A long-term research partnership for the tropical rainforest of Sumatra, Indonesia
Asia

Social networing and agricultural extension services © Yuking Linatra

OVERVIEW	Basic research on ecological and socioeconomic aspects of changing rainforest landscapes in Indonesia, in an evolving ABS legal framework
SUBJECT MATTER (GR / BR)	Plants, animals, and microorganisms
SCIENTIFIC OR COMMERCIAL USE	Basic research on biodiversity, including studies on diversity of plants, animals and soil microorganisms, collection of genetic material for barcoding, and assessments of environmental processes and socioeconomic impacts
PROVIDER COUNTRY	Indonesia
ABS FRAMEWORK IN PROVIDER COUNTRY	Indonesia is Nagoya Protocol Party since 2014. Nevertheless, national strategies and actions for the implementation of the Nagoya Protocol have been in place since 2011. In 2011, a decree issued by the Ministry of Agriculture regulated the conservation and utilization of plant genetics resource. In 2018, a decree issued by the Minister of Environment and Forestry regulated access to genetic resources of wild species and benefit-sharing. A 2019 law on research and innovation slightly modified ABS processes.
USER COUNTRY	Indonesia and Germany
ACTORS	**Resource providers:** • Bukit Dua Belas National Park, managed by National Park Authority • Harapan Rainforest and other protected areas in the Jambi province, managed by BKSDA Jambi, the provincial conservation agency • Smallholder farmers and public and privately-owned companies in Jambi **Competent authorities:** • Ministry of Environment and Forestry, Indonesia • Ministry of Research and Technology/National Research and Innovation Agency, Indonesia • Indonesian Institute of Science (LIPI), Indonesia **National collaborators:** • Institut Pertanian Bogor (IPB University), Indonesia • Tadulako University (UNTAD), Indonesia • Jambi University, UNJA, Indonesia • Public and privately-owned companies (including PTPN VI, PT BSU, PT Humusindo Makmur Sejati), Indonesia **Users:** • University of Göttingen, Germany • University of Hohenheim, Germany • Leibniz-Institute GIGA Hamburg, Germany • Thünen-Institute Braunschweig, Germany

SHORT DESCRIPTION

Over the last decades, the lowlands of Jambi province have undergone a major transformation from forest towards a cash crop-dominated landscape of rubber and oil palm plantations. The project "Ecological and Socioeconomic Functions of Tropical Lowland Rainforest Transformation Systems" (EFForTS) investigates the ecological and socioeconomic effects of such transformation. Its objective is to provide science-based knowledge on how to protect and enhance the ecological functions of tropical forests and agricultural transformation systems at a landscape scale, while improving human welfare. EFForTS is funded by the German Research Foundation (DFG) for two project phases since 2012 and funding has been renewed for a third project phase lasting until 2023.

ACCESS AND BENEFIT-SHARING ELEMENTS

Within EFForTS, a range of different agreements have been established since 2012, including:

- Memorandums of Understanding (MoUs) or similar documents signed between research institutions in Indonesia and Germany, establishing the research partnership
- MoUs signed between local universities and national authorities for establishing long-term plots in protected areas
- Plot contracts between national collaborators and both farmers and companies for compensation measures
- Counterpart agreements signed between participating universities

Additionally, research permits have been obtained from the Ministry of Research and Technology/National Research and Innovation Agency and sample collection permits from the Ministry of Environment and Forestry. Other permits were required for the national and international transport of biological material, and for national and international material transfers.

Since 2013, material transfer agreements (MTAs) between research partners have also regulated the export and use of specimens and samples - particularly ensuring these were only loans.

In 2018, prior informed consent (PIC) was issued by the National Park Authority (for the Bukit Dua Belas National Park) and by BKSDA Jambi (for non-national park areas). Mutually agreed terms have not been signed, as a template for the agreement is not yet available.

The project includes both monetary and non-monetary benefit-sharing.
Monetary benefits: A significant proportion of the 42.7 million euro project funding goes to Indonesian partners through about 160 research grants, 16 capacity building grants, and the setup of new infrastructure (research stations, a herbarium, a soil ecology lab, a hydrology lab and a palynology lab).
Non-monetary benefits:

- Long-term cooperation (over 20 years) between about 200 project members from Germany and Indonesia, including 230 publications, of which 72% jointly with counterparts and 34 with Indonesian first author
- Capacity-building (94 lectures, 24 workshops, 28 lab trainings, training of students: 10 PhD, 28 MSc, 45 BSc and exchange of researchers) and setup of demonstration plots
- Samples deposited in national collections in Indonesia

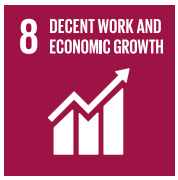
Lessons learned and best practices

NATIONAL ABS FRAMEWORKS	• Internal approaches adopted by users facilitate ABS processes (e.g., establishing ABS service within consortium and as interface with local partners, a CBD Board to monitor the implementation of relevant guidelines at project level, and a Data Management Board to monitor the compliance of data transfer)
	• Local coordinator with in-depth knowledge of the subject matter gives crucial support on ABS matters
	• In spite of facilitation by local partners, ABS processes are sometimes bureaucratic. It is not always understood that studies on genetic material can be done for mere scientific purposes, without any commercial use
BENEFIT-SHARING	• Sharing of benefits contributes to building trust with national and local stakeholders involved in the administrative and legislative implementation of the project
	• Benefit-sharing is a way to disseminate project activities and outcomes among scientists, decision makers, and the general public. However, related administrative procedures are complex, difficult to comprehend for the outsider, and may trigger conflict of interests
SUPPORT THROUGH CAPACITY-BUILDING PROJECTS	• Capacity-building is essential for ABS processes. It improved collaboration between researchers in Germany and Indonesia
	• Increasing involvement of Indonesian students in projects facilitated sample processing, sample export and joint publications
RELATIONSHIP BETWEEN USERS AND PROVIDERS	• Long-term partnerships - in this project, over 20 years - and a successful cooperation with local scientists, competent authorities, smallholder farmers and other stakeholders enables ABS processes
OTHER SUPPORTIVE MECHANISMS	• Voluntary tools, such as guidelines, can advance ABS principles in cases where no precise ABS requirements exist in the provider country. In this case, the DFG guidelines to promote ABS principles and procedures among its applicants, adopted in 2008, usefully inform and support ABS processes. Moreover, the project developed its own guidelines for scientists on how to use ABS-related funds available from DFG

Contributions to the SDGs

SDG 1, target 1.4, 1.5: Contribution to human welfare and poverty alleviation of smallholder farmers through mobilization of financial resources. For example, project involves plot contracts with farmers and companies that provide compensation measures for research activity and use of data and material.

SDG 4, target 4.7, 4.B: Comprehensive capacity-building and training of students, as part of monetary benefits and non-monetary benefits, including numerous grants and trainings for counterparts, stakeholders, office staff and local assistants in Indonesia. In addition, counterparts and coordinators in Indonesia conduct regular agricultural extension programmes to improve capacity of farmers and to disseminate the research results (for example, on optimal fertilization, organic farming, composting, and farm management).



SDG 8, target 8.5: Mobilization of financial resources for creation of new jobs for researchers as monetary benefit (see under SDG 15 and 17).

SDG 9, target 9.1, 9.5, 9.A: Substantial financial start-up support to counterparts in 2012 (47 projects) and by research grants for partners and stakeholders (ca. 120 grants). Contribution to the development of research infrastructure through the establishment of research stations and different labs (herbarium, soil ecology, hydrology and palynology).

SDG 12, target 12.2, 12.8, 12.A: Support of responsible consumption and production was provided as non-monetary benefit (see under SDG 4 and 15).

SDG 13, target 13.3: Increasing knowledge on influence of land use transformation and climate change on biogeochemical cycles supports decision-making of local authorities and smallholder farmers work.

SDG 15, target 15.1, 15.5, 15.6, 15.9, 15.A: EFForTS contributes to the protection and enhancement of the ecological functions of tropical forests with science-based knowledge with 20 scientific projects by monetary and non-monetary benefits, which are shared with local researchers, authorities and smallholder farmers.

SDG 17, target 17.3, 17.6, 17.8, 17.9: Involvement of stakeholders and indigenous communities: Cooperation with universities, national parks, state and private companies and governmental organizations in Indonesia. Researchers from Germany and Indonesia work in close cooperation on a wide range of disciplines (e.g., ecology, forestry, agriculture, remote sensing, economics, cultural anthropology) and have produced a large amount of joint publications.

Relevant contacts/sources of information:

- Prof. Dr Stefan Scheu & Dr Barbara Wick (University of Göttingen, Germany)
- Dr Aiyen Tjoa (UNTAD - Tadulako University, Indonesia)
- Interview with Prof. Dr Stefan Scheu and Dr Barbara Wick
- Website: https://www.uni-goettingen.de/de/310995.html
- ABS-Clearing House: https://absch.cbd.int/search/nationalRecords