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Documenting Traditional Knowledge – A Toolkit



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Foreword

Indigenous peoples and local communities around the world have developed an enormous wealth of traditional knowledge (TK). There is growing interest in documenting such TK.

The reasons why documentation initiatives are undertaken and the objectives they seek to meet vary greatly. In most cases, the benefits that documenting TK can provide seem straightforward. But there may also be risks, and these are not always so evident.

Many of the benefits and risks concern intellectual property. For example, documenting TK may help indigenous peoples and local communities prevent others from wrongly asserting intellectual property rights over it. However, a poorly conceived documentation project may jeopardize the protection of secret TK or even give third parties intellectual property rights in the documented TK.

The potential pros and cons of each TK documentation project therefore need thorough consideration on a case-by-case basis. TK holders need to decide whether the benefits of the project outweigh any potential downsides; and if they do decide in principle to go ahead with the project, it needs to be carefully planned to ensure that objectives are met, benefits are secured and risks are controlled or minimized.

This *Toolkit* should assist in that process. It provides basic information about documenting TK, and in particular the IP implications, with practical guidance on key issues that need to be thought-through before, during and after documenting TK.

The *Toolkit* does not promote the documentation of TK as such. It suggests that documentation of TK, especially when that might lead to its dissemination, should only take place within the context of an intellectual property strategy. Most importantly, it makes it clear that secret or confidential TK needs to be cautiously managed.

By providing an accessible and neutral overview, the *Toolkit* should help to ensure that all participants in documentation projects – most especially indigenous peoples and local communities – can make informed decisions.

Francis Gurry Director General WIPO

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List of acronyms

ABS access and benefit sharing

EU European Union

IGC WIPO Intergovernmental Committee on Intellectual Property and

Genetic Resources, Traditional Knowledge and Folklore

NGO non-governmental organization

PIC prior informed consent

TK traditional knowledge

 $\begin{tabular}{ll} \textbf{UNDRIP} & \textbf{United Nations Declaration on the Rights of Indigenous Peoples} \\ \end{tabular}$

 $\begin{tabular}{ll} \textbf{UNESCO} & \textbf{United Nations Educational, Scientific and Cultural Organization} \\ \end{tabular}$

WIPO World Intellectual Property Organization

Introduction

Documenting traditional knowledge (TK) is now widely discussed as a way of guaranteeing the social, cultural and economic interests of indigenous peoples and local communities. It has emerged as a tool that can help impede further loss of TK, maintain TK over time, support benefit sharing between holders of TK and those who use it, and ultimately protect TK from unwanted uses.

But just documenting TK is not in itself an effective strategy for protecting it. TK documentation does not necessarily ensure legal protection for TK.

Indeed, concerns have been raised regarding documentation and its potential effects on the rights, cultures and livelihoods of indigenous peoples and local communities. There are concerns that documenting TK may mean that communities lose control over it, make it widely available, compromise the secret nature of some TK, and so on.

This *Toolkit* aims to provide useful practical guidance on how to undertake a TK documentation project and how to address critical issues relating to intellectual property as they arise during the documentation process.

It aims to help conceptualize and plan a TK documentation process and understand its key intellectual property implications, as a means to assist in safeguarding the interests and protecting the rights of TK holders, in particular indigenous peoples and local communities. Intellectual property is an important issue to consider as part of a documentation process, since important intellectual property rights may be lost or strengthened depending on how TK documentation is carried out.

The *Toolkit* can be used when reviewing and organizing existing TK in databases, books, studies and so on, or directly obtaining TK from TK holders themselves *in situ* (in the field).

It does not advocate documentation of TK as such, nor does it provide, suggest or prefer any one approach to documentation. It does not suggest that TK should be made publicly or widely available.

The *Toolkit* emphasizes the interests of indigenous peoples and local communities as TK holders. However, documentation projects are often led by other actors. The *Toolkit* should also prove useful for public officials from intellectual property offices, policymakers and research and cultural institutions that work with communities *in situ* (for example, ethno-botanical projects or museums, libraries and archives), among others.

The *Toolkit* does not offer a ready-made plan for all TK documentation projects. Its content will need to be adapted to each project. Furthermore, it is not a substitute for expert legal advice, and documentation project participants should consult a lawyer to determine the applicable laws in force, the legal status of TK and the intellectual property implications.

Structure of the Toolkit

The Toolkit includes three sections:

- 1. Basic concepts
- 2. Key issues
- 3. Getting started the why and how of each specific project

A hypothetical example has been included as annex 1 to illustrate some of the main points.

This *Toolkit* focuses on "TK" in its narrower sense, i.e., the content or substance of technical knowledge and know-how related to biodiversity, food and agriculture, health, the environment and the like. For their part, "traditional cultural expressions" (TCEs) or "expressions of folklore" raise a series of distinct intellectual property-related questions. However, in practice TK and TCEs are often closely related and documented together. Much of the information in this *Toolkit*, especially on process, might also apply to TCEs, and annex 2 identifies some considerations regarding the documentation of TCEs specifically.

Annex 3 includes the data standard "Data Specification for Technical Aspects of Databases and Registries of Traditional Knowledge and Genetic/Biological Resources". The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC) recommended this as a standard for the documentation of TK and genetic/biological resources in databases and registers.

Annex 4 provides examples of TK documentation through registers and databases.

Annex 5 includes a list of elements usually included in a documentation format.

For the purposes of the *Toolkit*, TK documentation is broadly divided into three distinct phases:

• Before documentation

This phase should include careful planning, assessing options and setting objectives, as well as consultation with indigenous peoples and local communities and relevant stakeholders.

• During documentation In this phase, TK is actually collected and organized in some coherent manner, following planned actions and activities.

• After documentation

This phase involves a series of post-collection and organization activities related to the management of the database, documentation system or register that may have been created. It includes, among other things, managing access to and use of the documented TK.

Checklists are provided for each phase as annex 6.

A consultation draft of the *Toolkit* was published in November 2012. Mr. Manuel Ruiz contributed significantly to that draft. This is an updated and simplified version which takes into account comments received on the consultation draft.

1. Basic concepts

1.1 What is TK documentation?

TK documentation is primarily a process in which TK is identified, collected, organized, registered or recorded in some way, as a means to dynamically maintain, manage, use, disseminate and/or protect TK according to specific goals. A simple photograph, an isolated record of TK or a written note are not documentation *per se* in the sense suggested in this *Toolkit*. The isolated acts of taking a photograph or jotting down a descriptive note need to be part of a comprehensive, thought-through process in order to be regarded as "documentation".

1.2 Why is TK documentation important?

TK documentation can be a useful tool as part of an overall strategy for the protection of TK.¹ Its objectives may vary considerably depending on the specific context, the interests at stake, and the needs and expectations of indigenous peoples and local communities and other actors involved in the process, among other things. All these specificities and different interests, needs and expectations should be taken into consideration in any TK documentation process.

A documentation project may generate significant benefits, such as:

- monetary or in-kind benefits
- TK organized and systematized (preserved) for future generations
- collaboration and partnerships among a broad range of actors
- identification and broader social recognition of indigenous peoples and local communities in relation to specific TK
- capacity building and educational uses of databases or registers
- defensive intellectual property protection, i.e., scope to prevent the unjustifiable acquisition of intellectual property rights over TK
- positive intellectual property protection for TK or products related to it.

At the same time, efforts to document and systematize TK may also have an undesired impact and effect on communities and cultures, especially where oral tradition and more ancestral types of social practices and livelihoods prevail. Moreover, there are concerns that if documentation makes TK more widely available to the general public, especially if it can be accessed on the Internet, this can lead to misappropriation and use of it in ways that were not anticipated or intended by its holders. Risks in this regard will depend

on specific circumstances and contexts, and need to be carefully assessed before starting a documentation project.

Indeed, a poorly conceptualized and inappropriately planned documentation project may create unnecessary risks and produce negative results, such as:

- no monetary or in-kind benefits
- TK systematized in ways that are culturally foreign to indigenous peoples and local communities, and disenfranchise them
- an informal process that does not consider prior informed consent (PIC) and other relevant principles
- indigenous peoples and local communities losing some control over their TK, especially undisclosed or secret TK
- uses of TK that are difficult to monitor and may lead to misuse and misappropriation.

Crucially, TK documentation does not in itself necessarily ensure legal protection for TK.

Carefully conceptualizing and planning a documentation project can significantly reduce the risks and ensure positive results.

1.3 How can TK be documented?

TK documentation can take many shapes and forms – through written registries and files, video, images and audio; in a traditional indigenous language or other languages; and using modern or more classical technologies (digital *versus* written filing).

Examples of possible documentation activities

Documentation methods and formats can vary greatly. Examples include:

- writing down medicinal preparations by Shipibo communities (Peru), the Maori (New Zealand), or the Maasai (Kenya and Tanzania)
- taking notes about herding traditions of the *Tuareg* peoples in the Sahel (Africa)
- digitizing ancient manuscripts such as Ayurvedic medical texts (India)
- photographing land and agro-forestry management activities of the Campas peoples (Brazil) or medicinal practices of the Shuar (Ecuador)
- videotaping traditional agricultural practices and technologies of Aymara people (Bolivia), or the Nahua (Mexico), or the Pashtun (Afghanistan).

 $1. For further information on protection strategies, see: WIPO (2016) \ {\it Developing a National Strategy on Intellectual Property and Traditional Knowledge, Traditional Cultural Expressions and Genetic Resources. (Background Brief No. 3); available at: www.wipo.int/publications/en/details.jsp?id=3864&plang=EN; and WIPO (2015) \ {\it Intellectual Property and Genetic Resources, Traditional Knowledge and Traditional Cultural Expressions.} (WIPO Publication No. 933E); available at: www.wipo.int/publications/en/details.jsp?id=248$

2. Sarah A. Laird (ed.) (2002) Biodiversity and Traditional Knowledge: Equitable Partnerships in Practice. (People and Plants Conservation Series). London; Sterling, VA: Earthscan Publications, 2002. ISBN 9781849776080.

Two possible scenarios: in situ collection and desktop work

The forms in which TK may be found throughout the world vary greatly.³ Some elements of TK may only be revealed or disclosed to one part of a traditional community – for example, it may only be permitted to reveal TK to tribal elders or to community members who have been initiated. Alternatively, other elements of TK may be widely available even beyond communities and their control, for example in books and on the Internet.

Two scenarios are possible with regard to the actual act of documentation:

- In situ collection
- Data and TK are obtained directly, in situ, through interviews, communications, observations, taking images, recordings, etc., from the communities themselves.
- This will involve contact with the community or tribe chief, the elder, the shaman, an individual farmer, a community council, or whatever formal representative person or body is entitled to engage and transmit data and information in the form of TK.
- In situ collection implies on-site fieldwork and continued interaction with community members.
- Desktop work
- This involves going through documents, audiovisual archives, recordings, books, databases, research theses, ethno-botanical work, file archives, specialized journals, memoirs, specimen passport data, and so on
- looking for specific TK and TK references.

This *Toolkit* covers both scenarios, with some advice specific to one or the other.

1.4 What laws or regulations need to be considered when documenting TK?

The legal framework

In planning any documentation project, it is essential to discuss which rights are formally recognized by the State with regard to TK. Not all countries acknowledge (at least expressly) indigenous peoples' and local communities' collective property or other rights over TK.

Some countries have developed *sui generis* laws and regulations to legally protect TK which determine the conditions and requirements under which TK may be obtained and used.⁴ Since documenting TK implies obtaining and using it, any documentation exercise will have to comply with the laws or regulations in force.

Where rights over TK are recognized, communities or individual community members may still wish to ensure that they retain ownership when granting permission to third parties to collect TK or access it via a database or a register.

If national law does not recognize or establish clear rights of indigenous peoples and local communities over their TK, special consideration must be given to the potential benefits and drawbacks of documentation. This will require an analysis of the legal options available to ensure that TK is not appropriated by third parties.

For example, communities may need to consider how they might exercise control over a database and the information within it once TK is documented. This relates to who owns the database itself under the law and who exercises rights over the content of the database. Database content may be protected through copyright laws and/or under special database legislation such as the *sui generis* database protection that exists in the European Union.⁵

Customary laws and practices

In the context of a documentation project, due consideration is also required for customary laws and practices, which may determine whether and how TK can be obtained and shared, how must it be presented, in what form, by whom, and so on.⁶

As a general rule, research institutions, NGOs, or other third parties undertaking documentation need to ensure that customary laws and practices are fully respected at all stages of the TK documentation project. Whether expressed in written guidelines, codes of conduct, community protocols, formal agreements (written or oral) or even simple instructions given by TK custodians, communities or their representatives, efforts should be made to ensure such requirements are met.

Customary laws and practices need to be considered before documentation takes place, but may also arise during the documentation process. Indeed, when documentation activities begin, this may bring to light conflicts with customary laws and practices not envisaged at the date an agreement for documentation was made.

^{3.} For further information, see a document prepared by the WIPO Secretariat for the Seventeenth Session of the IGC, December 6-10, 2010, "List and Brief Technical Explanation of Various Forms in which Traditional Knowledge may be Found" (WIPO/GRTKF/IC/17/INF/9); available at: www.wipo.int/edocs/mdocs/sct/en/wipo_grtkf_ic_17/wipo_grtkf_ic_17/inf_9.pdf

 $^{4.} For example, in Brazil Law N^{\circ} 13.123 of 2015 \, recognizes \, that indigenous peoples, traditional communities and traditional farmers have the right to participate in decision-making on issues related to the conservation and sustainable use of their TK. In Costa Rica, article 66 of Biodiversity Law No. 7788, which regulates access and benefit sharing (ABS), recognizes that indigenous peoples and local communities have the right to raise a cultural objection with regard to access to and use of their TK in the context of bioprospecting projects. This type of recognition repeats itself in various other laws and regulations. For additional information regarding laws and regulations on the protection of TK, visit www.wipo.int/tk/en/databases/tklaws$

 $^{5.\,}Under\,the\,EU\,Database\,Protection\,Directive\,(European\,Directive\,96/9/EC\,of\,March\,11,\,1996).$

^{6.} Customary laws may be described as *sui generis* regimes for protection and regulation of TK, incorporating legal and quasi-legal norms and principles, which have been developed to respond to specific territorial, environmental, cultural and spiritual realities of indigenous peoples and local communities. Customary laws often control how TK should be held and passed down between generations.

For instance, documenters in the field may often need to respect a series of social practices which are not written and could not have been foreseen, but which are required if access to TK is to be obtained.

1.5 Intellectual property and TK

The relationship between intellectual property and the protection of TK in general terms is a huge subject, beyond the scope of this *Toolkit.*⁷

However, participants in a TK documentation project need to be aware of the implications of intellectual property mechanisms in relation to TK in order to better assess the viability and appropriateness of documentation processes and their connection, if any, with TK protection.

In brief, the protection of TK in the intellectual property sense refers to its protection against some form of unauthorized or inappropriate use by third parties. The objective of protection is to make sure that TK is not used without authorization, or misused. Two forms of intellectual property protection may be encountered, positive and defensive protection:

- Positive protection grants TK holders intellectual property rights and empowers them to use those rights for their own purposes (for instance, to promote their TK, to control its use by people not belonging to the community, and to benefit from its commercial exploitation if they so wish).
- Defensive protection allows TK holders to prevent or stop people not belonging to the community from illegally acquiring intellectual property rights over their TK (for instance, through the erroneous granting of patents for inventions based on TK).

TK documentation may play a role in both forms of intellectual property protection.

TK documentation may also be useful for preservation purposes (also referred to as "safeguarding"). However, preservation is different from the kind of protection referred to in this *Toolkit*. The objective of preservation is basically the maintenance or viability of TK. Documentation efforts for preservation purposes may make TK more accessible and vulnerable to unauthorized or inappropriate uses. Nonetheless, with proper management, protection and preservation can be mutually reinforcing.

^{7.} For information regarding intellectual property and TK, see: WIPO (2016) *Traditional Knowledge and Intellectual Property*. (Background Brief No. 1); available at: www.wipo.int/publications/en/details.jsp?id=3858

2. Key issues

2.1 Intellectual property issues8

The process of documentation may create new intellectual property rights in the recorded material.

Therefore, the potential implications of intellectual property for the documentation process need careful thought. You may need to consider:

- the type of rights that may be relevant to particular TK,
- intellectual property-related mechanisms (i.e., copyright and database protection) that may be relevant in the development and management of a TK database,
- who will become a right holder for the purposes of intellectual property, and
- whether Creative Commons or other licenses may be required to support the control and use of TK that has been collected and organized.

After the process of documentation itself has been completed, you may need to reassess the intellectual property rights that could be used to protect the documented TK or related elements.

Intellectual property rights generated during the documentation process

A crucial step in the documentation process is the recording, or "fixation", of the TK in a material form or when TK is transferred from one medium to another. This recording or fixation is often the point at which intellectual property rights come into existence. You will need to evaluate what rights exist in (i) the TK itself (including rights, if any, in genetic/biological materials) and (ii) the fixation, including rights in any compilations, databases, translations or reproductions. For instance, intellectual property rights are often created when:

- a spoken tradition is written down or taped, or
- a traditional healing method is filmed.

In this context, copyright is very relevant. Oppyright typically protects original creations such as novels, musical compositions, paintings and stories. It also protects databases that are original by reason of the selection or arrangement of their contents. In most jurisdictions copyright arises automatically. Importantly, copyright does not protect ideas or knowledge as such, but rather the form in which they are expressed.

Bear in mind that:

- Whoever writes down TK-related information may be entitled to copyright in the way the TK has been put into words.
- Whoever translates that TK-related information expressed in words may have his or her own rights in the translation.
- Whoever films someone explaining how to use TK may be entitled to rights in the recording.
- Whoever scans a manuscript and includes that information in a database may be entitled to rights in the selection and arrangement of its contents.

Indeed, the TK itself may well not be protected, on the ground that it is merely an idea, whereas its expression – be it in text, translation, a recording or a database – does qualify for protection.

For instance:

- Copyright will probably vest in a written version of a remedy that was previously only held and transmitted orally. In this case, generally the person or entity responsible for the fixation or recording of the TK (such as biologists or other researchers and collectors) will own the copyright or related rights in the recording of the TK, no matter who the TK holders might be. To address this issue, WIPO works to help communities record their own cultural heritage themselves – see further annex 2.
- TK may be protected indirectly by the copyright protection afforded to databases that are original by reason of the selection or arrangement of their contents. However, the copyright will extend only to the ways in which the TK is expressed, not to the ideas or the content of the TK itself.

A country's intellectual property legislation may allow these rights to exist without recognizing any rights of the indigenous peoples and local communities who developed and preserved the TK.

Further, in some jurisdictions database rights may be available for non-original databases. Non-original databases are those which do not result from creative activities *per se*, but that represent an investment of time, effort and resources in compiling and organizing the resulting data and information.¹⁰

^{8.} For information about intellectual property that is particularly relevant for indigenous peoples and local communities, see: WIPO (2017) Protect and Promote Your Culture: A Practical Guide to Intellectual Property for Indigenous Peoples and Local Communities. (WIPO Publication No. 1048E); available at: www.wipo.int/publications/en/details.jsp?id=4195

^{9.} For more information on copyright, see: WIPO (2016) *Understanding Copyright and Related Rights*. (WIPO Publication No. 909E); available at: www.wipo.int/publications/en/details.jsp?id=4081&plang=EN

^{10.} The EU Database Protection Directive (1996) grants a *sui generis* right to developers of non-original databases (those which cannot be protected through classical copyright). The Directive provides the developers of the database with the rights to prevent the extraction and/or re-utilization of the whole or a substantial part of the database's contents, where such databases represent a substantial investment in obtaining, verifying or presenting the contents. This protection applies irrespective of the eligibility of the contents for protection by copyright or other rights. Collections and databases of TK may be protected under this kind of *sui generis* database protection in some jurisdictions.

The protection accorded to databases may prove to be of interest for extending protection to TK which is already publicly available, especially TK that is compiled in new databases such as the Traditional Knowledge Digital Library in India (see section 3.4). However, it is doubtful whether this protection could extend to prevent single TK entries included in such databases from being "extracted and re-utilized."

Intellectual property rights that could be used to protect the documented TK or related elements after documentation

It is sensible to consider intellectual property issues again once TK has actually been collected and systematized. You may then have a better idea of the content of the documentation and whether or not all the intellectual property issues that were initially considered remain relevant.

At this stage, it may be worth assessing which intellectual property rights or other mechanisms could be used to protect the documented TK or related elements.

For example:

- Trade secrets or laws on confidentiality could be used to protect confidential documented TK against unauthorized disclosure and use.
- Trademarks, collective and certification marks, and geographical indications could be used to protect the reputation and special qualities of traditional products that use TK.

2.2 TK and the public domain

For the purposes of this *Toolkit*, the term "public domain" refers to elements that are not subject to exclusive intellectual property rights. If a certain element is in the public domain, any person is legally entitled to use it or exploit it without any restrictions.¹¹

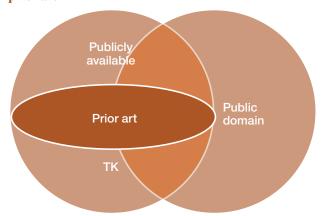
It is important to distinguish between documenting TK and its entry into the public domain. Documenting TK does not entail putting it in the public domain. Saying that TK is in the public domain implies that TK is freely available for anyone to use without charge, that there are no proprietary rights on that TK. Importantly, TK may be documented while remaining firmly withheld from the public domain.

Accordingly, some communities have documented TK (in State-managed or locally managed databases) with the intention of keeping it secret, so that they can be confident it will be maintained and preserved for future generations. In such cases, the collection can only be accessed by certain approved parties such as tribal elders, community members, women, leaders or initiates.

On the other hand, it may be necessary to document TK that is already categorically in the public domain, but is at risk of erosion (e.g., through weakening of ancestral customs, livelihoods and TK systems), for academic purposes (e.g., social and anthropological research) or other needs (e.g., to enhance patent examinations). Information may be in the public domain, but remain subject to physical/material restrictions on its use.

This discussion leads on to some important distinctions: "public domain," "publicly available" and "prior art" are often used as synonyms, but they are not the same in an intellectual property context. As figure 1 shows, they may overlap but they are not contiguous.

Figure 1: Publicly available TK, public domain and prior art



"Publicly available" refers to TK which is already available to the public and can be accessed through books and literature, the Internet or some other kind of recording. Publicly available TK may not necessarily be widely open to the public. For instance, some records on TK are kept in a specific library, archive or other repository. Even though these records are publicly available, in practice they can be accessed only by those with access to the repository.

 $^{11.} For a detailed discussion and analysis of this concept, see a document prepared by the WIPO Secretariat for the Seventeenth Session of the IGC, December 6-10, 2010, "Note on the Meanings of the Term 'Public Domain' in the Intellectual Property System with Special Reference to the Protection of Traditional Knowledge and Traditional Cultural Expressions" (WIPO/GRTKF/IC/17/INF/8); available at: www.wipo.int/edocs/mdocs/tk/en/wipo_grtkf_ic_17/wipo_grtkf_ic_17_inf_8.pdf$

^{12.} Black's Law Dictionary (eighth edition, 2005) defines the public domain as "the universe of inventions and creative works that are not protected by intellectual property rights and are therefore available for anyone to use without charge. When copyright, trademark, patent, or trade-secret rights are lost or expire, the intellectual property they had protected becomes part of the public domain and can be appropriated by anyone without liability for infringement" (p.1027). The public domain in relation to patent law consists of knowledge, ideas and innovations over which no person or organization has any proprietary rights. Knowledge, ideas and innovations are in the public domain if there are no legal restrictions on their use, after patents have expired, when patents have not been renewed, or after revocation or invalidation of patents. Legal restrictions on knowledge, ideas and innovations and precise rules on issues such as revocation and invalidation vary among jurisdictions, so there are in fact different public domains in different territories. For additional information, see a document prepared by the WIPO Secretariat for the Thirteenth Session of the Standing Committee on the Law of Patents, March 23-27, 2009, "Dissemination of Patent Information"; available at: www.wipo.int/meetings/en/doc_details.jsp?doc_id=130183

Where TK is disclosed within a limited context, any wider disclosure needs to be carefully considered. For instance, if TK available in a small library were to be uploaded to the Internet and made freely available online, it would become widely open to the public.

Undisclosed TK may be protected by international intellectual property law, which affords some protection to undisclosed information in general. Scope for such protection is lost when the TK is disclosed.

- On the other hand, just because material is available to the public does not necessarily mean that it cannot be protected by any intellectual property rights. In other words, publicly available is not the same as the public domain. For example, material may be published on the Internet or made available in a library or archive, but still be protected by copyright: people can access it, but they are not legally allowed to copy it without permission from the copyright owner.
- The concept of prior art (or state of the art) relates to patent law. Patents protect inventions – new and inventive products and processes. Although the precise requirements for patent protection vary among jurisdictions, generally any claimed invention must, among other things, be new and genuinely inventive, meaning it is not just an obvious development of existing knowledge.

To assess whether an invention is new and inventive, it is compared with the prior art. In most jurisdictions, the prior art consists of everything that was known or disclosed before the patent application was filed and that is relevant to the invention. It includes anything that has been made available to the public anywhere in the world.

All publicly available TK will therefore form part of the prior art in most jurisdictions. However, publicly available TK might not necessarily be easily accessible by patent examiners, so while it is included in the legal definition of the prior art in those jurisdictions, it may risk being overlooked in practice. For this reason, some projects have sought to document TK to prevent patents being wrongly granted for inventions that build upon this TK and so do not satisfy the novelty and inventive step requirements of patent law.

Furthermore, in some jurisdictions publicly available TK will not necessarily meet the legal definition of prior art, because those jurisdictions limit the prior art to written material, meaning that TK that is orally disclosed or disclosed by use is not covered. In such cases, a documentation project may help both to ensure that TK is included within the prior art in the legal sense and that patent examiners have access to it in practice.

2.3 Documentation through a database or register

Documentation may well lead to the development of a database or register of some form and complexity. A database or register may be designed for a variety of purposes. These purposes should be defined at the planning stage, before documenting TK, but its purpose may also evolve as it is created.

In general, documentation through databases or registers may serve as:

- a defensive tool to protect TK against unapproved use and to impede the erroneous granting of intellectual property rights over TK-related inventions,
- a means to conserve TK for the benefit of indigenous peoples and local communities themselves,
- a tool for demonstrating the existence of rights over TK itself or of land and resource rights,
- a tool for recording or supporting compliance with access and benefit-sharing agreements,
- a tool for asserting positive intellectual property rights,
- a source of information for research and product development, and/or
- a repository of cultural or national patrimony.

The primary purpose of a register is often different from that of a database.

A registry is an ordered collection or repository of information. The term "registry" typically has the connotation of a repository or list of information that has an official status. The inclusion of a record within a registry confers some legal status upon that record. In other words, a registry is not merely a list or database designed to provide information to users; it is a list or database into which people put information in order to gain legal rights relating to that information. "Registering" something in a registry "puts it on the record" and puts the public "on notice" that the registrant asserts a claim. For instance, offices of land title include registries in which claims of ownership of land are recorded. Claimants gain certain rights of priority by filing their claim in the land title registry. Similarly, intellectual property systems typically require applicants to register trademarks in a public registry, so as to preserve their rights and put future claimants of the symbol or name on notice that it has already been registered.

Creating a database may be the main purpose of a TK documentation project or it could be one activity within a much broader project or program. The nature of the information to be documented can range from conservation practices to knowledge regarding traditional medicine (including human and animal health); agriculture (plants, animals, farming techniques, innovations to enhance agriculture, fisheries); land uses; or other uses of biodiversity such as housing and clothing.

TK databases and registers can be created and managed by private entities (such as research centers, universities, NGOs and cultural institutions), indigenous peoples and local communities, or public institutions (government agencies which may wish to make information in their databases and registers public). Generally, TK documentation implies an interaction and complementary effort among these different actors. As a general rule and principle, the documented TK, and possibly any technology derived from it, must be made available to the community in which the TK originated. This may require parallel capacity-building efforts to ensure continued access and use by communities, including training in information technologies.

TK information held in a database or register may be confidential or non-confidential or a combination of both, with different levels of access or restrictions applying to different categories of TK and potential users. For example, strict restrictions may be applied to sacred TK or TK that communities may not want to allow to become publicly available. Lesser restrictions may apply to TK which is either non-sacred or is considered less important by the source community. Access to TK may be subject to payment of fees or free of charge. Rules for categorisation of TK to determine any restrictions on access can potentially be defined by customary laws. These restrictions may vary according to "green-, yellow- and redlight" criteria;13 in other words, TK may be freely accessible, certain restrictions may apply, or it may not be accessible at all to third parties. Other forms of categorisation may be based on the potential commercial value of TK.

2.4 Participation by and prior informed consent of indigenous peoples and local communities

Participation by and PIC of indigenous peoples and local communities are critically important for a documentation project.

Participation by these communities during all phases of decision-making regarding the documentation process is crucial to build trust and their sense of ownership of a project, especially when TK is to be collected directly, *in situ*, from indigenous peoples and local communities. It is also critical to enhance communication between parties involved, ensure mutual understanding of interests and prevent potential conflicts. Participation must be both transparent and free, engaging the key actors and stakeholders who may have an interest in the documentation project during its development and throughout its lifespan. Participation mechanisms have been widely recognized in international law, including ILO Convention 169 and the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), and in national policies and regulations.

Ultimately, participation will enhance the capacities of communities to fully understand the nature of the TK documentation process, its implications, its possible outcomes and their chances to affect and influence these outcomes. Participation should also include building and/or strengthening the capacity of communities to engage actively in the documentation process and either lead or complement collecting, systematization, review and overall management efforts. This could include, if there is the interest, very short and adapted modules or talks explaining how the intellectual property system operates, its pros and cons, its relevance in the context of documentation, and so on.

When documenting TK *in situ*, it may be advisable for documenters to regularly update the community or selected members on their progress. This may involve short talks or periodic more detailed meetings where advances are presented (information collected, advances in documentation, reporting of findings, among others) and maybe a demonstration of how the TK database is progressing. Feedback possibilities and interaction with communities can help to ensure their continued engagement and support throughout the documentation process (and after). Meetings with indigenous peoples and local communities and their authorities can also provide a means of identifying negative impacts and bring to light any failures to comply with agreed codes of conduct.

Participation of indigenous peoples and local communities in documentation processes should be continuous, informed, timely, balanced, reported, inclusive, facilitated, respectful, noncoercive (free) and based on an "intercultural dialogue approach" and good faith.

Indigenous peoples and local communities are entitled to say NO! They should freely decide whether or not to participate in or support such a project.

The concept of PIC is recognized in international law in instruments such as ILO Convention 169, the Convention on Biological Diversity¹⁴ and the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity. UNDRIP¹⁵ refers to free, prior and informed consent. There are variations according to the objectives of each convention, but essentially PIC refers to interested parties providing timely and appropriate information to support decision-making processes by a person, authority or representative body.

^{13.} This is the case of the Potato Park (Peru) Local Register. See a document prepared for the Sixteenth Session of the IGC, May 3-7, 2010, "Policies, Measures and Experiences Regarding Intellectual Property and Genetic Resources: Submission by the International Institute for Sustainable Development (IIED)" (WIPO/GRTKF/IC/16/INF/13); available at: www.wipo.int/edocs/mdocs/tk/en/wipo_grtkf_ic_16/wipo_grtkf_ic_16_inf_13.pdf

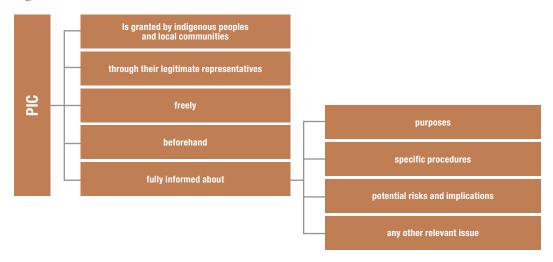
^{14.} The Conference of the Parties to the Convention on Biological Diversity has adopted voluntary guidelines that may be relevant in this context. See the Mo'Otz Kuxtal Voluntary Guidelines; available at: https://www.cbd.int/doc/decisions/cop-13/cop-13-dec-18-en.pdf

^{15.} The United Nations Declaration on the Rights of Indigenous Peoples expressly recognizes the rights of indigenous peoples over their TK.

In intellectual property discussions, including in the norm-building process underway at WIPO,¹⁶ PIC is not uniformly agreed upon as an absolute requirement in all circumstances.

Figure 2 shows key requirements of PIC in the context of a documentation process.

Figure 2: PIC in relation to TK documentation



PIC is both a process and a positive act. It may occur during two stages, as Figure 3 shows.

Figure 3: PIC at the planning and collection stages

Initially, when documentation is being planned	 It may be necessary to contact and engage in discussions with indigenous peoples and local communities to inform them about the planned documentation process, for example how TK will be collected and managed. This means information needs to be provided well in advance and in a form that is accessible to them. At this stage, there may be a need for express consent from appropriate community representatives, in particular in cases when visits or interviews are to be made in the field, in community lands and territories. 		
Subsequently, when in the field and on site	 It may be necessary to conduct more in-depth discussions and negotiations to determine and define the specific terms and conditions under which TK can be obtained and used. These discussions need to be based on a series of principles (including most importantly good faith) which should guide the overall process of providing pertinent information. 		

 $16. \ WIPO's Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC) is currently conducting negotiations with the objective of reaching an agreement on an international legal instrument relating to intellectual property which will ensure the balanced and effective protection of genetic resources, TK and traditional cultural expressions. For more information about the IGC, see: WIPO (2016) The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore. (Background Brief No. 2); available at: www.wipo.int/publications/en/details.jsp?id=3861&plang=EN$

PIC implies a positive act of accepting the collection of TK under certain conditions, such as:

- monetary or in-kind benefits to be provided to the community or communities
- TK to be collected only from a particular area or certain individuals
- conditions regarding the kind of TK that can be collected (traditional medical knowledge, TK on irrigation systems, sacred TK, secret TK, etc.)
- no disclosure or restricted/limited disclosure of the TK (i.e., controls on third-party access to the documented TK)
- access by community members to documented TK and to research based on it.

PIC may be granted by:

- elders
- · community representatives
- · traditional authorities
- · an assembly or
- whatever community structure/actor is entitled to do so by customary law, customs or maybe even national regulations.

Traditional decision-making mechanisms should be utilized as much as possible.

PIC may be reflected in many different forms, including:

- · oral acceptance,
- a traditional instrument or act (e.g. traditional practices, customs or even rituals, such as shaking of hands, sharing food, participating in a ceremony, etc.),
- a written agreement between the documenter and the community or communities, or
- agreed protocols or guidelines.

Nonetheless, when PIC is required, and to create legal certainty and clarity about the conditions under which PIC has been granted, it is advisable to reflect the PIC and the conditions in a written form and, if possible, have it formalized or authenticated. For instance, it is important to indicate not only whether documentation of TK has been agreed, but also to what extent the TK can be disclosed, whether secret TK can be accessed, who will be responsible for providing TK and the purpose of the documentation project, among other elements. A formal agreement may in any case be required by applicable law. For example, under the Peruvian Law 27811, registration of license contracts is compulsory. There may be other ways of legally formalizing the written form of PIC, which could be useful later as a proof of the conditions under which PIC was granted.

TK is often shared among indigenous peoples and local communities, sometimes across countries. In such cases, effort should be made in a documentation process to make participation and consultation as broad as possible. It would be advisable to ascertain the rights and interests of any communities who are not represented.

Last but not least, it is essential to bear in mind that PIC may only be required inasmuch as there exist a legal obligation and appropriate procedure plus an institutional policy that defines specific PIC steps, and PIC is feasible in practice.

2.5 Confidentiality

Documentation may include accessing and managing a variety of TK, including TK already in the public domain and/or widely available as well as confidential or secret TK.

Accessing confidential or secret TK is an especially sensitive issue which may affect communities' moral, spiritual, religious and even economic interests. Revealing undisclosed TK might result in their losing rights that could help control its use. On the other hand, documenting it may help to protect it, by providing a confidential or secret record of TK reserved for the relevant community only.

Undisclosed or secret TK can be documented and still be kept confidential or its use restricted. Special measures should be taken to avoid inadvertently disclosing it or making it available to the public.

Specific confidentiality agreements or more explicit contractual clauses may be required to satisfy the interests of those participating in the documentation process, especially indigenous peoples and local communities. These may include provisions which limit who can access TK, and under what circumstances (i.e., for patent search purposes only, by national intellectual property authorities only, by selected institutions, etc.). In such cases, it is advisable to include a clause specifying that obligations to maintain the secrecy and confidentiality of the database should remain even after the termination of the agreement.

It may be necessary to develop protocols on access and use to maintain undisclosed TK under special and stronger access restrictions or committing to higher levels of secrecy. If the idea is to document undisclosed TK in digital form or using electronic databases, security systems like passwords and codes should be put in place to protect the data related to undisclosed TK.

If undisclosed TK is documented for preservation purposes, control over access to such documentation, including digital documentation, should remain with one or more identified members of the community. It would not be advisable to connect servers holding such documentation to public networks such as the Internet.

3. Getting started – the why and how of a documentation project

3.1 Understanding the interests and concerns of indigenous peoples and local communities

Prior to designing any TK documentation project, there needs to be open and transparent interaction between its proponents and indigenous peoples and local communities. This may include situations:

- where TK needs to be collected in situ, directly from its custodians or holders, and
- where TK is to be identified and systematised from existing records (i.e., monographs, theses, journals, sound and audiovisual archives) or databases, and communities' immediate input is not required for the collection of TK per se, but a degree of acceptance and consent may nonetheless be required from them.

This exploratory initial interaction should enable all participants – proponents and indigenous peoples and local communities alike – to understand each other's specific interests and needs. The result of this initial process should at the very least:

- Create an environment of mutual confidence and trust.
 Depending on the circumstances, this may involve speaking to the right leader, representative or elder; wearing casual or typical clothing for discussions, if these take place in communities; using a translator to communicate; exchanging gifts; sharing family experiences or stories; and so on.¹⁷
- Ensure there is a mutual and reciprocal understanding of the expectations of each actor involved (even if the exact scope and objectives of documentation have not yet been defined).
- Ensure information is available and shared in an appropriate format and presentation, for example using the indigenous language, and a critical baseline is established for informed discussions to take place.
- Enable communities, through their representatives or legitimate leaders, to undertake their own assessment and analysis to decide whether the activities proposed and objectives sought support their own expectations and interests.
- Serve as a capacity-building process to help develop an understanding of the implications of what is being proposed.

 Determine whether or not there may be specific guidelines, laws, regulations or policies in place regarding access to and use of TK, including relevant customary laws.

Behind the objective of the documentation project is likely to be a set of broader interests and concerns on the part of indigenous peoples and local communities. Reflecting and consulting on these should help to identify more precise objectives for the project and determine which legal tools could be considered and used (e.g., intellectual property, contracts or customary law). These interests and concerns can be clarified by discussing a set of questions such as those in worksheet 1.

In particular, it may be necessary to consider what interests the communities concerned may wish to promote:

- defending against misappropriation, misuse or unfair commercial use of their TK
- restricting access to sacred/secret TK
- facilitating the dissemination of their traditional culture to the public, to promote a wider understanding of their culture
- preserving the cultural integrity of the TK
- using TK to help conserve the environment and manage natural resources
- exploring the potential economic, commercial or developmental implications of their TK
- promoting traditional or community industries and commercial enterprises
- supporting research partnerships or technology exchange partnerships related to technical aspects of their TK
- ensuring recognition of traditional ownership of TK, and its attribution when published or used by others
- documenting their ownership of TK as part of arrangements for giving prior informed consent for access to TK
- a combination of any of these, or other interests not mentioned here.

Not all of these interests necessarily relate to intellectual property issues.

These interests can be identified and internalized by those planning the documentation project through meetings with community representatives, workshops, direct talks with community leaders and continued dialogue, among other things.

^{17.} Approaches will vary considerably depending on specific customs of indigenous peoples and local communities. The *Pashtun* in Pakistan, for example, consider sitting down in a circle and sharing local tea to be a precondition for doing any type of business. The Andean *Quechuas* require small ceremonies of thanking the *Pachamama* (Mother Earth) before talks are held regarding agricultural practices. The *Aguaruna* peoples in Peru offer visitors *masato* (a local fermented drink) to celebrate initial contact and future friendship.

Worksheet 1: Key questions for initial discussion
What is the overall value of the documentation project?
 How will indigenous peoples and local communities and their members benefit from the project?
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How does documentation relate to their everyday life and their mid-term and long-term expectations?
How will documentation help to preserve their cultural integrity?
Are culture and TK protected if documentation takes place?
 What practical capacities exist for indigenous peoples and local communities to engage in TK documentation?

3.2 Defining the objectives of the documentation project

Issues to consider when defining objectives

Anyone seeking to undertake a documentation project should focus on at least four very basic, but often overlooked, questions, as specified in worksheet 2.

Provided there is clarity regarding the problem and the main aim of the project, it may be possible to determine whether certain policy, legal, social, economic or other objectives are feasible to attain and what intellectual property instruments or *sui generis* approaches should be applied and developed.

Worksheet 2: Key questions on project objectives
 What is the specific problem concerning the TK, for example misuse, misappropriation, or some other kind of illicit exploitation?
What exactly is being sought? What is the main goal or objective of the project?
Will documentation serve as a tool to enhance and revalue the TK?
What intellectual property strategies does the project aim to advance?

Examples of objectives of TK documentation

Documentation involves a planned, conscious and informed process of knowledge gathering and organization which may serve many purposes, including:

- · establishing positive rights in relation to TK
- preventing the erroneous granting of intellectual property rights over TK-related innovations (defensive protection)
- making TK available in a more systematized manner to a wider audience (researchers, students, entrepreneurs, etc.)
- creating new intellectual property rights through the scientific validation of TK and collaborative research and development
- preserving, safeguarding or promoting TK and transmitting it to future generations
- helping in designing and implementing benefit-sharing schemes
- using TK for specific community-oriented objectives (education, awareness raising, cultural preservation, etc.).

The first four examples of objectives mentioned above relate to intellectual property, while the others do not necessarily raise intellectual property issues.

3.3 Who leads the documentation project? What role should different actors play?

Broadly, TK documentation may take place in one of two contexts:

- documentation as part of a legal mandate under a national law or regulation or regional instrument which, for instance, creates or recognizes TK registers – examples include Panama, Peru and the Philippines as well as the Swakopmund Protocol on the protection of TK and Expressions of Folklore of the African Regional Intellectual Property Organization (ARIPO); or
- documentation as part of private initiatives (including initiatives led by indigenous peoples and local communities) which include development of databases – perhaps complementary to but not necessarily based on a legal or regulatory mandate, as in the case of the Honey Bee Network, the Peoples Biodiversity Register, the Inuit TK database in Canada or the Potato Park Local Register in Peru.

Very generally, documentation projects are proposed by four sets of actors: indigenous peoples and local communities themselves (e.g., for the development of TK local registers or databases); civil society organizations such as non-governmental organizations (NGOs), academic and cultural institutions at the local, national or international level; State/governmental institutions; and private sector organizations such as companies and associations.

Regardless of who leads a documentation project, the role of the different stakeholders needs to be clarified at the outset. The leader needs to explain clearly why documen-

tation is being proposed, *who* it is intended to benefit and *how* these benefits will be generated and shared.

3.4 Considering the needs of potential clients or users

Special consideration needs to be given to the possible clients or users of the documentation output. Deciding on the client/user may also define the nature of the information to be selected (i.e., confidential or publicly available TK) and the level of detail used in the documentation itself.

For example, if the recorded TK is intended to be used to prove the existence of prior art and help patent authorities better assess TK-related patent applications (for defensive purposes), a certain level of detail may be required which may not be necessary if documentation is pursued purely for educational or more general information purposes.

The language used to collect the information may also depend on the intended clients or users as well as on the objectives of the documentation project. If the recorded TK is to be used for specific community-oriented objectives, for instance for preservation purposes, the information should be collected in the local language. But if it is being collected for defensive purposes, for example for use by patent examiners, then it should be collected and arranged using globally understood names (e.g., the scientific and common name of plants) and widely used classification systems such as the International Patent Classification (IPC).

Resolving conflicts regarding rights over TK may require that documented TK includes certain elements and details (e.g., exact date of development, proof of ownership, specific use, etc.) that allow decisions to be made by an appropriate indigenous, communal or other judicial, administrative or arbitration body.

In general, identifying the needs of the client/user will help those considering the development of databases or registers to clarify what TK they may want to collect or select as well as the degree of detail required in documentation.

Documentation to assist intellectual property offices (defensive protection)

As previously mentioned, some documentation processes may lead to registers or databases which serve purely defensive protection purposes and so are only available to intellectual property authorities. Most commonly, such registers or databases will be used as a tool to support and improve the assessment of novelty and inventive step in patent systems, but they may also be relevant to the assessment of other forms of intellectual property such as trademarks or industrial designs.¹⁸

If TK is being documented for defensive purposes, bear in mind that only publicly available TK can be considered as prior art. It will be necessary to include details of publications, publishers and related bibliographic references, to allow patent examiners to consider information as prior art with reference to a certain date.

Non-disclosure agreements¹⁹ may be needed between the holder of the TK (or the provider through the register or database) and the intellectual property authority to ensure that only patent examiners have access to TK for analysis of patent applications. An example of such an approach is the TKDL of India (see below).

In these cases, once the TK has been documented, it may be necessary to translate it into globally understood languages. Also, the servers holding such documentation will need to be connected to the Internet. Access will then need to be regulated through digital signatures to ensure (i) authentication, (ii) non-repudiation and (iii) security of the database contents.

WIPO has improved its own search tools and information systems. In relation to patent examinations, existing criteria in WIPO's International Patent Classification System²⁰ and PCT minimum documentation have been revised to incorporate published TK so as to give TK greater recognition during international and national patent searches and analysis.²¹

In addition, WIPO's IGC has extensively examined and discussed the intellectual property issues that arise at the interface between TK documentation and TK databases, on the one hand, and patent examination, prior art searches and positive protection of TK, on the other. One tangible outcome of these discussions was a Data Specification for Technical Aspects of Databases and Registries of Traditional Knowledge and Genetic/Biological Resources which the IGC recommended as a standard for the documentation of TK and genetic/biological resources in databases and registers.²²

An example from India: the Traditional Knowledge Digital Library (TKDL)

The Traditional Knowledge Digital Library (TKDL)²³ is an example of documenting previously disclosed traditional medical knowledge in order to assist intellectual property offices. The TKDL was created to prevent the misappropriation of India's TK through international patenting activity. An interdisciplinary team of traditional medicine (Ayurveda, Siddha, Unani and

Yoga) experts, patent examiners, IT experts, scientists and technical officers were involved in the creation of the TKDL.

The TKDL project involves documenting the codified Indian systems of medicine, which were publicly available in existing literature related to Ayurveda, Siddha, Unani and Yoga, in digitized format in five international languages – English, French, German, Japanese and Spanish. It provides information on TK in languages and a format understandable by patent examiners in other countries' patent offices so as to prevent the wrongful grant of patents.

Though the codified Indian systems of medicine were publicly available in local languages such as Sanskrit, Urdu, Arabic, Persian and Tamil, they were not accessible to patent examiners at other patent offices and could not have been understood by them even if they had been. In other words, there were barriers of language and format. With the help of information technology tools and a novel classification system, the Traditional Knowledge Resource Classification (TKRC), the TKDL makes TK available to patent examiners in a format and language that they can easily understand.

The TKDL is not open to the public. To protect India's interest against any possible misuse, the CSIR has signed specific non-disclosure and access agreements with nine patent offices so far: IP Australia, the Canadian Intellectual Property Office, the Chilean Patent Office, the European Patent Office, the German Patent Office, the India Patent Office, the Japan Patent Office, the United Kingdom Patent and Trademark Office and the United States Patent and Trademark Office.

According to these agreements, broadly speaking, the patent offices concerned are allowed to utilize the TKDL for prior art searches and patent examinations, but they have to agree:

- not to disclose the content to third parties;
- to utilize the TKDL only for patent search and examination, pursuant to which they may give printouts to patent applicants for citation purposes; and
- to give feedback to the Indian CSIR to help enhance the features of the TKDL.

3.5 An intellectual property assessment template

An intellectual property management strategy will be required to organize and think through the documentation process and evaluate the appropriateness of intellectual property

19. A non-disclosure agreement (NDA), also known as a confidentiality agreement, confidential disclosure agreement (CDA), proprietary information agreement (PIA) or secrecy agreement, is a legal contract between at least two parties that outlines confidential material, knowledge or information that the parties wish to share with one another for certain purposes while restricting third-party access. It is a contract through which the parties agree not to disclose information covered by the agreement. An NDA can provide protection against any possible misuse of the content.

20. In 2005, 200 sub-groups for traditional herbal medicines were introduced into the International Patent Classification under A61K 36/00.

21. See a document prepared by the WIPO Secretariat for the Sixth Session of the IGC, March 15-19, 2004, "Defensive Protection Measures Relating to Intellectual Property, Genetic Resources and Traditional Knowledge: An Update" (WIPO/GRTKF/IC/6/8).

22. The recommended standard Data Specification for Technical Aspects of Databases and Registries of Traditional Knowledge and Genetic/Biological Resources is contained in document WIPO/GRTKF/IC/4/14 and referenced in documents WIPO/GRTKF/IC/5/6 and WIPO/GRTKF/IC/5/15. For further details, see section 3.6 and annex 3 below.

23. The TKDL is a collaborative project between the Council of Scientific and Industrial Research (CSIR), the Ministry of Science and Technology, and the Department of Avurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy (AYUSH), Ministry of Health and Family Welfare of India, and is being implemented at the CSIR,

instruments. This intellectual property strategy need not be very complex; a simple effort to organize how and when to consider intellectual property-related questions may suffice.

Consideration of intellectual property issues may be part of a comprehensive and detailed "intellectual property assessment" process based on six broad areas for reflection, as shown in table 1 (page 24).

3.6 Applying existing documentation standards

To maximize the effectiveness of documentation, it may be useful to apply existing data standards to the documentation and compilation of TK. WIPO's IGC has worked since its inception on intellectual property aspects of TK documentation. Following extensive consultations among members and stakeholders, it recommended a Data Specification for Technical Aspects of Databases and Registries of Traditional Knowledge and Genetic/Biological Resources.²⁴

The recommendation stipulates that, given the diversity of TK and associated biological/genetic resources, it may be advisable to create an intermediate level between the level of the database in its entirety and the level of individual database records, namely data domains (such as traditional medicine, traditional agriculture, etc.). Thus, databases may be structured in, or allocated to, specific domains, such as traditional medicine, traditional agriculture, expressions of traditional culture, and so on. The data standard sets out standard data fields for records in the domain of traditional medicine.

In terms of content standards, the data standard recommends a minimum set of data fields which a database or registry should encompass, if it aims to meet intellectual property-specific objectives in relation to TK and associated biological/genetic resources. The specification includes field names and field content definitions, and covers subject matter description data as well as intellectual property information associated with the description data. ²⁵ The full recommended data standard is contained in annex 3.

^{24.} See documents WIPO/GRTKF/IC/4/14, WIPO/GRTKF/IC/5/6 and WIPO/GRTKF/IC/5/15.

^{25.} The list of recommended data fields takes account of WIPO Industrial Property Documentation Standard No. 9 (ST.9): Recommendation Concerning Bibliographic Data On and Relating to Patents and Supplementary Protection Certificates.

Table 1: An intellectual property assessment template

1) Objectives	Goals or objectives	Establishing positive rights for TK? Proporting the propositive rights of intellectual proportion rights good TV related incorporations?
	of the documentation project	 Preventing the erroneous granting of intellectual property rights over TK-related innovations? Making TK available in a more systematized manner to a wider audience? Creating new intellectual property rights through scientific validation of TK and collaborative research and development? Preserving, safeguarding or promoting TK and transmitting it to future generations? Helping in designing and implementing benefit-sharing schemes? Using TK for specific community-oriented objectives? Other objectives?
2) Subject matter (TK)	The nature of the TK	Is the TK: • secret and confidential? • sacred? • individually or communally held? • orally transmitted? • documented and systematised in some form (traditionally or otherwise)? • codified? • already partially documented? • subject to customary restrictions for use or disclosure? • Any other important characteristics?
	The content or expression of the TK	Is the TK: • technical knowledge or know-how? • embodied in a tangible product? • related to traditional cultural expressions (not covered in detail in this <i>Toolkit</i>)? • Are there any other significant issues regarding its content or form of expression?
	TK and biological/ genetic resources	 Would/should specific biological or genetic resources be collected as part of the documentation project? Would preparations, mixtures or extracts be collected and documented? Are the biological or genetic resources imbued with distinctive characteristics developed through traditional methods of selection, breeding or processing? Are the biological resources endemic? Any other issues regarding biological/genetic resources?
	How widely is the TK used or disseminated?	 Known by a community individual or leader or elder, the community as a whole, a group, an indigenous nation or other social actors? Disclosed to: the general public (publicly or widely available)? individuals who do not belong to the community (such as researchers or students)? Is TK commercialized or traded in some form (whether as know-how or in a tangible expression)? Locally, regionally or internationally? Any other issues in relation to use and dissemination?
3) Actors	Role and rights of the different stakeholders	 Who leads the process? Which role will each actor play? Who will write down, film, record, translate and compile TK? To whom will the intellectual property rights that arise belong? What rights will indigenous peoples and local communities retain? Any other issues in relation to different stakeholders?
4) Potential clients or users	Who is the documentation project intended to benefit?	 Indigenous peoples and local communities? Intellectual property offices? Researchers? Other people or organizations?
5) Applicable intellectual property legislation	Applicable national and international legislation	 What specific laws and regulations are applicable to the subject matter being considered? Are there specific laws on TK? Who can provide specific intellectual property advice in this regard? WIPO, pro bono intellectual property experts, local NGOs, the documentation proponents? Any other issues relating to the applicable law?
6) Other related legal regimes	Other relevant legal regimes and instruments	 Customary laws and local traditions? Community protocols? Biodiversity laws and access and benefit-sharing legislation? Any other relevant laws or rules?

Notes	

Annex 1

A hypothetical documentation project: collecting TK from native communities in the Amazon

Before documentation

University X from the UK enters into talks with University Y in Brazil to undertake a project to collect biological samples for commercial research in the Amazon and to collect and systematize TK related to medicinal properties of these samples from the indigenous peoples of communities A, B, and C.

University Y contacts representatives of communities A, B and C and explains the purpose and objectives of the planned activities. Details are provided with regard to the exact nature of the project and how TK would be collected, organized and managed.

Representatives of the communities are invited to select community members to be trained in parataxonomy and help in TK collection and documentation activities.

University Y undertakes a prior informed consent procedure (PIC) with appropriate community bodies (in this case the local communal assembly). PIC involves *in situ* meetings and gatherings with community members to explain project methodology and goals and engage in confidence building. University Y also informs the community members about its project partners in the project, University X and Company Z which is based in the UK too.

University Y obtains all necessary permits and authorizations from the Brazilian authorities to undertake fieldwork with biological samples and their subsequent export.

Benefits are discussed with community representatives and reflected in written agreements. They include non-monetary benefits (training in parataxonomy, recognition of communities' contribution in publications, joint copyright given the case of research papers, joint patents if a viable product is generated in the research and development process, among others) and monetary benefits including up-front and milestone payments as well as a share of any income generated from the commercialization of products.

It is agreed that, should the project lead to the publication of scientific articles and the like, these publications will respect agreed limitations on access to the TK. In particular, they will not include references to confidential or sacred TK.

During documentation

Universities X and Y create a working team in Brazil to undertake fieldwork. The team travels to the selected sites in communities A, B and C.

Collection of plants is undertaken with the guidance of community members who have been trained as parataxonomists. The team is presented to each community in traditional rituals and greeting offerings. Fieldwork is only possible after a few days of introductions and interacting with community members.

Custodians of TK in each community such as elders are identified and interviewed to understand plant uses and applications. Plants are collected by the parataxonomists, displayed to community members and entered into a database using traditional forms and scientific formats. The database is constructed locally in interaction with community members. Specimens are selected for further research in Universities X and Y and further transferred to Company Z.

A record system is designed and developed with support from community leaders. Electricity is not available in the area, so it is constructed manually and managed locally using handwritten forms and photos. It is maintained by the community's lead parataxonomist.

Meetings are held with community leaders to design use protocols applicable to the database. These will be part of commitments to further research from University X (UK) and University Y (Brazil), and serve to guide potential access by third parties (including Company Z). They include a series of requirements to share non-monetary and monetary benefits including scientific training for young community members, sharing in research results, milestone payments and development of a locally managed fund, among others.

After documentation

After having applied for any applicable patents, Universities X and Y publish a systematization of the research project without any references to confidential or sacred TK. Credits are given to communities A, B and C. Copies of documents are provided free to the communities and they are also given audio summaries in native languages. Small, battery-powered audio devices are provided to the communities at no cost.

The TK database managed by Universities X and Y is made available to the public. Restrictions are placed on access depending on the type of TK. Confidential and sacred TK are not included in the database.

Community leaders are regularly informed about research advances and how well the TK database is operating.

The national intellectual property authority in Brazil consults with University Y and with community leaders regarding whether the content of the database can be used to help Brazilian intellectual property authorities in patent application reviews.

Annex 2

Documenting traditional cultural expressions (TCEs)

Generally, traditional cultural expressions (TCEs) are literary, artistic and musical productions, often broadly and collectively referred to as "intangible cultural heritage."

Many initiatives are being pursued all over the world to record, register and digitize intangible cultural heritage: individuals (such as ethnologists, folklorists and anthropologists), institutions (such as museums and archives) and governments (especially ministries of culture) have for decades recorded and disseminated expressions of our planet's rich cultural diversity.

UNESCO's 2003 Convention on the Safeguarding of the Intangible Cultural Heritage requires States Parties to keep registers, lists and inventories of their intangible cultural heritage. These forms of documentation are useful for safeguarding, preserving and promoting intangible cultural heritage.

However, as is the case with TK, documenting TCEs raises certain intellectual property questions, although these tend to be different from the kinds of intellectual property issues raised by TK documentation.

In the case of TCEs, examples of documentation activities may include:

- · recording traditional songs on audiotape
- · photographing traditional textile designs
- writing down spoken traditional stories
- photographing traditional art, such as rock paintings
- · digitizing ancient manuscripts.

Broadly, two types of intellectual property-related questions arise in TCE documentation projects.

First, the recording and digitization of TCEs, even for programs to safeguard and promote valuable cultural heritage, can unwittingly make the TCEs more accessible to third parties and so more vulnerable to unauthorized use and exploitation. In such cases, there may be a tension between "preservation" and "protection" because the very process of preservation may trigger concerns about lack of protection and run the risk of unintentionally making TCEs that are in the public domain vulnerable to unwanted exploitation. For example, ethnographic recordings containing sensitive material depicting initiation rites have been made available by a cultural institution for educational and commercial purposes. Yet cultural institutions play a critically valuable

role in preservation, promotion and education, and many institutions are pioneers in establishing mutually beneficial relationships with indigenous peoples and local communities.²⁶

Second, even though TCEs themselves may be in the public domain, the process of documenting them may create rights in the recorded material. For example, recording a traditional song creates intellectual property rights in the recording. The problem here, from a community's perspective, is that it is the person or entity responsible for the recording (such as an ethnomusicologist or museum) that owns the intellectual property rights in the recording, not the community whose tradition the song forms part of and which might have performed the song. This means that if documentation is not carried out by the community itself, the community will not own the song or its recording.

Should the community wish to enjoy control over the documentation of its TCEs, it should acquire the technical skills to undertake the documentation itself and the legal skills to manage its own intellectual property.²⁷

The registration of TCEs can also form part of legislative systems designed to vest TCEs with either positive or defensive protection. For example, Panama's Law of 2000,²⁸ which provides for a special intellectual property regime for the collective rights of indigenous peoples, provides rights in TCEs when they are registered with the Panamanian intellectual property office.

Documentation can also play a defensive role. The United States Patent and Trademark Office (USPTO) Database of Official Insignia of Native American Tribes, established in 2011, is a comprehensive database containing the official insignia of all state and federally recognized Native American tribes. Under the trademark legislation of the United States of America, and on the basis of the insignia registered in the database, the USPTO may refuse to register a proposed mark which falsely suggests a connection with an indigenous tribe or beliefs held by that tribe.

 $26. A useful resource in this regard is WIPO (2010) {\it Intellectual Property and the Safeguarding of Traditional Cultures: Legal and Practical Options for Museums, Libraries and Archives. (WIPO Publication No. 1023E); available at: www.wipo.int/publications/en/details.jsp?id=235&plang=EN$

27. This is precisely the focus and objective of WIPO's Creative Heritage Training Program. This initiative in community-led documentation is complemented by work being done, supported by WIPO, to develop software and digital rights management tools for indigenous and local communities to enable them to manage rights and interests in their digitized collections of TCEs electronically. For additional information on ways to support indigenous peoples and local communities in managing their intellectual property rights, see Wend Wendland, "Managing rights in digitized indigenous music," WIPO Magazine, October 2016; available at: www.wipo.int/wipo magazine/en/2016/05/article 0003.html

28. Law No. 20 of June 26, 2000, on the Special System for the Collective Intellectual Property Rights of Indigenous Peoples for the Protection and Defense of their Cultural Identity and their Traditional Knowledge; available at; www.wipo.int/wipolex/en/details.jsp?id=3400

More generally, unlike with TK, there are several instances of protection for TCEs, and contemporary derivatives thereof, to be found in conventional intellectual property systems. Many countries have also developed special *sui generis* protection for TCEs in their copyright laws. These should also be taken into account in any TCE documentation project. ²⁹

^{29.} A useful general resource on intellectual property and TCEs is WIPO (2010) Consolidated Analysis of the Legal Protection of Traditional Cultural Expressions/Expressions of Folklore. (WIPO Publication No. 785E); available at: www.wipo.int/edocs/pubdocs/en/tk/785/wipo_pub_785.pdf

Annex 3

Data Specification for Technical Aspects of Databases and Registries of Traditional Knowledge and Genetic/Biological Resources

Field Name (INID Code)*	Field Content Definition
(10) Identification of the Record	
Record Number	Number of the database record concerning a TK element or associated biological/genetic resource
*Document Number (11)	Number of the document which provides IP protection for a TK element or associated biological/genetic resource
Record Type (12)	Plain language designation of the kind of document
(20) Data concerning application	s for title
*Application Number(s) (21)	Numbers assigned to the application for an IP title which provides protection for the TK element or associated biological/genetic material
*Filing Date(s) (22)**	Date(s) of filing of application(s) for an IP title which provides protection for the TK element or associated biological/genetic material
*Other Date(s) Concerning the Application (23)	Other date(s), including date of filing complete specification of TK element or associated biological/genetic resources, following provisional specification and date of exhibition
(40) Dates of making available to	the public
Disclosure Date (09)	Date at which the TK element was disclosed and made available to the public, if any and if known
Publication Date (40)	Date of making available to the public an IP document describing a TK element or associated biological/genetic resource, on which grant has taken place on or before the said date
(50) Technical information	
International Patent Classification (51)	Class, Subclass, Group or Subgroup of the International Patent Classification in which the TK element or associated biological/genetic resource has been classified
Other Classification (52)	Class or subclass of domestic or national classification in which the TK element or associated biological/genetic resource has been classified
Title (54)	Title of the TK element or associated biological/genetic resource
Prior Art documents (56)	List of prior art documents, if separate from descriptive text
Abstract or claim (57)	Abstract or claim of the TK element and/or associated biological/genetic resource
Field of Search (58)	Field of Search
(70) Identification of parties cond	cerned with the record
Name(s) of Information provider	Name and address of the provider of information contained in the record
*Name(s) of applicant for title (individual/community) (71)	Name and address of the applicant for title concerning the TK element or related biological/genetic resource described in the record
Holder of knowledge or associated resources (72)	Name and address of the custodian of TK or associated biological/genetic resources
*Grantee(s), holder(s), assignee(s) or owner(s) of title, if any (73)	Name and address of grantee(s), holder(s), assignee(s) or owner(s) of title in the TK element or related biological/genetic resource, if any
(00) Specific data on TK or assoc	ciated resources
Access Conditions (01)	Conditions for Access for different users, categories and purposes to the record of the TK element or related biological/genetic resource, including socio/cultural taboos and restrictions
Approval of, and arrangements with, holder(s) (02)	Approval of, and arrangements with, the holder(s) of the TK or related resource concerning its compilation, dissemination and application, if any and if required
Scientific Name(s) (03)	Scientific name of genetic and biological resources
Vernacular Name(s) (04)	Vernacular name of genetic and biological resources in local language(s)
Descriptors (05)	Detailed description of the TK element, ethnomedical categories, and genetic or biological related resources
Keywords (06)	Index terms and keywords by which the TK element and related biological/genetic resources were indexed
Bibliographic references (07)	Bibliographic data on publications which have disclosed the TK element and associated genetic or biological resources to the public
Language (Code) (08)	Language in which the TK element and related resource were originally described

 $[\]label{thm:provide} {}^*\text{The Field Names and INID codes which are preceded by a single asterisk (*) relate to those data elements which are considered to be the minimum elements which should appear in records of TK databases/registries and on first pages of IP documents which provide positive legal protection for the elements of TK and associated biological/genetic resources described in the databases/registries and documents.$

^{**} Keeping in mind the rights of communities or individuals whose independent knowledge was disclosed or filed after the date(s) of filing contained in this field.

Annex 4

Examples of TK documentation through registers and databases

Registers established by law

Collective Register for Intellectual Property – Panama.

Panama established this database by Law No. 20 of 2000, which created a Special Regime for Intellectual Property over Collective Knowledge of Indigenous Peoples, to protect indigenous cultural patrimony. The register provides indigenous peoples with positive protection over their TK in Panama, granting them property rights over this knowledge. In this case, the register *creates* the property right. In practice, the register applies mainly to traditional cultural expressions (textile designs, handicraft models, etc.).

National Registers for Collective Knowledge - Peru.

Law No. 27811, which was adopted in 2002, establishes a Regime for the Protection of Collective TK Relating to Biological Resources. The law creates three types of registers: a National Public Register for TK, which compiles documented TK which is already in the public domain (in books, articles, databases, etc.); a National Confidential Register, which cannot be accessed by third parties; and local registers, which can be created and managed by indigenous peoples and communities with the support of the National Institute for the Protection of Competition and Intellectual Property (INDECOPI). For more information, see: http://servicio.indecopi.gob.pe/portalctpi/index.jsp

Country-led databases and registers

Traditional Knowledge Digital Library – India. The Traditional Knowledge Digital Library of India is a collaborative project of the Council of Scientific and Industrial Research and the Department of Ayurveda, Yoga and Naturopathy, Yunani, Siddha and Homeopathy (AYUSH) of the Government of India (see page 22 above). It has addressed the language and format barrier by scientifically converting and structuring the available contents (290,000 medicinal formulations to date) of the ancient texts on Indian Systems of Medicines – Ayurveda, Siddha, Unani and Yoga – into five international languages: English, French, German, Japanese and Spanish. It applies the Data Specification for Technical Aspects of Databases and Registries recommended by the IGC. For more information, see: http://tkdl.res.in

Traditional Food Register – Austria. The Traditional Food Register is maintained by the Ministry of Agriculture, Forestry, Environment and Water Management in cooperation with the Committee for the Preservation of the Culinary Heritage of Austria. Traditional knowledge about Austrian agricultural products, foodstuff, meals and drinks is compiled and protected in the register, which is made public by the Ministry. It contains more than 200 entries at present. "Traditional" is defined in the register as a period of at least three gen-

erations or about 75 years. The register applies the Data Specification for Technical Aspects of Databases and Registries of Traditional Knowledge and Genetic/Biological Resources recommended by the IGC. For more information, see: https://www.bmlfuw.gv.at/english/agriculture/food/Traditionalfood.html

Korean Traditional Knowledge Portal – Korea. The Korean Intellectual Property Office (KIPO) has maintained a database of traditional knowledge since 2004 through the Korean Traditional Knowledge Portal (KTKP). The database is based on traditional Korean medicine as described in Korean traditional literature and scholarly articles. It aims to lay the foundation for the international protection of Korean traditional knowledge by preventing unauthorized use of patents inside and outside the country; to promote the development of related studies and industries by providing an abundance of information on traditional knowledge and related research; and to enhance the quality of intellectual property applications for traditional knowledge by providing essential information for patent examinations. For more information, see: www.koreantk.com/ktkp2014

Databases and registers led by indigenous peoples and local communities

The Potato Park Indigenous Biocultural Heritage Register

- Peru. This is a database created by communities with the support of the ANDES Association, an NGO located in Cuzco. The database was developed using customary laws and is based on video recordings undertaken by women community members. Its objectives include helping to protect TK and associated resources from biopiracy, secure benefits for communities and preserve and protect their rights over their TK as well as promoting its use. The register is based on the ancient Andean system of khipus, a method of recording information using knots on strings used historically to document biological, cultural, economic and demographic information. Information is processed using the Yapana Matrix, based on rows and columns to quantify information according to the decimal and binary systems. The program for entering data into the register is web-based free/open source software (FOSS) which is compatible with the Quechua customary practices of free and open sharing of knowledge. The register plays a key role in contributing to realizing the Potato Park's management objectives. For more information about the Potato Park, see: www.parquedelapapa.org/eng/03parke_01.html

NGO-led databases

Honey Bee Network – India. Honey Bee is a knowledge network developed by the Society for Research Initiatives for Sustainable Technologies (SRISTI). It holds knowledge and innovations of TK holders, farmers, the research community and local communities in a common database. The database is managed by the National Innovation Foundation (NIF) and has several collaborative institutions around the country, each one of which holds its own register which is connected to the common database. The Honey Bee database does not function as a defensive tool. If TK is used for commercial purposes, benefits generated should be shared with the rights holders. www.sristi.org/cms/en/our_network

People's Biodiversity Register (PBR) – India. PBR documents community TK on medicinal plants with the aim of controlling biopiracy. This is a decentralized system, with several documentation units, mostly at village level and in some cases at community level. Since its creation in 1995 it has been developed in hundreds of villages across seven Indian states.

http://nbaindia.org/uploaded/pdf/PBR Format 2013.pdf

Gene campaign – India. The Gene Campaign, an NGO based in India, has established a database to be used as a source of prior art to challenge patents and ensure fair and equitable sharing of benefits arising from the utilization of communities' TK. Database development and management has been achieved through the efforts of the Department of Science and Technology, the Indian Government, Gene Campaign and local communities. Information in the database remains the property of local communities and is kept under the custody of the Department of Science and Technology. Healers, elders and medical practitioners were consulted during the documentation process, and young people from communities participated in the collection of TK. www.genecampaign.org

Databases for scientific research and development purposes with specific reference to TK

Natural Products Alert Database (NAPRALERT).

NAPRALERT® is a private relational database of all natural products, including ethnomedical information (TK), pharmacological/biochemical information of extracts of organisms *in vitro*, *in situ*, *in vivo*, in humans (case reports, non-clinical trials) and clinical studies. Similar information is available for secondary metabolites from natural sources. To date, more than 200,000 scientific papers and reviews have been included in NAPRALERT, representing organisms from all countries of the world, including marine organisms. https://www.napralert.org

Chemical Abstracts Plus Database (CAplus). This database contains information on more than 50 million organic and inorganic substances, and more than 60 million protein and DNA sequences. The chemical and biochemical information is produced by CAS, the Chemical Abstracts Service of

the American Chemical Society; the sequence information comes from CAS and GenBank, produced by the United States National Institutes of Health. It includes the archive of over 50,000 unique World Traditional Medicine patents. This collection is a body of scientific literature of particular use to the pharmaceutical and consumer products industries. The material from these basic and supplementary databases is searchable in many ways. CAS databases are available via two principal database systems, STN and SciFinder. www.cas.org/content/references

Annex 5

Key elements of a documentation format

Biological sciences have developed standardized formats in which scientists register observations on field records.

A classical format may include, at a minimum, the following elements:

- date, time
- area and location where TK collection is being undertaken
- information about the environment
- indigenous peoples' organizations or local communities involved
- · specific individuals involved
- conditions or limitations imposed on the use of the collected TK (because of its sacred or secret nature, for instance)
- specific site and place where TK is being recorded
- uses of the TK (including traditional names of plants, animals, organisms and local taxonomies)
- targeted species of plants (including wild species or cultivated, native varieties) or animals
- forms of application or techniques
- history of use
- · expected results
- · forms of verification
- current conservation conditions (*in vitro*, live cuttings, tissue cultures, seed banks, etc.).

Annex 6

Checklists

Phase 1: Before documentation of traditional knowledge

Consult as widely as possible among indigenous peoples and local communities and other key stakeholders.
Ponder on indigenous peoples' and local communities' expectations and how best to respond to them and reflect them.
Consider the legal issues that may arise in the context of existing policies, legal frameworks and regulations, in particular intellectual property-related issues.
Identify existing rules and principles which regulate the conditions under which TK will be collected and obtained.
Identify relevant customary laws.
Set out documentation objectives and develop an intellectual property strategy, if needed.
Consider the widest possible range of options to meet these objectives.
Clarify the role of the different stakeholders.
Consider whether and how to apply principles of prior informed consent.
Evaluate the best option and instrument (i.e., contract, general agreement, memorandum, guideline, protocol) which may be utilized to formalize agreement related to TK documentation.
Distinguish between non-confidential TK and secret TK, which may require additional conditions and securities.
Define the criteria and methods to be used to collect and identify the TK to be documented.
Define access control policies or guidelines which establish categories of users and thereby access conditions/restrictions.
Develop a monitoring and verification plan so that it is possible later to ensure that documented TK is used as agreed.

Phase 2: During documentation of traditional knowledge

☐ Verify that the originally planned TK documentation objectives have been met by interviewing users of the
TK database or register, indigenous peoples and local communities themselves or taking note of partners' experiences throughout the documentation process.
☐ Verify that comments and inputs made by stakeholders (especially indigenous peoples and local communities) have been appropriately addressed.
☐ Examine documented TK to identify any elements which should be deleted, restricted or otherwise given special protection.
☐ Check whether and how national intellectual property offices are using the documented TK, especially if TK was documented for defensive purposes.
☐ Monitor and periodically review the extent to which documented TK is accessed and by whom, as well as which entries are the most accessed, in order to help identify
the types of TK which may hold greatest economic or
scientific interest. Inform indigenous peoples and local communities about the results of the TK documentation process.
☐ Ensure management of the database is in hands of tech-
nologically savvy professionals or well-trained community members.
$\hfill\square$ Put in place technological measures to establish ownership over the documentation, by protecting the documentation
against unauthorized access by third parties, securing the content, protecting the database servers and securing the website, among other things.
☐ Carry out periodic reviews of compliance with requirements for storage, maintenance and control, such as electronic safeguards and restrictions in web-based databases, in
order to keep the database or register operational and, ultimately, safeguard indigenous peoples' and local communities' interests.
☐ Take measures to ensure the continued secrecy of undisclosed TK.
☐ Review possibilities for protecting TK through intellectual property and other mechanisms.
☐ Promote the TK documentation register or database and present it to a wider public, according to the agreed objectives of the project and process.
☐ Share lessons learned with a broader audience to inform other TK documentation projects.

Phase 3:

knowledge

After documentation of traditional

Notes

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