



Oceania Biodiscovery Forum

**Organised by the Australian Government,
the ABS Capacity Development Initiative
and
the Secretariat of the Pacific Regional Environment Programme**

Hosted by the Eskitis Institute, Griffith University

**Brisbane, Australia
19-23 November 2012**

S U M M A R Y R E P O R T

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Background

The Australian Government established the National Biodiscovery Forum series in 2009, providing Australian biodiscovery stakeholders with opportunities to exchange ideas, conceptions and experiences.

In 2012 the regional scope of the 3rd National Biodiscovery Forum was extended and stakeholders from Pacific Islands States and Territories invited to join their Australian counterparts at the first-ever Oceania Biodiscovery Forum. This has been made possible through support from and the Multi-donor Access and Benefit Sharing Capacity Building Initiative which is managed by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

In general, the forums aim to foster mutual understanding and collaboration between all participants – from state or federal government bodies, academic or research institutions and industry. The forums are designed to encourage all parties involved to realize the potential of biodiversity research and create a thriving global biodiversity based industry.

Biodiscovery – research and development on the discoveries of biodiversity research – has huge economic potential for the region if we can effectively support research and bridge the gap between research and product development.

The signing of the Nagoya Protocol on Access and Benefit-sharing marks a new era in the global relationship between providers and users of genetic resources. The challenge for research, industry and government is to develop, adopt and implement global standards for the use of genetic resources.

Based on the framework of the Protocol in, there is a need for a simple, consistent and efficient system that provides certainty for users and providers of genetic resources and traditional knowledge (TK) associated with those resources, a system that encourages conservation, biodiversity research, investment and innovation for the economic and social benefit of the society in general and particularly the custodians of genetic resources.

A quick look back:

The 1st National Biodiscovery Forum in 2009 was hosted by the Australian Government in Canberra provided an opportunity for biodiscovery and biotechnology researchers to highlight their research and exchange views with science, industry and environmental policy-makers. The 2nd National Biodiscovery Forum was hosted with the support of the Australian Government in 2011 by the Flinders University's newly established Centre for Marine Bioprocessing and Bioproducts in South Australia focusing on marine biodiscovery and the newly adopted Nagoya Protocol on ABS.

Both forums revealed that participating research scientists had a strong interest in the commercialization of their work. But at the same time they lacked knowledge on how to pursue this goal and the expectations of companies and investors.

The first Oceania Biodiscovery Forum therefore aimed to get a better understanding of:

- ... the commercialization process – what makes research attractive for investors?
- ... the benefits of biodiversity research and development – with the lottery a better bet than a blockbuster drug, what makes it worthwhile to provide access?
- ... the needs of those that provide genetic resources and associated traditional knowledge – why is there reluctance to share resources with researchers?

... how to design effective and efficient prior informed consent (PIC) and mutually agreed terms (MAT) procedures and documents – in particular important for those who provide genetic resources and associated knowledge.

Day 1 and 2 (19-20 November 2012) - three presentation themes:

Regional case studies of research leaving the lab – what are some real-life strategies for a successful transition from research to product development?
Industry perspectives on the Protocol and their needs – what turns research into an attractive commercial proposition? What are the must-haves?
A consultation process for stakeholders on implementation and ratification of the Nagoya Protocol in Australia – what framework can best provide certainty for all stakeholders?

Presentations addressed a number of questions:

- To make research attractive to investors, what is required from resource providers and researchers?
- To participate in the emerging global system, what is required of governments?
- To allow access to genetic resources and associated traditional knowledge - what are the needs of provider countries and communities?

Day 3 (21 November 2012) - Discussions of the previous days; guided tour organized by the host Eskitis Institute.

The Eskitis Institute works towards the development of new strategies to prevent and treat diseases with an emphasis on multi-disciplinary research and collaboration within the Institute and with external partners.

Research at the Institute is supported by the unique Nature Bank and the Queensland Compound Library

Nature Bank is a unique chemical biodiversity resource comprising over 45,000 biota samples, 17,000 extracts, 200,000 semi-purified fractions and 3,500 pure compounds.

Nature Bank biota samples are available for:

- Discovery partnerships with academic and industry groups in the areas of pharmaceuticals, nutraceuticals, cosmetics and functional foods.
- Studies of plant and marine invertebrate chemistry
- Studies of plant and invertebrate genetics

The Queensland Compound Libraries is an automated library of nearly containing about 400.000 small organic molecules and natural product extracts deposited by Australian chemists to make them available for high throughput screening in the context of biomedical research programs.

Day 4 and 5 (22-23 November 2012) - Capacity development for stakeholders from Pacific Island States:

Prior informed consent (PIC) and mutually agreed terms (MAT) are the cornerstones of any access to genetic resources for utilization in research projects. Therefore participants discussed and elaborated on key elements which need to be included in PIC and MAT to ensure a fair and equitable relationship between provider and user of genetic resources and associated traditional knowledge.

Outcomes

Oceania Biodiscovery Forum

As in previous National Biodiscovery Forums, the Oceania Biodiscovery Forum provided a platform for information exchange and discussion between government, industry, indigenous and research stakeholders engaged in the exploration of biodiversity for new properties and applications. This time, the ABS Capacity Development Initiative enabled stakeholders from across the Pacific region to participate for the first time.

A range of speakers explored the state of play in biodiscovery research in the region – from international collaboration and cross-disciplinary networks to new facilitating roles of ex situ collections.

The forum also focused on the Nagoya Protocol, expected to come into force in 2014. This will set the standards on access and benefit-sharing to be met in the future.

Representatives of the Australian Government, the European Union Commission and the Government of Switzerland described the regulatory system they are developing to implement the Nagoya Protocol. Discussion eventuated on how the Australian Government can help Australian researchers to be prepared for commercialisation in this new global framework.

Further issues under discussion included:

- marine genetic resources beyond areas of national jurisdiction and the Antarctic Treaty;
- the role of traditional knowledge (TK) in the context of random collections and screening;
- the role of lawyers when applying “modern” intellectual property (IP) concepts to TK (for instance, agreements are critical as they set the benchmark for the understanding between the parties; agreements need to be easily understood by communities);
- partnerships with communities (for instance, they must be built on strong solid relationships; necessity to deal with the appropriate authority for the resource and associated TK, i.e. a specific cultural owner of the plant creation story);
- climate change walks and forestry fire regimes;
- the ABS Clearing House as a key to the implementation of the Nagoya Protocol (NP); it was pointed out that transparency is one of the biggest benefits of the NP;
- transboundary challenges (for instance, in the case of monitoring the use and transfer of genetic resources); and
- the need to pool together to create institutions relevant to the ABS process, such as the Eskitis Institute and the Australian Institute of Marine Science (AIMS).

Pacific Workshop on PIC and MAT

The two days long workshop on PIC and MAT gathered over 40 representatives from governments and research institutions in the Pacific region, as well as few representatives from the Caribbean and Africa.

Day one focused on helping to understand the complexity of prior informed consent (PIC) procedures, day two was fully dedicated to mutually agreed terms (MAT), their content and role in the ABS system.

Based on several presentations and a mapping exercise conducted with the participants, lively and constructive discussions led to the identification of specific challenges in the Pacific region:

- Land tenure mainly based on customary rights
- Marine tenure rights more often under state ownership
- Ownership of genetic resources normally follows land and marine tenure rights
- Interaction of researchers with communities and respect of customary laws key to a functioning ABS system; intermediary role of government important in this context.
- Awareness with respect to ABS limited; need for awareness raising activities, including use of different media in local languages (e.g. videos, brochures etc.); more involvement of civil society and communities in governmental processes needed;
- Local authorities that provide PIC for the utilization of TK associated to GRs (if TK is widely used): chiefs, healers, council of chiefs
- Local authorities to provide PIC for the utilization of GRs: local/national government (for public land), land owner, chiefs, councils.

Generally, one can say that community governance structures are strong and hold substantial resource rights. Moreover, transboundary resources, particularly of marine origin, are very common. Therefore strong national and regional structures are needed to facilitate and improve cooperation and exchange in the ABS context. These structures need to be harmonized as the region already has very diverse government structures, from strong federal to more centralised systems. The challenge is clear: Users and providers of genetic resources need to deal with both communities and those various levels of government in authorization process involving PIC and MAT. This can make the process rather long and cumbersome.

Process

Oceania Biodiscovery Forum

Monday, 19 November 2013

Introduction – Opening – Housekeeping

Mr. Mark Taylor, Assistant Secretary of the Parks and Protected Areas Programs Branch gave the participants a warm welcome, before he handed over to Dr. Andreas Drews, Manager of the ABS Capacity Development Initiative, Mr. Peter Cochrane, Director of National Parks and Professor Ronald J. Quinn, Foundation Director of the Eskitis Institute at Griffith University, who together officially opened the first Oceania Biodiscovery Forum. This first session concluded with some remarks on logistical matters by Mr. Mark Taylor.

Research relationships

[Fuelling biodiscovery via an ex-situ bio-resource library \(Dr. Libby Evans-Illidge\)](#)

Dr. Libby Evans-Illidge gave an overview of the activities of the AIMS Bio-resources Library at the Australian Institute of Marine Science (AIMS). He explained its role as a starting point for marine biodiscovery, its role in national biodiversity research and their approach to ABS, i.e. legal certainty with a view to access to bio-resources and benefit-sharing.

[Marine Biodiscovery in Southern Australian Waters and the Australia-New Zealand Marine Biotechnology Network \(Mr. Raymond Tham\)](#)

Mr. Raymond Tham presented the Australia – New Zealand Marine Biotechnology Network, hosted by the Flinders University Centre for Marine Bioproducts Development. The network is an active forum to exchange ideas and develop collaborations between researchers, technologists, industry, government representatives and other interested parties towards the advancement of marine biotechnology in the region. The network is constantly growing and includes a wide range of collaborations, for instance with AIMS, MISA, Griffith University, CSIRO and Australian Antarctic Division.

[Strategy for access and benefit sharing in Papua New Guinea: Implementation of the Convention on Biodiversity \(Prof. Lohi Matainaho\)](#)

Professor Lohi Matainaho gave a detailed overview of the development and work of the PNG Institute of Biodiversity (PINBio) and efforts to develop an Integrated Environmental Conservation – Biodiscovery - Economic Development Strategy. He also provided detailed information on the UPNG-ICBG Collaboration.

[Biodiversity Research in Papua New Guinea \(Dr. Eric Kwa\)](#)

Dr. Eric Kwa highlighted the successful work of PINBio, which was not supported by a clear legal framework in the past. He also detailed on the current efforts to develop a legal framework on ABS.

[TeTika – Truth and Integrity \(Dr. Graham Matheson\)](#)

Dr. Graham Matheson is founder and managing director of CIMTECH. He presented his company's successful story, including its commercial products arm TeTika Skincare that was launched in August 2012 and stems from his research on traditional regenerative remedies used by the Kotou Nui of Rarotonga, Cook Islands. Dr. Matheson described the close

collaboration with the Kotou Nui and their 2003 access and benefit sharing agreement as a starting point for the research. He also referred to the implications the Nagoya Protocol for his business.

[Australia – India collaboration for the strategic development of Muricidae mollusc medicines \(Dr. Kirsten Benkendorff\)](#)

Dr. Kirsten Benkendorff gave a presentation on the Australia-India collaboration for the development of Muricid medicines. The main aim of this collaboration is to assess the potential for developing a scientifically substantiated nutraceutical from Muricidae molluscs for prevention or treatment of diseases.

Collections, innovations and industry

[Innovation and marine genetic resources collections \(Mr. Morten Walløe Tvedt\)](#)

Mr. Morten Walløe Tvedt explored possibilities for a non-economic benefit-sharing scheme from marine bioprospecting. He also looked at legal questions which collections of marine biological and genetic resources need to be actively aware of carrying out their activities.

[Nature Bank and the Queensland Compound Library \(Prof. Ronald J. Quinn\)](#)

Prof. Quinn gave a detailed overview of the Nature Bank and Queensland Compound Library, which are state-of-the-art resources for biodiscovery. Nature Bank is a storehouse of chemical diversity from the natural world. As an integrated drug discovery platform it encompasses a library of over 200,000 optimized natural product fractions derived from a collection of over 45,000 samples of plants and marine invertebrates originating in mega-diverse areas of tropical Queensland, Tasmania, Papua New Guinea, Malaysia and China. The Queensland Compound Library, an automated library of nearly 400,000 pure compounds from Australian chemists, was established to create synergies between Australasian chemists, biomedical researchers, and their international colleagues.

Tuesday, 20 November 2013

Indigenous Relationships

[A case study: Working with the Jarlmadangah Burru community \(Prof. Ron Quinn, Ms. Virginia Marshall, Mr. Paul Marshall and Mr. Mark Allen\)](#)

This case study had a closer look at the partnership for commercialisation of Aboriginal Traditional Knowledge. The Griffith University and Jarlmadangah Burru partnered to research and develop the traditional analgesic plant *Mudjala* into a commercial product.

[Indigenous Knowledge – Australian Experience \(Mr. Jim Walker\)](#)

Mr. Jim Walker had a closer look at the Australian experience with indigenous knowledge (IK) and the role of the Commonwealth Scientific and Industrial Research Organization (CSIRO). In his presentation he highlighted the role of the CSIRO's Indigenous Engagement Office (e.g., in the context of IK and IP standards) and relevant international processes on IP at the international level (e.g., WIPO).

[The Tropical Indigenous Ethnobotany Centre \(Mr. Gerry Turpin\)](#)

Mr. Gerry Turpin, a Ethno-botanist at the Australian Tropical Herbarium, James Cook University, gave an overview of the ongoing development of an indigenous-driven Tropical

Indigenous Ethno-botany Centre at the Australian Tropical Herbarium. The aim of the Center is to empower Indigenous people, countries and enhance cultural use of plants.

The Business of Genetic Resources

[Genetic resources use in Switzerland \(Mr. Marco d'Alessandro\)](#)

Mr. Marco d'Alessandro highlighted the great variety of access, use and transfer models in Switzerland. Users are found all along the innovation or value chain of utilized genetic resources, involving small, medium and large sized companies. Some are local, others global players. Mr. d'Alessandro also pointed out that there are "real users" according to the definition of "utilization of genetic resources" found in the Nagoya Protocol. Nevertheless, also so called "end users" and "suppliers" benefit from the utilization of genetic resources.

[Genetic resources use in the EU \(Mr. Matthias Buck\)](#)

Mr. Matthias Buck focused on a few important characteristics of the business with GR and associated TK (aTK) in the EU. He pointed out that genetic resources are used for a wide range of purposes and by a wide range of actors with different interests. Multiple actors intervene at different stages of the value chain (collecting, basic research, applied research, product development). According to Mr. Buck future interest in R&D on genetic resources will be stable or increasing, while demand for 'in situ' access will be declining in most sectors. He also stated that the use of aTK is actually of limited importance and expected to decline further. Ex situ collections, however, play a fundamental role in the EU genetic resources value chain for both non-commercial and commercial users.

[Getting a deal done! \(Mr. Mark Allen\)](#)

Mr. Mark Allen, a corporate and commercial lawyer with significant expertise in the commercialization of traditional knowledge and resulting intellectual property, highlighted the necessary steps and elements to make a commercialization process a success.

The Role of Government

[Switzerland's approach to the Nagoya Protocol \(Mr. Marco d'Alessandro\)](#)

Mr. Marco d'Alessandro presented the draft legal ABS measures in Switzerland to implement the Nagoya Protocol on ABS. A discussion evolved around the question whether the Swiss access, use and transfer models can be of use for the Pacific region.

[The European Parliament and Council's draft regulation \(Mr. Matthias Buck\)](#)

Mr. Matthias Buck gave an overview of the EU draft regulation for the implementation of the Nagoya Protocol in the EU by explaining the preparatory work that has been done (e.g. sectoral studies to develop "EU Baseline"). He also highlighted the main features of the proposal (e.g. due diligence, system of EU trusted collections).

[Round table discussion of measures to implement the Nagoya Protocol in Australia](#)

After a brief introduction by Mr. Ben Phillips, participants discussed the Australian proposal for measures to implement the Nagoya Protocol in Australia. The discussions focused on the following specific obligations in the Nagoya Protocol, which are currently not addressed by existing laws, administrative procedures or policies:

... to ensure that genetic resources and traditional knowledge associated with genetic resources used in scientific research and development within Australia have been accessed in accordance with the domestic law of the provider country (Art. 15 & 16)

... to monitor the use of genetic resources (Art. 17)

Wednesday, 21 November 2013

[Visit to the Eskitis Institute](#)

In the morning, participants were divided into groups and invited to a guided tour of the Eskitis Institute.

For more information on the Institute please click [here](#).

[Pacific Steering Committee Meeting of the ABS Capacity Development Initiative](#)

For the Pacific Steering Committee Report please click [here](#).

Pacific Workshop on PIC and MAT

The following two days were dedicated to matters related to Prior Informed Consent (PIC) and Mutually Agreed Terms (MAT), two key instruments of ABS in the Convention on Biological Diversity (CBD), and the Nagoya Protocol relevant to national implementation.

Thursday, 22 November 2013

[Welcome and Introduction](#)

Dr. Andreas Drews, ABS Capacity Development Initiative, Mr. Clark Peteru, Secretariat of the Pacific Regional Environment Programme (SPREP), and Mr. Ben Phillips, Australian Government Department of Sustainability, Environment, Water, Population and Communities (SEWPaC), welcomed the participants to the Workshop on PIC and MAT. After a short introduction and a round of introductions relevant issues raised during the previous days were summarized.

[Prior Informed Consent \(PIC\)](#)

[Introduction to PIC and key considerations for designing PIC policy \(Dr. Johanna von Braun\)](#)

Ms. von Braun gave an introduction to the concept of Prior Informed Consent (PIC) and elaborated on key questions and considerations for designing a PIC policy at the national level.

[PIC and Community Governance](#)

[Overview of community rights over land and marine GR and TK in the Pacific \(Mr. Clarke Peteru\)](#)

Mr. Clark Peteru highlighted the issue of 'ownership' of genetic resources and looked into ways and means to protect traditional knowledge in Pacific Island countries.

[Participatory mapping exercise on community rights over GR/TK in the region \(Dr. Daniel Robinson\)](#)

Mr. Robinson guided the participants through a mapping exercise. The group was split up into smaller groups. There were 4 stations around the room with 2-3 questions. One person was selected to take notes and facilitate discussion or 'probe' participants for details. The groups gave responses as relevant to their country or region's circumstances. They also gave specific examples from local communities. This sort of gap analysis made them reflect on how customary law and community rights are established in their respective countries.

[PIC and Community Governance mechanisms: further examples](#)

[Marine Genetic Resources, Community Governance and Local Marine Managed Areas \(LMMAs\) \(Mr. Alifereti Tawake\)](#)

Mr. Tawake introduced the Locally-Managed Marine Area Network, which involves a group of practitioners engaged in community-based marine conservation projects around the globe, primarily in the Indo-Pacific. He explained different community governance approaches and also highlighted gaps in the ABS process from an LMMA perspective.

[Community protocols and Access and Benefit-Sharing \(Dr. Johanna von Braun\)](#)

Ms. von Braun focused in her presentation on the development and functioning of Biocultural Community Protocols (BCPs) in the context of ABS (procedural issues, content etc.) Among others she highlighted the Bio-cultural Protocol of the traditional Healers of Bushbuckridge, South Africa, as an example.

[National PIC processes: examples from the region – open discussion \(Mr. Ben Phillips\)](#)

In this session participants from different countries in the region shared their experience with respect to PIC procedures. Among others, it was highlighted that in many of these countries community governance structures are strong and that they hold substantial resource rights. Also, transboundary resources, particularly marine, are common, so that you have to cope with different governments etc.

Friday, 23 November 2013

Mutually Agreed Terms (MAT)

[An introduction to MAT \(Dr. Susanne Heitmüller\)](#)

Dr. Susanne Heitmüller gave a short introduction to the instrument of mutually agreed terms (MAT) and its role in the context of ABS. She gave an overview of the relevant articles of the CBD and the Nagoya Protocol. She also outlined their usual content taking into account the relevant provisions of the Bonn Guidelines on ABS.

[Key considerations for MAT policy \(Mr. Geoff Burton\)](#)

Mr. Geoff Burton highlighted a couple of key considerations for MAT policy. He highlighted the practicality with regards to administrative costs to develop and use standard agreements for the basic research, i.e. the Biodiscovery phase and only enter into contract negotiations when the research is entering or aiming at the development of commercial products.

[MAT - Different contractual elements: standardized contractual elements; material transfer conditions; benefit sharing clauses; IPRs \(Mr. Morten Walløe Tvedt\)](#)

Mr. Walløe Tvedt looked into ABS contracts in more detail. He highlighted the complex issue of enforcement of ABS contracts, in particular when a sample has left the country, and made reference to the Teff Case.

[Mutually Agreed Terms: Examples from the region \(Dr. Daniel Robinson\)](#)

Dr. Daniel Robinson gave a detailed overview of two specific contracts from the region: the French Museum of Natural History and Government of Vanuatu Santo Agreement and the University of Utah, and UPNG Agreement.

[Examples of national MAT systems in the region – open discussion \(Mr. Ben Phillips & Mr. Geoff Burton\)](#)

In this session participants from different countries in the region shared their experiences with respect to MAT systems in the region. Reference was made to the Australian model agreements and to the usual standard clauses used in agreements provided by the Australian Institute of Marine Science (AIMS).

Broadening up discussion into the wider context

[PIC and MAT in the case of trans-boundary GR and aTK \(Mr. Clark Peteru\)](#)

Mr. Clark Peteru gave an overview of the role of transboundary genetic resources and traditional knowledge in the Pacific in the context of Article 11 of the Nagoya Protocol. He looked more closely at *kava*, as well as at *mamala* and Papua New Guinea as a country case.

[Revisiting the Roadmap Exercise: Country review of the Nagoya Protocol implementation roadmap with specific focus on PIC and MAT \(Dr. Andreas Drews and Mr. Clark Peteru\)](#)

Countries gave an update on the ratification and implementation status of the Nagoya Protocol with a specific view to PIC and MAT. They also discussed specific capacity development needs in this context.

[Report back from the Steering Committee Meeting \(Dr. Andreas Drews\)](#)

Dr. Andreas Drews reported back from the first meeting of the Pacific Steering Committee, which was held on Wednesday afternoon.

[Role and GEF Small Grants Program \(Ms. Sholto Fanifau\)](#)

Ms. Fanifau presented the GEF Small Grants Program (SGP) and its activities in the Pacific region, including its subregional programmes (Fiji – Fiji, Kiribati, Nauru, Tonga, Tuvalu, Samoa – Samoa, Cook Islands, Tokelau, Niue) and its national programmes (FSM, Marshall Is, Palau, PNG, Solomon Is, Vanuatu). Further, she highlighted possible synergies between GEF SGP's work and the ABS Initiative's activities.

[Next steps \(Dr. Andreas Drews\)](#)

Mr. Drews referred to the earlier presented Workplan 2013 as agreed by the Pacific steering Committee and highlighted that a limited budget is available to support national processes for ratification and implementation of the Nagoya Protocol upon request by the countries. He further pointed to the possibilities to develop proposals for community awareness raising under GEF SGP.

[Closing remarks \(Dr. Andreas Drews and Mr. Clark Peteru\)](#)

Finally, Dr. Andreas Drews and Mr. Clark Peteru thanked everyone for engaging actively in the fruitful discussions. They expressed their gratitude to the host of the workshop, the Griffith University's Eskitis Institute, and wished everyone safe travels home.

Contact

For questions and comments on the workshop please contact the organizers

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