

Science-Policy Workshop

Access and Benefit-Sharing for Non-commercial Academic Research

Workshop Report



20-22 November 2013

Lima, Peru

BACKGROUND

Workshop description and objectives

The workshop placed itself at the interface between science and policy on matters related to the national implementation of Access and Benefit-Sharing regulations and policies in Latin American and Caribbean countries. It was to focus on non-commercial academic research addressing also cases where there is a change of intent towards research and development for commercial ends.

The workshop focused on legal systems and procedures for Access and Benefit-Sharing and practical examples of non-commercial academic research on genetic resources, from nine Latin American and Caribbean countries, i.e. Argentina, Brazil, Cuba, Mexico, Bolivia, Colombia, Ecuador, Costa Rica and Peru. The aim with this geographic representation was to have a diversity of systems, learn from one another and reflect on trans-boundary access.

The workshop also focused on the benefits (and possible risks) associated to non-commercial academic research, in order to highlight and find opportunities for facilitated access for this type of research.

Ultimately, the workshop intended to draw concrete lessons learnt and key recommendations from the variety of experiences represented at the workshop to be show-cased regionally as well as in international fora. It also tried to promote an open and transparent communication in order to enhance mutual understanding between non-commercial academic research and governmental agencies involved in Access and Benefit-Sharing.

More specifically, the workshop's objectives were to:

1. characterise the types of benefits that can be derived from non-commercial academic research and risks that may arise from this research;
2. clarify the challenges that Access and Benefit-Sharing causes to non-commercial academic research and to administrative bodies, and discuss opportunities to facilitate the ABS implementation for this type of research;
3. provide a set of key messages derived from the workshop's dialogue, including lessons learned, new initiatives to reduce risks, address challenges, take advantage of opportunities and so on.

OPENING

The welcome to the workshop was given by José Alvarez, Biodiversity Director at the Ministry of Environment of Peru; Karin Holm-Müller from the University of Bonn; and Anne-Hélène Prieur-Richard from DIVERSITAS and on behalf of IUBS, SCNAT and ICSU ROLAC.



The workshop objectives and methodology were then presented by Arturo Martinez (CONICET) & Gabriela Salinas, facilitator of the workshop. Next, the participants presented themselves by country sharing exceptional things about their country.

Subsequently, Gabriel Nemogá-Soto presented an Introduction to Access and Benefit Sharing & the Nagoya Protocol, on behalf of Beatriz Gomez Castro from the UN Convention on Biological Diversity.



Finally, Lily Rodriguez & Susette Biber-Klemm made a presentation of the Projects supporting the implementation of the workshop: the project assessing the benefits from non-commercial research from the ILR, University of Bonn, and the DIVERSITAS, ICSU ROLAC, SCNAT & IUBS project on ABS for non-commercial academic research in LAC.

NON-COMMERCIAL ACADEMIC RESEARCH

PRESENTATION

Susette Biber-Klemm & Lily Rodriguez made a brief presentation on non-commercial academic research, how it works, the process it entails and possible checkpoints, some reflections on change of intent, and an assessment of research types and their probability of leading to a commercial product.



The discussion that followed raised the following issues.

The research chain needs to take traditional knowledge into account.

A way of seeing the problem of change of intent is that when there is no publication this when the change of intent may happen since it means that the scientist has another idea in mind than a purely academic one of publishing knowledge. However, a counter argument to this is that not all research gets published and this even when there is no intention of change of intent. Change of intent has nothing to do with whether scientists intend to publish or not. The question is more about what people want to do with the genetic resources themselves.

No difference between journals and books in regards to ABS matters. Publications should be cited.

In Columbia there is a pressure for publishing but also for getting patents. So some researchers look for patents not even thinking if it could be commercialised.

Checkpoints needed for the all the processes where the research process may lead to commercialisation. Need for compliance mechanisms for industrialised as well as emerging and developing countries.

PANEL ON NON-COMERCIAL ACADEMIC RESEARCH – PART I

Panelists:

- Valeria Souza - Microorganism-ecosystem research in Cuatro Ciénegas, México
- Mónica Moraes Ramirez - Taxonomic identification of plants, Bolivia
- Dalí Rojas Díaz - Genomics and Bioinformatics of microbial diversity in extreme environments, Colombia
- Lin Chau Ming – Ethnobotanic study of antimalarial plants, Brazil
- Eudalys Ortiz Guilarte – Microbiology: Bio products from marine bacteria, Cuba

Panelists shared about the types of research they conduct, the type of biological material they make use of and the methods and processes they apply, as well as other issues such as sample storage, exchange, use of information and results from the research and so on.



They answered to the following questions:

1. What is the purpose/objective of your research?

Mónica: document natural heritage of the country in ethnobotany; human and plants interactions, e.g. predation, pollination, etc.

Valeria: persistence and evolution of species, microbiological research for conservation; molecular biology on bacteria. Biological material: microbial mass; mud and water.

Dalí: study the biodiversity of microorganism in soil and water and their use, in a national park

Lin: traditional food plants in the Amazon, ethnobotanic research

Eudalys: collection of marine organisms, identification, research for commercial products that can serve conservation with benefit sharing

2. What will you do with this material? How do you process it? What methods do you use?

Mónica: collect in the field, dry plants with dryers depending on availability of logistics and collection kept in aqueous solutions, taxonomic identification, agreements with other foreign centres for genetic analyses and for sending sample as a loan.

Lin: interviewing of peoples, sample of plants in alcohol, dry in laboratory, no genetic molecules extracted or modified

Valeria: let material grow in substrate, DNA analyses, metagenomics – extract DNA (takes 2 years). Maintain in living collections.

Eudalys: work with cultures, isolate material, characterise material.

3. How is the sample stored? What will happen to the sample? Will it be transferred to third parties (including peers)?

Mónica: to herbaria; keep the best specimen that can be consulted by visitors or sent out for a specific time duration on request, duplicates are sent to other herbaria in the country or abroad, specimen sent for analysis is donated afterwards; based on formal agreements.

Lin: duplicates only go to institutions in Brasil.

Valeria: mud is frozen in samples, contribute to national string collection, will be transferred to CONABIO; information is shared.

Dalí: samples are distributed in three places: one research institute and two colleges. Public database.

Eudalys: Collections belong to two institutions; store own collection, store collection by orther of importance (20% in Nitrogen), always stored according to more than one method, not much exchange because of lack of storing capacities, always with permits.

4. What will happen to the information you generate? To the results of your research?

Mónica: collection is open to everybody together with maps and other publications, try to reach wide audience not only scientists; government is building national platform / database, have to publish information there – government tries to filter information from the database.

Lin: public database of higher plants, publication in book: Portuguese and three indigenous languages, to be used by school teachers.

Valeria: translated to local communities, high school children take part in research, many scientific publications, public database: two gene banks

Dalí: results have to be transmitted to government, centre has a committee that authorises publication, in some cases knowledge is not shared, researchers have to sign confidentially agreements.

Eudalys: Information resulting from research can be accessed, so far no publication, but translated to different languages, exchange of information/ results of project with policy makers and local communities, write technical reports that are submitted to government, scientific publications later on

5. In which ABS relevant ways could/can the sample or information be further used or not?

Valeria: purpose of project conservation, but project is very open as long as scientists share with the project the overheads of patents; the keystone of our project is common trust.

Lin: Agreement with local communities is needed if the material is used; if agreement with communities is possible depends very much on the community

Mónica: communities are happy about research because younger people are forgetting the knowledge

Dalí: every person who wants to use material has to sign an ABS contract

Eudalys: Owner of the resource is the state, people cannot hold patents, results of research belong to the research centre, in this way we remain sovereign, in order to have access to the resource you have to obtain an authorization.

Comment: Cuba: cooperation projects have also access to resources but have to comply with legislation, the institution has to have a license from the authority, you may request a patent without having the license – this is often the case, (...).

BENEFITS OF NON-COMERCIAL ACADEMIC RESEARCH

PANEL ON NON-COMERCIAL ACADEMIC RESEARCH – PART II

Panelists pointed out the benefits shared as a result of their research:

Valeria Souza –Microorganism-ecosystem research in Cuatro Ciénegas, México

- Molecular biology lab in the local high school
- Training to high school students and teachers to use molecular biological lab
- Lab allows to:
 - diagnose local biodiversity,
 - diagnose the health of their animals and plants
 - monitor potential pollution of their wells
- Green houses that help saving water for the community – based on the state agreement for the green houses as benefits for the community, the government granted the permit to do the change of intent to commercial research.

Mónica Moraes Ramirez – Taxonomic identification of plants, Bolivia

- Development of scientific and academic capacities in local communities. As local guides people learn to register data under a precise protocol and the scientific names of the plants relating them to vernacular, local names of each species.
- Involvement of the community at all levels, including children.

- User-friendly publications that are distributed to the communities that document the uses of plants. They are considered authors of these publications and researchers are considered only as compilers of data (a document was circulated by Mónica).
- Advice to local communities on how to use some resources in a sustainable way.

Dalí Rojas Díaz – Genomics and Bioinformatics of microbial diversity in extreme environments, Colombia

- Development of scientific capacities to process and analyze data in genomics and bioinformatics
- Development of a platform for genomic and bioinformatics research in the country
- Identification of potential of microbial diversity from extreme environments for possible use
- Publications (10 articles, 5 book chapters, 25 oral presentations)
- Advancement of professional capacities (16 undergraduates, 10 masters, 7 PhD)
- Books for schools

Lin Chau Ming – Ethnobotanic study of antimalarial plants, Brazil

- Primer on the subject for the instruction of communities and indigenous people.
- Contribution to a public health problem: malaria.
- Fellowships for local people
- Contribution to local communities self esteem

Eudalys Ortiz Guilarte – Microbiology: Bio products from marine bacteria, Cuba

- Contribution to conservation: development of a bio product to address environmental issues
- Advancement of scientific knowledge and technology
- Involvement of local people in the project

PRESENTATION ON BENEFITS

Lily Rodriguez presented the preliminary results of the online survey on benefits derived from non-commercial academic research, being applied to biological researchers from Germany at the moment. Non-monetary benefits were grouped in those related to information, capacity-building and type of collaboration.

Afterwards, Bruno Paladines presented the case of ecosystem research on biodiversity in Loja, Ecuador which brought specific benefits derived from research, related to education and knowledge transfer.

Among those mentioned:

- Increased knowledge of biodiversity in a hot-spot of the tropics
- Education and training of scientists of all levels
- Joint research
- Publications
- Transfer of knowledge from basic science to application
- Improvement of the scientific infrastructure
- Platform for Biodiversity and Ecosystem Monitoring and Research in South Ecuador
- Participation in local efforts in environmental education
- Supporting environmental planning of the biosphere reserve, watershed management, etc.)

BENEFITS ASSESSMENT

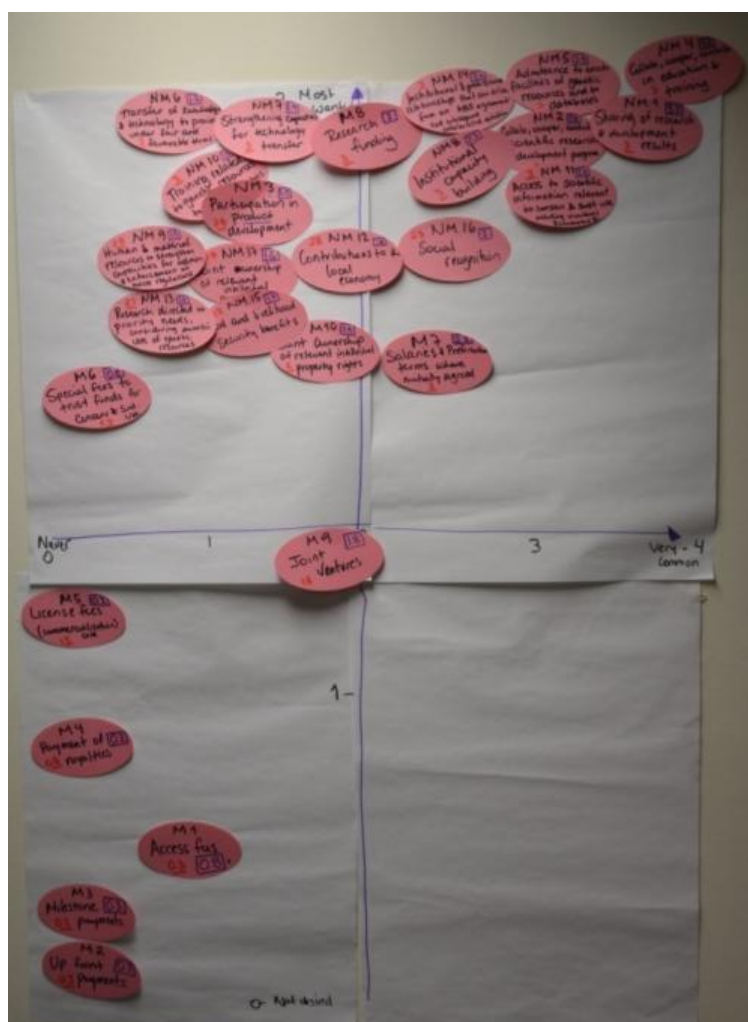
Participants carried out an assessment to determine the most common and most desirable benefits of Non-Commercial Academic Research. Each group rated the monetary and non-monetary benefits listed in the annex of the Nagoya Protocol, following the criteria:

• HOW COMMON?	• HOW DESIRABLE?
0= Never 1= Very rare 2= Rare 3= Common 4= Very Common	0= Not desired 1= Ok 2= Desired 3= Most Wanted

The ratings of the different groups were then averaged (see below for the average scores) and plotted in a graph to visually appreciate those most and less common and desirable. The vertical axis represents how desirable the benefit is and the horizontal axis how common it is.

The benefits on the lower left side represent those benefits less common and less desirable. These benefits are all monetary benefits, including access fees and fees per sample collected (M1), up-front (M2) and milestone (M3) payments; payment of royalties (M4) and license fees in case of commercialization (M5). As the discussion was centred on non-commercial academic research these benefits never or almost never occur or even apply (as is the case for royalties or license fees, unless there is a change of intent).

Some groups mentioned some monetary benefits may occur rarely, such as special fees to be paid to trust funds supporting conservation and sustainable use of biodiversity (M6) – more common in the case of foreign researchers and as voluntary schemes; joint ventures (M9) – joint research or projects; and joint ownership of relevant intellectual property rights (M10) – authorship or publications rights. Slightly more common would be research funding (M8) – more appropriate for the international context, as well as salaries and preferential terms where mutually agreed (M7) – including salaries and in-kind transfers.



Regarding how desirable monetary benefits are, groups found the first ones: access fees and fees per sample collected (M1), up-front (M2) and milestone (M3) payments; payment of royalties (M4) either not desired or just ok to have. The desirability of monetary benefits was slightly higher in the case of

license fees in case of commercialization(M5) joint ventures (M9), joint ownership of relevant intellectual property rights (M10) and salaries and preferential terms where mutually agreed (M7). The monetary benefits considered most desirable were special fees to be paid to voluntary trust funds supporting conservation and sustainable use of biodiversity (M6) and research funding (M8).

Groups considered necessary also to clarify where these funds would come from, and could only be possible if included in the research budget. In that case, it would not make sense if the research was funded by the public sector from the same country.

The non-monetary benefits are in general more common and by far more desirable in the case of non-commercial academic research. Among the benefits considered the most common benefits we find, in decreasing order: collaboration, cooperation and contribution in education and training (NM4), sharing of research and development results (NM1); admittance to ex situ facilities of genetic resources and to databases (NM 5) – though this may present some access problems-; collaboration, cooperation and contribution in scientific research and development programmes, particularly biotechnological research activities, where possible in the Party providing genetic resources (NM2) – though several groups agreed this benefit could be considered less common if referring specifically to biotechnology – transfer, however highly desirable; access to scientific information relevant to conservation and sustainable use of biological diversity, including biological inventories and taxonomic studies (NM11) – though this should be subject to national regulation on information; institutional and professional relationships that can arise from an access and benefit-sharing agreement and subsequent collaborative activities (NM14) – though some considered this was not a very clear definition; and institutional capacity-building (NM8) – taking into account needs of country of origin and ILCs – and social recognition (NM16) – also considered not clearly defined for whom the recognition is.



The rest of the non monetary benefits mentioned in the annex of the Nagoya Protocol were considered to occur rarely in non-commercial academic research: strengthening capacities for technology transfer (NM7) – independent of the actual transfer of technology; contributions

to the local economy (NM12) – though some discussion was considered necessary on how to best contribute; food and livelihood security benefits (NM15); joint ownership of relevant intellectual property rights (NM17); participation in product development (NM3) – another benefit that would require a more clear definition; human and material resources to strengthen the capacities for the administration and enforcement of access regulations (NM9) – which requires the influence and support of researchers; training related to genetic resources with the full participation of countries providing genetic resources, and where possible, in such countries (NM10) – which a group mentioned is particularly scarce in hotspot biodiversity countries-; research directed towards priority needs, such as health and food security, taking into account domestic uses of genetic resources in the Party providing genetic resources (NM13) – though considered by some not easy to change. As least common, transfer to the provider of the genetic resources of knowledge and technology under fair and most favourable terms, including on concessional and preferential terms where agreed, in particular, knowledge and technology that make use of genetic resources, including biotechnology, or that are relevant to the conservation and sustainable utilization of biological diversity (NM6).

All groups rated the non-monetary benefits as desirable, which resulted in several benefits being rated as “most wanted” by all groups. The non-monetary benefit with the lowest score was still considered strongly desirable: research directed towards priority needs, such as health and food security, taking into account domestic uses of genetic resources in the Party providing genetic resources (NM13).

In general, groups considered many of the benefits, as listed in Annex 1 of the Nagoya Protocol, should be better defined and exemplified in order to be able to rate it more appropriately. This was probably the first time that such a close analysis of the listed benefits was made.

Benefits mentioned in the Nagoya Protocol Annex		How Common? 0-4	How Desirable? 0-3
Monetary Benefits			
M1	1. Access fees/fee per sample collected or otherwise acquired;	0.8	0.25
M2	2. Up-front payments;	0.3	0.3
M3	3. Milestone payments;	0.3	0.2
M4	4. Payment of royalties;	0.2	0.8
M5	5. License fees in case of commercialization;	0.2	1.5
M6	6. Special fees to be paid to trust funds supporting conservation and sustainable use of biodiversity;	0.8	2.4
M7	7. Salaries and preferential terms where mutually agreed;	2.2	2.0
M8	8. Research funding;	2.0	3.0
M9	9. Joint ventures;	1.8	1.8
M10	10. Joint ownership of relevant intellectual property rights.	1.9	2.0

Benefits mentioned in the Nagoya Protocol Annex		How Common? 0-4	How Desirable? 0-3
Non-Monetary Benefits			
NM1	1. Sharing of research and development results;	3.2	3.0
NM2	2. Collaboration, cooperation and contribution in scientific research and development programmes, particularly biotechnological research activities, where possible in the Party providing genetic resources;	2.8	3.0
NM3	3. Participation in product development;	1.5	2.8
NM4	4. Collaboration, cooperation and contribution in education and training;	3.5	3.0
NM5	5. Admittance to ex situ facilities of genetic resources and to databases;	2.9	3.0
NM6	6. Transfer to the provider of the genetic resources of knowledge and technology under fair and most favourable terms, including on concessional and preferential terms where agreed, in particular, knowledge and technology that make use of genetic resources, including biotechnology, or that are relevant to the conservation and sustainable utilization of biological diversity;	1.2	3.0
NM7	7. Strengthening capacities for technology transfer;	1.9	3.0
NM8	8. Institutional capacity-building;	2.3	3.0
NM9	9. Human and material resources to strengthen the capacities for the administration and enforcement of access regulations;	1.5	2.8

NM10	10. Training related to genetic resources with the full participation of countries providing genetic resources, and where possible, in such countries;	1.5	3.0
NM11	11. Access to scientific information relevant to conservation and sustainable use of biological diversity, including biological inventories and taxonomic studies;	2.7	3.0
NM12	12. Contributions to the local economy;	1.8	2.8
NM13	13. Research directed towards priority needs, such as health and food security, taking into account domestic uses of genetic resources in the Party providing genetic resources;	1.5	2.3
NM14	14. Institutional and professional relationships that can arise from an access and benefit-sharing agreement and subsequent collaborative activities;	2.4	3.0
NM15	15. Food and livelihood security benefits;	1.7	2.7
NM16	16. Social recognition;	2	2.75
NM17	17. Joint ownership of relevant intellectual property rights.	1.6	2.8

NATIONAL ABS IMPLEMENTATION

PRESENTATIONS ON NATIONAL ABS IMPLEMENTATION

First, Susette Biber-Klemm presented a general overview of the elements and structures in National ABS systems that have an impact on access and benefit sharing in the case of non-commercial academic research.



Then, Norma Munguia Aldaraca from SEMARNAT (Ministry of Environment and Natural Resources), Mexico presented the process and projects being implemented in Mexico to strengthen the national capacities and conditions for ABS implementation.

Change of intent is not covered by the law in Mexico. Should build on the lessons from the Cartagena protocol.

Many existing law in different commissions which need to be coordinated. One of the challenges is the trade agreement with US and Canada, very much align with WIPO

Public awareness is a big challenge for civil society and in the research community.

Needs:

- Capacity to negotiate MAT
- Develop a legal and institutional framework
- Develop ABS framework
- Particular measure to develop capacity for local communities (and their knowledge), which are not qualified as traditional communities

Carlos Pittaluga from CNPq (National Council for Scientific and Technological Development), Brazil, followed and presented an overview of how the ABS



system works in Brazil, which actors are involved, the role of the CGEN (Genetic Heritage Management Council) and how and by whom decisions are made.

Council gives permission for any kind of access: scientific research, bioprospection, technological development. Attributions of this council:

- Accreditation to grant access permit
- ABS rules
- Decide about access solicitations
- Accreditation scientific collections that will receive the material

There are 3 institutions accredited by the council: IBAMA (environmental ministry), CNPq, IPHAN.

Research on taxonomy, systematic, ecology, conservation is not under this law.

PANEL ON NATIONAL ABS IMPLEMENTATION

Panelists:

- Marta Jimenez, Costa Rica – Ministry of Environment and Energy
- Jorge Alvarez, Cuba - Ministry of Science, Technology and Environment
- Beatriz Acevedo, Colombia –Ministry of Environment and Sustainable Development
- Sharbel Gutierrez, Bolivia - Ministry of Environment, Biodiversity, Climate Change and Forestry Management.
- Wilson Rojas, Ecuador – Ministry of Environment
- Karina Ramirez, Peru – Ministry of Agriculture
- Carlos Pittaluga, Brazil – National Council for Scientific and Technological Development
- Norma Munguia, Mexico - Ministry of Environment and Natural Resources

The discussion on national implementation was complex and extremely rich. A summary of some points are captured below.

The participants in this panel shared about how ABS is implemented in their countries, explaining how the system works, the institutions involved and the procedures to obtain permits or make contracts. For example, the Andean countries explained how ABS is implemented following the 391 Decision and Cuba mentioned differences depending on whether the research is national or if it has international partners. Several countries (Peru, ...) mentioned their ABS system is being currently revised.

The panel members also shared about specific existing procedures, mechanisms and instruments designed for non-commercial academic research. For example, Brazil talked about the online permit for basic research as well as for exporting material, and about the scientific collections accredited as a 'trustee' of genetic heritage, Costa Rica pointed out that national universities create own access procedures for non-commercial academic research, and Colombia explained specific regulations and procedures for collection sampling and use, as well as the requirement that calls for researchers being presented by a national partner university.

Panel members also discussed the importance of mechanisms that could help monitor the use of samples, information and results of research, considering different checkpoints or requirements that can reduce the cases of change of intent that are not notified.

Panel members also mentioned issues related to traditional knowledge, including mutually agreed terms and the consent from indigenous and local communities when appropriate.



Specific information was asked for regarding the number of permits issued:

- Brazil reported to have granted around 1000 authorizations for non-commercial research and around 90 contracts for commercial research since 2003.
- Mexico reported to have granted 4238 permits for scientific collect in the period between 1996 and 2011 and noted very few applications are denied.
- Cuba reported granting 20-30 permits per year since 2008, with only 2-3 being denied each year. It has issued around 5 contracts, only applicable for international partners, since 2008.
- Colombia reported issuing 89 contracts out of 199 applications since 2003. 1 was for commercial research.
- Bolivia reported having issued 9 access contracts between 2000 and 2005, out of 50-60 applications, several of those related to quinoa. 2 of those contracts were for commercial purposes. The system is currently being discussed.
- Peru reported issuing 10 contracts (issued in 2013) since 2009 out of more than 30 requests. There is no contract for commercial purposes. It has also issued 180 research permits for biological resources some of whom might evolve in a contract.
- Ecuador reported having 19 applications since 2011. Of those, 1 research contract and 1 commercial contract will be negotiated in the next weeks. It is currently revising the research permits and process for obtaining them.
- Costa Rica reported having issued 200 permits for non-commercial research and 35 for commercial purposes

ABS FOR NON-COMMERCIAL ACADEMIC RESEARCH

PRESENTATION OF CASE STUDIES

The 6 case studies for the group discussions on challenges, favourable conditions and opportunities to facilitate access and benefit sharing for non-commercial academic research were presented.

Group	Author	Title	Country & Topic
WG1	Juan Martín Díaz de Astarloa	A novel biological approach applied to the taxonomy of Argentine marine fishes: DNA barcoding	Argentina DNA based Identification and taxonomy of fish (Barcoding) for Argentina Regional Node of the International Barcode of Life project
WG2	Mónica Moraes Ramirez	Current national regulations and conditions for scientific plant collections and exchange	Bolivia Ethnobotany; Taxonomic Identification of plants; genetic analysis; Access in-situ in collective territories
WG3	Lin Chau Ming	Access to genetic resources and associated information in Brazil: the case of anti-malarial plants in Acre and Amazonas States	Brazil Ethnobotany; Access to collective territories of Indigenous Communities; traditional knowledge; phytopharmacological analysis; benefit sharing
WG4	Lara Sette Duraes	Semi-quantitative analysis of Laccase and MnP genes expression and evaluation of dye degradation by marine derived fungus	Brazil Applied microbiology; Contribution of enzymes produced by marine fungus to dye degradation; commercial potential
WG5	Dalí Alexandra Rojas Díaz	Colombian Center for Genomics and Bioinformatics of Extreme Environments - GeBiX	Colombia Microbiology; inventory in extreme environments; establish collection (platform on bioinformatics); including work on intellectual property rights
WG6	Valeria Souza	Access and Benefit Sharing in México: Cuatro ciénegas Coahuila, a social and technological experiment	Mexico Ecological study on diversification and coexistence; inventory of endemic species living in frail ecosystem; discovery of microbes with commercial potential; non-commercial, commercial; benefit sharing



Mónica Moraes Ramirez



Juan Martín Díaz de Astarloa



Lin Chau Ming



Valeria Souza



Lara Durães Sette

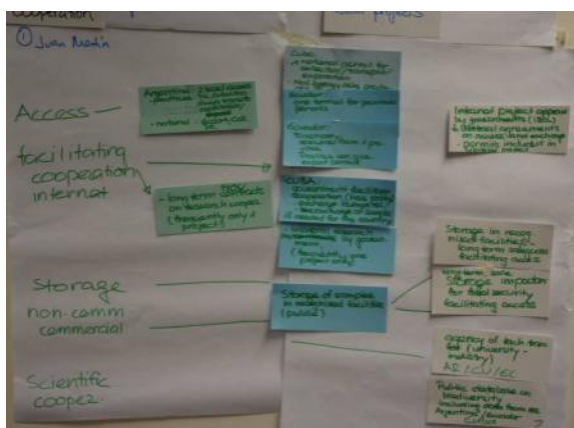


Dalí Rojas Díaz

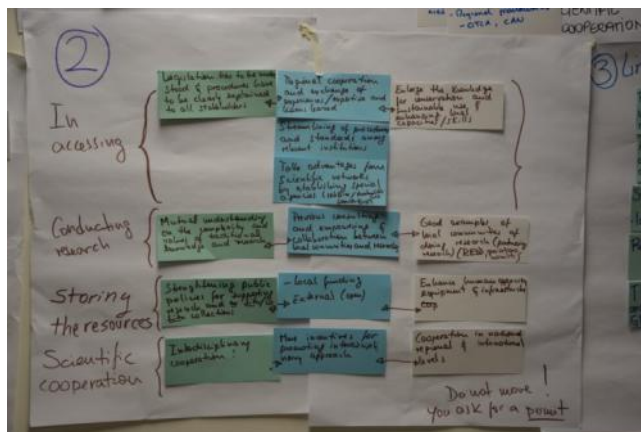
CASE STUDY GROUP ANALYSIS

Participants then chose the case study they wished to analyze, based on their interest or experience. Each group was asked to identify challenges, favourable conditions and opportunities related to ABS in non-commercial academic research in each one of the following elements:

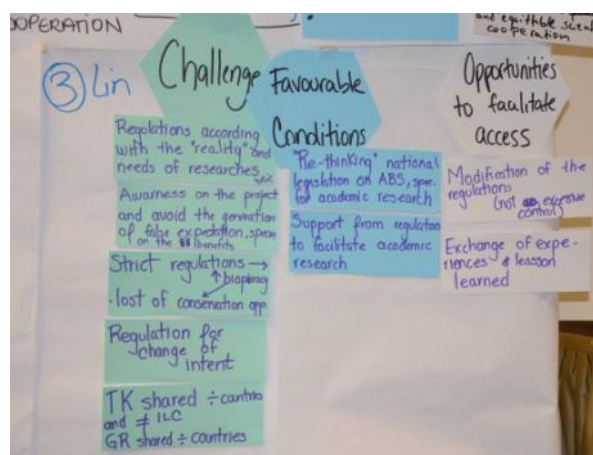
- a. In accessing (including traditional knowledge)
- b. In conducting the research (use of resources, products and publications)
- c. In storing the resource
- d. In potential for further commercial use
- e. In scientific cooperation



Working Group 1



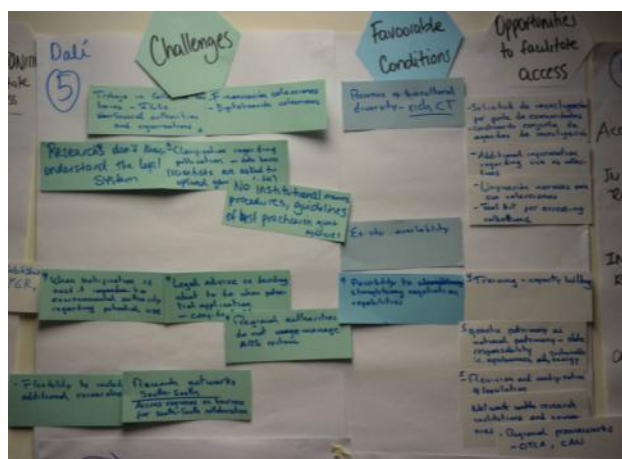
Working Group 2



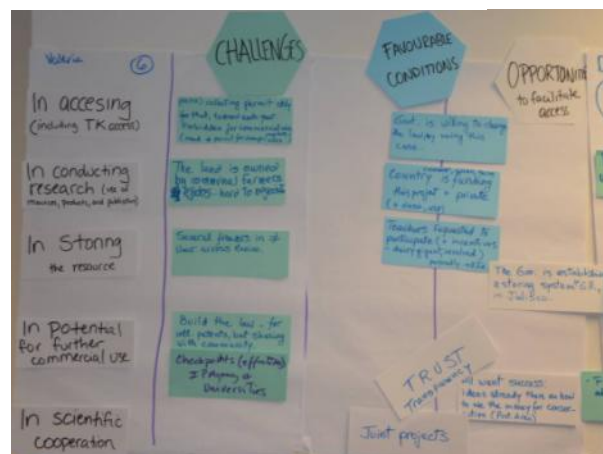
Working Group 3



Working Group 4



Working Group 5



Working Group 6

COMPILATION OF WORKING GROUP DISCUSSIONS

The challenges, favourable conditions and opportunities identified by each of the groups were then compiled according to each element analyzed:

a. In accessing genetic resources

	Challenges	Favourable conditions	Opportunities
WG1	Argentina: 2 levels access: 1) At the provincial level (PIC, collection, exportation) and procedures are different from one province to another 2) At the national level: export, collection, PIC	Cuba: 1 permit for collection, transport, exportation Ecuador: one format for provincial permits	International project approved by governments (e.g. IBOL), bilateral agreements on access and exchange Permits included in bilateral projects
WG2	Legislation has to be understood and procedures have to be clearly explained to all stakeholders	Regional cooperation and exchange of specimens/expertise and lessons learned Streamlining of procedures and standards among relevant institutions Take advantage from scientific networks by stabilising special agencies (INBIO, CONABIO,)	Enlarge the knowledge for conservation and sustainable use of biodiversity - enhancing local capacities/skills
WG3*	Regulation according to the "reality" and needs of researches Awareness on the project and avoid the generation of false expectations, specimens on the economical benefits Strict regulation leads to biopiracy and loss of conservation opportunities TK shared between different countries or different ILCs. Genetic resources shared between different countries	Re-thinking national legislation on ABS, specifically for academic research (most regulation was adopted before NP) Support from regulators to facilitate academic research	Modification of the regulations (not excessive control)
WG4**	Difficulty of identifying the right authority Different understanding of access for different countries Negotiation in fair and equitable conditions Economical resources and legislation that is not clear	Autonomy on capacity building and on research and infrastructure e.g. electronic system for permits in Brazil Existence of thematic networks	Clear and transparent procedures Awareness about procedures NP as an instrument for a more equitable scientific cooperation
WG5	Several authorities and institutions involved Researchers don't know or understand the ABS legislation	Rich bio-cultural diversity	Legislation should take into account when ILCs ask researchers to conduct research Build research agenda with the ILCs
WG6	Collecting permit only for that to renew each year. Forbidden for commercial use (need different permits for different uses)	Government is willing to change the law by using the Mexican case study as there is no legislation about the change of intent	

*WG3 combined In accessing and In conducting research in one field.

**WG4 combined In accessing, In conducting research and In scientific cooperation in one field.

b. In conducting research

	Challenges	Favourable conditions	Opportunities
WG1	-	-	-
WG2	Mutual understanding of the complexity and values of both TKL and research	Previous consulting and empowering and collaboration between local communities and researchers	Good example of local communities of doing research e.g. REDD
WG3*	Regulation according to the "reality" and needs of researches Awareness on the project and avoid the generation of false expectations, specimens on the economical benefits Strict regulation leads to biopiracy and loss of conservation opportunities TK shared between different countries or different ILCs. Genetic resources shared between different countries	[text below is same as in table in a.] Re-thinking national legislation on ABS, specifically for academic research (most regulation was adopted before NP) Support from regulators to facilitate academic research	Modification of the regulations (not excessive control)
WG4**	Difficulty of identifying the right authority Different understanding of access for different countries Negotiation in fair and equitable conditions Economical resources and legislation that is not clear	[text below is same as in table in a.] Autonomy on capacity building and on research and infrastructure e.g. electronic system for permits in Brazil Existence of thematic networks	Clear and transparent procedures Awareness about procedures NP as an instrument for a more equitable scientific cooperation
WG5	When publishing research outcomes, more and more journal request to publish data Institutions do not keep memory, so permit depends on the individual person		Additional information regarding use of collections Toolkit for accessing collections
WG6	The land is owned by communal farmers: this is hard to negotiate	Country is funding this project (CONACYT, SLIM, UNAM) but also international funding (NASA and NSF)	

*WG3 combined In accessing and In conducting research in one field.

**WG4 combined In accessing, In conducting research and In scientific cooperation in one field.



c. In storing genetic resources

	Challenges	Favourable conditions	Opportunities
WG1		Storage in recognised facilities long term safeguarding and facilitating access Long term safe storage important for legal security and facilitating access	
WG2	Strengthening public policies for supporting research and ex situ collection	Local funding and external one	Enhance human capacity experiment and infrastructure
WG3	-	-	-
WG4	Infrastructure, human resources, economic resources to maintain these storage To prepare ex situ collections to implement NP	Technology	Ex situ collections with NP implemented
WG5	Financial costs of collections Possibility of digitalisation of collections		
WG6	Several freezers in different university in Mexico	Teachers were requested to participate (and incentives given by dairy gigantic company (Lala))	
			The government is establishing a storing system for genetic resources in Jalisco



d. In potential for further commercialisation

	Challenges	Favourable conditions	Opportunities
WG1			Agency of technological transfer (university – industry) e.g. Argentina, Cuba, Ecuador Public database on biodiversity including data from research (e.g. Argentina, Ecuador, Cuba)
WG2	-	-	-
WG3	Regulation for change of intent		
WG4	Joint venture To have a partner within industry	Intellectual property right To have a MAT	Access to the information for the authorities
WG5	Researchers do not know when notification to authorities is needed Difficult to know what to do: publishing, authorities relationship, etc – issue of confidentiality Regional authorities may need more training even in addition to the one done at the national level		Training capacity building focusing on the issues in the challenges Treat genetic diversity as a national patrimony and state responsibility
WG6	1. Build the law for international patents but sharing with communities 2. Effective checkpoints done by international property rights and universities		All want success: ideas already on how to share and use the benefits such as for conservation
		Trust & transparency	



e. In scientific cooperation

	Challenges	Favourable conditions	Opportunities
WG1	To have long term contracts/MoU on research cooperation (frequently only one project)	Cuba: government facilitates cooperation (has policy on this): exchange of human resources and samples if needed for the country Bilateral research MoU by government for more than one project	
WG2	Interdisciplinary cooperation	More incentives to promote this approach	Cooperation at national, regional, and international levels
WG3			Exchange of experience and lessons learned
WG4**	[text below is same as in table in a. and b.]		
	Difficulty of identifying the right authority Different understanding of access for different countries Negotiation in fair and equitable conditions Economical resources and legislation that is not clear	Autonomy on capacity building and on research and infrastructure e.g. electronic system for permits in Brazil Existence of thematic networks	Clear and transparent procedures Awareness about procedures NP as an instrument for a more equitable scientific cooperation
WG5	Flexibility to include more researchers in a project once the contract is signed even if the development of the project requests it. South-South research networks		Modification of legislation Network of research institutions and companies. Regional framework e.g. OTCA, CAN
WG6		Trust & transparency Joint projects	

**WG4 combined In accessing, In conducting research and In scientific cooperation in one field.



Conclusions:

- Clarity of legislation is a challenge but different countries are looking into this
- Challenge of awareness from the scientists and government agencies on how these processes work
- Storage: importance of infrastructure
- Potential of further use: better information on possibilities and mechanisms
- Cooperation: favourable conditions when networks are already established and using them
- Mutual understanding between scientists and ILCs as well as interdisciplinary approach as facilitating research

RISKS OF NON-COMMERCIAL ACADEMIC RESEARCH

Working groups were also requested to consider three different questions considered as risks.

CHANGE OF INTENT

Groups were asked to discuss the probability of Change of Intent happening in the case study they had analyzed. Groups mentioned it was important to determine factors that can help identify the probability of change of intent, as well as to identify indications that change of intent is actually happening.

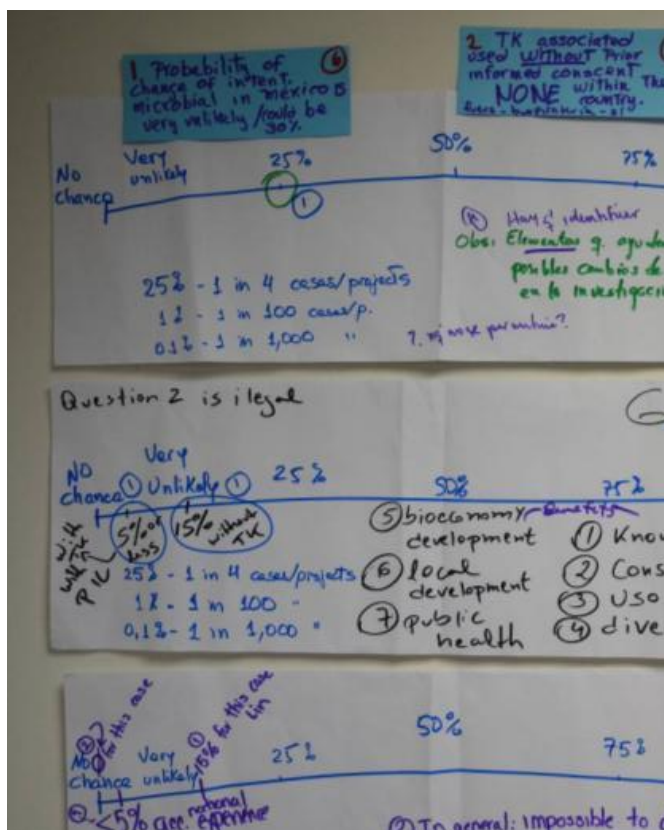
On the factors that may influence probability of change of intent, groups mentioned:

- Type of organism. For example, research on medicinal plants or micro-organisms may have a higher probability of further commercial use. However, some participants considered this may pose a risk of impacting funding for research that does not have so much potential for further commercial use.
- Type of research. For example, as discussed in the background document, inventories have a lower probability of change of intent than research exploring multiplication.
- Researching institution. For example, private companies' research may have a higher probability of leading towards further commercial use.

One group considered change of intent should be regulated independently of probability that it happens and that the probability of change of intent should not increase complexity of non-commercial academic research.

Some groups made the exercise of assigning a percentage to the probability of change of intent happening:

The group analyzing the Microorganism-ecosystem research in Cuatro Ciénegas-México case presented by Valeria Souza considered the probability of change of intent is very unlikely for this case, though the probability of it happening



is higher (around 30%) when researching microorganisms, given their potential for further commercial use is higher.

The group analyzing the ethnobotanic study of antimalarial plants in Brazil, presented by Lin Chau Ming, considered the probability of change of intent would be of around 15% for this case, but lower (around 5%) according to national experience.

The group analyzing the case of enzymes analysis produced by fungus and their contribution to textile dye degradation in Brazil, presented by Lara Durães Sette, considered the probability of change of intent would be of around 15% in case there is no traditional associated and 5% or less in case traditional knowledge and prior informed consent is involved.

The group analyzing the case of fish DNA bar-coding in Argentina, presented by Juan Martín Díaz de Astarloa, considered the probability of change of intent would be of around 25% for this case.

Finally, one group prepared a list of organisms that could have higher or lower probability of having a potential for further commercial use.

List of organisms according to the probability that research involving them may have a change of intent:

Higher probability	Medium probability	Lower probability
- Halophytes plants - Medicinal plants - Extremophiles - Cosmetics (plants, seaweeds, etc.) - Insects predators of pests - Edible fungi (wild) - Wild relative crops - Actinomycetes - Bacteria: ▪ Actinobacteria ▪ Pseudomonas ▪ Bacillus ▪ Nitrogen fixer - Invasive species - Soil MO (CO₂ capture) - Seawater MO (oil spills)	- Vascular plants as source of natural fungicides - Pollinators - Poryphera (sponges) - Fungi and MO (for remediation) - Zoarcids (fish with antifreezing proteins) - Edible wild insects - Bromeliads (remediation) - Orchids and cacti (tropical ornamental plants) - Amphibians - Poisonous species - Species that generate natural colorants - Tardigrads	- Birds - Lizards - Mammals - Other plants - Other fish

USE OF TRADITIONAL KNOWLEDGE WITHOUT PRIOR INFORMED CONSENT

Groups were asked to discuss the probability of using traditional knowledge without prior informed consent. Most groups agreed this was an issue that went against the regulations of most countries and as a result, illegal if happening.

However most groups agreed it is possible, as there are indeed cases, but it is difficult or impossible to determine its probability. For example, researchers may access information related to traditional knowledge from public databases that haven't necessarily gone through a PIC process. In Colombia, for example, the database on scientific research has around 500 research projects including relationships with communities and their territories. Not all have traditional knowledge associated; however, there are only 5 projects on the record of projects with PIC processes.

On the other hand, companies may look for scenarios with lower requirements. For example, they may prefer to establish agreements with private lands than to ask for prior informed consent of indigenous communities. Or, companies may look to work in countries where there is no request for PIC or permits in different conditions, such as for trade (although all participants countries require permits to undertake scientific research). For example, in Ecuador there is no request for PIC or research permit if working with extracts which results in communities collecting, extracting and then selling the extracts to the companies.

What can be done? One group mentioned it is important to apply codes of ethics and share best practices, as well as make sure the scientific community condemns these cases, governments penalize and user measures are put in place.

LOSS OF BENEFITS

Finally, groups were asked to discuss the benefits that would be lost if the research was not carried out, which included the direct benefits of the research and contributions to knowledge, innovation, capacity building, contributions for conservation and sustainable use and/or for local development.

SOME REFLECTIONS ON THE ABS IMPLEMENTATION SYSTEMS

On the beginning of the third day, a discussion was held as a re-cap of the national ABS systems presented the day before. In this discussion participants highlighted the need to conceive strategy for benefits that are most needed and important in the framework of the ABS policy. They also noted how procedures for access are in most countries focused on commercial research. For example the consultation phase before collecting is very costly and is a barrier to academic research. Another kind of additional cost is related to benefit sharing such as appropriate publications for local communities. It remains a challenge how to get research funding to cover all the processes and benefit-sharing aspects (e.g. funding for translations, for capacity building, etc. – all the activities that assure benefits are delivered to communities).

Participants also mentioned there is a need for feasible, easy but controllable procedures. Not everything needs to be regulated. For example, if the application process is too complicated in areas where there are indigenous and local communities, some researchers may decide not to do research in these areas, which could also translate in a benefit loss for these communities. Participants also mentioned it is important scientists have a basic politeness and respect for local communities and pointed out the need for intra-university capacity-building (e.g. to negotiate contracts).

Participants also recognized communication between science and government is much needed to build understanding of needs and concerns of both parts.

FINAL WORKING GROUPS

Then, groups met again to discuss, organize and complement the information generated in the workshop during the first two days. Each group worked on the elements used for the analysis of all the case studies (p. 15) but this time by looking at each element separately and combining information

obtained from the different working groups. Each working group came up with some key considerations on challenges, favourable and unfavourable conditions, as well as opportunities to facilitate the implementation of each of these ABS issues for non-commercial academic research. An additional element addressed was the question of benefits of non-commercial academic research. One group centred its discussion on this. In summary, the ABS issues addressed were:

- a. Accessing resources (including traditional knowledge)
- b. Conducting the research (use of resources, products and publications)
- c. Storing the resource
- d. Potential for further commercial use
- e. International cooperation – this was scientific cooperation in the case studies
- f. Benefits

The notes from each of the groups follow.

ACCESSING RESOURCES

Challenge 1

In some countries there are several authorities and institution involved in the delivery of permits. Different kinds of permits are granted by different levels of government (municipality, provincial/state and national) and different procedures apply among municipality and provincial/state of the country (e.g. procedures vary from one province to another).

Favourable conditions:

- There is the example of Cuba and Costa Rica that have 1 permit for collection, transport and exportation, and Ecuador that has one permit for all provinces.
- There is the example of Brazil where the National Authority (CGEN) is composed by all the authorities that are involved in all the process (in this case, just access not collect) resulting in a multidisciplinary instance, including the government, the researchers and the representatives of traditional communities.

Unfavourable conditions:

- Lack of training for the fiscals or people that fiscalize these processes.
- Increase of bureaucracy.

Opportunities:

- International projects that have agreements on access and exchange
- The Nagoya Protocol.

Challenge 2

Assuring a clear understanding of the ABS legislation and procedures by all stakeholders.

Favourable conditions:

- Different stakeholders participating in the elaboration of the legislation related to ABS. Examples: Costa Rica, Mexico, Cuba and Brazil that are revising the legislation with the presence of academia, industrial sector, traditional communities and others

- Awareness by the research institutions and universities besides through scientific societies during scientific events and in the different levels of the educational system
- Regional cooperation and exchange of specimens/expertise and lessons learned
- Streamlining of procedures and standards among relevant institutions
- Take advantage from scientific networks by establishing special agencies (INBIO, CONABIO,)

Unfavourable conditions:

- The ABS legislation is in some situations not a priority for the government

Opportunities:

- The Nagoya protocol entry into force;
- Enlarge the knowledge for conservation and sustainable use of biodiversity - enhancing local capacities/skills

Challenge 3

Guaranteeing regulations that are fit-for-purpose: that take into account the “reality” of what research is about and that are not overly constraining since this would encourage biopiracy and a loss of conservation opportunities.

Favourable conditions:

- Revision of the national legislation on ABS
- Understanding of the regulators regarding basic research
- Support from regulators to facilitate academic research

Opportunities:

- The Nagoya protocol entry into force.

Challenge 4

Equitable sharing of genetic resources and traditional knowledge between countries and ILCs.

Favourable conditions:

- Establishment of bilateral cooperation and agreements
- Awareness of the TK importance by the stakeholders

Unfavourable conditions:

- Heterogeneity of culture and policies among the countries;
- Differences of needs from these countries

Opportunities:

- Nagoya protocol

Challenge 5

Necessity to renew every year the collecting/accessing permit.

Favourable conditions:

- Brazil, Cuba and Costa Rica have systems that allow



authorization for many years without the need of renewing

Unfavourable conditions:

- Costs for the researchers and for the authorities that have to monitor it.

Challenge 6

Absence of different procedures for non-commercial and commercial research.

Favourable conditions:

- The Brazilian system that establishes different procedures for non-commercial (electronic and fast system for authorizations - CNPq) and commercial research, which is more complex because involves PIC and MAT. The basic research is not included in ABS legislation.

Unfavourable conditions:

- Time, costs, resources
- Absence of knowledge by the authorities on the subject in analysis
- Insufficient documentation on the issue

Challenge 7

Insufficient economic resources to address ABS challenges.

CONDUCTING RESEARCH

DESIGN OF RESEARCH

Challenge 1

Creating an agile authorization process of the governmental focal point.

Opportunities

- Review of current rules by countries and the region

Unfavourable conditions

- Corruption



Challenge 2

In cases that the project is conducted in local communities assure PIC and really engage the local community in the project.

Favourable conditions

- Social organizations & scientific organizations capable of supporting the involvement of local communities. Several examples on ethnobiological studies show good practices.

Unfavourable conditions

- Trust is broken by malpractices, biopiracy and false expectations

Opportunities

- Assistance to involve local communities in the projects could be seeking existing social and scientific organizations

Challenge 3

Capacity building for taking adequate decisions for management & conservation

Favourable conditions

- Interest of governmental administration, protected areas and other sectors to apply better strategies.

Unfavourable conditions

- Excessive reporting conditions and bureaucracy are unfavourable for the development of scientific projects

DEVELOPMENT OF RESEARCH

Challenge 1

Report to the focal point on the advances of the project preferably with an agreed upon brief format.

Favourable conditions

- Auditing mechanisms are recommended in critical projects and/or part thereof in order to build trust among researchers, focal points and local communities. In order to comply with this recommendation a list of criteria to define critical projects and/or part thereof should be developed

Unfavourable conditions

- Corruption

Opportunities

- Toolkits for accessing collections, maps and preliminary results

Challenge 2

Focal points should provide guidance on the compliance on access regulations

Favourable conditions

- Focal point when necessary may seek technical support from the scientific network for developing for establishing an auditing mechanism.

Unfavourable conditions

- Misplaced/unfounded expectations by/from TK holders, researchers, government officials.

Challenge 3

Training of local communities to take part in research and create local capacity to involve them in the project (parataxonomists, gathering data, etc.)

Favourable conditions

- Interaction between researchers and local communities with good examples

Unfavourable conditions

- Excessive reporting conditions and bureaucracy are unfavourable for the development of scientific projects

Opportunities

- Governments and education authorities learn about certifications and trainings to local communities given by scientific institutions

PUBLICATION AND DISSEMINATION OF RESULTS

Challenge 1

Widest possible dissemination of the scientific information

Favourable conditions

- From scientific to a wider audience (from technical to non technical languages), not only written (videos, workshops and participative scenes)

Unfavourable conditions

- Corruption

Opportunities

- Decision makers need scientific inputs to widespread information

Challenge 2

Researchers should send data to a national repository after publication

Favourable conditions

- Several internet skills to have this information available, according to each country legislation

Unfavourable conditions

- Corruption

Opportunities

- Establish and strengthen national biological platforms for making available biological data and information part of the Repositories.

Challenge 3

Traditional knowledge information should follow the provision of the PIC. If agreed the dissemination of the data should be responsibility of the repository and/or the research institution. Repository and research institution should be fully aware of the PIC

Favourable conditions

- Examples to recognize authorship

Unfavourable conditions

- Corruption

Opportunities

- Developing or enhancing national Intellectual property and authorship legislation to protect traditional knowledge in published information

Challenge 4

Cases in which researchers don't go back to share results with the local communities, which upsets the ILCs and impacts their willingness to work with other researchers

Opportunities

- Sharing the results of research with ILCs in a culturally appropriate way

Challenge 5

Qualified Legal advice on intellectual property rights for researchers regarding dissemination and publication.

General Unfavourable Condition.

- In general, an unfavourable condition is the lack of funds for complying with the requirements of the NP.

STORING RESOURCES

Challenge 1

Store in a national facility. It needs to have transparent way where there is a guaranty of good management and access, within the provision of the NP. Mexico, Argentina have new national facilities for all type of GR, Bolivia has national collections for animals and plants (dry specimens and living seeds), and no microbial resources.

Favourable Conditions

- We all need storage in recognised facilities long term safeguarding and facilitating access
- Pathogen microbes are in a national facility for epidemiological purposes (type CDC), in all countries.
- Colombia, Ecuador and Brazil has local facilities in each university, they are trustworthy.
- Guidelines for (microbial?) collections (OECD)
- Colombia has the data at the national level but not the collection.
- Mexico has CONABIO as a national data collection

Unfavourable Conditions

- In Peru there is no national collection and storage facilities are unreliable.
- Cuba does not have that provision, it has to be within each institution and this is not a good idea.
- Bolivia, microbes are not stored at the national level, just in local labs.
- Costa Rica ONG (inBio) build has a general, private facility of genetic resources. Not a national one. Universities and local research has its own collections
- There are no collection with intl. standards for microbiota in the region (?) except in Brazil

Opportunities

- It has to be state owned and state managed to guaranty no conflict of interest.

Challenge 2

Strengthening public policies for supporting research and ex situ collection, dead and living like botanical garden and zoos, microbial collections.

Favourable Conditions

- Local funding and external one.
- Local producers with traditional management practices have to maintain living germplasm in their agro systems

Opportunities

- Enhance human capacity experiment and infrastructure.



Challenge 3

In the national collections, you need also, infrastructure, human resources, and economic resources to maintain storage of dead material of plant, animal and fungi. Exchange between collections has to be regulated but at the same time promoted.

Favourable Conditions

- There is the technology and personnel to keep the genetic resources in good state if it is dead material and alive and viable for seeds and microbes.

Unfavourable Conditions

- Brazil has several collections in universities, but developed a national policy for sharing the information in the collections.

Opportunities

- Ex situ collections for patenting and as a checkpoint for NP implemented policies

Challenge 4

Possibility of digitalisation of macro-organism collections.

Build large data bases with GPS, physicochemical conditions, sampling date, genotype (barcode), phenotype for all type of organism.

Favourable Conditions

- Computer capability is increasing in the countries

Opportunities

- The data-base should be shared in an open way in the world but with different levels of security and access according the natural resource.

Challenge 5

For research use, several freezers and collections in universities and particular labs

Favourable or unfavourable conditions

- Data sharing and Technology has to be implemented for these local collections, which have to be a constant source of material for the national collection. Gene bank is not enough for data sharing.

Challenge 6

Discussing how traditional knowledge could or should be stored or not.

Unfavourable Conditions

- Traditional cannot be stored because it keeps evolving.

POTENTIAL FOR FURTHER COMMERCIAL USE

Challenge 1

To develop a holistic framework to include uses on biodiversity within ABS systems bearing in mind the innovation chain.

Opportunities

- Agency of technological transfer (university – industry) e.g. Argentina, Cuba, Ecuador
- Public database on biodiversity including data from research (e.g. Argentina, Ecuador, Cuba)

Challenge 2

Regulation for change of intent.

The group considered regulation should not be added but change of intent should be addressed case by case. Otherwise it would be like a recipe for officials. Scientific research continues evolving.

Favourable conditions

- In Brazil if not commercial there is no need for contract. The definition is restricted to commercialization of products.

Opportunities

- Capacity building for officials, researchers and authorities in general to deal with new situations.

Challenge 3

Joint ventures. To have a partner within industry and to find communities with research needs to develop and establish a partnership with them, establishing adequate transfer offices and communication between them.

Favourable Conditions

- Intellectual property rights and MATs if researchers have advanced information on specific resources

Opportunities

- Access to the information for the authorities
- Potential for Inventories of biodiversity
- Data go to public domain (except confidentiality or intellectual property rights)

Challenge 4

Joint ventures. To have a partner within industry and to find communities with research needs to develop and establish a partnership with them, establishing adequate transfer offices and communication between them.

Favourable Conditions

- Intellectual property rights and MATs if researchers have advanced information on specific resources

Opportunities

- Access to the information for the authorities

Challenge 5

Researchers do not know when notification to authorities is needed. It is difficult to know what to do: publishing, authority's relationship, etc – issue of confidentiality. Regional authorities may need more training even in addition to the one done at the national level.

Need to find high qualified lawyers to support the researcher's work



Opportunities

- Training and capacity building focusing on the issues in the challenges
- Treat genetic diversity as a national patrimony and state responsibility

Challenge 6

Build the law for international patents but sharing with communities. Effective checkpoints done by international property rights and universities. Enforcement of disclosure of origin outside the Andean Community (patent office, sanitary authorities)

Opportunities

- All want success: ideas already on how to share and use the benefits such as for conservation
- Sustainable use of resources for conservation. Example: use and management of Amazonian fruits.
- Opportunities for registering origin denomination

Challenge 7

Unification of policies with Agriculture, Health and Commerce government branches.

Favourable Conditions

- Private companies should be forced to get access contracts, but Brazil shows that it is possible to require these contracts when the product is about to be commercialized in the new legislation not yet in place.

Unfavourable Conditions

- Business time is shorter, research and governmental authorities are always behind.

Opportunities

- Trust & transparency
- Incentives for notifying, if companies then taxes could be reduced. And sanctions if omission occurs (commercial use without notification)
- Future new Brazilian legislation

INTERNATIONAL COOPERATION

The group first highlighted the different levels of cooperation that can exist:

- Between countries
- Between national competent authorities and focal points between countries
- Between scientists from different countries
- Between international agencies and scientists

Challenge 1

Increase national capacities to establish fair and equitable terms for the development of the non-commercial academic research

Unfavourable conditions

- Not enough resources from the government
- Not a priority for the national authority

Opportunities

- More available resources to support this activities
- More awareness in this issue

Challenge 2

The international cooperation shall be based on the national agendas and priorities for the non-commercial academic research

Unfavourable conditions

- Even if a national agenda exists not always is used for its purpose
- The need of resources in the countries promotes to take “what is on the table”.

Challenge 3

Building capacities for the institutions, research centres and governments for the negotiation of the projects, agreements and contracts

Unfavourable conditions

- There is not enough capacity to develop this capacities (for example: lack of academic programs to acquire this capacities)

Opportunities

- More available resources to support this activities
- More awareness in this issue

Challenge 4

The establishment of the long term contracts or Moue on research cooperation shall not be an obstacle to the non commercial academic research cooperation

Favourable conditions

- Learn from the lessons

Unfavourable conditions

- Lack of an intersectorial vision for the same objective (ABS)

Challenge 5

Interdisciplinary cooperation

Favourable conditions

- More incentives to promote this approach
- Codes of Ethics or Conduct of researchers, not to take advantage of different institutional capabilities
- Work permits have confidentiality clauses

Opportunities

- Cooperation at national, regional, bilateral and international levels.
- “Hay que ponerse las pilas/ser mosca!!!”

Challenge 6

Strengthening the capacity and the willingness to understand the cultural and institutional framework in other countries

Unfavourable conditions

- In some organizations the prevalence of the distinction between the global north and south.

Opportunities

- Clear and transparent procedures
- Awareness about this subject and these procedures
- NP as an instrument for a more equitable scientific cooperation

Challenge 7

The fact that an institution finances a project doesn't mean that they have the power

Unfavourable conditions

- In some organizations the prevalence of the distinction between the global north and south

Opportunities

- More awareness in this issue
- Work together to develop common objectives

Challenge 8.

When research is not supported by government or institutions and is based on individuals.



BENEFITS

This group discussed the importance of the type of benefits most mentioned during the workshop, given some specific examples of each type.

The group first discussed Monetary Benefits:

Benefits	Importance	Examples
Upfront payments	Rather uninteresting	
Access fees	Rather	

	uninteresting	
Salaries		Contracts of technicians Argentina: fish IBOL, research assistant for molecular analysis, filling in forms. People from communities: guides, support in collecting, technical support (para-botanic) Interpretation: translation if working with local communities. Compensation for logistic services provided.

Regarding cooperation with external (non-national) researchers:

Benefits	Importance	Examples	Other comments
Making use of costly foreign infrastructure and advanced technologies for own research	Important		Important benefit of international research cooperation. Needs to be a win-win situation.
Storing copies in other collections	Important	Fish otoliths (two in each fish) stored in country of cooperating partner; beneficial for both partners. Argentina-Uruguay Rio de la Plata; joint technical commission, doing inventories; copies stored in both countries.	Political issue: There might be a problem : government might not allow to export samples No permit to export samples important for the country (sample from the Malvinas no exchange with UK). Cuba: not prohibited, but not desirable. Scientific : important for safeguarding
Higher international visibility	Very important	Providing a platform for public and international visibility, networking (Barcode of Life data system; publicly accessible; see Argentinean case study) Joint publications in high-ranking journals Example : Issuing from work done by the Argentinian-Uruguayan Rio de la Plata technical commission Invitation to international conferences	
Capacity-building on master and PhD level	Very important and interesting	Argentina: in bilateral projects fellowship for students highly desirable. To be integrated in the budget. (IBOL: Argentina receives students from LAC, Katar; Argentinean students to Canada).	<i>Must</i> result from international cooperation. In regional cooperation it is a <i>mutual</i> agreement. In international cooperation rather one-way (industrialised countries provide capacity-building).

Capacity-building including stakeholder groups ; governmental agencies		Bilateral project Argentina-Katar – training Katarian students. Includes capacity-building	Katar universities and Argentinean government (Ministry of science and technology).
		Bio-national laboratories ; exchange of students in a win-win situation (Argentina-Germany : Ozone, Biotechnology ; Argentina-France : Environment ; studying Rio de la Plata ; Biotechnology) Argentina-Portugal: Study in gestuaries; exchange of students; win-win.	Promoted by governmental level – Ministry of science and technology en.mincyt.gob.ar/polo
Improving (research and) teaching capacities	Not important		

The group also discussed further benefits of research whether national or international:

Benefits	Importance	Examples	Other comments
Improving scientific infrastructure	Necessary, and very important	See joint laboratory projects.	
Capacity building in local communities	Not so common, but important	See project of Valeria; Lin, Monica. More common in agricultural projects, improving tubers (INIA; Ecuador).	Depends on project and on researcher Larger than scientific training
Document countries natural heritage	One of the most important	See project of Valeria, Monica, Lin Inventories, taxonomic guides...	Both scientific and for the public; results of scientific studies need to be spread.
Build biological inventory	High importance	IBOL; system of biodiversity information (Ecuador); biodiversity program (Argentina);	Related to above.
Help solve local, regional problems	Very important	Pollution problems (Lali); overfishing (Argentina); identify species abundance in order to assess need of conservation; Invasive species;	
Help in managing natural resources	Very important		It's one of the core businesses of biological science
Improving collections, databases	Very important	Argentinean program to improve collections (incl. funding) to implement the national biodiversity strategy.	

Open possibilities for commercial benefits		Bar-coding: involves commercial use of resources.	Depends on the cases
Generate funding for research for conservation		Cuba: Strombos giga, exportation to different places; exporters have to pay research to assess abundance.	
Assessing importance of certain places, priority setting in conservation	Very important	E.g. Identifying areas for reproduction; biodiversity hot spots	Science-policy issue : background information for decision-making on new areas to be conserved. Incl. Transnational: scientific background for agreement on trans-border protection.



WAY FORWARD

The participants had a last discussion on how they wished to move forward with what had been discussed in the Science-Policy Workshop. In addition to this, a discussion between the organising teams of the ICSU project and the Uni-Bonn projects, respectively, Arturo Mora of IUCN-Sur and Ignacio March Mifsut from GIZ also took place during the lunch break of the last day to identify ways and means to propagate the results from the workshop. The elements of this discussion are also reported here.

PRODUCTS

The concrete products to come out of the workshop are:

- A revised background document (output of the ICSU project)
- An Executive Summary of the background document
- Case studies, national implementation and other information documents finalised or further developed and to be hosted on the websites of the IUCN-GEF project and GIZ Mexican project

The revised background document and the executive summary need to:

- focus on favourable conditions and opportunities (challenges bring a negative message)
- avoid dichotomy between the North and the South and between User and Provider that is meaningless
- showcase the initiative started with the workshop as an on-going process where the workshop is only the first phase in a dialogue between scientific and policy communities – this dialogue needs to be continued and deepened
- convey their results as “key messages” (avoid use of “conclusions” as this workshop is only the 1st step in a longer process)

To reduce printing costs, it was proposed to have a web and a paper version of the executive summary. On the other hand, effort should be put in presenting the executive summary with an attractive design for dissemination. This document will include web links to the main document and case studies, hosted on partners' websites.

The background document and the executive summary will be available in both Spanish and English. This means that an English to Spanish translation will be required and that the translator should be carefully selected so that the language used is suitable for all LAC countries (i.e. use of terms is international, not country-specific).

To meet these objectives, the following actions should be undertaken:

- Printing and translation funds to be discussed and coordinated between SCNAT, ICSU ROLAC and DIVERSITAS
- Ignacio to send names of translators
- Arturo Mora to send name of their designer
- Explore the possibility to use the Swiss Biodiversity Forum designer

The case studies will also be available in English and Spanish or Portuguese and will be translated by their authors or Core Team members of the ICSU project. In addition, case studies that show “what to avoid doing” should also be included.

Comment on background document: LAC countries are governed by cultural and ethnic diversity so to be consequent we need to consider the need to integrate the views of indigenous and local communities in further development of this process and how to also achieve this in the key messages of the background document.

OPPORTUNITIES FOR FOLLOW-UP ACTIVITIES AND OUTREACH

Outreach should target international, regional and national fora.

The following opportunities should be explored or taken advantage of for follow up activities and building a long-term process:

- Bolivia: on 29 November 2013, there is a workshop with universities and central government; the NP will be discussed since the country is in the course of analysing the NP from a local perspective. Executive summary could be tested there if ready and Sharbel would send feedbacks on how it is received.

- Mexico & Brazil: Since all countries are in the process of revising their laws, the exchange of experience between LAC countries is enriching and is an important step in improving ABS system at the national levels.
- Cuba: there are two projects in the Caribbean on article 8a of the NP. A meeting in Jamaica organized by GIZ that came up the week of 25 November 2013 that provide an opportunity to exchange ideas and to connect with the projects represented there and understand how other regions see the issues. In the long run we will need guidance on how to harmonise the systems and it will be useful to have guidelines to implement Art. 8a.
- IUCN: Memorandum of Understanding between the GEF-IUCN and the ICSU projects will help with sharing information between countries and extend the potential for collaboration.
- IUBS: Their regional offices and scientific networks could support outreach activities by targeting the scientific communities in LAC.
- GIZ: Their project targeted the ethnobiology community because it is a scientific community that is already sensitive to issues of access and fair sharing of benefits. Thus, this community is an “easy” one to start building a momentum.

The dissemination of the results of the workshop could also take advantage of:

- Clearing house mechanism of the Nagoya Protocol
- IUCN side event on ABS at CBD-NP meeting, Feb 2014 – could be jointly organised by the Bonn University, ICSU project, IUCN, GIZ
- IUCN workshop, May 2014, Bogota, Colombia
- Events organised by IUCN-Sur ABS focal points
- IUCN congress in the Caribbean, Dominican Republic
- CBD COP12, October 2014 with participation of project partners
- SBSTTA, June 2014 with participation of project partners
- ICSU International Unions meeting, Jan 2014, Cuba, with participation of IUBS
- Ethnobiological Network meeting, GIZ, March 2014, Mexico with symposium(s) on ABS
- Workshop can be organised by GIZ/UNAM for the Mexican Science Academy on workshop outcomes
- German Future Earth conference
- Capacity-building events OF GIZ project with all ABS stakeholders and all aspects of ABS

A table with all these opportunities will be assembled and circulated among the workshop participants to indicate potential additional events as well as their participation (if already planned) at these events.

CLOSING

Finally, the workshop ended with participants sharing what they took home with them and with the thanking everyone for their contribution and great energy during the three days.

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