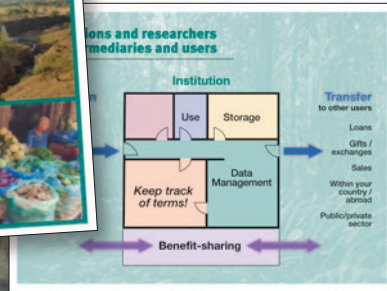


# Access and Benefit-Sharing at the Institution



**BOTANIC  
GARDENS**  
CONSERVATION  
INTERNATIONAL



A Darwin Initiative project implemented by  
BGCI and the Ethiopian Biodiversity Institute



# Access and Benefit-Sharing at the Institution

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## Acronyms and abbreviations

|              |  |
|--------------|--|
| <b>ABS</b>   | Access and benefit-sharing   |
| <b>BGCI</b>  | Botanic Gardens Conservation International                                 |
| <b>CBD</b>   | Convention on Biological Diversity   |
| <b>CITES</b> | Convention on International Trade in Endangered Species of Fauna and Flora |
| <b>DNA</b>   | Deoxyribonucleic acid  |
| <b>IRCC</b>  | Internationally Recognised Certificate of Compliance                       |
| <b>MAT</b>   | Mutually Agreed Terms  |
| <b>MTA</b>   | Material Transfer Agreement  |
| <b>PIC</b>   | Prior Informed Consent   |
| <b>TK</b>    | Traditional Knowledge  |

# Introduction



From 2016 to 2019, with funding from the UK Government's Darwin Initiative, Botanic Gardens Conservation International (BGCI) and the Ethiopian Biodiversity Institute (EBI) implemented a project on promoting the ABS-compliant use of plant genetic resources in research and development in Ethiopia.

As part of the project, a number of consultations were held with researchers and *ex situ* collection holders, during which the international and Ethiopian frameworks for access and benefit sharing were introduced and discussed. During these consultations, it became clear that these stakeholders would benefit from having access to a suite of teaching tools on access and benefit sharing, to help build understanding and capacity amongst their colleagues and students.

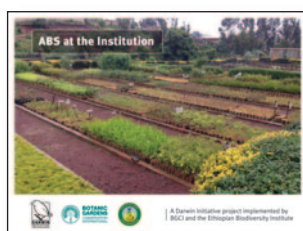
This resource focuses on the implementation of ABS within the institution. It can be used as a self-learning tool, but its design, as a presentation with teaching notes, is primarily to facilitate peer-to-peer information exchange and institutional capacity building. The presentation also includes some suggestions for brainstorming and group-work to explore some of the issues in more detail.

This resource forms part of a larger suite of teaching tools, which includes an Introduction to the International Framework for Access and Benefit Sharing and a set of quiz questions and 'scenarios' for testing learning and understanding.

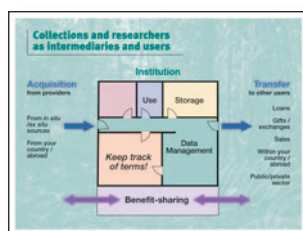
We hope that the whole ABS learning package will provide a useful and flexible resource to support ABS implementation and through this, promote the ABS-compliant use of plant genetic resources in research and development.



# Slide Index



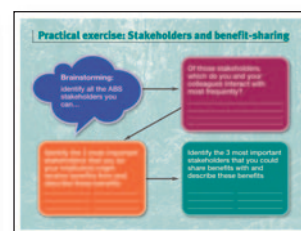
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8

Practical exercise: Genetic resource flows and uses

| Material  | Seeds | Market | Display | University | Do you supply  |
|---|-------|--------|---------|------------|----------------|
| What kinds of plant specimens have you collected? (What seeds?) | Seeds | Market | Display | University | Do you supply? |
| How does your institution use material? (What seeds?)           | Seeds | Market | Display | University | Do you supply? |
| What kinds of plant specimens have you collected? (What seeds?) | Seeds | Market | Display | University | Do you supply? |

9



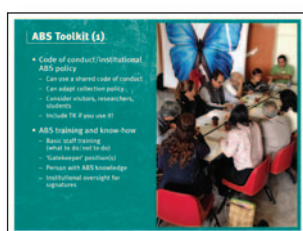
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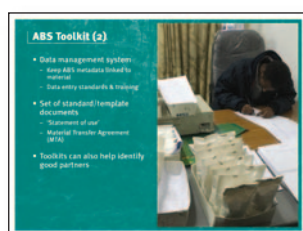
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## ABS at the Institution



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## ABS at the Institution

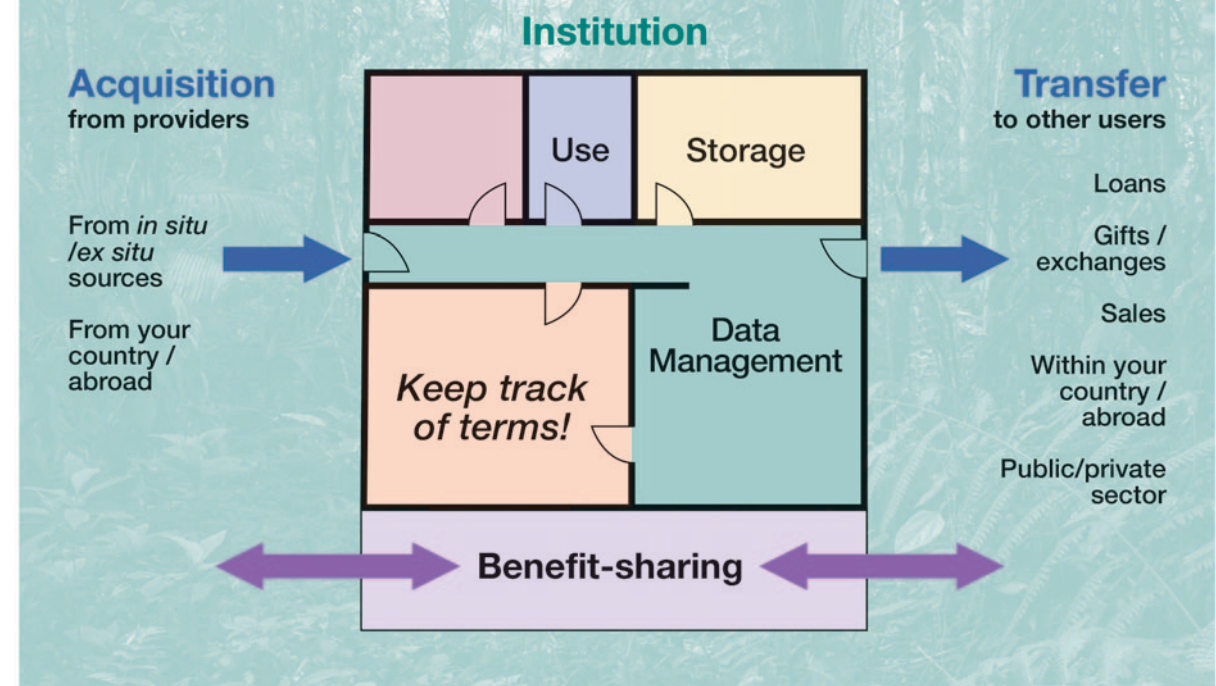
This section of the learning package is intended to help plant researchers and collection holders to consider how ABS is relevant to, and may be implemented in practice in their institutions.

This presentation explores who the main stakeholders are in relation to ABS at the institution, where material in collections is sourced from, how it is used and who it is supplied to. The presentation also discusses issues around Associated Traditional Knowledge and highlights the importance of data management. Finally, elements of an institutional ABS Toolkit are identified.





## Collections and researchers as intermediaries and users



## Collections and researchers as intermediaries and users

Researchers and collection-holders may handle and use plants from a wide range of sources, and may in turn pass these resources to other users in the course of their duties and collaborations. From an ABS perspective, we can think of them as users and as intermediaries in chains of custody, use and value for plant genetic resources.

As a user or intermediary, you (or more accurately, you and your institution) will need always to keep track of where material comes from, and any terms and conditions from the provider that restrict how you and your colleagues may use it or supply it to others, and any obligations to share benefits with the provider. This ABS information must stay linked to the material, one way or another. We will consider each of the steps of acquisition, institutional use and transfer.

Although we focus on plant genetic resources here, of course researchers and collections may also use or handle animal and/or microbial genetic resources. These resources are also covered by the Convention on Biological Diversity, the Nagoya Protocol and national laws, and these same basic principles apply.



Ben Jones



## Stakeholders

looking after, owning,  
keeping, controlling,  
regulating, studying,  
using, transferring,  
exporting, importing,  
transporting,  
commercialising...

## Stakeholders



Barney Wilczak

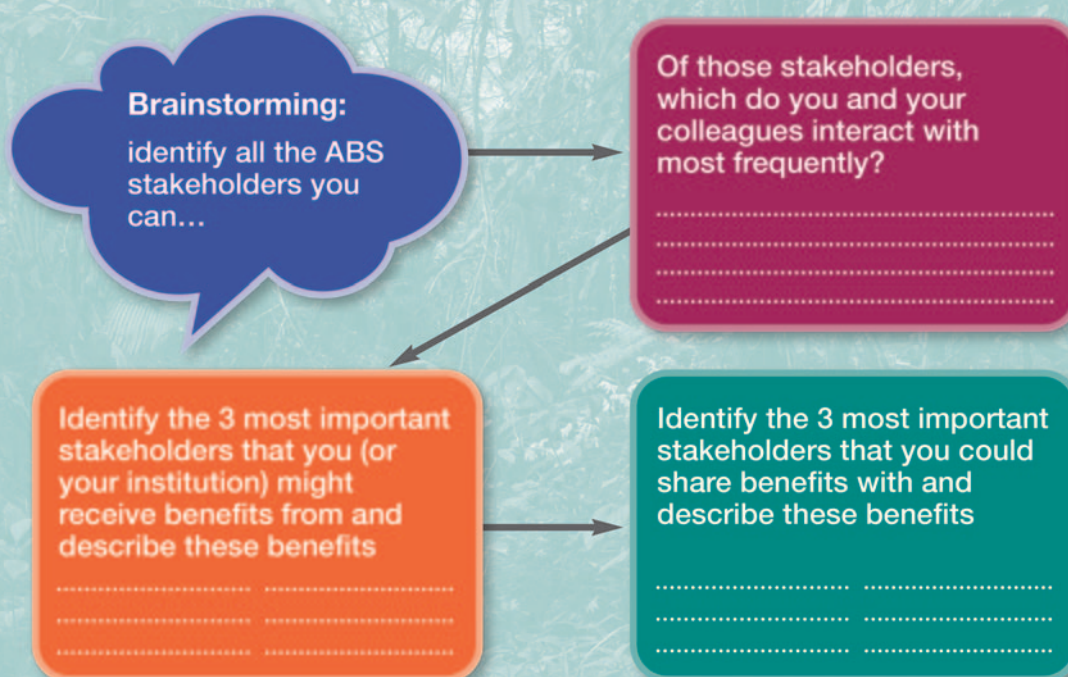
ABS implementation in practice involves a broad range of actors with varying interests, concerns or involvement in genetic resources and associated traditional knowledge along the chains of custody, use and value. We can consider them as ABS stakeholders, or in some cases (for example, Indigenous holders of traditional knowledge) rights-holders. In your role as a plant researcher or collection-holder you may interact with certain other ABS stakeholders frequently, some less so, and some not at all.

Can you think of other activities beyond those in the image that might be relevant to ABS?

Let us consider who these ABS stakeholders and rights-holders might be, and how they relate to your work.



## Practical exercise: Stakeholders and benefit-sharing



## Practical exercise: Stakeholders and benefit-sharing

*The purpose of this exercise is to highlight the network of actors involved in ABS and to consider the variety of benefits that can be generated and shared. This exercise can be completed individually, but if you are working with a group, it will be more engaging if the questions are discussed in smaller sub-groups, whose responses can then be shared with and discussed by the whole group. The brainstorming element can be conducted with the whole group, or in sub-groups.*

1. Who do you think are the ABS stakeholders in your country? Who has an interest and/or involvement in looking after, owning, keeping, controlling, regulating, studying, using, transferring, exporting, importing, transporting and/or commercialising (and so on)... genetic resources and associated traditional knowledge? Whom might you consider to be important ABS stakeholders outside your country? (You could cluster similar stakeholders under a range of different headings, for example 'authorities', 'research users', 'society', 'industry', and so on)

2. Now consider which of those domestic and/or foreign ABS stakeholders are particularly relevant to your domain of work. Which stakeholders do you and your colleagues interact with most frequently?
3. From that smaller list, identify three stakeholders that you or your institution might receive benefits from, and describe these benefits. Remember benefits can be non-monetary or monetary, and many benefits emerge from collaborative activities, not just utilisation.
4. Now identify the three most important stakeholders with whom you consider you or your institution share (or could share) benefits, and describe these benefits.

Did your discussions widen your recognition of potential ABS actors in your country? Did they suggest to you other kinds of benefits that could be shared, or ways in which benefits could be shared more effectively?



## Material

What material do you hold / use?



## Material

We also need to think about what material (containing genetic resources) and associated information an institution acquires, holds, uses, supplies. Different types of research or collections may use plant material in different forms, with implications for how ABS information can be kept linked to the material. Also, some plant samples or specimens might no longer be considered to be 'genetic resources', if prepared in such a way that they no longer contain DNA or the DNA is denatured or cannot be sequenced (for example, in a fixed slide).





## Sources

Where, and how, do you obtain material?

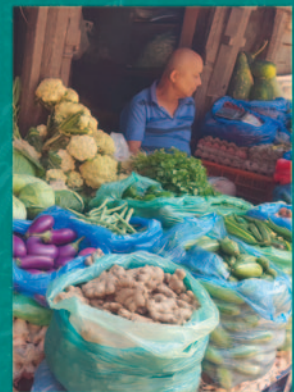
- *In situ* fieldwork?
- *ex situ* collections?
- commercial sources?

Provider information

- Country? Other levels?  
Who provided PIC?

Documentation

- Permits / consents
- Non-ABS permits



## Sources

Users access material, and share benefits with, providers. Keeping track of our obligations to providers is at the root of ABS implementation, so information and knowledge about providers must be kept linked to material (and information) as it moves and is used.

How does your institution acquire the plant material that it uses? Do you collect wild plants from *in situ* conditions, via fieldwork? Do you obtain specimens from other scientists and institutions, on loan or by gift? Do you sometimes buy plants or plant material from local markets, or from retail shops? If you buy from commercial sources, remember that such sources are generally selling material for direct use or consumption, not for research, and depending on national law you may need specific permission to conduct research on this material.

Regarding providers, you should generally have information on the country from which the material was acquired, but there may be other kinds of ‘provider’ to consider, for example whichever entity granted prior informed consent according to national ABS procedures – such as a community, government agency, landowner, *ex situ* collection or private donor.

You may also have needed to acquire other permits to conduct your work – for example research permits, permits to collect in a particular protected area, or permits to export or import CITES-listed species. These other permits should also be kept linked to material and information.

Remember that you and your institution should ensure that no illegally collected or acquired plants come into your collections ‘through the back door’.



## Uses

How do you use material?

- What research?
- What techniques?
- Nagoya 'utilisation'?

PIC requires information on intended use

Any restrictions should be clear



## Uses

How do you and your institutional colleagues use the material that is obtained from these various sources? What is the nature of your research, or the purpose of your collection? What techniques do you use?

Thinking of the focus that the Nagoya Protocol puts on 'utilisation' as the trigger for benefit-sharing – do you consider that you and/or your colleagues conduct research on the genetic or biochemical composition of the plant genetic resources you hold?

Remember also that when you seek prior informed consent (or other permission, depending on your national laws) to access genetic resources, you should provide information on how the material is to be used. There may be restrictions on further use or transfer.

If you are obtaining it for just one project, but intend to keep it in a place where other colleagues might use it for other purposes, then you should either request consent for those other purposes too, or else clearly restrict its use. If specimens are to be returned or destroyed after their initial use, this should be made clear, by labelling the specimens and/or annotating the data management system as necessary.





## Supply

Do you supply material?

– To whom?

Check for restrictions

– Permits, MTAs, other agreements



## Supply

Do you or your colleagues transfer plant genetic resources to other users, within or outside your institution?

The material that you use or hold may have been obtained according to mutually agreed terms that might limit the transfer to other parties, beyond those covered by the original prior informed consent. Collection permits, material transfer agreements and other ABS documents may contain restrictive terms, so it is critical to check for such terms before supplying the material or associated information to others.





## Practical exercise: Genetic resource flows and uses

| Material<br>(What kinds of plant specimens/samples does your institution hold?) | Sources<br>(Where and from whom do you obtain plant material?) | Uses<br>(How does your institution use material it holds?<br>Do you conduct research?<br>What kind?) | Partners<br>(Who do you work with?<br>If you conduct research, who are your research partners?) | Do you supply material to these partners? |
|---|--|--|---|---|
| Seeds<br>Wood samples   | Market   | Display<br>Taxonomy  | X university  | ✓   |

## Practical exercise: Genetic resource flows and uses

The purpose of this exercise is to map out the flows and uses of genetic resources for one or more institutions, to highlight the range of actors, activities and movements that may be relevant to ABS. You can work onto a common chart for a whole group (e.g. on a whiteboard or flipchart) or work on separate charts in subgroups.

Prepare the headings and columns on the sheets, then ask participants to provide information relating to their or their institution's work. Work freely into each column, without worrying about making a complete row for each type of material. Columns do not need to match up, except for the last two, where we ask if participants supply material to particular partners.

We can put this information together to get a better picture of how genetic resources move around between providers, your institution, and your partners - and how important it is to keep ABS information linked to material in order to ensure knowledge of, and compliance with, any terms and conditions on the material.

To make this exercise more challenging, by raising some of the questions currently being debated in many countries, you may choose to ask participants to indicate if they consider that the research they conduct could be considered as 'utilisation' according to the Nagoya Protocol (research and development on the genetic or biochemical composition of genetic resources). Ask them to flag, using three differently coloured dots, whether they consider whether a use clearly involves 'utilisation' (red), or possibly involves utilisation (yellow), or definitely does not (green). If you wish to expand on this theme you could pull out working interpretations of 'utilisation' from different countries' legal measures, such as the European Union regulation on compliance\*, to explore and discuss differences and implications for participants' work.

\* The Guidance document on the scope of application and core obligations of Regulation (EU) No 511/2014 provides some information on what is and is not considered to be 'utilisation' in the EU.



## Associated Traditional Knowledge

- TK is unevenly covered by international and national measures
- Users have responsibilities
- Follow protocols and best practices
  - Find who is entitled to provide consent
- Beware of accidental TK-sharing



## Associated Traditional Knowledge

Researchers and collection-holders that record, handle or use traditional knowledge (TK) need to be aware that they hold serious responsibilities. TK associated with genetic resources is also covered by the Nagoya Protocol, many countries' ABS laws, and the customary laws and protocols of the Indigenous peoples and local communities that hold such knowledge. However, there are some major gaps in the international framework regarding the protection of TK and the rights of knowledge-holders, and not all countries fully recognise such rights. For example, the Nagoya Protocol is silent about TK in the public domain. If a scientist publishes a paper containing TK, such knowledge is then considered by many to be in the public domain – meaning others may use it freely, possibly for eventual commercial gain, without needing to gain consent from the knowledge-holders or share benefits from them.

You should work according to community protocols where available as well as sectoral best practices or guidelines – for example, the Code of Ethics of the International Society for Ethnobiology, or similar tools developed at regional or national levels.

Ethical TK users work closely with knowledge holders for many reasons, not least the need to establish and maintain mutual respect and trust. This takes time and commitment. You should always ensure you obtain appropriate consent, from whomever is authorised to provide it for the particular community and type of knowledge, for your or your institution's intended uses of TK, including any further dissemination via publication or presentations. You may need to present a summary that has been reviewed by the knowledge holders. Knowledge holders may or may not want to be closely involved in the research, or acknowledged personally; you will need to discuss all of these aspects.

You should also be very cautious about sharing TK that is already held in your institution – for example on herbarium labels or in specimen databases. You may need to restrict access to those database fields, or blur out the 'use' part of a label when sharing images of herbarium specimens. Otherwise, you may risk putting more TK into the public domain without the knowledge or consent of the communities concerned.



## Keeping track: ABS metadata

### Data management is critical...

- **Provider/source**
  - A community? An *ex situ* collection? A private donor?
- **Documentation**
  - **Permits/agreements?**
    - Collecting permit, access permit, IRCC, Material Transfer Agreement?
    - Other permits/agreements? (e.g. collaborative agreement, CITES permit)
    - Dates of validity, material covered etc.
  - **Terms of use, including restrictions and benefit-sharing**
    - No sequencing? Reporting research results? Sending publications?
  - **Terms of transfer to third parties**
    - Notification to provider? New provider PIC? No transfer?
- **Samples taken, location used/stored**
- **Material transferred/returned/destroyed**

## Keeping track: ABS metadata

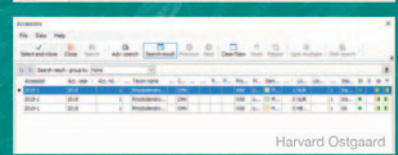
Data management is critical for ABS. We have explored some of the ways in which genetic resources may be used and move from providers to various users, emphasising the need to keep material and associated TK linked to the original providers and to any obligations and restrictions that must be honoured – for example obligations to share certain benefits or to obtain new prior informed consent for transfer, or restrictions on sequencing DNA or publishing TK.

Thus, in addition to the basic passport data that most plant researchers and collections already keep (such as collector name and number, date of collection, location, habitat and plant characteristics, accession number), your institution also needs to manage key metadata and documentation regarding the original provider and/or source, any prior informed consent required (or other permissions), and any terms for use, transfer and benefit-sharing. Restrictions on use or transfer must be flagged so that users are aware. Benefit-sharing obligations may involve reporting research results and sending publications, so you should be able to handle these linkages.

ABS information can be found in collecting or access permits, Internationally Recognised Certificates of Compliance, Material Transfer Agreements, donation forms and other forms of agreement. You may need more than one permit or consent to cover your collection and use of specimens, and they should all be recorded – for example import permits, export permits and of course CITES permits. If your work with partners is covered by a collaborative research agreement, this should be linked too (especially if it contains information on how specimens will be used). The data management system should hold information on the dates of validity of any permits/agreements and the material covered by those documents.

Your system should also enable you to keep track of samples collected from particular specimens, and to note when plant specimens have died or been de-accessioned, or if specimens have been returned or destroyed after use if terms so require.





## 16 | Access and Benefit-Sharing at the Institution



## ABS Toolkit (1)

- Code of conduct/institutional ABS policy
  - Can use a shared code of conduct
  - Can adapt collection policy
  - Consider visitors, researchers, students
  - Include TK if you use it!
- ABS training and know-how
  - Basic staff training (what to do/not to do)
  - ‘Gatekeeper’ position(s)
  - Person with ABS knowledge
  - Institutional oversight for signatures



## ABS Toolkit (1)

You may wish to consider the various measures that your institution can take to address ABS in practice as an ‘ABS toolkit’.

As a general measure, developing a code of conduct or institutional policy is very helpful as a means of understanding how genetic resources and TK are used by an institution. A code or policy helps to raise awareness, guide implementation and build the trust of providers and partners. Some research and collection networks have developed shared codes of conduct and best practices for their member institutions; these tools help to raise the ABS profile of the entire network and can facilitate ABS-compliant specimen use within and between institutions, especially when network members use shared or consistent exchange documentation as well. However it is still useful to have an individual institutional policy as well, to spell out how a shared code is applied in practice. A collection policy can be adapted to fit in ABS considerations. Institutions should make sure that everyone who works with genetic resources is aware of the policy – including researchers, visitors and students. If you or your institution studies or handles TK, the policy should cover these activities.

ABS covers a range of issues, and some training is needed. All staff should have enough ABS knowledge to prevent illegal acquisition, mis-use or inappropriate transfer (for example a gardener giving away plants). Depending on the size and complexity of your institution, there may be obvious ‘gatekeeper’ positions, for example the people who already register material or documents coming into the institution, who could receive ABS training and check that the correct process is followed. At least one person should understand enough about ABS to be able to deal with routine enquiries, and know who or where to turn to for more guidance when needed, perhaps at the national or network level. In addition, it is advisable for there to be institutional oversight regarding when ABS documents are developed and signed – for example agreements should ideally be signed off by institution or department heads.



## ABS Toolkit (2)

- Data management system
  - Keep ABS metadata linked to material
  - Data entry standards & training
- Set of standard/template documents
  - ‘Statement of use’
  - Material Transfer Agreement (MTA)
- Toolkits can also help identify good partners



## ABS Toolkit (2)

We have already emphasised the importance of a data management system for keeping ABS metadata linked with specimens and samples, and that data entry standards are essential.

Institutions may also find it useful to develop a set of standard or template documents. A descriptive ‘statement of use’ document can be given to a potential provider to set out the usual ways in which an institution uses material and associated TK, beyond the specific ways in which a researcher may seek material for one project. Then, if the provider has concerns about any of those uses, particular restrictions can be made clear in the prior informed consent document and/or an agreement setting out mutually agreed terms. The statement of use can also provide information on typical benefits that your institution generates and shares.

Template Material Transfer Agreements can be used to set out terms of use and transfer and benefit-sharing obligations when material is transferred from or to the institution. Some negotiation may be necessary if the other entity provides or mandates use of its own template documents and national law may dictate use of a particular document.

Finally, an ABS toolkit goes two ways: it helps an institution to implement ABS, but also demonstrates to potential partners and providers that it takes ABS implementation seriously. If you are seeking to work with a reliable partner, you can ask questions about their institutional ABS policy, data management capability, staff training and other measures.

Several examples of this toolkit approach (at the network level) are provided in the references for the international framework slides of this learning package, and the BGCI website offers diverse ‘ABS implementation examples’ provided by a range of institutions.



## In summary, in practice:

- Know, and follow, laws and good practice!
- Keep track of any permits, terms and obligations
- Working with communities (and TK) requires respect and communication
- Share benefits as agreed with providers and partners
- Create an ABS toolkit to support compliance and build trust
- Work with partners you trust



## In summary, in practice:

To sum up all that we have discussed: researchers, collection-holders and their institutions need to know, and follow, laws and good practice.

You will need to be able to manage ABS-related information such as permits and agreements so that you can demonstrate your compliance with national laws, follow up on your benefit-sharing obligations, and ensure that other users are aware of their responsibilities too. Never allow illegally collected or acquired material to come in ‘through the back door’.

If you work with Indigenous peoples and local communities and their traditional knowledge, you will need to find out about customary laws and protocols, and create and maintain respectful relationships and trust. Be alert to any activities that might inadvertently put TK into the public domain without the appropriate consent of knowledge-holders.

Whomever you work with, you will need to consider what benefits you can generate and how you can share them, as agreed in advance with partners, government bodies, communities or others – and you should also consider how you can opportunistically share other benefits that arise.

An ABS toolkit approach can help you work through all of these actions.

Finally, work with partners you trust to carry through their obligations too – be sure to ask about their ABS measures.





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