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Expert Dialogue on Afforestation and Forest Landscape Restoration

Documentation of the Study Visit to Germany of Indonesian National and Sub-national High Level Officials August 27th to September 4th, 2018



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Expert Dialogue on Afforestation and Forest Landscape Restoration

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Indonesian National and Sub-national High Level Officials
August 27th to September 4th, 2018**

STUDY TOUR LOCATION



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APBN	State Budget and Expenditure Plan (Anggaran Pendapatan dan Belanja Negara)
ASEAN	Association of Southeast Asian Nations
BMZ	German Ministry for International Cooperation (Bundesministerium f. wirtschaftl. Zusammenarbeit u. Entwicklung)
BWaldG	German Federal Forest Law (Bundeswaldgesetz)
DFV	German Forest Society (Deutscher Forstverein e.V.)
FC	Financial Cooperation
FLEGT	Forest Law Enforcement Governance and Trade
FMU	Forest Management Unit, Germany
FORCLIME	GIZ - Forest and Climate Change Programme
GIZ	German Association for International Cooperation (Deutsche Gesellschaft fuer Internat. Zusammenarbeit)
HKM	Community based forest (Manpun Hutan Kemasyarakatan)
HPH	Forest Logging Concession (Hak Pengusahaan Hutan)
HTI	Industrial Plantation Forest (Hutan Tanaman Industri)
HTR	Community Plantation Forest (Hutan Tanaman Rakyat)
IPPKH	Timber Extraction and Utilisation Permit (Izin Pemungutan dan Permanfaatan)
KfW	German Development Bank (Kreditanstalt fuer Wiederaufbau)
KPH	Indonesian FMU (Kesatuan Pengelolaan Hutan)
KPHK	Conservation Forest Management Unit (Kesatuan Pengelolaan Hutan Konservasi)
KPHL	Protection Forest Management Unit (Kesatuan Pengelolaan Hutan Lindung)
KPHP	Production Forest Management Unit (Kesatuan Pengelolaan Hutan Produksi)
NGO	Non-Governmental Organisation
NTFP	Non-Timber Forest Products
REDD	Reducing Emissions from Deforestation and Forest Degradation
SDG	Sustainable Development Goals, introduced with UN Agenda 2030
TC	Technical Cooperation
UN	United Nations
UPTD	Sub-National Technical Implementation Unit (Unit Pelaksana Teknis Daerah)
VDF	German Forest Tree Nursery Association (Verband Deutscher Forstbaumschulen)

Kesatuan Pengelolaan Hutan (KPH) are forest management unit and as such play an important role in managing forests in Indonesia. The role of the KPH is one of the issues promoted by Gesellschaft für Internationale Zusammenarbeit (GIZ) in terms of national and regional policy as well as in operational matters.

One of the KPH duties in Indonesia is managing forests in terms of ecological, social and economic functions, therefore afforestation and forest landscape restoration are important elements they deal with. Fortunately, Germany provides a success story in that field and Germany has become an Indonesian reference in managing forests.

The objective of the Expert Dialogue was to exchange with German forestry experts on professional issues like structural preconditions and the general setup of German forest management units (FMUs), best practice-procedures in sustainable and multifunctional forest management and - last but not least - historical background conditions as well as the present technical implementation of forest rehabilitation.

With this in mind, a group of high-level officials from the Indonesian Ministry of the Environment and Forestry, representing a number of directorates (Planning, Social Forestry, Macro Planning, Forest Protection Management, Forest Rehabilitation, Environment and Forestry Research Agency and Production Forest Utilisation) and the International Cooperation Bureau, as well as the provincial forest administrations of East Kalimantan, and the head of KPH Kapuas Hulu Utara, Berau, and Malinau, guided by members of the FORCLIME project team, visited Germany between 26 August and 4 September, 2018.

The dialogue process included visits to various institutions involved in forest management and rehabilitation across Germany.

“The Indonesian-German Forests and Climate Change Programme, FORCLIME, supports the Indonesian Government and relevant public and private actors in the development and implementation of the institutional and regulatory framework, methods and services required for sustainable forest management, nature conservation and the reduction of greenhouse gas emissions due to deforestation and forest degradation.”

Dr. Ayu Dewi Utari
Head of the Bureau of Planning, as the Project Executing Agency of FORCLIME

INTERVIEW WITH MR. PIPIN PERMADI, FORCLIME ABOUT THE INTENTIONS OF THIS TRIP



GIZ: Pak Pipin, what are your objectives for this expert dialogue?

“ Basically, two goals should be achieved: According to the overall theme of our 2018 annual study trip we want to find out how forest institutions in Germany deal with forest-rehabilitation matters under particular difficult conditions. These can be marginal locations like extraordinarily poor sites or disturbed landscapes e.g. post-mining areas. In addition to learning from the experiences of local colleagues we want to take the opportunity to have professional discussions on framework conditions for sustainable forest management in Germany. In the case where they are similar to Indonesian situations, findings in Europe might be inspiring for us especially for the implementation at the forest management unit (FMU) level. If not, at least technical approaches on how to deal with these challenges can help to develop appropriate solutions for Indonesia.

Besides the special topic of afforestation and re-afforestation, of course, the details of the institutional setup within a public forest service organisation is of major interest. As Indonesia's public forest service (Dinas Kehutanan) is currently building up a network of forest-management units around the country we are still facing big challenges. In order to introduce efficient and effective structures and procedures and develop our own system for sustainable forest management suitable for tropical conditions, every best practice example is very welcome. ”

GIZ: Are there special reasons for visiting relevant institutions in Germany?

“ First of all, Germany has a long tradition in forestry and is known as a reference for forest management in Indonesia, moreover during this time it has developed a diverse landscape of forest ownership. This seems to be a functioning way to ensure societal participation in forestry issues. As Indonesia is on its way to implementing social forestry schemes on a big scale, the German structures might provide inspiration on how cooperation among different forest owners can be organised.

Secondly there is longstanding cooperation between our countries and since Indonesia is introducing a network of KPH across the country it will be of major interest to keep on comparing the structures and procedures of these administrative systems. Taking into account that the German forest management system is based on provincial competences and decentralization there might be some details that can be transferable to Indonesia. As framework conditions differ widely, of course, things have to be evaluated in detail and considered thoroughly. The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) through the FORCLIME programme is supporting Indonesia to develop best-practice solutions and, to this end, the exchange of experts and the subsequent discussions prove very helpful. ”

GIZ: What kind of follow-up measures are targeted after the study tour?

“ Returning home all participants of a study tour usually bring lots of inspiration, ideas and reflections. This is already apparent from the discussions among the participants during the trip and this exchange continues even afterwards. To make sure that ideas don't get lost, findings are developed further and action is taken. GIZ FORCLIME is providing documentation of the journey as well as making presentations and other major inputs of expert exchange available for everybody. We also will organise a follow-up meeting later aimed at a resumption of the discussions and reporting on measures taken by participants of the study tour in the meantime. ”



“Returning home all participants of a study tour usually bring lots of inspiration, ideas and reflections. This is already apparent from the discussions among the participants during the trip and this exchange continues even afterwards.”



**VISIT TO ALFRED TOEPFER ACADEMY
FOR NATURE CONSERVATION
TUESDAY, 28.8.2018**

The first institution to be visited was the Alfred Toepfer Academy for Nature Conservation in Schneverdingen, where several presenters informed the participants about this institution, general framework conditions of forest management in Germany and the historical background of re-afforestation efforts in the Lueneburg Heath area.



Mr. Eick von Ruschkowski, head of the institution, introduced the delegation to the Alfred Toepfer Academy for Nature Conservation. It was founded in 1981 as the “Northern German Academy for Nature Conservation” and as a part of the Lower Saxony Ministry of Environment mainly situated within the former farm building “Moers Hof” close to Schneverdingen. In 1995 it was renamed in memory of its founder. Since 1999 seminars and workshops have been held, mostly in the nearby former British military camp in Reinsehlen, which was rebuilt and added to the setup.

Established to support education, research and public relations in the field of nature conservation the academy has been commissioned with four main tasks:

Four main tasks of Alfred Toepfer Academy

1. Training of government staff on nature-conservation issues including transferring basic knowledge as well as updating personnel on current developments and findings.
2. Acting as focal point for applicants for one-year voluntary environmental service, coordinating among providers of jobs in this regard in the state of Lower Saxony.
3. Providing and contributing research activities to other research programmes, cooperating with different institutions mainly in northern Germany.
4. Offering environmental education programmes to the interested public in order to raise environmental awareness and to promote the understanding of environmental protection.



The academy is supposed to mediate among scientists, administrators, the private sector and the general public and partners with non-governmental organisations (NGOs) within the sector. Besides the tasks cited above international cooperation activities are also conducted.

Topics for training workshops focus on matters such as:



- Sustainable development including UN Agenda 2030 sustainable development goals (SDGs)



- Environmental services



- Healthy food and nutrition



- Resolution of conflicts with predators in northern Germany



- Multi-stakeholder cooperation

After this introduction to the hosting institution Mr. Marcus Kuehling, managing director of the German Forest Society (Deutscher Forstverein, DFV) welcomed the participants and briefly explained about the Forest Expert Programme of the German Federal Ministry of Food and Agriculture and his organisation. Since the DFV organised the 2018 expert exchange program commissioned by GIZ FORCLIME, Mr. Kuehling introduced the participants to the schedule of the study trip. Within a broad overview he also gave a presentation on forestry in Germany, the administrative setup of both the Federal Republic and the German provinces' forest entities, he highlighted some major issues of domestic and international German forest policy and programmes and summarised statistical data on forest cover, forest ownership and ecological preconditions in Germany. The presentation was rounded off with information on legal requirements and the economic impacts of the forestry sector in Germany, silvicultural strategies and some very revealing inputs about the attitude of Germans in regards to their forests.

As a supplement to these inputs two field trips were carried out in order to familiarise participants with current forest structures, landscape-management approaches and nature-conservation efforts in the region. The first, made on August 27th by means of a horse-drawn wagon, gave a good impression of the landscape where forest stands and heather areas alternate on sandy plains and flat dunes. After re-afforestation, largely with conifer species (mainly pines), about 140 years ago deciduous tree species were introduced contributing to more diverse and mixed forests now.

The second field trip was a walk through different types of forests, heather fields and peat bogs guided by Mr. Johann Schreiner, former principal of the Alfred Toepfer Academy. During this excursion Mr. Schreiner provided detailed information on the impacts of historical land use, scientific aspects of soil formation and the current state of biodiversity. Meanwhile a sustainable combination of forestry, nature conservation and eco-tourism that was established providing income to local communities was explained.

“The academy is supposed to mediate among scientists, administrators, the private sector and the general public and partners with non-governmental organisations (NGOs) within the sector. Besides the tasks cited above international cooperation activities are also conducted.”

Unterwegs

im Naturschutzgebiet Lüneburger Heide





“As a supplement to these inputs two field trips were carried out in order to familiarise participants with current forest structures, landscape-management approaches and nature-conservation efforts in the region.”



DISCUSSION WITH INDONESIAN PARTICIPANTS of the 2018 expert dialogue on expectations ahead of the study trip to Germany

GIZ: *At the beginning of GIZ FORCLIME's study trip you must surely have concrete ideas and aspirations about the contents and results of this expert exchange. Pak Victor, as a head of a FMU in West Kalimantan - what are your general expectations with regards to this trip to Germany?*

“ Well, in general I would like to learn about the characteristics of German forests, like different forest types, ownership, biological diversity. Of course, there are big differences to Indonesia, not only in ecological conditions but maybe also in the mindset of the people dealing with forests. I am looking forward to having discussions with forest owners and managers to get some information in regards to that. ”



Mr. Konstantinus Victor
Head of FMU Kapuas Hulu Utara

GIZ: *Are there any specific aspects from forest history that might be of relevance?*

“ Definitely - after the devastation of forests in central Europe a lot of re-afforestation has taken place. I would like to know why and how this development started. ”



Mr. Djohan Utama Perbatasari,
Director for Environment Services
Management, Directorate General
of Sustainable Production
Forest Management, Ministry of
Environment and Forestry

GIZ: *Pak Djohan, what will be your questions to your colleagues in Germany? Are there special questions regarding non-timber forest products and environmental services, as this is part of your job in the Ministry of Environment and Forestry?*

“ For sure this will be in my focus. But at the same time, I would like to know about the attitude of both foresters and the general public towards the forest. They seem to be aware of environmental issues - how does this fit into their lifestyle? The foresters are reported to be very much committed to their tasks - what is the reason for that? ”

GIZ: *I suppose there will be ample opportunities to find out. Do you also have expectations in relation to the German way of implementing public administration?*

“ Yes, that's what the Germans are well known for. Certainly, it will be of interest to learn whether regulations are simply issued “top-down” or in a more participatory way. And another thing, what makes people obey the rules. Is it just discipline or is it a sophisticated system of law enforcement? ”

GIZ: *Pak Firman, in Indonesia you are responsible for soil and water protection. What are your major fields of interest during the study tour?*

“ Okay, first of all I would like to find out some details about German FMUs. Since in Indonesia many FMUs have just started operation I would like to know how sharing of responsibilities is done among the institutions. In detail I also want to find out whether there are joint planning procedures (e.g. medium-term planning), for instance with regards to rehabilitation of critical land and how this task can be allocated to FMUs? ”



Mr. Muhammad Firman,
Director for Water and Land
Conservation, Directorate General
of Watershed Management and
Protected Forest, Ministry of
Environment and Forestry

GIZ: *These are interesting questions. So, you are also referring to ways of cooperation among the relevant stakeholders?*

“ Sure. Overall it is also relevant whether the public is included in planning procedures and whether they can influence a technical decision. And what about the public awareness of these issues? ”



**VISIT TO PRIVATE
TREE NURSERY ENTERPRISES**
WEDNESDAY, 29.8.2018

On the occasion of the visit to two big private tree nursery enterprises in Pinneberg and Kölln-Reisiek (Schleswig-Holstein state, north of Hamburg) the spokesperson of the German Forest Tree Nursery Association Mr. Alain Paul initially presented some basic information on his association and the branch of forest tree nurseries in Germany. The private sector association advocates on behalf of its members, some 120 private, mainly family-run, companies with an overall production area of about 900 hectares and a production volume of roughly 350 million seedlings per year.

Some of these companies specialise in tree seed harvesting, seed trading and/ or commercial production of broadleaf or conifer tree seedlings. Because of site and climate reasons 80 % of the seedlings are grown in northern Germany, 90 % of the output is delivered bare rooted.

The legal requirements comprise several German laws on forest tree seeds and propagation material determining the species covered by the laws as well as defining regio-types of these species. In addition, there are other restrictions e.g. on plant-hygiene requirements.

Among the customers of the nurseries are public, private and communal forest enterprises. As revenues are declining companies tend to offer full-service packages including site preparation, fencing and planting of delivered seedlings. One of the biggest challenges for forest tree nursery enterprises is provision of a suitable number of different types of seedlings for adaptation of forests to climate change according to the demand, which varies every year.



After these general remarks Mr. Armin Vogt, managing director and co-owner of Erwin Vogt Forest Tree Nursery introduced his company, a family-managed and owned company with long tradition. About 60 of 130 hectares are used for production, and currently five family members are employed, among other staff. Seeds are collected at customers' own responsibility in suitable tree stands as needed, a full planting service is offered to customers.

Mr. Vogt highlighted the importance of the availability of suitable seeds, as seed harvesting of some species can only be done every four to five years because of fructification. Thorough and qualified seed storage therefore is of utmost importance. Unfortunately, the seeds of some species can only be stored for one to two years.

The second private enterprise visited was Schrader Forest Tree Nursery, represented by Mr. Bernd Schrader, managing director and co-owner of the company. This enterprise is a fourth-generation family-managed and owned company, managed by a board of three directors. Because of changing conditions over the years the company has had to adjust by reducing the number of production sites in Germany and regularly has to look for new and innovative fields, including a tree nursery and forest management venture in Malaysia. Christmas tree production in Germany is still of major importance (30 hectares of production area). Currently a considerable number of paraffin pre-treated spruce-seedlings are exported to Sweden every year.





**VISIT TO FOREST MANAGEMENT
UNIT SELLHORN**
THURSDAY, 30.8.2018



During the visit of the Lower Saxony state FMU in Sellhorn, head of the FMU Mr. Lutz Kuhlenkampff provided an extensive overview of the structure, targets and legal basis of the provincial forest service of Lower Saxony. Emerging from a classic public administration in 2005 the organisation was transferred to an institution of public law, which is run according to private-sector principles. Meaning the company has comprehensive responsibility for achieving its targets negotiated with its supervising institution, the Lower Saxony State Ministry of Food, Agriculture and Consumer Protection.



Mr. Kuhlenkampff also presented the historic development of the landscape of Lueneburg Heath in order to demonstrate the starting position of re-afforestation in the region. An excessive need for timber and overgrazing by the local Heidschnucke breed of sheep eventually led to large-scale deforestation around 200 years ago leaving mainly heather vegetation. This vegetation was partly removed by farmers to be used for litter in stables and for fertilizing the fields afterwards. As a result, there was little protection for the soil, and shifting dunes threatened several settlements.

When the import of cheap sheep products made the local breeding of Heidschnuckes uneconomic, major efforts were started by the then government to re-afforest vast areas of northern Germany about 150 years ago. Because of the adverse site conditions, predominantly conifer species like pine and spruce were used.

Subsequently these uniform tree stands led to many problems in terms of damage from natural disasters like storms, forest fires and insect pests. This finally resulted in a change of strategy. Accordingly, the “long-term ecological forest development approach” (so-called LOEWE-programme) was designed in order to promote more structured and site- and climate-adapted tree stands, thereby enhancing the resilience of multifunctional forests.

As the LOEWE-programme includes a number of principles Mr. Kuhlenkampff took the Indonesian group on a field trip afterwards explaining the implementation of these principles in practice. On the basis of examples of different stages of forest development, the best measures necessary to gradually transform the tree stands into the desired state were discussed.





“As the LOEWE-programme includes a number of principles Mr. Kuhlenkampff took the Indonesian group on a field trip afterwards explaining the implementation of these principles in practice.”



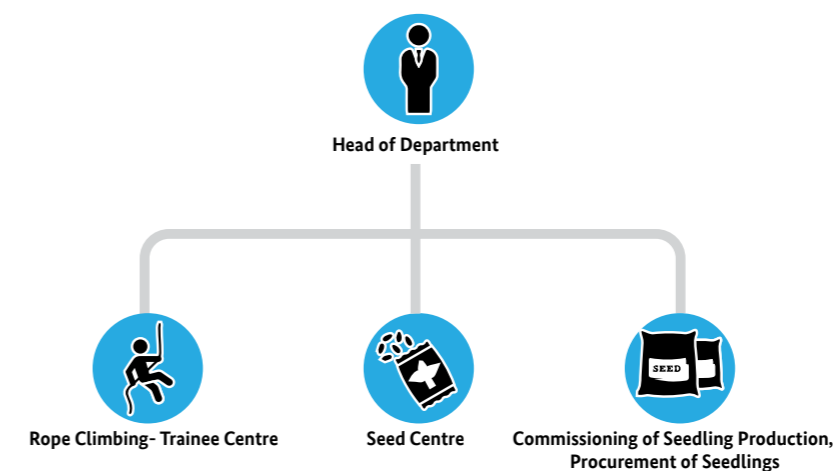
**VISIT TO FOREST SEED
ADVISORY CENTRE OERREL**
FRIDAY, 31.8.2018



Mr. Olaf Schoene, deputy head of the centre, welcomed the Indonesian group to the Forest Seed Advisory Centre Oerrel and introduced the staff involved. By means of a comprehensive presentation the head of the seed centre, Mr. Andreas Preuss, introduced the institution to the visitors. For this he stressed that high-quality tree seeds are the basis for successful forestry not only because of the trees' quality but also because of the need for adaptation of trees to changes in environment. The overall goal is the generation of healthy, high-quality, efficient and adaptable trees, even in times of climate change. Therefore, seeds are only collected in forest tree stands that have been approved by the Lower Saxony State Ministry for the Environment.



The organisational setup of the Forest Seed Centre includes several divisions:



As there are usually no government nurseries within FMUs anymore because of economic reasons, cooperation with the private sector is indispensable for the facility. Private tree nurseries are commissioned to produce seedlings from seeds provided, with an annual order volume of more than 5 million seedlings, to care for supplies for the state forest enterprise. These activities have to be supervised continuously to make sure that confusion and mixing of seed lots is avoided. Other private entities are also assigned different tasks like seed collection, transportation etc.

For seed harvesting a number of techniques are applied. Besides picking from trees by climbers, the shaking of trees by heavy machinery is made use of. After collection seeds have to be cleaned, processed (including drying, removal of wings etc.) and stored. Seed storage may be very delicate as very distinct temperatures and degrees of humidity must be guaranteed over long periods.

A different challenge is the stock-keeping of many different kinds of seeds (species, regio-types, qualities) over several years given the rare fructification of some tree species. As demand for seeds is not always predictable some experience is needed to ensure appropriate stocks.



By means of a different presentation Ms. Kerstin Kiefer discussed the legal-framework conditions that have to be observed when dealing with forest reproductive material. This is crucial first to assure high-quality tree stand regeneration and second because violations are punishable as criminal offences. Among the basic regulations are guidelines of the European Union as well as German federal law. Some 48 tree species in total are cited in law, among them 28 species relevant to forestry in Germany. All tree stands approved for seed collection are registered in a special seed stand inventory with an individual number being applied to every seed lot harvested and this number will be maintained during seedling production and delivery. Thus, all seedlings can be traced to their tree stand of origin.

To illustrate some aspects of seed collection, treatment and storage several activities and facilities were demonstrated in practice afterwards. To show alternative methods of seed collection, tree-climbing trainer Mr. Thomas Boehl explained and demonstrated how to use special climbing equipment and techniques to pick seeds even in remote parts of a treetop. Mr. Klaus Gille, seed treatment expert of the centre, took the group on a tour through several work and warehouse buildings, where a variety of special machines and tools was displayed. He clarified the many individual process steps that are carried out during seed cleaning, drying and other treatments.

Finally, Mr. Volker Einhorn, forest ranger and head of one of the resorts of FMU Oerrel took the Indonesian delegation on a field trip to the forest. Here he showed how high-quality tree planting material in the forest is used to convert former uniform forest resources into stable, ecologically high-value and resilient forests. As the first generation after re-afforestation tree species like spruce are more and more suffering from the impacts of regular droughts, less water-consuming species like pine, Douglas fir and oak are being introduced by both planting and natural regeneration.



“As there are usually no government nurseries within FMUs anymore because of economic reasons, cooperation with the private sector is indispensable for the facility.”



VISIT TO THE CITY OF HAMBURG
SATURDAY, 01.09.2018

On the occasion of a harbour cruise with many explanations about the historical and current economic significance of sea trade and during a guided city tour by bus, the Indonesian travellers had the opportunity to familiarise themselves with the city of Hamburg and its cultural highlights. In addition, plenty of time was set aside to stroll through the city and to explore the city's attractions individually. Of course, the Indonesian participants used the time to do some shopping, enjoy the beautiful scenery in the best weather conditions or just relax.





VISIT TO THE CITY OF LEIPZIG
SUNDAY, 02.09.2018

After a long bus ride through the German states of Lower Saxony and Saxony-Anhalt and the arrival in Saxony, the chance was given to explore the city of Leipzig on foot. A city guide who accompanied the group provided many explanations referring to some of the historic buildings and places that had been restored since German reunification. Several monuments to famous poets and musicians underline the cultural significance of this city.



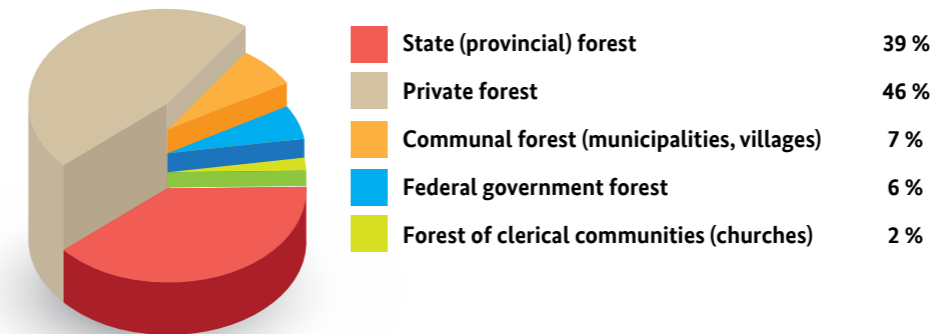
**VISIT TO FOREST MANAGEMENT
UNIT LEIPZIG**
SUNDAY, 03.09.2018



Mr. Andreas Padberg, head of FMU Leipzig, welcomed the Indonesian delegation to the public forest enterprise Sachsenforst in the facilities of FMU Leipzig. Explaining about Sachsenforst he highlighted that in total 12 FMUs and 1,300 employees take care of about 265,000 hectares of forest land implementing the mission to manage, preserve and shape the forest. The following are some figures about forest ownership and tree-species distribution in Sachsen state:



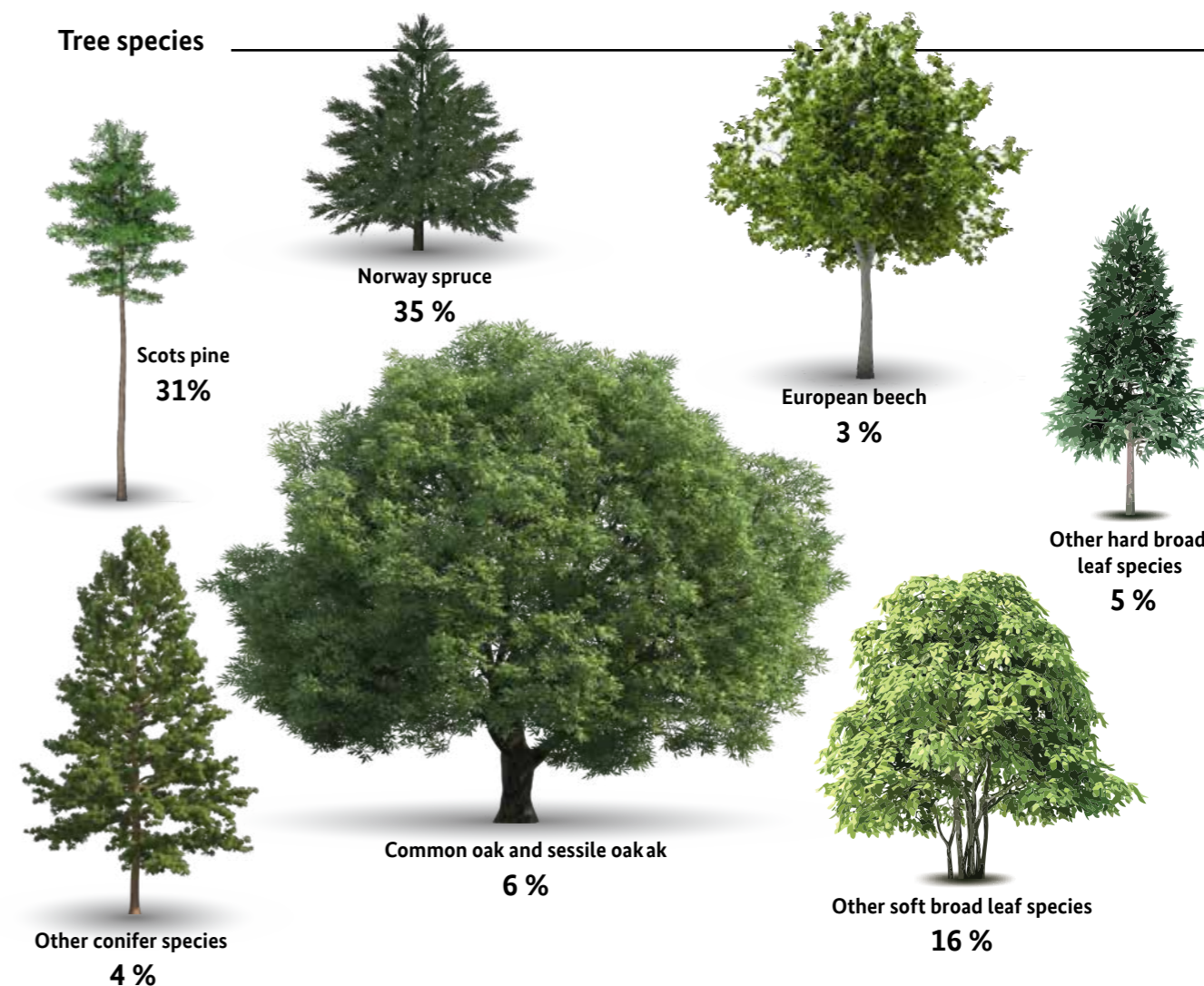
Ownership



The annual timber harvest in Sachsenforst amounts to about 1.2 million cubic metres, spruce contributing 73 % and pine 16 % to the total.

The average forest cover in the state is 28.5 %, with the figure for Leipzig being only 12.4 %.

Tree species

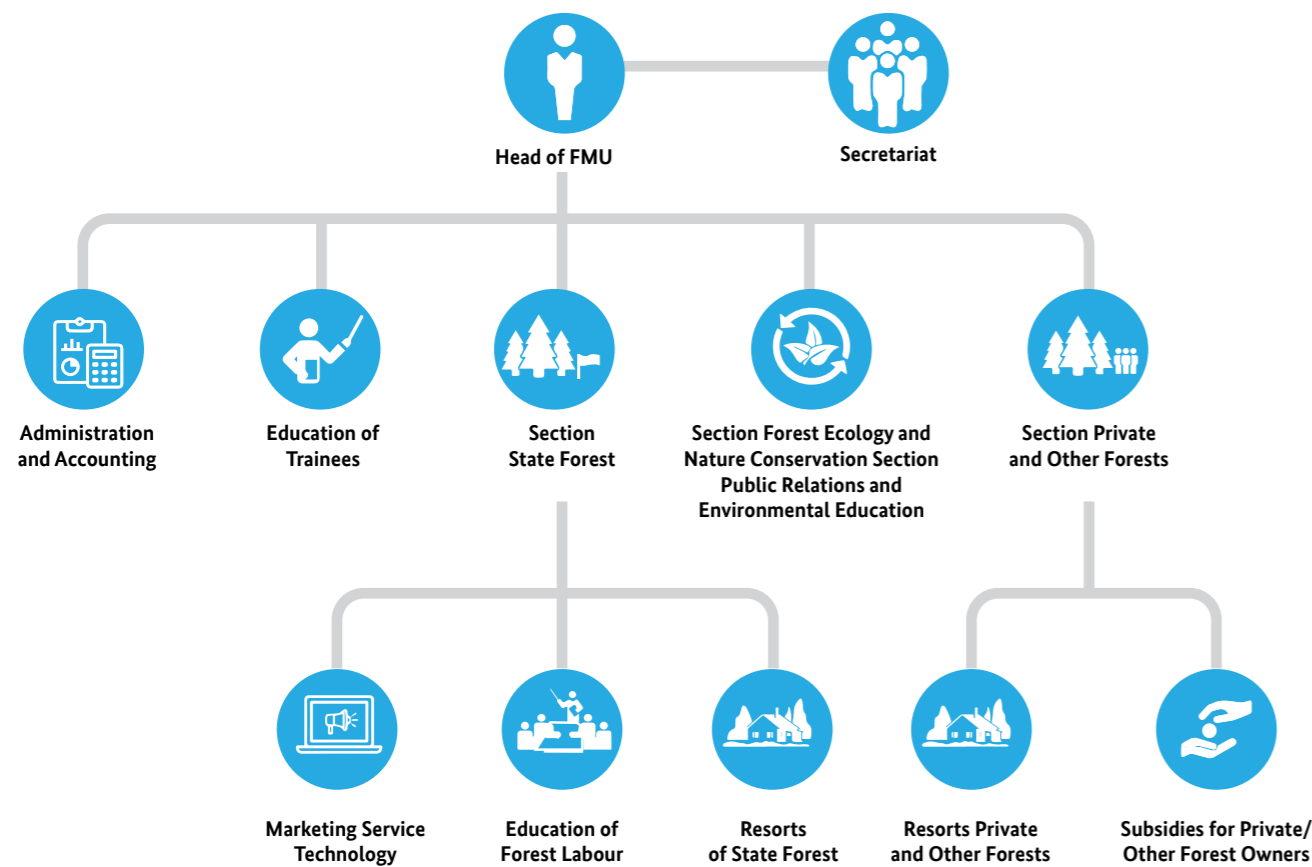


The average forest cover in the state is 28.5 %, with the figure for Leipzig being only 12.4 %. Mr. Padberg mentioned another special feature of his FMU, which is the characteristic vast areas of former or current mining activities extracting brown coal on a big scale. This involves extensive rehabilitation measures to compensate for forest losses and intervention in the natural environment in different parts of the FMU's jurisdiction.

One of the major targets of the state forest enterprise is the conversion of softwood-dominated forests into mixed stands in order to enhance ecological value and stability. About 1,300 hectares of enriched and redesigned tree stands are contributing to achieving this target every year.

FMU Leipzig manages about 34,000 hectares of forest, about 50 % of it private and 38 % state forest. Since the headquarters of the unit are in Leipzig, two more offices are maintained in Bernstorff and Colditz. The provision of general advice (free of charge) and technical support (charges apply) for private forest owners plays a major role among the tasks of the FMU. The unit consists of 14 resorts in total, among them nine resorts mainly busy with state forest (average size 1,400 hectares) and five resorts attending to other forest owners (average size 4,100 hectares).

The organisational structure of the FMU can be sketched as following:



Complementary to this structure there is an outdoor education centre and a wild boar-hunting dog training area among the special facilities of the FMU.

Unlike the average conditions in Sachsen state, FMU Leipzig is characterised by a high percentage of broad leaf tree species (more than 60 %). Another very significant feature of FMU Leipzig is the high intensity of forest functions ensuring environmental services to be maintained as a result of the immediate proximity to the biggest city in Saxony state. This urban environment also provides justification for extensive efforts at public relations and environmental education to raise environmental awareness and understanding for multifunctional forest management, including timber production.

“Another very significant feature of FMU Leipzig is the high intensity of forest functions ensuring environmental services to be maintained as a result of the immediate proximity to the biggest city in Saxony state.”

Elaborating on the rehabilitation of post-mining areas the head of the FMU highlighted the background and history of the present open-pit mining activities. All mining is done on the basis of comprehensive landscape planning documents, including details of future landscape restoration and land use. The funding for rehabilitation activities has to be provided by the mining enterprise, accordingly financial provisions must be made in advance.

In addition to technical explanations on re-afforestation strategies the expert exchange continued during a field trip to rehabilitation areas within the FMU (also see newspaper article). On different sites Mr. Padberg and the heads of the FMU resorts Mr. Carsten Pitsch and Mr. Christoph Seifert demonstrated different silvicultural approaches to rehabilitation. Given the poor soil conditions, which are often quite unpredictable, the open-pit excavations are often filled in with excavated soil from other sites of varying quality. As a result small-scale changes in the soil conditions cannot be ruled out. In most cases the soil is highly compacted and therefore not easily rootable by all tree species.

As newly established tree stands always have to be fenced for protection against wildlife, and since they often have to be supplemented or even replanted later, planting activities are quite costly (sometimes more than €20,000 per hectare). And even after several decades successful establishment of a new forest is sometimes uncertain and survival of the trees cannot be guaranteed because of changing groundwater conditions in a region that is heavily influenced by mining. Therefore, the silvicultural approach must be developed continuously, and occasionally new procedures are tested.

During the excursion there was also the opportunity to observe a still active brown coal mining pit from a vantage point. While touring the region it also became apparent that not all open pits in the area have been refilled and re-afforested. There are also sub-areas that are developed into a lake landscape and used as a recreational area and for tourism.

Towards the end of the field trip several research plots were visited and researcher Mr. Wolfgang Hueller explained about the long-term efforts to test specific tree species and varieties on suitability for re-afforestation of marginal sites and post-mining areas.



Picture of press article



SUCCESS FACTORS AND CHALLENGES FOR FOREST MANAGEMENT, LESSONS LEARNT Discussion with Indonesian Participants of 2018 Expert Dialogue

GIZ: Dear participants, towards the end of GIZ FORCLIME's 2018 expert dialogue we should reflect on the experiences and findings during the trip. You have been introduced to seed procurement, seedling production, background, history and present efforts of rehabilitation and last but not least the sustainable management of forests.

Ibu Sylvana, as a representative of a research and innovation department you might have observed some special features of German forestry – what are the important achievements and what do German foresters still have to cope with ?

Sylvana Ratina: Right, there are some aspects that are quite remarkable in German forestry, like the dedication and enthusiasm of forestry staff. They very much identify with sustainable forest management and are aware of their role in a local FMU convinced about working for a rewarding goal.

Another observation is, that there are very few conflicts with regards to forests, at least compared to Indonesia. This makes everyday business and cooperation much easier. A major challenge is obviously the transformation of quite homogenous, monoculture-like tree stands to mixed forests. There might still be some work ahead.

Bontor Lumban Tobing: This is because there seems to be a strong back-to-nature movement in Germany, which has to be considered. And in addition the forests need to be adjusted to changing environmental conditions like new pests and diseases boosted by climate change. But on the other hand forest policy ought to be quite consistent since it is based on a long tradition and quite considerable experience. And from my point of view major assets are both the strong link between forest entities and local communities as well as close cooperation with the private sector, meaning forestry is deeply rooted in society. Eventually clear land ownership makes things easier!



Ms Sylvana Ratina,
Secretary for the Directorate General
of Research & Development and Innovation,
Ministry of Environment and Forestry

GIZ: Pak Donny, would you agree with these statements?

Donny August Satriayudha: Yes, the biggest challenges for forestry are definitively derived from climate change. Strong, healthy and adaptable forests are required to get along with this problem. I also agree with the statement by Ibu Sylvana on human capacities in Germany. It should also be mentioned, that there is good knowledge about best-practice procedures and a great deal of discipline. Forestry personnel are aware of legal requirements and therefore enforce the law in a consequent way.

GIZ: Pak Joko, is there anything else to be said about the advantages and challenges of forestry in Germany?

Joko Istanto: Well, some minor aspects still should be supplemented: I noticed some qualities among German foresters, which seem to be important. For instance foresters spend much more time in the forest and know very well what's going on there. They manage the forest like their own property and are very much aware of the long-term effects of their actions. And local communities gain much more benefit from nearby forests than Indonesian communities do.

Also to add to the challenges I would mention the decrease in private tree nurseries, which might cause a shortage of seedling supply in the medium term. And a viable solution should be found to settle the comprehensive ideological conflict between forest managers and nature-conservation NGOs.



Mr Joko Istanto,
Provincial Forestry Service of East Kalimantan

GIZ: As all of you have identified the strengths of German forestry - what can be taken home in order to use as an inspiration for Indonesian forest management?

Bontor Lumban Tobing: For sure the fact that there is only one type of FMU could be transferred to Indonesia, meaning the integrative way of managing forests. And since German FMUs have much more authority with regards to a wide scope of tasks ("from planning to harvesting") we also should think about transferring more competencies and power to the local level of forest administration.

Sylvana Ratina: Yes, and with the competencies, responsibilities should go along. And at the same time government should grant support to FMU as needed, including financial support as long as independence can't be achieved.

In addition, I would like to mention that the kind of cooperation with local communities should also be transferred to Indonesia. That would also facilitate the joint solution of local conflicts.



Mr Bontor Lumban Tobing,
Mr. Bontor Lumban Tobing, Secretariat of DG of
Watershed Management and Protected Forest,
Ministry of Environment and Forestry

GIZ: Pak Donny, is there any lesson learnt with relevance to planning, since you are dealing with these issues in Jakarta?

Donny August Satriayudha: Of course, after all German foresters are also known for detailed planning procedures! Unfortunately much of the planning in Indonesia follows the top-down approach. I picked up in Germany that all planning is founded on detailed inventories prepared at a local level. This data, and planning proposals deriving from it, are used bottom-up and forwarded to higher levels for aggregation and finally used for national planning. This is not only a flexible approach to meet local demands but at the same time a convincing way of utilising local knowledge and experience on the macro level.

Joko Istanto: May I just supplement the statement of Ibu Sylvana on the support government should give to FMU? I would even suggest that about 90 % of provincial forest service funds should be allocated to the FMU in order to enhance efforts in re-forestation, social forestry and forest protection.



Mr Donny August Satriayudha,
Directorate of Planning of Forest Land Use and
Establishment of Forest Management Units, DG
Forestry Planning and Environment Governance,
Ministry of Environment and Forestry

GIZ: This sounds like a very concrete proposal, Pak Joko. Are you going to take it to Indonesia in order to follow up on it?

Joko Istanto: In East Kalimantan we are just in the process of discussing the five-year provincial forestry plan. For this I will use our experiences from Germany and contribute proposals accordingly to promote bottom-up planning. I also will encourage the heads of FMU to introduce their programmes as recommendations for the provincial government to advance the idea of sustainable, entrepreneur-like FMU-management for the benefit of local communities.

Donny August Satriayudha: For sure this new approach of bottom-up planning must be elaborated even more and materialise in relevant government regulations.

Bontor Lumban Tobing: And consequently provincial mid-term planning should have the appropriate impact on the national strategy anyway. If we do this we should drop the differentiation between production-KPH and protection-KPH and consider the individual conditions in each FMU instead.

Sylvana Ratina: There is one more thing to mention in regards to the follow-up after our study trip: I will propose to intensify research on sustainable forest-management policies by means of an expert exchange among researchers. This will contribute to mutual consultation and can make foreign experiences available for Indonesian practitioners.

GIZ: Summing it up there are lots of findings and inspirations from our 2018 expert dialogues among foresters from Indonesia and Germany. GIZ FORCLIME will keep on supporting exchanges between professionals of both countries and facilitate contacts among relevant institutions and their employees. FORCLIME will also follow up on this year's study trip in terms of documentation and continuation of exchanges among the Indonesian participants to learn about individual follow-ups and to find out what action has been taken.

“First of all, Germany has a long tradition in forestry and is known as a reference for forest management in Indonesia, moreover during this time it has developed a diverse landscape of forest ownership. This seems to be a functioning way to ensure societal participation in forestry issues. As Indonesia is on its way to implementing social forestry schemes on a big scale, the German structures might provide inspiration on how cooperation among different forest owners can be organised.”

—Pipin Permadi, FORCLIME

