

This is an Accepted Manuscript of a book chapter
published by Routledge/CRC Press in the book:

The Routledge Handbook of Polar Law

Published IN 2023

Book Chapter Title:

Mutually Agreed Terms, Arctic Genetic Resources and Private International Law.

Book Chapter available online:

<https://www.taylorfrancis.com/chapters/edit/10.4324/9781003404828-45/mutually-agreed-terms-arctic-genetic-resources-private-international-law-david-leary>

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Key words: Mutually agreed terms; Nagoya Protocol; Access and benefit sharing; Arctic genetic resources

Abstract

This Chapter examines the role of contracts for mutually agreed terms under the 2010 Nagoya Protocol on Access to Genetic Resources and Fair and Equitable Sharing of Benefits Arising from the Utilization to the Convention on Biological Diversity ('CBD') in the Arctic context. Despite being an instrument of Public International Law the Nagoya Protocol relies heavily on private international law for its implementation. Agreements on access and benefit sharing in the form of mutually agreed terms are contractual in nature. It is in the context of the negotiation, implementation of the enforcement of these contracts that private international law is most relevant. This chapter briefly considers why there is commercial interest in Arctic genetic resources. It then goes on to outline the key elements of the access and benefit sharing regime created by the CBD and the Nagoya Protocol. This is then followed by an examination of how the Nagoya Protocol interacts with private international law in the context of the contractual nature of access and benefit sharing and mutually agreed terms. Arctic domestic legislative regimes for access and benefit sharing are then outlined and an examination of how these legislative regimes interact with the rules of private international law is provided. But precisely how effective the close relationship between the CBD, Nagoya Protocol and private international law will be for resolving potential cross border contract disputes remains unclear. It does appear that linking private international law to the CBD and the Nagoya Protocol was simply "to smart by half" and probably creates more uncertainty than is desirable.

Introduction

This Chapter explores the role of mutually agreed terms in the sustainable exploitation of Arctic genetic resources.¹ The concept of mutually agreed terms lies at the heart of the access and benefit sharing regime for genetic resources established by the provisions of the 1992 United Nations Convention on Biological Diversity ('CBD')² and the 2010 Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (the 'Nagoya Protocol').³ While both these treaties are public international law instruments, many of the day to day legal issues associated with their implementation are governed by private law and in particular the law of contract and principles of private international law. This chapter therefore explores the interaction between these bodies of law in the Arctic context.

¹ Genetic resources referred to in this chapter means genetic resources as defined in Article 2 of the 1992 United Nations Convention on Biological Diversity, adopted 5 June 1992, entered in force 29 December 1993, 1760 UNTS 79. Article 2 of this treaty defines genetic resources as meaning "genetic material of actual or potential value." Genetic material is likewise defined in Article 2 of the same treaty as "any material of plant, animal, microbial or other origin containing functional units of heredity."

² Adopted 5 June 1992, entered in force 29 December 1993, 1760 UNTS 79.

³ Adopted 29 October 2010, entered in force 12 October 2014, <https://www.cbd.int/abs/>, accessed 1 February 2022.

It is surprising to find that despite relying very heavily on private law for implementation of the access and benefit sharing regime established by the CBD and the Nagoya Protocol there has been very little examination of these issues by scholars and lawyers more broadly. As Chiarolla has noted consideration of the interface between the CBD, the Nagoya Protocol and private international law (in particular) by scholars and lawyers is largely absent from the scholarly literature.⁴ This chapter therefore aims to add to the scholarly literature with respect to these issues focussing, in particular, on the role of private international law in the context of Arctic genetic resources. The chapter is in four parts. Part 1 briefly outlines why there is commercial interest in Arctic Genetic Resources. Following this discussion Part 2 outlines the key elements of the CBD and the Nagoya Protocol access and benefit sharing regime. Part 3 examines how private international law is relevant to implementation of the Nagoya Protocol with a particular focus on the contractual nature of access and benefit sharing and mutually agreed terms. Part 4 highlights the interaction between the CBD and the Nagoya Protocol in the Arctic context through examination of legislative regimes regulating access and benefit sharing regimes in operation in Arctic jurisdictions and how they may interact with private international law.

Scale of interest in Arctic Genetic Resources.

The Arctic is a hostile environment. Much of the Arctic is characterised by low temperature, extreme variability in day length, high levels of solar ultraviolet radiation exposure and low nutrient concentrations.⁵ In addition to these extremes the Arctic region also has a wide diversity of habitats including “sea ice, glacial ice, permafrost, tundra wetlands, oceanic water, subglacial soil, periglacial soil, [and] tundra soil”.⁶ Yet despite these harsh conditions both humans and an abundance of biodiversity flourishes in the Arctic both on land and in the oceans. The Arctic is home to a wide range of biodiversity including iconic species such as polar bears, mammals, birds as well as numerous species of bacteria, fungi, algae, protozoa and metazoan.⁷

It is the ability of such species to thrive in the extreme conditions of the Arctic that drives both scientific and commercial interests in their potential for new developments in biotechnology.⁸

⁴ Claudio Chiarolla, “The Role of Private International Law under the Nagoya Protocol,” in *The 2010 Nagoya Protocol on Access and Benefit-sharing in Perspective implications for international law and implementation challenges*, ed. Elisa Morgerra, Mathias Buck and Elsa Tsioumani, (Leiden, Martinus Nijhoff, 2013), 423-449, 423.

⁵ Yung Mi Lee, GoHeung Kim, You-Jung Jung, Cheng-Dae Choe, Joung Han Yim, Hong Kum Lee and Soon Gyu Hong, “Polar and Alpine Microbial Collection (PAMC): a culture collection dedicated to polar and alpine microorganisms” *Polar Biology* 35 (2012): 1433-1438

⁶ Puran Vishnu Vardhan Reddy, Singireesu Soma Shiva Nageswara Rao, Mambatta Shankaranarayanan Pratibha, Buddhi Sailaja, Bakka Kavya, Ravoori Ruth Manorama, Shiv Mohan Singh, Tanuku Naga Radha Srinivas, and Sisinthy Shivaji, “Bacterial diversity and bioprospecting for cold-active enzymes from cultural bacteria associated with sediment from a melt water stream of Midtre Lovenbreen glacier, an Arctic glacier”, *Research in Microbiology* 160, (2009): 538-546.

⁷ C. Krembs, H. Eicken, K. Junge and J.W. Deming. “High concentrations of exopolymeric substances in Arctic winter sea ice: implications for the polar ocean carbon cycle and cryoprotection of diatoms”, *Deep-Sea Research I*, 49 (2002): 2163-2164.

⁸ See for example discussion in Donatella de Pascale, Concetta De Santi, Juan Fu, and Bjarne Landfald, “The microbial diversity of Polar environments is a fertile ground for bioprospecting” *Marine Genomics* 8 (December, 2012): 15-22.

In a report published in 2008 the author of this chapter examined in detail the extent of evidence available on the nature of scientific research and development in relation to the biodiversity of the Arctic and concluded “that there is significant interest in the biotechnology potential of Arctic biodiversity.”⁹ The patenting and marketing of products derived from or inspired by Arctic biodiversity proves that this potential has now been realised.

Five key trends in research, development and commercialisation are prevalent with respect to Arctic genetic resources: a focus on “enzymes for use in a range of industrial processes; bioremediation and other pollution control technologies; anti-freeze proteins for use in food technology; dietary supplements with a particular focus on polyunsaturated fatty acids; and pharmaceuticals and other medical uses”.¹⁰ While many habitats have been investigated there has overall been a strong focus on the Arctic marine environment, particularly in Norway.¹¹

Much of the available data providing specific examples of products on the market is now a decade or more old. While there is an extensive body of very recent patent data which is indicative of trends in research and development, it is an open question as to whether levels of commercialisation have kept pace with, decreased or increased over the past decade. Nonetheless examples of specific products on the market derived from or inspired by the properties of the biodiversity of Arctic over a decade ago do exist. A study by the author of this chapter published in 2008 identified 43 known examples of companies involved in research and development and or actual marketing of products derived from Arctic genetic resources.¹² While there have been no further detailed studies published since then a brief review of commercial interest for the purposes of this chapter has identified more recent examples of companies which currently market products derived from Arctic genetic resources. Table 1 below gives some (non-exhaustive) examples of specific products currently on the market.

Contrary to trends elsewhere in the world there is little evidence of the use of indigenous traditional knowledge in development of biotechnology from Arctic genetic resources.

Company	Example of Product sourced from the Arctic	Web site address
ArcticZymes	ArcticZymes Proteinase (derived from marine microbial source)	https://arcticzymes.com
Calanus AS (also known as Zooca)	Zooca Lipids Zooca Hydrolysate	https://zooca.eu
Marealis AS	Precardix (blood pressure medication-natural ACE inhibitor) derived from Arctic Cold water shrimp.	https://marealis.com and https://precardix.com

⁹ David Leary, *Bioprospecting in the Arctic*, (Tokyo: United Nations University-Institute for Advanced Studies 2008), 12.

¹⁰ David Leary, “Bioprospecting at the Poles” in *Research Handbook on Polar Law* ed. Karen Scott and David VanderZwaag (Cheltenham, Edward Elgar, 2020), 272.

¹¹ Leary, *Bioprospecting in the Arctic*, 24.

¹² See Leary, *Bioprospecting in the Arctic*.

Table 1: Examples of products on the market derived from Arctic genetic resources.¹³

The CBD and Nagoya Protocol

Debates in relation to bioprospecting in the Arctic have essentially centred upon a response to the emerging international regime provided for under the CBD and the Nagoya Protocol. This in turn has been linked to debates in relation to expropriation of associated indigenous traditional knowledge, although as noted above there is little evidence of any significant utilisation of indigenous knowledge in the context of bioprospecting in the Arctic.

Key concepts in law and policy relating to bioprospecting originate from Arctic countries international obligations under the CBD. The objectives of the CBD are, inter alia:

“the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources...”¹⁴

The CBD explicitly recognises the important role biodiversity has played in the development of biotechnology. Biotechnology is defined in the CBD as “any technological application that uses biological systems, living organisms, or derivatives thereof, to make or modify products or processes for specific use.”¹⁵ The CBD also confirms the sovereign right of nation states over their genetic resources in accordance with their own national environmental policies.¹⁶ Significantly for the purposes of this chapter the CBD also explicitly recognises that authority to determine access to genetic resources¹⁷ rests with national governments who give effect to these obligations through national legislation.¹⁸

Under the provisions of the CBD countries are obliged to endeavour to create conditions to facilitate access to genetic resources.¹⁹ A key component of this regime is the explicit requirement for access to genetic resources to be subject to prior informed consent on mutually agreed terms.²⁰ It is the essentially contractual nature of these mutually agreed terms that triggers questions of private international law, discussed later in this chapter.

After entry into force of the CBD the principal decision making body of the CBD, the Conference of Parties (COP), adopted the Bonn Guidelines on access to genetic resources and fair and equitable sharing of the benefits arising out of their utilization (the Bonn Guidelines).²¹ Although not legally binding these guidelines were influential in shaping how many countries have legislated for access and benefit sharing regulation within their jurisdiction prior to negotiation of the Nagoya Protocol. Many jurisdictions across the world have yet to make

¹³ Information sourced from web sites as listed.

¹⁴ CBD, article 1.

¹⁵ CBD, article 2.

¹⁶ CBD, article 3.

¹⁷ Genetic resources are defined in article 2 of the CBD as “any material of plant, animal, microbial or other origin containing functional units of heredity.”

¹⁸ CBD, article 15(1).

¹⁹ CBD, article 15(2).

²⁰ CBD article 15(4).

²¹ United Nations Convention on Biological Diversity, Conference of Parties, Decision VI/24-Access and Benefit-Sharing as related to genetic resources- *Bonn Guidelines on access to genetic resources and fair and equitable sharing of the benefits arising out of the utilization*, <https://www.cbd.int/decision/cop/default.shtml?id=7198>.

changes to their legislation since the Nagoya Protocol was adopted. To a large extent though the provisions of the Bonn Guidelines and the Nagoya Protocol are consistent.

The Nagoya Protocol was adopted in 2010 as a supplementary protocol to the CBD to deal with issues relating to implementation of the obligations of the CBD on access and benefit sharing of genetic resources. It applies to all genetic resources covered by the CBD.²² It also extends to apply to “traditional knowledge associated with genetic resources within the scope of the Convention and to the benefits arising from the utilization of such knowledge.”²³

Article 5(1) of the *Nagoya Protocol* in relevant parts provides

“benefits arising from the utilization of genetic resources as well as subsequent applications and commercialization shall be shared in a fair and equitable way with the Party providing such resources that is the country of origin of such resources or a Party that has acquired the genetic resources in accordance with the Convention. Such sharing shall be upon mutually agreed terms.”²⁴

Thus the CBD, the Nagoya Protocol, and domestic regulatory regimes implementing the CBD and the Nagoya protocol establish clearly that a person or institution seeking access to genetic resources of a foreign state must seek the prior informed consent of the state where the resource is located, as well as the consent of any other holder of rights in relation to particular genetic resources such as indigenous and local communities discussed below. The foreign state as provider of access to the genetic resources and the person or institution seeking access such as a university, research institute or corporation etc will become parties to an access and benefit sharing agreement setting out mutually agreed terms regulating such access. While these documents have several different names including material transfer agreement, research agreements etc all are essentially contractual in nature. Although each defined with varying degrees of precision they typically cover key contractual terms such as:

- Authorising access to specified genetic resources;
- Controls or limitations on the subsequent use and
- Provisions on the fair and equitable sharing of benefits from their subsequent use.

These benefit sharing agreements as contracts are premised on the prior informed consent by the provider (and any relevant indigenous or local communities where relevant) which is an affirmative act of consent based on information provided by the potential user prior to the actual decision is made to grant access.²⁵

Concluding benefit sharing agreements or contracts containing mutually agreed terms is therefore at the centre of domestic approval processes for granting access to genetic resources in accordance with each jurisdiction's domestic law.²⁶ This also involves each State being required to ensure “that the prior informed consent or approval and involvement of indigenous and local communities is obtained for access to genetic resources where they have the established right to grant access to such resources.”²⁷

²² Nagoya Protocol, article 3.

²³ Nagoya Protocol, article 3.

²⁴ Nagoya Protocol, article 5(1).

²⁵ International Union for the Conservation of Nature, ‘Access to Genetic Resources-Article 6 of the Nagoya Protocol on Access and Benefit-Sharing, available at https://www.iucn.org/sites/dev/files/import/downloads/short_paper_article_6.pdf , accessed May 31 2022

²⁶ Nagoya Protocol, article 6.

²⁷ Nagoya Protocol, article 6(2).

These provisions are re-enforced by the provisions of Article 7 of the Nagoya Protocol which provide for the requirement of prior informed consent for all access to traditional knowledge associated with genetic resources.²⁸ Article 12 of the Nagoya Protocol also specifically addresses mechanisms associated with approving access and benefit sharing in relation to traditional knowledge associated with such genetic resources. As such in implementing their obligations under the Nagoya Protocol states are obliged (in accordance with their domestic law) to take into consideration indigenous and local communities' customary laws, community protocols and procedures with respect to traditional knowledge associated with genetic resources.²⁹ Indigenous and local communities must also participate in the establishment and implementation of mechanisms to inform potential users of traditional knowledge associated with genetic resources about their obligations with respect to fair and equitable sharing of benefits arising from the utilization of traditional knowledge.³⁰ In addition States are required to endeavour to support the development by indigenous and local communities, including women within these communities; community protocols in relation to access and benefit sharing in relation to traditional knowledge associated with genetic resources; minimum requirements for mutually agreed terms to secure the fair and equitable sharing of benefits arising from the utilization of traditional knowledge associated with genetic resources; and model contractual clauses for benefit-sharing arising from the utilization of traditional knowledge associated with genetic resources.³¹

As at 11 March 2022 there were 132 state parties to the Nagoya Protocol.³² The most current information available reports that as of 22 February 2018 75 State Parties had published measures in the ABS Clearing-House³³ or reported having established some access and benefit sharing measures. But as a note by the Secretariat of the CBD on the first assessment and review of the Nagoya Protocol and general issues of compliance noted in 2018

“The [Access and Benefit Sharing] (‘ABS’) measures reported vary in the degree of specificity and comprehensiveness and many were adopted prior to the adoption of the Nagoya Protocol. Some Parties reported having general legislation which relates to ABS (for example, general environmental legislation, or measures dealing with animal husbandry, forests), while others have adopted specific ABS measures to implement the Protocol. Of these 75 Parties, 44 indicated that they are currently revising existing or developing new ABS measures to implement the Protocol, and 10 Parties are planning to develop additional ABS measures.”³⁴

The implementation of the access and benefit sharing regime of the Nagoya Protocol under domestic law is therefore patchy across the globe. Given the reliance on domestic law for implementation of the access and benefit sharing regime private international law is directly

²⁸ Nagoya Protocol, article 7.

²⁹ Nagoya Protocol, article 12(1).

³⁰ Nagoya Protocol, article 12(2).

³¹ Nagoya Protocol, article 12(3).

³² Secretariat of the Convention on Biological Diversity, ‘Parties to the Nagoya Protocol’ available at <https://www.cbd.int/abs/nagoya-protocol/signatories/>, accessed March 11, 2022.

³³ As the ABS Clearing-House website notes, the ABS Clearing-House is a website “administered by the CBD Secretariat and established by Article 14 of the Nagoya Protocol. It is designed to enable Parties, but also non-Parties, indigenous peoples and local communities (IPLCs), international and non-governmental organizations, research institutions and businesses to make information relevant to ABS available in a standardized, and open and organized global repository.” Information available includes details of ABS legislation supplied by State Parties to the CBD and the Nagoya Protocol. See <https://absch.cbd.int/en/>, accessed March 11 2022.

³⁴ Compliance Committee under the Nagoya Protocol, *First assessment and Review of the Nagoya Protocol and General Issues of Compliance-Note by the Executive Secretary*, (UN Doc No. CBD/ABS/CC/2/3 (5 April 2018), <https://www.cbd.int/doc/c/ff27/0869/878e0ea8e9a8d7d00b0320f4/abs-cc-02-03-en.pdf>, accessed March 11, 2022 .p 4.

relevant to reconciling the many complex legal issues that will arise as exploitation and commercialisation of genetic resources is carried out across many jurisdictions. As each jurisdiction has different domestic law and policy to implement access and benefit sharing and mutually agreed terms obligations under the Nagoya Protocol each at varied levels of development and implementation, so multiple permutations of private international issues will arise.

How is private international law relevant to implementation of the Nagoya Protocol

Private international law can be defined as “the body of principles, rules and, at times, policies and approaches that indicate how a foreign element in a legal problem or dispute should be dealt with.”³⁵ In common law and civil law jurisdictions alike private international law is concerned with three key issues: (1) Jurisdiction-does the forum court or another foreign court have power to hear and determine a dispute; (2) choice of law- assuming a court does find it has jurisdiction to determine a dispute which substantive law should it apply the law of the forum (*lex fori*) or the law of another foreign State; and (3) recognition and enforcement of foreign judgments or arbitral awards.³⁶ All three key issues are relevant to access and benefit sharing under the Nagoya Protocol because of the essentially contractual nature of the transactions that implementation of the Nagoya Protocol gives rise to. As Ruse-Khan has noted

“Based on the [access and benefit sharing] framework set out by the [Nagoya Protocol], details of (fair and equitable) benefit sharing are meant to be set out in form of ‘mutually agreed terms’ ..i.e. in contractual arrangements between the provider of [genetic resources] and/or associated [traditional knowledge]....and a prospective user. Since utilization and subsequent commercialisation of [genetic resources] and traditional knowledge often takes place in countries other than the provider country, the enforcement of these access and benefit sharing contracts rise [sic] questions of jurisdiction, applicable law and enforcement of judgments or awards abroad.”³⁷

This inter-relationship between the Nagoya Protocol and the three key issues dealt with by private international law mentioned above was contemplated when the Nagoya Protocol was negotiated. As such Article 18(1) of the Nagoya Protocol imposes an obligation on each Party to the Nagoya Protocol to:

“encourage providers and users of genetic resources and/or traditional knowledge associated with genetic resources to include provisions in mutually agreed terms to cover, where appropriate, dispute resolution including:

- (a) The jurisdiction to which they will subject any dispute resolution processes;
- (b) The applicable law, and/or
- (c) Options for alternative dispute resolution such as mediation or arbitration.”³⁸

Similarly, under Article 18(2) each Party to the Nagoya Protocol is required

“to ensure that an opportunity to seek recourse is available under their legal systems, consistent with applicable jurisdictional requirements, in cases of disputes arising from mutually agreed terms.”³⁹

³⁵ Reid Mortensen, Richard Garnett, and Mary Keyes, *Private International Law in Australia* (Chatswood, LexisNexis Butterworths, 2019), 3.

³⁶ *Ibid.*

³⁷ Henning Grosse Ruse-Khan, *The Private International Law of Access and Benefit-sharing contracts*, Max Planck Institute for Innovation and Competition Research Paper Series, Research Paper No. 17-15, 12.

³⁸ Nagoya Protocol, article 18(1).

³⁹ Nagoya Protocol, article 18(2).

Article 18(3) goes on to require each Party to the Nagoya Protocol to also take effective measures regarding access to justice, the utilization of mechanisms regarding mutual recognition and enforcement of foreign judgments and arbitral awards.⁴⁰

Given the contractual nature of mutually agreed terms under the Nagoya Protocol consistency in terminology and certainty in contractual terms is desirable. In part this is encouraged by Article 19(1) of the Nagoya Protocol which requires that States “encourage, as appropriate, the development, update and use of sectoral and cross-sectoral model contractual model clauses for mutually agreed terms.”⁴¹ Article 19 therefore recognises

“the need to create legally enforceable and inter-operable [access and benefit sharing] contracts in different jurisdictions that may have different national [access and benefit sharing] frameworks and whose national courts may have different standards in recognizing as valid and enforcing contracts.”⁴²

A report prepared by the secretariat of the CBD in 2013 noted a wide divergence of approaches to the preparation of model contractual model clauses for mutually agreed terms including:

- model templates authored by public or private sector institutions designed to be adapted and applied across different sectors and context across jurisdictions and suitable for both commercial and non-commercial research;⁴³
- models authored by governments aimed to fulfil specific legislative or other regulatory requirements;⁴⁴
- models authored by a potential party to the agreement such as research or collection institutions;⁴⁵ and
- actual agreements that have been adapted retrospectively as models for the future.⁴⁶

It is clear though that there has in reality been no one single set of model contractual clauses universally adopted and this is a reflection of the wide diversity of situations in which such model clauses have been prepared. As the report mentioned above also notes:

...a given [access and benefit sharing] arrangement might involve a material transfer agreement or export permit, a research permit application incorporating mutually agreed terms including benefit-sharing obligations (executed simultaneously or triggered through the commercialization of products), and a research collaboration agreement, and may be supported by one or more codes of conduct, guidelines, best practices or standards. If traditional knowledge from indigenous and local communities is sought, evidence of an [access and benefit sharing] arrangement with the holders of that knowledge may be required. Note too, that legal instruments containing elements relevant to the obligations of the Convention and the Nagoya Protocol may have a central purpose that is broader than but that incorporates

⁴⁰ Nagoya Protocol, article 18(3).

⁴¹ Nagoya Protocol, article 19(1).

⁴² Elisa Morgera, Elisa Tsioumany and Mathias Buck, “Article 19-Model Contractual clause” in Elisa Morgera, Elisa Tsioumany and Mathias Buck, *Unravelling the Nagoya Protocol. A Commentary on the Nagoya Protocol on Access and Benefit-sharing to the Convention on Biological Diversity*, (Leiden, Brill 2015), 293-297

⁴³ Convention on Biological Diversity, Open-ended Ad Hoc Intergovernmental Committee for the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable sharing of benefits arising from their utilization, *Survey of Model Contractual Clauses, Codes of Conduct, Guidelines, Best Practices and Standards by the United Nations University-Institute of Advanced Studies*, (2013) UN Doc UNEP/CBD/ICNP/3/INF/2, 10-11.

⁴⁴ Ibid.

⁴⁵ Ibid.

⁴⁶ Ibid.

[access and benefit sharing] obligations, such as for example, an agreement that defines a collaborative research process between research institutions.

Codes of conduct, guidelines, best practices and standards may support the legal arrangements that underpin [access and benefit sharing], and might be relevant to the process of negotiation, the content of agreements, or both. In some cases, such support tools might be directly referred to in [access and benefit sharing] agreements, and so become legally relevant to the obligations of contracting parties under that agreement. Compliance with such codes may be encouraged in other ways also, such as through becoming the condition of a research grant.

In most cases, the single or constellation of legal instruments evidencing a given [access and benefit sharing] arrangement must, as described, fulfill a range of functions based on the requirements of the Convention, the Nagoya Protocol..., any national or sub-national [access and benefit sharing] legislation or policy measures, as well as any other applicable national or sub-national legislation, for example, regulations concerning entry into, and the collection and taking of biological samples from protected areas.

In addition, it is also worth noting that a wide variety of benefits that can be shared are also contemplated by the Nagoya Protocol. As Article 5 and the Annex to the Nagoya Protocol make clear monetary benefits payable under mutually agreed terms may include, but are not limited to:

- “(a) Access fees/fee per sample collected or otherwise acquired;
- (b) Up-front payments;
- (c) Milestone payments;
- (d) Payment of royalties;
- (e) Licence fees in case of commercialization;
- (f) Special fees to be paid to trust funds supporting conservation and sustainable use of biodiversity;
- (g) Salaries and preferential terms where mutually agreed;
- (h) Research funding;
- (i) Joint ventures;
- (j) Joint ownership of relevant intellectual property rights.”⁴⁷

Beyond monetary benefits the Nagoya Protocol also contemplates mutually agreed terms may include provisions relating to the sharing of non-monetary benefits, including, but not limited to:

- “(a) Sharing of research and development results;
- (b) Collaboration, cooperation and contribution in scientific research and development programmes, particularly biotechnological research activities, where possible in the Party providing genetic resources;
- (c) Participation in product development;
- (d) Collaboration, cooperation and contribution in education and training;
- (e) Admittance to *ex situ* facilities of genetic resources and to databases;
- (f) Transfer to the provider of the genetic resources of knowledge and technology under fair and most favourable terms, including on concessional and preferential terms where agreed, in particular, knowledge and technology that make use of genetic resources, including biotechnology, or that are relevant to the conservation and sustainable utilization of biological diversity;

⁴⁷ Nagoya Protocol, article 5 and Annex.

- (g) Strengthening capacities for technology transfer;
- (h) Institutional capacity-building;
- (i) Human and material resources to strengthen the capacities for the administration and enforcement of access regulations;
- (j) Training related to genetic resources with the full participation of countries providing genetic resources, and where possible, in such countries;
- (k) Access to scientific information relevant to conservation and sustainable use of biological diversity, including biological inventories and taxonomic studies;
- (l) Contributions to the local economy;
- (m) Research directed towards priority needs, such as health and food security, taking into account domestic uses of genetic resources in the Party providing genetic resources;
- (n) Institutional and professional relationships that can arise from an access and benefit-sharing agreement and subsequent collaborative activities;
- (o) Food and livelihood security benefits;
- (p) Social recognition; [and]
- (q) Joint ownership of relevant intellectual property rights.⁴⁸

It is fair to say then that model contractual clauses suggested by Article 19(1) of the Nagoya Protocol and the benefits that may provide for are arguably as diverse as the forms of biodiversity which the Nagoya Protocol seeks to regulate access and benefit sharing in relation to. Despite this diversity of forms many of these model contractual clauses do cover key issues of private international law including applicable law and jurisdiction “stating the applicable law and jurisdiction for contract interpretation of disputes” and “processes to apply in the event of disputes.”⁴⁹ However, it should also be noted that few of such model contractual clauses have been revised since the Nagoya Protocol’s adoption and questions therefore arise as to their fitness for purpose for use in national access and benefit regimes legislated to implement the Nagoya Protocol.⁵⁰

How is the Nagoya Protocol implemented in domestic jurisdictions in the Arctic?

Mutually agreed terms (which may or may not be based on model contractual clauses in the forms as discussed above) are of course shaped by, and in most cases mandated by the domestic legislation implementing the CBD and the Nagoya Protocol in each jurisdiction where applicable.⁵¹ As at 15 March 2022 in the Arctic only Canada, Russia, Finland, Denmark,

⁴⁸ Nagoya Protocol, article 5 and Annex.

⁴⁹ Convention on Biological Diversity, Open-ended Ad Hoc Intergovernmental Committee, 15.

⁵⁰ Convention on Biological Diversity, Open-ended Ad Hoc Intergovernmental Committee, 12.

⁵¹ A detailed examination of legislation applicable in each Arctic Jurisdiction is provided in David Leary. “Bioprospecting at the Poles.” The following discussion provides only a broad overview of applicable legislation in each of these jurisdictions drawing on that discussion. For more detailed information on each jurisdiction see that discussion and other sources cited therein.

Iceland, Sweden and Norway have signed and ratified the CBD.⁵² More significantly only Finland, Norway, Denmark and Sweden have ratified the Nagoya Protocol.⁵³ Given Sweden, Denmark and Finland are also members of the European Union ('EU') it is also worth noting that the EU is also a party to the Nagoya Protocol since 2014.⁵⁴

In terms of approaches to access and benefit sharing regimes under the CBD and Nagoya protocol in the Arctic this means there are six broad categories of jurisdictions:

- (1) A State that has no obligations under the CBD or the Nagoya Protocol as they have ratified neither instrument. This is the United States of America ('USA'). While the USA has signed the CBD it has not ratified or otherwise become a party to the CBD and has not signed or ratified the Nagoya Protocol.⁵⁵ Accordingly it is under no obligations under either instrument, except of course the general obligation to refrain from acts which would defeat the object and purpose of the CBD as a signatory to that treaty.⁵⁶ There is no federal legislation in the USA that specifically creates an access and benefit sharing regime applicable to Arctic genetic resources although some legislation related specially to management of national parks may be indirectly applicable.⁵⁷
- (2) States that only have obligations under the general framework provisions of the CBD but not the Nagoya Protocol as they have ratified the former but not the later. These States include Canada, Iceland and Russia. In the case of Canada there is no national access and benefit sharing legislation per se although at provincial level specific legislation regulating scientific research may be applicable in the Yukon⁵⁸ and Nunavut⁵⁹ while like the USA legislation relating to scientific research in national parks may also be applicable.⁶⁰ In Iceland there is no specific access and benefit sharing legislation although access to microbial life in some geothermal areas is regulated.⁶¹ In Russia there is no access and benefit sharing legislation although a patchwork of legislation dealing with a range of other issues including veterinary medicine, wildlife, intellectual property rights, regulation of science, genetic engineering and international trade may be applicable. But as one recent study highlights this patchwork of regulation

⁵² Convention on Biological Diversity, 'List of Parties', at <https://www.cbd.int/information/parties.shtml> accessed March 15 2022.

⁵³ Ibid.

⁵⁴ Ibid.

⁵⁵ Ibid.

⁵⁶ Convention on the Law of Treaties (Vienna) 23 May 1969, in force 27 January 1980, 8 ILM 679 (1969), Article 18.

⁵⁷ David Leary. "Bioprospecting at the Poles", 288.

⁵⁸ See *Scientists and Explorers Act 2002* (Yukon).

⁵⁹ See *Scientists Act 1988* (Northwest Territories).

⁶⁰ See David Leary. "Bioprospecting at the Poles", 288 which also draws on Freedom Kai-Phillips, "Access and benefit-sharing in Canada: Glimpses from the national experiences of Brazil, Namibia and Australia to inform indigenous-sensitive policy" in *Genetic Resources, Justice and Reconciliation*, Chidi Oguamanam, (Cambridge, Cambridge University Press, 2018), 157 and Chidi Oguamanam and Jain Vipal, "Access and Benefit Sharing, Canadian and Aboriginal Research after the Nagoya Protocol: Digital DNA and Transformations in Biotechnology", *Journal of Environmental Law and Practice* 3 (2017): 79.

⁶¹ See Iceland, *Law No 57/1988 on Research and Exploration of Natural Resources in the Ground*.

has been inconsistently implemented with little regard for the rights and interests of indigenous peoples and local communities.⁶²

- (3) Those states that are members of the EU and as such measures adopted by the EU and the European Commission apply. These measures include the EU ABS Regulation⁶³ and the associated Commission implementing Regulation.⁶⁴ Here regard should also be had to a Guidance Document⁶⁵ issued by the EU on the scope and application and core obligations of the EU ABS Regulation. Although non-legally binding the Guidance Document is intended to assist EU citizens, businesses and national authorities in the application of the EU ABS Regulations and the associated Commission implementing Regulation.⁶⁶ States in this category include Sweden, Finland, and Denmark. The application of these EU instruments is enhanced by specific legislation in each of these jurisdictions.⁶⁷
- (4) A State that is not a member of the EU but has ratified both the CBD and the Nagoya Protocol and has enacted specific legislation relating to access and benefit sharing. This State is Norway.⁶⁸
- (5) Greenland by itself can be regarded as a sixth category of jurisdiction because Denmark's approval of the Nagoya Protocol does not apply to Greenland or the Faroe

⁶² See Hasrat Arjjumend, Sabiha Alam, Nikolay Shishatskiy and Timo Koivurva, "Analysis of evolving domestic access and benefit sharing legislation in Russia from the perspective of indigenous people and local communities" *Journal of Global Resources* 2 (2016): 109.

⁶³ Regulation (EU) No 511/2014 of the European Parliament and of the Council of 16 April 2014 on compliance measures for users from the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from the Utilization in the Union, OJ L150/59 (16 April 2014).

⁶⁴ Commission Implementing Regulation (EU) 2015/1866 of 13 October 2015 laying down detailed rules for the implementation of Regulation (EU) No 511/2014 of the European Parliament and of the Council as regards the register of collections, monitoring user compliance and best practices, OJ L275/4 (13 October 2015)

⁶⁵ European Commission, Guidance document on the scope of application and core obligations of Regulation (EU) No 511/2014 of the European Parliament and of the council on the compliance measures for users from the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation in the Union (2021/C13/01), accessed at [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021XC0112\(02\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021XC0112(02)&from=EN) March 31 2022.

⁶⁶ European Commission, "Guidance document."

⁶⁷ In Sweden this is Ordinance is Förordning (2016:858) om användning av genetiska resurser och traditionell kunskap om sådana resurser. This ordinance can be accessed in Swedish at https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/forordning-2016858-om-anvandning-av-genetiska_sfs-2016-858 accessed March 30 2022 . In Finland this legislation is the Act on the Implementation of the Nagoya Protocol to the Convention on Biological Diversity (Finland). See Biodiversity Finland, Genetic Resources and Legislation, available at <https://www.biodiversity.fi/geneticresources/home> accessed March 30 2022) for more information. In Denmark the legislation is the Act on Sharing benefits arising from the utilisation of genetic resources (Denmark) Act no 1375 23/12/2012. Official English translation at <https://absch.cbd.int/api/v2013/documents/8C9F1ADB-89DF-B6E2-DF7D-F3F0802AE59B/attachments/Act%20on%20sharing%20benefits%20arising%20from%20the%20utilisation%20of%20genetic%20resources.pdf> accessed March 30 2022.

⁶⁸ In Norway the relevant legislation is the Marine Resources Act (Lov nr. 37 of 6 June 2008 om forvaltning av viltevannde marine ressursar (Norway)), unofficial English translation, at <http://extwprlegs1.fao.org/docs/pdf/nor82017E.pdf?> accessed March 30 2022); the Nature Diversity Act, (Lov nr. 100 of 19 June 2009 om forvaltning av naturens mangfold, available in Norwegian at <https://lovdata.no/dokument/NL/lov/2009-06-19-100> accessed March 30 2022); and the Regulation on Traditional Knowledge Associate with Genetic Material (Regulation nr. 1367 of 25 November 2016 relating to the protection of traditional knowledge associated with genetic material (Norway), unofficial English translation available at <https://lovdata.no/dokument/SFE/forskrift/2016-11-25-1367> accessed March 30 2022.

Islands.⁶⁹ Greenland has had legislation relating to access and benefit sharing since 2006 and this legislation was updated in 2016 with the passage of the Act on Utilization of Genetic Resources and Activities in Connection Therewith, which entered into force on 1 June 2016.⁷⁰

- (6) Arguably the Faroe Islands constitutes a separate potential hybrid category with respect to access and benefit sharing in the Arctic. The Government of the Faroe Islands describes itself as a “self-governing nation with extensive autonomous powers and responsibilities within the Kingdom of Denmark.”⁷¹ As noted above Denmark’s approval of the Nagoya Protocol does not apply to the Faroe Islands. As an autonomous part of the Kingdom of Denmark it has no capacity in international law to become a party to either the CBD or the Nagoya Protocol so neither applies to the Faroe Islands. As far as the author has been able to ascertain there has been no legislation enacted by the Home Rule Parliament of the Faroe Islands relating to access and benefit sharing and accordingly all such activities appear to be unregulated in the Faroe Islands.

Mutually Agreed Terms and Private International Law issues

Where mutually agreed terms for access and benefit sharing gives rise to a legal dispute across international borders private international law intervenes to direct how those disputes are to be resolved.⁷² The assumption in the following discussion is that a dispute has arisen from an alleged breach of the contractual relationship documented in the mutually agreed terms agreed in accordance with the relevant access and benefit sharing legislation of the provider State.

Outside of this context the author of this chapter does not agree with the assertion which seems to be implicit in Chiarolla’s groundbreaking study of private international law and the Nagoya Protocol that private international law has a role to play in so called cases of ‘misappropriation’ of genetic resources and traditional knowledge outside or contrary to “applicable domestic access and benefit sharing legislation or regulatory requirements of a Party to the Protocol.”⁷³ In essence what such an approach seems to suggest is the existence under domestic law of certain rights outside what a particular state may have legislated for. But to suggest the existence of such rights outside of domestic access and benefit sharing legislation seems to conveniently omit that the very reason the Nagoya Protocol was negotiated and domestic ABS legislation enacted was because no such legal rights existed before. Ethical debates about

⁶⁹ Convention on Biological Diversity, Access and Benefit-Sharing Clearing House, ‘Denmark’ at <https://absch.cbd.int/en/countries/DK> accessed March 31 2022.

⁷⁰ *Inatsisartutlov nr. 3 af 3. juni 2016 om udnyttelse af genetiske ressourcer og aktiviteter i forbindelse dermed*. A copy of this legislation is available from a Government of Greenland web site at <http://lovgivning.gl/lov?rid=%7b9FD12C4B-DB13-4545-B38E-F617738BD35F%7d> accessed March 30 2022 (hereinafter the ‘Greenland ABS Legislation’). A brief summary in English is also available Business Greenland, ‘Collection and research of genetic resources’ at <https://www.businessingreenland.gl/en/Erhverv/Genetiske-ressourcer> accessed March 30 2022.

⁷¹ The Government of the Faroe Islands, “The Faroe Islands in the international community” at <https://www.government.fo/en/foreign-relations/the-faroe-islands-in-the-international-community/> accessed March 31 2022.

⁷² Claudio Chiarolla, “The Role of Private International Law under the Nagoya Protocol”, 424

⁷³ Claudio Chiarolla, “The Role of Private International Law under the Nagoya Protocol”, 428.

‘misappropriation’ of genetic resources in that context seem to have become confused with what the law actually is. Access and benefit sharing legislation in each jurisdiction is the public law instrument that provides the legal framework within which mutually agreed terms are to be negotiated and upon which a contract, the source of private law rights is concluded.

Where states have chosen not to ratify the Nagoya Protocol or not to implement access and benefit sharing legislation the function of private international law is not to fill the gap by extending non-existent legal rights purportedly arising from ‘misappropriation.’ Such rights in law do not exist. Where parties have acted outside of ABS legislation it is not for private international law to step in to see that legislation is enforced. Private International Law has no role to play in enforcement of the domestic public law of any State. The function of Private International law is not to enforce the governmental interests, public policy decisions, revenue law, penal laws and similar such laws of foreign states. Decisions of courts of numerous jurisdictions confirm this.⁷⁴ So if suppliers or users of genetic resources act contrary to the ABS legislation of a particular State it is not the role of private international law to step in and enforce those laws.

Instead the key and only role of private international law is to provide a framework for resolving legal issues relating to the contract embodying mutually agreed terms which necessarily may arise because of the cross boundary nature of many such transactions. However, while a simplistic statement such as that above may be accurate, it nonetheless hides the complexity of the issues involved in private international laws interaction with the Nagoya Protocol. As one publication on the topic has quite accurately (if perhaps in an unsettling way) stated private international law is not just one body of law but rather a collection of

“rules, standards and exceptions that apply where hundreds of different legal systems attempt to determine whether and how each will give effect to the other, in transboundary situations. As one might guess, there are as many different ways of handling transboundary legal situations as there are countries. Every country comes to its own conclusions on these issues, based in its own national laws and policies. Indeed, if parties to a contract file separate lawsuits on the same point, in two different jurisdictions, it is highly likely that the two judges will each rule that a different body of law applies to the contract...In sum [private international law] is an attempt to develop a taxonomy of national approaches to these questions, and see if it is possible to discern commonalities, trends and standards that appear to apply in nearly all cases. At most it can provide the parties to [access and benefit sharing] contracts with a level of understanding regarding the uncertainties of their contracts, and help explain why it is not advisable for those contracts to rely on [access and benefit sharing] terminology...The great challenge for [private international law] lies in the fact that there are over 200 individual countries (or protectorates with separate national law) in the world, which means that there are over 40,000 possible combinations of countries that may be involved in a two-county international contract. Given that most [access and benefit sharing] contracts involve multiple countries, the number of possible combinations is astronomical. Added to that, every different type of contractual clause or legal issues may lead to a different decision regarding which countries law governs the interpretation or application of that clause or issue, so that a single contract can produce hundreds of different opinions.⁷⁵

While the possible permutations and combinations for resolving transboundary issues with respect to access and benefit sharing contracts in general terms may be many, in the Arctic context in light of the discussion on the state of ratification of the Nagoya Protocol and the

⁷⁴ For discussion on cases in relation to this in common law jurisdictions such as the U.K., U.S.A., Australia and New Zealand for example see Martin Davies, *Nygh's Conflict of Laws in Australia* (Sydney, LexisNexis Butterworths) (2019), 440-452.

⁷⁵ Tomme Young and Morten Tvedt, “‘Avoiding making legal assumptions’: The Perils of Relying on a ‘Governing Law’ Clause and/or ‘Private International Law’ “; in Tomme Young and Morten Tvedt, *Drafting Successful Access and Benefit-Sharing Contracts* (Leiden, Brill 2017): 298-300

extent of access and benefit sharing legislation in Arctic States above, it would appear that in the Arctic context private international law is primarily going to be relevant where contracts embodying mutually agreed terms are concluded with respect to genetic resources accessed from biodiversity located in Sweden, Finland, Norway, Denmark and Greenland. This is because these are the only jurisdictions in the Arctic where a contract properly characterised and including mutually agreed terms in terms of the Nagoya Protocol could arise. No access and benefit sharing contracts for mutually agreed terms as understood in terms of the Nagoya Protocol could arise with respect to genetic resources accessed from biodiversity in any other Arctic jurisdiction simply because those other Arctic jurisdictions have not ratified the Nagoya Protocol or enacted domestic ABS legislation.

Although specific examples of commercialisation of Arctic genetic resources can be pointed to (see above) the author of this paper has been unable to identify any specific example of an ABS Contract that has been concluded with respect to Arctic genetic resources that has been subject to a litigated dispute. As such consideration of private international law issues must for now remain in the abstract. Although one very interesting study does consider the hypothetical application of the Norwegian legislation which confirms the likely complexity of resolving cross boundary disputes relating to access and benefit sharing, and in particular suggests that private international law will be unable to resolve all foreseeable issues especially where domestic access and benefit sharing legislation in Norway interact with domestic administrative law.⁷⁶ There is no reason to expect such problems might not arise in other Arctic jurisdictions

As noted earlier in this chapter private international law assumes the access and benefit sharing contract has some cross border element. For example, parties to the access and benefit sharing Contract may be located in different jurisdictions. Similarly, for many such contracts it will also often be the case that the biodiversity or traditional knowledge to be accessed is located in one jurisdiction (the ‘provider’ jurisdiction) while the actual use, research development and commercialisation of will occur in one or more other jurisdictions (the ‘user jurisdictions’). Once new products have been developed applications for patents and or the marketing of new products developed from such genetic resources and or traditional knowledge could potentially occur in any number of jurisdictions around the world. Whether such further use, research, development, commercialisation and patenting is permissible under the terms of the access and benefit sharing contract could potentially be subject to litigation anywhere in the world remains a moot point. But as the above quote makes clear the actual content and principles of private international law is unique to each jurisdiction. Thus while ABS Contracts under the Nagoya Protocol will for the time being relate only to the genetic resources of Sweden, Finland, Norway and Greenland disputes in relation to such access and benefit sharing contracts could in theory be determined in accordance with the unique private international law of any of the more than 193 member states of the United Nations. It is likely though ABS contracts could be concluded by far fewer States than that as early studies show that the bulk of companies interested in Arctic Genetic Resources come from the USA, Canada, Iceland, Norway, Finland, Sweden, Denmark, and the United Kingdom.⁷⁷

⁷⁶ Morten Tvedt and Ole Fauchald, Implementing the Nagoya Protocol on ABS: A Hypothetical Case Study on Enforcing Benefit Sharing in Norway, *The Journal of World Intellectual Property* 14(5) (2011): 383-40.

⁷⁷ David Leary, “Bioprospecting in Antarctica and the Arctic. Common Challenges?” *Yearbook of Polar Law* 1 (2009): 145.

Given that many of the companies active in bioprospecting in the Arctic are European and are based in some of the same jurisdictions that have legislated to regulate access and benefit sharing in accordance with their obligations under the Nagoya Protocol, it is likely that European private international law will to some extent be relevant to resolving many such disputes. Fortunately, across the European jurisdictions of Sweden, and Finland and (although not a member of the EU) Norway there is arguably a degree of consistency in principles of private international law. This is because of the application of EU Regulations with respect to Private International Law and including the Brussels I Regulation (2012) (in relation to jurisdiction and the recognition and enforcement of judgments)⁷⁸ and the Rome I Regulation (that deals with private international law applicable to contractual obligations).⁷⁹ Brussels I Regulation (2012) for example provides that as a general rule persons domiciled in a particular EU Member State shall be sued in the courts of that Member State.⁸⁰ Likewise a judgment given in a EU Member State is automatically recognised in the other EU Member State without any special procedure being required.⁸¹ Similarly, Rome I Regulation provides a contract shall generally be governed by the law chosen by the parties through an express choice of law clause.⁸²

While there is consistency in the rules of private international law across the European Union the author also concedes that it is an open question as to whether these EU Regulations would apply to contracts relating to mutually agreed terms. Article 1 of Brussels I Regulation provides that it does not apply to “revenue, customs or administrative matters or to the liability of the State for acts and omissions in the exercise of State authority (*acta iure imperii*).”⁸³ Likewise Rome I does not apply “to revenue, customs or administrative matters.”⁸⁴ Contracts containing mutually agreed terms clearly do not relate to revenue, or customs matters. But does the entry into contracts such as these constitute administrative matters or relate to the liability of the state for *acta iure imperii*? This question cannot be answered conclusively at this stage, it is arguable that the better view is that it does not. This is because arguably in any future litigation it would not be an administrative decision of a State or the act of the State that would be in question, but rather the terms of the contract, their interpretation and their implementation. Even if that were the case and Brussels I or Rome I did not apply then the courts would still need to determine issues relating to jurisdiction and recognition and enforcement of judgments etc in accordance with other applicable rules of private international law. As noted earlier in this chapter such determinations will vary depending on factors such as the nationality or domicile of particular parties and the court which is asked to exercise jurisdiction. In the absence of specific dispute it is difficult to express a conclusive view on this issue.

Conclusion

This Chapter has examined the role of mutually agreed terms under the CBD and the Nagoya Protocol in the Arctic context. Quite uncharacteristically for an instrument of public

⁷⁸ Regulation (EU) No 1215/2012 of the European Parliament and of the Council of 12 December 2012 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters (recast), OJ L 351/1, (20 December 2012) (‘Brussels I’)

⁷⁹ Regulation (EC) No 593/2008 of the European Parliament and of the Council of 17 June 2008 on the law applicable to contractual obligations (Rome I). L 177/6 (17 June 2008)

⁸⁰ Article 4, Brussels I.

⁸¹ Article 36, Brussels I.

⁸² Article 3, Rome I.

⁸³ Article 1, Brussels I.

⁸⁴ Article 1, Rome I.

international law the Nagoya Protocol relies heavily on private international law for the implementation of its core provisions relating to access and benefit sharing through mutually agreed terms. As this paper has highlighted agreements on access and benefit sharing in the form of mutually agreed terms are contractual in nature. It is in the resolution of disputes in relation to these potentially cross border contracts that private international law is most relevant. There is no doubt there is commercial interest in Arctic genetic resources. Several Arctic jurisdictions have implemented access and benefit sharing legislation consistent with the Nagoya Protocol, but precisely how these legislative regimes will interact with the rules of private international law in the Arctic context must await an actual contractual dispute. Precisely how effective the close relationship between the CBD, Nagoya Protocol and private international law will be for resolving potential cross border contract disputes remains unclear. But rather than providing for legal certainty given the diversity of ways that private international law may resolve a particular issue across multiple jurisdictions it is at least arguable that the Nagoya Protocols attempt to link its access and benefit sharing provisions to private international law has created more complexity than is needed. It appears therefore that in creating this link between access and benefit sharing under the Nagoya Protocol and private international law the drafters of the Nagoya Protocol have simply been “to smart by half” in the sense in their efforts to create certainty they appear to have created even more uncertainty, at least in the Arctic context.