order to co-produce solutions to complex societal challenges (Lang et al., 2012; Scholz & Steiner, 2015). It extends beyond interdisciplinarity by engaging stakeholders in joint problem framing and knowledge integration across epistemic boundaries. Sustainability and resilience issues are frequently characterised as “wicked problems”—uncertain, contested, and value-laden—requiring approaches that move beyond expert-driven or purely disciplinary models. From this perspective, resilience is not only a systems property to be measured, but a relational and interpretive process shaped by diverse actors, values, and situated knowledges.

Within this thesis, transdisciplinarity functions as an epistemic stance that supports plural perspectives, joint problem framing, and reflexive knowledge integration. It aligns with the relational view of resilience developed above, recognising that adaptive and transformative capacities emerge through interaction across social, ecological,

institutional, and cultural domains. By foregrounding dialogue and epistemic plurality, transdisciplinarity complements the conceptual emphasis on narrative, meaning-making, and collective sensemaking in shaping resilience processes.

While this section establishes the conceptual rationale for a transdisciplinary orientation, the methodological implications of this stance—including research design, participatory engagement, and reflexive practice—are elaborated in Chapter 3.

2.7 Chapter 2 Takeaways

These takeaways clarify the key conceptual foundations that inform the narrative–resilience framework developed in this thesis and guide the empirical and participatory analyses that follow.

- **Resilience has evolved** from a static systems property to a dynamic, relational, and contested social–ecological process. This thesis extends this shift by examining how resilience is narrated, negotiated, and transformed in practice.
- **Structural** foundations such as governance, diversity, leadership, and social infrastructure remain necessary but are insufficient on their own. However, these **conditions operate through relational and interpretive** processes that shape how communities perceive disruption and mobilise collective response..
- **Enabling factors** for resilience **operate** through both m**aterial and symbolic dimensions**: they depend not only on the presence of resources or institutions, but on how they are experienced, combined, and made meaningful through relationships, identity, and trust.
- **Community and place** provide a critical scale **for observing and enabling transformation.** Ecovillages and similar settings reveal resilience as a situated practice grounded in sense of place, collective identity, and everyday experimentation.
- **Complex systems thinking** illuminates feedbacks, interdependencies, and emergence, yet requires **complementarity with discursive and narrative perspectives** to account for how meaning, power, and emotion shape adaptive and

transformative processes. Resilience is therefore understood as both structural and interpretive**.**

- **Transdisciplinary, reflexive, and participatory** approaches are **essential for engaging with resilience** under conditions of uncertainty. By integrating diverse knowledges and foregrounding co-production, this research positions resilience practice as a shared learning process.
- The **conceptual framework** developed in this chapter **locates community resilience at the intersection of systems, narratives, and situated agency.** It provides the foundation for subsequent chapters by framing resilience as a co-constructed, narrative–relational process.

Chapter 2 has established the theoretical and conceptual foundations of the study. Chapter 3 now outlines the methodological approach through which this framework is applied in comparative case studies and participatory inquiry.

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Chapter 3: Methodology

3.1 Overview

This chapter presents the methodological foundations of the thesis and explains how the overall research design integrates the three papers. It introduces the philosophical and epistemological orientation guiding the study, outlines the transdisciplinary approach, and describes the iterative, three-stage design through which the narrative–resilience framework was developed, applied, and refined. The chapter also details the comparative case study of two ecovillage communities, the qualitative and participatory methods used for data collection and analysis, and the role of reflexive practice woven throughout the inquiry. It concludes with ethical considerations, researcher positionality, and the criteria used to ensure quality and trustworthiness. Supplementary methodological materials including interview guides, validation protocols, coding frameworks, and comparative tables, are provided in Appendices B–J.

The overall research design is illustrated in Figure 3.1, which summarises the three sequential and iterative stages that structure the thesis: the development of the narrative–resilience framework, its empirical application in two ecovillage case studies, and its refinement through participatory validation with practitioners. These stages provide a coherent design that links conceptual development, empirical investigation, and collaborative interpretation across the three papers.

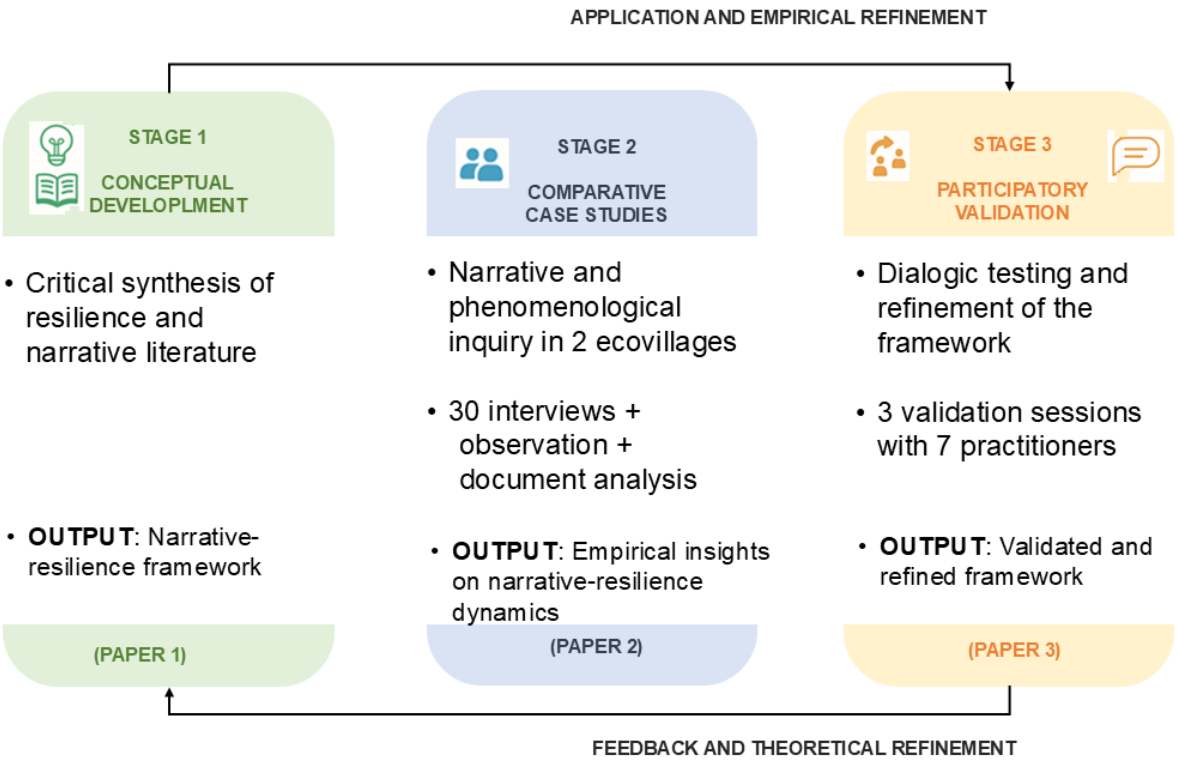


Figure 3.1 Overview of the three-stage research design integrating conceptual, empirical, and participatory inquiry.

With this broad outline in place, the following section introduces the methodological orientation that underpins the study.

3.2 Introduction

This chapter outlines the overarching methodological design that connects the three papers comprising this thesis by compilation. Building on the theoretical foundations and conceptual framework developed in Chapter 2, it explains the philosophical orientation, transdisciplinary approach, and multi-stage research design through which the study investigates how narratives shape and express community resilience. The research unfolds across three iterative stages: a conceptual synthesis that develops the narrative–resilience framework (Paper 1); a comparative case study applying this framework to two ecovillage communities (Paper 2); and a participatory validation phase in which the framework is refined through practitioner and community dialogue (Paper 3). The research adopts a transdisciplinary, constructivist, and narrative-oriented methodology, combining comparative case studies with qualitative and participatory methods—including semi-structured interviews, participant observation, document analysis,

narrative analysis, and validation dialogues—to examine how narratives shape and express community resilience.

These stages address the overarching research questions by first developing a conceptual understanding of how narratives relate to resilience (RSG1–RSG2), then examining how different types of narratives emerge, evolve, and interact with resilience-enabling factors in practice (RSQ1–RSQ6), and finally exploring how these narrative processes can be operationalised, tested, and strengthened through participatory engagement (RSQ6–RSQ7). This design ensures coherence between conceptual development, empirical investigation, and collaborative interpretation, with each stage informing the next through iterative cycles of analysis, reflection, and refinement.

The methodology adopts a qualitative and reflexive design aligned with the study's interest in how communities interpret, negotiate, and enact resilience. While grounded in constructivist and social constructionist perspectives, the approach remains attentive to the material, ecological, and institutional conditions that shape community life. It therefore prioritises methods that explore lived experience, relational processes, and meaning-making—such as semi-structured interviews, narrative inquiry, participant observation, document analysis, and participatory validation—while recognising that these interpretive dynamics interact with structural factors such as governance arrangements, ecological constraints, and resource availability.

A transdisciplinary orientation guides the research by integrating insights from resilience theory, narrative studies, sustainability science, and community practice. It brings academic and practitioner knowledge systems into dialogue, fostering reflexive engagement and methodological flexibility. This approach enables the study to remain analytically rigorous while grounded in the lived realities of the communities involved. It reflects the thesis's core premise that resilience is not merely a structural or technical property, but an emergent process shaped through the interaction of material conditions, meaning-making, and social relationships.

The chapter proceeds as follows. Section 3.3 outlines the study's philosophical and epistemological grounding. Section 3.4 elaborates the transdisciplinary approach. Section 3.5 describes the overall research design, followed by sections detailing case selection, data collection procedures, and analytical strategies. The final sections address ethical

considerations, researcher positionality and reflexivity, and the strategies used to ensure quality and trustworthiness, concluding with reflections on methodological limitations.

3.3 Philosophical and Epistemological Orientation

To examine how narratives shape community resilience, this research is guided by a social constructionist ontology and a constructivist epistemology, which together view reality and knowledge as co-produced through experience, interaction, and interpretation, yet always in relation to material and ecological conditions. This orientation enables attention to the social and experiential dimensions of resilience—including shared purpose, sense of place, local knowledge, creativity, and collective imaginaries (Béné et al., 2016; Berbés-Blázquez et al., 2017; Fazey et al., 2020)—while remaining grounded in the biophysical realities that communities inhabit. It complements systems-based perspectives by highlighting how everyday sensemaking influences the ways people respond to change and uncertainty, and by recognising agency as relational and distributed across people, practices, stories, and structural conditions.

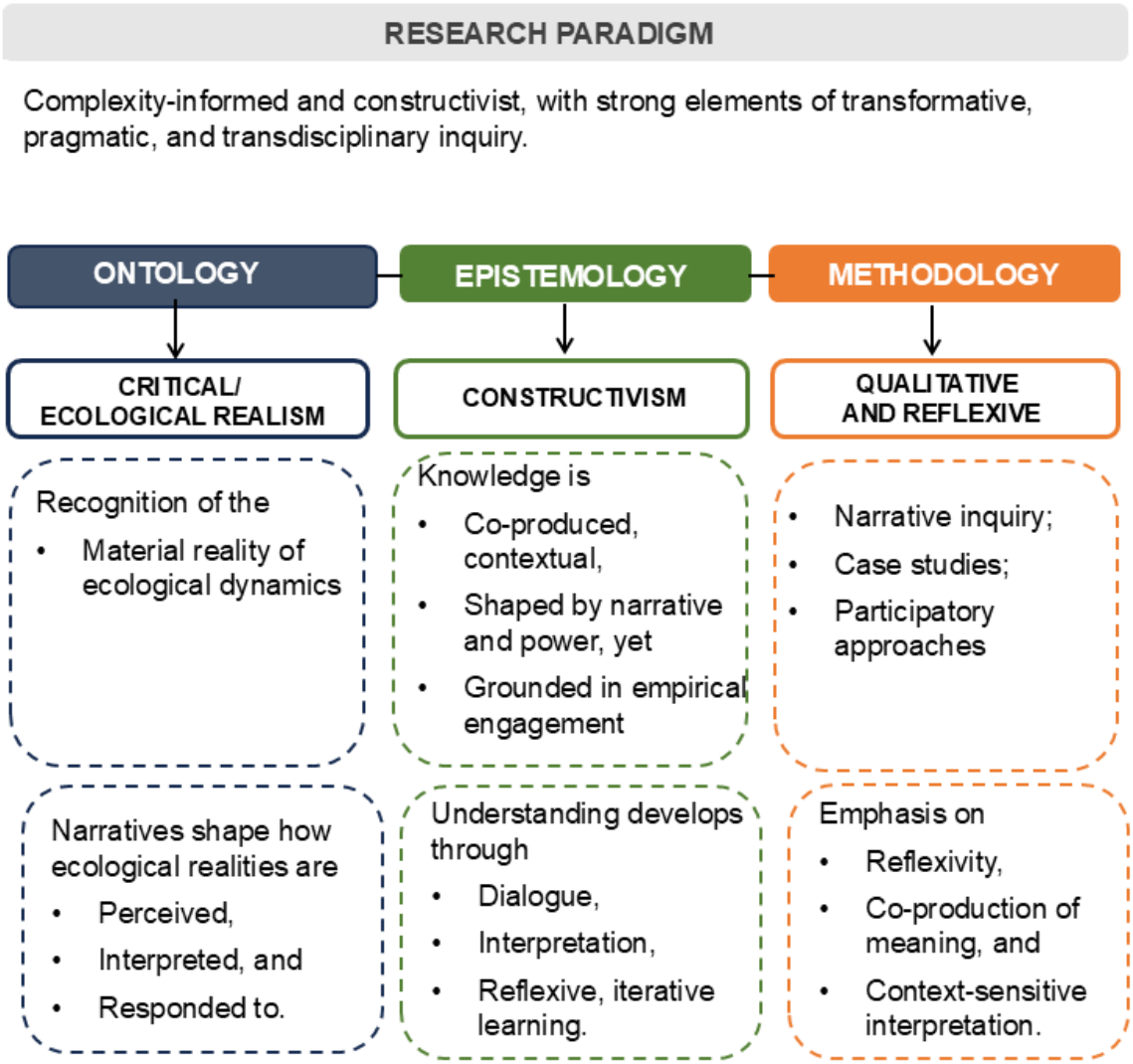


Figure 3.2 Integrating ontology, epistemology, and methodology within a critical–constructivist paradigm.

While recognising the material reality of ecosystems and ecological processes, this study adopts the view that people interpret environmental change—and what they perceive as threats or opportunities—through culturally, emotionally, and socially mediated frames. A drought, for example, is a biophysical event, yet its implications are read differently across scientific, policy, and community contexts. For scientists, it may signal shifting climatic baselines; for policymakers, it represents governance challenges around resource allocation; and for local communities, it can be experienced as a test of cooperation, identity, or adaptive practice. Such interpretations arise from the interplay between lived experience, shared narratives, and observable ecological dynamics, highlighting that meaning is co-produced through both material conditions and culturally mediated understanding.

At one end of the epistemological spectrum lies a strongly objectivist position, illustrated by Lord Kelvin's 1883 assertion that meaningful knowledge is defined by what can be measured (Kelvin, 1883). This worldview, echoed in the managerial adage "if you can't measure it, you can't improve it," prioritises quantification as the primary pathway to understanding (misattributed to Drucker; see Grint, 2008). While valuable for certain forms of inquiry, this stance inadequately accounts for experiential, relational, and culturally embedded ways of knowing that also shape how communities navigate environmental change.

A social constructionist perspective highlights instead that social realities are constituted through language, story, and shared practice, while also interacting with and being constrained by material conditions (Berger & Luckmann, 1966). The study therefore avoids both naïve objectivism and absolute relativism. Meaning is treated as situated and socially mediated, but also consequential, insofar as interpretations influence behaviour, guide decision-making, and shape collective responses to disturbance. Within this perspective, narratives, emotions, interpretations, and situated experiences are treated as legitimate and necessary forms of data for understanding community resilience.

This position is also informed by relational and critical realist perspectives that recognise the stratified and emergent character of social–ecological systems. Relational approaches in resilience scholarship emphasise that human and ecological processes are co-constituted through dynamic interdependencies rather than separable domains (Cote & Nightingale, 2012; Ives et al., 2018; West et al., 2020). In parallel, critical realism distinguishes between observable events and the underlying causal mechanisms that give rise to them, enabling analysis of how structural conditions, institutional arrangements, and cultural meanings interact without reducing one dimension to another (Bhaskar, 1978; Sayer, 2000). This orientation supports the thesis's emphasis on the interplay between narrative processes and structural capacities, treating neither discourse nor material conditions as ontologically primary, but as mutually conditioning dimensions of resilience.

Constructivism views knowledge as contextual and relational, shaped by the purposes and perspectives through which individuals interpret experience (von Glasersfeld, 1995). Social constructionism extends this insight by emphasising the collective negotiation of meaning through communication, interaction, and shared practice (Berger & Luckmann,

1966). These perspectives align with the narrative orientation of this research, which treats stories not merely as representations of experience but as performative acts that shape understanding, enable knowledge exchange, cultivate relationships, and support collective action. By analysing how narratives help communities interpret disruption, coordinate responses, establish shared meanings, and imagine alternative futures, the study positions narrative as a site of knowledge production that interacts dynamically with structural, ecological, and institutional conditions.

Recognising that methods are not neutral but shape the kinds of knowledge they produce is also central to this study. Scholars in sustainability science have increasingly argued that all methodological choices embed assumptions about what counts as valid knowledge and desirable futures (Jasanoff, 2004; Hulme, 2011; Miller & Wyborn, 2020). Rather than striving for objectivity through detachment, they advocate reflective approaches that acknowledge uncertainty, plural perspectives, and the value-laden dimensions of knowledge production. This principle informs the study's methodological orientation: knowledge creation is treated as dialogical, interpretive, and situated, and always partial, which is why triangulation, multi-stage design, and validation dialogues are used to strengthen credibility.

Accordingly, the methods used—semi-structured interviews, participant observation, narrative analysis, and participatory validation—were designed not to fix meaning but to surface and negotiate multiple storylines, consistent with the co-production of understanding between researcher and community. Participatory validation in this thesis refers to collaborative processes through which research participants assess whether emerging interpretations, frameworks, or models resonate with lived experience, reflect relevant dynamics, and offer practical value. It emphasises dialogue, reflexivity, and co-interpretation rather than technical verification (Bradbury et al., 2019; Clandinin & Connelly, 2000). The protocols and materials used in these sessions are provided in Appendices B-J.

This philosophical orientation grounds the study's transdisciplinary design. The following section outlines how collaboration across academic, practical, and community domains enabled a more comprehensive understanding of how narratives contribute to resilience, and how methodological choices were shaped by this critical–constructivist stance.

3.4 Operationalising a Transdisciplinary Approach

Transdisciplinarity provides the methodological bridge between the epistemological commitments outlined in Chapter 2 and the applied aims of this research. In line with Lang et al. (2012) and Scholz and Steiner (2015), it is understood here as a collaborative, reflexive mode of inquiry that integrates academic, experiential, and practice-based knowledge to address complex social–ecological challenges. It extends beyond interdisciplinary coordination by engaging diverse actors in the co-production of knowledge and the joint framing of problems.

Resilience cannot be adequately examined through a single disciplinary lens. Ecological perspectives illuminate feedbacks and adaptive cycles; social sciences foreground governance, identity, and power; and narrative and cultural approaches attend to meaning-making, emotion, and collective imaginaries. A transdisciplinary orientation enables these perspectives to be brought into dialogue, recognising that resilience is both structurally embedded and culturally mediated.

This approach responds to longstanding critiques that resilience frameworks have often privileged Western technocratic epistemologies while marginalising Indigenous and community-based knowledge systems (Bohensky et al., 2013; Cafer et al., 2019). Policy-oriented resilience assessments frequently prioritise infrastructure performance, economic productivity, or governance efficiency—criteria rooted in managerial rationalities. By contrast, many Indigenous ontologies emphasise relationality, reciprocity, kinship, and intergenerational stewardship as foundational to wellbeing and resilience (Berkes, 2008; Kimmerer, 2013; Tengö et al., 2017; Whyte, 2018). Although the Intergovernmental Panel on Climate Change (IPCC, 2022) now explicitly recognises Indigenous and local knowledge systems as essential to climate adaptation and adaptive governance, such integration has historically been uneven, and global assessment processes have been criticised for privileging technocratic forms of expertise (Nadasdy, 1999). In contrast, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES, 2019) has developed more explicit mechanisms for incorporating Indigenous and local knowledge within assessment processes. Attending to these dynamics is essential for ensuring that transdisciplinary collaboration remains reflexive, equitable, and context-sensitive.

This research is conducted partly on Gadigal land of the Eora Nation (Sydney), and acknowledges the enduring connection of First Nations peoples to Country, culture, and community. Recognising that knowledge production is shaped by historical and ongoing power relations (Nadasdy, 1999), the study adopts a reflexive stance toward whose knowledge is legitimised, how narratives are interpreted, and how analytical authority is exercised.

Working across epistemic and cultural boundaries can be cognitively and emotionally demanding (Mulgan, 2022), yet such tensions can catalyse deeper learning and creative insight (Fazey et al., 2018). Rather than seeking to eliminate difference, this study engages plurality as a productive condition for understanding resilience. Participants were invited not merely as subjects of study, but as co-interpreters of resilience processes, contributing situated expertise to the refinement and testing of the conceptual framework.

Operationally, the transdisciplinary process unfolded in iterative stages of problem framing, knowledge integration, and reflexive evaluation (Lang et al., 2012; Scholz & Steiner, 2015). Paper 1 synthesised literature across resilience and narrative theory to develop an integrative framework. Paper 2 applied this framework through comparative case studies, examining how resilience is enacted and narrated in practice. Paper 3 engaged participants in validating and refining the framework through structured dialogue. Each stage informed subsequent analysis, creating a reflexive loop between theory and empirical engagement.

The methodology thus enacts the principles it seeks to understand: diversity of perspectives, relational engagement, adaptability, and collective learning across boundaries.

3.5 Overall Research Rationale

The overall research design follows an iterative, three-stage process that integrates conceptual synthesis, empirical exploration, and participatory validation. Each stage corresponds to one of the three papers comprising the thesis, together forming a methodological arc from theory development to application and refinement.

The methodological rationale for this design follows directly from the conceptual foundations outlined in Chapter 2. The qualitative, narrative-focused approach was

developed to examine how narrative processes operate within community resilience, rather than to assess their relative importance compared with structural factors. Recognising that meaning-making represents one dimension of resilience, the study required methods capable of engaging with the interpretive, relational, and experiential aspects of how communities understand and respond to change, while remaining attentive to the material, ecological, and institutional conditions within which these processes unfold. This necessitated an interpretive and participatory orientation able to capture how individuals and groups make sense of disruption, co-create shared responses, and enact processes of adaptation and transformation.

The rationale for the multi-stage design is threefold. First, it enables systematic integration of diverse perspectives on resilience, connecting ecological, social, and narrative dimensions. Second, it facilitates cross-case learning by comparing how communities construct and perform resilience within different contexts. Third, it allows iterative refinement through dialogue with practitioners and experts, ensuring that the framework developed is context-sensitive, credible, and usable beyond the case studies.

Stage 1 developed the narrative–resilience framework through critical synthesis of resilience and narrative scholarship. Stage 2 applied this framework in comparative ecovillage case studies using interviews, participant observation, and document analysis to explore how narratives shape resilience in practice and how they interact with structural conditions. Stage 3 involved participatory validation dialogues to test and refine the framework's relevance, clarity, and usability. The feedback loop connecting these stages highlights the reflexive integration of theory, empirical insight, and community practice.

Through this methodological approach, the research adopts a reflexive, grounded, and collaborative stance, aiming to remain attentive to complexity while contributing to both conceptual understanding and practical reflections on resilience and transformation.

Figure 3.3 clarifies the analytical focus and contribution of each paper, showing how theoretical development, empirical investigation, and participatory refinement align with the overarching methodological arc. This integrated summary makes explicit how the components of the research design work together to address the central research question, ensuring coherence between the study's aims, the forms of data collected, and the interpretive strategies employed across the thesis.

The next section outlines how these methodological choices informed the selection of cases and participants.

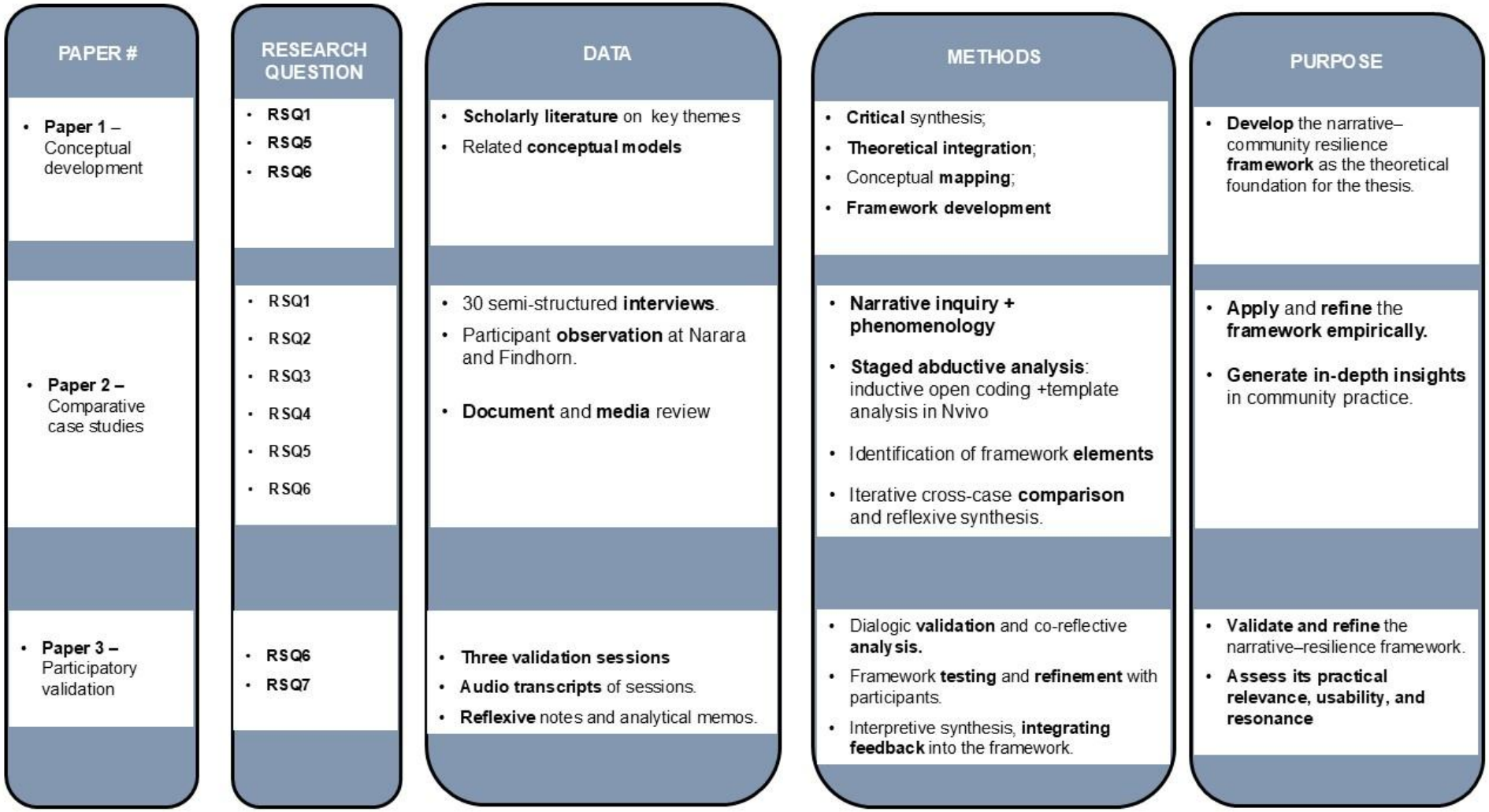


Figure 3.3. Research design overview: questions, data, methods, and purpose by paper

3.6 Case Selection and Participant Overview

The empirical stages of this research focused on two ecovillage communities—Narara Ecovillage in Australia and Findhorn Ecovillage in Scotland—as sites for examining how narratives shape, practise, and express community resilience. These cases were selected through purposive and theoretically informed sampling guided by both conceptual and pragmatic considerations. The aim was not to generate statistically representative findings but to enable deep, contextualised understanding of the narrative–resilience relationship across distinct yet structurally comparable social–ecological systems.

3.6.1 Rationale for Case Selection

Ecovillages provide analytically rich contexts for examining resilience because they intentionally integrate ecological design, participatory governance, and social learning while simultaneously navigating tensions, resource constraints, governance challenges, and environmental risks common to community-led sustainability initiatives. Their explicit normative orientation toward sustainability renders narrative processes visible, articulated, and reflexively engaged.

The selection of Narara and Findhorn was based on three main criteria:

- **Conceptual alignment:** Both communities explicitly integrate ecological design, participatory governance, and social learning into everyday practice, making them fertile contexts for exploring narrative processes of adaptation, continuity, and transformation.
- **Structured contrast across context and development phase:** The cases share the identity of being intentional ecovillages affiliated with the Global Ecovillage Network, yet differ significantly in historical depth, governance evolution, economic structure, and biophysical setting. Findhorn represents a long-established and internationally networked community with over sixty years of institutional layering and recent large-scale restructuring following economic and organisational shocks. Narara represents a younger, peri-urban ecovillage still consolidating its governance, infrastructure, and collective identity. This contrast

enables examination of how narrative processes operate across different phases of community development and resilience practice.

- **Access and sustained engagement:** Both sites demonstrated openness to multi-stage participatory research, enabling in-depth field immersion, co-reflective interviews, and validation workshops (protocols and material used provided in Appendices H1- H3).

Findhorn Ecovillage, located in northeast Scotland within a coastal temperate environment exposed to North Sea climatic variability, was founded in 1962 and has evolved into a complex socio-institutional network comprising residential neighbourhoods, educational organisations, cooperative enterprises, arts initiatives, and environmental projects. Its historical grounding in spiritual–ecological principles (including inner reflection, co-creation with nature, and work as service) has shaped enduring collective narratives. In recent years, Brexit, COVID-19, the energy crisis, and the winding up of the Findhorn Foundation led to significant economic contraction and organisational restructuring. This culminated in the formation of the Ecovillage Findhorn Community Benefit Society and the transition of land and assets into democratic community ownership. These developments position Findhorn as a mature community undergoing institutional reconfiguration, where narratives of continuity, crisis, and renewal intersect.

Narara Ecovillage, located in the Narara Creek Valley on the Central Coast of New South Wales, Australia, occupies approximately 56–64 hectares of mixed agricultural land and native bushland within a peri-urban, bushfire-prone landscape. Established in the early 2010s following extended community organising and regulatory negotiation, Narara combines permaculture design, cooperative land ownership, and sociocratic governance structures that embed participatory decision-making. A substantial portion of the site is allocated to ecological conservation, agriculture, and shared spaces, with housing density intentionally limited to preserve environmental function. The community integrates high-efficiency building standards and shared renewable energy systems consistent with its stated regenerative design principles. As a relatively young and expanding ecovillage, Narara provides a context in which narratives of resilience are actively articulated, negotiated, and institutionalised through ongoing experimentation in governance, sustainability practices, and collective identity formation.

Intentional communities often face fluctuating membership, governance tensions, and challenges in sustaining long-term participation (Christian, 2003; Dawson, 2006). Studying two communities that have persisted and evolved — albeit in distinct ways — provides insight into how narratives contribute to stability, adaptation, and collective continuity across different developmental stages.

Both communities are explicitly sustainability-oriented and may exhibit higher levels of reflexive dialogue, participatory governance, and intentional identity formation than many conventional settlements. They are therefore not treated as normative exemplars, but as analytically revealing cases in which narrative processes become particularly visible under conditions where collective meaning-making is institutionally foregrounded. The mechanisms identified are not assumed to be exclusive to ecovillages; rather, these cases provide empirically traceable contexts through which narrative change and its relational conditions can be examined with greater clarity.

Findhorn and Narara illuminate distinct yet complementary phases of resilience practice: Findhorn as a long-established community renegotiating legacy and institutional structure, and Narara as an emergent community consolidating narrative of interdependence, regeneration, and shared identity.

3.6.2 Participant Overview

Participants were selected to reflect the diversity of roles and experiences within each ecovillage, ensuring a balanced representation of perspectives. Recruitment combined open invitations and targeted sampling through community networks to include founders, governance members, working-group participants, and newer residents. This diversity provided a mosaic of viewpoints on community purpose, adaptation, and learning.

A total of 30 semi-structured interviews were conducted—15 at each site—along with follow-up dialogues and participatory validation workshops. Participants ranged in age from their 30s to 70s, with an approximately even gender balance (17 women and 13 men). The inclusion of participants with varied durations of involvement (from founding members to recent residents) enabled exploration of intergenerational and temporal dimensions of narrative continuity and change. Interview schedules and guiding prompts are provided in Appendix B.

Table 3.1 Participant Research Characteristics across Case Study Communities

Community	Number of Participants	Gender (F/M)	Roles Represented	Years of Residence
Findhorn Ecovillage (Scotland)	15	8 / 7	Founders, governance members, educators, residents, GEN affiliates	3–50 years
Narara Ecovillage (Australia)	15	9 / 6	Founders, committee members, working group coordinators, residents	1–12 years
Total	**30**	**17 / 13**	—	—

All participants were assigned pseudonyms, and identifying details were removed from transcripts to preserve confidentiality. Participation was voluntary and conducted under informed consent, with ethics approval granted by the University of Technology Sydney Human Research Ethics Committee (UTS HREC Ref. No. ETH23-8868). Copies of the Participant Information Sheet and Consent Form templates are provided in Appendices A3 and A2.

The following section outlines how empirical material from these cases was gathered and interpreted. It details the qualitative and participatory methods employed across Stages 2 and 3, the analytical procedures guiding interpretation, and the iterative process through which findings were refined and validated.

3.7 Data Collection and Analysis

This section consolidates the data collection and analysis methods used across Stages 2 and 3 of the research. These stages combined qualitative, participatory, and narrative-oriented approaches to explore how community stories shape and express resilience. The process was iterative and reflexive, integrating insights from earlier conceptual work (Stage 1) with empirical findings from the two case studies (Stage 2) and participatory validation dialogues (Stage 3).

3.7.1 Data Collection

Data were collected through multiple qualitative sources (semi-structured interviews, participant observation, document and media review, and participatory validation dialogues) to capture the lived, relational, and temporal dimensions of community

narratives. This multi-method design enabled triangulation and a richer understanding of how resilience is enacted and narrated in practice.

3.7.1.1 Semi-Structured Interviews

Semi-structured interviews served as the primary data source in Stage 2. Thirty in-depth interviews were conducted across the two case study sites, each lasting approximately 60–90 minutes and audio-recorded with participants' consent. The sample included founders, governance members, educators, working-group coordinators, and residents. The interview guide, which invited participants to share stories of change, adaptation, belonging, governance, identity, and collective learning, is provided in Appendix B2. This conversational structure allowed participants to frame their experiences in their own terms while providing sufficient consistency for cross-case comparison.

3.7.1.2 Participant Observation

Participant observation complemented the interviews by immersing the researcher in the social and cultural rhythms of community life. Fieldwork was conducted through one intensive week of residence at Narara Ecovillage in October 2023 and at Findhorn Ecovillage in January 2024, supplemented by attendance at additional meetings, events, and workshops at Narara in person, and at Findhorn online throughout the following year. Observation focused on storytelling practices in meetings, informal gatherings, and rituals, documenting how narratives were performed, shared, and negotiated in situ. Field notes were recorded daily, with attention to language, tone, emotion, and interaction.

3.7.1.3 Document and Media Review

Document and media review included a wide range of community and policy materials to complement interviews and observations. These encompassed community documents (vision and mission statements, strategic plans, newsletters); archival materials (historical accounts of each ecovillage's foundation, early newsletters, and commemorative publications documenting milestones); digital communications (website content, blog posts, social media updates); educational and outreach materials (workshop flyers, training course outlines such as permaculture and regenerative design programs; visual and spatial materials (photographs, maps, and artefacts including community murals, posters that expressed shared identity and values); and policy and network documents (materials from the Global Ecovillage Network)

3.7.1.4 Participatory Validation Dialogues

Validation sessions functioned both as data collection and as a co-reflective analysis process. Three validation sessions, each lasting between one and one-and-a-half hours, were conducted online using Microsoft Teams and were video-recorded with participants' consent. Two sessions involved three participants each, while the third was an individual interview that followed the same validation protocol. Participants represented a diversity of gender, cultural backgrounds, community tenure (newcomers and long-term members), and roles within the ecovillages.

Table 3.2 summarises the demographic and community characteristics of the seven participants involved in the validation sessions.

Table 3.2. Participant Characteristics in Validation Sessions

Characteristic	n	%
Total participants	7	100
From Narara	3	43
From Findhorn	4	57
Male	2	29
Female	5	71
Newcomers	2	29
Long-term members	5	71

To support engagement, guiding questions were provided in advance. Session protocols and prompts are available in Appendix H. Although recruited through different ecovillage sites, the groups were intentionally mixed to enable cross-case comparability. Participants were informed that the sessions formed part of a research validation process, and discussions were framed as collaborative dialogues to assess the framework's resonance, clarity, and practical relevance.

3.7.2 Data Analysis

Data analysis followed a stepwise, iterative process combining thematic and narrative strategies within an abductive qualitative design. The approach sought to remain faithful to participants' meaning-making while progressively relating individual accounts to broader resilience dynamics and the emerging conceptual framework. Analysis was

conducted using NVivo 12 software to support systematic coding, traceability, and cross-case comparison. The multi-stage strategy aligned with the methodological aim of examining how narrative processes interact with structural conditions to shape community resilience across two ecovillage contexts.

The analytical process moved iteratively between inductive engagement with the data and deductive dialogue with resilience theory, allowing empirical insights to both inform and refine the conceptual framework.

3.7.2.1 Step 1: Open and Template Coding

The analysis began with an initial round of open coding, inductively identifying patterns, metaphors, narrative tensions, and meaning structures directly from interview transcripts. Open coding is well suited to exploratory qualitative inquiry because it supports close engagement with participants' language and lived experience while avoiding premature categorisation (Charmaz, 2014; Saldaña, 2021). In this study, open coding enabled early identification of recurring references to learning, adaptation, belonging, conflict navigation, experimentation, intergenerational continuity, governance tensions, and responses to disturbance.

During this stage, attention extended beyond topical themes to narrative dynamics, including how participants structured events temporally across past, present, and future; how identity claims were articulated; and how crises were framed, reframed, or normalised.

From this inductive phase, a large pool of preliminary codes was generated. These were clustered into higher-order thematic groupings through constant comparison and analytic memo-writing. It was during this clustering stage that recurring narrative functions began to surface, including those consolidating shared identity, mobilising action, mediating conflict, and reframing disruption.

Following this inductive phase, emergent codes were organised using a flexible analytical template informed by the conceptual framework developed in Paper 1. Template coding provides a structured means of relating empirical material to theoretical constructs while allowing iterative refinement (Crabtree & Miller, 1999; King, 2012). Importantly, the six narrative roles were not imposed as fixed categories at the outset. Rather, they were progressively clarified and refined through repeated engagement with the data, as

patterned narrative functions became consistently observable across participants and across cases.

Thus, the hybrid coding strategy combined inductive sensitivity with theoretical guidance. Narrative roles were clarified through empirical clustering and subsequently aligned with resilience-enabling factors. The template included categories such as narrative roles, narrative types, archetypes, and resilience-enabling factors (see Appendix G1 for full definitions and illustrative quotes). NVivo summary tables detailing disruptions, resilience factors, and discursive elements are provided in Appendix D, E and F.

Resilience-enabling factors were treated as sensitising concepts derived from the literature rather than predetermined categories imposed upon participants' accounts. While interview prompts occasionally invited reflection on factors identified in academic scholarship, participants were not required to adopt this terminology. The template was iteratively refined in response to emergent patterns in the data, ensuring that analytical categories remained grounded in participants' accounts.

3.7.2.2 Step 2: Holistic Narrative Analysis

Selected interviews were subsequently analysed holistically as complete narratives. Narrative analysis was employed to attend not only to what participants said, but to how they structured experience through story — including plot progression, turning points, tone, positioning of self and community, and implied moral or future orientation (Clandinin & Connelly, 2000; Riessman, 2008).

This stage was critical for refining the six narrative roles. Rather than coding isolated excerpts, the analysis examined how narrative functions operated across entire accounts. For example, a single interview might simultaneously consolidate identity, express tension, and articulate experimentation. This revealed that narrative roles were not mutually exclusive categories but dynamic functions enacted within broader narrative ecologies.

Comparative reading across interviews allowed identification of shared motifs, divergences, and tensions within and between Narara and Findhorn. This process illuminated how stories sometimes reinforced cohesion while at other times surfaced conflict or difference. It also revealed that competing narratives could contribute to

adaptive capacity through productive friction rather than undermining resilience — an insight that informed the development of the concept of narrative plasticity.

Thematic saturation was assessed through ongoing coding and memo-writing. After approximately 24–26 interviews, new transcripts no longer generated novel narrative functions or resilience-related themes, though they continued to deepen and nuance existing categories. This aligns with qualitative guidance defining saturation as the point at which additional data no longer yield new conceptual insights (Charmaz, 2014; Saunders et al., 2018).

3.7.2.3 Step 3: Cross-Case Synthesis

Cross-case synthesis was undertaken to identify convergences and divergences in how narrative practices interacted with resilience-enabling factors across Narara and Findhorn (Yin, 2018; Miles, Huberman, & Saldaña, 2020). Analytical memos from each case were systematically compared to examine how similar narrative roles operated within distinct cultural, organisational, and ecological contexts.

This comparison revealed both patterned similarities — such as the importance of identity-forming stories — and contextual differences in how narratives mediated governance tensions, ecological constraints, or historical trajectories. Cross-case synthesis strengthened confidence that the six narrative roles were not artefacts of a single site but recurring narrative mechanisms operating across contexts.

Extended comparative tables are provided in Appendix J1-J4.

3.7.2.4 Step 4: Participatory Validations

Findings were subsequently presented in participatory validation sessions. Participants were invited to assess resonance, identify misinterpretations, and suggest refinements. Member checking and co-interpretation enhance credibility and contextual grounding (Birt et al., 2016; Lincoln & Guba, 1985).

Importantly, validation sessions contributed to refinement of narrative categories. In several instances, participants clarified distinctions between identity-affirming stories and aspirational narratives, and emphasised tensions that were less visible in individual interviews. These dialogues strengthened the interpretation of narrative plasticity as the capacity to adapt, combine, and contest stories in response to disturbance.

Protocols and materials are provided in Appendix H1-H3.

3.7.2.5 Iterative Integration

The analytical process was cyclical rather than linear. Early coding informed subsequent interviews, while cross-case insights reshaped theoretical interpretation. The movement between data and theory was abductive, allowing conceptual refinement in light of empirical complexity (Srivastava & Hopwood, 2009).

Reflexive memos documented interpretive decisions, emerging tensions, and the researcher's positional influences (Finlay, 2002). Several unexpected analytical patterns prompted further conceptual refinement.

Figure 3.4 illustrates this iterative process.

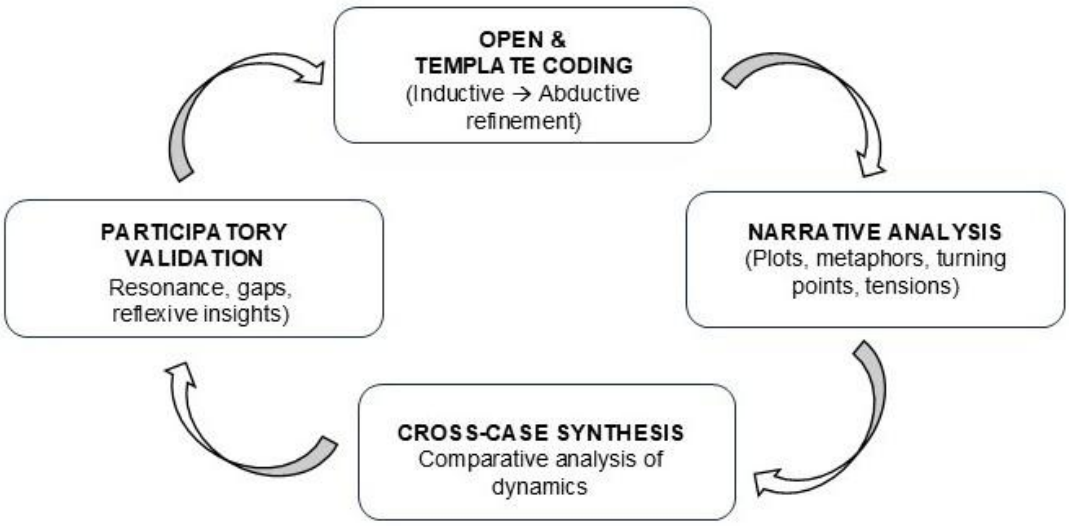


Figure 3.4 Iterative process used in the data analysis

3.8 Ethical Considerations

All stages of this research were conducted under a single ethics approval granted by the University of Technology Sydney Human Research Ethics Committee (UTS HREC Ref. No. ETH23-8868), which covered the conceptual, empirical, and participatory phases of the study. The research adhered to UTS guidelines for human research and followed the ethical principles guiding qualitative inquiry, including respect, voluntary participation, and protection of confidentiality. An excerpt of the approved ethics application, outlining

procedures, risks, and mitigation strategies relevant to this project, is provided in Appendix A1.

Participation was fully informed and voluntary. Written consent was obtained prior to all interviews, observations, and participatory validation sessions, and participants were advised that they could withdraw from the study at any time without consequence. To protect anonymity, code identifiers (A–Z and combinations thereof) were used in place of names, and potentially identifying details were generalised or omitted in transcripts, analytical notes, and publications. An overview of the interview questions and validation prompts used in the study is provided in Appendices C1–C2 and D2.

A risk assessment conducted prior to fieldwork classified the study as low-risk, with a low likelihood of harm or discomfort. Ethical considerations included sensitivity to cultural and contextual differences between Australia, the United Kingdom, and Spain (the researcher's country of origin). Interview and validation questions were designed to avoid intrusive or culturally inappropriate topics in any of the research settings. All interviews and validation sessions were conducted in English—the working language of both ecovillages—ensuring clarity of communication and mutual understanding between researcher and participants.

3.9 Researcher Positionality

In this study, I draw on the concept of positionality as encompassing a researcher's worldview, identity, and standpoint in relation to the research context (Bourke 2014; Foote & Bartell, 2011; Savin-Baden & Major, 2013). My social position, professional training, and personal values shaped how I engaged with participants, interpreted their stories, and navigated the ethical and epistemological dimensions of the research.

I identify as a White Southern European woman from Spain, trained as an engineer and now working within a transdisciplinary research environment. While generally racialised as White within the Australian context, my accent and non-Anglo-European background sometimes marked me as an outsider in both academic and community settings. This in-betweenness fostered empathy and curiosity but also required careful attention to how my presence and the phrasing of questions might influence responses. I approached interviews with sensitivity to power relations, intentionally framing conversations as co-

reflective dialogues rather than data extraction, consistent with relational ethics in qualitative research (Ellis, 2007).

As a non-Indigenous researcher conducting work on Gadigal land of the Eora Nation, I acknowledge my position as a guest on unceded Country. This awareness informed a deliberate effort to approach knowledge creation as relational and situated, recognising the deep ecological and cultural knowledges that predate and exceed Western scientific traditions. It also shaped how I understood community narratives as embedded within broader histories and geographies.

My technical and systems-based background initially oriented my understanding of resilience toward structural and functional models. Through engagement with narrative inquiry and community practice, this perspective expanded to include the cultural, affective, and interpretive dimensions of change. This evolution mirrors the epistemological shift underpinning the study, from resilience as a measurable property to resilience as a living, storied practice. It also shaped how I interpreted different types of narratives and how I understood narrative roles in relation to resilience-enabling factors.

Reflexivity was not treated as an afterthought but as an ongoing methodological practice. Throughout fieldwork, I kept reflexive memos documenting assumptions, emotional responses, and interpretive risks. When strong hunches or early patterns emerged, I checked these with participants—either in follow-up conversations or during validation sessions—to invite alternative readings and dissenting views. This practice supported the credibility and confirmability of the analysis (Lincoln & Guba, 1985) and helped prevent premature closure of interpretation.

Positionality also shaped access and rapport. Shared ecological values created a sense of kinship with ecovillage members, facilitating trust and openness. Yet, as an external researcher, I remained conscious of community dynamics and internal politics. I mitigated potential bias by triangulating observations with documents and contrasting individual accounts with collective narratives. During validation, I actively encouraged disagreement and made interpretive processes transparent, reinforcing the co-productive ethos of the research (Reason & Bradbury, 2008).

In addition, I was aware that several aspects of the inquiry—the exploration of disruptions, internal tensions, governance challenges, and the community's responses to

shocks—touched on sensitive terrain. Participants often hold deep emotional and reputational investment in their ecovillages, and I recognised that sharing stories of conflict or vulnerability could feel exposing or risk being interpreted as reflecting negatively on the community as a whole. To navigate this, I approached these topics with care, emphasising transparency about the purpose of the research and inviting participants to share both successes and less comfortable experiences in their own terms. I aimed to foster an atmosphere of trust, reassuring participants that the goal was understanding rather than evaluation, and that their narratives would be represented with nuance and respect (Josselson, 2007; Tracy, 2010).

Finally, reflexivity extended to the ethical and environmental dimensions of research practice. I engaged critically with the contradictions inherent in conducting sustainability-related research, including the emissions associated with long-distance travel for part of the fieldwork and the significant energy and water demands embedded in the digital infrastructures that supported a project including data centres, cloud computing platforms and server farms. A language model (ChatGPT) was used to support minor editorial tasks and to assist with organising analytical memos; all coding, interpretation, and analytical decisions were conducted by the researcher. These reflections were integrated into research logs to maintain transparency around the material and ethical implications of academic work.

Overall, reflexivity served as both a methodological safeguard and a transformative process, supporting a more situated, relational, and critical engagement with the research context.

3.10 Quality and Trustworthiness

The research design comprised three interconnected components: (1) the development of a narrative–resilience framework; (2) comparative case studies in two ecovillages; and (3) participatory validation to refine and sense-check the framework. Analytically, the study progressed from within-case coding and narrative analysis to cross-case synthesis and collaborative reflection. This multi-stage process ensured coherence between conceptual development, empirical grounding, and participatory interpretation.

To establish methodological rigour, the study applied four interrelated criteria commonly used in qualitative and constructivist research—credibility, dependability, confirmability, and transferability (Lincoln & Guba, 1985)—each operationalised in ways that align with the participatory and reflexive ethos of the research.

- **Credibility** was supported through triangulation across multiple methods and data sources, including semi-structured interviews, participant observation, document analysis, and participatory validation dialogues. Analytical findings were cross-verified during member feedback sessions, where participants reviewed preliminary interpretations and offered critiques. This approach aligns with established practices of member checking and co-interpretation that enhance trustworthiness by grounding interpretations in participants' lived experience (Birt et al., 2016). Supplementary materials supporting these processes are included in Appendices B, C, D, E, F, G, H, I and J.

- **Dependability** was maintained through a transparent audit trail documenting analytical decisions, codebook iterations, and framework refinements. NVivo project logs, reflexive memos, and version-controlled documents provided a record of each stage of data management and interpretation. Appendices D, E, F, G, H and I include coding frameworks and extended thematic tables that formed part of this audit process. The iterative analytic design, that is moving between inductive and deductive cycles, enabled systematic re-examination of earlier interpretations as new insights emerged (Miles, Huberman, & Saldaña, 2020).

- **Confirmability** was strengthened through sustained reflexive practice and external scholarly review. Reflexive journals captured evolving assumptions, positional influences, and interpretive challenges, consistent with reflexive standards in qualitative inquiry (Finlay, 2002). Further confirmability was achieved through peer feedback on drafts presented at conferences and incorporated into co-authored publications, ensuring that emergent claims were scrutinised beyond the researcher–participant relationship.

- **Transferability** was fostered through thick, contextual description of both ecovillage settings, including their cultural histories, governance structures, ecological features, and community practices. This depth of contextualisation enables readers and practitioners to assess the applicability of the findings to other community resilience

contexts based on resonance rather than direct generalisability. Supporting contextual materials, demographic summaries, and site documents are provided in Appendices B4, B5 and J1.

By combining methodological transparency, participant engagement, and reflexive accountability, the study ensures that interpretations remain empirically grounded, contextually sensitive, and responsive to the complex, meaning-laden realities of community resilience.

3.11 Limitations

As with any qualitative, case study–based research, this study has limited generalisability. The two ecovillages examined offer rich, contextual insights into community resilience but represent particular forms of intentional community with relatively homogenous demographics, comprising predominantly White, well-educated, and economically secure members. These characteristics may shape worldviews and experiences of resilience that differ from those in more diverse or marginalised contexts.

Ecovillages were nevertheless selected for their value as integrated social–ecological systems that intentionally align subsystems such as energy, water, food, and waste with sustainability and regeneration goals (Fonseca et al., 2022). Although intentional communities often face high rates of turnover, governance strain, and organisational fragility—with many initiatives struggling to persist over time—ecovillages that endure offer important opportunities to study the conditions that support long-term resilience. Their ongoing experimentation with adaptive management and participatory governance therefore provides a distinctive setting for examining how human communities interact with their surrounding ecosystems and for considering how such practices might be adapted to other contexts (Ferginia & Yanto, 2023; Yue, 2011).

The narrative and constructivist orientation adopted in this research values depth over breadth, prioritising meaning-making, lived experience, and interpretive nuance. This emphasis also shaped the scope of the empirical work. The two-case design enabled detailed, immersive engagement and fine-grained narrative analysis, which would have been difficult to achieve with a larger number of sites. Similarly, the validation stage involved a small but diverse group of seven participants. While not numerically extensive,

this sample proved sufficient for generating rich dialogue and reflective engagement with the framework, particularly when considered alongside the 30 semi-structured interviews, which had already reached thematic saturation. These choices supported a coherent and intensive exploration of narrative–resilience dynamics, while limiting the breadth of contexts to which findings can be extended.

Although reflexive strategies were employed throughout data collection and analysis, my own background and standpoint may have shaped aspects of engagement and interpretation. Such influences are an inherent feature of qualitative inquiry, particularly in research that foregrounds narrative, experience, and interpretation.

Together, these methodological choices established a coherent and reflexive foundation for the three-paper design. The next chapter builds on this foundation by presenting the first paper, which develops the conceptual framework exploring linkages between narrative processes and resilience-enabling factors.

3.12 Chapter 3 Takeaways

The following takeaways show how the methodological design operationalises the thesis' core argument: that community resilience emerges through the interplay of structural conditions, relational dynamics, ecological context, and the plasticity of narrative processes. Understanding this interplay requires methods that are transdisciplinary, participatory, reflexive, and grounded in the lived realities of specific communities and places.

- The study is grounded in a **critical–constructivist paradigm** that recognises resilience as shaped through experience, interaction, and interpretation, **while acknowledging the material, ecological, and institutional conditions** that enable or constrain community responses to change.
- A **transdisciplinary orientation** bridges resilience theory, systems thinking, narrative and discourse studies, and sustainability science, integrating academic, community, and practitioner knowledges through collaboration, reflection, and mutual learning.

- The overall research **design follows an iterative three-stage** arc: (1) conceptual synthesis developing the narrative–resilience framework (Paper 1); (2) comparative case studies of Narara and Findhorn (Paper 2); and (3) participatory validation and refinement with practitioners and community members (Paper 3).
- Narara and Findhorn **Ecovillages** were purposively **selected as contrasting yet comparable intentional communities** that model sustainable and resilient living, offering emergent and mature contexts for examining how narratives shape, practise, and express resilience over time.
- **Qualitative and participatory methods**—semi-structured interviews, participant observation, document and media review, and participatory validation dialogues—were used to capture the lived, relational, and temporal dimensions of community resilience. Interview guides, fieldwork protocols, and validation materials are provided in the appendices.
- Data analysis proceeds through open and template coding, narrative analysis, cross-case synthesis, and participatory validation, with iterative integration between data collection and interpretation and systematic use of memos to document analytic decisions and reflexive insights.
- Ethical rigour is maintained through formal ethics approval, informed consent, anonymisation, sensitivity to cross-cultural contexts, and attention to potential risks, ensuring that participation is voluntary, safe, and respectful across all stages of the research. An excerpt of the approved ethics application is provided in the appendix A1.
- Researcher **positionality and reflexivity are treated as central** methodological resources: the thesis acknowledges the researcher's social location, values, and evolving understanding of resilience, and employs reflexive journalling, member checking, and transparency about interpretive risks to strengthen the study's integrity.
- The study's main limitations arise from its qualitative, ecovillage-based design and the relatively homogenous demographics of the case communities, which restrict direct generalisation but offer deep, situated insight into narrative–resilience dynamics in intentional community settings.

The methodological framework outlined in this chapter provides the foundation for the three papers that follow. Together, these papers apply, test, and refine the narrative–resilience framework developed in Chapters 1 and 2: Paper 1 elaborates the conceptual model, Paper 2 explores its empirical application through comparative case studies, and Paper 3 engages community participants in its participatory validation and further development. Part II therefore marks a shift from framing and design to the core analytical contributions of the thesis.

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PART II: PAPERS BY COMPILATION

"We make the path by walking."
Antonio Machado

Part II presents the core contributions of this thesis by compilation. It brings together three interlinked papers (Chapters 4–6) and an integrative synthesis (Chapter 7). These chapters advance the central argument of the thesis: that narratives function as a form of cultural infrastructure that underpins, expresses, and continually reshapes community resilience within social–ecological systems.

Across these chapters, the research moves iteratively between conceptual development, empirical inquiry, and participatory validation. This progression shows how narrative processes interact with recognised resilience-enabling factors and how meaning-making, identity, and interpretation complement the structural and relational dimensions of resilience.

- Chapter 4 (Paper 1 – *The Role of Narratives in Community Resilience: A Framework for Understanding and Action*) develops the theoretical foundations. Drawing from resilience theory, systems thinking, and narrative studies, it proposes a conceptual framework that positions narratives as active components in resilience-building processes. The paper outlines how functions such as sensemaking, identity formation, and shared meaning contribute to community responses to change.
- Chapter 5 (Paper 2 – *Narrative Plasticity and the Dynamics of Community Resilience*) applies this framework through comparative case studies of Narara and Findhorn Ecovillages. Using qualitative and narrative inquiry methods, it examines how local story repertoires both enable and constrain resilience in practice. The paper introduces the concepts of narrative plasticity and narrative

ecology to describe the adaptive, relational, and evolving qualities of community narrative processes.

- Chapter 6 (Paper 3 – *Narrative Plasticity and Structural Conditions: Participatory Refinement of a Community Resilience Framework*) extends the inquiry through participatory validation. Through facilitated sessions with community members, the study explores how the framework resonates in practice, identifies refinements, and considers its potential for informing community action, education, and planning. This stage demonstrates how narratives can serve as reflexive tools that support shared understanding and adaptive capacity.
- Chapter 7 concludes Part II by synthesising insights across the three papers. It identifies their overarching theoretical, methodological, and practical contributions, reflects on implications for narrative and resilience scholarship, and considers pathways for future transdisciplinary inquiry.

These chapters put into practice the methodological principles outlined in Part I, which recognises the reality of biophysical and institutional conditions while examining how communities interpret and respond to them through narrative and relational processes. They also reflect the thesis's constructivist epistemology and its transdisciplinary values of collaboration, reflexivity, and the integration of diverse knowledge systems. Part III then builds on this foundation by drawing the strands together into an overall synthesis and reflection, consolidating the contributions of the research and exploring their implications for resilience theory, governance, and practice.

Chapter 4: Paper 1

The Role of Narratives in Community Resilience:
A Framework for Understanding and Action

4.1 Preamble

This chapter presents the conceptual framework that anchors the thesis. Its purpose is to make explicit the cultural and interpretive layer of resilience, an area often acknowledged but rarely examined in depth. The chapter reviews established models of community resilience and identifies five resilience-enabling factors that appear consistently across diverse social–ecological contexts. It then argues that these factors become meaningful in practice through narrative processes. In community settings, stories help shape identity, make sense of disruption, share knowledge, mobilise agency, build cohesion, and revise collective understandings as conditions change.

The framework developed in this chapter is intentionally heuristic rather than prescriptive. It articulates a set of narrative roles and their linkages to resilience-enabling factors, providing an analytical foundation for the empirical and participatory work that follows. Paper 2 applies this framework in two ecovillage case studies, and Paper 3 revisits it through practitioner validation. Together, these chapters examine how six narrative functions interact with five enabling factors to shape community resilience at the intersection of meaning, structure, and practice.

This work responds to a clear gap in resilience scholarship: the limited integration of narrative processes into models of community resilience. While social factors such as trust, leadership, and learning are increasingly recognised, far less attention has been given to how people interpret disturbance, construct shared meaning, or coordinate collective action through narratives. Meaning-making processes remain under-specified, despite their influence on governance, legitimacy, and transformation.

To address this gap, the paper synthesises insights from resilience theory, narrative studies, systems thinking, and sustainability science. This transdisciplinary engagement informed the identification of common resilience-enabling factors, alongside core narrative functions relevant to how communities interpret events, negotiate tensions, and imagine alternative futures. Enabling factors describe the structural, ecological, institutional, and relational conditions that support adaptive and transformative capacity, while narrative functions describe how stories organise meaning, emotion, identity, and agency.

The chapter uses a conceptual synthesis approach, combining insights from several fields and iterating between ideas and early observations to build a coherent framework. Rather than replacing existing resilience models, it extends them by explicitly incorporating narrative as a mediating cultural process.

The result is a flexible conceptual tool that supports both theory and practice. It invites researchers, practitioners, and communities to consider how meaning-making shape resilience alongside material and institutional conditions. By highlighting the narrative dynamics that animate and sustain collective adaptation, the framework contributes to a more holistic understanding of how communities navigate uncertainty, maintain coherence, and pursue transformation.

The following article develops this framework in full, outlining its theoretical foundations, key components, and relevance for understanding how narratives shape community resilience.

4.2 Signature Page

Paper 1

The Role of Narratives in Community Resilience: A Framework for Understanding and Action

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Statement of authorship and contribution

The contribution of each author to this paper is detailed in the thesis under the "Statement of Contribution of Authors" section.

All authors have reviewed and approved the contribution statement and the inclusion of this paper in the doctoral thesis of Julia Fernandez.

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4.3 Full Article #1- The Role of Narratives in Community Resilience: A Framework for Understanding and Action

Abstract

This paper develops a conceptual framework positioning narratives as cultural infrastructure in community resilience. Traditional resilience frameworks emphasise structural and functional attributes—such as governance, infrastructure, and ecological thresholds—while giving limited attention to the stories through which communities interpret disruption, mobilise capacity, and orient transformation. Drawing on resilience theory, planning, and the environmental humanities, the framework links five widely recognised resilience-enabling factors (diversity, connectivity, adaptability, transformability, and social capital) with six narrative roles (identity-shaping, sensemaking, knowledge transmission, agency stimulation, cohesion building, and reflexive adaptation).

The framework highlights how meaning-making processes shape governance choices, legitimacy, and collective action. It warns that overly simplistic narratives can obscure systemic drivers of vulnerability and risk fostering complacency or victim-blaming. By contrast, diverse and inclusive narrative repertoires can strengthen trust, legitimacy, and agency, providing a cultural foundation for adaptive and transformative planning.

We argue that flexible narrative practices through participatory scenarios, narrative workshops, or deliberative forums; should be treated as planning interventions in their own right, as vital as material or institutional investments. By linking interpretive practices with enabling factors, the framework offers policymakers a tool to diagnose fragmentation, amplify marginalised voices, and design culturally grounded pathways for resilience and adaptation

Keywords: Community resilience; Environmental policy; Cultural infrastructure; Meaning making; Adaptive capacity

4.3.1 Introduction

Communities worldwide are facing escalating crises, from climate change and public health emergencies to economic shocks and political upheavals. These shocks expose the

fragility of the systems we depend on and the social structures that sustain them (IPCC AR6, 2022). In this context, resilience—the capacity of communities to adapt, recover, and transform—has become essential for sustaining ecological integrity, social cohesion, and effective governance.

Resilience thinking provides a powerful lens for understanding how communities engage with change, particularly when it emphasises the interdependence of social and ecological systems (Berkes et al., 2003; Folke et al., 2016). Much of the scholarship, however, has focused on structural and functional dimensions such as infrastructure, governance, and ecological thresholds, with far less attention to the cultural and narrative processes through which communities interpret disruption, mobilise collective action, and imagine futures (Birkmann, 2022).

Over the past two decades, resilience scholarship has broadened from fixed formulations in engineering and material sciences (Holling, 1973) toward an understanding of resilience as a dynamic capacity unfolding through anticipation, meaning-making, and the negotiation of diverse futures (Almedom, 2013; Folke et al., 2010). This shift highlights resilience not only as a structural property but also as a socially constructed process. Yet the role of narrative remains underdeveloped. Narratives are often treated as tools for communication, but they also guide how communities prioritise challenges, decide which actions feel legitimate, and align around shared directions for change. Veland et al. (2018) distinguish between an "information deficit" and a "narrative deficit," arguing that transformation requires not just better communication of scientific facts but also engagement with the stories, protagonists, and temporalities through which people construct meaning. Building on this insight, the present framework situates narratives as world-making structures that actively shape resilience-enabling factors and the pathways through which communities adapt and transform. While this paper foregrounds narrative processes, this is not to suggest they supersede structural determinants of resilience; rather, the focus is to articulate how narrative functions interact with existing social, ecological, and institutional structures.

This paper addresses that gap by asking: What role do narratives play in community resilience? We argue that stories are central to identity, sensemaking, cohesion, and agency, providing the narratives through which communities interpret risks, mobilise

collective capacity, and orient themselves toward transformation (Bruner, 1991; Riedy, 2020).

We present a narrative–resilience framework that integrates five widely recognised enabling factors—diversity, connectivity, adaptability, transformability, and social capital—with six narrative roles: identity-shaping, sensemaking, knowledge transmission, agency stimulation, cohesion building, and reflexive adaptation. In doing so, the paper offers a conceptual bridge between resilience theory and narrative scholarship (Folke et al., 2010; Sandercock, 2003).

While these enabling factors have been central to resilience frameworks, they are typically treated as structural attributes or system properties. Fan and Lyu's (2021) review of resilience scholarship shows that although research has expanded from ecological to social and governance domains, the interpretive and cultural dimensions remain underexplored. This framework responds by systematically integrating narrative roles into resilience thinking positioning meaning-making as a constitutive layer of resilience rather than an ancillary process.

The paper begins by clarifying its methodological grounding, showing how the framework emerged from an integrative synthesis of resilience and narrative scholarship. It then reviews the evolution of resilience thinking, identifies core enabling factors, and situates the study within the broader genealogy of community resilience frameworks. Next, it examines the cultural and interpretive functions of narrative before introducing the proposed framework, supported by a summary table mapping narrative role to enabling factors. The discussion highlights the framework's contributions, implications for practice, and limitations. The conclusion positions the framework as a foundation for subsequent work, including empirical application in ecovillage case studies (under review) and participatory validation with community stakeholders (under review).

4.3.2 Methodological Positioning

This paper develops a conceptual framework through integrative synthesis rather than empirical testing. It begins with a narrative-oriented literature review tracing how resilience has been theorised across ecology, psychology, and the social sciences, with particular attention to community-focused frameworks that identify enabling factors. Citation tracking and thematic clustering were used to identify influential models—

including the Community Capitals Framework, which emphasises social, natural, and built assets; BRIC, the Baseline Resilience Indicators for Communities; and PEOPLES, an index-based framework linking population, environment, and infrastructure—along with more recent ecovillage-focused approaches (Baumber et al., 2022). These frameworks were examined for how they operationalise resilience in practice, that is, how they translate the abstract concept into concrete factors, indicators, or processes that can be applied and measured.

Building on this foundation, the paper draws on scholarship in narrative studies, the environmental humanities, and sustainability transitions to articulate the cultural and interpretive functions of resilience. This dual review, of resilience-enabling factors and of narrative roles, was then brought into dialogue through conceptual mapping. The aim was to identify points of resonance and integration, treating enabling factors as system capacities that only become effective when activated through shared stories.

The framework is explicitly theoretical and heuristic. Rather than presenting empirical testing here, it provides a structured way to conceptualise how narrative processes animate resilience in practice. In later stages of this research program, the framework is applied in comparative case analyses of ecovillages and validated through participatory engagement with practitioners, moving from conceptual articulation to empirical grounding and practical application.

4.3.3 Resilience Foundations and Enabling Factors

Resilience, broadly understood as the capacity of systems to withstand disturbance and reorganise without losing essential functions (Walker et al., 2004), has become a central concept across sustainability and community studies. Early formulations in engineering emphasised robustness and the capacity to return quickly to a single desirable equilibrium after disturbance, treating resilience as a material property defined by strength and speed of recovery (Fiksel, 2006; Tredgold, 1818). A major shift occurred when Holling (1973) introduced ecological resilience, highlighting that systems may have multiple stable states and that resilience lies in the capacity to absorb disturbance, adapt, and sometimes transform. Holling moves away from equilibrium thinking opened resilience to broader applications in psychology, where longitudinal studies examined how individuals withstand adversity (Werner & Smith, 1982), and in organisational and social sciences,

where learning, behavioural dynamics, and collective action became central (Erol et al., 2010). Building on these disciplinary strands, resilience theory has expanded into social–ecological systems (SESs), emphasising the complexity, adaptability, and dynamism of coupled human–natural systems (Folke et al., 2010; Gunderson & Holling, 2002; Walker et al., 2004). These developments show that resilience has evolved as a transdisciplinary concept, not only because it has roots across multiple fields, but also because complex socio-ecological challenges demand collaboration between disciplines and the integration of diverse knowledge systems (Fan & Lyu, 2021; Lang et al., 2012; Scholz & Steiner, 2015). From this perspective, resilience is not only a structural property of systems but also a lived, narrated, and culturally constructed process. Some scholars have explicitly theorised resilience as inseparable from meaning-making. For instance, Almedom (2013) proposed the OPEN framework—resilience as Outcome, Process, Emergence, and Narrative—highlighting anticipation, identity, and sense-making as integral to adaptive capacities.

To ground this study in the broader genealogy of resilience scholarship, we reviewed a selection of influential frameworks that exemplify different contexts (community development, farming systems, urban planning, ecovillages) and methodological approaches (index-based, scenario-building, qualitative). These models were chosen because they illustrate how resilience has been operationalised across diverse domains, translating abstract concepts into measurable or actionable factors.

Table 4.1. Assessment of Enabling Factors in the Selected Resilience Frameworks

Title/ Author	Context	Enabling factors
A Community Resilience Framework for community development practitioners building equity and adaptive capacity (Cafer et al 2019)	Community development	• Available capital • Natural capital • Cultural capital • Human capital • Social capital • Financial capital • Built capital
A framework to assess the resilience of farming systems (Meuwissen et al. 2019)	Farming	• Robustness • Adaptability • Transformability
The co-production of sustainable future scenarios (Iwaniec et al, 2020)	Urban	• Adaptive learning • Diversity • Redundancy
Resilient utopias	Ecovillage	• Diversity • Reserves

Title/ Author	Context	Enabling factors
(Baumber et al 2022)		• Nestedness • Semi-permeability • Creative mindset • Leadership • Communication • Self-organisation • Unity of purpose • Spiritual capital
A holistic index-based framework to assess urban resilience: Application to the Madrid Region, (Suarez 2024)	Urban	• Diversity • Self-sufficiency/ autonomy • Polycentric governance, • Social cohesion, • Learning/ innovation • Social-ecological justice.

Despite differences in emphasis, most resilience frameworks converge on five factors that consistently underpin adaptive capacity: diversity, connectivity, adaptability, transformability, and social capital. Diversity, whether biological, cultural, or functional, provides multiple pathways for response and buffers against shocks (Carpenter et al., 2012; Folke et al., 2002). Adaptability refers to the capacity to adjust behaviours and institutions as conditions change (Biggs et al., 2015; Folke et al., 2010), while transformability becomes essential when incremental adjustments are insufficient, requiring entirely new system configurations (Olsson et al., 2014; Walker et al., 2004). Recent work on pathway diversity further conceptualises resilience as the capacity to sustain multiple possible futures, emphasising agency and systemic feedbacks (Lade, Walker, & Haider, 2019). Together, these perspectives reinforce the importance of diversity, adaptability, and transformability as enabling factors that prevent communities from becoming locked into single, potentially maladaptive trajectories.

Connectivity supports resilience by facilitating the flow of resources, information, and coordination across scales. At the same time, excessive connectivity can transmit shocks or dependencies, underscoring the need for semi-permeable configurations—boundaries that are open enough to allow beneficial exchange yet selective enough to filter or slow the spread of risks (Baumber et al., 2022; Folke et al., 2004). Underpinning all of these factors is social capital, which encompasses the trust, reciprocity, and norms of cooperation that make collective action possible (Adger, 2003; Folke et al., 2005; Pretty, 2003).

A range of indicator-driven tools—such as BRIC (Cutter et al., 2010), PEOPLES (Renschler et al., 2010), PSI (People–Systems–Institutions), and CYRM (Child and Youth Resilience Measure)—have been developed to operationalise these enabling factors and improve comparability across contexts. However, such approaches often privilege measurable attributes over cultural and discursive processes. The framework proposed here responds to this gap by positioning narratives as a constitutive layer through which enabling factors are activated, contested, and reconfigured in practice.

4.3.4 Genealogy of Community Resilience Frameworks.

Building on these foundations, community resilience has been developed through a wide range of frameworks that translate ecological and psychological insights into collective and place-based contexts. Influential examples include Cutter et al.'s (2010) BRIC index, the PEOPLES framework (Renschler et al., 2010), the Community Capitals Framework (Emery & Flora, 2006), and more recent ecovillage-focused work (Baumber et al., 2022). While these approaches differ in emphasis—some privileging quantitative indicators, others relational or cultural dynamics—they converge on the task of identifying enabling factors. Yet, as Kulig et al. (2013) note, many models conflate resilience with its drivers or outcomes, making it difficult to separate the concept itself from the conditions that support it. Moreover, most emphasise structural attributes or measurable capacities, with less attention to the interpretive processes through which communities make sense of disruption, legitimise choices, and coordinate action.

The framework developed in this paper builds on this genealogy while addressing the identified interpretive gap. It distinguishes between stories (situated accounts of lived experience through which individuals express identity, meaning, and agency) and narratives (the broader interpretive structures that organise those stories into shared patterns of sensemaking). By articulating how stories contribute to identity formation, knowledge exchange, cohesion, and reflexive adaptation, and how narratives provide the cultural frameworks that shape and stabilise these processes, the framework introduces a cultural dimension that complements existing structural and functional approaches. In this way, it extends the lineage of community resilience frameworks by positioning narrative as a constitutive process that organises, animates, and reconfigures enabling factors in practice.

4.3.5 Narratives and Community Resilience

Fisher's (1984) articulation of the narrative paradigm positions humans as homo narrans, whose reasoning and decision-making are guided not only by formal logic but by the coherence and fidelity of stories. This reframing legitimises narratives as constitutive of meaning-making and collective reasoning, providing a foundation for understanding their role in resilience processes.

In this study, a distinction is made between stories and narratives. Stories refer to specific lived accounts, episodes, or experiential expressions through which individuals and communities recount events. Narratives, by contrast, denote broader interpretive structures that organise such stories into coherent patterns of meaning, identity, and direction (Somers, 1994). While stories convey experience, narratives shape how experience is collectively interpreted and situated within shared understandings of resilience and change.

Narratives function simultaneously as individual mental models and collective cultural practices, providing connective tissue between personal experience and community adaptation (Rabani & Mishra, 2024). They emerge from both cognition and social interaction. At the individual level, narratives structure conscious and unconscious sense-making (Johnson et al., 2023); socially, they are constructed and transmitted through shared cultural knowledge and communication (Cockerill et al., 2024). The human predisposition to organise experience into story-like forms supports this process, as narratives create causal order that renders events interpretable, memorable, and communicable (Bruner, 1991). Psychological research further highlights their role in fostering self-reflection and perspective-taking (Wamsler, 2014).

In times of adversity, stories acquire particular salience. Shared accounts strengthen social bonds, generate collective meaning, and support psychological resilience (Boon et al., 2016). Sustainability scholarship increasingly recognises narrative processes as essential yet underexplored dimensions of how communities navigate uncertainty and change (O'Brien, 2016; Riedy, 2020; Rizzuto et al., 2022).

Earlier conceptualisations, such as Almedom's (2013) OPEN theory, emphasised that resilience unfolds as a narrated process across temporal scales, foregrounding anticipation, identity, and sense-making as integral to adaptive capacity. Subsequent

scholarship warns against reducing resilience to a single storyline. Brown (2016) highlights narrative plurality, cautioning that privileging one dominant account can obscure alternative perspectives and constrain possibilities for change. Resilient communities, by contrast, sustain diverse and coexisting narratives reflecting multiple experiences and values. Paschen and Ison (2014) similarly demonstrate how storytelling practices in participatory governance create space for dialogue and democratic negotiation under uncertainty. Empirical research shows that narratives not only reframe disruption but actively reshape governance: in U.S. water management, storytelling helped weave conflicting perspectives into shared stewardship (Lejano et al., 2013); elsewhere, narrative practices have supported resistance to restrictive official accounts (Clark, 2020) and enabled communities to hold together mourning and future-oriented imagination (Asiimwe Kyomugisha, 2025).

Narratives, however, are not inherently emancipatory. Oversimplified or idealised accounts of resilience can obscure underlying inequalities, enable greenwashing, or shift responsibility for systemic crises onto individuals and communities (Coulthard, 2012; Davoudi, 2012). This double-edged character underscores the need for critical engagement.

Resilient communities cultivate flexible narrative repertoires rather than relying on a single dominant account. Maintaining multiple interpretive pathways allows adaptation while preserving shared identity and purpose. Work on pathway diversity similarly emphasises the value of keeping futures open rather than privileging fixed trajectories (Lade et al., 2019). The framework developed here extends this insight by demonstrating how narratives provide the cultural infrastructure for such multiplicity: stories give meaning to alternative pathways, legitimising them as viable directions for adaptation and transformation. Narratives are dynamic and recursive, evolving with experience while reshaping how resilience itself is imagined and enacted (Dobrin & Weisser, 2002; Howard, 1991).).

4.3.6 The Narrative- Resilience Framework

Previous research has identified a variety of roles that narratives can play within communities. For the purposes of analysing their contribution to resilience, we delineate

six broad roles. These roles are analytically distinct but deeply interconnected, each grounded in narrative theory and linked to specific resilience-enabling factors.

The following subsections illustrate that connection. While the analysis here is conceptual, these relationships are further examined through empirical case studies in subsequent work.

1. **Identity Shaping**

Narratives articulate shared histories, values, and aspirations, reinforcing collective identity and belonging (Wardekker et al., 2023). By framing diversity as part of who the community is, identity stories protect against homogenisation and strengthen social capital through belonging and commitment. Wardekker et al. (2023) illustrate this in an urban context, showing how local stories connect abstract climate strategies with citizens' everyday experiences, thereby strengthening identity and engagement. Similarly, Case and Hunter (2012) highlight how counter-spaces allow marginalised groups to affirm cultural identity through shared narratives, which not only reinforce belonging but also increase inclusivity and the transformative potential of adaptation processes.

2. **Sensemaking**

Narratives reduce ambiguity, provide causal explanations, and guide decision-making under uncertainty (Turner et al., 2023; Weick et al., 2005). This interpretive role supports adaptability by helping communities reframe disruption as learning, while relying on connectivity to circulate shared understandings. Turner et al. (2023), studying post-apartheid South Africa, show how narratives grounded in ubuntu, "I am because we are", helped communities re-establish anchors of identity, integrate diverse perspectives, and navigate transformative change. Sensemaking narratives thus support both immediate coping and longer-term learning.

3. **Knowledge Transmission**

Frandsen and Johansen (2017) highlight the importance of multivocality, where stories from organisations, media, and communities broaden perspectives and inform decisions. Schlüter, Müller, and Frank (2019) similarly show that combining different knowledge systems improves sustainability management. At the community level, Litfin (2014) demonstrates how storytelling in ecovillages integrates diverse knowledge and fosters alternative visions of socio-ecological futures. These examples illustrate the knowledge transmission role of narratives: the preservation and sharing of tacit practices and cultural

memory across generations, sustaining flows of information that strengthen both adaptability and connectivity.

4. **Agency Stimulation**

A sense of agency grows when people hear and share stories that show change is possible. Such narratives motivate participation, legitimise action, and build confidence for collective efforts (Blythe et al., 2021; Moore & Westley, 2011). In small-scale fisheries, Blythe et al. (2021) found that fishers reframed outside pressures as opportunities to adjust their practices and reorganise their systems. Similarly, in the context of climate disruption, stories that acknowledge eco-anxiety yet frame it as a catalyst for collective response can help transform feelings of paralysis into constructive action (e.g., Weick et al., 2005). In both cases, agency is strengthened through storytelling, which in turn supports adaptability and, when needed, deeper transformation.

5. **Cohesion Building**

Shared narratives foster trust, solidarity, and coordinated action, reinforcing social capital and connectivity (Adger, 2003; Pretty, 2003). Cohesion narratives buffer against fragmentation, sustaining cooperation and emotional resilience during crises. Villalonga-Olives and Kawachi (2017), for instance, show that resilience during crises emerges through social relations, as individuals draw on social support networks and shared narratives of coping, highlighting that resilience is fundamentally embedded in collective dynamics rather than individual traits.

6. **Reflexive Adaptation**

We identify a meta-role for narratives: shaping how resilience itself is understood and enacted. Narratives about resilience influence resilience practice, and resilience practice, in turn, reshapes the narratives communities tell. Reflexive stories question taken-for-granted assumptions, reshape goals, and legitimise new directions, influencing all enabling factors simultaneously. They connect interpretations of past experiences with collective visions for the future (Ford et al., 2016; Walker et al., 2012), while also evolving in response to lived disruptions. Veland et al. (2018) show that dominant and alternative stories shape what communities see as possible, either opening up or restricting their options. Reflexive adaptation is therefore not just about changing practices but about rethinking and reshaping the stories that guide resilience.

Figure 4.1 presents the framework, mapping the six narrative roles (green) onto the five enabling factors (white).

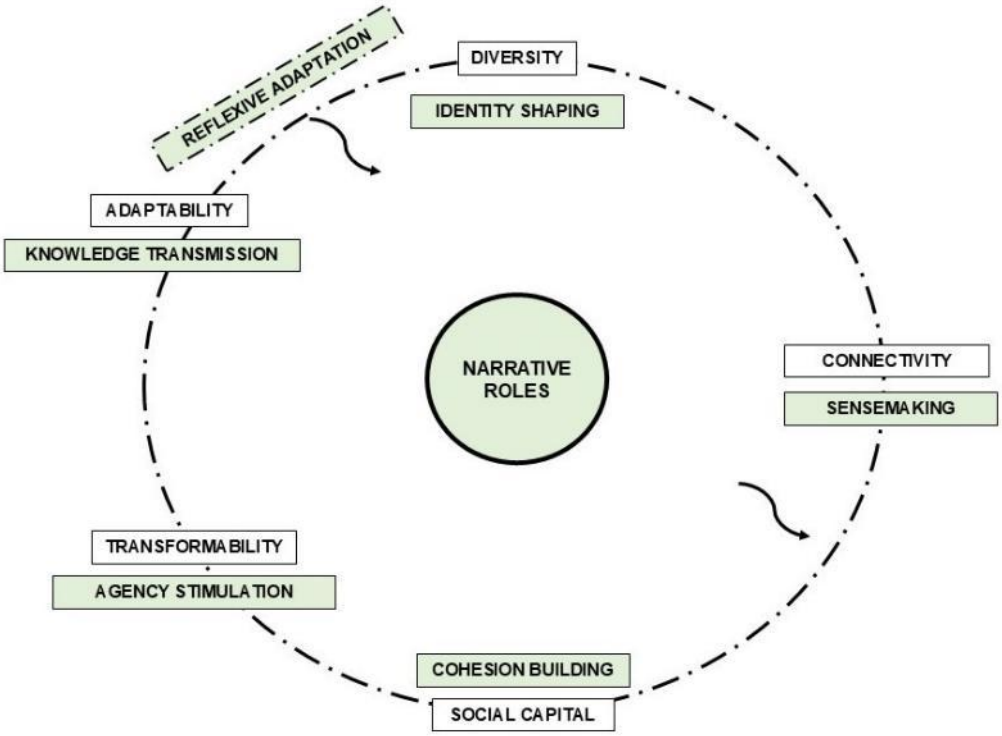


Figure 4.1. A resilience framework illustrating the interplay between narrative roles and resilience-enabling factors. The meta-role highlights how overarching stories shape shared discourse and collective sense of resilience.

The framework illustrates how narratives shape the way enabling factors are interpreted, valued, and mobilised, thereby influencing the extent to which these capacities contribute to resilience. The six narrative roles interact with enabling factors through pathways that are dynamic, mutually reinforcing, and context dependent. Although each role may connect to multiple factors in practice, Figure 4.1 highlights the most salient linkages to enhance conceptual clarity.

This framing affirms that resilience is not only about the resources communities possess, but about how those resources are narratively organised, contested, and reworked over time.

Each narrative role was analysed in terms of what it organises within community systems, whether meaning, coordination, or change, and then mapped to enabling factors identified in community resilience theory that represent corresponding structural or relational capacities. The detailed conceptual derivation of these linkages is provided in Appendix

C. While narrative roles interact with multiple enabling factors in practice, the framework identifies primary functional affinities to clarify how narrative processes render structural capacities meaningful and actionable.

4.3.7 Discussion

4.3.7.1 Contributions and Implications

This work advances resilience theory by demonstrating how stories function as constitutive and dynamic forces that interact with, rather than replace, structural and ecological conditions. It positions narrative as a central dimension of resilience practice, shaping how communities interpret challenges, coordinate action, and mobilise existing capacities. The contribution lies in bringing meaning-making more explicitly into resilience thinking while maintaining the distinction that resilience is not solely a cultural or discursive process. Instead, resilience emerges through recursive dynamics in which narratives influence resilience-enabling factors, and lived experiences of resilience, in turn, reshape the stories communities tell. From this perspective, enabling factors are not static attributes but relational and organisational capacities sustained through ongoing narrative processes, trust-building, and collective sense-making, all embedded within broader material and institutional contexts.

Recent scholarship highlights that narratives do not operate in isolation but co-evolve with social relations. Koch, Gorris, and Pahl-Wostl (2021) show how narrations and social ties mutually shape governance processes, with converging narratives fostering trust and collaboration, while divergent narrations can entrench divisions and hinder collective action. This suggests the framework is not only cultural and interpretive but also compatible with structural analysis tools such as network analysis. Mapping how narrative alignment intersects with patterns of collaboration could provide practical pathways for diagnosing fragmentation or fostering cohesion in community settings.

Because resilience evolves over time yet is often defined through attributes such as diverse capital or adaptability, a recurring challenge in resilience research is distinguishing the concept itself from the factors that contribute to it (Carpenter et al., 2012; Norris et al., 2008). Kulig et al. (2013) similarly note that models frequently conflate resilience with drivers such as social capital or governance capacity or rely on perceptions measured at a single point in time. In response, this framework conceptualises

resilience as a dynamic, relational process enacted through narratives. While earlier approaches such as the OPEN theory (Almedom, 2013) foregrounded narrative as a dimension of resilience, our framework advances this line of thought by systematically linking narrative functions with recognised enabling factors. This challenges reductionist tendencies that reduce resilience to measurable components and instead highlights a process-based view in which resilience emerges through interpretation, mobilisation, and collective practice.

This work also aligns with broader calls for integrative and transdisciplinary approaches that connect ecological, social, and cultural dimensions of resilience (Cote & Nightingale, 2012; Iwaniec et al., 2020). It provides hypotheses for practice and policy, such as the expectation that communities may be more resilient when narratives are shared rather than fragmented and empowering rather than dispiriting.

4.3.7.2 Limitations and Scope

We present the framework as a conceptual contribution, with empirical application and testing to follow. Its current role is generative, offering propositions to be explored and refined in real-world contexts.

The framework cautions that resilience can be undermined by damaging narratives. These include stories that oversimplify wicked problems (Rittel & Webber, 1973), perpetuate human–nature dualisms (Boulangeat, Depellegrin, & Egarter Vigl, 2022), or overstate the benefits of crises while neglecting their costs (Folke et al., 2010; Turner et al., 2023). Narratives that present disruption as inherently positive may reduce the urgency of action or shift responsibility for systemic crises onto individuals and communities. Simplified or celebratory framings of resilience risk fostering complacency and victim-blaming by disregarding power, inequality, and historical context (Coulthard, 2012; Davoudi, 2012).

Attention to power and voice is therefore crucial: whose stories are amplified, whose are marginalised, and how inclusive narrative repertoires can be cultivated. Addressing these questions is central to ensuring that the framework supports equitable and transformative resilience practices.

The framework is now being applied in two comparative case study communities: Narara (Australia) and Findhorn (Scotland). Preliminary findings suggest that flexible and

context-sensitive narrative practices allow communities to reinterpret challenges, adjust course, and sustain shared meaning over time.

4.3.7.3 Implications for Practice and Policy

The framework developed here has practical value for communities, practitioners, and policymakers seeking to strengthen resilience in the face of escalating disruptions. It offers a diagnostic lens to identify which stories sustain resilience and which may undermine it. For example, identity-shaping and cohesion-building narratives can help maintain social capital during crises, while agency and reflexive narratives can open space for transformation when incremental adaptation is insufficient.

For practitioners, the framework suggests that cultivating diverse and flexible story repertoires may be as important as investing in material resources. Facilitated meaning making processes including participatory scenario building, narrative workshops, or community storytelling forums, can provide arenas for sensemaking, alignment, and innovation. Such practices may help diagnose fragmentation, amplify marginalised voices, and foster inclusive pathways for adaptation.

For policymakers, the framework highlights the risks of relying on oversimplified master narratives, such as those that individualise responsibility for systemic crises or portray disruption as inherently beneficial. Instead, policies that recognise and support plural, locally grounded stories are more likely to build legitimacy and collective agency. Integrating narrative analysis with structural tools such as network mapping could further strengthen governance by illuminating how story alignment intersects with collaboration, trust, and institutional capacity.

Looking ahead, the framework offers a foundation for participatory validation with communities and practitioners. Such engagement will be essential to refine its practical relevance, test its utility in real-world contexts, and ensure that it contributes to equitable and transformative resilience-building strategies.

4.3.8 Conclusion

As resilience becomes central to contemporary responses to disruption, it is essential to look beyond structural and systemic capacities to the cultural narratives through which communities interpret uncertainty and imagine transformation.

This paper introduced the narrative–resilience framework, which systematically links six narrative roles—identity shaping, sensemaking, knowledge transmission, agency stimulation, cohesion building, and reflexive adaptation—with five widely recognised enabling factors. It embeds cultural and interpretive processes into resilience thinking.

A central insight is the recursive quality of this relationship: narratives shape how resilience is enacted, while experiences of resilience and disruption reshape the narratives themselves. Meaning-making is therefore not a peripheral element but a constitutive force that guides how communities sustain identity, mobilise collective action, and negotiate transformation.

This study positions the narrative–resilience framework as a heuristic structure rather than a fixed model, demonstrating its potential to link meaning-making with resilience capacities. Future research can build on this foundation by testing and refining the framework across diverse contexts and through participatory approaches, ensuring it remains both analytically robust and practically relevant.

Attending to narrative as cultural infrastructure invites a shift in resilience thinking, from measuring what communities have to asking how they story themselves into futures. Positioning narrative in this way highlights its potential as a lever for resilience, enabling communities to continually reinterpret disruption and reimagine what is possible together.

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Chapter 5: Paper 2

Narrative Plasticity and the Dynamics of Community Resilience

5.1 Preamble

This chapter presents the empirical application of the narrative–resilience framework developed in Chapter 4. Building on the conceptual foundations established in Paper 1, it examines how narrative processes interact with resilience-enabling factors in two contrasting yet comparable ecovillages where resilience is intentionally cultivated. Drawing on 30 semi-structured interviews, field immersion, and documentary analysis, the study investigates how community members articulate identity, interpret disruption, mobilise collective agency, and navigate uncertainty through situated narratives that both reflect and shape broader structural conditions.

The findings indicate that community resilience does not depend on a single dominant storyline, but emerges through a dynamic configuration of interacting narratives that evolve, diverge, and recombine over time. To account for this dynamism, the chapter introduces two key concepts. Narrative plasticity refers to the capacity of shared narratives to be reinterpreted, contested, and adapted while maintaining sufficient coherence for collective meaning and coordinated action. Narrative ecology denotes the patterned system of narrative roles, types, and archetypes circulating within a community, shaping how change is understood, negotiated, and enacted. Together, these concepts illuminate how resilience arises through the interplay between structural conditions and the plasticity of narrative ecologies.

This paper constitutes the second publication of the thesis. While Paper 1 developed a conceptual framework linking narrative roles with resilience-enabling factors, this study applies and tests that framework empirically through a comparative case analysis of Narara Ecovillage (Australia) and Findhorn Ecovillage (United Kingdom). Its purpose is to demonstrate how narratives operate alongside enabling factors such as adaptability, diversity, connectivity, transformability, and social capital, and how these dimensions co-evolve in practice.

In line with the methodological design outlined in Chapter 3, the detailed procedures for this study—including case selection, interview protocols, coding strategies, and comparative analysis—are presented in Section 5.2.4. The full text of the paper follows.

5.2 Signature Page

Paper 2

Narrative Plasticity and the Dynamics of Community Resilience

Authors

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Statement of authorship and contribution

The contribution of each author to this paper is detailed in the thesis under the "Statement of Contribution of Authors" section.

All authors have reviewed and approved the contribution statement and the inclusion of this paper in the doctoral thesis of Julia Fernandez.

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5.3 Full Article #2- Narrative Plasticity and the Dynamics of Community Resilience

Abstract

Community resilience scholarship has increasingly recognised the importance of social learning, governance, and adaptive capacity, yet the role of narrative processes in shaping resilience remains under-theorised. This study examines how narratives influence community resilience in two ecovillages, Narara (Australia) and Findhorn (Scotland), using a comparative qualitative case study design grounded in narrative inquiry and phenomenology. Drawing on 30 interviews, participant observation, and document analysis, we analyse how narrative roles interact with resilience-enabling factors including diversity, connectivity, adaptability, transformability, and social capital.

Findings show that resilience emerges not only through structural capacities , but through patterned interactions between narrative processes and enabling conditions. We introduce the concept of narrative plasticity to describe the collective capacity to reinterpret guiding narratives in response to disruption while maintaining shared coherence. Across both cases, identity shaping, cohesion building, and agency stimulation were highly prevalent, yet their effects varied according to institutional context and socio-economic conditions.

By integrating narrative roles with resilience-enabling factors, the study develops a framework that conceptualises community resilience as a dynamic narrative–structural process. This reframing clarifies how interpretive dynamics shape adaptation and transformation in social–ecological systems.

Keywords: Narrative plasticity, Community resilience, Narrative ecology, Social-ecological systems, Ecovillage sustainability transition.

5.3.1 Introduction

Contemporary societies are increasingly shaped by overlapping crises, including pandemics, accelerating climate change, economic instability, and political polarisation. These disruptions expose vulnerabilities not only in ecological systems and infrastructures but also in governance arrangements and social relations, highlighting that technical or material responses alone are insufficient (Meerow et al., 2019; Pahl-Wostl,

2023; Turnhout et al., 2020). Addressing such challenges requires a cultural shift in the ways communities and institutions perceive risk, navigate uncertainty, and sustain social bonds. Recent research highlights the importance of rebuilding social capital, strengthening connectedness, and fostering place-based engagement as foundations of community resilience (Eriksen & Simon, 2025; Larsen et al., 2023; Zhao et al., 2025).

Resilience, broadly defined as the capacity of a system to maintain essential functions and identity while absorbing disturbance, adapting, and reorganising (IPCC, 2022; Walker et al., 2004), provides a useful lens for examining how complex systems navigate uncertainty. In this study, the focus is specifically on community resilience, understood as the capacity of communities to sustain identity, wellbeing, and collective functioning while adapting and, where necessary, transforming in response to disruption (Berkes & Ross, 2013; Magis, 2010). This community-level framing foregrounds relational dynamics, shared meaning-making, and governance processes that shape how resilience is enacted in practice. A common way to operationalise this broader concept—that is, to make it measurable and applicable—is through the identification of enabling factors (Carpenter et al., 2012; Suarez et al., 2016).

These factors do not operate in isolation but interact in dynamic, context-specific ways that often involve tensions and trade-offs (Walker & Salt, 2012). Within this repertoire, socially oriented factors such as connectivity, trust, and social learning foreground the relational and cultural dimensions of resilience (Baumber et al., 2022; Berkes et al., 2003; Cafer et al., 2019). Recognising these dynamics has led scholars to argue for approaches that more fully integrate complexity, situated knowledge, and cultural meaning into resilience research (Cote & Nightingale, 2011; Iwaniec et al., 2020).

Ecovillages are intentional communities designed through participatory processes to integrate ecological, social, cultural, and economic dimensions of sustainability (Global Ecovillage Network [GEN], 2018). Academic scholarship further describes ecovillages as community-led initiatives that experiment with alternative governance arrangements, economic models, and sustainability practices within place-based contexts (Venkitaraman & Joshi, 2022). In this study, the term *ecovillage* refers to self-organised communities oriented toward social–ecological regeneration through shared values, cooperative governance, and collective forms of organisation.

Ecovillages provide particularly suitable settings for examining a narrative–community resilience framework because they intentionally cultivate practices aligned with resilience principles, including ecological design, shared infrastructure, and participatory governance. As small yet complex social–ecological systems, they make resilience processes visible in everyday life and consequential for collective functioning. At the same time, research shows that many intentional communities have struggled to persist over time due to governance challenges, economic fragility, and internal conflict (Dawson, 2006; Sargisson, 2014). This historical fragility highlights the diverse trajectories such communities can follow, rather than assuming resilience as given. Ecovillages also position themselves as intentional alternatives to dominant social and economic models while remaining embedded within broader institutional and societal pressures. This dual positioning makes them analytically valuable for examining how narratives and resilience-enabling factors interact in practice.

Although prior research has examined ecovillages as experimental sustainability sites and grassroots resilience initiatives (Lockyer & Veteto, 2013; Venkitaraman & Joshi, 2022), attention has focused primarily on material practices and external impacts. Less examined are the cultural and narrative processes through which ecovillages sustain community resilience internally, particularly under conditions of uncertainty and disruption.

Emerging scholarship increasingly recognises narratives as integral to resilience processes, shaping how communities interpret disruption, construct shared identity, transmit knowledge, and mobilise collective agency (Asiimwe Kyomugisha, 2025; Clark, 2020; Riedy, 2020). Despite their centrality in practice, narrative processes remain underexplored in resilience research. This study addresses that gap by asking: What role do narratives play in community resilience? We explore this question through a comparative analysis of two ecovillages.

Our contributions are threefold. First, we show that narratives actively shape community resilience by linking lived experience with adaptive and transformative capacities. Second, we introduce the concept of narrative plasticity, defined as the ability of communities to reinterpret and evolve guiding narratives in response to disruption, thereby reframing resilience as a dynamic, co-constructed process. Third, we develop a practical framework that identifies key narrative roles, understood as recurring functions

through which communities organise meaning and collective response, and demonstrates how diverse and adaptive interpretive processes shape community resilience.

These contributions offer both theoretical insight and practical tools for community governance, planning, and collective action. Building on Fernandez et al. (under review-a), which identified linkages between narrative roles and resilience-enabling factors, this study refines that framework through comparative case analysis and shows how narrative diversity and plasticity operate in practice.

5.3.2 Theoretical Framework

5.3.2.1 Resilience Foundations

Resilience is a widely applied concept across disciplines, with multiple frameworks emphasising different priorities and scales. Within this broader field, community resilience refers to the capacity of a community to absorb disturbance, adapt to changing conditions, and, where necessary, transform in ways that sustain wellbeing and identity (Berkes & Ross, 2013; Folke et al., 2010; Magis, 2010). It has become central across sustainability science (Adger, 2000), disaster risk reduction (Cutter et al., 2010), public health (Kirmayer et al., 2009), or urban planning (Davoudi, 2012).

The foundation for this study builds on core contributions to resilience thinking that established the conceptual basis for analysing social–ecological systems. Walker et al. (2004) distinguished between resilience, adaptability, and transformability, emphasising that systems must not only withstand disturbance but also adjust and, when necessary, undergo more fundamental shifts. This distinction has been particularly influential for community resilience, where both incremental adaptation and transformative change are often required under conditions of uncertainty. Folke et al. (2010) further synthesised resilience scholarship, demonstrating that resilience is best understood as a dynamic process in which adaptability and transformability are negotiated across social and ecological scales. From this perspective, resilience is not a fixed trait but emerges through ongoing reorganisation of meaning, relationships, and practice.

Unlike ecological resilience, which may be assessed through thresholds and feedbacks, social resilience foregrounds meaning-making, values, and power relations in shaping adaptive capacity (Cote & Nightingale, 2011; Davoudi, 2012; Magis, 2010). In this study,

community resilience is understood as a specific expression of social resilience at the community scale, where collective identity, governance, and shared practices mediate responses to change. These interpretive dimensions influence how communities determine what is essential to preserve, making community resilience less a stable property than a negotiated and relational outcome. To operationalise such complexity, scholars have proposed system-oriented approaches (Erol et al., 2010; Suarez et al., 2024), many of which identify enabling factors that provide a practical way of assessing resilience across scales. Across diverse resilience frameworks, recurring enabling factors include diversity, adaptability and transformability, social and relational capital, and distributed forms of coordination (Baumber et al., 2022; Cafer et al., 2019; Meuwissen et al., 2019).

Early operationalisations translated resilience into applied models, including the Community Capitals Framework, the BRIC index, and Berkes and Ross's integrated model. Subsequent scholarship clustered around themes such as equity and ecosystem health, preparedness, practitioner usability, and identity and cohesion (Baumber et al., 2022; Cafer et al., 2019; Kammouh et al., 2019), and more recently embedded resilience principles within governance processes (Suarez, 2024). Building on this trajectory, the present study tests a narrative–community resilience framework in two ecovillages, examining how narrative processes interact with enabling factors to shape resilience in practice.

5.3.2.2 Enabling Factors of Resilience

One way to understand and apply resilience is by identifying enabling factors that strengthen a system's ability to adapt and transform in the face of disruption. Among these, social capital has been widely emphasised as central to collective action. Adger (2003) demonstrated how trust and networks of reciprocity support adaptation to climate change, while Berkes and Ross (2013) highlight the role of trust, leadership, and social networks in sustaining collective management and community resilience. Building on this foundation, Walker and Salt (2012) identified a broader set of enabling factors—diversity, connectivity, adaptability, and social capital—and drew attention to the trade-offs inherent in their application. For example, diversity can stimulate creativity and open multiple response pathways but may also generate friction. Connectivity fosters coordination yet can create dependency. Social capital underpins trust and cooperation,

but it is fragile when participation declines. These factors, including adaptability and transformability, interact in complex and context-specific ways that can reinforce or undermine resilience (Walker and Salt, 2012). Their significance lies not only in their presence but in how they are mobilised, navigated, and sustained in practice. Enabling factors provide communities with response pathways and coordination mechanisms, yet their effectiveness depends on how trust, connectivity, and social learning are cultivated in specific settings.

While enabling factors describe the structural and relational capacities that support resilience, they do not fully explain how communities interpret, coordinate, and mobilise these capacities in practice. This requires attention to narrative processes.

5.3.2.3 Narratives and Resilience

Narratives do more than recount events; they actively shape how communities understand and respond to change. Narratives of place and belonging can anchor community identity, as Sandercock (2003) shows in urban planning contexts. Narratives also mobilise networks: Lejano et al. (2013) trace how shared storylines align actors in environmental campaigns, while Clark (2020) demonstrates how narrative reframing can position disruption as an opportunity for renewal. Narrative processes further enable communities to hold both grief and possibility. Cunsolo and Ellis (2018), for example, show how collective interpretation and emotional processing of ecological loss can spur adaptation rather than paralysis. Other scholars highlight the role of narrative in strengthening belonging (Riedy, 2020) or shaping collective visions for change (Asiimwe Kyomugisha, 2025; Chabay et al., 2022). Together, these studies provide empirically grounded evidence that narrative processes contribute to community resilience. Despite this recognition, most resilience frameworks continue to rely on indicators, psychometrics, or structural measures, giving less systematic attention to cultural and narrative dimensions.

In prior work, we proposed a framework linking narrative roles with resilience-enabling factors (Fernandez et al., under review-a).

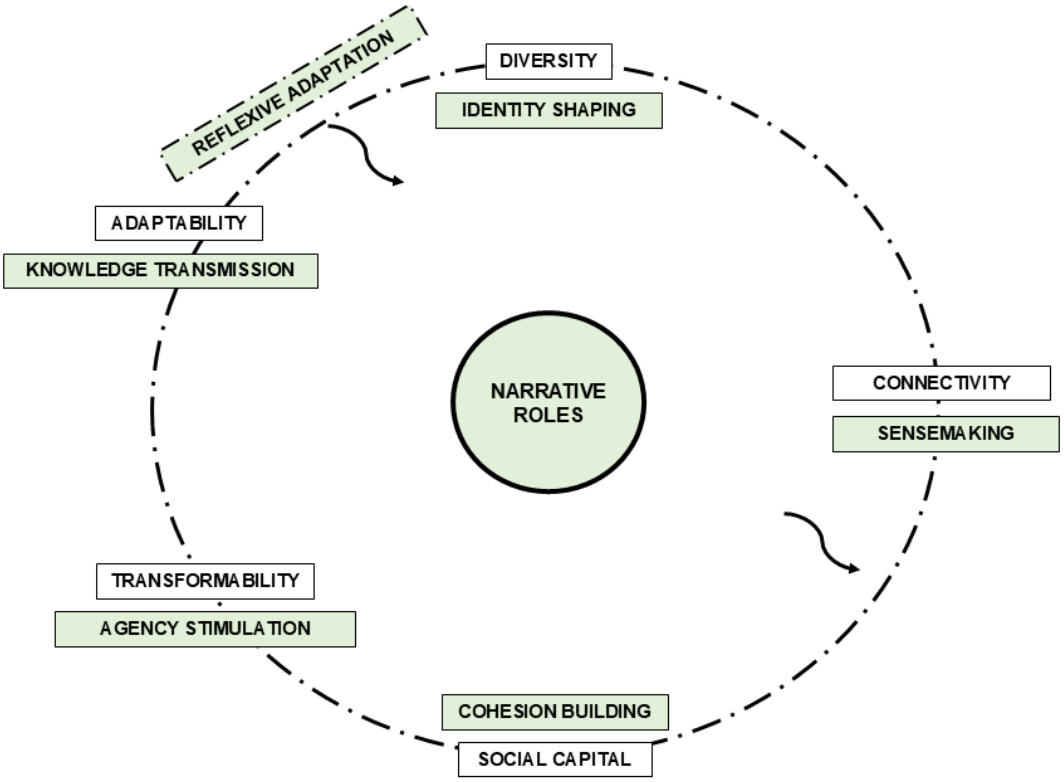


Figure 5.1 Resilience framework illustrating the interplay between narrative roles (green) that enhance resilience and the enabling factors (black) that support them.

Note. Reproduced from Fernandez et al. (under review-a) The linkages between narrative roles and resilience-enabling factors are derived from a conceptual synthesis of narrative and resilience literature. Each role is mapped to the factors it most directly reinforces based on theoretical and empirical scholarship. The figure highlights analytically salient connections rather than exhaustive ones. A detailed account of how each narrative role was conceptually linked to specific resilience-enabling factors, including supporting literature, is provided in Appendix C.

Narratives shape identity, guide sensemaking, transmit knowledge, mobilise agency, strengthen cohesion, and enable reflexive adaptation (Berkes & Ross, 2013; Lejano et al., 2013; Pahl-Wostl, 2023). Reflexive adaptation, conceptualised as a meta-role, captures how narratives shape responses to disruption while lived experiences simultaneously reshape the narratives themselves. Through these roles (Figure 5.1), narratives interact with resilience-enabling factors and reframe resilience as a dynamic process of collective interpretation and adaptation. Narratives are not static; they evolve over time, balancing continuity with change and interacting within wider cultural, institutional, and discursive contexts. Existing scholarship recognises that narratives operate as adaptive and systemic

processes (Howard, 1991; Dobrin & Weisser, 2002; OPPORTUNITIES Project, 2021). This recursive quality underscores the flexibility of narrative configurations, a theme developed further later in the paper.

5.3.3 Need and Contribution of This Study

Previous resilience frameworks have often been operationalised through indicators and metrics, yet fewer studies have systematically engaged with narratives or lived experience. Comparative and case-based research highlights the implications of this gap. Suarez et al. (2016) show that translating broad resilience theory into urban assessment tools can create disconnects between abstract models and practical needs. Similarly, Wilson et al. (2014) demonstrate that attempts to measure resilience in rural China were complicated by trade-offs between social capital and adaptability, revealing tensions that standard indicators struggled to capture. Cafer et al. (2019) proposed a practitioner-oriented framework for community development, yet the interpretive and narrative dynamics through which resilience capacities are mobilised remain underexplored. These studies reveal both the value and difficulty of empirical application: frameworks must capture complexity while remaining grounded in lived experience.

This study extends that tradition by comparatively testing a narrative–community resilience framework in two ecovillages. Its contribution lies in positioning narrative processes as a critical mechanism through which enabling factors are enacted, thereby extending resilience theory into the cultural and relational dimensions of community life.

5.3.4 Methods

This study employed qualitative methods to explore how narratives shape community resilience in two ecovillages. Narrative inquiry provided the primary methodological foundation, emphasising how stories structure lived experience, organise collective meaning, and guide adaptive action over time (Clandinin & Connelly, 2000; Stefanescu, 2015). This orientation enabled attention to how participants construct continuity, interpret disruption, and position themselves within broader community storylines.

This approach was complemented by phenomenology, which foregrounds how individuals interpret and embody lived experience within situated contexts (Alhazmi &

Kaufmann, 2022; van Manen, 1990). Phenomenology supported close engagement with participants' subjective accounts, while narrative inquiry enabled examination of how these experiences are woven into shared storylines that shape collective resilience practices. Together, these approaches allowed investigation of both individual sensemaking and the collective narrative processes through which community resilience is enacted.

A comparative case study design enabled in-depth exploration of resilience processes within distinct yet comparable community contexts. Narara Ecovillage in Australia and Findhorn Ecovillage in Scotland were selected because both explicitly pursue community resilience while representing different stages of development, cultural orientations, and scales. Narara, founded in 2008 near Sydney, is a younger peri-urban initiative of approximately 100 households, with a focus on ecological design, cooperative governance, and applied experimentation in sustainable living, including sociocracy (a consent-based, circle-structured governance model), eco-housing, and renewable energy systems. Findhorn, established in 1962 in northeast Scotland, encompasses approximately 220 households and has developed an international profile grounded in spiritual and ecological values, education, and cooperative enterprise.

Their contrasting trajectories provide a rich basis for comparison. Differences in geography, governance arrangements, economic structures, and cultural orientations offer complementary perspectives on how community resilience is enacted in practice, while their shared affiliation with the Global Ecovillage Network situates them within a broader transnational movement oriented toward sustainability transitions.



Figure 5.2. Examples of alternative housing: Narara's earth-inspired home (left) and Findhorn's eco-pod dwellings (right).

5.3.4.1 Defining System Identity and Boundaries

To structure the comparative analysis, this study draws on both foundational and contemporary understandings of resilience. Walker et al. (2004) conceptualise resilience as the capacity of a system to maintain its identity, defined as its core characteristics, functions, and relationships, when exposed to disturbance. More recent formulations, including the IPCC AR6 definition (IPCC, 2022), emphasise resilience as the capacity of social, economic, and environmental systems to cope, adapt, learn, and transform while sustaining essential functions and identity. These perspectives support examination of how community identity, understood as core characteristics, functions, and relationships, is preserved, reinterpreted, or transformed through narrative processes. Clarifying system identity and boundaries establishes analytical scope, enables examination of internal dynamics and cross-scale influences, and enhances comparability between cases (Bousquet et al., 2021; Nguyen & Akerkar, 2020).

For each ecovillage, system identity was identified through interview data and publicly available materials describing community values, governance processes, practices, and aspirations. Appendix J1 summarises the characteristics participants regarded as essential to preserve in the face of disturbance. Additional contextual information is provided in Appendix B5.

Fieldwork was conducted at both sites and included 30 semi-structured interviews (15 per community). Participants represented a diverse range of residents, including long-term members, newcomers, and individuals engaged in governance roles. Interviews invited reflection on ecological risks, financial pressures, governance tensions, and everyday resilience practices. All interviews were audio-recorded with consent under UTS Human Research Ethics approval ETH23-8868, transcribed verbatim, and analysed using NVivo 12.

Field immersion of approximately one week at each site involved participation in daily activities and community events, enabling observation of resilience practices in situ. Informal conversations and participant observation complemented interview data. Additional materials, including vision statements, newsletters, and community media, were analysed to capture institutionalised expressions of resilience. A reflexive research journal was maintained throughout to document positionality, interpretive decisions, and emerging analytical questions.

Analysis followed a staged abductive approach integrating narrative inquiry and phenomenology. The process began with inductive open coding of interview transcripts, allowing themes, metaphors, tensions, and recurring narrative patterns to emerge without predefined categories. Codes captured references to identity, belonging, governance processes, experimentation, conflict navigation, responses to disruption, learning, and future imaginaries.

Through iterative comparison across transcripts and between cases, these initial codes were organised into higher-order narrative functions. Analytic memos documented interpretive decisions, disconfirming examples, and cross-case tensions. At this stage, the emphasis was on understanding how narratives operated in practice before engaging systematically with the conceptual framework.

The six narrative roles, developed in Paper 1, were revisited in light of the empirical material. As patterns stabilised across cases, the roles were refined where necessary to reflect how narratives operated in practice. This ensured alignment with the conceptual framework while remaining grounded in participants' accounts.

The analysis also identified recurring narrative types and archetypal figures that emerged inductively from the interview material. Narrative types were derived from patterned story forms appearing across participants, such as foundational narratives grounding identity or transformative narratives framing disruption as turning points. Archetypal figures were recognised where participants consistently positioned actors in recurring moral or relational roles, such as custodians of values, experienced knowledge-holders, reformers, or facilitators of cohesion. These dimensions were stabilised through cross-case comparison rather than predetermined categorisation.

To support systematic cross-case comparison, template analysis (King, 2012) was subsequently employed. A flexible coding template incorporating resilience-enabling factors identified in the literature was developed after the inductive stage. These factors functioned as sensitising concepts rather than fixed categories; participants did not necessarily use this terminology, and the template evolved in response to patterns identified earlier. References to enabling factors were analysed in relation to narrative roles, governance processes, and structural conditions within each community.

Several analytical tensions emerged during this process, particularly where narrative dynamics appeared to shape diversity, reflexivity, or adaptation. These instances were examined through iterative comparison and reflexive memoing to refine the framework.

5.3.5 Results

5.3.5.1 Threats and Disturbances

As outlined in Section 5.2.4.1, the two ecovillages differ in their system identities, which shape how resilience processes unfold. Both Narara and Findhorn experienced overlapping external shocks and internal stressors across ecological, financial, political, and cultural domains. These disturbances did not operate as isolated events but interacted in ways that exposed vulnerabilities and required both immediate and longer-term adaptation.

Table 5.1 summarises coded references to major disturbances across both communities. Values are presented as references per number of participants mentioning the disruption (e.g., 13/7 indicates 13 references across 7 participants).

Table 5.1. References to Major Disturbances across Narara (N) and Findhorn (F)

Disruption	Total (Refs/ Part)	Total % (n=30)	N (Refs/Part)	N % (n=15)	F (Refs/Part)	F % (n=15)
COVID19	**18/12**	**40%**	13/7	47%	5/5	33%
Financial pressures	**34/19**	**63%**	17/9	60%	17/10	67%
Ecological risks	**31/14**	**46%**	18/8	53%	13/6	40%
Political & legal factors	**30/18**	**60%**	21/11	73%	10/7	47%

Financial pressures were the most frequently referenced disruption overall (19 of 30 participants; 63%). At Narara, high living costs were often linked to reduced inclusivity: “It’s really expensive to live here… that disrupts resilience because we can’t be as inclusive as we’d like to be” (Participant M). At Findhorn, financial vulnerability was associated with reliance on residential and international programmes, highlighting exposure to external revenue streams.

Ecological risks were referenced by 14 participants (46%). At Narara, bushfire exposure and landscape vulnerability were described as ongoing structural concerns shaping

preparedness and planning. At Findhorn, ecological pressures were framed as longer-term sustainability challenges rather than episodic shocks.

Political and legal factors were mentioned by 18 participants (60%) and were more prominent at Narara. Planning approvals and council relations were frequently described as shaping adaptive capacity: "We're no longer independent of council… from a resilience point of view, it's a bit disappointing but probably sensible" (Participant M). At Findhorn, references centred more on organisational complexity and governance legacies: "Our community has developed in very complex ways, creating lots of wicked problems" (Participant J).

COVID-19 was referenced by 12 participants (40%), though framed differently across sites. At Narara, it was associated with internal disagreement and strain on cohesion: "COVID was the first time where people became very attached to their views… I was concerned the community might almost break down" (Participant I). At Findhorn, it was primarily described as an economic disruption linked to reduced travel and suspended international programmes.

5.3.5.2 Narratives Enabling and Constraining Resilience

Community resilience in both ecovillages was sustained not by a single dominant storyline but by a set of overlapping narratives. These narratives anchored identity, reframed disruption, transmitted knowledge, and mobilised agency, creating a flexible repertoire of meanings that communities could draw upon in times of crisis.

Figure 5.3 presents the prevalence of narrative roles across both case studies.

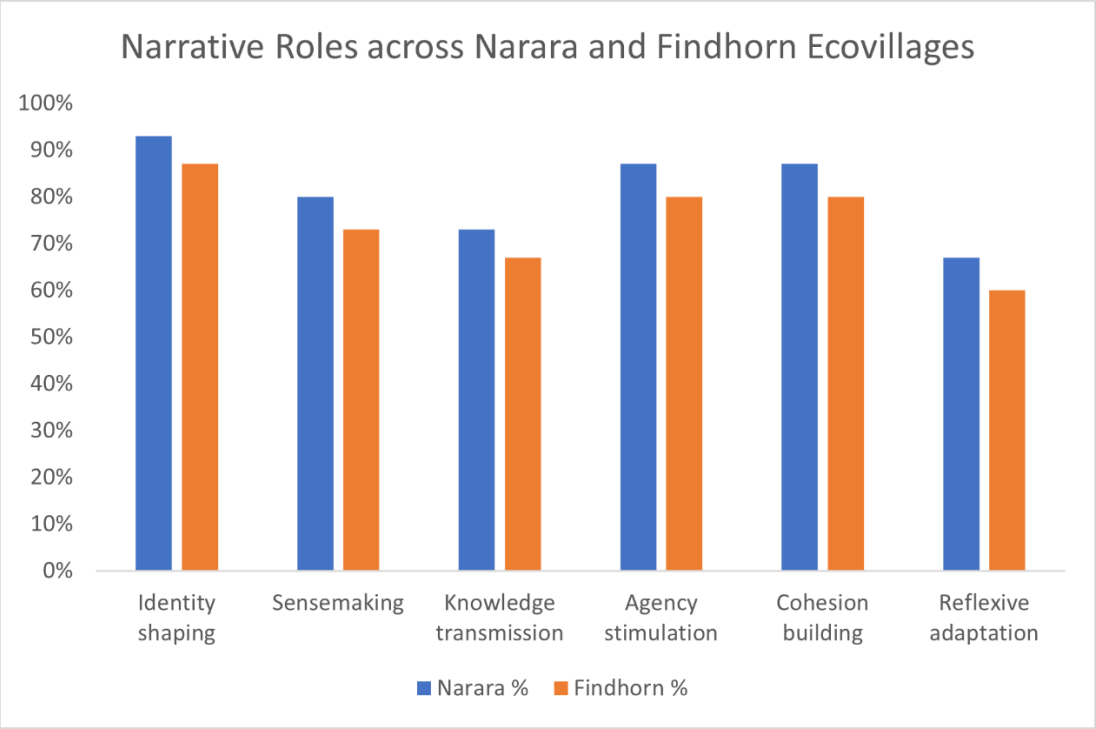


Figure 5.3. Narrative Roles across Case Studies

Identity-shaping emerged as the most widely referenced narrative role (27 of 30 participants; 90%), followed by agency stimulation and cohesion building (25 of 30; 83% each). Participants consistently described shared purpose, collective effort, and mutual commitment as central to community life.

At Narara, ecological purpose anchored belonging: "We talk about regeneration and living in harmony… learning from Indigenous wisdom" (Participant L). At Findhorn, agency narratives translated into coordinated action during crisis: "We appointed reps in each cluster to identify vulnerable people… that process in itself was empowering" (Participant AA). Cohesion was also described as evolving over time. One Narara member reflected that the community had shifted toward greater "inclusiveness and kindness" (Participant A), indicating changes in relational norms.

Reflexive adaptation was referenced by 19 participants (63%). Participants described how individuals adjusted to community norms over time, with one Narara member noting that newcomers' "rough edges get rubbed off" as they learn how the culture works (Participant O). Several accounts illustrated tension between cohesion and reflexivity. Strong norms of consensus were sometimes described as slowing decision-making, with one participant explaining that proposals required "97%… to give their yes," and dissenters were encouraged to act as a "loyal minority" (Participant C). In other instances, disagreement

was framed as productive, prompting more provisional decisions: “Probably the best answer for the moment… otherwise it goes on and nothing happens” (Participant E). These accounts indicate that cohesion and reflexivity coexisted but were sometimes experienced in tension.

Not all narratives supported resilience in generative ways, that is, in ways that participants associated with learning, coordination, experimentation, or renewed commitment. Participants described how competing positions could fragment coordination: “There’s so many opinions it can be a bit exhausting… at some point, people sort of lost interest” (Participant V). In some cases, dominant storylines created strain. For example, sustainability narratives were described as diluted into “greenwashing,” weakening commitment to deeper change. At Findhorn, portrayals of the community as a global spiritual hub supported international engagement but also introduced contradictions and economic vulnerability. These examples illustrate how narratives could both enable and constrain resilience.

In addition to the six narrative roles, the analysis identified recurring narrative types that emerged inductively and were stabilised through cross-case comparison. Foundational narratives anchored identity in origin stories and long-term purpose: “When I joined, I knew this was a demonstration ecovillage… not just a place to live, but to create a model” (Participant K). Transformative narratives were evident in moments of institutional redesign, such as governance reform at Narara: “We looked at the sociocratic structure… so we started the steering circle” (Participant C). Reflexive narratives treated collective meaning as provisional and open to reinterpretation: “We’re basically reframing all of that stuff… with much more awareness of the planetary need to live more simply” (Participant AC). Comparable patterned forms were observed across sensemaking, knowledge transmission, and cohesion-building narratives. A full analytical table detailing roles, types, themes, and excerpts is provided in Appendix F.

5.3.5.3 Resilience Enabling Factors Identified by Participants

Participants described a range of practices, relationships, and capacities that supported or hindered community resilience. Across the dataset, these were analytically organised into five resilience-enabling factors: diversity, connectivity, adaptability, transformability, and social capital.

Figure 5.4 presents the proportion of participants referencing each factor, including associated tensions.

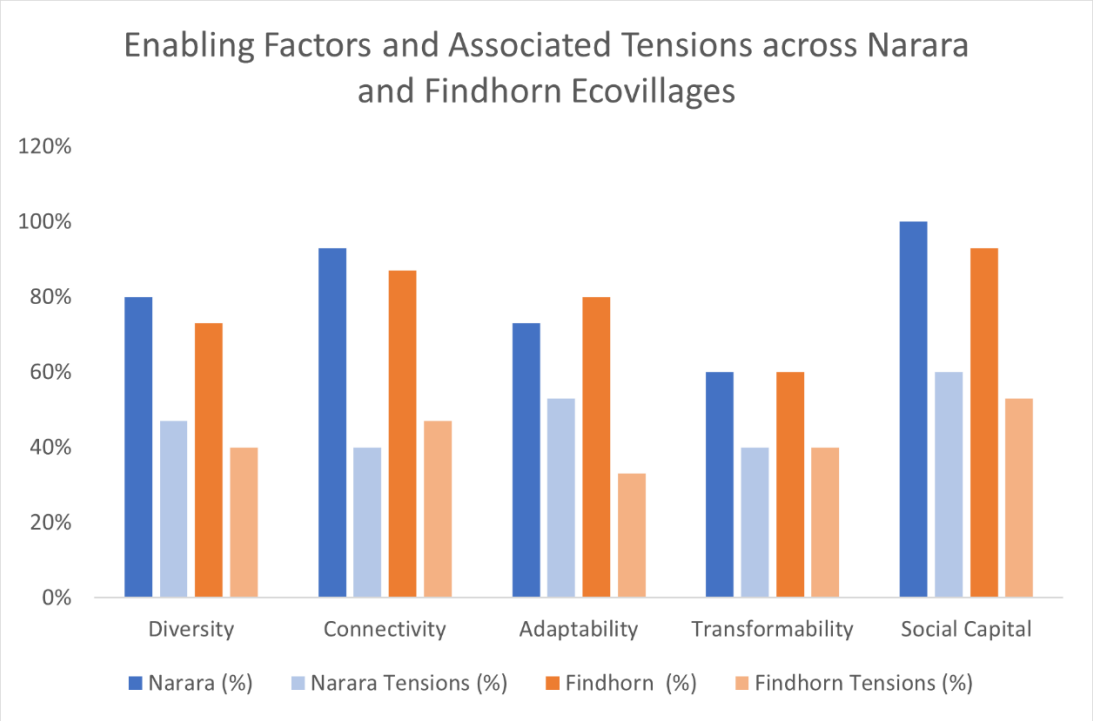


Figure 5.4. Resilience-Enabling Factors and Associated Tensions: Comparative Case Analysis

Relational enabling factors dominated participants' accounts of resilience. Social capital was referenced by nearly all participants (97%), with trust, shared leadership, and cooperation described as foundational to community functioning. Connectivity similarly featured prominently (90%), enabling coordination across governance, social life, and practical collaboration. However, these relational strengths were also described as demanding and occasionally fragile. Strong bonds required sustained emotional labour and were vulnerable when participation declined or conflict intensified. As one Findhorn member reflected, "May I put my truth beside your truth" (Participant Y), capturing the delicate balance between difference and cohesion. Another participant emphasised that community support persists even in the absence of personal affinity: "Even if I don't like you individually, you're part of this community. Therefore, I will help you" (Participant C).

Alongside these relational foundations, participants frequently highlighted the generative yet challenging role of diversity and adaptability (both referenced by 77%). New

members were described as bringing “ideas and energy” (Participant L), expanding the community’s adaptive repertoire. Yet 43% of participants explicitly linked diversity to coordination strain and ideological disagreement. Adaptability similarly carried ambivalence. While governance experimentation and procedural adjustment were framed as central to resilience, change was often slow and complex, with one proposal described as taking “two years to get through” (Participant B). In this way, capacities that expanded adaptive potential also introduced friction.

Transformability was referenced less frequently (60%) and was described more in terms of incremental adjustment than wholesale structural reorganisation. Participants more often emphasised relational maintenance and procedural adaptation than large-scale systemic redesign. Across both communities, prevalence patterns were broadly aligned, indicating a shared emphasis on relational and adaptive capacities, even as their specific expressions varied by context.

5.3.5.4 Interactions Between Narratives and Enabling Factors

Narrative roles and resilience-enabling factors co-occurred in patterned ways across both cases. While roles may support multiple factors simultaneously, the analysis focused on the strongest and most direct pairings to maintain empirical clarity. Figure 5.5 presents cross-case co-occurrences (percentage of participants per case; n = 15).

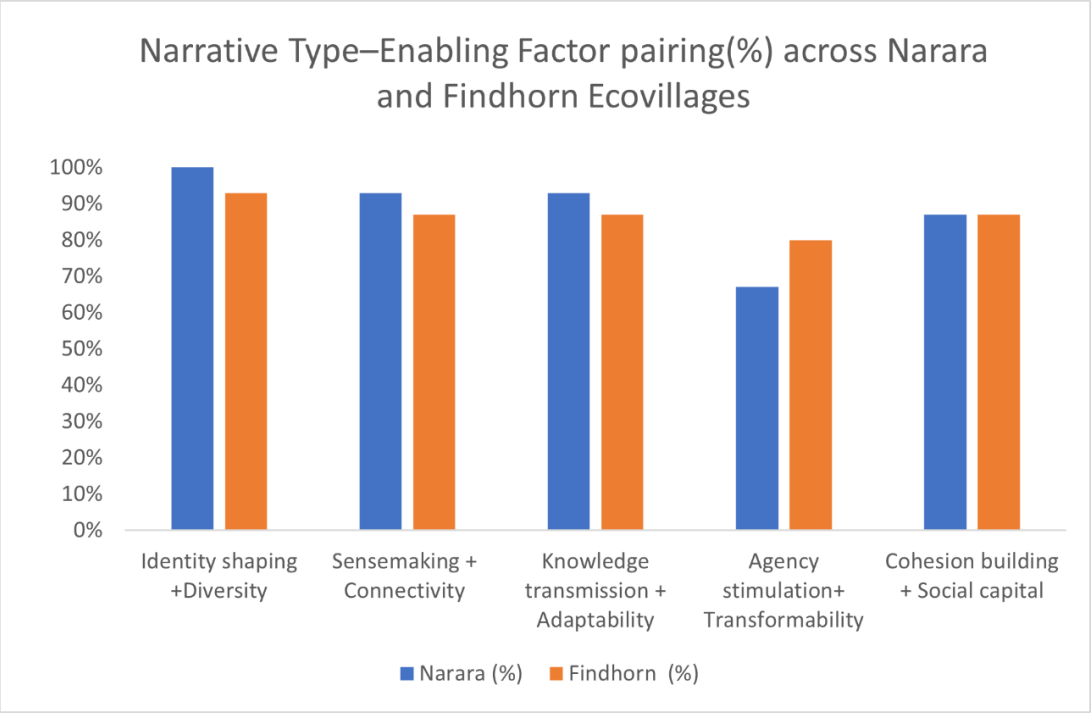


Figure 5.5 Cross-case comparison of narrative–enabling factor pairings (% of participants)

Across both communities, four pairings were highly prevalent (over 85% of participants in each case): Identity shaping–Diversity; Sensemaking–Connectivity; Knowledge transmission–Adaptability; and Cohesion building–Social capital. These recurring alignments suggest that narrative processes and structural capacities operated together rather than independently.

Identity narratives frequently framed diversity as integral to collective self-understanding. At Findhorn, demographic change reshaped experiences of belonging: "When I was a kid, I knew all the faces… now I go to community meetings and still think, who's that? … It feels a lot less wild, free" (Participant S). Here, diversity altered the meaning of identity, prompting renegotiation rather than fragmentation.

Sensemaking narratives often aligned with connectivity, enabling shared interpretation during disruption. Participants described how coordinated communication and distributed roles supported collective understanding and action. Knowledge transmission similarly intersected with adaptability, particularly where governance learning and procedural adjustment were narrated as cumulative processes.

The most notable divergence appeared in the Agency–Transformability pairing, which was more prevalent at Findhorn (80%) than Narara (67%). In Findhorn, agency narratives

extended beyond local adjustment toward institutional experimentation: “I believe in this model of living as one of the possibilities for civil society empowerment… creating better public policies” (Participant AD). Agency was thus framed not only as participation but as structural prototyping.

Structural arrangements shaped how these interactions unfolded. Governance restructuring at Findhorn redefined formal membership boundaries: “In 1999, the new Findhorn Association was created… everyone who felt part of the community could be a member” (Participant V). At Narara, sociocracy shaped how participation was narrated and practised: “It’s empowering for people… from their practice at working through decision making” (Participant L). Across both sites, reflexive moments emerged when earlier assumptions were reconsidered in light of lived experience, particularly around financial sustainability and governance.

Although all six interactions were present in both communities, their relative salience varied according to ecological exposure, governance arrangements, and economic model. In Narara, narratives were frequently anchored in planning regulation, bushfire risk, and participatory decision-making. In Findhorn, agency narratives more often connected local experimentation to institutional reform, reflecting the community’s international orientation and organisational complexity.

Across both cases, narrative roles were not activated in isolation. During disruption, participants moved between cohesion, agency, and reflexive accounts, with different narratives gaining prominence as situations evolved. The patterned co-occurrences shown in Figure 5.5 indicate that resilience was narrated through dynamic combinations of roles and enabling factors rather than through fixed categories.

5.3.6 Discussion

5.3.6.1 Narratives as Constitutive of Community Resilience

The findings reinforce the argument that resilience is not a universal attribute but a contextually shaped process, defined and enacted through specific social relations, disturbances, and institutional conditions. As resilience scholars have emphasised, resilience must be understood in relation to particular actors, scales, and threats (Berkes & Ross, 2013; Cretney, 2014). As Meerow and Newell (2019) argue, resilience is always

resilience to something and for someone. The central question is therefore not simply whether a community is resilient, but resilient to what, for whom, and at what cost.

In this study, ecovillages provide analytically valuable settings because their reflexive governance cultures and explicit sustainability commitments make processes of interpretation, negotiation, and collective decision-making especially visible. Disagreement and realignment tend to unfold in formal forums rather than remaining informal or obscured. At the same time, the findings confirm that intentional communities are not homogeneous enclaves but dynamic systems shaped by internal diversity, ideological differences, and power relations (Dawson, 2006; Kunze, 2012). This aligns with scholarship highlighting how ecovillages actively construct and negotiate alternative narratives of sustainability, progress, and collective life (Rubin, 2019).

Financial pressures and political–legal challenges were the most frequently cited disturbances, reinforcing scholarship demonstrating that intentional communities remain embedded within wider economic and regulatory systems rather than operating outside them (Boyer, 2015; Sargisson, 2007; Shi, 2023). Resilience in these contexts was therefore shaped not only by internal cohesion or shared values, but by exposure to market forces, governance arrangements, and institutional constraints. This supports arguments within resilience theory that adaptive capacity is conditioned by political–economic structures and cross-scale interactions (Berkes & Ross, 2013; Cretney, 2014).

Within this context, narratives emerged as central to how communities interpreted complexity, responded to disruption, and oriented themselves toward desired futures. Narratives did not merely describe resilience; they actively shaped it by linking lived experience to adaptive and transformative capacities. Across both case studies, narratives operated as dual forces. At times they fostered cohesion, agency, and adaptability. At other times they contributed to fatigue, division, or decision-making paralysis.

The most prevalent narrative roles were identity shaping, agency stimulation, and cohesion building, each referenced in approximately 80–90% of interviews. This pattern reflects the character of intentional communities, where shared purpose, collective governance, and participation are foundational features (Dawson, 2006; Kunze, 2012). In such contexts, narratives that reinforce belonging, mobilise action, and sustain commitment are particularly salient to resilience processes. Conversely, rigid or polarised narratives, especially when reinforced by institutional constraints or structural inequities,

limited collective agency and amplified tensions. These findings align with critical resilience scholarship emphasising that resilience is shaped by power relations and political–economic conditions that influence whose interpretations prevail (MacKinnon & Derickson, 2013; Brown, 2015).

5.3.6.2 Narrative Plasticity and Narrative Ecology

A second key contribution lies in the identification of narrative plasticity as a cultural mechanism shaping resilience. Across both cases, resilience depended less on fixed narratives than on the capacity to revise and adapt shared meanings as challenges emerged. Narrative plasticity refers to the ability of shared narratives, understood as patterned systems of meaning, to shift in interpretation, boundaries, or implications for action while retaining sufficient coherence to sustain collective coordination. Although not a predefined analytical category, plasticity emerged inductively through the comparative analysis as a recurring pattern across interviews.

This concept builds on earlier uses of plasticity in narrative scholarship. Clark (2020) employed the term in transitional justice to describe movement beyond rigid, externally imposed narrative frames, while media scholarship has highlighted the evolving and adaptive character of narrative forms (Howard, 1991). Here, the concept is extended from individual narrative agency to the collective level, examining how community-level narratives evolve through the interaction of multiple storylines over time.

To capture the broader system within which such shifts occur, we introduce the concept of narrative ecology. Narrative ecologies refer to the interconnected set of narratives circulating within a community, the patterned forms that organise collective experience, and the actors who articulate and sustain them. These narrative elements interact, reinforce, and at times contest one another, varying in prominence depending on context and moment. Narrative ecologies function as flexible interpretive toolkits that communities draw upon in practice (Howard, 1991), expanding adaptive possibilities within resilience processes. Their diversity provides both stability and flexibility in times of disruption (Dobrin & Weisser, 2002; OPPORTUNITIES Project, 2021).

Figure 5.6 synthesises the study's findings by integrating narrative roles and resilience-enabling factors within a dynamic framework…"

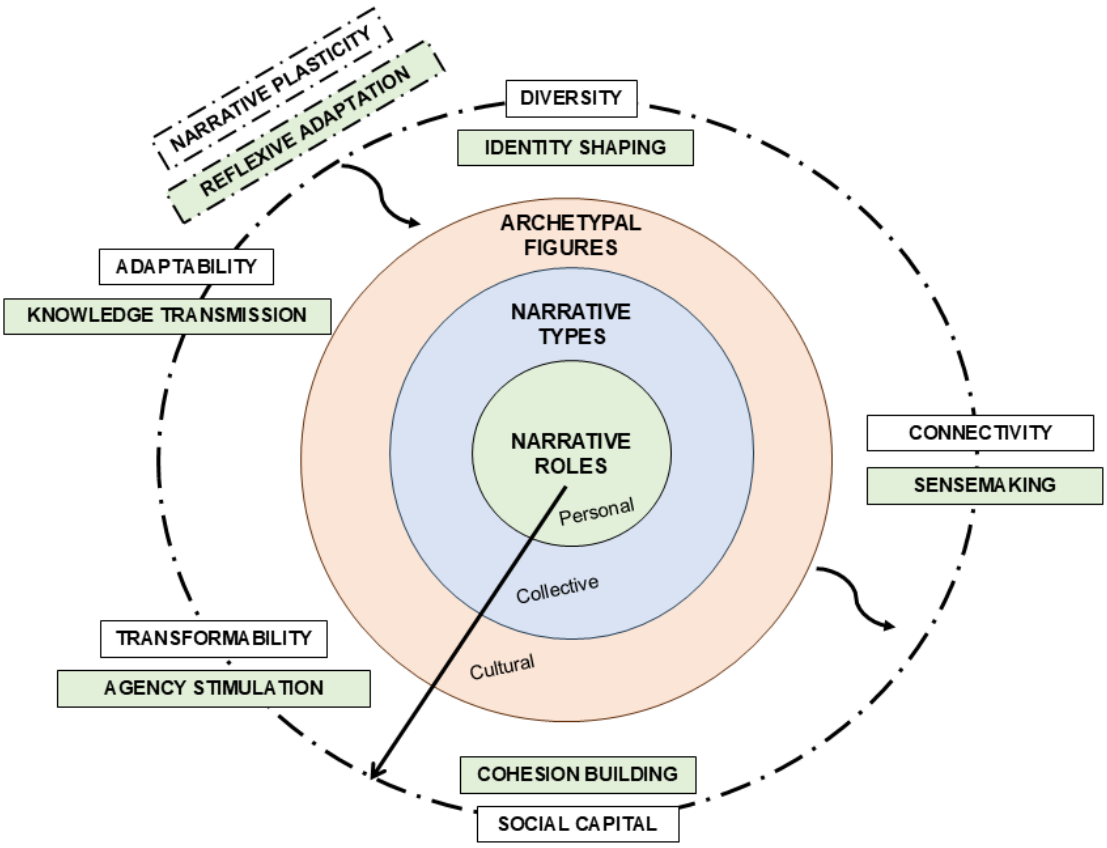


Figure 5.6. Integrated Narrative–Resilience Framework: Roles, Enabling Factors, and Plasticity.

Plasticity, however, is not inherently beneficial. Narrative theorists emphasise that collective understanding depends on continuity within shared narrative configurations; excessive fluidity can fragment identity and weaken coordination (Czarniawska, 2004; Gergen, 1994; Ricoeur, 1984; Somers, 1994). Similarly, resilience scholarship stresses that adaptability must be coupled with stability, memory, and social cohesion (Berkes & Ross, 2013; Folke et al., 2010; Walker et al., 2004). This tension was visible in both case studies, where strong norms of consensus sometimes constrained dissent or slowed adaptive decision-making. Dominant or overly cohesive narratives occasionally marginalised alternative perspectives and reinforced hierarchies of power (Eriksen et al., 2021; Meerow & Newell, 2019). Resilience therefore depends not only on shared interpretations of disruption, but on whose interpretations are recognised, contested, and allowed to evolve.

5.3.6.3 Integrating Narrative Roles and Resilience-Enabling Factors

A third contribution lies in integrating narrative roles with resilience-enabling factors. Previous research has often treated narrative processes and structural conditions as

separate dimensions. By linking them, this study conceptualises community resilience as a dynamic process of adaptation and transformation in which narratives shape how enabling factors are interpreted and enacted, while enabling factors condition which narratives are prioritised, institutionalised, or constrained.

Social capital was the most frequently referenced enabling factor, aligning with the relational character of intentional communities, where trust and shared norms underpin collective life (Berkes & Ross, 2013; Liftin, 2014). Transformability, although still present, appeared less frequently than other factors. This is notable given that ecovillages are frequently described as sites of experimentation and social innovation (Boyer, 2015; Seyfang & Haxeltine, 2012). The stronger emphasis on cohesion and social capital suggests that participants foregrounded continuity and collective identity as central to resilience, even within communities oriented toward change.

Resilience emerged through negotiated trade-offs among enabling factors and through dynamic tensions between narrative processes and structural conditions. Both communities exhibited all six narrative–enabling factor interactions, indicating a shared repertoire of capacities. However, their relative prominence varied according to local ecological risks, governance arrangements, and economic models.

Narratives made structural capacities meaningful and actionable in practice, while material and institutional conditions shaped which narratives gained traction. Governance arrangements, leadership transitions, and institutional boundaries influenced which narratives were legitimised, contested, or constrained. Narrative capacity alone did not guarantee resilience; it required supportive institutional and material conditions to be sustained over time. Narratives of agency and experimentation encouraged participation, yet regulatory constraints, financial pressures, and governance processes shaped how far such narratives could be enacted. Inclusive decision-making structures at Narara enabled participation but slowed implementation as the community expanded, while Findhorn's international orientation created both opportunities for influence and economic vulnerability.

A further consideration concerns the extent to which the ecovillages examined here may represent contexts in which narrative plasticity is particularly pronounced. While intentional communities are explicitly oriented toward collective reflection and experimentation, the processes identified in this study are not exclusive to such settings.

All communities engage in narrative negotiation when facing disruption, even if these dynamics are less formalised or publicly articulated. The contribution of this study therefore lies less in claiming exceptionalism than in clarifying the mechanisms through which narrative–structural interplay shapes resilience. Ecovillages provide a concentrated lens through which these mechanisms become more visible and analytically tractable.

Taken together, these findings suggest that resilience does not arise from enabling factors alone, but from the interplay between narrative processes and structural realities. Communities strengthen resilience when they are able to mobilise narratives that negotiate trade-offs, align collective aspirations with institutional constraints, and sustain adaptive coordination over time (Cafer et al., 2019; Suarez et al., 2016; Wilson et al., 2014).

5.3.6.4 Implications for Theory and Practice

This research advances resilience theory by foregrounding narratives as systemic and dynamic processes rather than secondary reflections of experience. Community resilience emerges not as a fixed attribute, but as an ongoing process of reinterpretation, coordination, and adaptation (Folke et al., 2010; Olsson et al., 2014). By integrating narrative roles with resilience-enabling factors, the study reframes resilience as a narrative–structural process in which process of interpretations and institutional conditions co-produce adaptive and transformative capacities. In this framing, narrative plasticity functions as a cultural mechanism through which communities negotiate disruption, sustain coordination, and recalibrate shared purpose over time.

These insights carry practical implications for community governance and resilience practice. Community initiatives depend on shared identity, social learning, and sustained participation to maintain resilience (Koch et al., 2023; Pahl-Wostl, 2023; Turner et al., 2023). The framework developed here offers a vocabulary and analytical structure through which communities can recognise, mobilise, and reflect on their narrative resources. Narrative plasticity supports governance reform, intergenerational knowledge exchange, and collective visioning by enabling communities to reconfigure meaning in response to disruption rather than becoming entrenched in rigid positions.

Conflict and decision-making processes are shaped by competing narratives that structure legitimacy, trust, and collective interpretation (Krauß & Bremer, 2020; Pahl-Wostl, 2023).

Deliberately engaging narrative diversity can strengthen inclusive governance and transform tensions into opportunities for learning. Across the case studies, narrative plasticity was most visible when cohesion narratives gave way to reflexive questioning, when identity narratives were renegotiated in response to demographic change, and when agency narratives translated into institutional experimentation. These shifts were enabled by relational and structural conditions such as trust, connectivity, and distributed governance. Where social capital was strong, contestation stimulated adaptive learning; where cohesion hardened into procedural rigidity, reflexivity narrowed and adaptability slowed.

The findings also hold implications for resilience planning and policy. Approaches that prioritise technical capacity alone risk overlooking the interpretive and political processes that shape collective agency and governance trajectories (Meerow & Newell, 2019; Turnhout et al., 2020). Narrative-based approaches anchor resilience strategies in local values and relationships, positioning narrative literacy as a core competency for planners and facilitators. The framework provides a diagnostic lens through which practitioners can assess whether cohesion narratives dominate at the expense of reflexive adaptation, whether diversity is framed as generative or divisive, and whether agency narratives extend beyond local adjustment toward structural reform. Methods such as narrative mapping, facilitated deliberation, and reflexive review can support communities in cultivating narrative plasticity intentionally rather than leaving dominant storylines unexamined (Hajer, 2005; Krauß & Bremer, 2020). In doing so, this typology extends earlier narrative approaches in planning and resilience scholarship, which have emphasised identity formation and sensemaking but have not systematically linked narrative roles to resilience-enabling factors (Sandercock, 2003; Chabay et al., 2022).

Finally, these patterns extend beyond ecovillage contexts. While ecovillages make narrative dynamics particularly visible due to their participatory cultures and explicit sustainability commitments, the interactions observed between identity, connectivity, adaptability, and institutional reform reflect dynamics common to socio-ecological systems more broadly. Previous scholarship has described ecovillages as experimental sustainability sites and microcosms of wider societal tensions (Exner & Schützenberger, 2018; Lockyer & Veteto, 2013; Pedersen, 2002). The mechanisms identified here suggest that narrative plasticity may operate as a more general property of community resilience

wherever diversity, trust, and distributed governance are present, even if such processes are less formally articulated.

5.3.6.5 Limitations and Future Directions

This study has several limitations. The focus on two ecovillages and a relatively small participant sample constrains the breadth and transferability of the findings. While the comparative design enabled depth and contextual sensitivity, it limits claims of statistical generalisability beyond similar intentional communities. In addition, the researcher's facilitative role in interviews and participatory sessions may have influenced the direction of discussions and the prominence of certain themes. These factors call for careful interpretation and suggest the need for further empirical testing across more varied settings and participant groups.

A further limitation concerns the study's analytical emphasis. The research was designed to illuminate how narrative processes operate within community resilience rather than to measure the relative weight of narrative and structural factors. As such, the findings clarify mechanisms of interaction but do not rank the causal importance of different enabling conditions.

Looking ahead, the narrative ecology framework developed here offers both an analytical lens and a practical orientation. Future research should test and refine this framework across diverse contexts, including urban neighbourhoods, civil society organisations, and regional governance systems. Comparative and longitudinal designs would be particularly valuable for examining how narratives and institutional structures co-evolve over time, and how shifts in power, diversity, and governance arrangements shape narrative plasticity. Participatory approaches may also deepen understanding of how communities can intentionally cultivate adaptive narrative configurations while attending to the structural conditions that enable or constrain their evolution.

5.3.7 Conclusion

This study makes three interconnected contributions to resilience scholarship. First, it demonstrates empirically that narratives are not peripheral reflections of resilience but constitutive processes through which communities interpret disturbance, coordinate action, and sustain collective identity. Across Narara and Findhorn, overlapping narrative

roles anchored belonging, transmitted knowledge, mobilised agency, and enabled reflexive adaptation. At the same time, certain narratives constrained cohesion or limited experimentation, illustrating that narrative processes operate as dual forces within community resilience.

Second, the study introduces the concept of narrative plasticity, defined as the collective capacity to reinterpret guiding narratives in response to disruption while maintaining sufficient coherence for coordinated action. Rather than treating resilience as stability or structural robustness alone, this reframing highlights the cultural and interpretive dynamics through which adaptation and transformation become possible. Narrative plasticity emerged inductively across the case studies as a recurring mechanism linking reinterpretation, governance adjustment, and collective learning.

Third, the study develops and empirically tests a novel framework that integrates narrative roles with resilience-enabling factors. Unlike prior approaches that examine narrative processes or structural capacities in isolation, this framework demonstrates how they co-occur and condition one another in practice. By identifying patterned interactions between identity, sensemaking, knowledge transmission, agency, cohesion, and enabling factors such as diversity, connectivity, adaptability, transformability, and social capital, the framework clarifies how resilience is co-produced through narrative–structural interplay. The novelty lies not simply in cataloguing roles or factors, but in specifying their functional alignments and showing how narrative plasticity operates as a central property within this dynamic system.

Importantly, community resilience in both cases emerged not from narrative processes or structural conditions alone, but through their continual interaction. Stories gained traction when supported by governance arrangements, leadership configurations, and relational infrastructures that shaped how narratives circulated, were contested, and became institutionalised.

Beyond these cases, the findings point to the broader relevance of narrative processes in contexts marked by ecological, social, and economic uncertainty. Ecovillages serve as analytically valuable sites because these dynamics are more explicit within them, yet the mechanisms identified here extend beyond intentional communities. By foregrounding narrative as a constitutive dimension of resilience, this study contributes a conceptual and

practical lens for examining how communities navigate complexity, negotiate trade-offs, and pursue adaptive and transformative change.

Recognising resilience as a narrative–structural process carries implications for governance, planning, and collective action. Communities and institutions that cultivate diverse yet coherent narrative configurations, while strengthening the structural conditions that sustain participation and legitimacy, may enhance their capacity to interpret disruption, coordinate response, and pursue transformation in uncertain futures

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Chapter 6: Paper 3

Narrative Plasticity in Practice: Community Validation of a Resilience Framework

6.1 Preamble

The preceding case studies demonstrated the value of the narrative–resilience framework and highlighted areas needing refinement, particularly in relation to governance tensions, financial pressures, and evolving community identities. To ensure the framework's practical relevance, this chapter moves from empirical application to participatory co-validation, engaging community members directly in testing, questioning, and extending the model.

This stage centres lived experience as a form of legitimacy. It examines which elements of the framework resonate in practice, which feel incomplete, and how it might support dialogue, planning, and decision-making. Through facilitated sessions with members of the Findhorn and Narara ecovillages, participants recognised themselves within the framework's narrative roles, story types, and archetypes. Using its shared vocabulary, they articulated diverse contributions and tensions and proposed important refinements, including the addition of a Survivor archetype, explicit attention to demonstration narratives, and clearer recognition of the financial and governance conditions shaping community narrative systems.

The validation process became generative in its own right. It sparked new narratives, renewed collective meaning-making, and helped participants re-story their communities in the wake of recent disruptions. This reflexive dynamic demonstrates narrative plasticity—the capacity of stories to flex, recombine, and realign while maintaining coherence—and shows how participatory dialogue can strengthen both the analytic and practical value of resilience frameworks.

Methodologically, this chapter follows the participatory and reflexive orientation outlined in Chapter 3. Rather than treating the framework as a fixed representation, it approaches it as an evolving tool shaped through dialogue between researchers and community members. The detailed procedures for the validation sessions, including facilitation steps and materials, are provided in the Methods section (6.1.2) of the paper that follows.

This paper constitutes the third and final core publication of the thesis. Building on the conceptual foundations established in Chapter 4 and the empirical insights from Chapter 5, it addresses the final research aim: to ensure that the narrative–resilience framework is

both theoretically robust and practically usable. Through this participatory refinement, the chapter advances the broader ambition of the thesis: to develop context-sensitive, narrative-informed, and reflexive approaches to understanding and strengthening community resilience.

6.2 Signature Page

Paper 3

Narrative Plasticity and Structural Conditions: Participatory Refinement of a Community Resilience Framework

Authors

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Statement of authorship and contribution

The contribution of each author to this paper is detailed in the thesis under the "Statement of Contribution of Authors" section.

All authors have reviewed and approved the contribution statement and the inclusion of this paper in the doctoral thesis of Julia Fernandez.

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6.3 Full Article #3: Narrative Plasticity in Practice: Community Validation of a Resilience Framework

Abstract

This paper validates a narrative–resilience framework through participatory dialogues with two ecovillage communities, demonstrating that narrative plasticity is a lived mechanism of community resilience. The framework links six narrative roles—identity, sensemaking, knowledge, agency, cohesion, and reflexivity—to recognised resilience-enabling factors including diversity, connectivity, adaptability, transformability, and social capital. It positions narrative plasticity—the capacity of stories to adapt, recombine, and realign while retaining coherence—as central to how communities navigate disruption. Three participatory validation sessions with members of Findhorn (Scotland) and Narara (Australia) examined whether the framework resonated with lived experience and captured the complexity of community narrative ecologies. Participants found the narrative roles, types, and archetypal figures meaningful and practically useful, while proposing refinements such as adding a "Survivor" archetype, recognising demonstration narratives that include both successes and failures, and attending more closely to governance, financial, and identity tensions.

Unlike conventional validation approaches focused on measurement accuracy or factor structure, this study adopts a dialogue-based mode of validation that emphasises co-interpretation, reflexive learning, and community voice. The validation process itself generated new narratives, surfaced tensions, and deepened collective reflection, illustrating that co-creating and validating knowledge functions as a resilience practice. Participants highlighted the framework's value for dialogue, participatory governance, community visioning, and external engagement, noting that ecovillages embody both alternative practices and challenges characteristic of wider society.

Overall, the study demonstrates that resilience frameworks gain legitimacy and usefulness when validated through lived stories and community dialogue, complementing metric-based assessments and offering a transdisciplinary approach for understanding and fostering resilience across diverse contexts.

6.3.1 Introduction

Community resilience has become a central concern in the face of accelerating social, ecological, and climatic disruptions. It is increasingly understood not only as a system's capacity to anticipate, absorb, and adapt to shocks, but as a lived, cultural process through which communities preserve core identities, sustain pathways to desired futures, and negotiate meaning under conditions of uncertainty (Helgeson et al., 2024; United Nations, 2021). Recent scholarship suggests that resilience emerges not only from material conditions, governance arrangements, or ecological capacities, but also from relational, emotional, and interpretive processes that shape how disturbance is understood and negotiated (Qamar, 2024).

Despite its widespread use, many resilience frameworks remain untested outside expert or institutional settings. Quantitative validation approaches, such as psychometric testing, indicator-based indices, and large-scale modelling, offer robustness and comparability (Hochrainer-Stigler et al., 2025; Zawalińska et al., 2022; Zhong et al., 2014), yet they often privilege technical reliability over community relevance. These approaches rarely capture how resilience is experienced and enacted in everyday life (Gerst et al., 2024; Kammouh et al., 2019). This produces a persistent gap between analytical models and lived reality: without participatory grounding, frameworks risk becoming abstract, misaligned, or exclusionary (Asiimwe Kyomugisha, 2025; Foster-Fishman et al., 2005).

This study addresses that gap by validating a narrative–resilience framework through participatory dialogues with members of two ecovillages. Ecovillages are particularly rich contexts for validation because their members explicitly reflect on resilience as part of community life, making tacit social, cultural, and relational processes more visible. Their intentional experimentation with governance, sustainability practices, and community-building renders narrative dynamics more legible than in many conventional communities (Baumber et al., 2022; Exner & Schützenberger, 2018; Pedersen, 2002).

Narrative plasticity refers to the shared capacity to revise, adapt, and hybridise stories during periods of disturbance while maintaining enough coherence to sustain collective identity and purpose, acknowledging that excessive flexibility can risk fragmentation. Narrative ecology (or ecology of stories) describes the dynamic system of interacting storylines and meanings that circulate within communities. Resilience-enabling factors are widely recognised conditions that support adaptive capacity, and in this framework

they are understood as interdependent with narrative processes rather than operating independently. The framework distinguishes between narrative roles (functions such as identity shaping or sensemaking) and narrative types (broader story forms such as transformative or regenerative narratives). It also includes archetypes (symbolic figures such as Guardians or Transformers) that operate across personal, collective, and cultural levels.

These concepts underpin the narrative–resilience framework, which proposes that stories do not merely reflect resilience but actively contribute to it through meaning-making, identity formation, dialogue, and reflexive learning.

Rather than validating the framework through technical or expert-driven approaches, the study examines whether it resonates with lived experience and supports reflective, practice-oriented dialogue. In doing so, it demonstrates that narratives act as generative forces shaping how communities understand and respond to change, and that narrative plasticity is a central resilience mechanism. It also shows that resilience emerges through the co-evolution of narrative, structural, and ecological processes, and that cultural, relational, and reflexive practices form an essential dimension of resilience, sustained through dialogue, reflection, and re-storying. Finally, the validation sessions suggest that co-creating and refining knowledge is not simply a research step but an enactment of resilience: the process itself sparked new insights, surfaced tensions, and renewed collective purpose.

Against this background, the study examines how the narrative–resilience framework resonates with ecovillage members, what refinements they propose, and how participatory dialogue can serve as both a mode of validation and a practice of resilience.

6.3.2 Methods

6.3.2.1 Study Design

This study constitutes the third component of a broader program of research that first developed a conceptual framework for the role of narratives in community resilience (Fernandez et al., under review-a) and subsequently applied it through comparative case studies of Findhorn and Narara Ecovillages (Fernandez et al., under review-b).

Unlike quantitative validation approaches that prioritise measurement accuracy, factor structure, or statistical reliability, this study adopts a participatory, dialogue-based mode of validation centred on community voice. The aim is to examine how the framework resonates with lived experience, whether it captures the complexity of narrative life within communities, and how useful it is for guiding resilience practice. This approach differs from conventional focus groups in important respects. Whereas focus groups are typically designed to elicit opinions or reactions to researcher-generated prompts (Kitzinger, 1995; Morgan, 2019), participatory validation emphasises co-interpretation, collective meaning-making, and reflexive engagement with the conceptual framework itself. Rather than positioning participants as respondents, the process invites them to act as co-analysts who interrogate, refine, and extend the framework through shared dialogue.

This orientation aligns with traditions of participatory and dialogical inquiry (Bradbury et al., 2019; Reason & Bradbury, 2008), in which validation is understood not as confirming constructs but as generating shared insight, deepening relational understanding, and enhancing practical relevance. It also resonates with narrative research, which emphasises interpretive collaboration and the co-production of meaning between researchers and participants (Clandinin & Connelly, 2000; Riessman, 2008). In this sense, validation becomes an iterative and generative practice: an opportunity for communities to recognise themselves in the framework, reshape it, and articulate new narratives that support resilience in everyday life.

To support clarity during the sessions, brief operational summaries of key concepts were provided. Narrative plasticity refers to the community's shared capacity to adapt and reinterpret stories during disturbance while maintaining sufficient coherence for coordinated action. Narrative ecology describes the interacting system of personal, collective, and cultural narratives circulating within a community. These narrative dynamics were examined in relation to five widely recognised resilience-enabling factors: diversity, connectivity, adaptability, transformability, and social capital. In this framework, these factors are treated as interdependent conditions that both shape and are shaped by narrative practice.

The framework further distinguishes between narrative roles, narrative types, and archetypes, which together form a nested, multi-layered structure. Narrative roles (green in Figure 6.1) represent everyday interpretive practices such as shaping identity, making

sense of disruption, transmitting knowledge, strengthening cohesion, or enabling reflexive adaptation. Narrative types (blue) refer to broader story forms, such as transformative, regenerative, or intergenerational narratives, that organise collective experience over time. Archetypes (orange) operate at the cultural-symbolic level, offering recognisable figures such as Guardians, Transformers, Allies, and Adversaries that help communities articulate shared struggles and contributions.

These layers interact dynamically. Roles give rise to types, types often stabilise through archetypal figures, and archetypes feed back into how roles are enacted in everyday life. Their interplay constitutes the narrative ecology through which communities interpret, negotiate, and enact resilience.

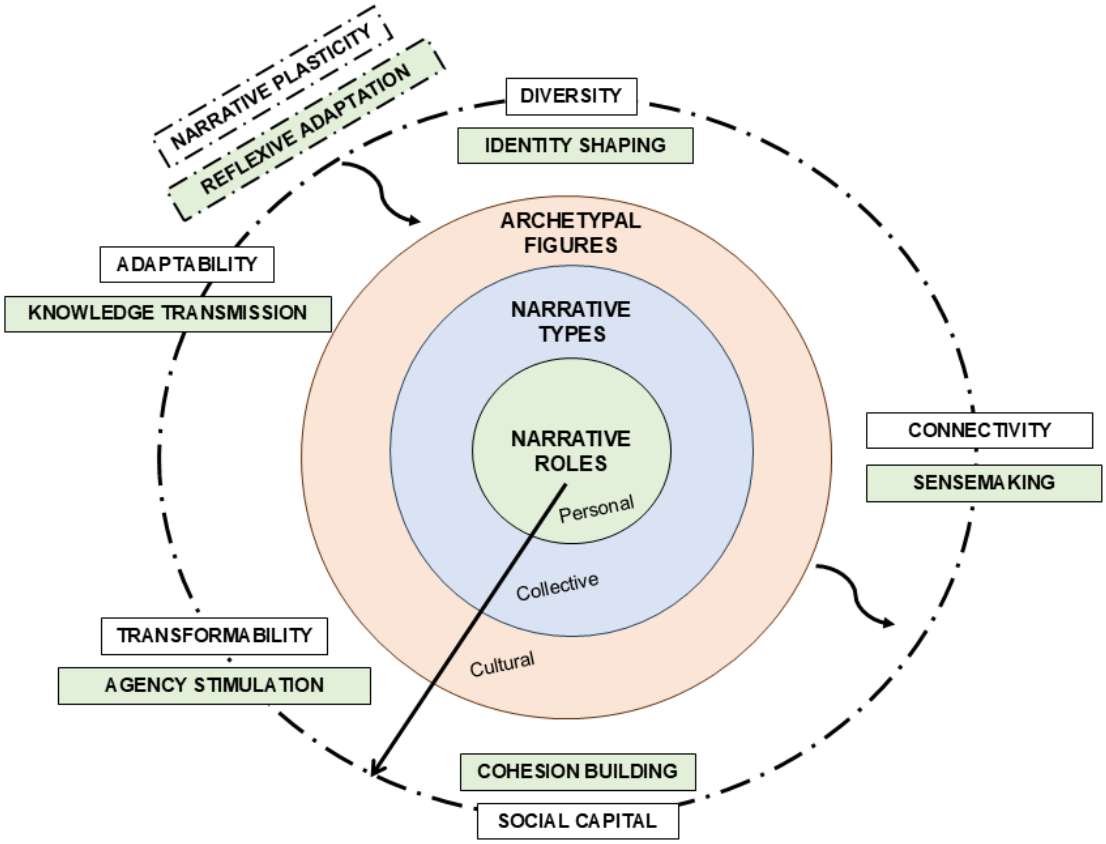


Figure 6.1. Completed framework integrating narrative roles and resilience-enabling factors, with narrative plasticity as the central property underpinning resilience.

A further concept informing this study is that of demonstration narratives, introduced in the comparative case studies (Fernandez et al., under review-b). These narratives make resilience visible by linking everyday practices with broader aspirations, offering lived examples that anchor identity, motivate participation, and communicate learning to external audiences. Because participants highlighted demonstration narratives early in the

validation sessions, they are acknowledged here as a dimension likely to inform refinement of the framework.

Ecovillages were selected as validation settings because they render tacit resilience practices more visible. As intentional communities committed to ecological living, participatory governance, and collective learning, they regularly reflect on processes of adaptation, making them well suited for examining how a resilience framework resonates at the level of shared meaning and practice. Research also shows that many intentional communities struggle or dissolve in their early years due to governance tensions, financial pressures, or difficulties sustaining shared purpose (Metcalf, 2012). The longevity of Findhorn and Narara therefore offers particularly valuable insight into the narrative and institutional processes that enable communities to persist where others falter.

The previously developed narrative–resilience framework (Fernandez et al., under review-a) links six narrative roles with five enabling factors and positions narrative plasticity as the central mechanism shaping resilience outcomes (Figure 6.1). The validation sessions examined whether this framework captures the lived dynamics of resilience within community contexts and whether it supports shared reflection, alignment, and future-oriented planning.

6.3.2.2 Participants and Recruitment

Participants were purposively recruited through ecovillage networks at Findhorn (Scotland) and Narara (Australia), with the inclusion criterion that they held active roles within their communities, such as participation in governance processes, facilitation responsibilities, or involvement in working groups and organisational initiatives. This ensured that participants were familiar with community decision-making practices and resilience processes.

Narara, founded in 2008 near Sydney, is a younger peri-urban initiative focused on ecological design, cooperative governance, and applied experimentation in sustainable living. Findhorn, established in 1962 in northeast Scotland, is larger and shaped by a long spiritual, ecological, and educational lineage. Their contrasting histories, cultural orientations, governance structures, and geographic contexts offer complementary perspectives on how resilience is enacted, making them valuable sites for participatory validation.

Three online validation sessions, each lasting between one and one-and-a-half hours, were conducted with a total of seven participants. Two sessions involved three participants each, and the third was an individual session conducted using the same protocol. Because sessions were held online, participants from both communities were mixed within the group dialogues, enabling cross-case exchange and shared reflection across contexts.

Participants represented diversity in gender, cultural background, community tenure (including both newcomers and long-term members), and roles within the ecovillages. The relatively small number of participants reflects the depth-oriented and dialogical nature of participatory validation, which prioritises depth of engagement over breadth of representation.

To support preparation and engagement, participants were provided with guiding questions (Appendix H) prior to the sessions. All participants were community members rather than external experts. They were informed that the sessions formed part of a research validation process, and discussions were framed as collaborative dialogues focused on assessing the relevance, clarity, and practical applicability of the framework. All procedures were conducted in accordance with UTS Human Research Ethics approval (ETH23-8868).

6.3.2.3 Data Collection

Data were collected through three validation sessions structured as semi-structured, dialogical engagements. The sample size is consistent with phenomenological research approaches, in which participants are selected based on their shared experience of the phenomenon under study while also representing varied roles and perspectives (Moser & Korstjens, 2018). The aim was not statistical representativeness but depth of reflective engagement.

Each session began with a concise presentation of the narrative–resilience framework (Figure 6.1), outlining the interrelations between narrative roles and resilience-enabling factors, associated narrative types and archetypes, and the concepts of narrative plasticity and narrative ecology. Key disturbances previously identified within the communities were also introduced to provide contextual grounding.

Participants were then invited to engage with guiding questions circulated in advance and to reflect on whether the framework resonated with their lived experience, where it felt incomplete, and how it might be refined. Sessions lasted between 60 and 90 minutes and were facilitated in a participatory and reflexive manner, drawing on narrative elicitation techniques (Clandinin & Connelly, 2000; Holstein & Gubrium, 2011) to encourage open dialogue and collective interpretation. Visual prompts, including framework diagrams, summary findings from the prior study, and illustrative excerpts, were used to support discussion and stimulate reflexive engagement.

All sessions were conducted online and audio-recorded with participants' consent. Ethical procedures included obtaining informed consent, anonymising contributions, and remaining attentive to power dynamics and relational sensitivities within the group setting. The study was approved by the UTS Human Research Ethics Committee (HREC, ETH23-8868).

6.3.2.4 Validation Approach

This study adapted established approaches to framework validation, which typically emphasise dimensions such as structure, content, and usability (Bowling et al., 2021; Coffey et al. 2022; Hochrainer-Stigler et al., 2025). To centre community voice, the study expanded these criteria and added a reflexive dimension.

- **Structure validity** examined whether the framework resonated with lived community experience.
- **Content validity** assessed whether elements were missing, misrepresented, or unclear.
- **Practical validity** evaluated usefulness for planning, facilitation, and community dialogue.
- **Reflexive validity** considered whether engagement with the framework generated new insights, narratives, or refinements (Alvesson & Sköldberg, 2018; Bradbury et al., 2019).

These criteria guided facilitation and interpretation, grounding the study in a participatory mode distinct from traditional technical validation.

6.3.2.5 Data Analysis

Transcripts were analysed using a combined thematic and narrative approach. Thematic coding (Appendix I) followed Braun and Clarke's (2008) reflexive thematic analysis and

proceeded iteratively through familiarisation, initial coding, and theme development. Coding focused on:

(a) references to framework components (narrative roles, types, archetypal figures, and enabling factors),
(b) critiques and suggestions for modification,
(c) examples of practical application, and
(d) emergent narratives extending beyond the existing framework.

Codes were compared across sessions to identify convergence, divergence, and areas requiring conceptual refinement. Analytic memos documented interpretive decisions and emerging tensions, ensuring transparency in how modifications to the framework were derived.

In parallel, narrative analysis examined how participants structured their accounts, organised meaning around disruption and adaptation, and positioned identity and agency within community contexts. Drawing on Riessman's (2008) interpretive approach, attention was given not only to what participants said about the framework, but how they narrated resilience, including plotlines, moral positioning, and shifts in emphasis. This dual analytical strategy enabled evaluation of conceptual resonance while also illuminating the narrative dynamics through which resilience is enacted and reflected upon in practice.

6.3.3 Results

6.3.3.1 Validation of Framework Elements

Participants lived experience strongly affirmed the framework. Across the three sessions, participants described its categories and roles as "recognisable" and "intuitively meaningful." At Narara, for example, Participant L connected it to the cohesion role, observing that it reflected everyday practice: "I think they were telling a story about tolerance and listening and appreciating and respecting each other regardless of difference," aligning with the cohesion role presented in the framework. Members also noted alignment with their governance practices: "It takes so long to get things done … but look at what we've achieved" (Participant C), reflecting how governance narratives matched the framework's emphasis on collective action despite inefficiency. Participants

further reported that the labels for roles helped them recognise their own contributions: “As soon as you put some labels on things, people have a way of saying, oh yeah, I’m an ally or I’m more in a guardian role” (Participant AB). These responses suggest that the framework achieved conceptual differentiation without reducing lived complexity.

Identity narratives were widely recognised, particularly those linked to origin stories and shared values: “Almost everyone would know the founder’s journey story; it’s part of why we’re here” (Participant C, Narara). Participants also noted shifts in identity over time, suggesting that multiple identity narratives coexist and evolve. This reflects narrative diversity, functioning analogously to ecological diversity by broadening the repertoire of meanings available for adaptation and innovation. For example, identity narratives shifted from an early vision of a “planetary village,” emphasising global connectedness and planetary responsibility, to a more established identity as an “ecovillage” grounded in intentional community and sustainability practice.

The framework’s other narrative roles were similarly affirmed. Knowledge transmission appeared in permaculture education, intergenerational skills transfer, and the interpretation of technical systems such as smart grids. Agency narratives were central to motivating action, with strategic plans and visioning processes serving as narrative scaffolds for participation. Cohesion was expressed through symbolic and material practices, such as the Listening Café at Findhorn, described as “a space where sharing together builds resilience” (Participant AB). Reflexive adaptation emerged in stories about reinterpreting legacy structures, particularly following Findhorn’s decision to sell the Cluny Hotel, which prompted grief but also enabled new narratives of transparency, renewal, and democratic governance.

All narrative types were observed in practice, including foundational, regenerative, transformative, intergenerational, empowerment, and reflexive narratives. Participants also emphasised the importance of “demonstration narratives,” which articulate resilience-in-action by showcasing lived examples of adaptation, cooperation, and learning. Importantly, participants stressed that demonstration narratives include “successes and things that didn’t go so well,” underscoring their value as honest, instructive accounts (Participant L, Narara).

Archetypes such as Guardians, Transformers, Allies, Adversaries, and Affected were widely recognised, though participants emphasised their fluidity across contexts (for

example, government shifting from adversary to ally). This fluidity reflects the dynamic interplay between narrative roles, types, and archetypes within the community's broader narrative ecology. Participants proposed an additional archetype, the Survivor, to capture those who persist through repeated shocks while sustaining hope and cohesion: "Over time there's a narrative of faith: we go through these crises … we'll find our way through this" (Participant AB, Findhorn).

Participants repeatedly highlighted the value of maintaining multiple coexisting stories, reinforcing the concept of narrative ecology identified in the case studies (Fernandez et al., under review-b). As one Findhorn member noted: "The talk was actually about the importance of being able to listen to views you didn't agree with … knowing not everybody was on the same page." Likewise, a Narara member observed: "There is a diversity of stories here… I don't feel like we are in a bubble." These reflections affirm that resilience was sustained through a plural, interdependent repertoire of narratives rather than through a single unifying storyline.

Cross-cutting themes, including humour, tolerance of difference, and the ability to "hold multiple truths," were frequently cited as supporting resilience. Together, these reflections demonstrate that resilience emerges through a living, adaptive narrative ecology in which stories evolve, overlap, and interact in response to change.

6.3.3.2 Refinements and Additions

Participants identified several refinements to enhance the framework's alignment with lived experience. Financial pressures were repeatedly highlighted as central to community resilience: "Financial viability is a very, very hot topic… it's really come into the forefront" (Participant AB). Governance tensions were also noted: "A new organisation was set up … operating on the basis of democratic decision-making and transparency … and also some resistance" (Participant AA). These reflections reinforce the framework's emphasis on the co-evolution of narrative and structure, illustrating how material constraints shape—and are shaped by—community narratives.

Participants also emphasised that ecovillages should not be understood solely as counter-narratives to mainstream society. While they offer alternative models, they also reproduce many of the tensions found in wider systems. One Findhorn member observed: "I think that we're actually a microcosmos of what's going on in mainstream society… we've got

all the global challenges here too" (Participant Q). This insight refines the framework by recognising that narratives are simultaneously oppositional and reflective, providing both critiques of and parallels to broader social dynamics.

Some participants found archetypes occasionally difficult to distinguish or overlapping, suggesting opportunities for simplification and clarification. They also drew attention to cultural practices—such as eco-theatre—as narrative expressions of resilience: "When our community centre burned down, we had a piece around this … using creativity to address trauma" (Participant Y). Physical shared labour was similarly described as an enactment of cooperation: "Each of you are on one end of a big piece of timber … that becomes part of the story of the ecovillage" (Participant C).

These refinements highlight areas where the framework can be expanded to better reflect the interplay between meaning-making, structural conditions, and everyday practice.

6.3.3.3 Applications and Usefulness

The framework appeared to participants as something that could be directly usable in practice Participants emphasised its function as a tool for dialogue and planning: "Enabling people to talk with each other and recognise the role that they either currently play or could step into … that's a very helpful thing" (Participant AB, Findhorn). At Narara, its resonance with sociocracy was underscored: "It values quieter voices and in a way that nothing else … has really helped … virtually everyone gets the chance to make a difference" (Participant AC). Sociocracy was re-narrated as a story of inclusivity and legitimacy, mapping onto the identity, cohesion, and adaptive functions of the framework.

Several participants linked the framework to post-crisis reflection, such as governance transitions in Findhorn after the Foundation's closure. Demonstration narratives were noted as useful for communicating with external partners, such as planners and universities. Collectively, these insights affirm the framework's value for governance, visioning, community learning, and knowledge exchange.

6.3.3.4 Reflexive Validity

The validation sessions themselves generated new stories, insights, and forms of reflection. Participants described the dialogues as prompting reconsideration of legacy narratives, revealing emotional dimensions of re-storying, and clarifying tensions around governance and identity. This reflexive dynamic illustrates that the validation process was

not merely evaluative but also a resilience practice in action, a space where shared learning, recognition, and re-storying occurred.

At Findhorn, reflection supported re-interpretation of the Foundation's closure, giving rise to Survivor narratives that anchored cohesion. "We've existed for 62 years now and there have been numerous crises that we've come through … over time that builds up a sense … we'll find our way through this" (Participant AB). At Narara, participants revisited tensions around speed, inclusivity, and decision-making. Several noted that the sessions re-energised their sense of purpose. These reflections affirm the concept of reflexive validity, showing that participatory processes can generate new narrative resources and strengthen resilience.

6.3.3.5 Validation of Narrative Plasticity

Across all sessions, participants strongly affirmed narrative plasticity as a lived and generative mechanism of resilience. They described how stories were reshaped, reinterpreted, or recombined in response to shifting structural, emotional, and organisational conditions.

Flexibility and adaptability were widely recognised. At Findhorn, the evolution of foundational narratives and the re-storying of institutional transitions demonstrated plasticity. Grief associated with the sale of the Cluny Hotel was re-narrated as an opportunity for transparency and organisational renewal: "You appreciate it for the time you've got it … and then you've got to let it go with grace" (Participant AB). Participants linked this capacity to skills in governance and leadership, noting the need to build collective competencies in re-storying during transitions. "When this new body finally bought the first bits of land and buildings … there was a huge release of energy and excitement. We, the people of the community, are finally … responsible for these things" (Participant AB). Creative practices such as eco-theatre helped reshape trauma into renewal.

Plasticity activated enabling factors across both cases. At Narara, sociocracy was narrated as a story of inclusivity, reinforcing cohesion and adaptability. At Findhorn, survivor narratives strengthened social capital through themes of persistence and continuity, while demonstration narratives at Narara anchored identity and external connection.

Narrative plasticity also enabled communities to hold continuity and change together. Letting go of buildings or institutional forms was framed as adaptation rather than erosion, while core commitments remained identity anchors. As one participant reflected, “This is a crisis, but this is a call to see what’s not working” (Participant Y).

Yet participants recognised that plasticity was not unlimited. Re-storying required trust, governance capacity, and shared commitment. Under financial strain or institutional uncertainty, reinterpretation could generate fatigue or ambiguity. Reflections on governance restructuring at Findhorn illustrate this tension: when decision-making shifted from a centralised Foundation to more dispersed ownership, it “made a huge change in the way that the whole place operates” (Participant AA). As authority became more distributed, clarity around leadership and direction could weaken.

These insights suggest that narrative plasticity is a bounded capacity, dependent on relational stability and institutional coherence to function adaptively. Rather than unlimited flexibility, it represents an ongoing co-evolution of meaning, structure, and agency.

6.3.4 Discussion

6.3.4.1 Situating the Study within Resilience Validation Literature

Resilience research has increasingly recognised validation as essential for both legitimacy and practical uptake of frameworks. Across sectors, from disaster risk and infrastructure to health, agriculture, and child wellbeing, validation has largely relied on psychometric, econometric, and index-based modelling approaches (Beccari, 2016; Cimellaro et al., 2010; Hochrainer-Stigler et al., 2025; Wadi et al., 2023; Zawalińska et al., 2022). Systems-oriented initiatives such as NIST (National Institute of Standards and Technology, 2023), survey-based instruments like CART (Pfefferbaum et al., 2015), and statistical indices such as BRIC (Cutter et al., 2010) exemplify this dominant orientation.

While these approaches generate comparability, reliability, and predictive power, they largely privilege quantification and generalisability. In doing so, they often bracket out the lived, cultural, and relational dimensions of resilience: how communities interpret change, negotiate tensions, and sustain collective agency. This leaves a persistent gap for validation approaches that centre experience, dialogue, and meaning-making.

The present study intervenes in this gap by reframing validation as a participatory and interpretive process rather than a purely technical test of internal consistency. The narrative-based validation approach adopted here aligns with calls for culturally situated and community-led resilience assessment (Coffey et al., 2022) and with scholarship positioning storytelling as a vehicle for resilience-building (Kyomugisha, 2025). It extends these directions by introducing the concept of reflexive validity: the idea that engagement with a framework can itself generate insight, refine categories, and catalyse shared understanding.

Rather than replacing conventional validation traditions, this approach complements and expands them. By positioning narrative and meaning-making as dimensions of legitimacy, the study demonstrates that participatory engagement can strengthen, rather than compete with, established measurement practices. In this sense, the research contributes to a broader shift within resilience scholarship toward interpretive, relational, and transdisciplinary orientations, recognising that frameworks must be assessed not only by how well they measure resilience, but by how well they resonate with and support the communities who enact it.

6.3.4.2 Contributions of the Narrative–Resilience Framework

The validation dialogues confirm and refine the framework's central proposition: that resilience is enacted through interpretive and relational processes embedded within material conditions. Rather than treating resilience as the aggregation of discrete attributes, the findings demonstrate that communities mobilise resilience through ongoing narrative work, situated within governance arrangements, financial pressures, leadership patterns, demographic change, and institutional histories. This reinforces a core insight of the wider research programme: narrative and structural conditions co-evolve, jointly shaping how resilience is interpreted, legitimised, and sustained.

Across the sessions, participants broadly affirmed the framework's validity. Narrative roles and enabling factors were described as "recognisable" and "intuitively meaningful," not because they abstractly captured resilience, but because participants could locate their own practices, tensions, and contributions within them. Legitimacy thus emerged experientially, complementing technical forms of rigour often prioritised in resilience assessment (Pfefferbaum et al., 2013; Wadi et al., 2023).

Content validity emerged dialogically. Rather than testing items in isolation, participants surfaced underrepresented themes through storytelling, including financial fragility, governance tensions, shifting identities, and ecological grief. The creative responses to fire trauma at Findhorn resonate with scholarship on ecological grief as a site of transformation (Cunsolo & Ellis, 2018), while governance tensions echo broader research on participatory intentional communities, where decentralised decision-making generates productive yet demanding frictions (Palgi & Getz, 2025). In this way, validation functioned not only as confirmation, but as refinement.

One substantive refinement was the introduction of the Survivor archetype, capturing persistence through repeated shocks. This parallels research showing that survivorship can become a meaningful narrative identity that sustains agency and continuity (Ajjawi et al., 2021), particularly in historically vulnerable intentional communities (Baumber et al., 2022). The framework was therefore not merely affirmed, but extended through participatory engagement.

A further conceptual insight reaffirmed through validation was the importance of narrative diversity. Participants consistently described resilience as emerging not from a single unifying story, but from a plurality of coexisting and sometimes competing narratives. This supports the thesis' broader argument that narrative diversity enhances adaptability by preventing brittle coherence and enabling recombination during disruption.

In practical terms, participants emphasised the framework's usefulness as a dialogical tool for governance and planning. At Narara, alignment with sociocracy clarified how participatory decision-making embodied identity, cohesion, and adaptive functions. At Findhorn, archetypal labels such as Guardian, Transformer, Ally, and Survivor offered a shared vocabulary for recognising diverse contributions and negotiating tension. Consistent with participatory governance research (Sonntag & Zizzo, 2019; Warren, 2016), this shared language supported inclusion, belonging, and collaborative problem-solving. The framework thus operates not only as an analytical device, but as a participatory instrument capable of strengthening resilience practice.

Finally, the validation process itself demonstrated reflexive validity. The sessions did not simply test the framework; they generated new narratives, surfaced latent tensions, and catalysed renewed shared understanding. In line with research on reflexive governance

and transformation (Lazurko et al., 2025; Moore et al., 2018), the co-creation and validation of knowledge functioned as a resilience-building practice in its own right.

6.3.4.3 Narrative Plasticity as a Distinctive Contribution

A central theoretical contribution of this study is the empirical validation and further specification of narrative plasticity as a core dimension of community resilience. Narrative plasticity refers to the capacity of shared stories to adapt, recombine, and hold continuity and change together in response to disturbance, while retaining sufficient coherence to sustain collective identity and coordinated action. By grounding this concept in participatory validation, the study extends foundational resilience constructs, persistence, adaptability, and transformability (Folke et al., 2010; Holling, 2001), showing how these capacities are enacted through interpretive and cultural processes rather than structural conditions alone.

The validation dialogues provided strong empirical grounding for this concept. Participants described how core narratives had shifted over time, sometimes gradually, sometimes through rupture. At Findhorn, the transition from a spiritual–institutional identity to a more decentralised governance ethos following the Foundation's closure exemplified plasticity in practice. Stories of loss and grief were reconfigured into narratives of renewal, transparency, and shared responsibility, illustrating narrative reframing as a mechanism for navigating complexity (Rauschmayer et al., 2023). At Narara, sociocracy was continually re-narrated, moving from a narrative of procedural frustration to one of inclusivity and legitimacy, thereby activating trust, adaptability, and social capital (Brown, 2016; Paschen & Ison, 2014).

Importantly, the findings clarify that narrative plasticity is not merely an individual interpretive capacity, but a collective and infrastructural process. Participants highlighted the distributed skills required for re-storying, facilitation, empathetic listening, leadership legitimacy, and governance arrangements capable of holding tension and enabling reflection. This aligns with transition management scholarship emphasising reflexive experimentation and shared sensemaking as foundations for transformative governance (Loorbach, 2010).

The validation process also revealed that plasticity operates within boundaries. Participants described moments when stories became too fluid or divergent, weakening

shared grounding and generating uncertainty, decision paralysis, or fragmentation, particularly during periods of institutional strain or unresolved conflict. These observations resonate with critiques cautioning that adaptive capacity can become counterproductive when coherence erodes (Cote & Nightingale, 2012; Krauß & Bremer, 2020). Narrative plasticity therefore supports resilience only when anchored by trust, relational continuity, and governance clarity. It is a bounded capacity rather than unlimited flexibility.

Narrative plasticity further interacts with narrative diversity. A plural narrative ecology offers multiple interpretive pathways through which disruption can be reframed, reducing the risk that a single dominant storyline constrains collective imagination. Participants repeatedly emphasised that resilience depended less on unanimity than on the capacity to hold multiple perspectives and integrate divergent viewpoints. In this sense, diversity enhances adaptability by enabling recombination of meanings during change.

Collectively, these findings advance resilience theory in three ways. First, they position stories as dynamic infrastructures of adaptation, shaping how resilience-enabling factors are interpreted and mobilised. Second, they demonstrate that the usability of capacities such as diversity, connectivity, and social capital depends on interpretive work, how communities legitimise action and navigate identity tensions. Third, they highlight resilience as a reflexive and relational practice sustained through continual processes of re-storying that balance coherence with openness.

Narrative plasticity thus provides a conceptual bridge between structural and interpretive accounts of resilience. It illustrates how communities live with complexity not by rigidly maintaining predefined narratives, but by dynamically reconfiguring meaning while preserving enough continuity to sustain coordinated action.

6.3.4.4 Implications for Practice and Policy

The validation findings demonstrate that the narrative–resilience framework holds practical relevance for community development, governance, and policy. Above all, they show that resilience-building cannot be reduced to material capacities or institutional design alone. It depends equally on the interpretive and relational processes through which communities understand change, negotiate tensions, and coordinate action.

For community practice, participants emphasised the value of the framework as a dialogical tool that makes implicit contributions visible. The shared vocabulary of Guardians, Transformers, Allies, and Survivors helped members recognise diverse roles, surface tacit knowledge, and legitimise different forms of participation. Consistent with participatory governance research (Warren, 2016; Zizzo, 2019), such shared language strengthened belonging and facilitated constructive negotiation of difference. Narrative mapping and reflective dialogue thus offer a low-cost, trust-based mechanism for sustaining social capital while holding narrative diversity without fragmentation.

Demonstration narratives emerged as particularly valuable. Participants highlighted the importance of stories that make resilience visible, examples of governance transitions, cooperative labour, ecological care, and collective learning. These narratives function as cultural anchors, maintaining continuity during uncertainty while communicating lived examples of adaptation. They complement conventional resilience metrics by providing situated and affective evidence of resilience-in-action, similar to case-based learning approaches in urban resilience planning (Hart et al., 2007). In this sense, narratives are not merely descriptive but generative forces that mobilise agency and sustain shared purpose.

For policy and institutional design, the findings underscore the need to integrate narrative analysis into resilience planning. Formal strategies often falter when they overlook the narrative dimensions of legitimacy, identity, and trust. The framework offers policymakers a way to diagnose dominant framings, identify marginalised perspectives, and recognise tensions between institutional discourse and community experience (Gupte & Mehra, 2017). Attending to these narrative dynamics can support more inclusive, dialogical, and adaptive governance.

Embedding narrative literacy within consultation processes, such as story circles, narrative mapping, and reflective forums, can enrich technical planning by surfacing lived experiences that rarely appear in formal assessments. This aligns with participatory and transdisciplinary governance approaches emphasising co-production and relational accountability (Fazey et al., 2018; Pahl-Wostl, 2023). Participants indicated that such practices could be relevant beyond ecovillages, including in municipal planning, education, and inter-organisational coordination.

Crucially, the findings reinforce that narrative processes and structural conditions co-evolve. Governance arrangements, leadership patterns, demographic diversity, and institutional memory shape which stories gain legitimacy, while evolving narratives in turn stabilise or transform institutional structures. Recognising this reciprocal dynamic can help policymakers design institutions that are flexible enough to adapt yet coherent enough to sustain trust. This aligns with calls for polycentric, reflexive governance capable of navigating complexity and plural perspectives (Folke et al., 2016; Pahl-Wostl & Knieper, 2023; Westley et al., 2013).

Overall, the study demonstrates that integrating narrative approaches into resilience practice can deepen shared meaning, broaden participation, and strengthen adaptive capacity. The framework therefore functions not only as an analytical lens but as a practical resource for communities, educators, practitioners, and policymakers seeking culturally grounded and context-sensitive resilience-building strategies.

6.3.4.5 Limitations and Future Research

Several limitations shape the scope and transferability of this study. Most immediately, the small sample of seven participants across three validation sessions constrains the breadth of perspectives represented. The depth of engagement was appropriate for a narrative and phenomenological inquiry, enabling rich, dialogical insight into lived experience, but it does not provide statistical generalisability. As in other group-based research, there is also the potential for dominance effects, hesitations around dissent, and confidentiality sensitivities (Roller & Lavrakas, 2015; Smithson, 2000). Future studies could expand participant diversity and scale validation across additional contexts to test the framework's robustness and transferability (Coffey et al., 2022; Hochrainer-Stigler et al., 2025).

A second limitation concerns the study's interpretive orientation. The research was designed to explore how narrative processes interact with structural, relational, and ecological conditions rather than to quantify their relative influence. This approach generated conceptual depth, particularly regarding narrative plasticity and narrative ecologies, but it does not assess the proportional contribution of narrative versus material factors. Mixed-method designs could extend this work by linking narrative functions to established quantitative indicators, examining how meaning-making and material conditions co-evolve in shaping resilience outcomes.

The empirical focus on ecovillages also shapes analytical scope. Intentional communities provide unusually explicit settings for observing reflexive governance, narrative evolution, and collective learning, yet they are not representative of all community contexts. Following Flyvbjerg's (2006) distinction between statistical and analytical generalisation, the contribution here lies in theoretical insight rather than population-level inference. Applying the framework in urban neighbourhoods, regional governance systems, or civil society organisations would enable comparative examination of how narrative plasticity manifests across differing socio-ecological conditions.

There is also scope for longitudinal research tracing how narrative ecologies evolve across multiple disturbance events. Such work could illuminate the temporal dynamics of plasticity, institutional learning, and governance transformation. Integrating narrative analysis with tools such as FRMC, BRIC, or CYRM-28 may further bridge qualitative meaning-making with measurable resilience indicators.

Finally, the study highlights the need for deeper investigation into the reciprocal dynamics between narrative and structure. Governance arrangements, leadership transitions, financial pressures, demographic diversity, and boundary permeability shape which stories gain legitimacy, while evolving narratives in turn stabilise or transform institutional configurations. Future research examining these co-evolutionary processes across varied contexts could advance an integrated resilience model that treats meaning-making, relational dynamics, and institutional design as mutually shaping dimensions of adaptive capacity.

Together, these directions outline a broader agenda for refining and extending the narrative–resilience framework. They point toward transdisciplinary research bridging narrative studies, resilience science, participatory governance, and community development, advancing culturally grounded and reflexive approaches to resilience assessment and practice.

6.3.5 Conclusions

This study demonstrates the value of a participatory, narrative-based approach to validating a resilience framework. The validation dialogues centred lived experience, community voice, and collective reflection, generating insights unlikely to emerge through technical assessment alone. By grounding the framework in practitioner and

community perspectives, the process ensured that its concepts, language, and applications remained meaningful, usable, and contextually relevant. Participants affirmed the framework's resonance with everyday resilience practice while refining it through additions such as the Survivor archetype, clearer recognition of demonstration narratives, and deeper attention to governance, financial, and identity tensions. These refinements strengthened both its descriptive precision and practical utility.

A central contribution is the empirical confirmation of narrative plasticity as a generative mechanism of resilience. Across the ecovillages, plastic narratives enabled communities to hold continuity and change together, mobilise enabling factors such as cohesion, diversity, and adaptability, and reinterpret disturbances as opportunities for renewal. At the same time, the validation dialogues clarified the limits of plasticity: when stories become too fluid or divergent, shared grounding weakens and communities risk fragmentation, confusion, or decision paralysis. Narrative plasticity therefore supports resilience only when balanced with coherence, relational trust, and governance structures capable of holding tension without collapsing into uniformity or drift. Importantly, the validation process itself functioned as a resilience practice. Engaging with the framework generated new narratives, surfaced tensions, deepened shared understanding, and renewed collective purpose. Co-creating and validating knowledge is not merely a methodological step but an enactment of resilience in action.

The findings reinforce that resilience has a relational, cultural, and reflexive dimension expressed through the stories communities use to interpret and navigate change. At the same time, resilience emerges through the interplay between narrative processes and the material, institutional, and ecological conditions that shape community life. Participants found that the framework provided a shared vocabulary for recognising roles, identifying tensions, and supporting collective meaning-making. In this way, it complements structural approaches to governance and decision-making without implying that narrative operates in isolation.

Overall, the study shows that resilience frameworks gain legitimacy not only through measurement but through participatory co-validation with the communities they seek to represent. By expanding the methodological repertoire of resilience assessment, this research demonstrates how narrative-based approaches can complement quantitative indicators, offering culturally grounded and context-sensitive understandings of adaptive

capacity. Extending this validation across diverse social–ecological settings and integrating mixed methods will further strengthen the analytical robustness and practical relevance of resilience models.

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PART III: SYNTHESIS AND CONCLUSIONS

"Much of the oxygen we breathe comes from plants that died long ago...
Receiving from the past, we can give to the future.
When tackling issues such as climate change, the stance of gratitude is a refreshing alternative to guilt or fear as a source of motivation."
— Joanna Macy & Chris Johnstone, *Active Hope*

Part III brings together the conceptual, empirical, and participatory insights developed across the three papers to form an integrated synthesis. While the preceding chapters presented discrete studies — each with its own focus, methods, and contributions — this final part returns to the broader purpose of the research: to understand how narratives function as a form of cultural infrastructure within community resilience, interacting with structural, ecological, and relational conditions to shape adaptation and transformation.

This section shifts from individual contributions to collective integration. It traces how the research evolved iteratively across conceptual development, empirical inquiry, and participatory refinement, demonstrating how these strands reinforce one another. These chapters in Part III advance a coherent argument about how narrative processes and structural conditions co-evolve, jointly shaping the ways communities interpret change, organise collective action, and sustain resilience over time.

The chapters that follow address four interconnected aims:

- Synthesis of key findings and theoretical integration: drawing insights from the three papers to clarify how narrative processes animate and interact with resilience-enabling factors across scales and contexts.
- Identification of emerging trends and implications: situating the research within contemporary debates in resilience thinking, sustainability transitions, and narrative governance.

- Reflection on methodology and positionality: considering how a constructivist epistemology, an appreciation of biophysical and institutional realities, and a transdisciplinary orientation shape both the study and practice of resilience.
- Articulation of future pathways and impacts: outlining how the narrative–resilience framework can inform community practice, education, research, and policy design beyond the ecovillage cases.

Taken together, Part III reframes the thesis as more than a sequence of studies: it presents a cohesive account of how meaning, practice, and structure co-evolve in the cultivation of resilient communities. The synthesis and conclusions consolidate the theoretical and practical contributions of the research while pointing toward new directions for transdisciplinary inquiry and applied transformation. Chapter 7 begins that synthesis. It integrates insights from across the thesis to revisit the overarching research question, articulate the core contributions, and clarify the broader significance of the narrative–resilience framework.

Chapter 7: Synthesis and Conclusions

7.1 Overview

This chapter brings together the conceptual, empirical, and participatory insights developed across the thesis to show how narratives function as cultural infrastructure for community resilience. It integrates findings from the three papers, tracing how the narrative–resilience framework evolved through conceptual development, comparative case analysis, and participatory validation. Across these stages, the research demonstrates that resilience is not only a structural or ecological capacity, but a relational, interpretive, and reflexive process enacted through narrative practices, identity work, and collective meaning-making.

The chapter proceeds as follows. Section 7.2 synthesises the findings; Section 7.3 presents key contributions; Section 7.4 introduces the scaling model; Section 7.5 outlines policy and practice implications; Section 7.6 reflects on limitations; Section 7.7 sets out future research directions; Section 7.8 considers applications across sectors; and Section 7.9 concludes the chapter.

This synthesis positions narrative processes across three interrelated levels:

- **Epistemic level:** Narratives operate as plural knowledge systems capable of holding uncertainty and enabling interpretive humility in contexts of deep unpredictability (Constantino & Weber, 2021; Veland & Lynch, 2016).
- **Relational level:** Empathy, belonging, and identity function as foundations for shared meaning and social cohesion, constituting the narrative ecologies through which communities make sense of change (Brown et al., 2017; Krauß & Bremer, 2020).
- **Governance level:** Deliberative narrative practice enables coordination, dialogue, and participatory decision-making, while also revealing tensions, exclusions, and power dynamics within institutions (Denton, 2017; Dobroć et al., 2023; Koch et al., 2023).

Figure 7.1 visualises these connections, illustrating how narratives link imagination, practice, and institutional adaptation. Operating across scales, from personal to collective and local to systemic, narratives enable communities to live with complexity and navigate transformation.

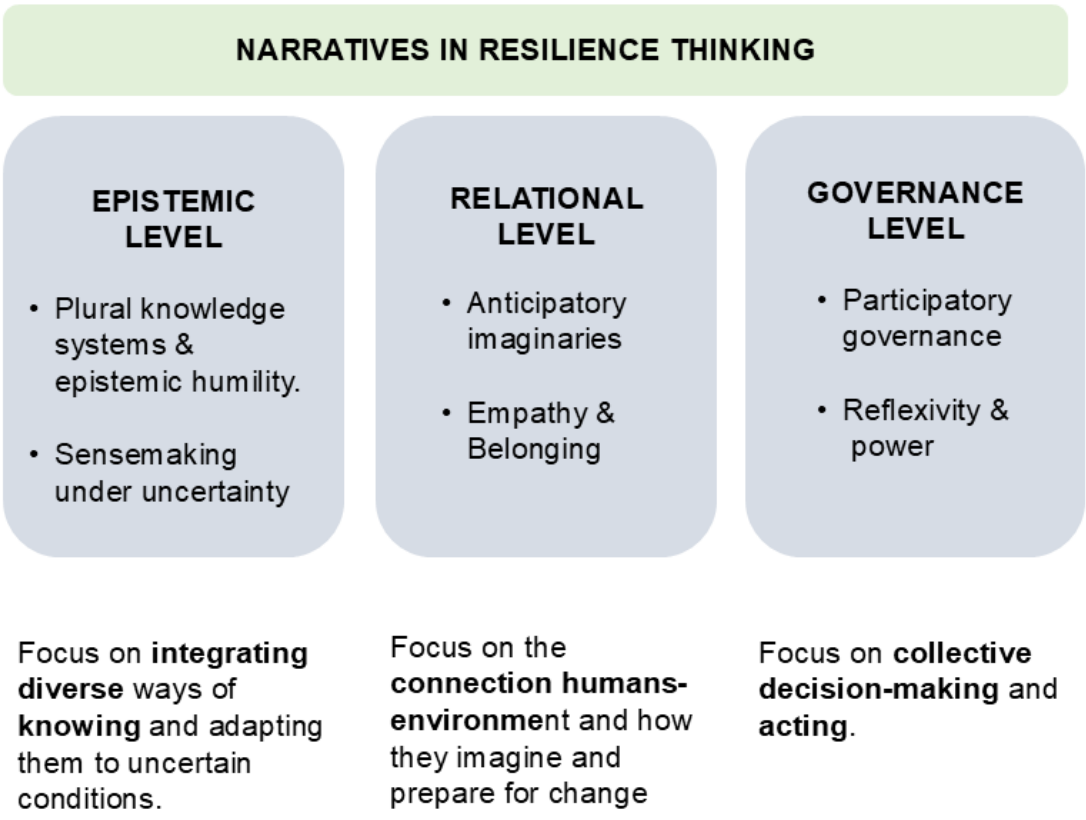


Figure 7.1. Narrative linkages across epistemic, relational, and governance levels

Building on this overview, the next section synthesises insights generated across the three papers. While each addressed a different dimension of the research question, conceptual foundations, empirical application, and participatory refinement, their combined findings offer a coherent account of how narrative and structural dynamics jointly shape community resilience. Section 7.2 therefore integrates these contributions, highlighting the patterns, complementarities, and cross-cutting themes that emerged across the research.

7.2 Integrated Summary of Findings

This section synthesises the key insights generated across the three papers to show how the thesis collectively addresses the overarching research question. Rather than restating each study's findings, it integrates their conceptual, empirical, and participatory contributions to reveal the cross-cutting patterns that explain how narratives shape and express community resilience. The synthesis traces how the Narrative–Resilience Framework evolved through iterative refinement, highlighting the dynamic interactions

between narrative roles, resilience-enabling factors, and structural conditions. In doing so, it lays the foundation for the final integrated framework presented at the end of this section.

Across the three papers, the thesis develops a coherent account of how community resilience emerges through the interplay of structural conditions and narrative ecologies, including the interpretive practices through which communities make sense of change. Rather than treating narratives and structural factors as discrete influences, the integrated findings show that resilience is co-produced through evolving story systems, institutional arrangements, and the meanings communities attach to them. The conceptual, empirical, and participatory phases demonstrate how narratives shape, express, and sustain resilience, while structural and cultural dimensions continually co-evolve.

The first paper established the conceptual foundations by identifying six narrative roles and linking them to recognised resilience-enabling factors such as diversity, connectivity, adaptability, transformability, and social capital. It argued that narratives function as cultural infrastructure, translating experience into shared meaning, organising expectations, guiding collective action, and shaping how communities imagine possible futures. Crucially, the framework positioned narrative processes alongside ecological and structural conditions, emphasising reciprocal interaction rather than privileging one domain over another.

The second paper applied this framework through comparative case studies of Narara and Findhorn Ecovillages. The analysis showed that narrative roles interacted with resilience-enabling factors in patterned ways, shaping how each community interpreted disruptions, negotiated tensions, and coordinated collective responses. These dynamics unfolded within, and were shaped by, governance arrangements, leadership patterns, demographic diversity, and resource conditions. Storylines of identity, cohesion, renewal, and agency helped members navigate uncertainty, while moments of narrative contestation opened space to question assumptions and recalibrate direction.

It was through this empirical work that narrative plasticity emerged as a central mechanism: the capacity of shared stories to flex, recombine, and evolve while maintaining sufficient continuity for coordination. The analysis also identified narrative ecology as an interwoven system of roles, types, and archetypes operating across personal, collective, and cultural levels. Structural factors influenced which stories gained

traction and legitimacy, while evolving narratives reshaped institutional norms and expectations. These findings demonstrated structural–narrative co-evolution as a defining feature of community resilience.

The findings also clarified the limits of narrative influence. Narrative plasticity is not inherently adaptive, and not all shared stories support resilience. Dominant or overly cohesive narratives can constrain diversity, dampen critical reflection, and marginalise alternative perspectives. In some instances, hegemonic storylines stabilised existing power dynamics or privileged particular identities, narrowing the space for dissent. Resilience therefore depends not merely on coherence, but on the openness, reflexivity, and contestability of the narrative ecology within which stories circulate.

The third paper extended and refined these insights through participatory validation. Community members affirmed the framework's resonance while introducing refinements, including demonstration narratives and the Survivor archetype, and clarifying how stories intersect with material, emotional, and institutional conditions. Importantly, validation confirmed narrative plasticity as a collective and infrastructural process rather than solely an interpretive one. The co-validation sessions themselves became resilience practices, generating new narratives, surfacing tensions, and strengthening shared understanding. In doing so, the participatory phase deepened the empirical insights of Paper 2 and operationalised reflexive validity as a methodological contribution.

Taken together, these contributions reveal three core patterns:

First, community resilience arises from the interplay between structural conditions and narrative processes. Narrative roles, types, and archetypes shape how disruptions are interpreted and how agency is mobilised, yet these processes remain embedded within governance systems, resource distributions, and institutional histories. Structural conditions influence which stories emerge and circulate, while evolving narratives reshape institutional expectations and pathways for action.

Second, resilience is sustained through reflexive dialogue and co-production. Across sociocratic meetings, rituals, and informal exchanges, communities continually reinterpret their pasts, reassess their goals, and recalibrate their responses. These practices foster narrative plasticity, the capacity to revise and recombine sotrylines in response to changing conditions. However, plasticity operates within limits. Where reflexive dialogue

is curtailed, dominant narratives become insulated from critique, or power asymmetries constrain participation, narrative systems risk rigidity rather than adaptation. Plasticity therefore depends on relational trust, inclusive governance, and permeability to dissent.

Third, narrative pluralism underpins resilient transformation. Communities capable of holding multiple, sometimes competing narratives while sustaining shared orientation were better equipped to navigate uncertainty and institutional change. Diversity expanded the narrative repertoire available for reframing disruption and imagining alternatives. Yet pluralism strengthened resilience only when supported by equitable voice and participatory structures. Without these anchors, fragmentation risked weakening coordination, while unchecked dominance risked exclusion and narrative lock-in. Maintaining space for counter-narratives and power-sensitive dialogue therefore emerges as a condition of adaptive capacity.

Drawing together these insights, the integrated Narrative–Community Resilience Framework (Figure 7.2) illustrates how structural conditions, narrative ecologies, and meaning-making practices operate as a dynamic system. Structural conditions shape what is possible; narrative ecologies shape how possibilities are interpreted and legitimised; and meaning-making practices mediate how communities respond across time. Through their ongoing interaction, storylines, structures, and interpretive practices co-evolve.

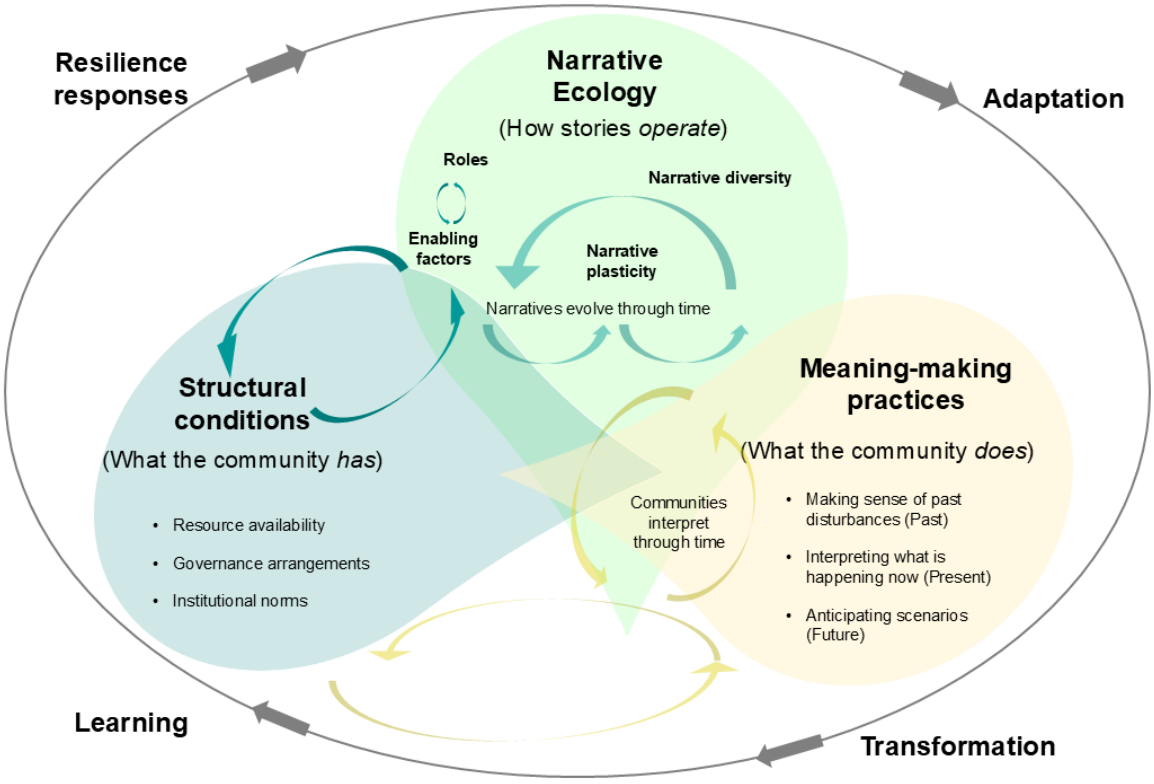


Figure 7.2. Integrated Narrative–Resilience Framework

The outer ring of the framework represents emergent resilience responses, adaptation, transformation, and learning. These are not fixed attributes but expressions arising from the interaction of narrative, structural, and relational dynamics. Community resilience therefore emerges as an ongoing process rather than a static quality, grounded in the continual negotiation of meaning within evolving institutional and ecological contexts.

7.3 Revisiting the Research Questions

This section synthesises how the thesis has addressed the central research question and its seven sub-questions across the three papers and the integrative analysis. The table below summarises how each research question has been addressed across the empirical chapters and synthesised in the final analysis, clarifying the alignment between the study's aims, findings, and theoretical contributions to community resilience scholarship.

Table 7.1 Mapping of Research Questions to Empirical Findings and Theoretical Contributions

Research Question	Where Addressed	Key Insight
RQ: What role do narratives play in shaping community resilience?	Chapters 4–6; Synthesis	Narratives function as generative forces that interact with structural enabling factors to shape community resilience, adaptive capacity, and transformation through interpretive and relational processes. However, their effects are contingent: narratives can enable adaptation and learning, but may also stabilise exclusion or constrain alternative possibilities where participation is uneven.
RSQ1: What types of narratives emerge?	Chapter 5	Foundational, crisis, aspirational, and demonstration narratives shape collective identity, memory, and learning within evolving narrative ecologies.
RSQ2: Who contributes and whose knowledge is prioritised?	Chapter 5	Narrative influence reflects governance structures, discursive authority, and institutional legitimacy. Dominant narratives can stabilise shared purpose but may also marginalise alternative voices where participation is uneven or power asymmetries persist.
RSQ3: How do narratives evolve?	Chapters 5–6	Narrative plasticity enables reinterpretation, recombination, and adaptive continuity, while operating within relational and governance constraints.

Research Question	Where Addressed	Key Insight
RSQ4: How do narratives vary across contexts?	Chapter 5 (comparative analysis)	Governance arrangements, demographic composition, and institutional history shape narrative diversity, legitimacy, and the permeability of dominant storylines.
RSQ5: Which enabling factors are prominent?	Chapter 5; Appendix coding tables (D4)	Diversity, trust, leadership, connectivity, and collective learning are consistently salient in shaping community resilience outcomes.
RSQ6: How do narrative roles interact with enabling factors?	Chapters 4–5	Narrative roles interact reciprocally with structural capacities, influencing how enabling factors such as cohesion, adaptability, and transformability are interpreted and mobilised in practice.
RSQ7: How are narratives connected to transformation?	Chapter 6; Section 7.5	Community narratives contribute to transformation by shaping cross-scale imaginaries, legitimising institutional change, and enabling reflexive adaptation over time.

The findings show that narratives are constitutive of community resilience rather than merely expressive of it. Community resilience emerges through the co-evolution of narrative ecologies and structural conditions, where governance, resources, and institutional norms shape which stories gain legitimacy, and evolving narratives in turn reshape collective expectations and action. Narrative plasticity enables reinterpretation and continuity, yet its adaptive value depends on inclusive dialogue and permeability to dissent. Community resilience therefore rests not on coherence alone, but on the ongoing negotiation of meaning within plural and power-sensitive narrative systems.

7.4 Contributions to Contemporary Resilience Thinking

Insights from this thesis contribute to an expanding body of scholarship that reframes resilience as a relational, reflexive, and culturally mediated process rather than a purely structural or technocratic property. Synthesising the literature reviewed in this research reveals an evolution in how resilience is conceptualised and practised, an evolution mirrored in the conceptual, empirical, and participatory findings across the three papers. Together, these developments signal a shift toward understanding community resilience as a meaning-infused process situated within dynamic social–ecological relations.

7.4.1 How the Thesis Extends or Challenges Current Debates

Early resilience thinking, shaped by engineering and ecological sciences, emphasised stability, recovery, and the capacity to return to equilibrium. These approaches relied on logics of prediction, control, and optimisation, assuming uncertainty could be managed through technical intervention or improved system performance (Cutter et al., 2010; Holling, 1973; Hollnagel, 2017). However, contemporary crises, including climate change, pandemics, and socio-economic inequality, have revealed the limits of these paradigms. Complexity science and post-normal approaches instead foreground learning, reflexivity, and dialogue as foundational to resilience (Folke et al., 2010; Funtowicz & Ravetz, 1993), expanding attention from system attributes to the interpretive processes through which communities negotiate and co-create adaptive responses.

Simultaneously, the democratisation of knowledge and participatory governance challenged expert-driven models. Scholars argued that resilience is inherently political, raising questions about whose resilience is prioritised and what values shape adaptive choices (Fazey et al., 2018; Jasanoff, 2004; MacKinnon & Derickson, 2013). Emotional, ethical, and cultural dimensions gained prominence as research illuminated the roles of ecological grief, identity, belonging, and meaning-making in collective adaptation (Brown et al., 2017; Cunsolo & Ellis, 2018). These developments broadened the field from technical capacity to include cultural coherence, relational wellbeing, and the imaginative resources needed to envision alternative futures (Riedy & Waddock, 2022).

However, while this political turn foregrounds questions of justice and power, narrative processes themselves are not inherently emancipatory. Narrative processes can consolidate dominant interests, normalise inequitable arrangements, or marginalise dissenting voices. Interpretive coherence may stabilise collective identity, yet it can also entrench exclusionary boundaries or inhibit transformative change. Recognising this ambivalence is critical: narrative processes shape not only how communities adapt, but whose experiences are legitimised and whose futures are rendered imaginable. A framework attentive to community resilience must therefore account for the power-inflected dynamics through which certain storylines gain authority while others are muted.

Despite these conceptual advances, many applied sectors, including infrastructure management, disaster risk reduction, and economics, continue to operationalise resilience

through quantifiable indicators and predictive models (Barrett et al., 2020; Cutter et al., 2010). While these tools remain essential, they struggle to account for the relational and interpretive dimensions through which community resilience is enacted in practice. Communities navigate uncertainty not only through infrastructure and technical capacity, but through meanings, relationships, and adaptive behaviours that unfold in real time.

A growing body of work recognises the relevance of narrative and discursive perspectives in resilience research. Revell (2020), Vaughn and DeJonckheere (2021), Doloisio (2025), and Greene et al. (2017) each demonstrate how interpretive processes shape adaptive capacity in diverse contexts. Yet this literature remains fragmented, often examining narrative alongside structural factors without systematically integrating the two.

This thesis addresses that gap by demonstrating that narrative processes and structural resilience-enabling factors are mutually shaping. It advances an integrated framework that brings these dimensions together, showing that community resilience arises through the continual interplay between narrative ecologies and the social, ecological, and institutional conditions that support or constrain adaptive capacity.

Figure 7.3 illustrates how contemporary resilience thinking is expanding across these conceptual and methodological fronts.

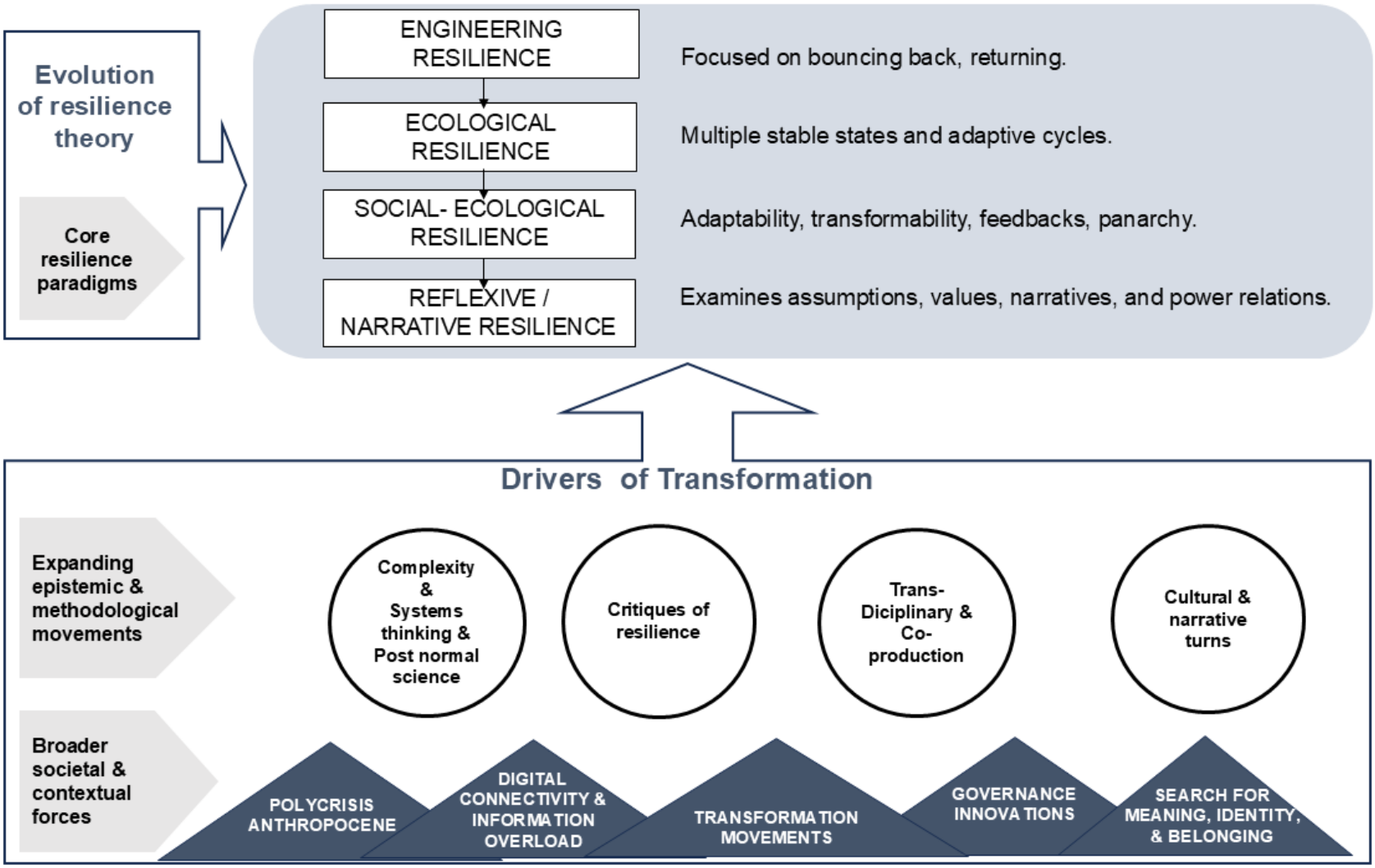


Figure 7.3. Evolving understandings of resilience and the forces shaping its development.

7.4.2 Key Conceptual Advances

This thesis advances several conceptual contributions to contemporary community resilience thinking. Figure 7.4 summarises the five theoretical pillars underpinning the narrative–resilience framework.

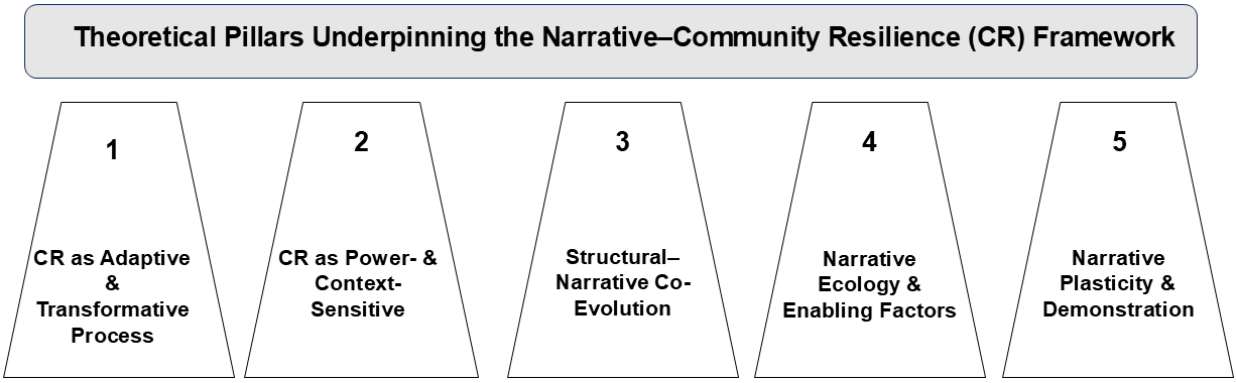


Figure 7.4 Five theoretical pillars of Narrative-Community resilience framework.

The thesis advances several interconnected conceptual contributions to contemporary resilience thinking. Central among these is the development of narrative plasticity as a core mechanism of community resilience. While prior work recognises that narratives evolve, this research shows that adaptive capacity depends on a community's ability to revise, hybridise, and reconfigure shared narratives without losing sufficient coherence for coordination. Narrative plasticity captures how meaning systems flex in response to disruption; however, this flexibility is neither automatic nor inherently adaptive. It depends on reflexive dialogue, inclusive governance, and the permeability of dominant narratives to critique. Where stories become insulated from challenge or aligned with entrenched power dynamics, narrative systems risk rigidity and maladaptive lock-in. Community resilience is therefore strengthened not by narrative cohesion alone, but by the capacity to hold difference, negotiate power, and sustain contestation.

Building on this mechanism, the thesis elaborates the concept of narrative ecology: a dynamic system of interacting storylines, roles, types, and archetypal figures through which communities interpret their environment and organise action. Narrative ecologies resemble ecological systems in their diversity and interdependence, yet they are structured by asymmetries of influence. Certain roles or storylines may become hegemonic, shaping collective priorities while limiting counter-narratives. Resilient narrative ecologies therefore require not only diversity, but institutionalised space for dissent and reinterpretation. Structural conditions shape which narratives gain legitimacy, while narratives influence how structural capacities are

reinforced or transformed. Community resilience emerges through this continual structural–narrative co-evolution.

Within these ecologies, narrative roles operate as dynamic mechanisms linking meaning and material capacity. Identity, sensemaking, agency, cohesion, knowledge transmission, and reflexive adaptation shape how communities mobilise social capital, navigate diversity, and enact adaptability and transformability. These roles remain embedded within governance patterns, leadership structures, and institutional arrangements, illustrating how interpretive and structural dimensions co-produce pathways of community resilience rather than functioning independently.

Extending this further, the thesis introduces the concept of demonstration narratives: stories that make community resilience visible through lived examples of cooperation, adaptation, and institutional learning. These narratives translate abstract resilience capacities into embodied practice, reinforcing shared orientation while remaining open to reinterpretation. In doing so, they help stabilise shared meaning while also modelling adaptive possibility.

Collectively, these advances position narrative as a central yet contested dimension of community resilience. By foregrounding both its generative and constraining capacities, the thesis offers a more nuanced account of how community resilience emerges within culturally mediated and power-sensitive social–ecological systems.

7.5 Scaling Resilience: From Local Practice to Global Transformation

This section addresses RSQ7 by examining how community resilience narratives connect to broader processes of social, cultural, and institutional transformation. Building on the narrative–resilience framework developed in this thesis; it explores how the relational processes that sustain community resilience within ecovillages extend across levels of organisation.

Efforts to scale community resilience beyond local experiments reveal a persistent tension between replication and resonance. Conventional policy approaches often assume resilience can be reproduced through standardised models, a tendency Capano and Woo (2016) describe as “blueprint thinking” and Finkenbusch (2022) critiques as reducing resilience to a uniform governance template. The findings of this research suggest instead that community resilience scales not through replication of form but through translation of function: a relational process in which meaning, practice, and structure co-evolve across contexts.

Insights from ecovillage experience indicate that community resilience is not replicated through fixed designs but emerges as a relational capacity co-produced through stories, practices, and attachments that connect people to each other and to place. Evidence from other contexts reinforces this view. In post-earthquake Italy, communities rebuilt around shared narratives of belonging and self-reliance (Forino, 2015); Scandinavian and Ethiopian ecovillages negotiated identity through participatory living and people–place relationships (Temesgen, 2024); and global networks of intentional communities describe resilience as arising through collective storytelling and co-created learning (Ulug et al., 2021). Scaling, therefore, involves extending relational function rather than copying institutional form.

At the same time, intentional communities face turnover, governance strain, and organisational fragility. Comparative research shows that ecovillage projects often struggle to sustain themselves, revealing that community resilience cannot be standardised or transferred wholesale (Singh et al., 2019). In Norway, Hurdal Ecovillage experienced strain when expansion shifted from participatory co-creation to a developer-led model; relational and narrative coherence weakened, contributing to financial difficulty and disillusionment (Temesgen, 2024). In India, Auroville's long experiment with community-building has similarly faced tensions, as growth and formalisation introduced administrative complexity and inequality, at times distancing the community from its founding ethos (Venkitaraman & Joshi, 2022).

These cases illustrate that scaling is best understood as translation rather than replication: an ongoing reconfiguration of meaning, practice, and structure as they evolve across organisational levels. Figure 7.5 synthesises the conceptual model developed in this thesis, illustrating scaling as a narrative process unfolding through six iterative pathways—seed, connective tissue, scaffolding, bridge, anchor, and loop—through which meaning, practice, and institutional form are continually reinterpreted across levels.

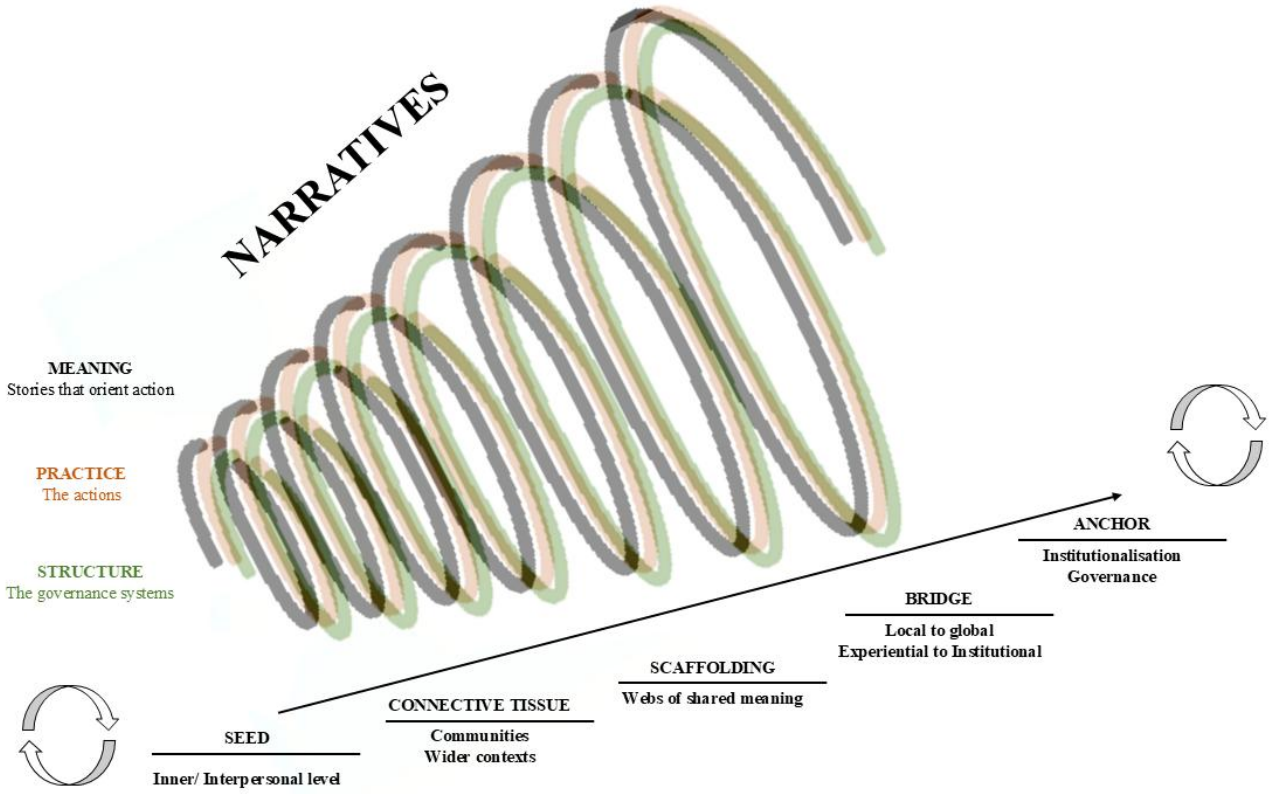


Figure 7.5. Scaling resilience as a narrative process: weaving meaning, practice, and structure across levels of organisation through iterative pathways (seed, connective tissue, scaffolding, bridge, anchor).

Scaling depends not only on narrative circulation but on distributed agency. Community members, facilitators, network organisations, researchers, educators, and policy actors operate at different scales yet contribute to reflexive transformation. Scaling community resilience is therefore not a top-down transfer but a collective process of adaptation across institutional and cultural boundaries.

Narara Ecovillage provides a concrete example. Its shared narrative of being a "living laboratory for sustainable and resilient living" frames community life as an ongoing experiment in learning and adaptation. This narrative supports sociocratic decision-making, participatory reflection, and iterative feedback processes. Over time, these practices consolidate into structures, such as cooperative ownership, defined circle roles, and transparent governance, institutionalising adaptability while maintaining shared purpose. Through partnerships with universities, local councils, and the Global Ecovillage Network, these principles extend beyond the community. Scaling thus amplifies function rather than duplicating form.

While much of this discussion focuses on adaptive and transformative narratives, it is equally important to recognise that maladaptive or exclusionary narratives can also scale. Narratives that legitimise extractivism, reinforce hierarchy, or suppress pluralism may circulate across

networks and institutions, shaping governance agendas in ways that undermine long-term community resilience (Eriksen et al., 2021). The scaling of community resilience therefore demands critical reflection on the values and power relations embedded within dominant storylines. It is not simply a question of diffusion, but of normative direction toward more inclusive, reflexive, and equitable practices.

7.5.1 Imaginative Resonance

Imaginative resonance marks the earliest and most interior phase of scaling. It unfolds at the level of identity, emotion, and interpersonal connection, where communities begin to imagine alternatives and sense the possibility of different futures. Within ecovillages, resonance is cultivated through storytelling circles, shared reflection, and collective visioning practices. Brown et al. (2017) describe this as imaginative capacity, while Milkoreit and Merrie (2019) show how narrative practices help communities "think futures into being." Resonance provides the affective and interpretive ground from which collective action grows.

7.5.2 Narrative Propagation

As imaginaries gain coherence, they begin to circulate. Propagation refers to the movement and adaptation of stories across people, places, and media. Stories become shared cultural artefacts—symbols, metaphors, demonstrations—that are reinterpreted as they travel. Veland and Lynch (2016) conceptualise these as discursive systems linking ways of knowing, while Riedy and Waddock (2022) describe narrative catalysis as the activation of values and identities through story. However, excessive plasticity can fragment shared meaning (Ricoeur, 1984; Somers, 1994). Propagation supports community resilience when diversity remains anchored to shared reference points and open dialogue.

7.5.3 Networked Learning

Propagation enables networked learning: distributed experimentation, reflection, and adaptive practice across communities and platforms. Learning becomes relational and participatory, unfolding through peer exchange and translocal collaboration (Jenkins et al., 2013; Papacharissi, 2015). Koch et al. (2023) describe such relational infrastructures as learning architectures linking local innovation to institutional change. In ecovillage networks, governance exchanges and ecological design collaborations illustrate how tacit knowledge becomes collective intelligence supporting community resilience beyond a single site.

7.5.4 Trans-Scalar Translation

Translation involves negotiating narratives across institutional and epistemic boundaries. Local experience is articulated in policy language; global frameworks are interpreted through lived practice. Galafassi et al. (2018) describe narratives as bridging devices between abstraction and experience, while Krauß and Bremer (2020) characterise this as boundary-spanning across knowledge systems. Translation ensures that situated stories inform and reshape broader sustainability discourses while remaining responsive to local context.

7.5.5 Institutional Embedding

Embedding occurs when narrative-informed practices influence formal governance, education, or planning structures. Westley et al. (2013) conceptualise this as the institutionalisation of social innovation, while Folke et al. (2021) emphasise reflexive institutions capable of integrating diverse knowledge. Yet embedding also carries risks. Institutionalisation can narrow interpretive diversity, privileging certain frames while marginalising others (Jasanoff & Kim, 2015). Without sustained pluralism and participatory safeguards, community resilience may weaken as dominant narratives harden into orthodoxy.

7.5.6 Reflexive Adaptation

Scaling culminates—and renews—through reflexive adaptation. Communities and institutions continually reassess stories, practices, and structures. Reflexivity prevents scaling from becoming rigid or self-affirming. Saltelli et al. (2020) caution that transformation without critique may reproduce dominant logics, while Sellberg et al. (2021) emphasise reflexivity as essential for long-term resilience. In ecovillages, reflexive adaptation appears in governance reviews, conflict processes, and iterative visioning cycles that sustain community resilience over time.

These pathways demonstrate that scaling community resilience is not linear expansion but a recursive and relational process shaped by narrative mediation. The analysis reinforces the central contribution of this thesis: community resilience emerges through the interplay between structural conditions and narrative ecologies, and this interplay operates across scales. By tracing how stories resonate, propagate, translate, embed, and adapt, this section shows how local practices contribute to broader transformation while remaining power-sensitive and contextually grounded.

7.6 Implications for Practice and Policy

The findings of this research show that community resilience depends not only on structures, resources, or ecological conditions, but on the cultural and interpretive processes that sustain meaning, trust, and collective agency. Recognising narratives as part of a community's cultural infrastructure reframes resilience-building from technical system management toward cultivating living narrative ecologies that help communities interpret change, articulate shared visions, and coordinate action.

The institutional dimensions of scaling community resilience cannot be separated from their narrative foundations. Diversity, distributed leadership, and semi-permeable governance shape the conditions under which stories emerge, circulate, and are contested. In turn, evolving narratives reinforce or unsettle these arrangements. Stories of trust, collective responsibility, or decentralised authority can legitimise adaptive governance, while narrative erosion or exclusion can destabilise it. This reciprocal dynamic illustrates how narrative and institutional processes co-evolve, jointly enabling or constraining community resilience.

A clear example comes from Narara, where the extended negotiation of the dam-revitalisation proposal demonstrated how narratives of trust and collective responsibility can stabilise semi-permeable governance. Throughout the two-year consultation, residents repeatedly returned to the refrain "we need to work this through together" while engaging multiple circles. This shared framing sustained patience, legitimacy, and collective purpose during a process marked by conflict and risk concerns. By interpreting the proposal as an expression of collective care, the narrative reinforced distributed decision-making and enabled the project to proceed. At the same time, the case underscores that such outcomes depend on inclusive processes; without equitable participation, cohesion narratives can mask unresolved tensions.

Scholarship in sustainability transitions and narrative governance similarly emphasises participatory dialogue, trust-based coordination, and cross-scale learning as foundations of community resilience (Koch et al., 2023; Pahl-Wostl, 2023). Embedding storytelling within planning processes (Hajer, 2005; Krauß & Bremer, 2020) helps translate abstract sustainability goals into locally meaningful frames that strengthen legitimacy. However, narrative integration must remain attentive to power asymmetries; without mechanisms for dissent and contestation, dominant framings may narrow rather than expand adaptive capacity.

In practice, this suggests creating deliberative forums, narrative-mapping exercises, and peer-to-peer reflection platforms through which communities, practitioners, and policymakers can co-create and revise shared visions. Narrative mapping offers a practical method for identifying

patterns of cooperation, conflict, and renewal, enabling communities to recognise which storylines support community resilience and where revision may be necessary.

Horizontal learning networks such as ecovillage alliances can document and exchange lessons across contexts (Riedy & Waddock, 2022). Combined with reflexive governance approaches (Dobroć et al., 2023; Saltelli et al., 2020), these networks help sustain plural and adaptive decision-making. Together, these strategies strengthen distributed leadership, social trust, and shared meaning as cultural foundations of community resilience.

7.6.1 . Community Practice and Local Governance

Communities strengthen community resilience when they work intentionally with their narrative ecologies rather than allowing dominant storylines to shape action implicitly. Diverse and flexible narrative repertoires broaden interpretive capacity and reduce the risk of narrow or exclusionary framings (Revell & Dinnie, 2018; Fraile-Marcos, 2020). Participatory approaches such as scenario building, reflective dialogue, and story circles can surface, contest, and renew these repertoires.

The six narrative roles provide practitioners and governance actors with a diagnostic lens. They clarify which narrative functions are strong or underdeveloped, how they interact with enabling factors such as trust, diversity, and adaptability, and where gaps may constrain collective action. Strengthening underrepresented roles, for example, agency or reflexive adaptation, can support more balanced and inclusive community resilience processes.

Demonstration narratives make community resilience visible and tangible. By linking everyday practice with broader aspirations, they align action across scales and reinforce shared purpose. When inclusive, such narratives enhance legitimacy; when selective, they may inadvertently silence alternative experiences. Attending to this tension is essential for equitable resilience-building.

7.6.2 Intermediaries, Educators, and Practitioners

Narrative tools offer intermediaries, educators, and practitioners practical means of supporting community resilience. The narrative–resilience framework provides a shared language for integrating narrative literacy into facilitation, training, and engagement. Recognising archetypal roles and tracing evolving storylines can strengthen participation and shared ownership of change.

Techniques such as storytelling circles, narrative mapping, and re-storying exercises can be embedded in governance meetings and educational programs. These practices make visible the dynamics of identity, meaning, and agency that shape collective responses to uncertainty. At Findhorn, initiatives such as the Artist Trail, where residents co-create storytelling-based experiences, illustrate how participatory narrative practices strengthen shared understanding and make community identity explicit. Such practices can elevate marginalised voices and build cohesion, provided they remain attentive to inclusion and power dynamics.

7.6.3 Policy and Institutional Design

Community resilience policy often falters not because of technical shortcomings but because it overlooks narrative dimensions of identity, legitimacy, and collective purpose. Policies become more effective when they incorporate story-based engagement methods that enable residents to articulate lived experience. Participatory communication platforms can support this work by surfacing plural perspectives rather than privileging singular institutional narratives.

Integrating narrative analysis into planning and evaluation enables institutions to examine how official framings shape behaviour, inclusion, and public trust. Comparing governmental "success narratives" with community experience can reveal misalignments that undermine adaptation. Embedding narrative awareness within governance can move institutions away from prescriptive control toward more reflexive and dialogical decision-making.

7.6.4 Integrating with Wider Debates

These implications connect with broader debates on narrative governance and sustainability transitions. Dominant sustainability discourses remain influenced by technocratic and growth-oriented logics, limiting collective imagination (Riedy, 2022). Extending the concept of narrative ecologies into resilience research, this thesis shows how interacting stories enable adaptive learning, trust-building, and collaborative governance while remaining shaped by structural power relations.

Findings from Narara and Findhorn illustrate how distributing authority and maintaining open communication can foster learning and shared responsibility. At the same time, they demonstrate that narrative–structural interplay is delicate: without pluralism and reflexivity, governance arrangements may drift toward rigidity or exclusion. Community resilience therefore emerges as a co-evolving process in which meaning, practice, and institutional arrangements continually reshape one another.

These implications underscore that community resilience requires more than robust governance or technical solutions. It depends on nurturing the narrative and cultural foundations through which people interpret change, negotiate difference, and imagine shared futures. Recognising narratives as both analytical lenses and practical tools enables communities and policymakers to cultivate interpretive flexibility, relational trust, and collective agency, anchoring community resilience in lived experience while remaining attentive to power and inclusion.

7.7 Applying The Narrative–Resilience Framework across Sectors

While the previous section outlined broader implications for practice and policy, this section demonstrates the transferability of the narrative–resilience framework beyond ecovillage contexts. Building on the participatory validation and scaling analysis, it illustrates how core components of the framework—such as narrative roles, mapping exercises, and demonstration narratives—can be adapted across sectors without assuming uniform replication. Additional applied resources, including the practitioner toolkit and the transferability method developed through this research, are provided in Appendix K.

Figure 7.6 visualises these cross-sectoral applications, showing how community groups, local governments, educators, policy organisations, and civil society networks can use narrative tools to strengthen dimensions of community resilience, including identity, belonging, reflexivity, learning, and structural adaptation.

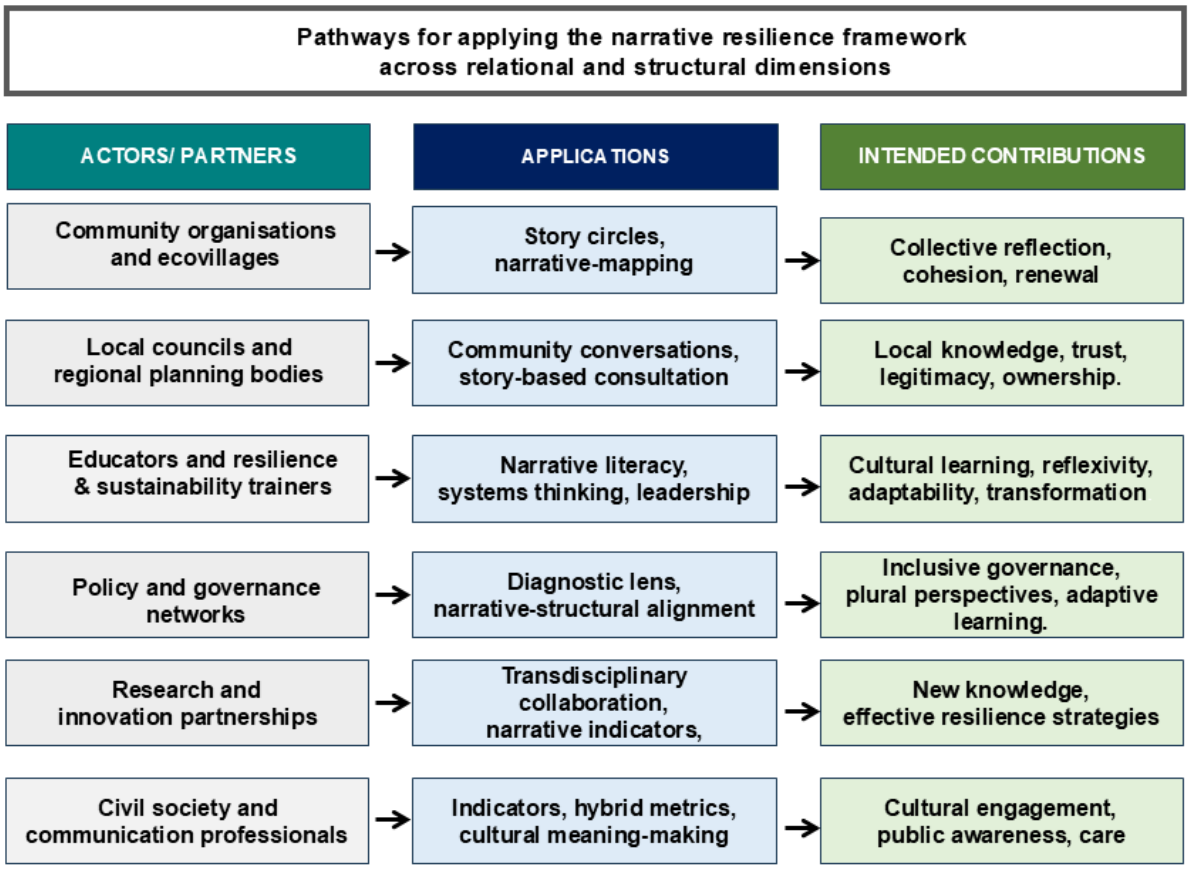


Figure 7.6. Potential pathways for applying the narrative–resilience framework across partners in resilience practice

7.7.1 Community Organisations and Ecovillages

At the community scale, story circles, narrative-mapping workshops, and reflective dialogues help members surface experiences of change and make sense of them collectively. These practices strengthen trust, belonging, and shared identity while revealing dominant and marginalised narratives. By making tacit stories explicit, communities can identify tensions, cultivate underdeveloped narrative roles, and intentionally reinforce the stories that enable social capital, adaptability, and cohesion.

7.7.2 Local Councils and Regional Planning Bodies

Local governments can embed story-based engagement within existing consultation processes. While not replacing surveys or formal hearings, dialogical formats allow residents to articulate how they experience place, risk, and aspiration. These narratives reveal values and relationships often absent from technical data, enabling planners to align policies with lived experience.

Integrating narrative methods enhances legitimacy, trust, and long-term community ownership of sustainability initiatives.

7.7.3 Education and Training Organisations

Educators, facilitators, and capacity-building organisations can incorporate narrative literacy into leadership programs, sustainability curricula, and systems-thinking courses. Narrative literacy helps learners recognise how stories shape perception and action, how dominant framings constrain imagination, and how alternatives open pathways for cultural and institutional change. When paired with systems thinking, narrative methods support reflexive and adaptive mindsets essential for navigating complexity.

7.7.4 Policy, Governance Networks, and Public Institutions

Policy actors can use the framework as a diagnostic tool for interpreting the stories that underpin institutional decisions and public discourse. Every policy field is structured around dominant narratives—of growth, innovation, security, or scarcity—that shape which problems and solutions are seen as legitimate. Mapping these narratives and comparing them with community stories helps reveal misalignments and exclusions. Embedding narrative awareness into policy processes enables more inclusive, responsive, and dialogical governance.

7.7.5 Research and Innovation Partnerships

Transdisciplinary research collaborations can use the framework to bridge empirical analysis with creative and community-based methods. Below are some examples of key narrative indicators (KNIs) that can complement quantitative measures and bring forward how people interpret and respond to change:

- **Narrative diversity (KN1)** – assessing the breadth of narrative types circulating within a community, indicating the range of perspectives, experiences, and interpretive resources available.
- **Narrative plasticity (KN2)** – examining the capacity of stories to integrate new information, adapt to emerging conditions, and evolve without losing coherence.
- **Collaborative coherence** (**KN3**)– identifying shared accounts of working together, which reveal how narratives reinforce trust, reciprocity, and collective efficacy.

- **Temporal grounding** (**KN4**)– tracing how stories link past experiences with future aspirations, offering insight into the temporal dynamics of resilience and the community's capacity to learn, project, and anticipate.

This hybrid approach supports more holistic understandings of resilience and transformation.

7.7.6 Civil Society Organisations and Communication Professionals

Civil society groups, artists, and communicators can collaborate with communities to share stories of adaptation, innovation, and care through exhibitions, podcasts, digital storytelling, and participatory media. These practices translate local experience into accessible narratives that evoke empathy and broaden public imagination. When diverse voices are amplified, adaptation becomes visible as a shared cultural project rather than a purely technical policy challenge.

These pathways illustrate how community resilience is strengthened when narrative processes become shared practices linking reflection with action, meaning with governance, and imagination with transformation. The framework offers both analytical insight and practical tools to support cross-sectoral engagement while remaining attentive to power, inclusion, and contextual specificity.

7.8 Methodological Reflections and Limitations

This research adopted an integrative and adaptive design combining three methodological strands: conceptual synthesis, qualitative case study, and participatory validation. These approaches were selected not only to analyse community resilience but to engage with it in ways that were reflexive, collaborative, and open to learning. The thesis demonstrates that interpretive depth and analytical rigour are not mutually exclusive, and that narrative and participatory methods can complement, rather than compete with, established resilience research traditions.

Paper 1 synthesised insights from resilience theory, planning scholarship, and the environmental humanities into a coherent conceptual framework. Rather than treating these literatures in isolation, it brought them into dialogue to articulate the cultural and interpretive dimensions of community resilience. This conceptual groundwork provided a structured lens through which subsequent empirical investigation could proceed.

Paper 2 applied the framework through comparative qualitative case studies. The analysis examined how participants narrated disruption, identity, governance, and change, attending to metaphor, temporal framing, and recurring story patterns. This approach recognised that narratives reveal not only lived experience but the interpretive processes through which communities understand and respond to it. The comparative design strengthened analytical robustness by identifying patterned co-occurrences between narrative roles and resilience-enabling factors across contexts.

Paper 3 extended the inquiry through participatory validation. Participants engaged directly with the framework, refining categories, identifying omissions, and articulating experiential resonance. This process treated reflexivity as integral to research rather than external to it. Validation was therefore not limited to confirming internal coherence, but became a collaborative process of interpretation that both strengthened the framework and generated new narrative insights.

Across the three papers, the research design evolved iteratively. Conceptual development informed empirical investigation, and empirical findings, in turn, reshaped the conceptual framing. This abductive movement between theory and fieldwork reflects the thesis's underlying epistemological stance: that community resilience is best understood through plural perspectives, ongoing reflection, and co-produced knowledge.

Nevertheless, several limitations shape the scope and transferability of the findings.

First, the empirical focus on two ecovillages enabled depth but constrains generalisability. As Flyvbjerg (2006) notes, case study research contributes through analytical rather than statistical generalisation. Ecovillages' explicit commitments to sustainability and participatory governance may accentuate certain forms of narrative plasticity and reflexivity not present in other settings. Future research could apply the framework to urban neighbourhoods, regional institutions, or communities experiencing different socio-ecological pressures. Comparative study of initiatives that have struggled or dissolved would further illuminate the limits of community resilience and the conditions under which narrative dynamics fail to support adaptation.

Second, the participatory validation involved a small cohort (n = 7). While this facilitated trust, depth, and dialogical engagement consistent with phenomenological inquiry, it limits representativeness. Broader validation through larger workshops, cross-case comparisons, or mixed-method integration would strengthen calibration of narrative roles and resilience-enabling factors.

Third, researcher positionality shaped the research process. Positioned between analyst and facilitator, and engaged within the communities studied, I operated in a liminal role that enabled relational insight but required sustained reflexivity regarding interpretation, representation, and power. Awareness of how narratives are amplified, stabilised, or marginalised within research settings was therefore essential.

Finally, the thesis foregrounds narrative and interpretive dimensions of community resilience without directly measuring material, ecological, or infrastructural outcomes. The framework should therefore be understood as complementary to quantitative indicators. It illuminates the cultural, relational, and affective dynamics that influence how structural capacities are mobilised, but does not replace structural assessment.

The methodological contribution of this research lies in demonstrating how conceptual synthesis, qualitative inquiry, and participatory dialogue can be integrated into a coherent and adaptive research design. By treating knowledge production itself as a reflexive and relational practice, the study mirrors the dynamics it describes: co-evolution, plurality, and adaptive learning as foundations of community resilience.

7.9 Future Research Directions

The findings of this thesis open multiple pathways for future inquiry, conceptual, methodological, and practical. As resilience scholarship continues to evolve toward more inclusive and transdisciplinary approaches, the narrative–resilience framework developed here provides a flexible foundation that can be extended, tested, and adapted across diverse contexts and scales.

Figure 7.7 illustrates the interrelated trajectories emerging from this work. The diagram positions the narrative–resilience framework at the centre, surrounded by five complementary pathways that together outline a research agenda for advancing narrative approaches to community resilience and sustainability transitions.

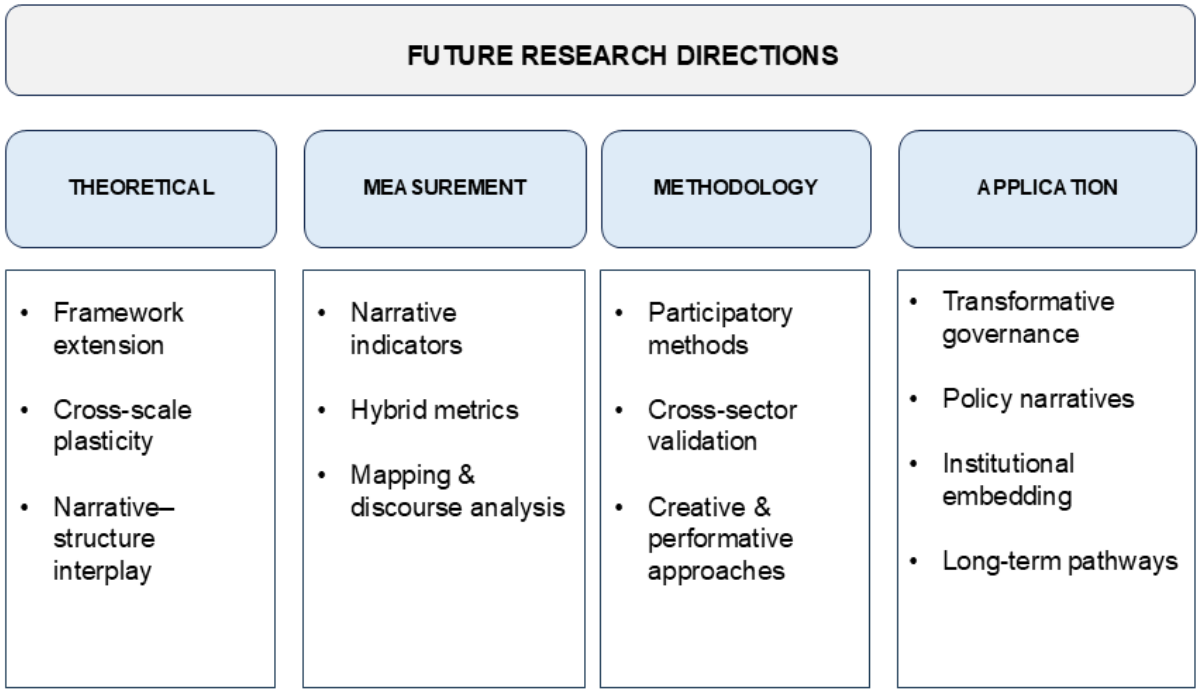


Figure 7.7. Future research paths emerging from the narrative–resilience framework.

7.9.1 Extending and Testing the Framework

Future research could apply and evaluate the narrative–resilience framework across a broader range of social–ecological settings, including urban neighbourhoods, regional planning initiatives, policy institutions, and, where appropriate and invited, Indigenous community contexts. Urban neighbourhoods provide settings in which community resilience is shaped by everyday practices of diversity, belonging, and local governance, making them well suited for examining how narrative roles and enabling factors operate under less self-selecting conditions (Aldrich & Meyer, 2015; Magis, 2010). Regional planning initiatives offer opportunities to investigate how narratives influence long-term visioning, cross-scale coordination, and collaborative governance (Innes & Booher, 2010; Pahl-Wostl, 2015). Policy institutions produce the dominant stories that frame resilience agendas; applying the framework in these settings could surface how official narratives align with or diverge from community experience (Gupte & Mehra, 2017; Roe, 1994).

Where research engages with Indigenous communities, careful attention to relational accountability and local epistemologies is essential, recognising that Indigenous narratives and governance traditions emerge from distinct cultural, historical, and place-based contexts (Smith, 2012; Whyte, 2018). Comparative applications across these varied settings would enable deeper analysis of how narrative functions and resilience-enabling factors interact under different governance arrangements, cultural values, and ecological conditions.

Mixed-method designs combining narrative inquiry with quantitative resilience indicators could strengthen the empirical base of the framework, linking interpretive processes with measurable system outcomes. Such extensions would move the framework toward a more rigorously tested and contextually adaptable tool for policy and practice.

7.9.2 Exploring Narrative Plasticity

The concept of narrative plasticity emerged in this research as a distinctive contribution requiring further theoretical and empirical investigation. While scholars have long noted that narratives evolve through interactions between memory, identity, and social context (Czarniawska, 2004; Somers, 1994), little work has examined how these evolutions unfold across disturbance cycles within community resilience processes. Future research could explore how narrative plasticity operates across temporal scales or how it may be intentionally cultivated through education, leadership, and participatory design.

Further inquiry is needed into the limits and potentially maladaptive dimensions of narrative plasticity. Plasticity does not inherently produce equitable or adaptive outcomes. Certain narrative configurations may reinforce dominant power structures, marginalise dissenting voices, or stabilise exclusionary identities, thereby constraining transformation. Future studies should examine the institutional, relational, and governance conditions that enable reflexive reinterpretation while preventing rigidity or hegemonic lock-in.

Longitudinal studies tracing community narratives before, during, and after disruption, an approach increasingly advocated in climate-risk and sustainability scholarship (Constantino & Weber, 2021; Krauß & Bremer, 2020), would offer insight into how meaning, identity, and agency shift over time. Such work would deepen understanding not only of how interpretive mechanisms underpin adaptation and transformation, but also of when narrative systems become rigid, contested, or exclusionary. This line of inquiry would sharpen theoretical precision around narrative plasticity as a conditional and power-sensitive dimension of community resilience.

7.9.3 Narrative–Relational–Structural Interconnections

A further line of inquiry concerns the interrelationships between narrative–relational dynamics and the structural–functional conditions that shape community resilience. As demonstrated in this thesis, narrative evolution is not an isolated cultural process but emerges within, and continually interacts with, governance practices, organisational histories, institutional

permeability, and demographic composition. Research across social–ecological governance similarly shows that narratives are both constrained and enabled by institutional arrangements, leadership patterns, and community boundaries (Pahl-Wostl, 2009; Lejano et al., 2013).

Future research could examine how specific narrative types—such as stories of trust, stewardship, decentralised authority, or collective responsibility—intersect with structural elements like participation mechanisms, leadership turnover, diversity, or institutional memory. Trust-building narratives, for instance, can strengthen social capital, whereas fractures in trust narratives may reveal underlying structural strain (Bodin et al., 2020). Narratives that valorise distributed authority may reinforce participatory governance, while efficiency-oriented stories can gradually legitimise recentralisation.

Investigating these reciprocal dynamics would deepen understanding of how narrative ecologies and structural systems co-evolve, contributing to a more integrated model of community resilience that treats meaning-making, relationships, and structure as mutually shaping dimensions of adaptive capacity.

7.9.4 Operationalising Narrative Indicators

Another promising direction for future research lies in developing narrative-based indicators that complement existing resilience metrics. Such indicators could capture qualitative dimensions—belonging, reflexivity, agency, coherence, and trust—that are often missing from conventional assessments but are central to how communities perceive and enact resilience. Advancing this work aligns with broader calls to integrate cultural and relational dimensions into resilience evaluation frameworks (Adger et al., 2013; Gee et al., 2017).

Methods including narrative mapping, discourse analysis, and digital ethnography offer practical ways to assess how narratives circulate and influence collective action. Over time, this work could contribute to hybrid measurement systems that combine material indicators, ecological condition, infrastructure robustness, governance capacity, with cultural indicators such as narrative diversity and meaning-making processes. These approaches would support more holistic assessments of community resilience by capturing not only what communities possess but how they interpret and mobilise those capacities.

7.9.5 Participatory Methodologies

Participatory and creative methods, long emphasised in transdisciplinary sustainability research (Chilvers & Kearnes, 2020), offer practical ways to design validation processes that function as both research and intervention. Working with reflexive validity, these approaches allow participants to question, refine, and expand the framework through use. Engaging planners, educators, and policymakers would test whether the narrative–resilience framework can operate as a shared language bridging scientific analysis, practice, and governance.

Creative and performative techniques such as participatory theatre, visual storytelling, embodied activities, or digital media could further illuminate how narrative practices mobilise emotion, imagination, and collective agency. These approaches deepen understanding of how communities construct meaning, navigate difference, and cultivate the relational capacities underpinning community resilience.

7.9.6 Linking Narratives to Transformative Governance

Future research could examine how dominant and counter-narratives shape adaptation pathways, drawing on narrative policy analysis and transformative governance (Dryzek & Pickering, 2019; Lejano & Nero, 2020). Policy narratives frame problems, legitimise interventions, and delimit what forms of change appear feasible. Counter-narratives emerging from grassroots movements, community initiatives, or Indigenous governance traditions may disrupt or redirect these dominant frames.

Investigating these interactions would position narrative research as a cultural complement to systems-based transformation approaches. It would clarify how stories influence legitimacy, authority, learning, and the distribution of agency across governance levels. Such inquiry could examine how narrative practices support more reflexive, plural, and justice-oriented governance capable of responding to uncertainty through dialogue rather than control.

Building on this thesis, future inquiry can trace how narrative ecologies evolve across scales and governance arenas, advancing more inclusive and reflexive approaches to community resilience.

7.9.7 Continuing Pathways and Legacy

The work developed in this thesis is not presented as a closed model but as an evolving framework open to refinement through continued engagement. The narrative–resilience

framework may be adapted, recalibrated, or expanded as new communities and researchers apply it in different institutional and cultural settings. Its adaptability is intended to support ongoing inquiry into how communities interpret change and cultivate community resilience through evolving narrative ecologies.

The research also creates opportunities for continued collaboration with ecovillages, networks, local governments, and educational institutions. Future participatory workshops, action research, and creative methodologies may further test the framework as a shared language linking scientific analysis, community practice, and governance.

The broader contribution of this thesis lies in reframing community resilience as an interpretive and relational process shaped through narrative negotiation. By foregrounding narrative ecologies alongside structural conditions, the research offers conceptual tools and methodological approaches that others may adapt, challenge, and extend. Its legacy is therefore not a finalised model, but a platform for continued dialogue, experimentation, and critical engagement with the cultural dimensions of community resilience.

7.10 Conclusions

This chapter has integrated the conceptual, empirical, and participatory strands of the thesis to demonstrate how narratives function as cultural infrastructure within community resilience. Narrative processes do not replace structural or ecological conditions; rather, they constitute one of the dimensions through which those conditions are interpreted, enacted, and transformed. Across the three papers, the research shows that community resilience is not solely a system property but a relational and interpretive practice sustained through shared meaning-making, identity formation, and the continual negotiation of collective purpose.

A central insight is that narrative processes contribute to community resilience through their interaction with structural, relational, and ecological factors. Narratives shape how communities perceive disturbance, assess risk, and coordinate action, yet they are themselves shaped by governance arrangements, leadership legitimacy, demographic diversity, resource conditions, and institutional histories. This reciprocal dynamic underscores that narrative ecologies evolve within structural constraints and opportunities, influencing community trajectories while remaining embedded in architectures of participation and accountability. Narrative processes do not substitute for structural attributes; they animate them, orient them, and render them socially operative.

The comparative case studies of Findhorn and Narara demonstrate that resilient communities cultivate plural and evolving narrative systems. Such narrative ecologies provide diversity and adaptive capacity, enabling communities to navigate uncertainty while sustaining coherence. Within these dynamics, narrative plasticity emerged as a defining mechanism: the capacity of stories to absorb disturbance, integrate new information, and adapt while retaining continuity of identity and shared direction. At the same time, this research shows that plasticity is conditional. Where narrative systems become rigid, exclusionary, or insulated from critique, adaptive capacity may weaken. Community resilience therefore depends not only on narrative coherence but on reflexivity, openness, and the capacity to hold difference.

The participatory validation process further demonstrated that narrative engagement can itself function as a resilience practice. Through co-reflection, participants clarified shared values, surfaced tensions, and refined collective understandings. Validation became not merely a methodological step but a relational process that strengthened interpretive capacity and collective agency.

Together, these findings reposition community resilience as both structural and cultural. It is built through institutions, governance arrangements, and material capacities, and sustained through meaning-making, memory, and imagination. The stories communities tell about who they are, how they have responded to disruption, and what futures they consider possible shape how structural capacities are mobilised and how transformation unfolds.

The thesis contributes conceptually by integrating narrative roles with established resilience-enabling factors, demonstrating how interpretive processes and structural capacities co-produce adaptive and transformative potential. Methodologically, it advances a transdisciplinary design combining conceptual synthesis, comparative qualitative analysis, and participatory validation. Practically, it offers tools, including narrative mapping, re-storying practices, and key narrative indicators, that can support community development, governance, and policy engagement.

In contexts marked by ecological, social, and institutional uncertainty, community resilience depends not only on what systems can withstand but on how communities interpret, negotiate, and reimagine their collective futures. Recognising narratives as cultural infrastructure foregrounds the role of meaning, identity, and imagination in shaping adaptive capacity. Stories do not merely describe community resilience; they participate in its formation and evolution.

Figure 7.8 synthesises the thesis's research questions, key findings, and contributions, illustrating the development of the narrative–resilience framework from conceptual foundations through empirical application to participatory refinement..

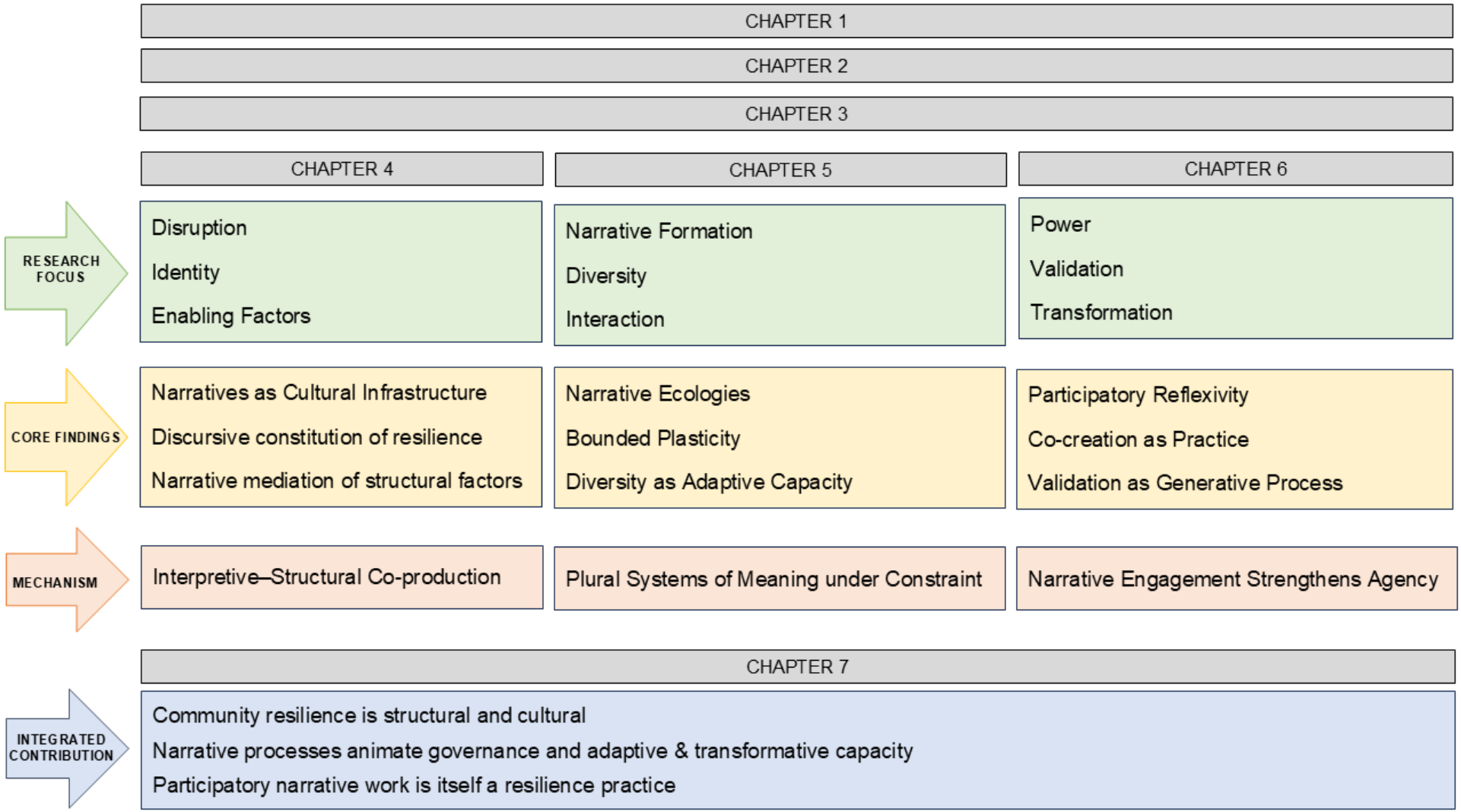


Figure 7.8. Overview of research focus, key findings, and integrated contributions of the thesis.

The insights of this chapter show that narratives function as generative forces within community resilience, shaping how communities interpret and respond to change. Through the framework developed in this thesis, community resilience is understood both as an analytical lens and as a participatory practice, linking lived experience with adaptive capacity and shared purpose. In this way, narrative processes contribute not only to persistence, but to the capacity of communities to evolve in response to disruption.

As this synthesis concludes the formal scholarly arc of the thesis, the Epilogue shifts into a reflective register. It reconnects the analytical insights developed here with the lived and ongoing narrative work of community resilience, turning from synthesis toward practice, imagination, and the continued process of collective re-storying.

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Epilogue: Re-storying Resilience

"It matters what stories make worlds, what worlds make stories."
Donna Haraway

This thesis began with a question about stories and, in the end, became one. Across its pages, narratives were not only examined but enacted, woven through conceptual synthesis, fieldwork encounters, and participatory reflection. The research unfolded as a living dialogue between theory and practice, between language and experience, between what can be explained and what must be interpreted. In this sense, the work did not simply describe resilience: it performed it.

Through the three studies, the research traced how communities craft meaning amid uncertainty and how these meanings shape the capacity to adapt, connect, and transform. The process also revealed that scholarship itself is a practice of resilience—a continual negotiation between stability and change. Each iteration of the framework, each dialogue with participants, and each reflexive turn mirrored the adaptive cycles it sought to understand. The inquiry became a narrative of narratives: a story about how knowledge evolves through interaction, humility, and imagination.

The collective insights point to a simple but enduring truth: resilience is not a fixed property nor a destination, but a relationship continually re-authored through the stories we share. Communities, like ecosystems, draw strength from diversity—of voices, perspectives, and ways of knowing. When stories coexist and converse, they create an ecology of meaning capable of holding both loss and renewal. Such narrative plurality is not only part of resilience; it helps to create it.

Ultimately, this work affirms that cultivating resilience involves cultivating the art of re-storying, of listening carefully, to reinterpret inherited narratives, and to imagine alternatives that honour complexity while sustaining hope. The framework proposed here offers one contribution to that broader endeavour, an invitation to recognise narrative as

one dimension of resilience that interacts with structural, ecological, and relational conditions.

As the thesis closes, it gestures outward, to the stories still unfolding in communities, classrooms, organisations, and policy forums; to the conversations yet to come between people, places, and technologies; and to the ongoing work of weaving meaning in uncertain times.

Appendices

Appendix A Ethics and Administrative Documents

A1. Excerpt from Ethics Approval Document

Approval number: UTS HREC REF NO. ETH23-8868

Approval date: 31/10/2023



Declaration:

- I am aware that this research is being conducted within this Faculty/School/Centre.
- I am satisfied that the researchers have met all Faculty/School/Centre requirements in relation to this research
- I am satisfied that this research has been deemed low risk by the Faculty/School/Centre in accordance with the National Statement on Ethical Conduct in Human Research (Chapter 2.1).
- This research will be undertaken in compliance with the UTS Research Ethics and Integrity Policy or any replacement or amendment thereof.
- This research will be undertaken in compliance with the Australian Code for the Responsible Conduct of Research and National Statement on Ethical Conduct in Human Research.

*

(•) Yes
( ) No

Date Approved/Endorsement*

31/10/2023

A2. Consent Form Template

UTS UNIVERSITY OF TECHNOLOGY SYDNEY

CONSENT FORM

[ETH23-8461]- Complexity and the dynamic nature of general resilience. Assessment of narratives around resilient and sustainable livings.

I, **Simon Stassen,** agree to participate in the research project being conducted by Julia Fernandez, Julia.fernandez@student.uts.edu.au; ph.: .

I have read the Participant Information Sheet, or someone has read it to me in language that I understand.

I understand the purposes, procedures and risks of the research as described in the Participant Information Sheet.

I have had an opportunity to ask questions, and I am satisfied with the answers I have received.

I freely agree to participate in this research project as described and understand that I am free to withdraw at any time without affecting my relationship with the researchers or the University of Technology Sydney or my organisation.

I understand that I will be given a signed copy of this document to keep.

I am aware that I can contact Julia Fernandez or Lyndall Parris on lyndall@nararaecovillage.com if I have any concerns about the research.

_____ ____/____/____

Name and Signature [participant] Date

Julia Fernandez

_____ November 2023

Name and Signature [researcher or delegate] Date

A3. Participant Information Sheet Template

UTS UNIVERSITY OF TECHNOLOGY SYDNEY

PARTICIPANT INFORMATION SHEET

[ETH23-8461]- Complexity and the dynamic nature of general resilience. Assessment of narratives around resilient and sustainable livings.

WHO IS CONDUCTING THIS RESEARCH?

My name is Julia Fernandez and I am an academic at UTS. My supervisors are Alex Baumber and Fanny Salignac of the Faculty of Transdisciplinary Innovation at the University of Technology of Sydney (UTS) and Ece Kaya from UTS Business school.

WHAT IS THE RESEARCH ABOUT?

The purpose of this research is to explore current and future alternative narratives around resilient livings and sustainable futures.

WHY HAVE I BEEN INVITED?

You have been invited to participate in this study because you are in a management or other research relevant role at Findhorn Ecovillage and could potentially offer insights around social and ecological transformations.

Your contact details were obtained by Mari Hollander.

FUNDING

No funding has been received for this project.

IF I SAY YES, WHAT DOES MY PARTICIPATION INVOLVE?

If you decide to participate, I will invite you to be interviewed about your experiences at Findhorn Ecovillage. This interview is expected to take 45 mins to 1 hour and will be conducted by Julia Fernandez at Findhorn on December 2023 and January 2024. With your consent, the audio of the interview will be recorded.

ARE THERE ANY RISKS/INCONVENIENCE?

Yes, there is some risk that you could reveal something personal or about the organisation you work for that you do not want published. We will manage this risk by ensuring that interview data is stored securely. In any published results your responses will be de-identified, and we will attribute them only to a research participant from Findhorn Ecovillage.

DO I HAVE TO TAKE PART IN THIS RESEARCH PROJECT?

Participation in this study is voluntary. It is completely up to you whether or not you decide to take part.

WHAT IF I WITHDRAW FROM THIS RESEARCH PROJECT?

If you decide not to participate, it will not affect your relationship with the researchers or the University of Technology Sydney. If you wish to withdraw from the study once it has started, you can do so at any time without having to give a reason, by contacting Julia Fernandez at Julia.Fernandez@student.uts.edu.au

If you withdraw from the study, the audio recordings and transcriptions of your interview will be destroyed.

WHAT WILL HAPPEN TO INFORMATION ABOUT ME?

By signing the consent form you consent to the research team collecting and using personal information about you for the research project. All this information will be treated confidentially, and any published results will be de-identified. Your information will only be used for the purpose of this research project, and it will only be disclosed with your permission, except as required by law.

We plan to publish the de-identified results in academic journals, conference proceedings and a documentary video file. In any publication, information will be provided in such a way that you are identified with your permission only as an unnamed research participant from Findhorn Ecovillage. Your de-identified data may be archived for future use in research projects that are an extension of this research project. In all instances, your information will be treated as confidential and stored securely.

In accordance with relevant Australian and/or NSW Privacy laws, you have the right to request access to the information about you that is collected and stored by the research team. You also have the right to request that any information with which you disagree be corrected. Please inform the research team member named at the end of this document if you would like to access your information.

The results of this research may also be shared through open access (public) scientific databases, including internet databases. This will enable other researchers to use the data to investigate other important research questions. Results shared in this way will always be de-identified by removing all personal information (e.g. name, address, date of birth etc.).

WHAT IF I HAVE ANY QUERIES OR CONCERNS?

If you have queries or concerns about the research that you think I or my supervisor can help you with, please feel free to contact me on Julia.fernandez@student.uts.edu.au. You can also speak to a local independent contact Mari Hollander on mari.hollander@findhorn.org

You will be given a copy of this form to keep.

NOTE:
This study has been approved in line with the University of Technology Sydney Human Research Ethics Committee [UTS HREC] guidelines. If you have any concerns or complaints about any aspect of the conduct of this research that you wish to raise independently of the research team, please contact the Ethics Secretariat on ph.: +61 2 9514 2478 or email: Research.Ethics@uts.edu.au], and quote the UTS HREC reference number. Any matter raised will be treated confidentially, investigated and you will be informed of the outcome.

Appendix B . Supplementary Methodology Details

B1. Recruitment Overview

Participants were recruited through conversations with key community contacts, email invitations circulated via Narara and Findhorn internal mailing lists, and snowball sampling. Eligible participants included adult residents and active community members with experience in governance, sustainability practices, or everyday community life. Interested individuals contacted the researcher directly and were provided with the Participant Information Sheet and Consent Form approved under ETH23-8868. In total, 32 people expressed interest and 30 completed interviews. Participation was voluntary, and all interviewees provided written informed consent prior to taking part.

B2. Semi-Structured Interviews Tentative Script

- Introductions
- Handover of Information and Consent forms
- Explanation of the interview process
- Follow-up questions will be suggested only in case needed

B3. Questions for Participants

Questions (with potential follow-ups if needed)	Key themes
Q1. Can you please tell me the story of why you decided being part of [name of ecovillage]? … How would you describe life in [name of the ecovillage] (A *Day in the life of*)?	Time being part of the community Values Motivations for transformation Personal and historical context Community organisation and functioning
Q2. How would you describe the community? … What do you think you have in common or is it is different to normal society?	Community identity (core elements, purpose…) Systems identity Enhancing factors for resilience (social) Current narratives around the community and the world
Q3. From your point of view, what are the major disturbances that the ecovillage has faced over time?	Resilience Disturbance description (expected vs unexpected, members affected, responses and consequences Traditional resilience enhancing factors
Q4. How did the community bounce back from that event?	Actor responding to disturbances. Agency Enhancing factors for resilience (social)

Questions (with potential follow-ups if needed)	Key themes
…do you feel something in particular pushed you to take action… …some academics mention [indicate factors] as enablers for resilience. Do you feel any of those have been relevant in your process?	Type of information for resilience measures People involved in the creation of resilience measures
Q5. What were the major learnings/ measures implemented from that disruption? … Is there any image/ metaphor that comes to your mind when you think on your/ community resilience process?	Resilience frameworks (actors, type of info, framing of information) Narratives and metaphors Action research and knowledge sharing
Q6. After the disturbance, did you talk about what happened?	Resilience and narratives Recovery process Narratives -Information framing and shared experience Resilience frameworks
Q7. What are the major threats that you believe could affect the community in the future?	Resilience responses
Q8. How present are the values of sustainability (social, environmental, economic) in the community? … In what aspects connected to sustainability do you think the community is succeeding?	Sustainability Shared vision Scale
Q9. How would you describe your relationship with nature/ others? … What type of knowledge do you use on your day-to-day tasks within the community?	Social-ecological systems Worldviews Sustainability
Q10. Do you feel the vision of the community has changed over time?	Narratives -Information framing Location and narratives
Q11. What is your view about social transformation towards a more resilient and sustainable future? (Community and society)?	Narratives -Information framing Alternative narratives Sustainability and speed of change Learning sharing
Q12. What would you say to those that don't have a very optimistic view on the future? … What would you say to the younger generations?	Narratives and counter-narratives Values Stories for collective action
Q13. Where do you think the community should focus their efforts to be more resilient in the future? … And the whole society?	Resilience framework Action research
Q14. Knowing that my research is connected to resilience and transformations, what would be useful for you/community to know? … How would you like to receive this information?	Resilience Narratives Action research outcomes Reflexivity

B4. Participant Demographic Overview

Community	Participant code	Age at the time of interview (2023-2024)	Gender	Country of birth
Narara Ecovillage	A	40-50	F	Australia
	B	50-60	F	USA
	C	40-50	M	Australia
	D	60-70	F	UK
	E	40-50	M	UK
	F	40-50	M	UK
	G	40-50	F	Australia
	H	60-40	F	Australia
	I	40-50	F	Australia
	J	40-50	M	Australia
	K	60-70	M	Australia
	L	60-70	F	Australia
	M	40-50	M	Australia
	N	30-40	M	Austria
	O	40-50	F	UK
Findhorn Ecovillage	P	50-60	M	UK
	Q	50-60	F	Canada
	R	60-70	M	USA
	S	20-30	M	UK
	T	50-60	F	UK
	U	30-40	F	Switzerland
	V	40-50	F	France
	W	50-60	M	USA
	X	60-70	M	Sweden
	Y	40-50	F	Germany
	Z	50-60	M	USA
	AA	70-80	F	UK
	AB	40-50	M	UK
	AC	60-70	M	USA
	AD	30-40	F	Brazil

B5. Site Context Documents

Photographs

Narara Ecovillage



Photo 1. Narara Ecovillage: Landscape and built environment. Source: Narara Ecovillage website.



Photo 2. Site ecological context, October 2023. Author's photo.



Photo 3 Site context, October 2023. Author's photo.



Photo 4. Infrastructure under construction for common area, October 2023. Author's photo.

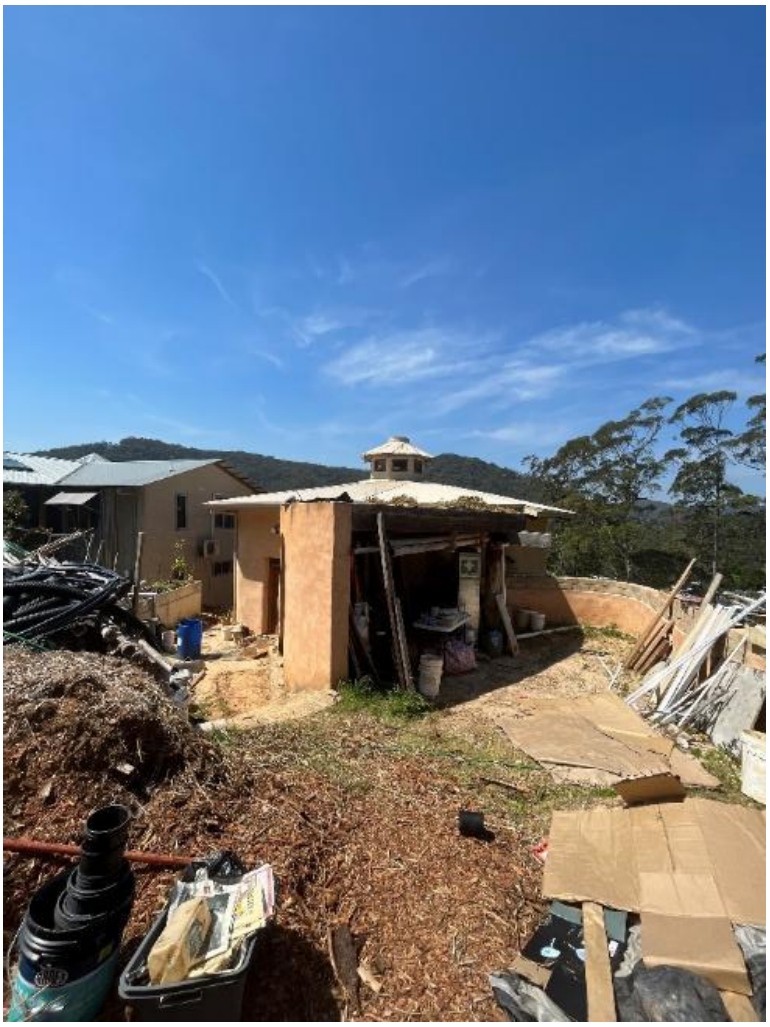
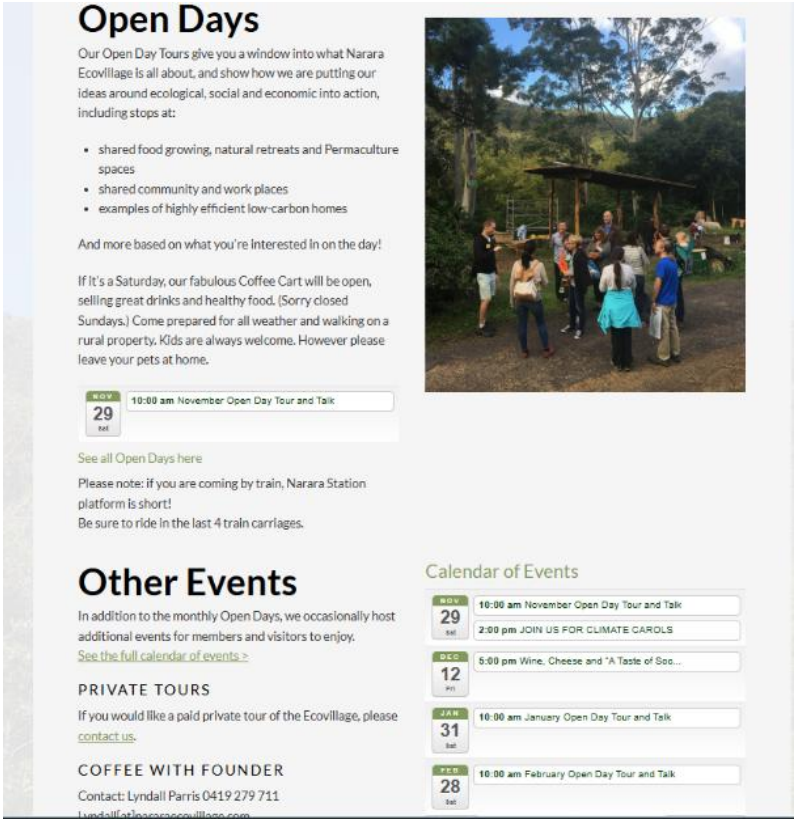


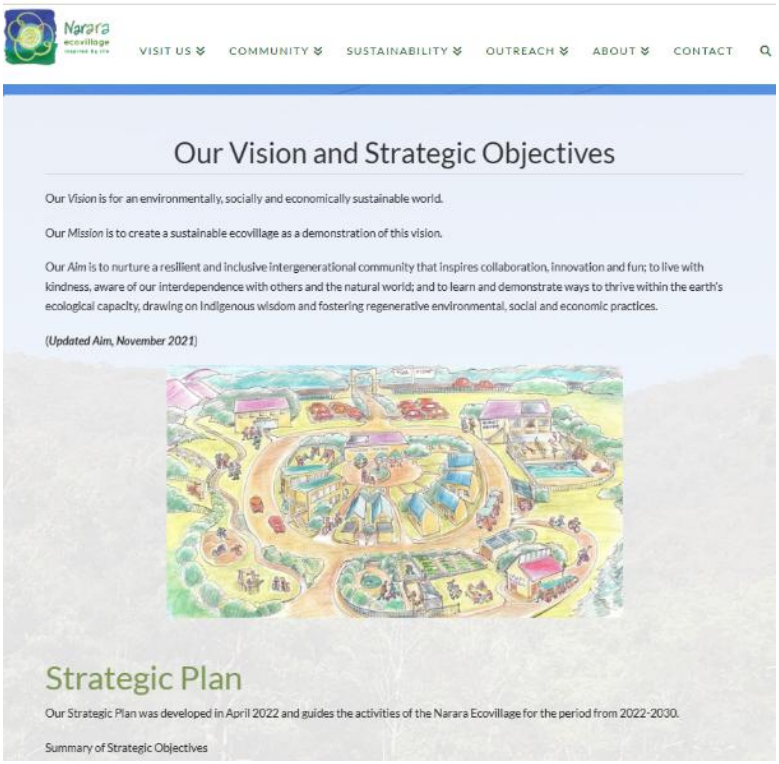
Photo 5. Eco-house under construction, October 2023. Author's photo.



Photo 6. Thermally efficient hemp house. Source: Narara Ecovillage website.



Excerpt 1. Announcement of public events at Narara ecovillage. Source: Narara Ecovillage website.



Excerpt 2. Excerpt from the Narara Ecovillage website showing the community's vision, mission and strategic objectives. Source: Narara Ecovillage website.

Findhorn Ecovillage



Photo 7. Findhorn Ecovillage landscape. Source: Fodor's Travel; courtesy of Findhorn Village.



Photo 8. Findhorn ecological context, January 2024. Author's photo.



Photo 9. Findhorn ecological context, January 2024. Author's photo.



Photo 10. Findhorn houses, January 2024. Author's photo.



Photo 11. Findhorn eco- houses made from recycled old Scottish whisky barrels, January 2024. Author's photo.



Excerpt 3. Narrative text from the Findhorn Ecovillage website (public narrative). Source: Findhorn Ecovillage website.



ECOVILLAGE EDUCATION

The ecovillage model presents itself as an inspiring and viable solution to eradication of poverty and degradation of the environment, while combining a supportive social-cultural environment with a low-impact lifestyle. Join our programmes to learn more.

Our campus is used as a teaching resource by a number of university and school groups as well as by professional organisations.

For more information about our programmes click here

Findhorn Foundation



Excerpt 4. Narrative excerpt from the Findhorn ecovillage website (Regenerative narrative)

Appendix C Conceptual Derivation of Linkages Between Narrative Roles and Resilience-Enabling Factors

These linkages were developed through integrative synthesis of narrative theory and community resilience scholarship in Paper 1. The associations represent analytically salient connections grounded in theoretical and empirical literature, rather than exhaustive or exclusive relationships.

C1. Conceptual approach

The derivation followed three analytical steps:

1. Identification of recurrent narrative functions in narrative scholarship, including identity formation, sensemaking, knowledge transmission, agency mobilisation, cohesion building, and reflexive reinterpretation.
2. Identification of widely recognised enabling factors within community resilience frameworks (e.g., Walker et al., 2004; Folke et al., 2010; Baumber et al., 2022).
3. Analytical mapping of narrative functions to enabling factors based on theoretically grounded mechanisms. Specifically, we examined how particular narrative processes activate, reinforce, or reconfigure enabling factors within community resilience contexts.

The resulting framework highlights the most direct and theoretically supported linkages for clarity, while recognising that narrative roles may interact with multiple enabling factors in practice. The linkages presented here represent theoretically grounded associations rather than deterministic pathways. Narrative roles frequently interact with multiple enabling factors simultaneously, and their effects are context-dependent.

C2. Conceptual Rationale for Narrative Roles and Their Linked Enabling Factors in the First Iteration of the Framework

Role	Definition	Primary linkages	Conceptual rationale
Identity shaping	Narratives articulate shared histories, values, and aspirations, reinforcing collective identity and belonging.	Diversity	Identity narratives stabilise diversity by framing heterogeneity as part of collective self-understanding and shared purpose. Narrative scholarship shows how shared stories consolidate identity and motivate participation (Case & Hunter, 2012; Wardekker et al., 2023). Community resilience research similarly links identity

Role	Definition	Primary linkages	Conceptual rationale
			and belonging to sustained collective action (Berkes & Ross, 2013).
Sensemaking	Narratives reduce ambiguity by framing disruption, providing causal explanations, and guiding interpretation under uncertainty	Connectivity	Sensemaking depends on connectivity to circulate shared interpretations and align responses. Organisational scholarship demonstrates how collective interpretation supports adaptive response under uncertainty (Weick et al., 2005). Within community resilience, this interpretive function enables coordinated coping and learning.
Knowledge transmission	Narratives preserve and convey tacit, experiential, and cultural knowledge across time and groups.	Adaptability	Storytelling strengthens adaptive capacity by preserving experiential learning and cultural memory. Research in organisational and sustainability contexts shows that multivocal storytelling broadens knowledge integration and supports adaptive response (Frandsen & Johansen, 2017; Schlüter et al., 2019).
Agency stimulation	Narratives inspire participation, legitimise action, and build confidence for collective change.	Transformability	Stories of possibility mobilise collective action and legitimise institutional experimentation. In resilience scholarship, such narratives can enable deeper systemic shifts beyond incremental adaptation (Adger, 2003; Blythe et al., 2021).
Cohesion building	Shared narratives foster trust, solidarity, and coordinated collective purpose.	Social capital,	Cohesion narratives reinforce trust and cooperation, strengthening social capital as a core enabling condition of resilience (Pretty, 2003; Villalonga-Olives & Kawachi, 2017).
Reflexive adaptation (meta-role)	Narratives interrogate assumptions, reshape goals, and legitimise new pathways of action.	All five enabling factors	Reflexive narratives influence how resilience is interpreted and enacted by revising dominant framings and collective goals. Such reflexivity has been identified as central to adaptive and transformative governance (Veland et al., 2018; Walker et al., 2012).

Appendix D Supplementary Results -RESILIENCE ENABLING FACTORS

D1. Disruptions Mentioned by Participants

Disruption	Total (Refs/ Part)	Total % (n=30)	Example of participant quote
COVID19	**18/12**	**40%**	"Negotiating different views about Covid was difficult for us" (Participant F)
Financial pressures	**34/19**	**63%**	"Economically, we're not, they're not doing well at all" (Participant B) "There seems to be resistance between being organic and economically sustainable" (Participant C)
Ecological risks	**31/14**	**46%**	"We lost the community centre to the fires so we couldn't bring the children together in a place" (Participant Q)
Political & legal factors	**30/18**	**60%**	"So lately, with the No and yes, vote; some people was saying it as a life or death situation, and that people will kill themselves if we vote, No" (Participant B)

D2. Extended Coding Summary: Resilience-Enabling Factors (Narara)

Enabling factor	Definition	Participants Referencing	Narara %	Participants Referencing Tensions	Tension %	Illustrative Positive Quote	Illustrative Tension Quote
Diversity	Presence of multiple perspectives, skills, worldviews, age groups and knowledge systems	12 / 15	80%	7 / 15	47%	"We encourage diversity of people and thought still in the village" (Participant M)	"People with different views about… their vote or COVID" (Participant D)
Connectivity	Strength and density of relationships, shared practices, internal and external networks	14 / 15	93%	6 / 15	40%	"It takes a village to raise a child" (Participant K)	"You have to retrain muscles" (Participant M)

Enabling factor	Definition	Participants Referencing	Narara %	Participants Referencing Tensions	Tension %	Illustrative Positive Quote	Illustrative Tension Quote
Adaptability	Capacity to adjust practices, processes or structures in response to disruption or scaling pressures	11 / 15	73%	8 / 15	53%	“We're going to move to probably supermajority” (Participant D)	“Even with about a hundred, it just doesn't work” (Participant K)
Transformability	Capacity to reorganise governance, ownership, or structural arrangements when existing systems become untenable	9 / 15	60%	6 / 15	40%	“Those groups have power to make decisions in their own domain” (Participant L)	“A lot of issues… are going to the board that really shouldn't be” (Participant M)
Social Capital	Trust, reciprocity, shared norms, collective identity, and coordinated collective action	15 / 15	100%	9 / 15	60%	“We just wanted to have a social foundation and put down roots in a community” (Participant A)	“It’s not utopia” (Participant M)

D3. Extended Coding Summary: Resilience-Enabling Factors (Findhorn)

Enabling Factor	Definition	Participants Referencing	Findhorn %	Participants Referencing Tensions	Tension %	Illustrative Positive Quote	Illustrative Tension Quote
Diversity	Presence of multiple perspectives, backgrounds, skills, age groups, knowledge systems	11 / 15	73%	6 / 15	40%	"Young Americans, young Brits, young South Africans, and Australians…" (Participant AC)	"Often people would stay less than a year." (Participant V)
Connectivity	Strength and density of relationships, networks, shared practices, communication flows	13 / 15	87%	7 / 15	47%	"There was a very strong sense of common purpose." (Participant AB)	"It can be a bit of a pressure cooker." (Participant AB)
Adaptability	Capacity to adjust practices in response to disruption or constraint	12 / 15	80%	5 / 15	33%	"COVID was a massive shock…" (Participant Q)	"It's always depended on individuals sacrificing their own financial well-being." (Participant S)
Transformability	Capacity to reorganise governance, economic models, or core orientation when existing systems become untenable	9 / 15	60%	6 / 15	40%	"We formed the new benefit society… very close to our hearts." (Participant R)	"That seems to have been really a fatal flaw." (Participant AB)
Social Capital	Trust, reciprocity, shared norms, collective identity, coordinated action	14 / 15	93%	8 / 15	53%	"I just felt this was my place when I came in." (Participant Y)	"You weren't there for the money… you only got a small allowance." (Participant Z)

D4. Extended Coding Summary: Resilience-Enabling Factors (Total)

Enabling Factor	Definition	Total Referencing	Total %	Total tensions	Total tensions %
Diversity	Presence of multiple perspectives, skills, worldviews, age groups and knowledge systems	23/30	77	13/30	43
Connectivity	Strength and density of relationships, shared practices, internal and external networks	27/30	90	13/30	43
Adaptability	Capacity to adjust practices, processes or structures in response to disruption or scaling pressures	23/30	77	13/30	43
Transformability	Capacity to reorganise governance, ownership, or structural arrangements when existing systems become untenable	18/30	60	12/30	40
Social Capital	Trust, reciprocity, shared norms, collective identity, and coordinated collective action	29/30	97	17/30	57

Appendix E Supplementary Results -NARRATIVE ROLES

E1. Distribution of Narrative Roles (Narara)

Narrative Role	Definition	Narara: Participants Referencing (n=15)	Narara %
Identity Shaping	Narratives articulating shared history, values, belonging, and collective purpose	14 / 15	93%
Sensemaking	Narratives that interpret disruption, reduce ambiguity, and reframe crisis	12 / 15	80%
Knowledge Transmission	Narratives preserving practices, sustainability knowledge, governance learning, and intergenerational exchange	11 / 15	73%
Agency Stimulation	Narratives that motivate participation, experimentation, and collective action	13 / 15	87%
Cohesion Building	Narratives reinforcing trust, solidarity, shared effort, and emotional resilience	13 / 15	87%
Reflexive Adaptation	Meta-narratives questioning assumptions and reshaping governance, participation, or ecological standards	10 / 15	67%

E2. Distribution of Narrative Roles (Findhorn)

Narrative Role	Definition	Findhorn: Participants Referencing (n=15)	Findhorn %
Identity Shaping	Narratives articulating shared history, values, belonging, and collective purpose	13 / 15	87%
Sensemaking	Narratives that interpret disruption, reduce ambiguity, and reframe crisis	11 / 15	73 %
Knowledge Transmission	Narratives preserving practices, spiritual teachings, sustainability knowledge, and intergenerational learning	10 / 15	67 %
Agency Stimulation	Narratives that motivate participation, experimentation, and collective action	12 / 15	80 %
Cohesion Building	Narratives reinforcing trust, solidarity, shared sacrifice, and emotional resilience	12 / 15	80 %
Reflexive Adaptation	Meta-narratives questioning assumptions and reshaping governance, sustainability practice, or purpose	9 / 15	60 %

E3. Distribution of Narrative Roles (Total)

Narrative Role	Definition	Participants Referencing (n=30)	Total %
Identity Shaping	Narratives articulating shared history, values, belonging, and collective purpose	27/30	90
Sensemaking	Narratives that interpret disruption, reduce ambiguity, and reframe crisis	23/30	77%
Knowledge Transmission	Narratives preserving practices, sustainability knowledge, governance learning, and intergenerational exchange	21/30	70%
Agency Stimulation	Narratives that motivate participation, experimentation, and collective action	25/30	83%
Cohesion Building	Narratives reinforcing trust, solidarity, shared effort, and emotional resilience	25/30	83%
Reflexive Adaptation	Meta-narratives questioning assumptions and reshaping governance, participation, or ecological standards	19/30	63%

E4. Discursive Elements Mentioned by Participants.

Narrative/ Discursive element	N	Example of participant quote
World as system of systems	12	"When I talk about nature I'm talking about nature. I'm talking about systems, ecosystems, beings. (AD)
Cooperation as a core value	16	"This is not about you individually. This is about the group, which I think it's like, a huge shift in mindset" (B) "The goodness come from doing things together" (Q)
Regenerative/ sustainable relationships with nature	22	"I was looking for a sense of greater connection both to people and to the Earth" (A) I think of sustainability as being able to look at how we survive, the basics of everyday life and being together"(Q)
Knowledge is generated after past events	4	"We try and predict where the threats are going to come from" (J)
Clashing narratives	4	"The challenge has been that the ecovillage story of origin (Planetary village), was not always well aligned with a newer one" (Q) "There were, you know, really strong polarities in views about, um, the politics around" (A),
Transmission of knowledge	6	"I don't do any formal training or anything like that, but I help people with composting" (K) "Permaculture in a way, change your view and your relationship with the land" (D)

Narrative/ Discursive element	N	Example of participant quote
Stories are shared	4	“There is a story in the community when people first come, some people are a bit jetlagged and expect everything to change” (O) "We need to keep working towards creating a different story for humanity, or in some way working, again, either to mitigate the impacts of the climate crisis, or the policy crisis (S)
Envision abouts the future	8	"We are not providing options for people on really low incomes; there are options do something creative with that" (A)
Influence policy making	6	“Othe groups have really become a political lobbying, which we're not but I want to (C) “Legislators or an elected legislators will give you access to certain levers of power” (E)
Use of metaphors	9	“A safe container that will allow people to express their deepest feelings of anguish about what’s happening with the world” (K) “We can be testing laboratories to try to do things differently” (D)

Appendix F Supplementary Results -INTERACTIONS

F1. Structured Co-Occurrence Coding at Participant Level (Narara)

Participant	Identity + Social capital	Sensemaking + Adaptability	Agency + Adaptability	Agency + Transformability	Cohesion + Social capital	Identity + Social capital
A	1	1	1	1	0	1
B	1	1	1	1	1	1
C	1	1	1	1	1	1
D	1	1	1	1	1	1
E	1	1	1	1	1	1
F	1	1	1	1	1	1
G	1	0	0	0	0	1
H	1	1	1	0	1	1
I	1	1	1	0	1	1
J	1	1	1	1	1	1
K	1	1	1	1	1	1
L	1	1	1	0	1	1
M	1	1	1	1	1	1
N	1	1	1	0	1	1
O	1	1	1	1	1	1
TOTALS	**15**	**14**	**14**	**10**	**13**	**15**
%	**1.00**	**0.93**	**0.93**	**0.67**	**0.87**	**1.00**

F2. Structured Co-Occurrence Coding at Participant Level (Findhorn)

Participant	Identity + Social capital	Sensemaking + Adaptability	Agency + Adaptability	Agency + Transformability	Cohesion + Social capital	Identity + Social capital
Q	1	1	1	1	1	1
R	1	1	1	1	1	1
S	1	1	1	1	1	1
T	1	1	1	0	1	1
U	1	0	0	0	0	1
V	1	1	1	1	1	1
W	1	1	1	1	1	1
X	1	1	1	1	1	1
Y	1	1	1	1	1	1
Z	1	1	1	1	1	1

Participant	Identity + Social capital	Sensemaking + Adaptability	Agency + Adaptability	Agency + Transformability	Cohesion + Social capital	Identity + Social capital
AA	1	1	1	1	1	1
AB	1	1	1	1	1	1
AC	1	1	1	1	1	1
AD	1	1	1	1	1	1
TOTALS	**14**	**13**	**13**	**12**	**13**	**14**
%	**0.93**	**0.87**	**0.87**	**0.80**	**0.87**	**0.93**

F3. Structured Co-Occurrence Coding at Participant Level (Total)

Case Study	Identity + Social capital	Sensemaking + Adaptability	Agency + Adaptability	Agency + Transformability	Cohesion + Social capital	Cohesion + Reflexive adaptation
Narara	15	13	13	7	15	13
Findhorn	12	14	13	11	12	14
Total	**27**	**27**	**26**	**18**	**27**	**27**
%	**0.90**	**0.90**	**0.87**	**0.60**	**0.90**	**0.90**

Appendix G Supplementary Discussion Information

G1. Framework Empirical Iteration of Narrative Roles and their Associated Types, Archetypes, and Themes

#	Narrative Role	Narrative Type	Core Function	Key Archetypes	Typical Themes	Illustrative Quotes
1	Shaping Identity	Foundational / Spiritual	Articulating shared values, history, and purpose to stabilise collective identity amid change	Guardian, Elder	Regeneration, spirituality, ethical cohabitation, protection of founding vision	"Co-creation with nature is not just an idea here, it's something people genuinely try to live by." (Participant L, Narara) "We had to make sure that the original vision of the ecovillage wasn't diluted as new people came in." (Participant J, Narara)
2	Facilitating Sensemaking	Interpretive / Transformative	Reframing disruption, conflict, or uncertainty as part of an ongoing learning process	Affected → Transformer	Turning points, crisis interpretation, worldview shifts, collective endurance	"Can I go beyond all the differences and can I disagree with the other person and still love them? … It's a process and it does not stop." (Participant Y, Findhorn) "There were times we thought it might fall apart, but somehow we kept going." (Participant J, Narara)
3	Transmitting Knowledge	Regenerative / Learning	Preserving, circulating, and adapting ecological, cultural, and governance knowledge across generations and networks	Guardian	Sustainability practices, systems thinking, embodied expertise	"I've been doing these workshops around the world and in Australia for 40 years… teaching people how to turn despair into empowerment." (Participant K, Narara) "I dumpster dive 40 green bins… nothing that can be composted leaves the village." (Participant K, Narara)
4	Stimulating Agency	Empowerment / Transformative	Mobilising participation, legitimising experimentation, and catalysing structural or governance change	Transformer, Ally	Initiating new structures, governance experimentation, resilience planning	"How do we regenerate ourselves… regenerate a whole new economy… become even more progressive." (Participant Q, Findhorn) "We looked at the sociocratic structure… and I said, well, they have another circle… so we

#	Narrative Role	Narrative Type	Core Function	Key Archetypes	Typical Themes	Illustrative Quotes
						started the steering circle." (Participant C, Narara)
5	Building Cohesion	Collective Meaning-Making	Reinforcing trust, relational commitment, and shared belonging, including the capacity to hold difference	Ally	Trust, solidarity, shared effort, relational resilience	"We've built something that actually works… people are living here, the land is regenerating." (Participant C, Narara) "It feels to me that it's time that the community itself became mobilized… if you can get a group of people to act collectively you can start to make a difference." (Participant AB, Findhorn)
6	Enabling Reflexive Adaptation	Evolving / Reflexive	Supporting critical reflection on dominant stories, allowing narrative revision, and enabling governance or identity reconfiguration	Transformer, Adversary	Contestation, reframing sustainability standards, evolving collective consciousness	"Through understanding our narratives… we may find a way to create a better society." (Participant AD, Findhorn) "We're basically reframing all of that stuff… with much more awareness of the planetary need to live more simply." (Participant AC, Findhorn)

Appendix H Protocols for Participatory Validation

H1. Validation Session Protocol

Session Information

• Date: Sunday 6 July 2025
• Time: 6:30pm (NSW) / 9:30am (Scotland)
• Duration: 60min to 90min
• Modality: Online (see meeting invite for the link)

Step-by-step outline of the activities

• Welcome and context setting (5 min)
• Presentation of main results (10 min)
• Brief presentation of the framework (8 min)
• Small-group or paired discussion guided by prompts (15 min)
• Collective sensemaking or mini-mapping activity (12 min)
• Reflection round focusing on tensions, gaps and practical applications (8 min)
• Closing check-out (2 min)

Information for participants

- **Context**

My research explores social-ecological resilience.
Recent events including extreme weather, public health crises, technological disruption, and geopolitical tensions, have challenged communities around the world.

Since more disruptions are likely in the future, it's critical that we learn to live in ways that enhance resilience.

But resilience is not only about structures and material capacities; it also involves a cultural shift. It's about how we understand risk, relate to uncertainty, and connect with each other.

In that context, my guiding research question is: "What roles do narratives play in community resilience?

- **What happened so far:**

- I've analysed the interview data from both Narara and Findhorn Ecovillage.
- Some key themes and insights have emerged.
- I've drawn on ideas from different disciplines related to resilience, sustainability, and transition.

- **What to expect during the session:**

- I'll share a few slides summarising the findings.
- The aim is to get your feedback:
  – Do these ideas resonate with you?
  – Is anything missing?
  – How might these practices or insights apply in a community setting?
- People from both Narara and Findhorn will be in the session.
- The session will be recorded for post-analysis.
  – As a reminder, all data (including this session and the interviews) will be anonymised.
  – This research has been approved by the UTS Human Research Ethics Committee (UTS HREC) and follows the National Statement on Ethical Conduct in Human Research.
  – If you prefer to share something privately, you're very welcome to reach out to me directly.

- **Tone of the session**

The goal is to have an open, honest, and informal conversation. I'd love for you to bring your experience, questions, and reflections into the discussion.

Some thoughts to hold as we talk:

- "How do the ideas we'll explore today feel familiar, surprising, useful, or incomplete to you?"
- "What kinds of stories do people share here? Do they inspire, explain, connect, or challenge? How do they shape how we respond to disruption or imagine the future*?"*
-

- **Reflection prompts**

These are just prompts, think about whether they feel true *always, sometimes, or never* in your experience.

- When you think about resilience in your community, what narratives or stories come to mind? What helped people make sense of disruption or change?
- Have you noticed certain stories that bring people together—or others that hold things back? How do they compare to narratives outside your community?
- What kinds of stories are told here about who we are, where we've come from, or where we're going? Who tends to tell them? Who listens?
- In moments of difficulty or transition, how have stories helped people adapt, rethink, or take action?

- How does it feel when old narratives no longer fit? What happens when new ones start to take root?
- Do you see space in your community for different kinds of stories to co-exist—or to evolve over time?

Materials used

Slide providing context, Results table, Narrative-resilience framework,

Role of the facilitator

Encouraging equal participation, capturing reflections on slides

Ethics and consent

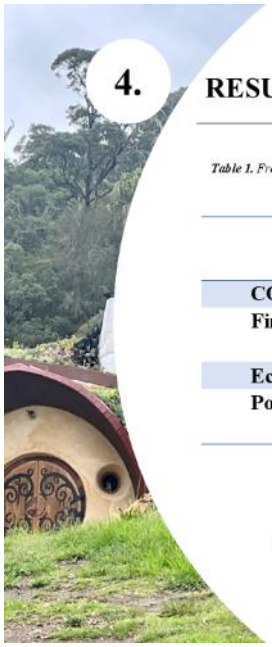
The session followed approved ethics granted by the University of Technology Sydney Human Research Ethics Committee (UTS HREC Ref No. ETH23-8868), which covered the conceptual, empirical, and participatory phases and participation was voluntary.

H2. Reflection prompts used for participant validation

- When you think about resilience in your community, what narratives or stories come to mind? What helped people make sense of disruption or change?
- Have you noticed certain stories that bring people together or others that hold things back? How do they compare to narratives outside your community?
- What kinds of stories are told here about who we are, where we've come from, or where we're going? Who tends to tell them? Who listens?
- In moments of difficulty or transition, how have stories helped people adapt, rethink, or take action?
- How does it feel when old narratives no longer fit? What happens when new ones start to take root?
- Do you see space in your community for different kinds of stories to co-exist or to evolve over time?

H3. Material used

Excerpts from the slides used during the validation sessions are provided here. These samples illustrate the key prompts and framing used to guide participant discussion, without reproducing the full slide deck.



4. RESULTS: DISTURBANCES AND SHOCKS TO THE SYSTEM

Table 1. Frequency of References to Key Disturbances Global/ for the community at Narara and Findhorn

Disruption	Total n	Narara n	Findhorn n
COVID19	**18/12**	13/7	5/5
Financial pressures	**34/19**	17/9	17/10
Ecological risks	**31/14**	18/8	13/6
Political and legal factors	**30/18**	20/11	10/7

Local council relations, zoning, planning approvals, government regulation, Brexit, Australian referendum "The voice"



6. RESULTS: VISUAL SUMMARY

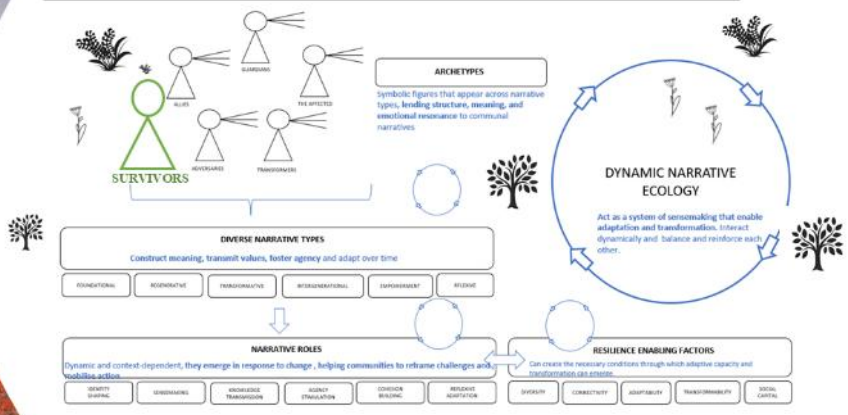


Figure 3. Conceptual Elements Shaping Community Resilience

Image source: Snedic, M. (n.d.). *7 best landsc*

Appendix I Coding Frameworks and Analytical Tools after Validation

I1. Analytical Coding Framework with Categories, Definitions, and Illustrative Participant Quotes

Category	Code	Definition	Quote
Framework components	Narrative roles	References to functions of narratives (e.g., identity-shaping, sensemaking, cohesion-building, knowledge transmission, agency stimulation, reflexive adaptation).	"The talk was actually about the importance of being able to listen to views that you didn't agree with and being able to discuss them knowing that not everybody was on the same page… how important that was to be able to tolerate." (Participant L, Narara) Example of Cohesion-building
	Narrative types	Foundational, regenerative, transformative, intergenerational, empowerment, reflexive stories.	"They had to find a ridiculous amount of funding in a week, which they managed to do… So this is an amazing story of overcoming… these sagas from the pioneers became like legends, stories of struggle and achievement to get where we are now." (Participant L, Narara) Example of Foundational narratives
	Archetypes	Symbolic figures structuring narratives (guardian, transformer, ally, adversary, survivor, affected).	"We had to make sure that the original vision of the ecovillage wasn't diluted as new people came in." (Participant J, Narara) Example of Guardian figure
	Enabling factors	Mentions of diversity, connectivity, adaptability, transformability, or social capital.	"It is a highlight of the week for many people. It is a way of the community sharing… it's very alive in the moment. And I think that develops, helps to develop a feeling, you know, a sense of resilience." (Participant AA, Findhorn) Example of Guardian figure
Critiques or modifications	Framework gaps	Comments on missing roles, types, or archetypes.	"You should include the 'survivor' as an archetype, people often ask how we're still here." (Patrick, Findhorn) Missing Archetype The Surivor
	Refinements	Suggestions for redefining or adjusting categories.	"I think that we're actually a microcosm of what's going on in the mainstream society. We often don't see it, but my work is much more globally based, and I'm often looking at the larger challenges in the global perspective and thinking, oh, we've got it all here." (Participant Q, Narara) Refinement Community story not as a counter-narrative.
Practical applications	Practice linkages	Stories where narratives were explicitly used to mobilise action, support governance, or build resilience.	"It's empowering the people who come to the meeting to say… can you start to collaborate with [others]?" (Participant C, Narara) Example Mobilised agency

Category	Code	Definition	Quote
Emergent narratives	Beyond-framework themes	Narratives not captured by the framework, such as global reflections, meta-stories of resilience, or critiques of dominant paradigms.	“The umbrella… protects us from neoliberalism. Our stories are the opposite — about reusing, reducing waste, not buying more.” Participant C, Narara) Emergent narrative: critique of consumerism and neoliberal values.

Appendix J Extended Comparative Analysis Tables

J1. Comparative Table: Core System Characteristics to Be Preserved (System Identity) Across Narara and Findhorn

Feature	How is demonstrated	Narara examples	Findhorn examples
ENVIRONMENTAL SUSTAINABILITY	• Natural reserves and wildlife • Infrastructure for housing, energy, water and waste • Practices such as renewable energy use, sustainable building techniques, waste reduction, water conservation • Biodiversity conservation, ecosystem restoration and land practices	• Central coast flora and fauna • Renewable energy generation and smart grid systems • Self-managed water system • Waste management strategies (e.g. communal composting) • Decarbonisation strategies in place • Sustainable homes and permaculture design principles • Increased biodiversity as part of the strategic plan • Organic agriculture • Natural landscaping	• Coastal dunes and wetlands. Native flora and fauna. • Mix of sources for energy generation. Transitioning to renewable energies • Ecological wastewater treatment • Electric car-sharing service • Initiatives for measuring ecological footprint (e.g. Carbon neutrality by 2030) • Ecological building and Permaculture design principles • Organic agriculture • Natural landscaping
ECONOMIC SUSTAINABILITY	• Sources of income • Alternative economic models • Resource sharing	• No bank money for the foundation • Cooperative businesses: Cart Café • Prioritise local production for food • Time banking system • Degrowth mentality	• Community businesses: The Phoenix café, Phoenix store, social enterprises • Social enterprises • Circular economy initiatives (e.g. recycling store)
SOCIAL SUSTAINABILITY/ COMMUNITY GOVERNANCNE	• Social capital • Individual and community knowledge • Community living practices.	• Individuals and families from various backgrounds, professions, and life stages. • Varied skillset and diversity of knowledge	• Individuals and families from various backgrounds, professions. Significant percentage of retired people. • Varied skillset to a certain extent

Feature	How is demonstrated	Narara examples	Findhorn examples
	• Shared values, goals and resources • Collective decision-making processes •	• Values of environmental sustainability, community, creativity and diversity. • Community infrastructure, natural resources and meals • Governance through Sociocracy and circle meetings	• Spiritual principles, holistic living, and reverence for nature, diversity and creativity. • Governance through circle meetings • Community infrastructure (Findhorn community centre, Moray centre for art, Universal hall) and co-housing initiatives • Communal meals
COMMUNITY ENGAGEMENT AND OUTREACH	• Education initiatives • Encouragement of creative expression to reflect the identity and heritage of the community. • Connection to other organisations to support sustainable/ regenerative livings	• Deep ecology workshops, Interspecies communication • Storytelling nights • Cinema • Open days for visitors, Garden trails • Part of Global Ecovillage Network (GEN)	• Former Findhorn Foundation: Permaculture Design Certificate Course, The Findhorn International Forum on Sustainability • Cinema • Dancing circles • Ecovillage experience week • Part of Global Ecovillage Network (GEN)

J2. Comparative Table: Resilience-Enabling Factors



RESILIENCE CATEGORY	ENHANCING FACTORS	SUBSUBCATEGORY	CONNECTION TO RESILIENCE PRACTICE	NARARA	FINDHORN
HOLDING (STRUCTURE)	**DIVERSITY**	RESPONSES	Increased variety of responses available to cope with change	The community counts with a varied skillset within the people that forms it (e.g. engineers, business background, ecologist, lawyers…). This allows community to feel confident that if there is a disturbance "they will know who to ask"	A diversity of believes is granted strengthening the freedom and acceptance withing the co unity.
		PEOPLE	Increases the likelihood that a system will contain individuals or components with traits suited to new or unexpected challenges.		
		KNOWLEDGE	Enhances the available resources and responses to respond to change		Collaboration in community activities where different members provide different knowledge (e.g. arts, business, ecology…)
	RESERVES	FINANCIAL	Reserves act as buffers against disturbances. They provide a surplus they can be drawn upon when the system is under stress.	Enough resources to maintain the community and do exploratory activities aimed at improving the c t living. Exploring internal and external sources of income.	Currently experiencing some challenges related to the financial survival of the community. Exploring external funding options from the Scottish government.
		ECOLOGICAL	Provide a range of ecosystem services, habitat protection, increased genetic diversity	Variety of native wildlife and an aim to keep preserving it.	Varied local flora and fauna and an aim to preserve it.
		LABOUR	improve production processes and enhances overall system efficiency.		
	NESTEDNESS		Interactions or properties of smaller components within a system are subsets of those found in larger components	Part of Global Ecovillage Network (GEN) which provides some guidance on resilience practices and connects systems that have experienced simil challenges. Increased stability of the system.	Part of Global Ecovillage Network (GEN) which provides some guidance on resilience practices and connects sys that have experienced similar challen Increased stability of the system.
	SEMIPERME ABILITY	OPENESS	Allows information flow and fosters collaboration and cooperation among stakeholders.	Transparency practice regarding information flow at internal level. Open days facilitate the connection with external stakeholders.	Internal communication seems to be a challenge at the moment despite the variety of communication channels the community has. In the past, strong presence of external individuals. This is not the case since the FF close down.
		MODULARITY	It creates redundancy within systems and limits the spread of failures or disturbances.	Appropriate balance between private and public. Flexible housing units, adaptable community facilities, efficient infrastructure systems, resilient food production practices, sustainable transportation options, and inclusive governance structures.	Flexible housing units, efficient infrastructure systems, and inclusive governance structures. There has been challenges, relying on the FF courses as a the single source of income. One of the community facilities

RESILIENCE CATEGORY	ENHANCING FACTORS	SUBSUBCATEGORY	CONNECTION TO RESILIENCE PRACTICE	NARARA	FINDHORN
					was taken by the fires which left the community without a place to get together. The transportation options were a challenge during the lockdown as most people fly there.
BEING (SOCIAL CAPITAL)	**CREATIVE MINDSET**	INNOVATIVE RESPONSES/ EXPERIMENTATION ARTISTIC EXPRESSION	Willingness to embrace change and explore new possibilities. It encourages individuals to think outside the box and make the most of available resources. An outlet for emotional expression and coping during times of stress or adversity.	Certain level of excitement to explore challenges and the confidence in the ability to find solutions.	Currently aiming at doing feasibility projects to explore innovative responses to some of the challenges the community is facing. Strong reliance in the artistic expression as a way of sharing the community identity and heritage.
	LEADERSHIP	HIGH LEVEL	Providing vision and direction, empowering and supporting individuals, promoting transparent communication and building strong support networks and communities.		Lack of leadership in the present has been presented as an issue.
		DISTRIBUTED		Despite the tension between the Steering Committee and some of the community circles, the community seems to have a distributed leaderships that pr[illegible]es a clear direction on the future of the communi[illegible]	Distributed leadership could be improved, particularly for the newcomers.
	COMMUNICATION	MONITORING	It facilitates the sharing of information, knowledge, and resources among residents.	Multiple communication channels. The vast amount of information can be a challenge.	Varied communication channels. The loss of the Community centre had an import[illegible] impact in the community communication.
		FEEDBACK	It fosters trust and cohesion, facilitates decision making, and provides mechanism for resolving conflicts.	Variable interest on receiving feedback and information about community decision dependi[illegible]on the members.	Variable interest on receiving feedback and information about community decision depending on the member[illegible]
	SELFORGANISATION	AGENCY	Inherent capacity to adjust their structure and behaviour autonomously.	Residents are empowered to actively participate in decision-making. Water system is managed by the community. Increased sense of agency to manage and optimise the use of community infrastru[illegible] Emergence of innovative projects and initiati[illegible] driven by resident-led collaborations	Decision-making processes distributed among various circles, working groups, and committees.
		DECENTRALISATION	Can develop multiple pathways, feedback loops, and alternative configurations	Increased autonomy during pandemic.	Residents take ownership of issues and initiatives that matter to them, leading greater engagement, empowerment, and resilience
GUIDING (IDEOLOGY)	**UNITY OF PURPOSE**	SHARED VISION	Provides a common purpose and direction for individuals or the community.	The community vision is frequently shared and easily accessible for the residents. This provide[illegible] sense of unity and direction.	There is a need to reassess the vision of the community as after the FF closing down, it has not been renewed.

RESILIENCE CATEGORY	ENHANCING FACTORS	SUBSUBCATEGORY	CONNECTION TO RESILIENCE PRACTICE	NARARA	FINDHORN
		TRUST	Sense of belonging and support strengthen social bonds.		There is trust in the community and the process as Findhorn has gone through different disruptions overtime and has survived.
SPIRITUAL CAPITAL	**LINK TO HIGHER PURPOSE**		It provides with a sense of purpose which serve as a source of strength and resilience during difficult times.	Residents seem to tap into a variety of elements that connect them to a spiritual dimension. It is not necessary any of the main religions.	Although there are references to co-creation with nature and trust the inner knowledge to face challenges; there has not been a spiritual 'guru' which is seem as a positive aspect.

Table 6.cccc

NEW RESILIENCE CATEGORY	ENHANCING FACTORS	SUBSUBCATEGORY	CONNECTION TO RESILIENCE PRACTICE	NARARA	FINDHORN
SIZE	SMALL		Stronger social bonds and sense of belonging. Ease of communication and flexibility and adaptability.	Seems to have the appropriate size that allows privacy but makes community living possible. It makes current decision processes effective.	
	LARGE		Access to a wider range of resources, expertise and specialized services. May benefit from economies of scale. Challenges of complexity and coordination.	This has been pointed out as a potential challenge on the future that will have to be addressed.	During times in which the community received a large number of visitors, the community was vibrant and a place for innovation.
SPIRITUAL CAPITAL	RITUAL ENGAGING		It provides emotional regulation, meaning-making, social connection, coping mechanisms, identity formation, and community cohesion.	The community offers "Deep ecology workshops" which offer a safe container for people to express their despair around climate change and other global shifts	

J3. Comparative Table: Narrative Roles

NARRATIVE FEATURE	SUBFEATURE	SUBSUBFEATURE	CONNECTION TO RESILIENCE	NARARA	FINDH
SENSEMAKING	PERCEPTION AND DESCRIPTION OF DISRUPTIONS	ENVIRONMENTAL	To inform and successfully deploy resilience building strategies	Refer to ecological disruptions as threats at a global level but not in particular for their location. Climate related events are a source of worry, however that same awareness makes them put strategies in place. "Breaking together" mentality.	No significant climate disruptions over time. Not perceived as a threat. Housing is prepared for disruptive climate events which enhances the sense of security.
		ECONOMIC		Aware of current economic shocks (e.g. rising cost of building the houses) or potential future disturbances (e.g. Café cart losing money) but they don't pose a significant risk because current members are in a privilege position, there is individual expertise in economy areas, and they put in place strategies to solve the current challenge (e.g. affordable housing strategies)	Strong reliability on the Findhorn foundation for the economic survival of the ecovillage. This single source of income has been heavily affected after Brexit and Covid pandemic. While recent external sources of income have been approved (e.g. National funding from the Scottish gov.) the economic situation is perceived and discussed as an important threat for the sustainability of the community.
		CULTURE		While there have not been irreversible cultural shocks; Diversity of opinion has been the major cause of disruption in Narara (e.g. Views and behaviours during the pandemic, The voice vote, or street naming). However, because diversity is assumed as a core value of the community, it is not perceived as a threat. The community counts with diverse strategies for group decision-making including Sociocracy and conflict resolution. These strategies have helped to overcome the conflicts, strengthening the resilience capacity of the group and the sense of cohesion. Very much aware that "community is not liking everyone"	Findhorn has gone through several cultural shocks since its foundation. Disagreements between the founders, a strong reliance on the voice of one of the founders (Eileen), lack of leadership, divisions between old and new members, loss of the community centre, decreased demand of the self-development courses imparted by the Foundation. These cultural shocks seem to touch core elements of the structure as they are related to the mission of the community. A certain sense of nostalgia of 'the good old days" is perceived. It does not seem the current community has a clear strategy to revitalise the community and ensure its sustainability.
	COLLECTIVE AND INTIMATE STORY CLASH?		Recovery process can be negatively affected if the collective & individual story clash	There seems to be a healthy balance between the private and the public space both physical and figurative. No major dissonances found	Tensions between how the community is presented and how the individual experiences in reality

NARRATIVE FEATURE	SUBFEATURE	SUBSUBFEATURE	CONNECTION TO RESILIENCE	NARARA	FINDH
	VALUES			Agency, Empowerment, Connection to nature and people are present in people's narratives. While the prospects for a future society are not optimistic, there seem to be a strong reliance on the power of the collective.	Resilience and connection to spirit seem to be present on people's narratives.
	RELATIONSHIP WITH NATURE			Strong connection to nature and local wildlife	Strong connection to nature and local wildlife.
KNOWLEDGE TRANSMISSION AND LEARNING	RESILIENCE PRACTICES DEVELOPED AS RESULT OF PAST EVENTS		Knowledge used to support community-based resilience initiatives	Currently partaking in the GEN resilience project aimed at assessing and documenting the resilience of the ecovillage. Information is organically shared, no stablish ed process to document or shared information.	Currently partaking in the GEN resilience project aimed at assessing and documenting the resilience of the ecovillage. No stablished process to document o shared information.
	ECOLOGICAL AND COMMUNITY KNOWLEDGE			Strong knowledge on ecology and indigenous knowledge-based practices (e.g. Permaculture) Lack of wider information sharing with Aboriginal groups in the area.	Relevant knowledge on ecology. Mild influence of traditional cultures such as Celtic and Scottish.
	LOCAL AND INDIGENOUS KNOWLEDGE			Strategic plan and report meetings developed and shared with the group. Varied interest depending on the group members.	No formal process in place to document local or community knowledge. Community knowledge is shared informally in community events.
SOCIAL CAPITAL AND COMMUNITY COHESION			Sharing stories enhances adaptative capacity and guides collective actions for the storyteller and the group.	Creation of shared meaning and identities among individuals and groups in times of crisis. Initiatives such as "Storytelling night" allow the community to express their stories of adversity. The Open days and Garden trail days are an opportunity for the group to share their collective project strengthening the community cohesion. Heritage and identity of the community is expressed through artistic expression.	Stories of resilience, overcoming adversity and collective action are shared (e.g. local magazine, community festivals and events) fostering social capital. Strong shared meaning generated artistic expression.

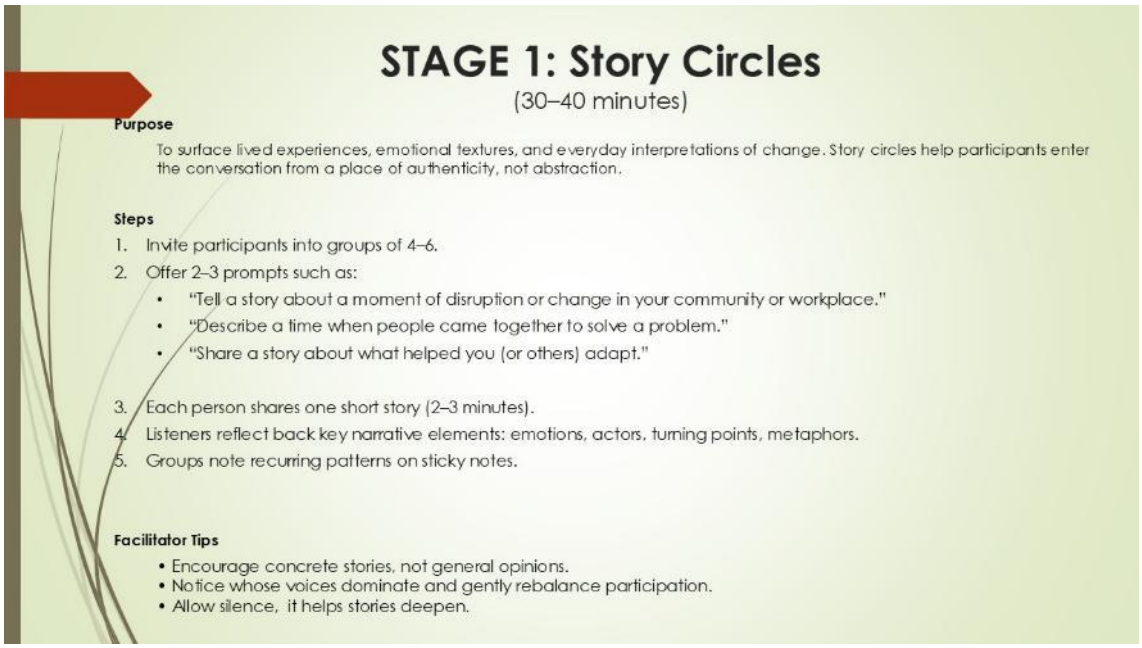
J4. Comparative Table : Transformational Factors (Folke Et Al. (2003))

Folke et al. (2003) factors in complex social-ecological systems (CSES) for transformations				
	SES factor	**Guiding elements for change**	**NARARA**	**FINDHORN**
1	Learning to live with change and **uncertainty**	Resistance	An awareness that the world is rapidly changing due to technology advancements (AI) or other global shifts including climate change.	There is trust in the community and the process as Findhorn has gone through different disruptions overtime and has survived.
2	**Nurturing** diversity for **reorganization and renewal**	Imagination and innovation	Several initiatives are place to foster the organisation of the community in an agile manner (informal meetings, no reports in some cases…). Through the Open days, the community aims to attract new members for renewal and financial sustainability. Although new members are welcome, there is some resistance to reorganisation (to do things differently)	New strategies in place to nurture the diversity of the community (e.g. including new demographics, or people with different skillset). The community is aware of the need for renewal after FF closure.
3	Combining **different types of knowledge** for learning	Imagination and innovation	The community counts with a varied skillset which allows innovative and renewed responses. New members are continuously renewing the community particularly at the beginning. Confidence in the capacity of the group to come up with innovative res es.	Varied skillset and type of knowledge within the community although there seem to be some silos. Upcoming proposal for feasibility project will promote the use of diverse knowledge
4	Creating opportunities for **self-organization** toward social-ecological sustainability	Agency	Strong sense of agency within the community. References to self-satisfaction, freedom, and empowerment. The community present several self-organisations traits managing their own infrastructures, deciding their financial model, or defining sustainability objectives.	The community has created opportunities for self-organisation by promoting community-led projects and initiatives in the past (e.g. Trees for life) and by providing skill-sharing and learning opportunities and integrating spiritual and ecological practices.

Appendix K Practitioner Toolkit (Method transferability guide)

K1. Facilitation Guide for Narrative Mapping





STAGE 2: Mapping narrative tensions

(30 minutes)

Purpose

To identify dominant narratives, counter-narratives, and tensions between ways of understanding or responding to change.

Steps

1. Bring the group together around a shared board
2. Invite participants to place sticky notes representing narrative elements from story circles.
3. Cluster these notes into patterns such as:
   - "How things used to be"
   - "How things are now"
   - "What the future could look like"
4. Identify tensions or contrasts. Examples:
   - stability vs. change
   - scarcity vs. possibility
   - individual responsibility vs. collective capacity
5. Draw links between narratives that reinforce or challenge one another.

Facilitator Tips

- Ask: "What stories keep showing up? Which remain hidden?"
- Encourage participants to name tensions without needing to resolve them.

STAGE 3: Linking Narratives to Resilience-Enabling Factors

(30–40 minutes)

Purpose

To explore how stories shape (or constrain) resilience capacities.

Steps

1. Introduce the five enabling factors (diversity, connectivity, adaptability, social capital, transformability)
2. Provide a printed template (e.g. Narrative- Resilience Matrix
3. , see templates)
4. For each factor, ask the group:
   - "Which stories strengthen this capacity?"
   - "Which stories undermine it or make it harder to develop"
5. Participants annotate the map with examples from the story circles and tensions exercise.
6. Identify gaps : areas where new or hybrid narratives may be needed

	Diversity	Connectivity	Adaptability	Transformability	Social capital
Identity-shaping					
Sensemaking					
Knowledge transmission					
Cohesion building					
Agency stimulation					
Reflexive adaptation					

"Narrative- Resilience Matrix" template

Facilitator Tips

- Avoid framing stories as "good" or "bad"; instead ask how they function.
- Draw attention to narrative diversity as a useful form of adaptive capacity.

STAGE 4: Collective Sensemaking

(20 -30 minutes)

Purpose

To translate the mapping into shared understanding, practical insights, or next steps.

Steps

1. Invite participants to walk around the completed map and reflect silently.
2. Facilitate a whole-group discussion using questions such as:
   - "What stands out or surprises you?"
   - "Where do we see potential for re-storying or shifting trajectories?"
   - "What enabling factors appear most influenced by our narratives?"
   - "What possibilities or actions emerge from this picture?"
   - "What enabling factors appear most influenced by our narratives?"
3. Document shared insights and potential next steps.

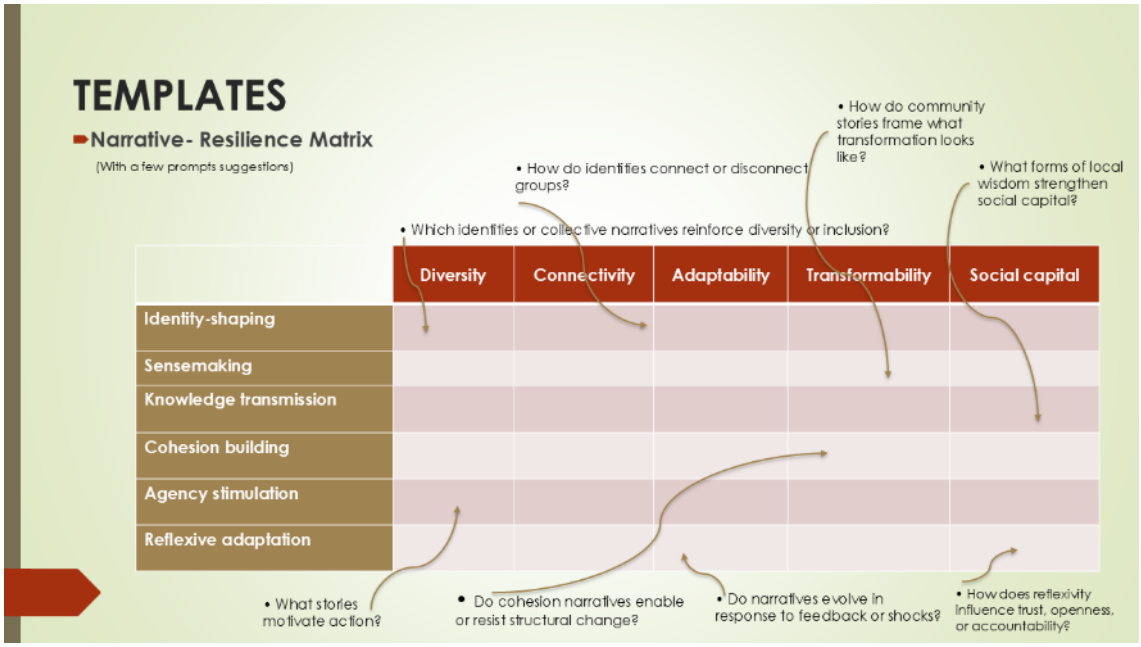
Facilitator Tips

- Focus on emergent patterns, not consensus.
- Encourage attention to both structural conditions (governance, resources, institutions) and narrative ecologies (roles, meanings, tensions).
- Close by acknowledging the emotional labour of sharing stories.

TEMPLATES

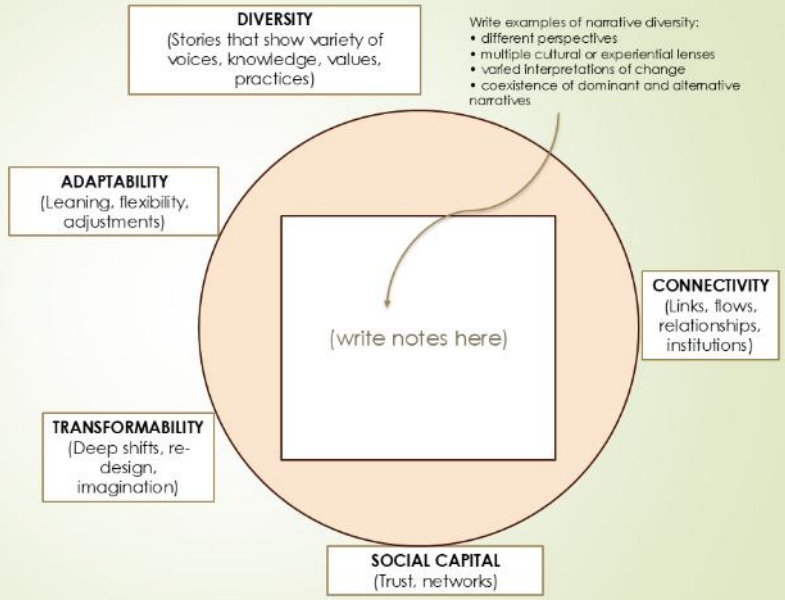
Narrative- Resilience Matrix

(With a few prompts suggestions)



TEMPLATES

- Enabling factors wheel



TEMPLATES

- Narrative tensions map

1. Dominant narratives
   - _____
   - _____
   - _____
   - _____

2. Alternative or emerging narratives
   - _____
   - _____
   - _____
   - _____

3. Tensions or contradictions
   - Where do the stories clash?
   - Where do expectations differ?
   - What emotions or assumptions sit underneath?

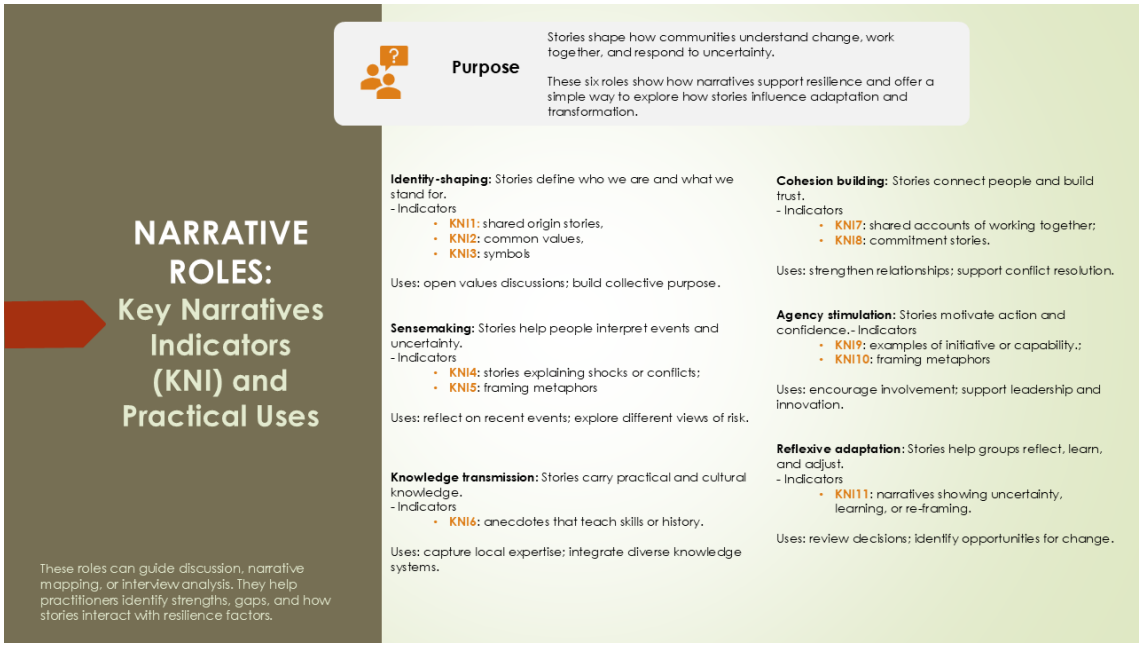
4. What might these tensions be telling us?
   - _____
   - _____
   - _____

K2. Community Reflection Prompts





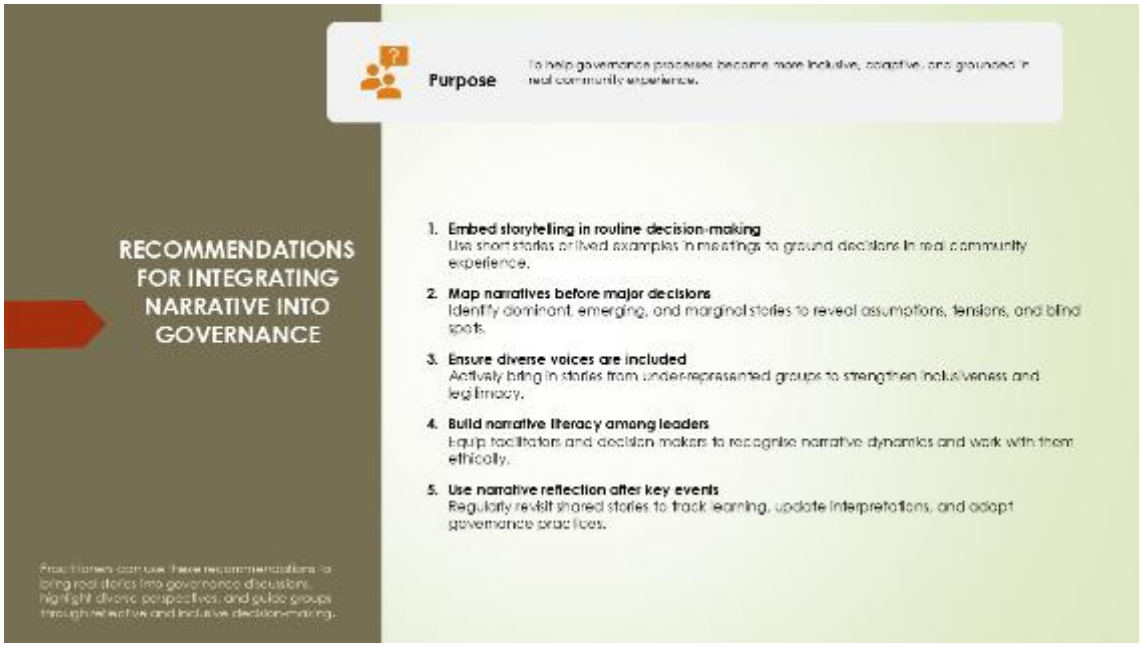
K3. Narrative Roles: Indicators and Practical Uses



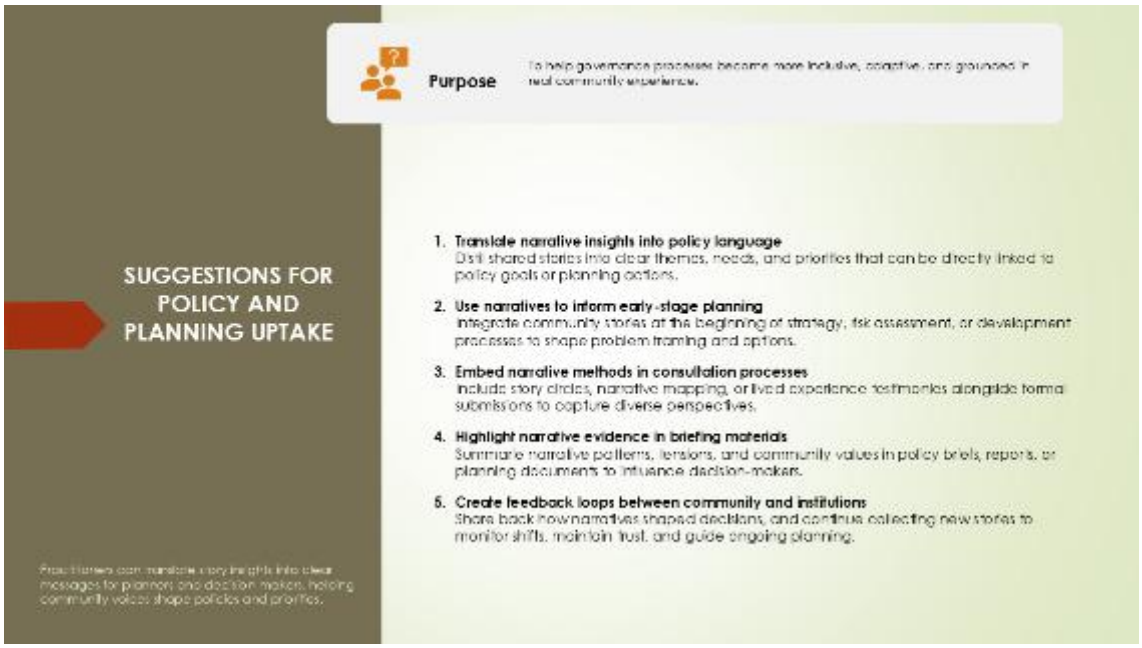
K4. Narrative Diversity and Narrative Plasticity: Indicators and Uses



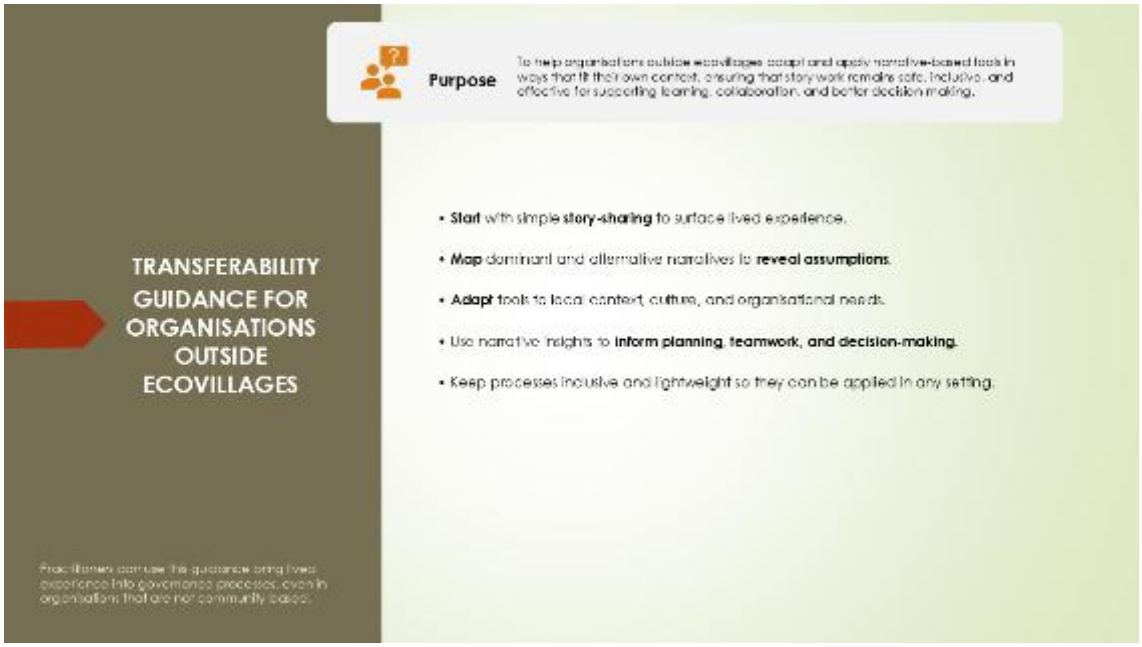
K5. Recommendations for Integrating Narrative into Governance



K6. Suggestions for Policy and Planning Uptake



K7. Transferability Guidance for Organisations outside Ecovillages



References for Appendices

Narara Ecovillage. (n.d.). *[Thermally efficient hemp house]*. https://www.nararaecovillage.com

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