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The WIPO GRATK Treaty and National Disclosure Regimes: Convergence, Gaps, and Implementation Challenges

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SOUTH CENTRE

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THE WIPO GRATK TREATY AND NATIONAL DISCLOSURE REGIMES: CONVERGENCE, GAPS, AND IMPLEMENTATION CHALLENGES

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ABSTRACT

The World Intellectual Property Organization (WIPO) Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge (GRATK Treaty), adopted in 2024, establishes a multilateral mandatory disclosure requirement for patent applications based on genetic resources (GRs) and associated traditional knowledge (TK). This Research Paper assesses how existing national disclosure regimes align with the Treaty's minimum obligations and identifies legislative and institutional adjustments that implementation may require. The paper compares thirteen jurisdictions regarding the trigger, subject matter and content of disclosure, territorial scope, institutional mechanisms, rectification and sanctions. It finds substantial convergence with the Treaty's objectives but significant variation in legislative design. Key gaps in the alignment of national disclosure regimes with the Treaty concern territorial scope, coverage of associated TK, declarations where required information is unavailable, opportunities for rectification, and limits on patent revocation. The paper concludes that its implementation will require careful calibration between patent disclosure obligations and existing biodiversity and access and benefit-sharing frameworks, while preserving the policy space available under the Treaty.

Le Traité de l'Organisation mondiale de la propriété intellectuelle (OMPI) sur la propriété intellectuelle, les ressources génétiques et les savoirs traditionnels associés (Traité GRATK), adopté en 2024, instaure une obligation multilatérale de divulgation pour les demandes de brevet fondées sur des ressources génétiques (RG) et des savoirs traditionnels associés (ST). Ce document de recherche évalue dans quelle mesure les régimes nationaux de divulgation existants sont conformes aux obligations minimales du Traité et identifie les adaptations législatives et institutionnelles que sa mise en œuvre pourrait nécessiter. Le document compare treize juridictions en ce qui concerne le déclenchement, l'objet et le contenu de la divulgation, le champ d'application territorial, les mécanismes institutionnels, la rectification et les sanctions. Il révèle une convergence substantielle avec les objectifs du Traité, mais des variations significatives dans la conception législative. Les principales lacunes dans l'alignement des régimes nationaux de divulgation sur le Traité concernent la portée territoriale, la couverture des savoirs traditionnels associés, les déclarations en cas d'indisponibilité des informations requises, les possibilités de rectification et les limites en matière de révocation des brevets. Le document conclut que sa mise en œuvre nécessitera un ajustement minutieux entre les obligations de divulgation en matière de brevets et les cadres existants relatifs à la biodiversité ainsi qu'à l'accès et au partage des avantages, tout en préservant la marge de manœuvre politique prévue par le Traité.

El Tratado de la Organización Mundial de la Propiedad Intelectual (OMPI) sobre la Propiedad Intelectual, los Recursos Genéticos y los Conocimientos Tradicionales Asociados (Tratado GRATK), adoptado en 2024, establece un requisito multilateral de divulgación obligatoria para las solicitudes de patente basadas en recursos genéticos (RG) y conocimientos tradicionales asociados (CT). Este documento de investigación evalúa en qué medida los regímenes nacionales de divulgación existentes se ajustan a las obligaciones mínimas del Tratado e identifica los ajustes legislativos e institucionales que podrían ser necesarios para su implementación. El documento compara trece jurisdicciones en relación con las condiciones que dan lugar a la obligación de divulgación, el objeto y el contenido de dicha divulgación, el alcance territorial, los mecanismos institucionales, las posibilidades de rectificación y las sanciones. El análisis revela una convergencia considerable con los objetivos del Tratado, pero también importantes diferencias en el diseño legislativo. Las principales deficiencias en la adecuación de los regímenes nacionales de divulgación al Tratado se refieren al alcance territorial, la cobertura de los conocimientos tradicionales asociados, las declaraciones

exigidas cuando no se dispone de la información requerida, las posibilidades de rectificación y los límites a la revocación de patentes. El documento concluye que la implementación del Tratado requerirá una cuidadosa coordinación entre las obligaciones de divulgación en materia de patentes y los marcos normativos existentes sobre biodiversidad y acceso a los recursos genéticos y participación en los beneficios, preservando al mismo tiempo el margen de maniobra en materia de políticas públicas que ofrece el Tratado.

世界知识产权组织（WIPO）于 2024 年通过的《知识产权、遗传资源及相关传统知识条约》（GRATK 条约），针对基于遗传资源（GRs）及相关传统知识（TK）的专利申请，确立了一项多边强制性披露要求。本研究论文评估了现有各国披露制度与该条约最低义务的契合程度，并指出了实施该条约可能需要的立法和体制调整。本文就披露的触发条件、主题事项和内容、地域范围、体制机制、更正及制裁等方面，对 13 个司法管辖区进行了比较。研究发现，各国制度与该条约的目标基本一致，但在立法设计上存在显著差异。各国披露制度与《条约》在对接方面存在的主要差距涉及：地域范围、相关传统知识的覆盖范围、在无法提供所需信息时的声明、更正机会以及专利撤销的限制。本文得出结论：该《条约》的实施需要在专利披露义务与现有的生物多样性及获取与惠益分享框架之间进行审慎的协调，同时保留《条约》所赋予的政策空间。

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I. INTRODUCTION

The adoption of the WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge (GRATK Treaty)[2] in May 2024 marked a historic milestone in international intellectual property (IP) law. The Treaty is anchored in two principal objectives: enhancing the efficacy, transparency and quality of the patent system, and preventing the erroneous grant of patents for inventions that lack novelty or inventiveness in light of genetic resources and associated traditional knowledge (TK). To achieve these objectives, it establishes a mandatory disclosure obligation. Patent applicants are required to disclose the country of origin or, where applicable, the source of the genetic resources, as well as the source of associated traditional knowledge, when those resources or knowledge contributed to the claimed invention.

The Treaty's preamble places this disclosure requirement within a broader systemic framework. It emphasizes that patent offices should have access to appropriate information to make well-founded patentability determinations. At the same time, it seeks to promote legal certainty and consistency for both providers and users of genetic resources (GR) and traditional knowledge. The preamble also acknowledges the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and affirms that best efforts should be made to include Indigenous Peoples and local communities in the Treaty's implementation.

The Treaty, however, does not emerge in a legal vacuum. Over the past two decades, several countries have introduced mandatory disclosure requirements into their national patent legislation. These regimes differ considerably in their scope, legislative design and legal consequences.

As the Treaty moves towards ratification and eventual entry into force, an important question arises regarding to what extent do these existing national disclosure regimes already comply with the Treaty's obligations? Equally important is whether legislative amendments will be necessary to bring domestic laws into conformity with the Treaty's minimum standards.

This Research Paper addresses these two questions through a comparative analysis of selected national patent disclosure regimes against an interpretation of the provisions of the GRATK Treaty and of their implications for effective implementation at the domestic level. It identifies areas of convergence and divergence between national laws and the GRATK Treaty and evaluates the legislative and institutional adjustments that States may need to undertake to ensure compliance with the Treaty's requirements.

[2] WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge. Available from https://www.wipo.int/wipolex/en/text/592504.

II. THE NEGOTIATING HISTORY AND SCOPE OF THE GRATK TREATY

Although the GRATK Treaty marks a landmark development in multilateral IP treaties, it constitutes a partial resolution of the problem of misappropriation of genetic resources and associate TK through the IP system.[3] The Treaty emerged largely in response to longstanding concerns of developing countries that the international patent system enabled the appropriation of innovations derived from their biodiversity and traditional knowledge without adequate transparency, recognition, or benefit sharing.

Following the adoption of the Convention on Biological Diversity (CBD) in 1992, biodiversity-rich countries increasingly argued that patent applicants should be required to disclose the origin of GRs and associated TK used in inventions. In their view, such a requirement would help support the CBD's objectives of conservation, sustainable use, and the fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge.[4] The disclosure requirement was therefore conceived not only as a patent-law formality, but also as a mechanism to improve transparency, facilitate compliance with national access and benefit-sharing regimes, and reduce instances of "biopiracy."

The origins of the disclosure requirement can be traced to the implementation debates surrounding the CBD during the early 1990s. The idea subsequently gained traction in national and regional initiatives, most notably within the Andean Community, whose Decisions 391 (1996) and 486 (2000) linked intellectual property protection to compliance with access rules governing genetic resources and associated knowledge.[5]

At the multilateral level, developing countries sought to incorporate disclosure obligations into the World Trade Organization's (WTO) Agreement on Trade Related Aspects on Intellectual Property Rights (TRIPS Agreement), particularly during discussions on the relationship between TRIPS and the CBD following the 2001 Doha Ministerial Declaration.[6] Proposals submitted by countries including Brazil, India, Peru, Pakistan and others called for patent applicants to disclose the source and origin of genetic resources and associated traditional knowledge and, in some versions, to demonstrate prior informed consent and benefit-sharing compliance.[7] These

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[3] Nirmalya Syam and Carlos M. Correa, "Understanding the New WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge", Policy Brief No.131, South Centre, Geneva, 3 July 2024. Available from https://www.southcentre.int/wp-content/uploads/2024/07/PB131_Understanding-the-New-WIPO-Treaty-on-Intellectual-Property-Genetic-Resources-and-Associated-Traditional-Knowledge_EN.pdf; N.S. Gopalakrishnan, et. al., "Intellectual Property, Genetic Resources, and Associated Traditional Knowledge", *Environmental Law Reporter*, vol. 54 (No.5), 2024, pp. 10829-10836. Available from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4914236; Ian Goss, "25 Years in the Making: The WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge", *Harvard International Law Journal,* vol. 66, 2025. Available from https://journals.law.harvard.edu/ilj/wp-content/uploads/sites/84/02_HLI_66_S_Goss.pdf.

[4] Graham Dutfield and Andrea Zappalaglio, "Evaluating the WIPO Genetic Resources and Associated Traditional Knowledge Treaty: Critical History and Textual Analysis", (May 12, 2026). Revised draft to be published in the *International Review of Law Computers and Technology* [forthcoming, 2026]. Available from https://ssrn.com/abstract=6803019.

[5] Ibid.

[6] WTO; Doha Ministerial Declaration, 14 November 2001, paragraph 19. Available from https://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_e.htm.

[7] See WTO, Article 27.3(b), traditional knowledge, biodiversity. Available from https://www.wto.org/english/tratop_e/trips_e/art27_3b_e.htm.

proposals, however, remain on the agenda of the TRIPS Council and continue to encounter persistent opposition from several developed countries, preventing consensus within the WTO.[8]

In parallel, negotiations increasingly shifted to the World Intellectual Property Organization (WIPO). The establishment in 2000 of the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC) created a dedicated forum for discussions on genetic resources, traditional knowledge and intellectual property. Over the following two decades, the IGC produced numerous studies, draft texts and negotiating proposals. Indigenous Peoples, local communities, developing countries, academics and civil society organizations played an active role in shaping the negotiations. Progress was often slow and marked by significant disagreement between countries seeking a robust disclosure obligation and those favouring a more limited approach.[9]

Nevertheless, after more than twenty years of negotiations within WIPO, and following parallel developments under the CBD and the Nagoya Protocol Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (Nagoya Protocol), WIPO Member States finally reached consensus at a Diplomatic Conference convened in Geneva in May 2024. The resulting GRATK Treaty reflects both the persistence of developing countries in seeking greater coherence between intellectual property and biodiversity governance, and the compromises made to secure agreement among a diverse membership.[10]

Any WIPO Member State may become a party to the Treaty. A State that signed the Treaty may deposit an instrument of ratification. An eligible State that did not sign may deposit an instrument of accession. The Treaty will enter into force three months after 15 eligible parties have deposited instruments of ratification or accession. As of September 2026, 44 States have signed the Treaty. Malawi, Peru and Uganda have ratified it, while Albania has acceded to it. The Treaty therefore has four Contracting Parties and has not yet entered into force. Broad participation will be important to achieve its objectives. The disclosure obligations apply only in Contracting Parties. Limited participation would leave many patent applications outside the common disclosure framework. It would also reduce the Treaty's ability to improve transparency and prevent the erroneous grant of patents across jurisdictions.[11]

II.1 Salient Features of the Treaty

The principal innovation of the GRATK Treaty is the establishment of a mandatory disclosure requirement. Where a claimed invention is based on a genetic resource (GR), patent applicants must disclose the country of origin of the GR or, where the country of origin is not known, its

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[8] Dutfield and Zappalaglio, *supra* note 2. See WTO, "Reviving Discussions on the Relationship between the TRIPS Agreement and Convention on Biological Diversity", Communication from Brazil, India and Peru, IP/C/W/719, 18 March 2025. Available from https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=Q:/IP/C/W719.pdf&Open=True. Also see WTO, "IP for Development", Communication from Bangladesh, Brazil, Colombia and India, IP/C/W/743, 27 July 2026. Available from https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=Q:/IP/C/W743.pdf&Open=True.

[9] Ibid.

[10] Wend Wendland, "WIPO's new treaty on genetic resources and associated traditional knowledge – a long-awaited and ground breaking step towards combatting biopiracy", SOUTHVIEWS, No. 299, 9 October 2025. Available from https://www.southcentre.int/southviews-no-299-9-october-2025/.

[11] WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge, Articles 12, 13, 17 and 18. See also WIPO, Contracting Parties and Signatories, status as of 18 September 2026. Available from https://www.wipo.int/wipolex/en/treaties/ShowResults?search_what=C&treaty_id=19830.

source.[12] Where the claimed invention is based on associated traditional knowledge (TK), applicants must disclose, as applicable, the Indigenous Peoples or local communities (IPLCs)[13] providing that knowledge or, where this information is not available, its source.[14]. Through this mechanism, the Treaty seeks to improve transparency within the patent system.

Though the Treaty establishes a minimum international obligation within the patent system for disclosure, it does not establish a comprehensive regulatory framework governing GRs and associated TK. It does not regulate access and benefit-sharing (ABS), determine the legal consequences of non-compliance with national biodiversity legislation, or address issues such as derivatives or digital sequence information (DSI). These matters remain within the competence of domestic law and other applicable international instruments.[15] As a large portion of contemporary research using biological materials draws on their sequence information stored in databases without any physical access to the material itself, the exclusion of DSI from the scope of the GRATK Treaty patent applications on a large number of products that are invented by using the sequence information drawn from databases may not contain a disclosure of origin or source.[16]

While in terms of Article 9 of the GRATK Treaty contracting parties are allowed to include additional obligations such as extending the disclosure requirement to DSI and derivatives within their national laws, the Treaty does not create a minimum obligation for all contracting Parties to do so. This essentially allows developed countries that favour a narrow scope disclosure requirement to exclude DSI and derivatives from the disclosure requirement. As these countries also collectively account for the predominant share of patent applications filed globally, the majority of patent applications that involve inventions that have used DSI would, in effect, remain excluded from disclosure of source or origin.

The disclosure obligation is triggered where the claimed invention is “based on” a genetic resource or associated traditional knowledge. The Treaty defines "based on" to mean that the genetic resource or associated traditional knowledge must be necessary for the claimed invention and that the invention depends on its specific properties.[17] This definition reflects a negotiated compromise reached during the Diplomatic Conference between proposals favouring broader and narrower scope of the disclosure obligation.[18] Another significant outcome of the negotiations was the deletion of a provision contained in the Basic Proposal of the draft treaty submitted to the Diplomatic Conference, that would have allowed Contracting Parties to introduce justified exceptions and limitations to the disclosure requirement in special cases based on the public interest. As adopted, the Treaty establishes no general exception to the disclosure obligation. This was a positive outcome for developing countries as it essentially restricts the space for developed countries that have been resistant to the disclosure requirement to further narrow down its scope while implementing their treaty obligations. Article 3.3 nevertheless recognizes that applicants may not always possess the required information. Where the country of origin or source

[12] WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge, Article 3.1. Available from https://www.wipo.int/wipolex/en/text/593055.
[13] The express reference to IPLCs is itself significant. This is the first IP treaty to do make a reference to IPLCs
[14] Ibid., Article 3.2. See Ayla do Vale Alves, “ESIL Reflection – WIPO’s New Treaty on Intellectual Property, Genetic Resources and Traditional Knowledge – A Turning Point for Indigenous Heritage?”, *ESIL Reflections*, vol.13 (No.11), 2024. Available from https://esil-sedi.eu/esil-reflection-wipos-new-treaty-on-intellectual-property-genetic-resources-and-traditional-knowledge-a-turning-point-for-indigenous-heritage/.
[15] Gopalakrishnan, et. al., supra note 1, p. 10832.
[16] Shuwen Xu, “The 2024 WIPO Treaty on Genetic Resources: Dawn of a New Day?”, *Stanford Journal of International Law,* vol.62 (No.1), pp. 78-109, at pp. 100-102. Available from https://law.stanford.edu/wp-content/uploads/2026/04/SJIL_62-1_Xu.pdf.
[17] WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge, Article 2.
[18] Syam and Correa, *supra* note 1, p. 3.

of the genetic resource, or the relevant IPLC providing the associated traditional knowledge, is not known, applicants may instead submit a declaration affirming that the information is not known.

The Treaty does not require patent offices to be legally mandated to verify the authenticity of disclosures submitted by applicants. At the same time, the Treaty does not regulate whether Contracting Parties may require applicants to submit supporting documentation under domestic law. Thus, the modality of submitting the disclosure is left to be addressed under national laws or regulations as deemed appropriate. Patent offices can, for example, require the submission of information regarding compliance with applicable ABS regulations, as additional requirements within their legal system, in accordance with Article 9 of the GRATK Treaty. The Treaty also establishes the framework governing sanctions and remedies for non-disclosure. Article 5.1 requires Contracting Parties to adopt appropriate administrative, legal and/or policy measures to address failures to comply with the disclosure obligation under Article 3. At the same time, Articles 5.3 and 5.4 place important limits on those measures. In particular, a granted patent may not be revoked, invalidated or rendered unenforceable solely on the ground that the required disclosure was not made, unless the non-disclosure resulted from fraudulent intent.[19]

The issue of sanctions and remedies was amongst the most contested issues in the negotiations. The scope of sanctions and remedies is critical to ensure effective compliance with the disclosure obligation by defining the consequences of non-disclosure or wrongful disclosure. The patent laws of a number of developing countries that have an existing disclosure requirement have strong sanctions and remedies to ensure compliance with the requirement. In this regard the Treaty effectively set a standard of sanctions and remedies that is lower than what some developing countries have.[20]

Article 5.2 requires Contracting Parties to provide applicants with an opportunity to rectify failures to comply with the disclosure requirement, except where the non-disclosure is fraudulent. The Treaty does not prescribe the procedures or timeframes for rectification, leaving these matters to national implementation.[21] The Treaty also does not define when non-disclosure is fraudulent.[22]

Therefore, the national law can define the test for determining non-disclosure with fraudulent intent, the authority to make such determination, and the stage at which rectification may be refused. Moreover, besides the ground of fraudulent-intent, the Treaty does not prevent patents from being revoked on other grounds under national law e.g., non-compliance with ABS regulations. As discussed below in this paper, some patent offices in developing countries require the applicants to provide evidence of compliance with ABS regulations through the national biodiversity authority concerned.

Table 1 summarizes the provisions of the GRATK Treaty against which the selected national legislative frameworks are examined. It distinguishes the minimum obligations that Contracting Parties must implement from areas in which the Treaty leaves room for additional national requirements or choices of implementation, including verification, institutional linkage and broader national disclosure rules.

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[19] Ibid.
[20] See Vidisha Garg, "WIPO GRATK Treaty India helped Write and Would Not Sign", Anand & Anand, 1 August 2026. Available from https://www.anandandanand.com/news-insights/wipo-gratk-treaty-india-helped-write-and-would-not-sign/.
[21] Syam and Correa, supra note 1, p. 3.
[22] Gopalakrishnan, et. al., *supra* note 1, p. 10832.

Table 1
Minimum obligations under the WIPO GRATK Treaty and their Interpretation in this Paper

Treaty issue	Minimum obligation and interpretation used
Trigger	Disclosure applies when the claimed invention is based on a genetic resource or associated traditional knowledge. The resource or knowledge must be necessary to develop the invention. The invention must depend on its specific properties. The full patent application should be considered.
Required information	The applicant must disclose the country of origin of the genetic resource. The source may be disclosed when the origin is not known. For associated traditional knowledge, the applicant must disclose the Indigenous Peoples or local community that provided it. The source may be disclosed when that information is not available.
Unknown information	The applicant must be allowed to declare that the required information is not known.
Territorial scope	The Treaty does not limit disclosure to domestic genetic resources or domestic associated traditional knowledge.
Derivatives and DSI	Derivatives and DSI are outside the present minimum obligation. National law may cover derivatives and DSI as compatible extensions.
Verification	A patent office cannot be required to verify the authenticity of the disclosed information. National law may allow checks. Another authority may also verify the information.
Publication and linkage with biodiversity authority	The Treaty does not require publication of the disclosed information. It also does not require its transmission to or processing by a biodiversity authority. National law may require publication of non-confidential origin and source information. It may also provide for referral to and review by a biodiversity authority. These measures are compatible with the Treaty and may make disclosure more useful in practice.
Rectification	The applicant must have an opportunity to correct a failure to disclose. National law may withhold that opportunity where there is fraudulent conduct or intent.
Sanctions	National law must provide measures for non-compliance. A patent cannot be revoked solely for failure to disclose unless there is fraudulent intent.
National flexibility	The Treaty sets a minimum floor. Each Contracting Party may choose its method of implementation. Broader national obligations remain compatible unless the Treaty expressly prohibits them.

III. METHODOLOGY

This Research Paper adopts a comparative legal analysis to assess the extent to which selected national patent disclosure regimes align with the minimum obligations established by the WIPO GRATK Treaty. Rather than evaluating the effectiveness of disclosure requirements in addressing misappropriation of GR and associated TK or supporting fair and equitable benefit-sharing, the analysis focuses on the legal design of national disclosure mechanisms that preceded the WIPO GRATK Treaty and examines whether they satisfy, exceed, or diverge from the obligations that Contracting Parties must implement under the Treaty.

The GRATK Treaty serves as the analytical benchmark against which national legislation is assessed. As mentioned, the Treaty establishes minimum obligations relating to the mandatory disclosure of the country of origin or source of GRs, and the provider or source of associated traditional knowledge where the claimed invention is based on such resources or knowledge. It also prescribes minimum procedural safeguards regarding opportunities to rectify non-disclosure, limitations on patent revocation solely for failure to disclose, and the absence of any obligation upon patent offices to verify the authenticity of disclosures. These provisions form the baseline for comparison. The analysis applies the interpretations set out in Section II. A national rule is regarded as meeting the minimum standard when it covers each mandatory requirement of the GRATK. A broader rule is regarded as compatible unless the Treaty expressly prohibits it, and a narrower rule is treated as a gap against the Treaty obligation.

The comparative analysis examines thirteen jurisdictions (including five Andean Community members) representing different legal traditions, levels of economic development, biodiversity profiles, and approaches to regulating genetic resources. The jurisdictions were selected using four principal criteria. First, the study includes countries that have historically been among the principal proponents of an international mandatory disclosure requirement during negotiations in both the WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC) and the WTO TRIPS Council, including Brazil, India and the Andean Community Member States. Secondly, the analysis includes countries recognized as megadiverse countries whose domestic legislation has often served as models for biodiversity governance and access and benefit-sharing regulation. Thirdly, the study incorporates countries occupying different positions with respect to the GRATK Treaty, including signatories, Contracting Parties that have ratified the Treaty, and important jurisdictions that have not signed the Treaty, thereby enabling comparison between jurisdictions that will be legally bound by the Treaty and those whose domestic disclosure regimes have evolved independently. Finally, the analysis includes jurisdictions participating in regional systems, particularly the Andean Community and the African Regional Intellectual Property Organization (ARIPO), in order to examine how regional cooperation arrangements may influence implementation of the Treaty.

National disclosure regimes differ considerably in legislative structure. In some jurisdictions disclosure obligations are located within patent legislation, while in others they are embedded in biodiversity legislation, implementing regulations, or administrative procedures that operate alongside patent examination. Consequently, the analysis focuses on the substantive operation of national disclosure systems rather than their statutory provisions. A disclosure mechanism implemented through biodiversity legislation is therefore treated as functionally equivalent to one contained directly within patent legislation where it achieves the same legal outcome.

Each jurisdiction is examined across a common set of analytical dimensions derived from the substantive provisions of the GRATK Treaty. These include:

(i) the legal trigger for the disclosure obligation;
(ii) the scope of genetic resources, associated traditional knowledge, derivatives and digital sequence information covered by the disclosure requirement;
(iii) the content of the information required to be disclosed;
(iv) the territorial scope of the obligation;
(v) the institutional mechanism through which disclosure is made;
(vi) whether patent offices are required to verify disclosures;
(vii) opportunities available to applicants to rectify failures to disclose; and
(viii) the sanctions and other legal consequences applicable in cases of non-disclosure or incorrect disclosure.

Examining each jurisdiction against these common dimensions facilitates systematic comparison while highlighting the different legislative techniques adopted to pursue similar policy objectives.

The analysis distinguishes between provisions that exceed the minimum obligations of the GRATK Treaty and provisions that are inconsistent with it. As the Treaty establishes minimum standards rather than exhaustive harmonisation, national legislation imposing broader disclosure obligations is not regarded as inconsistent merely because it goes beyond the Treaty's requirements. For example, several jurisdictions require disclosure when GRs are used in an invention, rather than only when the invention is “based on” those resources. Disclosure requirements in some jurisdictions explicitly cover derivatives and/or digital sequence information relating to GRs. Some jurisdictions also require patent applicants to provide documentary proof of compliance with access and benefit-sharing legislation. Such measures are treated as compatible with the Treaty unless they are expressly precluded by its provisions. Conversely, where national legislation imposes a narrower disclosure obligation, limits disclosure to domestic genetic resources, does not extend to associated traditional knowledge, fails to provide the declaration contemplated under Article 3.3, or permits patent invalidation solely on the ground of non-disclosure contrary to Article 5.3, these features are identified as potential areas requiring legislative alignment.

The analysis also distinguishes between issues of treaty compliance and broader policy choices. The objective is not to rank national disclosure regimes according to their relative strength or effectiveness but to identify where domestic legislation converges with, diverges from, or goes beyond the minimum obligations established by the GRATK Treaty. This distinction is particularly important because many national disclosure regimes were originally designed to implement access and benefit-sharing (ABS) legislation in accordance with the Convention on Biological Diversity and the Nagoya Protocol rather than an international patent disclosure obligation. Their broader regulatory objectives frequently explain differences in legislative design that should not be interpreted as inconsistency with the Treaty.

Finally, the comparative analysis is primarily doctrinal in nature. It examines statutory provisions, implementing regulations, patent examination guidelines and related legal instruments governing disclosure obligations. The study does not attempt to evaluate empirical questions concerning enforcement practices, compliance rates, patent office behaviour or the effectiveness of disclosure regimes in preventing biopiracy. Those issues remain important areas for future research as the GRATK Treaty enters into force and national implementation experiences begin to emerge.

IV. COMPARISON WITH SELECTED NATIONAL DISCLOSURE REQUIREMENTS

This section applies the methodology and selection criteria described in Section III to compare the national disclosure regimes against the Treaty baseline. The comparative table in Annex 1 summarizes the principal requirements and identifies key alignment gaps, where applicable.

IV.1 Brazil

Brazil is a signatory to the GRATK Treaty.

The disclosure requirement in relation to intellectual property rights is stipulated in the Brazilian biodiversity law – Law No.13 123 of 2015.[23] This law regulates access to GRs (referred to as genetic heritage) and associated TK from Bazil, the economic exploitation of a product or reproductive material derived from access to GRs and associated TK, as well as fair and equitable sharing of the benefits arising from such economic exploitation. Article 12 of the law stipulates that access to GRs and associated TK must be registered with the Genetic Heritage Management Council (C Gen), and the registration must be done prior to the request for any IP right, i.e., before making an application for grant of any IP right, including patents. Article 47 states, "The granting of intellectual property rights by the competent authority over a finished product or over reproductive material obtained from access to genetic resources or associated traditional knowledge is conditional upon registration or authorization, in accordance with this Law." Article 20 of Decree No.8.722 of May 11, 2016, established an electronic registration system (the National System for the Management of Genetic Heritage and Associated Traditional Knowledge – SisGen).[24]

Article 109 of the Decree states that "The user, when applying for intellectual property rights, must indicate whether there has been access to genetic resources or associated traditional knowledge, as well as whether there is a registration of access carried out under the terms of this Decree." This requirement applies to claims on derivatives of GRs or the use of DSI, as "genetic heritage" is defined broadly in the patent law as "genetic information of genetic origin ... including substances derived ....".[25]

In terms of content, the registration must identify the genetic heritage within Brazil at the strictest possible taxonomic level and provide the in-situ provenance, normally through georeferenced coordinates where that is possible.[26] If associated traditional knowledge is involved, the user must identify the indigenous population, traditional community, or traditional farmer, even where the knowledge was obtained from a secondary source.[27] For associated traditional knowledge, the registration must also indicate the source of the knowledge and the georeferenced coordinates of the community.[28] If coordinates cannot be provided, the user must provide the most specific geographic location possible.[29]

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[23] Brazil, Law No.13.123 of 20 May 2015. Available from http://www.wipo.int/wipolex/en/details.jsp?id=15741.
[24] Brazil, Decree No.8.772 of 11 May 2016. Available from http://wipo.int/wipolex/en/legislation/details/16116.
[25] Brazil, *supra* note 16, Article 2.
[26] Brazil, *supra* note 17, Article 22.
[27] Ibid.
[28] Ibid.
[29] Ibid.

This is more detailed than the minimal requirement in the GRATK Treaty which only requires disclosure of the country of origin or source, or the providing IPLC or source of the associated TK. Moreover, while the Brazilian law requires the user to submit the most specific geographic location from where the GR or associated TK was obtained if the user cannot provide the exact coordinates.[30] Under the GRATK Treaty only a declaration that the origin or source is not known to the patent applicant would suffice instead.

Thus, the patent applicant must provide this information to the IP office. The trigger of this disclosure is the act of access to the GR or associated TK.[31] Access is defined as research or technological development carried out on samples of genetic heritage, or associated TK.[32] This contrasts with the trigger under the GRATK Treaty, which is that a patent application is for an invention based on GR and associated TK. In effect, the Brazilian law triggers the disclosure requirement for any use of the GR or associated TK.

Even though the disclosure requirement is embedded in the ABS law, this is not inconsistent with the Treaty. Article 9.2 of the Treaty states that "Nothing shall prevent Contracting Parties from determining the appropriate method of implementing the provisions of this Treaty within their own legal systems and practices."

However, the obligation that the GRATK Treaty creates is in respect of any GR or associated TK on which a claimed invention is based. It is not limited to only instances of access to GRs or associated TK from Brazil, which triggers the C Gen registration.[33] Brazil would therefore have to try to align its disclosure mechanism with the Treaty and enable disclosures to be made even for GRs and associated TK of non-Brazilian origin.

There is no obligation on the intellectual property office (INPI) to verify the disclosure. This approach is compatible with Article 3.5 of the GRATK Treaty because it does not impose a verification obligation on INPI. The Brazilian approach puts the onus on the applicant to submit the SisGen registration reference in the patent application and update the SisGen record with regard to the patent application.[34] This provides authenticated information to the INPI about the SisGen registration and the CGen is also informed of the patent application through mention of the application in the updated SisGen record.[35] This obviates the need for any verification function by the INPI with regard to the disclosure. A SisGen registration can be updated to include changes connected with intellectual-property applications or licensing.[36] Paragraph 3. § 2º of Decree No. 8.772 of May 11, 2016 explicitly mandates that the update must specifically be performed by the user (applicant) to include information regarding the request for any intellectual property right or patent licensing.[37] As discussed above, the GRATK Treaty does not prevent contracting Parties from requiring verification of the disclosure through other modalities without making authentication a legal obligation on the IP office.

Decree No. 8.772 of May 11, 2016 also provides an opportunity to rectify the absence of a SisGen registration. Article 110 provides that, where registration is missing or has been cancelled, the competent authority must notify the intellectual-property authority so that the applicant is given 30

[30] Ibid.
[31] Brazil, *supra* note 16.
[32] Ibid.
[33] Ibid., Brazil, *supra* note 17.
[34] Ibid.
[35] Ibid.
[36] Brazil, Law No. 9.729 of 14 May 1996. Available from https://www.wipo.int/wipolex/en/legislation/details/23216.
[37] Brazil, *supra* note 17.

days to present proof of registration; otherwise, the IP application is archived. This supplies a defined opportunity to cure the deficiency before the procedural consequence applies and is therefore consistent with the Treaty requirement to provide an opportunity for rectification.

In sum, the Brazilian mandatory disclosure requirement is broadly compatible with the GRATK Treaty and in some respects goes beyond its minimum requirements, including through the broad concept of "genetic heritage". A significant gap nevertheless remains because the SisGen-based mechanism applies to access to Brazilian GRs and associated TK, whereas Article 3 of the Treaty is not territorially limited to domestic resources or knowledge. Brazil would therefore need to consider how to accommodate disclosures concerning non-Brazilian GRs and associated TK. Brazilian law also provides a defined opportunity to rectify the absence of SisGen registration before the IP application is archived, which is consistent with the Treaty's rectification requirement.

IV.2 The Andean Community Member Countries

Four Andean Community member countries – Bolivia, Colombia, Ecuador and Peru – are signatories to the WIPO GRATK Treaty. In July 2026, Peru became the first Andean Community member country to ratify the Treaty.[38] These countries are among the leading megadiverse countries from where a substantial proportion of biological diversity on the planet originates.

The Andean Community countries apply Decision 486 of the Andean Community (Common Industrial Property Regime) as the regional patent law regime.[39] Article 26(h) of Decision 486 states that a patent application must contain, where applicable, a copy of the access contract, when the products or processes for which a patent is sought have been obtained or developed from genetic resources or their derived products of which any of the Member Countries is the country of origin. Article 26(i) states that when the products or processes for which patent is being applied for have been obtained or developed from the traditional knowledge of indigenous, Afro-American or local communities, the applicant must submit a copy of the document that proves the license or authorization for the use of such traditional knowledge. This approach has also been followed in South Africa (see below).

In Bolivia, the Andean Community Decision 486 is complemented by Bolivia's Supreme Decree No.24676 (1997).[40] Under the Seventh Complementary Provision of this domestic decree, Bolivia's National Intellectual Property Service (SENAPI) is legally forbidden from processing or granting a patent unless the applicant produces a certified Secretarial Resolution confirming a valid Access Contract signed with the Ministry of Environment. To obtain this Secretarial Resolution the applicant must disclose the geographic origin (*in situ* location) of GRs and the source of TK (provider). Hence, there is indirect mandatory disclosure to the biodiversity authority concerned. Until this disclosure is made, the patent application cannot be processed or granted by SENAPI. Similarly, in Ecuador the national IP office is required under Executive Decree No.905 of October 3, 2011 to request the registration number of the access contract and a copy of the contract before granting an IP right where there are reasonable indications or certainty that the

[38] WIPO, WIPO GRATK Treaty Notification No.4, 8 July 2026. Available from https://www.wipo.int/wipolex/en/treaties/notifications/details/treaty_gratk_4.
[39] Andean Community, Decision No. 486 – Common Provisions on Industrial Property. Available from https://www.wipo.int/wipolex/en/legislation/details/9451.
[40] Bolivia, Supreme Decree No. 24676 of 21 June 1997. Available from https://www.wipo.int/wipolex/en/legislation/details/502.

products or processes for which protection is sought have been obtained from a genetic resource or a product derived therefrom.[41] Colombia and Peru also follow a similar approach.

The disclosure requirement also applies to any claims where the invention is made using derivatives. Andean Community Decision 391 (Article 1) explicitly defines a "derived product" as a molecule, a combination of natural molecules, or a crude extract obtained from live or dead biological resources.[42] This encompasses isolated proteins, purified enzymes, plant alkaloids, and active chemical fractions.

However, the Andean Community law does not explicitly include DSI. Some national practice within the Andean Community has interpreted ABS rules in ways that may extend to certain uses of DSI, implying that use of DSI of a genetic resource would be deemed to access to the GR itself. Article 1 of Andean Community Decision 391 defines the “intangible component” as any know-how, innovation or individual or collective practice, having real or potential value, that is associated with a genetic resource, its derived products, or the biological resource containing them. This definition has been used by Andean Community Members to enforce ABS regulations over digital data. For instance, Colombia has adopted Resolution 1348 of 2014 (under the authority of Decision 391) to legally declare that separating or utilizing functional units of DNA/RNA (even if retrieved from a digital database) requires an official ABS contract.[43] Ecuador and Peru also follow a similar approach. This does not by itself, however, place DSI within the patent disclosure obligation under Decision 486.

Even though the disclosure in these countries is required to be made to the Ministry of Environment or similarly competent authority responsible for implementing Andean Community Decision 391, this does not contravene the requirements of article 3 of the GRATK Treaty read with the flexibility under article 9.2 to determine the mode of implementation of the obligations under the Treaty. The GRATK Treaty does not mandate that the disclosure must be made in the patent application itself, it merely mandates that where a claimed invention in the patent application is based on GRs and/or associated TK, the origin or source, as applicable, must be disclosed. Where and how this disclosure must be made is not prescribed. In considering its ratification of the GRATK Treaty, Peruvian authorities held the view that rules under the Andean Community Decision 486 are consistent with the GRATK Treaty.[44]

However, article 3 stipulates that the disclosure must be required for any invention based on GRs and/or associated TK, regardless of whether the origin or source is within an Andean Community member country. In this sense, the disclosure regimes in these countries are limited in territorial scope to member countries of the Andean Community.

Moreover, there is no option under the Andean Community law to submit a declaration stating that origin or source of the GR and associated TK is not known to the applicant, as required under article 3.3 of the GRATK Treaty.

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[41] Ecuador, Executive Decree No. 905 of 3 October 2011. Available from https://www.wipo.int/wipolex/en/legislation/details/11842.

[42] Andean Community, Decision No. 391 of 2 July 1996. Available from https://www.wipo.int/wipolex/en/legislation/details/9446.

[43] Colombia, Resolution No. 1348 of 14 August 2014. Available from https://www.minambiente.gov.co/wp-content/uploads/2021/10/Resolucion-1348-de-2014.pdf.

[44] European Commission, “A General Overview of the Peruvian Intellectual Property Landscape in 2026”, 30 July 2026. Available from https://intellectual-property-helpdesk.ec.europa.eu/news-events/news/general-overview-peruvian-intellectual-property-landscape-2026-2026-07-30_en.

Under article 75 (g) and (h) of Decision 486, the competent authority in a member country may declare absolute nullity of a patent at any time if a copy of an access contract or license or authorisation for the use of TK has not been submitted. While the GRATK Treaty stipulates that a patent cannot be invalidated solely on the ground of failure to make the disclosure, the nullification of a patent under the Andean community law is not due to the failure to declare but a failure to provide proof of the right to use the GR or associated TK.

IV.3 China

China is not a signatory to the GRATK Treaty.

According to Article 26(5) of the Patent law, where an invention is accomplished by relying on genetic resources, the applicant must indicate the direct source and original source of those genetic resources in the patent application documents.[45] If the applicant cannot indicate the original source, the applicant must state the reasons. The Implementing Regulations Article 29 state that "… A patent application of an invention-creation accomplished based on generic resources shall state the fact in the request and fill out a form made by the patent administrative department of the State Council."[46] For international applications entering the Chinese national phase, Article 126 of the Implementing Regulations provides that, where the invention or creation involved in the international application is based on genetic resources, the applicant must explain this in the written declaration when entering the Chinese national phase and fill out the prescribed forms. Therefore, the same disclosure-form mechanism also applies at national-phase entry.

This disclosure requirement requires the applicant to declare the **direct** source from where the GR was obtained, as well as the **original** source of the GR.[47] In contrast, the GRATK requires disclosure of the country of origin, and the source declaration is required only if the country of origin is not known to the applicant. Hence, the requirement under Chinese law is more granular. It should be noted that the GRATK Treaty does not prevent additional requirements from being introduced above the minimal requirements the Treaty establishes.

The trigger for the disclosure obligation is that the invention-creation is accomplished by relying on genetic resources, according to Art. 26(5) of the Patent law. Art. 29 of the Implementing Regulations explains this trigger more specifically. It provides that an invention-creation is accomplished by relying on genetic resources where the invention-creation is accomplished by utilizing the hereditary functions of generic resources. The patent law defines an invention as a "new technical solution", which practically means the invention must utilize the genetic functional units of the genetic resource to form its technical solution.[48]

According to Article 29 of the Implementing Regulations, genetic resources referred to in the Patent law refers to **materials taken** from humans, animals, plants, or microorganisms containing

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[45] China, Patent law of the People's Republic of China (translation for reference only). Available from https://english.cnipa.gov.cn/art/2022/10/13/art_3068_179273.html.

[46] China, Implementing Regulations of the Patent law of the People's Republic of China. Available from https://www.wipo.int/wipolex/en/legislation/details/13395.

[47] China, *supra* note 28; China National Intellectual Property Administration, Genetic Resources Source Disclosure Registration Form, Form No. 100023. Available from https://www.cnipa.gov.cn/module/download/downfile.jsp?classid=0&showname=100023%E9%81%97%E4%BC%A0%E8%B5%84%E6%BA%90%E6%9D%A5%E6%BA%90%E6%8A%AB%E9%9C%B2%E7%99%BB%E8%AE%B0%E8%A1%A8.doc&filename=fb890249eaf54a7588a19906b8d79517.doc.

[48] China, *supra* note 36, Article 2.

functional units of heredity with actual or potential value, and the **genetic information** generated from the utilization of such materials. The invention-creation developed relying on the genetic resources referred to in the patent law means that the invention-creation that is developed relying on the use of the heredity function of the genetic resources. As the definition clearly refers to "genetic information", DSI may be deemed to be included within the scope of the disclosure requirement.

Whether a derivative is included within the scope of the disclosure requirement hinges entirely on whether the invention still relies on the heredity function of that derivative. Disclosure of the source of a derivative is required only if the invention uses its genetic blueprint to read, copy, or change how something grows. For example, if a plasmid from a desert plant is introduced into another crop which then copies the genetic trait of the plasmid to become drought resistant, the source of the plasmid must be disclosed because the invention of the drought resistant strain of the crop relies on the hereditary function of the plasmid (derivative) of the desert plant. Conversely, if an enzyme derived from a microbe is used as a chemical catalyst in a detergent to break down hard to remove stains, then the invention would not rely on the hereditary function of the microbe. Hence, such a derivative would not require disclosure of the source.

The trigger under the Chinese disclosure requirement is not identical to the "invention based on GR" trigger under the GRATK Treaty. The disclosure trigger of GR in Chinese law is that the invention-creation is "accomplished by relying on genetic resources". Reliance is further defined as "utilizing the hereditary functions" of the resources. Therefore, China requires a substantive connection between the invention and the GR, mere "use" or mention GR in the application is not enough to trigger the disclosure obligation. This makes China broadly align with the Treaty's trigger "based on" which requires that the GR be necessary to the development of the claimed invention, and that the claimed invention depend on the specific properties of that GR. In short, China's disclosure trigger and the Treaty's "based on" trigger are highly consistent in their core elements, but subtle differences in wording may create uncertainty in borderline cases. At present, it is not possible to broadly assert whether Chinese law is narrower or broader.

Article 26(5) of the patent law requires the applicant to indicate both the direct source and the original source of the genetic resources in the patent application documents, as well as the collection pathway. In practice, the disclosure is made through the genetic resource source disclosure form.[49] The form asks the applicant to provide information on the source of the genetic resources. The "direct source" part in the form asks how the applicant obtained the genetic resources. If the genetic resources was obtained through a non-collection route, the applicant must provide information such as the provider's name, country or region, and contact details. If the genetic resource was obtained through collection, the application must provide information such as the collection place (including country, province or city), the collector's name, and the collector's contact details. The "original source" part in the form asks for information identifying where the genetic resources originally came from, including the collector, his/her contact information, GR acquisition time and place (including country, province/city).

However, neither Article 26(5) nor the form itself does not expressly require the applicant to identify Indigenous Peoples or local communities as a separate category. If a community is the direct provider or is relevant to the original source, that information may be practically relevant to the source disclosure. However, the Patent law provision is framed in terms of "direct source" and "original source," not in terms of a separate IPLC disclosure requirement. In fact, the international category of IPLCs does not map neatly onto China's domestic legal framework. In China's Sixth

[49] China National Intellectual Property Administration, *supra* note 38.

National Report to the Convention on Biological Diversity, China addresses IPLC-related targets not by identifying IPLCs as a distinct category of traditional knowledge rights-holders, but by referring to the traditional knowledge, innovations and practices of China's 56 ethnic groups, the Chinese people, ethnic medicines, and local communities' participation in biodiversity conservation and co-management.[50] This shows that, in the Chinese context, IPLC-related issues are translated into domestic categories of ethnic groups, local participation, conservation and State-led management. Against this background, the absence of IPLCs from China's patent disclosure legislation is not merely a drafting omission, it reflects the broader difficulty of transposing the IPLC concept into China's domestic legal framework.

There is no general obligation on the China National Intellectual Property Administration (CNIPA) to authenticate every factual statement in the genetic-resource source disclosure. The patent framework operates principally through applicant disclosure and examination of compliance with the prescribed formal and substantive requirements.[51] Non-disclosure or defective disclosure may be addressed during examination through correction or rejection, while post-grant invalidation requires an applicable statutory invalidation ground.[52] Accordingly, for purposes of comparison with Article 3.5 of the GRATK Treaty, Chinese patent law does not impose a general duty on the patent office to verify the authenticity of every disclosure.

China allows post-grant invalidation where the case also involves a listed invalidation ground, especially Article 5, such as unlawful acquisition or utilization of the genetic resources.[53] The Regulations on the Administration of the Access to Biological Genetic Resources and Benefit-Sharing (State Council Order No. 756, effective 1 October 2023) create a verification mechanism linked to the patent system via article 28 where an invention-creation for which a patent is applied relies on biological genetic resources, the patent administration department of the State Council shall require the applicant to submit a legal source certificate. If the applicant fails to submit it, the patent shall not be granted.[54] The provision further states that, during examination, the patent administration department shall consult the ecology and environment department of the State Council on the legality of the disclosed source of the biological genetic resources. This provision shows that China has an external legality-check mechanism: the patent authority does not act alone and it may consult the ecology and environment authority on the legality of the disclosed source. Accordingly, the conclusion is that China does allow verification or legality checking by another authority for biological genetic resources, especially through the ecology and environment authority under the ABS regulations.

An applicant is allowed to amend or supplement the disclosure of genetic resources through the genetic resource source disclosure registration form.[55] Under the CNIPA Patent Examination Guidelines, this form is regarded as an administrative form that is distinct from the patent specification. This means that any changes made to the disclosure through this form will not change the description and claims in the patent specification. This also means that if the invention relies on the GR, in addition to the disclosure of the source through the administrative form, the

[50] China, Sixth National Report to the Convention on Biological Diversity, section VI. Available from https://chm.cbd.int/en/database/NR6/CHM-NR6-CN-241353-2.
[51] China, *supra* note 36.
[52] China, Guidelines for Patent Examination, Part I, Chapter 1, Section 5.3; and Part II, Chapter 10, Section 9.5.3. Available from https://www.wipo.int/wipolex/en/legislation/details/22371.
[53] China, *supra* note 36; *supra* note 37.
[54] China, Regulations on the Administration of the Access to Biological Genetic Resources and Benefit-Sharing. State Council Order No. 756, 1 October 2023. Available from http://www.gov.cn/zhengce/content/2023-03/17/content_5747128.htm.
[55] China Patent Examination Guidelines 2023, *supra* note 43.

patent specification should also contain a description of how the GR is used to produce the claimed invention. That description can only be amended in accordance with Article 33 of the patent law which states that the amendment cannot go beyond the scope of the disclosure in the original description and claims. This means any GR not described in the original specification cannot be added through an amendment, even if its source can be disclosed through the form as a supplementary disclosure. Hence, the omission is incurable, not because the disclosure requirement itself is incurable, but because the missing technical information cannot be added without violating Article 33. This approach is consistent with the requirements of the GRATK Treaty as the patent law provides an opportunity to the applicant to rectify a failure to make the disclosure, while ensuring that the amendment process cannot be used to introduce new technical matter that was not originally disclosed in the description and claims.

A granted patent cannot be invalidated under patent law solely on the grounds of failure to disclose the source of the GR. While the examiner can reject a pending application for non-compliance with Article 26.5 of the patent law,[56] once the patent is granted, a third party cannot use a missing or flawed administrative declaration form as a ground to invalidate the patent.[57] This is consistent with the restriction in the GRATK Treaty that a conferred patent right cannot be invalidated solely on the ground of failure to meet the disclosure requirement. However, a granted patent can still be invalidated under Article 5 of the patent law on other grounds such as unlawful acquisition of the GR used.

IV.4 India

India is not a signatory to the WIPO GRATK Treaty.

The approach to the disclosure requirement in the Indian patent law is aligned with the objective of the GRATK Treaty to prevent the grant of erroneous patents.[58] Indian patent law requires mandatory disclosure of the geographical origin and source of the biological material when used in an invention. Biological material includes GRs and the disclosure requirement is triggered when the biological material is used in the invention described in the patent specification.

Under Section 10(4)(d)(ii) (D) of the Patents Act, the disclosure must be made in the patent specification providing technical information on the invention.[59] Besides this disclosure made in the patent specification through Form 2, in the patent application filed through Form 1, applicant has to check a declaratory statement that "The invention as disclosed in the specification uses the biological material from India and the necessary permission from the competent authority shall be submitted ... before the grant of patent."[60] Hence, India applies two types of disclosure – a substantive disclosure of the geographical origin and source in the patent specification in accordance with section 10(4)(ii)(D), and an administrative declaration of legal provenance of the

[56] China, *supra* note 37, Article 59.
[57] Ibid., Article 69; China Patent Examination Guidelines, *supra* note 43, Part IV, Chapter 3, Section 3.3.
[58] Anson C.J., "WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge: Concerns of India and Developing Nations – Part 1", *SpicyIP,* 3 June 2024. Available from https://spicyip.com/2024/06/wipo-treaty-on-intellectual-property-genetic-resources-and-associated-traditional-knowledge-concerns-of-india-and-developing-nations.html.
[59] India, The Patents Act, 1970. Available from https://ipindia.gov.in/frontend/pdf/patents/1_113_1_The_Patents_Act__1970___incorporating_all_amendments_till_1-08-2024.pdf.
[60] India, Form 1 under The Patents Act, 1970 and the Patent Rules, 2003. Available from https://ipindia.gov.in/frontend/pdf/forms_and_official_fees/02%20form-1.pdf.

GR from India used in the invention disclosed in the patent specification. The administrative declaration in Form 1 is not required for an international application entering the national phase through the Patent Cooperation Treaty (PCT) route.

It should be noted that only the patent specification submitted through Form 2 is published. and can be monitored by competent authorities and relevant stakeholders. This has potential practical utility for ABS regulations. The disclosed origin and source become available to the National Biodiversity Authority and other interested parties. The Patent Office does not verify the accuracy of this information. The National Biodiversity Authority has the separate role of assessing compliance with biodiversity law and applicable ABS requirements. The effectiveness of the system therefore depends on coordination between the Patent Office and the National Biodiversity Authority. It also depends on the capacity of the Authority to monitor published applications and act on relevant disclosures.

The administrative check box declaration in Form 1 is aimed to enable and enforce the implementation of Section 6 of the Biological Diversity Act, 2002. This provision states that any person applying for an IP right for any invention based on any research or information on a biological resource accessed from India, including any such resource deposited in repositories outside India, or traditional knowledge associated thereto, must obtain prior approval from the National Biodiversity Authority (NBA) of India before the grant of such IP rights. The applicants are also required to register with the NBA before the grant of IP rights.

The administrative form-based declaration was introduced to close a systemic loophole arising from how patent applications filed through the national route are processed. At the time of filing the patent application, the Indian patent law allows the applicant to file a provisional specification (without the full technical description) and secure an early priority date, and then file the complete specification within 12 months. Hence, an applicant could file a provisional specification without disclosing the geographical origin and source of the GR. With the priority date secured, the research on the GR could continue without the disclosure, patent applications on the invention could be filed in other countries, and the applicant could also decide to not file a complete specification at the end of the period leading to a withdrawal of the Indian patent application. Introduction of the administrative declaration to be filed along with the original patent application creates a record of whether any GR of Indian origin is used in the invention described in the patent specification, even if the geographical origin and source is not described in the provisional specification. The patent office would continue with the examination process but the grant of the patent would be frozen until the approval of the NBA is provided by the applicant. This can be submitted as miscellaneous information under Form 30 or as a written response to the First Examination Report (FER) if an objection about the missing disclosure is made therein.

The disclosure under section 10(4)(d)(ii)(D) must include the geographic origin and the source of the GR. The patent examination guidelines clarify that providing a country name is not sufficient to meet the disclosure requirement. The applicant must also identify the specific state, district, city, or unique ecosystem where the material is collected.

The Patents Act does not expressly require the applicant to disclose the provider, IPLC identity, community holder, or source of associated traditional knowledge as a separate item in the patent specification. Where the claimed invention in a patent application is based on associated TK, Article 3.2 of the GRATK Treaty makes it an obligation on each contracting Party to, first, require the applicant to disclose the Indigenous People or local community that provided the associate

TK, “as applicable”. The concept of “Indigenous People” is not applied by India in general.[61] The reason why this is done is pragmatic. Many biological resources and associated traditional knowledge are shared across fluid geographic regions, ethnic groups, and state borders. Forcing disclosure of a local community providing the associated TK could give rise to disputes involving other local communities who have used the same resource or associated TK for centuries. India has sought to prevent such issues from arising by making the NBA the sole authority to execute ABS contracts with the bioprospecting person or entity. Therefore, the disclosure of the local community is also not applicable in the context of India.

Even though the GRATK Treaty accommodates such situations where disclosure of IPLCs may be inapplicable, the Agreed Statement in relation to article 3.2 8 (a) clarifies that “It is understood that the term ‘as applicable’ in Article 3.2(a) shall not be interpreted as providing flexibility to the Contracting Parties to not require applicants to disclose the information required in Article 3.2(a). For greater certainty, Article 3.2(a) will be implemented without having any effect on the scope of the disclosure requirement in Article 3.” The inapplicability of article 3.2 (a) triggers the obligation under article 3.2 (b) which states that the applicant must be required to disclose the source of the associated TK “... where article 3.2(a) does not apply....”

It should be noted that the disclosure requirement in India is also triggered if there is use of any derivative of a GR. Any physical use of the GR to make the invention work triggers the disclosure requirement. Even if the invention depends on an isolated byproduct like a protein, an enzyme, or a chemical plant extract, the law treats it as a natural material that never loses its biological identity. Even though these pieces are dead chemicals with no genetic or reproductive function, their simple physical presence in the invention would trigger the disclosure requirement.

The disclosure requirement could also be applied to DSI. If the DSI is used to construct a physical ingredient, the patent specification must explicitly list the physical *in-situ* location where the sequence naturally originated.

The patent law also does not put any obligation on the patent office to verify the authenticity of the disclosure. An applicant can also rectify a missing or incorrect source disclosure by filing a formal amendment under Section 57 of the Indian Patents Act. This amendment is governed by Section 59, which limits all patent modifications strictly to three types: a disclaimer, an explanation, or a correction to incorporate a fact.

Contrary to the obligation under article 3.3 of the GRATK Treaty that if the information required to be disclosed under Articles 3.1 and 3.2 is not known to the applicant the contracting Party must require the applicant to submit a “... declaration to that effect, affirming that the content of the declaration is true and correct to the best knowledge of the applicant”, the Indian patent law provides no such exception to the disclosure requirement. If India were to become a contracting Party to the GRATK Treaty, it would have to adopt measures to implement this obligation.

The Indian patent law also varies significantly from the GRATK Treaty with regard to sanctions and remedies under article 5. A patent application can be rejected in the pre-grant stage itself if the disclosure is not made or a wrong disclosure is made. Section 25(1)(j) of the Patents Act allows any person to file a pre-grant opposition on the grounds of non-disclosure or wrong disclosure. Rule 55(5) of the Patent Rules provides the discretion to the Controller to require the

[61] See T.C. James, International Discussions on Indigenous People and India, Discussion Paper No.272, RIS Discussion Paper Series, January 2022, Research and Information Systems for Developing Countries, New Delhi. Available from https://www.ris.org.in/sites/default/files/Publication/DP%20272%20T%20C%20James%20English.pdf.

applicant to amend the complete specification and other documents (including relating to the disclosure) or reject the patent application.[62] While the Controller has the discretion to therefore offer an opportunity to the applicant to rectify the failure to make the disclosure before implementing sanctions or directing remedies, under Article 5.2 of the GRATK Treaty it is mandatory that such opportunity be given to the applicant.

Besides a possible rejection based on a pre-grant opposition, a patent grant could also be refused for the failure on the part of the applicant to provide the authorization from the NBA as required under the Biodiversity Act. This, however, will not constitute a refusal of the patent application on the grounds of a failure to disclose. The GRATK Treaty does not prevent the refusal of a patent on such additional grounds.

A patent could also be revoked in India on the grounds of failure to make the disclosure or for wrong disclosure. This could occur through a post-grant opposition under Section 25(2)(j) within one year of grant or through revocation proceedings under Section 64. If India were to consider ratification of the GRATK Treaty, India may need to consider how to address the limitation imposed by Article 5.3 of the Treaty regarding the proof of fraudulent intent where non-disclosure is the sole basis for revocation.

IV.5 Indonesia

Indonesia is a contracting Party to the WIPO GRATK Treaty.

Indonesian patent law expressly requires disclosure under article 26.1 where an invention relates to and/or originates from genetic resources and/or traditional knowledge.[63] The disclosure must be made in the description - the patent specification. The trigger of the disclosure is if the invention relates to any GR or TK and/or it originates from the same. The disclosure requirement also applies to any derivative as well as DSI that relates to the GR.

In addition to the disclosure in the patent description (specification), the applicant is also required to submit a Statement Letter of Origin, which is a signed declaration by the applicant confirming the source of the GR or TK used in the invention.[64] This additional requirement was introduced through the 2024 amendment to the patent law.[65] Before this amendment, the applicant had to submit an authorized permit or certificate of legal provenance of the origin of the GR or TK from a competent Indonesian or foreign government authority, as applicable.[66] The statement letter acts as a standalone administrative validation checklist. While Article 26(1) requires the applicant to explain the technical role and origin of the material inside the paragraphs of the patent description, the Statement Letter is filed as a separate administrative attachment. The previous certification system forced the patent grant to be suspended until government authorities could cross-verify the biological data. Under the amended Statement Letter approach the administrative document has no impact on the grant of the patent, and any legal challenge to the declaration is left to be litigated between the applicant and third parties in the post grant phase. The patent

[62] India, The Patent Rules, 2003. Available from https://ipindia.gov.in/pages/patents/rules-patents-2003.
[63] Indonesia, Law No. 13 of 2016 on Patents. Available from https://www.wipo.int/wipolex/en/legislation/details/16392.
[64] Indonesia, Statement on the Origin of Genetic Resources/Traditional Knowledge. Available from file:///Users/l/Downloads/Surat_Pernyataan_Asal_SDG_PT_DJKI_recreated.pdf.
[65] Indonesia, Law No. 65 of 2024. Available from https://www.wipo.int/wipolex/en/legislation/details/22784.
[66] Indonesia, *supra* note 54, Articles 26(1) and (2).

office thus plays no role in verification of the authenticity of the disclosure, aligned with the GRATK Treaty.

The applicant is required to declare the origin of the GR and TK, but the law does not stipulate any requirement to declare the source.[67] This is a departure from the requirements of the WIPO GRATK Treaty which stipulate that where the country of origin, and the Indigenous People or local community providing the TK cannot be disclosed, the applicant must be required to disclose the source of the GR and associated TK. Moreover, unlike stipulated in the treaty, Indonesia also does not provide the option to the application to submit a declaration stating that the origin of the GR or TK, as the case may be, is not known to the best of the knowledge of the applicant.

Like in India and China, the disclosure of the origin of TK does not have to identify the Indigenous People or local community providing the knowledge, as this approach is not applicable in Indonesia.

Under Indonesian Patent law, the amendment of a patent description is governed by Article 39 during the pre-grant phase, and by Articles 67 and 69 during the post-grant phase. Article 39(2) establishes that modifications to the technical description are allowed provided that the amendment does not extend or broaden the scope of the invention initially applied for in the original application. Under this article, an applicant who receives an office action regarding an insufficient or missing GR or TK origin statement can legally add the missing metadata (such as the specific country or province name), because doing so clarifies an existing fact rather than introducing a forbidden, broad new technology parameter.

Once a patent has already been officially issued, amendments to the description can no longer be processed by standard examination channels. Instead, they must be formally appealed to the Patent Appeal Commission. The application for amendment must be submitted within three months window from the date the patent grant is issued. Such corrections to the description are legally confined only to specific categories, including correcting a translation error or clarifying a vague or ambiguous statemen in the text. This means that only minor corrections to the disclosure will be allowed after the patent is granted, and any material fact cannot be introduced or altered.

It should be noted that Indonesia is aligned with the requirement of the GRATK Treaty that the applicant must be given an opportunity to address the failure to make the disclosure. This opportunity is very substantially provided in the pre-grant phase.

Indonesian patent law provides both pre-grant stage and post-grant consequences for failure or bad faith in disclosing the origin of genetic resources and/or traditional knowledge.

In the pre-grant stage, Article 36(1) of Law No. 65 of 2024 provides that if the applicant does not complete the requirements and completeness of the application within the relevant time period, the Minister shall notify the applicant in writing that the application is deemed withdrawn. Since the disclosure of origin of genetic resources and/or traditional knowledge is part of the application completeness requirements where the invention relates to genetic resources and/or traditional knowledge, failure to complete that requirement may result in the application being deemed withdrawn.

In the post-grant stage, Article 132(1)(b) provides a specific sanction for bad faith in the disclosure of origin information. A patent may be deleted based on a court decision if the patent holder acted

[67] Ibid., Indonesia, *supra* note 56.

in bad faith in disclosing information on the origin of genetic resources and/or traditional knowledge as referred to in Article 26. This means that post-grant consequences are not framed simply as ordinary omission, but specifically as bad faith in the disclosure of origin information. The GRATK Treaty allows a conferred patent right to be invalidated on the ground of non-disclosure with fraudulent intent, but the term is not defined. Under article 9.2 of the treaty contracting Parties have the flexibility to determine the mode of implementing the obligations under the treaty. Hence, "bad faith" could be considered as approximating to "fraudulent intent". Indonesian patent law does not allow invalidation of a conferred patent solely on the ground of failure to disclose, but on a judicial determination of non-disclosure on bad faith.

IV.6 Malawi

Malawi was the first country to ratify the GRATK Treaty.

However, under the Patents Act of Malawi there is no disclosure requirement regarding origin or source of GRs and associated TK used in an invention claimed in a patent application.[68] Malawi is also a Contracting Party to the Harare Protocol on Patents, Utility Models and Industrial Designs within the Framework of the African Regional Intellectual Property Organization (Harare Protocol).[69] If a regional patent application is filed under the Harare Protocol, it is substantively examined by the African Regional Intellectual Property Organization (ARIPO). If a patent is granted the same becomes binding on all contracting States that are designated in the patent application unless the grant is rejected by the national patent office of the designated country within a period of 6 months.[70] There is no requirement for the ARIPO patent application to disclose the origin or source of any GR or associated TK used in the claimed invention. This suggests that there would be a need to introduce a disclosure requirement for patent applications claiming inventions based on GRs and/or associated TK in Malawi. There would also be a need to explore how complementary mechanisms can be adopted for ARIPO patents.

IV.7 Namibia

Namibia is a signatory to the WIPO GRATK Treaty.

Namibia has a very strong disclosure requirement in the national patent law. Section 24(2) of the Industrial Property Act of 2012 states that

> "Where the subject matter of a patent application is derived from or developed with biological resources or associated indigenous or traditional knowledge, the applicant must disclose in the application for a patent the country providing the resources or associated indigenous or traditional knowledge, from whom in the providing country they were obtained, and, as known after reasonable inquiry, the country of origin and any other information regarding the source or nature of the resources as may be prescribed."[71]

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[68] Malawi, Patents Act (Chapter 49:02). Available from https://www.wipo.int/wipolex/en/legislation/details/9337.
[69] Harare Protocol on Patents, Utility Models and Industrial Designs and Regulations for Implementing the Harare Protocol (as amended on December 10, 2024). Available from https://www.wipo.int/wipolex/en/treaties/details/204.
[70] Ibid., Section 3(6)(b).
[71] Namibia, Industrial Property Act, 2012 (Act No. 1 of 2012). Available from https://www.wipo.int/wipolex/en/legislation/details/16331.

Therefore, the disclosure is triggered in Namibia when the claimed invention is derived from biological resources (including GRs) or associated TK, or it is developed with those resources or associated TK. This is a significantly broader and stricter disclosure threshold than the GRATK Treaty. While the GRATK Treaty triggers the disclosure requirement based on the necessity of the GR to the invention or the dependency of the invention on the associated TK, the necessity or dependency test does not apply under the Namibian disclosure regime. In Namibia, the resource does not have to be essential to the final patent claims. If GR or TK was used anywhere in the developmental lifecycle or as an experimental tool to achieve the result, the disclosure requirement is triggered.

As defined in section 24(2), the disclosure requirement also applies to inventions that are derivatives or developed with derivatives. Under Namibian Biodiversity Act, a “derivative” is explicitly defined as any naturally occurring biochemical compound resulting from the genetic expression or metabolism of a resource, even if it does not contain functional units of heredity. The disclosure requirement could also be applicable to inventions made with DSI as any invention developed with biological resources fall within the scope of the disclosure requirement. The biodiversity law also states that an access permit would be required to access intangible components of biological or genetic resources, including genetic information or gene sequences.

The disclosure requirement under the patent law also specifies that the applicant must disclose the country providing the resources. Section 24(2) itself distinguishes this from the requirement on the part of the applicant to disclose the country of origin. Thus, the disclosure requirement includes within its scope not only the country where the resource was obtained, but also the country where the resource originated, insofar as the provider and originating country are different, and the country of origin is known to the applicant. In the GRATK Treaty, only the country of origin, defined as the country possessing the GR in *in situ* conditions, is required to be disclosed. The GRATK Treaty also requires disclosure of source where the country of origin is not known. In the Namibian formulation the providing country is the source from which the GR is accessed. In addition to disclosing this source as a providing country, Namibia also requires disclosure of country or origin. Nothing in the GRATK Treaty prevents this.

Namibia is also a contracting State to the ARIPO Harare Protocol which does not have a disclosure requirement. Namibia could reject an ARIPO patent within the period prescribed in the Harare Protocol on the grounds of non-disclosure, or in case such a notification cannot be issued due to paucity of time and the ARIPO patent becomes legally valid in Namibia, the patent could be invalidated through a legal challenge.

While article 3.3 of the GRATK requires that applicants must be given the opportunity to submit a declaration in lieu of the disclosure affirming that the origin or source is not known to the applicant, the Namibian patent law does not provide such an opportunity. If Namibia were to align its law with the requirement of the GRATK in this regard, it would need to ensure that such a declaration is not abused to bypass its strict disclosure requirements.

Another critical issue for Namibia as a signatory to the GRATK Treaty is about sanctions and remedies for non-disclosure. While the patent law provides opportunity to the patent applicant to rectify a failure to make the disclosure as a general opportunity available to the applicant to request amendments to the patent application any time before the grant of a patent,[72] a patent application that does not make the disclosures under section 24 can be refused the grant or a patent and even invalidated in post-grant invalidation proceedings under section 65. As

[72] Ibid., Section 28.

mentioned before, the GRATK Treaty does not allow invalidation of a patent solely on the grounds of a failure to make the disclosure.

IV.8 South Africa

South Africa is a signatory to the GRATK Treaty.

As a Contracting Party to the treaty South Africa has to require patent applicants to disclose the country of origin or source of the GR on which the claimed invention is based as well as the provider IPLC or source. The patent law of South Africa does not explicitly require applicants to make this disclosure. Rather, under section 30(3A) of the Patents Amendment Act 2005, every applicant who lodges a patent application with a complete specification must, before acceptance, lodge the prescribed statement that must state whether or not the claimed invention is based on or derived from an indigenous biological resource, a genetic resource, or traditional knowledge or use.[73] This requirement applies to any genetic resource regardless of whether the resource originates in South Africa or not.

When a patent applicant submits a Section 30(3A) statement before acceptance of the application, stating that the claimed invention is based on or derived from an indigenous biological resource, genetic resource, traditional knowledge, or traditional use, the declaration triggers section 30(3B) whereby the Registrar halts the acceptance of the application and calls upon the applicant to submit proof of his/her title or authority to make use of the said GR. To satisfy this legal demand the applicant must submit documentation, which includes providing a formal bioprospecting permit, proof of material transfer agreement and benefit-sharing agreement. All these would inherently include provenance of source and origin of the GR, as well as proof of mutually agreed terms of access and benefit-sharing with any indigenous community.

Form P.26 gives effect to this requirement.[74] The applicant must state whether the invention is based on or derived from an indigenous biological resource or genetic resource, and whether it is based on or derived from traditional knowledge or use, and whether the invention is co-owned with a local community or individual. The form does not require the applicant to provide further details identifying the resource, its origin, or identify the relevant local indigenous peoples and local communities who provide such associated traditional knowledge. However, based on what is stated in the declaration section 30(3B) action may be initiated.

South Africa requires an applicant who acknowledges the use of a GR or associated TK to provide documents showing legal provenance. These documents may disclose the origin or source required by Article 3. This modality of getting the applicant to make a disclosure may not be inconsistent with the GRATK Treaty because the treaty gives contracting Parties the freedom to determine the mode of implementation of the obligations thereunder, as stipulated in article 9.2.

Nevertheless, there might be need to consider alignment with article 3.3 of the GRATK Treaty which requires contracting Parties to provide the applicant with the opportunity to file a declaration to affirm that the origin or source is not known to the applicant. Under the current South African system this option would be impossible because if an applicant admits to basing the claimed

[73] South Africa, Patents Amendment Act 2005. Available from https://www.wipo.int/en/web/traditional-knowledge/w/tklaws/article_0021.

[74] Form P26 statement on use of Indigenous biological resource, genetic resource traditional knowledge or use. Available from https://www.cipc.co.za/wp-content/uploads/Forms/Patents/p26.pdf.

invention on a GR or associated TK, documents attesting to legal provenance would have to be produced.

The statement under section 30(3A) must declare whether the claimed invention is based on or derived from any GR or associated TK. A literal reading of this provision suggests that any use of derivatives or DSI of a GR would be included within the scope of this provision. While the term “genetic resource” is not defined in the patent law, the analogous term “indigenous biological resource” has been in defined in section 2 of the Patent Act, which cross-references the definition of the term in the National Environment Management: Biodiversity Act, 2004 (NEMBA), as explicitly including derivatives.[75] As the undefined term “genetic resource” must be interpreted harmoniously with the analogous define term “indigenous biological resource”, derivatives would seem to be within the scope of the Section 30(3A) declaration. As discussed above, the GRATK does not restrict extension of the disclosure requirement to use of derivatives of GRs.

However, the disclosure requirement does not seem to apply to DSI because NEMBA limits the definition of indigenous biological material physical matter (DNA, RNA, cells, or tissues). Intangible, digitized data, such as DSI or generic scientific research data derived from analyzing a resource, lacks physical mass and does not meet this material definition. Hence, DSI appears to be outside the scope of the disclosure to be made under patent law. Nevertheless, this is an interpretive gap — the Patents Act itself does not define "genetic resource," and a purposive interpretation of that term in patent law could potentially extend to DSI independently of NEMBA's materiality-based definition.

The requirement under section 30(3B) of the Patents Act for the Registrar to require the patent applicant to submit proof of title or authority to use indigenous biological resource, genetic resource or traditional knowledge in the making of the claimed invention does not constitute a legally imposed requirement to verify the disclosure submitted in accordance with Article 3 of the GRATK Treaty. Section 30(3B) does not create an obligation on the patent Registrar to verify the disclosure of origin or source, as the section 30(3B) action is triggered not by a disclosure of origin or source but by a declaration of use of GR or associated TK in the patent application. The section 30(3B) action does not constitute an audit of the location or source from where the GR or associated TK was accessed.

With regard to the obligation under the GRATK Treaty that the applicant must be given an opportunity to address a failure to provide the disclosure under article 3, since the South African approach relies on discovery of the origin and source through the submission of legal provenance documents, the need for an opportunity to rectify the failure to disclose does not arise. No patent application is accepted unless the statement under section 30(3A) is provided by the applicant. This requirement applies to all patent applicants, even if they have not used a GR or associated TK. Only if the applicant affirms that GRs or associated TK have been used. Further discoveries of appropriate authorizations is sought from the applicant, and the patent is not accepted until this information is provided.

Section 61(1)(g) of the Patents Amendment Act 2005 provides a clear post-grant consequence for an inaccurate Section 30(3A) statement.[76] A patent may be revoked where the statement lodged under Section 30(3A) contains a material false statement or representation, and the patentee knew or ought reasonably to have known that it was false when it was made. This is

[75] South Africa, National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004), section 1. Available from https://www.gov.za/documents/national-environmental-management-biodiversity-act-0.
[76] South Africa, Patents Amendment Act 2005, *supra* note 64.

well aligned with the requirement under the GRATK Treaty that a conferred patent right cannot be revoked solely on the basis of a failure to disclose, unless there is fraudulent intent. The treaty does not define what constitutes fraudulent intent and this determination can be made nationally.

It is unclear whether the disclosure submitted under sections 30(3A) and (3B) is routinely transmitted to or processed by the national biodiversity authority. The patent Registrar has an administrative role. The Registrar requests the statement and the documents showing title or authority. The Registrar is not required to verify the disclosed origin or source. The available rules also do not make clear whether the relevant origin and source information is published. These issues are outside the minimum obligations of the GRATK Treaty. They are nevertheless important to the practical value of disclosure. South Africa could provide for the transmission of relevant information to the biodiversity authority. It could also require publication of non-confidential information concerning origin and source. This would allow the authority and other interested parties to monitor compliance and act where necessary.

IV.9 Uganda

Uganda is the second country that has ratified the GRATK Treaty.

Like Malawi and Namibia, Uganda is also a contracting State to the ARIPO Harare Protocol. Unlike Malawi, Uganda has a mandatory disclosure requirement in its patent law. Section 21(8) of the Industrial Property Act of 2014 states that

> "The description shall contain a clear identification of the origin of genetic or biological resources collected in the territory of Uganda and that were directly or indirectly used in the making of the claimed invention as well as of any element of traditional knowledge associated or not with those resources and that was directly or indirectly used in the making of the claimed invention without the prior informed consent of its individual or collective creators." [77]

This disclosure requirement only calls for disclosure of origin of the GR or TK, as applicable. It does not provide the option to disclose the source where the origin is not known. The GRATK Treaty requires that the option to disclose the source must be an alternative to disclosure of the country of origin, where the country of origin is not known. Moreover, the disclosure requirement is limited to GRs collected in the territory of Uganda. The GRATK disclosure requirement is applicable for any GRs or associated TK obtained from anywhere in the world.

The patent law clearly includes both direct and indirect use of GRs within the scope of the disclosure requirement. This implies that derivatives are included within the scope of the disclosure requirement. It is noteworthy that under the biodiversity law of Uganda – the National Environment (Access to Genetic Resources and Benefit Sharing) Regulations 2005 – genetic resources are defined as inclusive of their derivatives and intangible components.[78]

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[77] Uganda, The Industrial Property Act, 2014 (Act No. 3 of 2014). Available from https://www.wipo.int/wipolex/en/legislation/details/16480.

[78] Uganda, The National Environment (Access to Genetic Resources and Benefit Sharing) Regulations, 2005 (S.I. No. 30 of 2005), regulation 2. Available from https://www.wipo.int/wipolex/en/legislation/details/6113.

There is no option for the applicant under the patent law to submit a declaration affirming that the country of origin or source of the GR and the associated TK is not known to the applicant, as required under article 3.3 of the GRATK Treaty.

The disclosure can be amended in accordance with section 23 of the patent law which stipulates how a patent application can be amended and limits thereof.

Under section 90 of the patent law an interested person may petition the court seeking invalidation of a granted patent on various specified grounds, including on the ground of a material misrepresentation in the patent application or in any other document filed with the application. Hence, a material misrepresentation of the origin or source of GR and associated TK, including absolute non-disclosure of the same, would constitute a ground for invalidation of the patent. Invalidation of the patent on the ground of material misrepresentation is aligned with the stipulation in the GRATK Treaty that a patent can be invalidated if the patent applicant makes the disclosure with fraudulent intent. The GRATK Treaty does not define what constitutes fraudulent intent. Material misrepresentation of the disclosure could be considered by the courts as fraudulent intent.

V. CROSS-CUTTING TRENDS FROM THE COMPARATIVE ANALYSIS

The foregoing country-by-country analysis reveals a number of recurring themes that cut across jurisdictions. While national disclosure regimes differ in their legislative design and institutional arrangements, they exhibit important areas of convergence and divergence that provide broader insights into the implementation challenges and policy implications of the GRATK Treaty. The following subsections present a synthesis of those cross-cutting patterns.

V.1 Broad Policy Convergence Despite Diverse Legislative Models

Perhaps the most striking finding is that the policy objectives underlying national disclosure regimes are remarkably similar despite significant differences in legislative design. Virtually every jurisdiction examined seeks to increase transparency regarding the utilization of genetic resources and associated traditional knowledge within the patent system. Whether disclosure is incorporated into patent legislation itself, biodiversity legislation, or administrative regulations, the common objective is to reduce information asymmetries between patent applicants, patent offices, biodiversity authorities and providers of genetic resources.

At the same time, countries differ considerably in the legal mechanisms chosen to achieve these objectives. Brazil embeds disclosure within its biodiversity legislation through the SisGen registration system. India combines technical disclosure in the patent specification with an administrative declaration linked to biodiversity approvals. South Africa relies upon a declaration that activates documentary proof of legal provenance. The Andean Community integrates disclosure within regional ABS legislation through mandatory access contracts. China and Indonesia rely more heavily on administrative declarations accompanying patent applications.

These differences demonstrate that no single institutional model has emerged as the international standard. Rather, disclosure obligations have evolved in response to different constitutional arrangements, administrative capacities, biodiversity governance structures and innovation policies. The GRATK Treaty appropriately accommodates this diversity by allowing Contracting Parties to determine their own methods of implementation under Article 9.2.

V.2 Divergence in the Trigger of Disclosure

One of the most important areas of divergence concerns the threshold that activates the disclosure obligation.

The GRATK Treaty adopts a relatively narrow formulation requiring disclosure where the claimed invention is “based on” a genetic resource or associated traditional knowledge. This formulation represents a negotiated compromise intended to exclude situations in which genetic resources merely formed part of background research or experimental activities.

National legislation demonstrates considerably greater diversity.

Some jurisdictions, including India, Indonesia and Uganda, trigger disclosure whenever biological material has been used in developing the invention.

Others, such as Namibia, employ even broader formulations extending disclosure to inventions developed with biological resources, regardless of whether the resource ultimately forms part of the claimed invention.

Brazil links disclosure to access to genetic resources through biodiversity legislation, while the Andean Community links disclosure to inventions developed from resources originating within Member States.

Conversely, China links disclosure to whether the invention-creation is accomplished by relying on the hereditary functions of the genetic resource. This trigger is broadly consistent with the Treaty's "based on" standard requiring a sufficiently close connection between the claimed invention and the genetic resource, though differences in wording may create uncertainty in borderline cases.

These differences illustrate that implementation of the Treaty will not simply require adding disclosure provisions where none presently exist. Many countries will instead need to determine whether existing triggers should be retained alongside the Treaty trigger or modified to ensure compliance while preserving broader domestic policy objectives.

V.3 Misalignment of Territorial Scope

A second major trend concerns the territorial reach of disclosure obligations.

The GRATK Treaty is neutral regarding the geographical origin of genetic resources. Once the disclosure trigger is satisfied, the obligation applies irrespective of whether the resource originates domestically or abroad.

Many existing disclosure regimes are considerably narrower. Brazil's SisGen system primarily regulates access to Brazilian genetic heritage. The Andean Community regime applies principally to genetic resources originating within Member States. Uganda similarly limits disclosure to resources collected within Uganda.

These territorial limitations reflect the original objective of implementing national ABS legislation rather than establishing universally applicable patent disclosure obligations.

Consequently, one of the most common legislative amendments likely to be required among Contracting Parties will be extending disclosure obligations to inventions based upon foreign genetic resources and associated traditional knowledge.

V.4 National Laws Frequently Apply the Disclosure Requirement to Derivatives and DSI

Another significant trend concerns the treatment of derivatives and digital sequence information.

The GRATK Treaty deliberately remains silent regarding both issues. National legislation, however, increasingly extends disclosure beyond physical genetic resources. Brazil, Indonesia and several Andean Community Member States adopt particularly broad definitions capable of encompassing derivatives and, in certain circumstances, DSI. India similarly interprets disclosure obligations broadly where biological materials or derivatives are physically used in the invention.

Chinese disclosure requirement applies where the invention-creation is accomplished by relying on the hereditary function of genetic resources or on genetic information generated from their utilization. Derivatives or DSI are not automatically included or excluded. The decisive question is whether the invention relies on the hereditary function or relevant genetic information of the genetic resource.

By contrast, South Africa's legislation appears limited by the materiality-based definition of indigenous biological resources under biodiversity legislation.

These differences reflect the continuing international debate under the Convention on Biological Diversity over how DSI should be treated for access and benefit-sharing purposes. As a South Centre analysis notes, advances in biotechnology and the use of DSI mean that “physical access is no longer required” for utilization or replication of a genetic resource, which has generated different national approaches and persistent disagreements over the applicable legal framework.

Importantly, the comparative analysis shows that several jurisdictions have already developed domestic responses to the treatment of derivatives and digital genetic information in their disclosure or ABS frameworks, even though the GRATK Treaty itself does not establish a minimum disclosure obligation for derivatives or DSI.

V.5 Variances in National Level Coordination Between Patent and ABS Laws

The relationship between disclosure obligations and access and benefit-sharing legislation varies substantially across jurisdictions. Some countries treat disclosure primarily as an administrative patent law requirement. Others regard disclosure as one component of a broader ABS framework.

Brazil, South Africa, India and the Andean Community provide particularly strong examples of integrated regulatory systems in which patent disclosure interacts directly with biodiversity permits, access contracts, prior informed consent procedures or benefit-sharing agreements.

The comparative analysis therefore demonstrates that disclosure obligations perform multiple regulatory functions simultaneously. They can facilitate patent examination, strengthen implementation of biodiversity legislation, generate documentary evidence concerning the provenance of genetic resources, and encourage compliance with national ABS requirements.

The GRATK Treaty accommodates these integrated approaches by refraining from prescribing how disclosure obligations should be incorporated into domestic legal systems.

V.6 Limited Role of Patent Offices in Verifying Disclosure

Another striking area of convergence concerns institutional responsibility. None of the countries examined imposes a comprehensive legal obligation on patent offices to verify independently the accuracy of disclosures submitted by applicants. Instead, disclosure generally operates as a formal declaration system. Verification, where undertaken, is performed indirectly through biodiversity authorities, administrative registration systems or judicial proceedings.

This reflects practical considerations. Patent offices possess expertise in patentability rather than biodiversity governance. Requiring patent examiners to investigate the provenance of genetic

resources would significantly increase examination burdens while exceeding their institutional competence.

The GRATK Treaty reflects this practical reality by expressly avoiding any obligation requiring patent offices to authenticate disclosures.

V.7 Recognition of Opportunities to Rectify Non-Disclosure

Most jurisdictions examined provide applicants with opportunities to correct incomplete or inaccurate disclosures during patent examination. Although the legal mechanisms differ, the general trend favours rectification rather than immediate rejection. This approach has now been reinforced by Article 5.2 of the GRATK Treaty.

The principal differences concern timing and procedural flexibility. Some countries permit amendments throughout examination. Others impose stricter limits once substantive examination has commenced or after grant. It must be noted in this regard that the Treaty establishes a common minimum requirement while leaving procedural details to national law.

V.8 Sanctions Represent the Greatest Area of Divergence

The comparative analysis suggests that sanctions remain the aspect of national disclosure regimes least harmonised with the GRATK Treaty. Several countries, including India and Namibia, permit revocation of patents based directly upon disclosure-related defects.

Other jurisdictions instead rely upon broader grounds such as fraud, bad faith, material misrepresentation or failure to comply with biodiversity legislation.

The Treaty adopts an intermediate approach by prohibiting revocation solely for failure to disclose while preserving sanctions where fraudulent intent exists. This compromise means that a number of existing disclosure regimes may require legislative refinement, particularly where patent invalidation currently operates without consideration of intent.

V.9 Regional IP Systems Present Unique Implementation Challenges

Regional patent organizations represent one of the least explored dimensions of Treaty implementation. The experiences of the Andean Community and ARIPO illustrate fundamentally different models. The Andean Community has progressively integrated biodiversity considerations into regional intellectual property law through Decisions 391 and 486. By contrast, the ARIPO Harare Protocol currently contains no disclosure requirement despite several Member States becoming signatories or Contracting Parties to the GRATK Treaty.

This divergence suggests that implementation will increasingly require coordination between national governments and regional intellectual property organizations. Without such coordination, inconsistencies may arise between regional patent grants and national implementation obligations.

VI. POLICY RECOMMENDATIONS

The comparative analysis demonstrates that implementation of the GRATK Treaty will require limited legislative restructuring in the countries selected for this study. Many of them already possess disclosure regimes that meet or exceed significant elements of the Treaty's minimum requirements. Nevertheless, the analysis also identifies recurring areas where legislative refinement or institutional adjustment may be required. These observations suggest several policy priorities for Contracting Parties, the WIPO Secretariat, regional intellectual property organizations and other stakeholders.

First, implementation should preserve the Treaty's character as a minimum-standard instrument. The comparative analysis demonstrates that many existing national disclosure regimes extend beyond the obligations established under the Treaty by adopting broader disclosure triggers, requiring documentary evidence of compliance with access and benefit-sharing legislation, or extending disclosure obligations to derivatives and digital sequence information. These approaches reflect legitimate domestic policy choices developed in response to national biodiversity governance priorities. Implementation should therefore avoid interpreting the Treaty as imposing a ceiling on existing regimes or future regulatory developments. WIPO implementation activities should reinforce that Contracting Parties remain free to maintain or adopt broader disclosure mechanisms provided they remain consistent with the Treaty's express provisions.

Second, governments should undertake comprehensive reviews of domestic legal frameworks rather than limit implementation to isolated amendments of patent legislation. In several jurisdictions examined in this paper, disclosure obligations are implemented through biodiversity legislation, administrative regulations or integrated ABS procedures rather than patent statutes alone. Effective implementation therefore requires coordination among intellectual property offices, biodiversity authorities and other competent institutions to ensure that disclosure obligations operate coherently across the broader regulatory framework.

Third, Contracting Parties whose existing disclosure regimes are territorially limited should consider extending their application to inventions based on genetic resources or associated traditional knowledge originating outside their own territories. The comparative analysis indicates that territorial limitations constitute one of the most common areas of divergence from the Treaty. Addressing this issue will be particularly important for countries whose disclosure regimes were originally designed exclusively to support domestic ABS legislation.

Fourth, national implementation legislation should expressly provide applicants with the opportunity contemplated under Article 3.3 to submit a declaration where the origin or source of genetic resources or associated traditional knowledge is genuinely unknown. Several national disclosure regimes presently lack such a mechanism despite otherwise exhibiting a high degree of alignment with the Treaty. While implementing this obligation, governments should ensure there are appropriate guardrails to ensure that this route is not abused to avoid the disclosure requirement.

Fifth, governments should review national provisions governing sanctions and remedies to ensure consistency with Article 5 of the Treaty. While Contracting Parties retain broad discretion to determine appropriate administrative and legal consequences for non-compliance, patent

revocation or invalidation solely on the ground of failure to disclose should be distinguished from sanctions imposed for fraudulent conduct or violations of independent access and benefit-sharing obligations.

Sixth, implementation should strengthen institutional cooperation between patent offices and biodiversity authorities while preserving their respective institutional functions. The comparative analysis demonstrates that disclosure systems generally operate most effectively where patent offices remain responsible for patent examination and biodiversity authorities retain responsibility for implementing access and benefit-sharing legislation. Electronic information-sharing mechanisms and interoperable administrative databases may significantly reduce compliance costs while improving legal certainty.

Seventh, regional intellectual property organizations should examine whether existing regional patent frameworks require adjustment following entry into force of the Treaty. Particular attention should be given to the absence of disclosure requirements under the ARIPO Harare Protocol and the interaction between regional patent grants and national implementation obligations.

Finally, the WIPO IGC should continue monitoring implementation experiences and facilitate exchanges of best practices among Contracting Parties. As national implementation progresses, issues not expressly addressed by the Treaty, including digital sequence information, derivatives, and artificial intelligence-assisted biological innovation are likely to assume increasing practical importance. Continued dialogue among WIPO, the Convention on Biological Diversity, national governments and other stakeholders will therefore remain essential to ensuring that the disclosure framework established by the GRATK Treaty evolves coherently alongside developments in science, technology and international biodiversity governance.

VII. CONCLUSION

The GRATK Treaty should not be viewed as concluding the international discussions on genetic resources and intellectual property. Rather, it establishes an institutional platform upon which future developments can build. Questions concerning digital sequence information, artificial intelligence, synthetic biology, traditional knowledge databases, cross-border genetic resources, certificates of compliance, and interoperability between patent and biodiversity information systems are likely to dominate future international discussions.

Implementation should therefore remain adaptive. Governments should periodically review national disclosure systems in light of technological developments, judicial interpretation and evolving international practice. WIPO should similarly establish mechanisms to monitor implementation experiences, facilitate exchange of best practices and identify areas where additional guidance may be required.

Ultimately, the success of the GRATK Treaty will not be measured solely by the number of ratifications or legislative amendments adopted. Its longer-term contribution will depend upon whether it succeeds in fostering greater transparency, improving patent quality, strengthening confidence in the intellectual property system, and promoting a more coherent relationship between innovation policy and biodiversity governance. The comparative experience examined in this study demonstrates that many countries have already developed innovative approaches capable of achieving these objectives. The challenge now is to ensure that implementation of the Treaty consolidates these experiences, encourages continued policy innovation, and contributes to an international patent system that is not only more transparent but also more equitable, coherent and responsive to the longstanding demand for an international regime that ensures the fair sharing of the benefits derived from the use of genetic resources.

Annex - Comparative Table: National Patent Disclosure Regimes and the WIPO GRATK Treaty

This table compares national patent disclosure requirements for genetic resources (GRs) and associated traditional knowledge (TK) in selected countries against the minimum baseline obligations under the WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge (GRATK Treaty). The GRATK Treaty column sets the minimum requirements; national provisions going beyond those are not non-compliant.

Comparative Table: National Patent Disclosure Regimes and the WIPO GRATK Treaty										
Dimension	GRATK Treaty (Baseline)	Brazil	Andean Community (Bolivia, Colombia, Ecuador, Peru)	China	India	Indonesia	Malawi	Namibia	South Africa	Uganda
Treaty Status	—	Signatory	Signatory (Bolivia, Colombia, Ecuador) Contracting Party (ratified) - Peru	Not a Party	Not a Party	Contracting Party (ratified)	Contracting Party (first to ratify)	Signatory	Signatory	Contracting Party (ratified)
A. DISCLOSURE TRIGGER										
Trigger formulation	*Invention 'based on' GR or associated TK*	Access to GR/TK from Brazil (registration with CGen/SisGen)	Invention obtained/developed from GR or TK of CAN member country origin	Invention 'accomplished by relying on' GR (hereditary function must be used)	Biological material 'used in' the invention	Invention 'associated with and/or derived from' GR/TK	No disclosure requirement exists	Invention 'derived from or developed with' GR/TK (development tool use sufficient) → broader than treaty	Claimed invention 'based on or derived from' GR or TK	GR 'directly or indirectly used' in claimed invention
Alignment	—	**Partial**	**Partial**	Broadly equivalent	Broadly equivalent	Broadly equivalent	**N/A**	Broader than treaty (no gap)	Broadly equivalent	Broadly equivalent

Comparative Table: National Patent Disclosure Regimes and the WIPO GRATK Treaty										
Dimension	GRATK Treaty (Baseline)	Brazil	Andean Community (Bolivia, Colombia, Ecuador, Peru)	China	India	Indonesia	Malawi	Namibia	South Africa	Uganda
Gap vs treaty trigger?	—	Access-based trigger; GRs from outside Brazil excluded	Restricted to member country-origin GRs/TK only	No gap	No gap – trigger is broader	No gap – trigger is broader	Gap	No gap — trigger is broader	No gap	Territorial limit: only GRs from Uganda
B. SCOPE — What subject matter is covered?										
Derivatives of GRs	*Not explicitly excluded; 'based on' open to encompass derivatives*	Yes — 'genetic heritage' defined to include 'substances derived'	Yes — Decision 391 explicitly defines 'derived product' (molecules, crude extracts, enzymes, etc.)	Conditional — only if invention relies on hereditary function of derivative	Yes — any derivative physically used triggers disclosure	Yes — law expressly covers derivatives	N/A	Yes — Biodiversity Act defines 'derivative' broadly (biochemical compounds from genetic expression/metabolism)	Yes — 'indigenous biological resource' cross-references NEMBA definition inclusive of derivatives	Yes — biodiversity law defines GRs to include derivatives
Digital Sequence Information (DSI)	*Not addressed in treaty text (contested under CBD/Nagoya)*	Yes — 'genetic heritage' defined broadly; DSI arguable	Yes — member countries treat DSI access as access to GR, but not explicit in patent disclosure requirement	Yes —GR defined as both materials taken and genetic information	Conditional — if DSI used to construct physical ingredient	Yes — expressly includes DSI	N/A	Arguable — intangible components covered under Biodiversity Act	No — NEMBA materiality-based definition excludes intangible data	Arguable — biodiversity law includes intangible components
Associated TK	*Yes — art 3.2 requires disclosure of*	Yes — IPLC/community identity	Yes — authorization/ licence for	No explicit IPLC requirement;	No IPLC disclosure; NBA is sole	Origin of TK required; no IPLC	N/A	Yes — 'indigenous or traditional	Declaration of TK use triggers	Yes — TK use within Uganda requi

Comparative Table: National Patent Disclosure Regimes and the WIPO GRATK Treaty										
Dimension	GRATK Treaty (Baseline)	Brazil	Andean Community (Bolivia, Colombia, Ecuador, Peru)	China	India	Indonesia	Malawi	Namibia	South Africa	Uganda
	providing IPLC or source	and source required	TK use must be submitted	framed as 'direct/original source' of GR only	ABS contracting authority; source disclosure gap vs art 3.2(b)	identification; source alternative not provided		knowledge' explicitly covered	provenance documentation; IPLC identity not separately required	red; prior informed consent framing
C. CONTENT OF DISCLOSURE — What information must be provided?										
Country of origin	*Required (primary obligation)*	Not by name; georeferenced in-situ provenance required (more detailed)	Required implicitly via access contract / authorization copy	Yes — 'original source' includes country/province	Yes — but must specify state/district/ecosystem, not just country name	Yes — origin declaration required	N/A	Yes — country of origin required (in addition to providing country)	Yes — triggered by s.30(3A) declaration; provenance documents reveal origin	Yes — origin of GRs collected in Uganda
Source / providing entity	*Required where country of origin is unknown*	Yes — provider identification required	Yes — source of TK (licence/authorization) required	Yes — 'direct source' (how applicant obtained GR) required	Yes — source of biological material (Form 2)	Gap	N/A	Yes — 'providing country' separately required in addition to country of origin	Yes — emerges from s.30(3B) provenance documents	Gap
IPLC / community identity	*Required under art 3.2(a) 'as applicable'; source under art 3.2(b) if art 3.2(a) does not apply*	Yes — community identity required	Yes — authorization from community required	No explicit requirement; not applicable in China	No — NBA model excludes community identification	No — not applicable in Indonesia	N/A	Yes — explicitly required	No — not separately required	Yes — individual or collective creators named in s.21(8)

Comparative Table: National Patent Disclosure Regimes and the WIPO GRATK Treaty										
Dimension	GRATK Treaty (Baseline)	Brazil	Andean Community (Bolivia, Colombia, Ecuador, Peru)	China	India	Indonesia	Malawi	Namibia	South Africa	Uganda
Unknown origin / source declaration (art 3.3)	*Mandatory: applicant must be able to declare that origin/source is not known to them*	Not provided — most specific location must be given	Not provided — Gap	Yes — 'original source: state reasons if unknown'	Not provided — Gap if India ratifies	Not provided — Gap	N/A	Not provided — Gap if Namibia ratifies	Impossible under current system — s.30(3B) requires provenance proof if use admitted	Not provided — Gap
D. VERIFICATION — Is the IP office required to verify the disclosure?										
IP office verification role	*Not required; Parties free to adopt other modalities (art 9.2)*	No — INPI relies on SisGen reference; CGen cross-checks administratively	No — IP office checks for access contract copy; substantive verification by biodiversity authority	Limited — CNIPA formal review	No — patent office has no verification obligation; NBA handles legal provenance	No — Statement Letter shifts burden to applicant; post-grant challenge by third parties	N/A	No — Industrial Property Office relies on applicant disclosure	Partial — Registrar calls for provenance documents under s.30(3B) but does not audit origin/source	No explicit verification obligation
Alignment with treaty	—	Yes	Yes	~~Partial~~Yes	Yes	Yes	N/A	Yes	Partial	Yes
E. RECTIFICATION — Must the applicant be given an opportunity to remedy failure to disclose?										
Opportunity to rectify	*Mandatory — contracting Parties must provide opportunity before sanctions apply (art 5.2)*	Yes — Decree art 110: CGen notifies INPI; applicant gets 30 days to register	No explicit provision. National implementing regulations allow opportunity to rectify	Yes — amendment of administrative form allowed	Partial — Controller has discretion but is not obliged (Gap)	Yes — Article 36(1) notice before deemed withdrawal; pre-grant opportunity	N/A	Yes — general pre-grant amendment right available	Not applicable — patent not accepted until s.30(3A) provided; but no art 3.3 pathway	Implied through general amendment procedure (s.23)

Comparative Table: National Patent Disclosure Regimes and the WIPO GRATK Treaty										
Dimension	GRATK Treaty (Baseline)	Brazil	Andean Community (Bolivia, Colombia, Ecuador, Peru)	China	India	Indonesia	Malawi	Namibia	South Africa	Uganda
Alignment with treaty	—	Yes	Yes	~~Partial~~Yes	Partial	Yes	N/A	Partial	Partial	Partial
F. SANCTIONS & REMEDIES — Consequences of non-disclosure or bad-faith disclosure										
Pre-grant sanction	*Not prescribed; left to Parties*	Application refused if SisGen registration not submitted	Application not processed without access contract copy	Application can be rejected under art 26(5) for non-compliance	Pre-grant opposition allowed (s.25(1)(j)); Controller has discretion to reject	Application deemed withdrawn if completeness requirements not met	N/A	Application can be refused under s.24 for non-disclosure	Application not accepted until s.30(3A) statement lodged	Not explicitly specified
Post-grant revocation (alignment with art 5.3)	*Permitted only where non-disclosure is with fraudulent intent; patent cannot be revoked solely for failure to disclose*	Yes — INPI can annul; but only after rectification opportunity	Partial — absolute nullity for non-submission of access contract (not purely disclosure-based)	Yes — granted patent cannot be invalidated solely for failure to make administrative declaration	Gap — revocation at any time via s.64 without fraudulent intent requirement	Yes — only for bad faith (art 132(1)(b)); broadly aligned with fraudulent intent standard	N/A	Gap — s.65 allows invalidation solely on non-disclosure	Yes — s.61(1)(g): material false statement with knowledge; aligned with fraudulent intent standard	Yes — material misrepresentation under s.90; courts may treat as fraudulent intent
G. INTERNATIONAL APPLICATIONS — Treatment of PCT national-phase applications										
PCT national-phase applications	*Treaty obligations apply to all patent applications, including PCT entries*	SisGen registration required before any IP right application; applies to PCT entries	Decision 486 art 26 applies on national phase entry in each member country	Implementing Regulations art 126: same disclosure form required on national phase entry	Form 1 declaration not required for PCT applications (administrative gap)	Not explicitly addressed	N/A	Not explicitly addressed; ARIPO patent issue compounds this gap	s.30(3A) statement required before acceptance; applies to PCT entries	Not explicitly addressed; ARIPO patent issue compounds this gap
H. OVERALL ASSESSMENT — Key gaps requiring alignment if/when country is or becomes a Contracting Party										

Comparative Table: National Patent Disclosure Regimes and the WIPO GRATK Treaty										
Dimension	GRATK Treaty (Baseline)	Brazil	Andean Community (Bolivia, Colombia, Ecuador, Peru)	China	India	Indonesia	Malawi	Namibia	South Africa	Uganda
Key alignment gaps	—	1. Extend beyond Brazilian-origin GRs/TK to all origins 2. Introduce art 3.3 unknown-origin declaration o ption	1. Extend beyond member country-origin GRs/TK to all origins 2. Introduce art 3.3 unknown-origin declaration option 3. Art 5.3 compliance (nullity framing)	1. Widen trigger to cover 'based on' (not only 'relying on hereditary function') 2. Extend to DSI 3. Add IPLC disclosure requirement	1. Add source of associated TK disclosure (art 3.2(b)) 2. Introduce art 3.3 unknown-origin declaration option 3. Ensure rectification opportunity is mandatory (art 5.2) 4. Align post-grant revocation with art 5.3	1. Introduce source disclosure as alternative to origin (art 3.2) 2. Introduce art 3.3 unknown-origin declaration o ption	1. Introduce GR/TK disclosure requirement entirely 2. Address ARIPO patent gap	1. Introduce art 3.3 unknown-origin declaration option 2. Align post-grant invalidation with art 5.3	1. Introduce explicit origin/source disclosure in patent specification (current system is indirect) 2. Introduce art 3.3 declaration pathway 3. Address DSI exclusion	1. Extend to GRs/TK of non-Ugandan origin 2. Introduce source disclosure as alternative to unknown origin 3. Introduce art 3.3 unknown-origin declaration option 4. Address ARI PO patent gap

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