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SDGS ROUNDTABLE ON SUSTAINABLE DEVELOPMENT GOAL 15: LIFE ON LAND

-With Focus On Sustainable Forestry-

Friday, 24 February 2017, 1:30-5:45

Time	Session/ Topic	Speaker / Moderator
12:00-1:30	Registration	
12:30-1:30	Lunch	
1:30-1:45	Opening Remarks	Dr. Balazs Horvath Director, UNDP Seoul Policy Centre Dr. Hyun Park Director of Global Forestry, National Institute of Forest Science
1:45-1:50	Group Photo	
1:50-2:20	**Forestry & Development**	
	UNDP's REDD+ and Forestry Work in Developing Countries	Mr. Tim Clairs UNDP Geneva
	KOICA's Strategy on Resilient and Sustainable Forestry Management Based on Korean Experiences	Dr. Minho Lee KOICA

2:20-2:45	**Technical Studies from Korea**	
	Valuation of Reforestation in Terms of Disaster Risk Reduction: A Technical Study from the Republic of Korea	Prof Yowhan Son, Prof W.K. Lee, Dr. Anil Markandya, Dr. Sarwat Chowdhury Korea University, Basque Centre for Climate Change and UNDP Seoul Policy Centre
2:45-3:00	Lessons Learned from Sub-tropical Experimental Forestry (EF) Research in ROK and their Potential Application in Other Countries	Dr. Jaehoon Kim NIFOS Korea
3:00-3:30	Q&A	Moderator: Mr. Artemy Izmestiev
3:30-3:45	Coffee Break	
3:45-4:15	**Economic, Environmental & Social Dimensions of Sustainable Forestry & Challenges from Developing Countries**	
	Sustainable Forest Management: Challenges and Opportunities from Myanmar	Dr. Thaung Naing Oo Director, Forest Research Institute Forest Department, Ministry of Natural Resources and Environmental Conservation, Myanmar
	Sustainable Forest Management: Lessons from Sri Lanka	Mr. Anura Sathurusinghe Chief Conservator of Forests, Govt of Sri Lanka
4:15-4:45	Sustainable Forest Management - Gender, Inclusiveness and Benefits Sharing	Ms Elsie G. Attafuah Senior Regional Technical Advisor, REDD+, UNDP Nairobi
	Sustainable Forest management Perspective: Co-management practices in protected areas of Bangladesh	Mr. Md. SukurAli Joint Secretary Ministry of Environment and Forests Md. Abdul Latif Mia Conservator of Forests, Bangladesh
4:45-5:30	Q&A	Moderator: Sarwat Chowdhury
5:30-5:45	Closing Session: UNDP's Development Solutions Platform and Possible Follow Up on Sustainable Forest Management	

Concept Note

SDG Roundtable on SDG 15 (with focus on Sustainable Forestry)

The mandate of UNDP Seoul Policy Centre (USPC) is to represent UNDP in Korea, work with Korea on international issues, and share Korea's development experiences with other countries. As part of our work on international issues, we are organizing Roundtables focused on SDGs. This upcoming Roundtable is one of these. As a knowledge broker and facilitator, the Centre uses the Development Solutions Partnership (DSP) approach initiated in 2014 to connect Korea with UNDP's global network and enhance the Korea-UNDP partnership on strategic development issues globally. Based on demand and drawing on the expertise of Korean and international partners together, USPC supports selected Country Offices and their partners to apply Korea's experiences and lessons learned at the country level.

Based on Korea's own history of rapid development rising from the aftermath of the Korean War and becoming a donor country, there is substantial practical experience and knowledge to be shared with developing countries today. There is also high demand among developing countries for Korea's know-how. Building on the outcome of this Roundtable, USPC will consider reforestation as a possible focus area for sharing Korea's experiences and lessons learned with developing countries.

Background:

SDGs, Forestry & UNDP

Investing in forests and forestry represents an investment in people and their livelihoods, especially the rural poor, youth and women. It is also directly related to the 2030 Agenda, a plan of action for people, planet and prosperity. In fact, forestry and its related themes have implications for multiple

SDGs and relevant targets and remains at the core of localizing SDGs. Around 1.6 billion people—encompassing more than 2,000 indigenous cultures—depend on forests for their livelihood. Forests are the most biologically-diverse ecosystems on land, home to more than 80% of the terrestrial species of animals, plants and insects. They also provide shelter, jobs and security for forest-dependent communities. Sustainable Development Goal 15 specifically aims to "protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss".

As the United Nations' global development network, UNDP advocates for change and connects countries to knowledge, experience and resources to help people build better lives. UNDP's 2014-2017 Strategic Plan highlights the links among environmental sustainability, poverty, governance, gender equality, and resilience. Recognizing the benefits of forests to livelihoods and to ensuring ecosystem services, including carbon sequestration, UNDP's contribution to sustainable forest management ranges from strengthening forest governance to ensuring the inclusion of indigenous peoples and civil society in sectoral decision making, working with the private sector and governments to promote forest-friendly commodity supply chains, and strengthening the livelihoods of forest-dependent communities. UNDP helps integrate issues of climate and disaster risk at the country level with a focus on risk-informed and sustainable development and building resilience.

The Republic of Korea is one of only four countries and the only (former) developing country that has a successful history of forest rehabilitation following World War II—together with Germany, the UK, and New Zealand according to FAO (1982). There is a timely convergence of UNDP's work on climate change, disaster risk management and sustainable forest management with SDG implementation within the 2030 Agenda and the Republic of Korea's successful interventions in reforesting the country.

Korea's Development Experiences and Lessons Learned

Korea has gone through one of the most rapid urbanization processes the world has seen, which contributed to rapid productivity growth, but also produced negative socio-cultural and ecological consequences. There is high demand for sharing Korea's development experiences in tangible and pragmatic ways. In particular, Korea's experience in successfully transforming its denuded land into rich forests in less than half a century with its strong forest policy and focused implementation offers lessons to developing countries. Its ambitious vision for reforestation and forest expansion, which resulted in this achievement remains a source of inspiration for countries grappling with multiple development challenges while trying to protect forests by implementing sustainable forestry and reforestation. Korea's experience offers insights into how engagement in nationwide reforestation process can work, how to stabilize high forest cover, and what role forests can play in a comprehensive vision of sustainable development.

In the 1960s, the introduction of the 'Forest Law and the Erosion Control Law' and establishment of the Korea Forest Service (KFS) marked the start of Korea's reforestation policy. The Korea Forestry Research Institute (KFRI), an affiliate agency under KFS, conducted Korea's first forest inventory survey (1964-1969) with support from UNDP and FAO. This field study mapped Korea's forest areas and analysed the land quality and soil conditions. It was followed by other UNDP support for the development of the national forest policies and plans.* The increase in Korea's forested area is a testimo-

**The Republic of Korea and the United Nations Development Programme (UNDP)*. Ministry of Education, Science and Technology 2010

ny to achievements. In the early 1960s about 56%** was covered by forest, today it is 64% -- an additional 840,000 hectares. In 2009 and 2014, the Republic of Korea submitted national reports on sustainable forest management to the Montreal Process of the Convention on Biological Diversity.***

Korea has implemented forest policy that was intended to ensure forestland recovery and wood supply, forest rehabilitation and sustainable forest management. This experience is relevant to various developing countries in the context of developing their National REDD+ Strategy and their move towards a more sustainable forest policy and management of forests. Countries face a tension between protecting their old growth forests and maintaining ecosystem and biodiversity balance while ensuring livelihoods needs of the poor and vulnerable are met. They can benefit from critically examining the lessons learned from Korea and other countries.

In the 2017 SDG Roundtable, Korea's concrete cases of successful reforestation efforts will be presented, along with cases from other countries around the world. The meeting will examine sustainable forestry (forest protection, afforestation and reforestation) from the vantage point of the three critical dimensions of sustainable development—economic, environment and social—and will attempt to agree on specific elements that can lead to USPC DSP development in this thematic area.

Objective:

In the context of SDGs, it is timely for USPC to partner with the Korea Forest Service to contribute to the 2030 Agenda for Sustainable Development.

The objectives of the roundtable are to:

- Share UNDP's experience on Sustainable Forestry and Agenda 2030.
- Highlight good practices from Korea on sustainable forest management.
- Share expertise of organizations in this important work topic and engage with development practitioners, academia, private sector, and student community in Korea and learn about challenges and opportunities in countries in Africa, Asia and South America (Bangladesh, Ecuador, Ethiopia, Myanmar, Nigeria, Sri Lanka and Timor Leste)
- Analyze relevant concerns and how the Korean experience can be utilized in developing countries
- Agree on follow-up actions

Logistics:

- Date: 24 February, 2017
- Venue: Holiday Inn Hotel in Seoul
- Organization: The event was organized by UNDP Seoul Policy Centre
- Participants: Relevant Korean government ministries, diplomatic community, international organizations/development partners, professors and students, UNDP, visiting government officials from Ministry of Environment and Forestry from Bangladesh, Ethiopia, Nigeria, Timor Leste and others.

**As a result of large-scale reforestation, stocked forested land increased from 4 m ha to 6.3 m ha between 1961 and 1995

***National Report on Sustainable Forest Management in Korea 2014


Participants
List

Participants List

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13. Dr. Musen; National Coordinator, REDD+, Government of Nigeria
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51. Jo, Yoon; Manager, Korea FAO Association
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53. Hubezys, Tammy; 1st Secretary, Australian Embassy
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81. Lee, Wona; Student, Korea University
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Information
On
Speakers

Dr. Balazs Horvath
Director, UNDP Seoul Policy Centre

- Balázs Horváth took up his post as Director of the UNDP Seoul Policy Centre in June 2016.
- Prior to joining the Centre, he served as the Country Director in UNDP's South Sudan Country Office since 2012

Dr. Hyun Park
Director, National Institute of Forest Science

- Dr. Hyun Park works at the National Institute of Forest Science, as a Director of Global Forestry division.
- He mainly supervises and conducts research on international forest cooperation.

Mr. Tim Clair
Principal Policy and Technical Advisor, UNDP

- Tim Clairs is UNDP's Principal Policy and Technical Advisor on Reducing Emissions from Deforestation and Forest Degradation (REDD+). He manages UNDP's global REDD+ Team.
- He continues to serve as a member of the UN-REDD Programme management group and also leads UNDP's work as a delivery partner for the World Bank's Forest Carbon Partnership Facility (FCPF).

Dr. Min Ho Lee
Agricultural Specialist, KOICA

- Dr. Min Ho Lee is an agricultural specialist in the Economic Development Department of KOICA in the Republic of Korea.
- His experience includes project planning and designing of aid (ODA) projects for rural development in developing countries, designing policy and project strategies related to sustainable agriculture, conservative, and organic agriculture, and others.

Dr. Sarwat Chowdhury,
Policy Specialist, UNDP Seoul Policy Centre

- Dr. Sarwat Chowdhury works as a Policy Specialist on *Green Economy, Natural Capital and Productive Capacities* at the UNDP Seoul Policy Centre.
- She has worked on climate change and sustainable development issues for the last 15 years
- Her portfolio covers a mix of global topics for the UNDP Sustainable Development Cluster, including the UN Partnership for Green Economy (PAGE) initiative.

Dr. Woo-Kyun Lee
Professor, Korea University

- Dr. Woo-Kyun LEE is a Professor at the Division of Environmental Science & Ecological Engineering at Korea University.
- His research focuses mainly on forest planning, forest growth modeling, climate change impact assessment and adaptation.

Dr. Yowhan Son
Professor, Korea University

- Dr. Yowhan SON is a Professor at the Division of Environmental Science & Ecological Engineering at Korea University.
- His fields of interest are in forest ecology, ecosystem carbon cycling and climate change, and long-term mass dynamics of coarse woody debris.

Dr. Jaehoon Kim
Researcher, National Institute of Forest Science

- Dr. Jaehoon Kim is a researcher of Warm Temperate and Subtropical Forest Research Center (WTSFRC) at National Institute of Forest Science (NIFoS) in the Republic of Korea.
- He is specialized in water resources assessment on forest and climate changes and now takes part in the project of Korean Fir (*Abies koreana*) forest restoration in Mt. Halla.

Dr. Thaung Naing Oo,
Director, Forest Research Institute

- Dr. Thaung Naing Oo is the director for Forest Research Institute, Forest Department, Ministry of Natural Resources and Environmental Conservation, Myanmar.
- His prior experience includes being the director of UN-REDD Programme, Myanmar and deputy director in Planning and Statistics Division of Nay Pyi Taw's Forest Department.

Mr. Anura Sathurusinghe
Conservator General of Forest
National Programme Director (Sri Lanka UN-REDD Programme)

- Mr. Sathurusinghe presently serves as the head of the Forest Department and as Conservator General of Forests, Sri Lanka.
- He also serves as the National Programme Director, Sri Lanka UN-REDD Programme.
- His area of specialty includes community forestry and forest restoration.

Ms. Elsie G. Attafuah
Senior Regional Technical Advisor, REDD+

- Ms. Elsie G. Attafuah is a Senior Regional Technical Advisor, REDD, with the United Nations Development Programme (UNDP) based in Nairobi.
- In this position, she provides strategic technical, policy, programming and implementation support to countries in the Africa region as well as manages and coordinates the UNDP REDD+ regional team in Africa.

Mr. Muhammad Sukur Ali
Joint Secretary, Ministry of Environment and Forests

- Mr. Muhammad Sukur Ali currently works at the Government of the People's Republic of Bangladesh as a Joint Secretary of Ministry of Environment and Forests.
- He studied at Bangladesh Agricultural University.

Mr. Muhammad Abdul Latif Mia
Conservator of Forests, Chittagong Circle

- Mr. Muhammad Abdul Latif Mia is the Conservator of Forests, Chittagong Circle.
- He has about 32 Years of Professional experience in forest ecosystem management, forest policy and administration, poverty alleviation through social forestry, forest protection and Co-management in forest Protected Areas.

Moderators

Mr. Artemy Izmestiev
Policy Specialist, UNDP Seoul Policy Centre

- Mr. Artemy Izmestiev has worked for UNDP for over eight years, supporting the coordination and management of development assistance in a number of countries in Africa, Eastern Europe and CIS and the Arab States. His previous posting was with UNDP in Tajikistan, where he served as aid coordination specialist.
- His work has focused on the development of aid policies, joint development assistance programmes and in promoting knowledge exchange for development results between developing countries.

Feedback From SDG 15 Roundtable

Feedback from SDG 15 Roundtable

A total of 57 feedback forms were returned by the participants.

Question 1 asked about two main points from the roundtable.

Many participants pointed out Korea's restoration policy and sustainable forest management as main ideas of this roundtable. Forestry policy, which has high economic value and unified land policy caught the attention of the respondents. They highlighted factors that enabled the successful implementation of forestry policy in Korea, such as good leadership, investment and public-private partnership. Participants also mentioned the importance of lesson sharing from good forestry management cases, REDD+ and the role of UNDP to achieve SDG 15.

Question 2 asked what aspects the respondents wanted to know more about in regards to Korea's forestry experience.

Participants wanted to know more details about the process of Korea's forest management policy since time at the roundtable was rather limited for a full discussion on this topic. In addition, as most of the contents were about the successful aspect of forestry policy, some people wanted to know about the challenges that the Korean government faced when implementing the forestry policy and the problem solving procedure they went through. They were interested to learn about the social and technical problems which could appear in the policy procedure. The mobilization of resources and people, which is decisive for successful implementation of policy, was a recurring query. Questions about problems such as soil erosion and wild fire and how to manage disasters were discussed. There were also questions about balancing likely conflicts such as urbanization and forestry sustainability, land policy and property right and development and restoration. There was also a question on the role of USPC in achieving SDG 15 -*how USPC can support other developing countries*.

Question 3 asked which country cases/ examples the participants found useful and would like to know more about.

Many people found the case of Myanmar and Sri Lanka, as well as other countries such as Costa Rica and Guatemala useful. One individual answered that '*The experience of Korea, Sri Lanka, Bangladesh and African countries are very helpful due to different perspectives*.' Respondents also expressed interest in implementing aspects of the Korean approach to their own countries especially African and Latin America countries. Moreover, examples of gender and sustainable forest management, disaster risk reduction and others were mentioned as issues that could usefully be explained further in relation to forestry.

Question 4 asked the participants to rate this roundtable.

The majority of respondents rated 4 or 5 out of 5 for this roundtable. Based on the 50 people who answered the last question, the average rating of this roundtable is 4.41. Some expressed regret for not having enough time for in-depth discussion and suggested that a longer roundtable is organized to delve into these issues further.

Overall, participants showed great interest in the presentations and discussion during the roundtable and especially about Korea's ability to successfully implement sustainable forest management. Respondents wanted to know details about the Korean case such as trials and errors, other success factors and risk management in order to learn lessons from it and utilize it for successful forest management in developing countries.

The majority of respondents showed great satisfaction with this roundtable. Since many people praised this roundtable as fruitful, there were explicit requests for another roundtable on this topic.

Recommendations

Some ideas for a future roundtable or further research:

-Discuss how Korea solved conflicts regarding private properties and urbanization issues in implementing forestry policy.

-Country case studies are very helpful. Discuss more detailed information about each country's case. As many participants wanted to learn lessons from the cases and examples, specific information can help the participants compare the cases with their own country's situation and check the feasibility of implementing them.

-It will be helpful to show other remarkable cases in forestry management such as Costa Rica, which has an impressive Payments for Ecological Services (PES) system and its influence on restoration of forest, Gambia which overcame the threat of desertification through forestry and the impact of investment period and magnitude.

-Extend time for the next roundtable. Half-day roundtable is not sufficient to share an discuss ideas in depth.

Roundtable Brief Summary

Opening Remarks

Welcoming the participants, Dr. Balázs Horváth, Director at the UNDP Seoul Policy Centre (USPC), noted that he was honored to open the third roundtable on Sustainable Development Goals organized by UNDP Seoul Policy Centre, which this time was on SDG Goal 15 "Life on Land" with a particular focus on sustainable forestry.

Dr. Horváth highlighted the importance of forestry not only in a traditional part of Korean landscape but noted that as in other parts of the world, trees have a cultural value or carry symbolic functions. Mountains, forests and trees are gracefully painted with care in traditional art. For example, the representation of pine trees in Korean paintings often characterizes longevity, integrity and elegance. These cultural connotations may be unique to Korea and the sub-region, but they also prompted the special value that trees have in cultures around the world. The massive reforestation that Korea experienced in the decades following the Korean war not only had a significant economic impact, it also helped establish national self-awareness in the Republic of Korea.

Dr. Horváth affirmed the significance of this roundtable as it discusses forestry in the context of the SDGs. Within the SDGs, the issue of forestry is explicitly addressed within Goal 15 on Life on Land. They are also addressed within the targets related to biodiversity. He expressed his hope that the broad inclusive format of this round table will allow us to consider different factors – economic, social and environmental of sustainable forestry– in our discussion.

Dr. Horváth pointed out that Korea's reforestation efforts featured prominently at the 2014 Meeting of the Convention on Biological Diversity in Pyeongchang. There, Helen Clark, the Administrator of the UNDP emphasized the importance of adequate financial resources for biodiversity-related initiatives. He noted that UNDP Seoul Policy Centre not only wanted to consider how Korea managed its reforestation, but also decided to look at whether investment in reforestation made financial sense. The first background paper presented at the SDG Roundtable today looked at the historical data on reforestation and avoided disasters, and concluded that whereas the initial investment in reforestation was very significant, Korea could eventually reap significant benefits well in excess of the costs. Besides the analysis at the macro level, another study looked at some existing forestry services, including the Experimental Forest in Jeju. The idea is, these studies would provide inspiration, as well as practical ideas to different governments around the world.

USPC Director concluded with a famous quote by Kim Gu, an independence fighter and President of the Provisional Government of the Republic of Korea in the early 1900s: "...I want our nation to be the most beautiful in the world. By this I do not mean the most powerful nation. Because I have felt the pain of being invaded by another nation, I do not want my nation to invade others. It is sufficient that our wealth makes our lives abundant […]". He highlighted that the green landscape of Korea not only illustrates Kim Gu's dream of a beautiful and abundant nation, but also presents an inspiration for many countries that are entering the path of truly sustainable development. The objective of this round table is to discuss some of the tools that countries can use in making this dream a reality.

In his congratulatory remarks, Dr. Hyun Park, the Director of Global Forestry at the National Institute of Forest Science, thanked UNDP for organizing this meaningful roundtable session, and welcomed all participants to the Sustainable Development Goals Roundtable on sustainable forestry.

Dr. Park briefly explained the history of the establishment of Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs) and the role of United Nations Development Programme. He also gave details on global consensus and the development of 2030 Agenda based on the achievements of the MDGs and then on the process of the approval of SDGs.

Furthermore, by illustrating the SDGs, with 17 sub-goals, Dr. Park underlined 5Ps as the key components; People, Planet, Prosperity, Peace and Partnership. He said “The global family needs to pursue the virtues of coexistence and cooperation for ourselves to survive in the future”, and “the SDGs and the cooperative activities are not an option, but an essential target to be achieved.”

With regard to the topic of the SDG Roundtable, sustainable forestry, he highlighted that the roundtable offers a great opportunity for all of participants to communicate with each other about the roles of forest and forestry in the achievement of the SDGs. He hoped that this roundtable could be a chance to exchange knowledge, share experiences and learn lessons.

Dr. Park also expressed his belief that through this 2017 roundtable on sustainable forestry, participants can identify useful lessons from each small stories, and pick up practical outcomes with active participation. He concluded by welcoming all participants in this roundtable to raise questions, to offer suggestions and to have a free discussion.

Session I. Forestry and Development

Mr. Tim Clairs, UNDP Geneva presented about UNDP's REDD+ and forestry work in developing countries. He explained three important concepts-REDD+, Nationally Determined Contribution (NDC) and SDG15 and their connectivity. REDD+ stands for Reducing Emissions from Deforestation and Forest Degradation in developing countries. He highlighted the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks in developing countries. Forests and REDD+ take important parts in NDC. Agriculture and land use, land use change and forestry (LULUCF) are among the most referenced sectors in the NDC (FAO 2016). In addition, REDD+ and NDC are closely related to SDG15: Life on Land. By 2020, we aim to promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally. In the UNDP REDD+ portfolio, there are three phases: Phase 1- Initial Readiness, Phase 2- Investments and scale-up and Phase 3- Results-based Payments.

There are several NDC examples relevant to Korea's expertise such as Chile, Democratic Republic of the Congo, Ecuador, Honduras, Panama, Sri Lanka and Viet Nam. Chile includes both sustainable management recovery of 100,000 ha of forest and reforestation of additional 100,000 ha. In case of Sri Lanka, forest component includes the goal of increasing its forest cover from 29% to 32% by 2030. The National REDD+ Strategy is explicitly mentioned in Sri Lanka and involves very detailed activities. In addition, the mitigation component of Viet Nam's INDC includes forest activities, including increasing the forest cover to the level of 45%.

Dr. Minho Lee, KOICA gave a presentation on KOICA's strategy on the resilient and sustainable forest management based on Korean experiences. Korean experiences on sustainable forest management date back to 10th century. The first Korean artificial forestry, 'SangLim' was made in 887-897 as a barrier against flooding. Also, there has been community-based approach in Korean experience. For instance, villagers actively participated in reforestation in 1980s. In addition, regional agricultural research and extension services were driven by government. Korea's experience also encompass cash crop development such as herb production, multi-function land use like flower planting and horticulture, low carbon technology and certification system. From these instances, we can conclude that Korean agro-forestry experiences are useful contents for sustainable forest management (SFM).

A total of 441.5m USD was spent in Agricultural & Rural Development (1991-2014) for KOICA projects. There were 34 forestry projects, taking an average of 10.1% of total KOICA fund. There were total 15 projects in 9 countries (30.1m USD) with a conserved area of 2,084ha (2005-18). KOICA's strategy (2016-2020) for rural and agricultural development aims to enhance the quality of life through the rural and agricultural development. Main programs include growing farmer-based-cooperatives, constructing agricultural production system, increasing crop productivity and other programs for sustainable production and expanding market access. Moreover, KOICA developed inclusive regional development programs such as the sustainable SMU village development programs and strengthening capacity of natural resource conservation in order to achieve SDGs 2, 10, 14 and

15. In the future, KOICA plans to develop tools for implementation of strategies, thereby contribute to the integrated sustainable agriculture and forestry management in developing countries.

Presentation by **Prof Yowhan Son, Prof W.K. Lee, Korea University and Dr. Sarwat Chowdhury, UNDP Seoul Policy Centre** highlighted the lessons from the Valuation of Reforestation in terms of Disaster Risk Reduction based on a technical study from the Republic of Korea. The Republic of Korea is one of only four countries and the only former developing country that has successful history of forest rehabilitation following the Second World War. In Korea's reforestation experience, there are three main principles-nationwide, fast-growing and economically valuable tree planting. The lessons from reforestation experience were the value of comprehensive project and three key factors-strong leadership, PPP(public-private partnership) and administrative and technical supports. Ecosystem services greatly improved after the successful reforestation in Korea.

However, an investigation on the economic feasibility of reforestation program at the national scale was lacking. Therefore, this technical study supported by the UNDP Seoul Policy Centre was undertaken. It estimated investment and ecosystem services such as disaster risk reduction (DRR), water yield enhancement and soil erosion control on a forestation program. Cost benefit analysis method was utilized to measure the DRR effect of reforestation. This analysis concludes that the forestation of Korea had significant cumulative net benefits in economic terms by enhancing ecosystem services which includes DRR, soil erosion control, water yield enhancement and carbon sequestration. Also, a certain level of investment after forestation is constantly required for protection and management. In addition, an intensive investment for a short period will be effective. The study has some limitations as a small number of social and environmental factors were considered. There are also constraints on setting reference levels, unit costs, and quantifying the benefit of ecosystem functions.

Dr. Jaehoon Kim, NIFOS Korea presented on the lessons learned from sub-tropical Experimental Forestry (EF) research in ROK and their potential application in other countries. The Warm Temperate and Subtropical Forest Research Center (WTSFRC) under NIFoS is located in Jeju Island. There is an experimental forest area of 3,366.6 ha in Jeju which includes Gotjawal, Seoqwipo and Hannam experimental forests. Several research projects are actively carried out in these forests including Conservation and Restoration on Korea *fir* in Mt. Halla, forest genetic resources conservation, long term runoff monitoring on forest watershed, and so on. The center attained the first FSC (Forest Stewardship Council) certification in Korea in 2006. The experimental forest serves various functions such as biodiversity conservation, maintaining forest productivity and social and economic benefits. It also provides service to the public, like field trips from overseas, spatial planning, individual visiting, and various events. This research in Jeju has implications for the conservation of forest ecosystems, sustainable forest management and contributions to local communities in developing countries.

Questions and Answers

First set of questions raised by Nigerian Delegations and KDI

Q1. Nigeria: Korea's experience is a massive success. How did Korea navigate political challenges and manage to place value on the ecosystem and prioritize forestry in the national budget?

Q2. Nigeria (Commission for Climate Change and Forestry): There is a lot to learn from Korea's success story. In the actual process of planting trees, did Korea pay attention to the restoration of indigenous species?

Q3. KDI student: Land policy is a huge problem in many countries. How did Korea balance development and reforestation in overcoming environmental challenges?

Answer by KFS (Ms. Yoon): Barren mountains were a hindrance to Korea's development. For example, they led to the flooding of roads, lack of underground water sources, and droughts. Forests have the potential to reduce disasters, so it is important to understand the link between forestry and development.

Second set of questions raised by Gambia, KDI and UNDP Bangladesh

Q1. Gambia: Developing countries use forests for various purposes e.g. source of fuel, firewood, cooking. In Korean, what kinds of forest products are used as alternative fuel sources?

Q2. KDI student: Based on Korea's experiences, how can land policies contribute to the physical and economic transformation of developing countries?

Q3. UNDP Bangladesh CO: The deciduous forests we have are degraded due to human settlement and industrialization. Policymakers are not yet sensitized to this issue. Again, how can we balance development and forestation? What is your policy suggestion for restoring forests in Bangladesh?

Q4. KDI student (Tanzania): Meeting the challenges of preserving life on land, in developing countries, does not rely on one single ministry. For example, it creates controversies among ministries that are in charge of coal making and others that oversee environmental conservation.

Q5. KDI student: How did the Korean government tackle the challenges of soil erosion? In Africa, trees planted on mountains do not survive because of soil differences. How are trees protected, and how is soil erosion prevented?

Answer by:

NIFOS (Mr. Hyun Park): Korea also experienced considerable failure. Many good trees were planted, but they did not all survive. Korea experienced floods every year. After 20 years of failures, the country began to introduce species such as nitrogen fixing trees. Once the land was covered, Korea moved on to trying more profitable trees. Soil erosion was a huge problem, especially in highlands. The government paid to move settlements in the highlands to the lowlands. The government planned fuel-wood forests, but this failed, because coal-mining was profitable in Korea. Nowadays, there are alternatives to fossil fuels like coal, such as solar energy. At first, the government and policymakers ignored the importance of forests, but after 20 years of trials and errors that included successes and failures, they realized, for example, monsoons cause floods and soil erosion and felt the need to face fundamental problems by increasing investment in forests.

Seoul National University (Professor Yoon): Many factors contributed to Korea's success i.e. investment, citizen participation, leadership, institutions. Reforestation does not concern only forestry-related people, but a wide network of stakeholders. Korea was fortunate to have a strong leadership that led the country's economic development. Without economic development, reforestation may not have succeeded. What is unique about Korea is that economic development and reforestation came hand in hand.

KOICA: Providing some practical tips regarding project formulation and collaboration with KOICA, proposals need to be prepared in alignment with national development plans. Communication with the local KOICA office is very important. KOICA has two approaches for resource provision: i) via conventional aid projects, ii) via private partners. KOICA has a standard screening process, so countries should submit proposals to the local KOICA office at least two years in advance.

Third set of question raised by an attendee from Bangladesh: Biodiversity loss is a huge concern, but its measurement is missing in the valuation study. How can the ecosystem services of biodiversity products be calculated?

Answer by Professor Son: Regarding the valuation of biodiversity, the benefits of ecosystem services are many, but the current study only includes some of them e.g. water yield, carbon sequestration. These were already sufficient to show that over time reforestation brings substantial net benefits. The benefits of biodiversity were not included in our study because it is difficult to quantify. Regarding the issue of soil erosion, reforestation in Korea was not only about planting trees, but was more economically comprehensive in scope e.g. providing income sources for village people, maintaining a tree nursery system. Regarding monoculture plantation, there were some drawbacks, e.g. Korea introduced a certain species in one given area. Korea focused on plantation/reforestation itself, rather than the multifunction of forests, so the challenges to monoculture plantations were to be expected.

Session II. Economic, Environmental & Social Dimensions of Sustainable Forestry & Challenges from Developing Countries

Dr. Thaung Naing Oo, Forest Research Institute Forest Department, Ministry of Natural Resources and Environmental Conservation, Myanmar gave a presentation on Sustainable Forest Management: Challenges and Opportunities from Myanmar. Systematic forest management has been practiced in Myanmar since 1856, especially for *teak* forests. Silvicultural operations are carried out to improve the quality of the forests. Forest plantations are also established in the degraded forest areas for various purposes. Forests are managed through 10 year District Forest Management Plan for each of the 68 Districts across the country. Currently, 10 year District Forest Management Plan (2016 -17 to 2025-26) is being implemented. According to the *Forest Resource Assessment* 2015, Myanmar has a population of 51.2 million people. The forest area in the country is 29m ha which covers 42.97% of total country area. Strengthening Sustainable Forest Management (SFM) practices, large scale reforestation and rehabilitation is urgently needed in the country to increase forest cover and to comply with international agreements regarding climate change mitigation and adaptation. Myanmar's forest policy is based on National Environmental Policy (1994), Myanmar Forest Policy (1995) and Land Use Policy (2016).

Specific to silviculture, Myanmar Selection System(MSS) started in 1881 to achieve sustainable yields and is the main silvicultural system practiced in the management of natural forests in the country. Currently, the restoration and Rehabilitation Programme in Myanmar (2017-2026) is being implemented with the following objectives: to restore and rehabilitate forests using an appropriate method, to support the community forestry and agro-forestry practices, to strengthen the investment of large and small scale private plantation, and to formulate plantation policy through consultation with relevant stakeholders. Challenges for sustainable forest management in the country include lack of integration of forestry policies and planning into other sectoral policies as well as national development plans, lack of recognizing full range of values of forests and limited resources, insufficient mobilization of resources and man power. There are also opportunities for sustainable forest management in the country such as implementation of REDD+ and forestry sector as an important component of Nationally Determined Contributions (NDCs).

Mr. Anura Sathurusinghe, the Government of Sri Lanka presented on Sustainable Forest Management in Sri Lanka. Sri Lanka has been declared as one of the 34 biodiversity hot spots in the world. Sri Lanka's Forest Policy (1995) targets to conserve forests for posterity, increase the tree cover and productivity of forests and enhance the contribution of forestry to the welfare of the rural population and strengthen the national economy. Deforestation has continued since 1956 in both dense and open forests, changing Sri Lanka's forest cover from 44.1% to 29%. It was caused by shifting cultivations, illegal cultivations, encroachments, development projects, extraction of gravel, metal and minerals from forests, cattle damages on natural regeneration, cardamom cultivation, and forest fires. Forests provide diverse ecosystem services from food to climate regulation. Efforts have been

made through the Sri Lanka Community Forestry Program to involve local communities in forest

management.

With support from UN-REDD, Sri Lanka has gone through Phase 1: REDD+ Readiness. Phase2: Actual implementation of National REDD+ Investment Framework and Action Plan needs financial support. The expected outcome of REDD+ implementation is to strengthen the country's overall sustainable land management efforts to maintain and enhance ecosystem services, biodiversity and economic growth while minimizing the risk of natural disasters. The expected budget is US$100 million dollars where Sri Lanka government and GCF finance US$65 million and US$35 million, respectively. Overall, REDD+ Policies and Measures target the drivers of deforestation and forest degradation and aim to remove barriers for forest enhancement. Forest data generated through the National Forest Monitoring System enables effective and accurate monitoring, measurement, reporting and verification of REDD+ results. Information on nationally defined REDD+ safeguards are made accessible to the public. There is evidence of full and effective stakeholder engagement and evidence of technical and functional capacity development by institutions and individuals with key roles and responsibilities. These outputs are designed to operationalize the necessary mechanisms, processes and information streams required under the Warsaw Framework for REDD+. UNDP remains as the nominated accredited agency for this work with Food Agriculture Organization (FAO) as UN Executing Partner.

Sustainable Forest Management -Gender, Inclusiveness and Benefits Sharing -REDD, Views from Africa by Govt of Ethiopia/ UNDP Regional Team, Nairobi

While implementing REDD+ Programs under UNFCCC, the importance of inclusiveness, gender and equitable benefit sharing is very important. These need to be incorporated in all three phases of REDD+. Meanwhile, there is a need for strategic approach for them to be implemented in resource mobilization, monitoring framework and partnerships. The presenter highlighted several lessons from REDD+ experiences in Africa. In Ghana, efforts are underway for gender issues to be mainstreamed into national REDD+ processes, including national REDD+ Gender Subworking Group establishment, supporting the operationalization of the Gender and REDD+ Roadmap and informing Ghana's draft National REDD+ Strategy. In Nigeria, gender was integrated into community projects. Gender considerations were included among criteria for project selection and women were specifically identified and involved among the stakeholder groups.

In Central Africa, a forest initiative monitoring framework includes sex-disaggregated indicators such as total amount of wood energy produced per inhabitant and consumed, and the number of people migrating from non-forests to forests and vice versa, all disaggregated by sex. The framework also encompasses indicators that directly relate to women's empowerment such as the existence of instruments developed, enacted and implemented to promote the rights of communities to access and sustainably use forest resources, with due regard given to gender, vulnerable people, local communities and indigenous people.

From the experiences in Africa, the future design of REDD+ programmes can be strengthened to better integrate inclusiveness, gender and incentive allocation systems. The process can start by establishing connections and patterns between themes, within countries, within the region and amongst regions. Also, programme delivery can be enhanced through full implementation of the Warsaw Framework to make the case for additional resource mobilization and investments.

In conclusion, an ambitious and transformative REDD+ agenda requires inclusive, gender equitable

and credible stakeholder and institutional engagement (e.g. civil society, indigenous people, local communities and private sector). REDD+ countries can provide leadership. Also, new thinking and knowledge in the implementation of the programmes are needed. Advanced future REDD+ programmes will require country-led, country-owned initiatives, collaboration and strategic partnerships.

Mr. Mohammed Shafiul Alam Chowdhury, Ministry of Environment and Forests and Md. Abdul Latif Mia, Chittagong Circle presented on Sustainable Forest Management practices in protected areas of Bangladesh. Bangladesh has been making efforts to achieve the SDGs in forest resource management and protection. There are related policies and strategies in place such as the Perspective Plan 2010-2021, National Biodiversity Strategy and Action Plan (2016-2021) and Bangladesh Climate Change Strategy and Action Plan (2009).

Bangladesh is under the pressure from a large and fast growing population, while forest resources remain limited. Problems have risen such as increasing demand for forest products and land grabbing for settlement purposes and agricultural expansion. The government has established Protected Areas (PA) for conservation of biodiversity and forest resources. Co-management approach was adopted to encounter these challenges and achieve effective forest resources management. The Co-management in PA started from 2003 as a pilot program and was expanded to 20 PA's in 2015. Co-Management Committees and Councils collaborate with local community and various stakeholders. Yet, challenges such as huge resource dependency, settlement inside PA's and lack of conservation financing remain.

Questions and Answers

First question raised by KFS (Ms. Yoon): Regarding the balance between development and reforestation, Korea had a greenbelt around Seoul where forests were planted and protected. Land was divided by function e.g. factory areas, forest areas, and there was land use pressure driven by CSOs and community members. It could be interesting to share this experience in terms of how other countries set their proportions of land use.

Feedback by an attendee from Ivory Coast: Ivory Coast used to be a highly forested country, but no longer so because coffee, cocoa and palm oil producers have completely consumed the forests. Our country needs assistance in managing our forests. It is a real development challenge.

Second set of questions raised by :
SREDA: How did Rwanda and other countries succeed in increasing gender equality in this area?

KDI student: Regarding REDD+, in terms of delivering as one, how do various UN agencies link up on the issue of reforestation and SDG Goal 15?

Answer by UNDP Nairobi: On delivering as one, REDD+ and the UN's Development Assistance Framework provide platforms that encourage stakeholders to work together. On the issue of gender

equality, there is a dedicated effort on making this prominent through advocacy, partnerships and target-setting. Rwanda, for example, has a particularly strong leadership that emphasizes meeting the set targets.

Third question raised by Nigeria: Are the laws and policies in Korea revised, or newly drafted, in response to changing circumstances?

Answer by KFS (Ms. Yoon): Korean forestry laws continue to evolve. Also, Korea has had 10-year plans in the forestry sector since 1973. The latest plan will be implemented through 2018. In the early years, the objectives were reforestation. Currently, the objective is broader: to promote sustainable forest management.

Fourth Question raised by KDI student (South Sudan): How did Myanmar succeed in training elephants to work on forestation?

Answer by Myanmar: Myanmar's policies, laws and the 5-year plan are also being revised with the inclusion of new concepts. Regarding the training of elephants, old harvesting techniques were used, and local tribes were used to train elephants for use in sustainable forest management.

Presentations of Session I

Moderator

Mr. Artemy Izmestiev

Presenters

Mr. Tim Clairs

Dr. Minho Lee

Prof. Yowhan Son

Prof. W.K. Lee

Dr. Anil Markandya

Dr. Sarwat Chowdhury

Dr. Jaehoon Kim

Presentation I

UNDP's REDD+ and Forestry Work in Developing Countries

Mr. Tim Clairs

Tim Clairs
Principal Technical Advisor, UNDP REDD+ Team
Seoul, February 2017

UN-REDD PROGRAMME
Food and Agriculture Organization of the United Nations
UNDP
UNEP

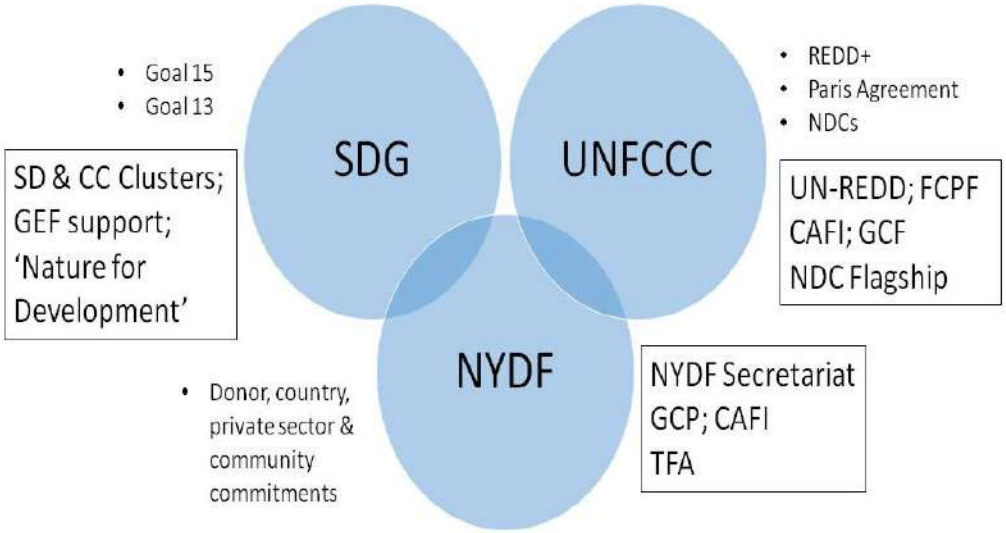
FOREST CARBON PARTNERSHIP FACILITY

CAFI CENTRAL AFRICAN FOREST INITIATIVE

GREEN CLIMATE FUND

@UNDP_REDDPlus

SDGs, Forestry & UNDP:
Combining & Integrating



REDD+

REDD+ refers to: "reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks in developing countries"

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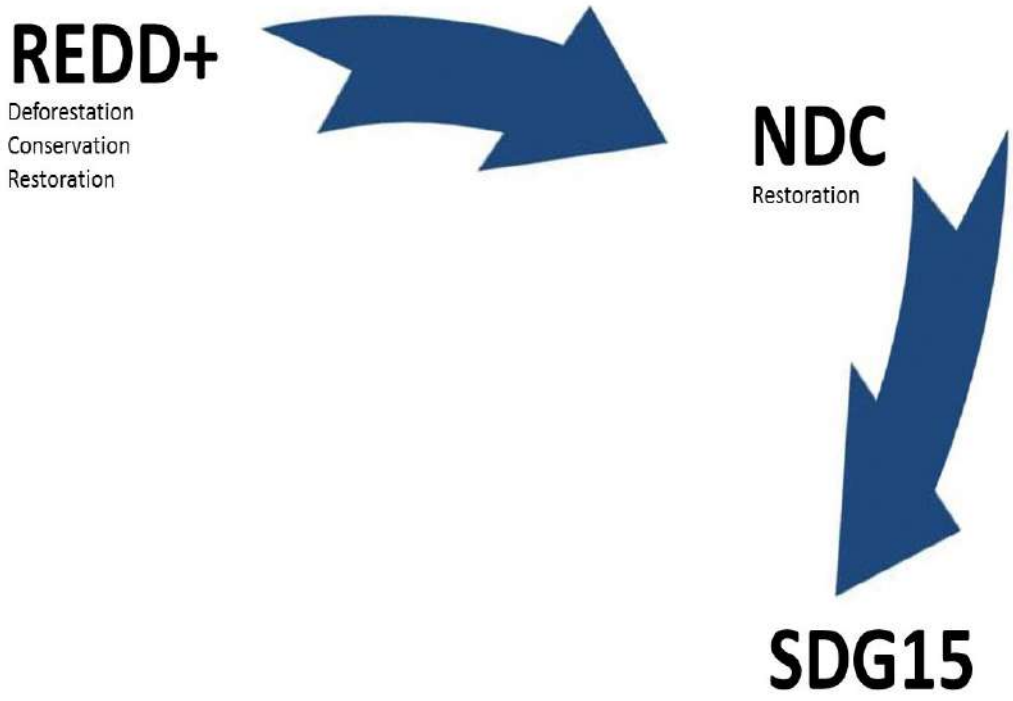


NDC

- Agriculture and land use, land use change and forestry (LULUCF) are among the most referenced sectors in countries' mitigation contributions. (FAO 2016)
- 54% of countries included LULUCF as part of an economy-wide target, while LULUCF is referenced in many more – 77% of all countries' INDCs (i.e., approx. 120 INDCs) reference LULUCF, making the role of LULUCF in the INDCs second only to the energy sector. (FAO 2016)

REDD+
Deforestation
Conservation
Restoration

NDC
Restoration

- By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally
- Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation

SDG15

UNDP REDD+ Portfolio

Initial Readiness

- UNFCCC "Warsaw Framework" requirements
- UNDP focus on:
  - National REDD+ Strategies/Action Plans
  - IP/CSO stakeholder engagement
  - Institutional capacity
  - Fund management arrangements

Investments and scale-up

- Implementing National REDD+ Strategies/Action Plans
- Applying "policies and measures" (PAMs) to address drivers of deforestation
- Transformative investments/policy reforms
- NDC implementation
- Investment planning
- Innovative financing
- Partnerships
- FPIC
- Safeguards

Results-based Payments

- Re-invest in Phase 2 actions
- Benefit-sharing
- Paris Agreement Article 6 measures

UNDP REDD+ Portfolio

Initial Readiness

- Argentina
- Bangladesh
- Chile
- Colombia
- Ivory Coast
- Ethiopia
- Honduras
- Mongolia
- Myanmar
- Nigeria
- Peru
- Sri Lanka
- Uganda
- Cambodia
- Honduras
- Kenya
- Panama
- Paraguay
- PNG
- Suriname

Investments and scale-up

- DRC
- Gabon
- Ecuador
- Sri Lanka
- Ivory Coast
- Ghana
- DRC
- Myanmar
- Peru
- Viet Nam

Results-based Payments

- Ecuador
- Guyana

NDC Examples Relevant to Korea's Expertise

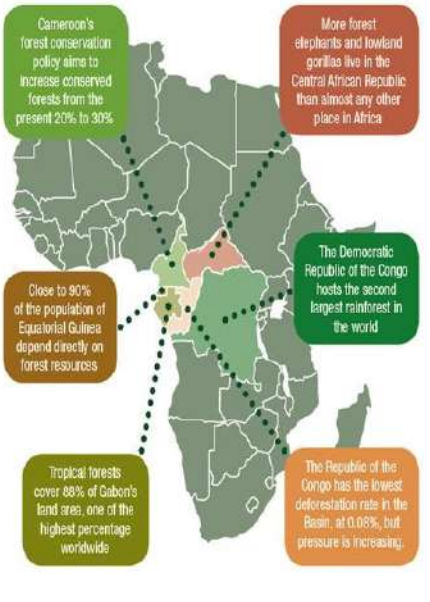
REDD+ Country	Forests in INDC/NDC
Chile	Includes both sustainable management recovery of 100,000ha of forest, and reforestation of additional 100,000ha.
DRC	Land-based reduction central to goal of 17% emissions reduction. Forestry activities will focus mainly on afforestation and reforestation.
Ecuador	Restore 500,000 hectares initially and increase by 100,000 hectares per year until 2025.
Honduras	The forest sector mitigation contribution to the INDC includes 1 million ha forest AF/RF between 2012 and 2030.
Panama	Increase LULUCF mitigation by 10% through reforestation and restoration activities in protected areas, with respect to the baseline scenario by 2050
Sri Lanka	Forest component includes increasing the forest cover of Sri Lanka from 29% to 32% by 2030.The National REDD+ Strategy is explicitly mentioned. In general very detailed inclusion of activities in the forest sector.
Viet Nam	The mitigation component of Viet Nam's INDC includes forest activities, including increasing the forest cover to the level of 45%.

Tim Clairs
Principal Technical Advisor, UNDP REDD+ Team
Seoul, February 2017

Thank You!

@UNDP_REDDPlus

CAFI : *Scaling up climate and forest efforts in Central Africa*



CAFI
CENTRAL AFRICAN FOREST INITIATIVE

240 million ha of forests

A carbon sink equivalent to 6 years of global CO_2 emissions

Home to 60 million people inside or in the direct vicinity

Feed 40 million in urban centres close to forests

Home to rare and endangered species

8,000 plant species are endemic

SDG Forest/REDD+ Targets

- SDG 15
  - By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally
  - Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation

SDG Forest/REDD+ Targets

- SDG 13
  - Integrate climate change measures into national policies, strategies and planning
  - Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly $100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible

NYDF Targets

• Goal 1	• At least halve the rate of loss of natural forests globally by 2020 and strive to end natural forest loss by 2030
• Goal 5	• Restore 150 million hectares of degraded landscapes and forestlands by 2020 and significantly increase the rate of global restoration thereafter, which would restore at least an additional 200 million hectares by 2030

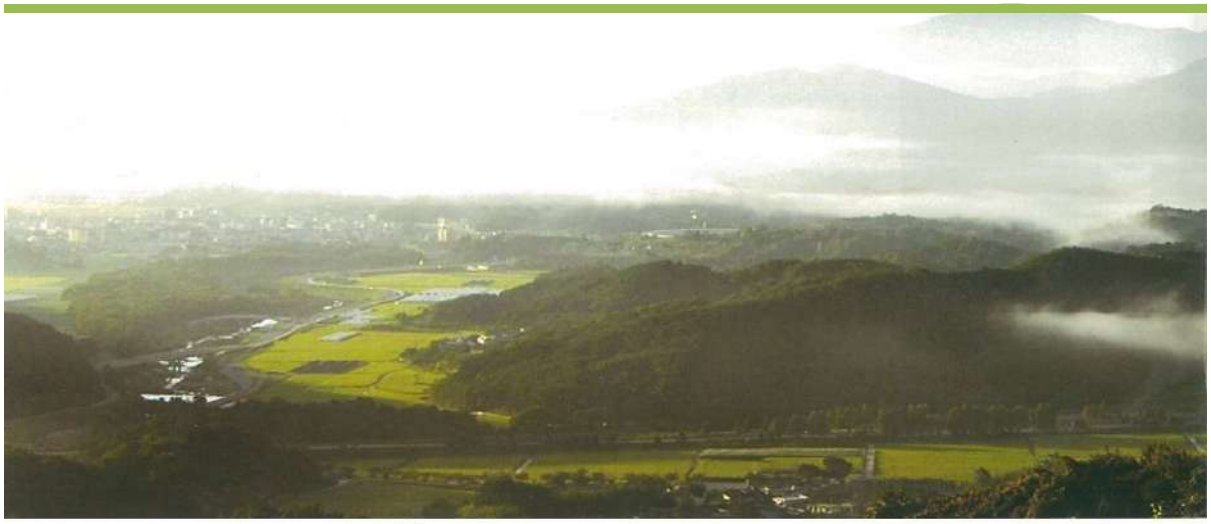
UNDP's REDD+ Added-Value

- Leading the development and implementation of REDD+ National Strategies/Action Plans and associated national investment plans
- This includes supporting multi-stakeholder participatory processes, including agreeing drivers of deforestation and prioritizing "policies and measures" PAMs to address the drivers
- and ensuring social integrity of actions (gender, livelihoods, local community and Indigenous Peoples rights).

Presentation 2

KOICA'S STRATEGY ON THE RESILIENT AND SUSTAINABLE FORESTRY MANAGEMENT BASED ON KOREAN EXPERIENCES

Dr. Minho Lee



KOICA's strategy on the resilient and sustainable forest management based on Korean experiences

Minho Lee
Ph.D., Agricultural Specialist
Economic Development Office, KOICA

KOICA
Korea International Cooperation Agency

Korean experiences on sustainable forest management

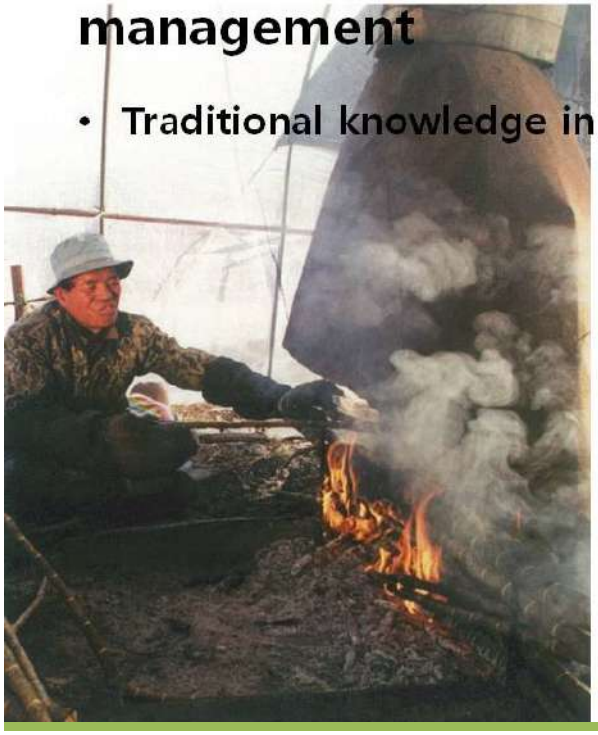
Korean experiences on sustainable forest management

- Traditional knowledge in agro-forestry

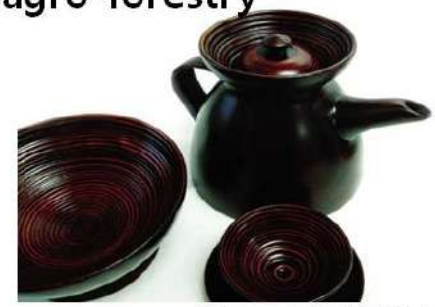
Korean experiences on sustainable forest management

- Traditional knowledge in agro-forestry

Korean experiences on sustainable forest management



- Traditional knowledge in agro-forestry



(Source: http://gd.kidp.or.kr)

Korean experiences on sustainable forest management

- Before intervention

Korean experiences on sustainable forest management

- Community-based approach

Korean experiences on sustainable forest management

- Community-based approach

Korean experiences on sustainable forest management

- Community-based approach

Korean experiences on sustainable forest management

- Government-driven

Korean experiences on sustainable forest management

- Government-driven

Korean experiences on sustainable forest management

- Government-driven

Korean experiences on sustainable forest management

- Government-driven

Korean experiences on sustainable forest management

- Government-driven

Korean experiences on sustainable forest management

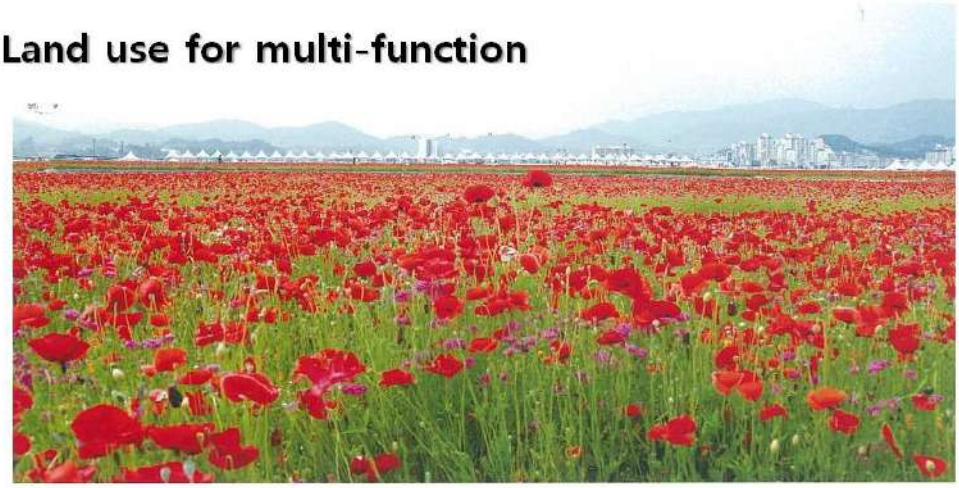
- Cash crop development


Korean experiences on sustainable forest management

- Cash crop development

Korean experiences on sustainable forest management

- Land use for multi-function



Korean experiences on sustainable forest management

- Land use for multi-function

Korean experiences on sustainable forest management

- Low carbon technology and certification system

[Carbon labelling system]

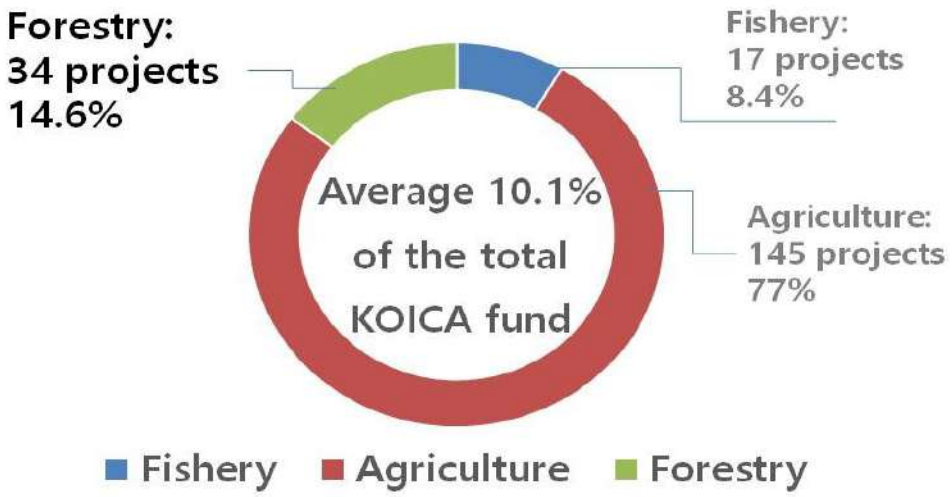
VS

[Low Carbon agricultural product certification system]

Korean experiences on sustainable forest management

- Local market development

Forestry projects in KOICA



Total 441.5million USD in
Agricultural & Rural Development (1991-2014)

Forestry projects in KOICA (2005-2018)

Country	Program
Indonesia	4 projects for training, conservation & climate mitigation
Myanmar	2 projects for reforestation
China	2 projects for training & reforestation
Tunisia	2 projects for training & reforestation
Philippines	1 project for plantation
Kyrgyz	1 project for training
Solomon Island	1 project for training
Uzbekistan	1 project for afforestation
Mongolia	1 project for afforestation

Total 15 projects in 9 countries (30.1million USD);

Total conserved area: 2,084ha

KOICA's strategy (2016-2020) for rural and agricultural development

- **Vision**: To secure the comprehensive **well-being** for everyone

- **Mission**: KOICA contributes to the enhancement of the **quality of life** through the rural and agricultural development

KOICA's strategy (2016-2020) for rural and agricultural development

Strategic Objectives
SO1. Sustainable Production and Expanding Market Access [SDGs 1 and 2]
SO2. Inclusive Regional Development [SDGs 2 and 10]
SO3. Strengthened Capacity of Natural Resource Conservation Coping with Climate Change [SDGs 14 and 15]

KOICA's strategy (2016-2020) for rural and agricultural development

- Main programs for agriculture & rural development

Strategic Objectives	Main Programs
SO1	• Food crop productivity increase • Growing farmer based cooperatives • Construction of agricultural production system • Food and agricultural product value chain • Agricultural extension service
SO2	• Sustainable SMU village development

KOICA's strategy (2016-2020) for rural and agricultural development

- Main programs for sustainable forest management

Strategic Objectives	Main Programs
SO2	• Sustainable forestry management participated by villagers
SO3	• Conservation of fishery and forestry resources • Agro-biodiversity conservation • Reforestation and stop desertification • Consulting national strategy of forestry management • Eco-tourism and ecological welfare

KOICA's strategy (2016-2020) for rural and agricultural development

- Results framework

Objectives	Intermediate Results
SO1	• IR1.1 Improvement of production infrastructure • IR1.2 Increased productivity and household income
SO2	• IR2.1 Increased social capital • IR2.2 SMU Social capital and awareness
SO3	• IR3.1 Applying technology and access to information • IR3.2 Sustainable agriculture practices

KOICA's strategy (2016-2020) for rural and agricultural development

- Results framework - indicators

Results	Indicators related to SFM
IR1	• Area of soil improvement or land developed (ha) • Farmer-based organization's (FBO) household productivity and income (benefit/cost, USD)
IR2	• Number of voluntary members participating to the community's activities
IR3	• Area or weight of resilient soils and water (ha or T/ha)

2018 KOICA's new forestry project plan

- Title: Climate smart interventions in forest and farm systems in Guatemala (2018-2020/7million USD)
- Objectives: to strengthen national capacity to increase the resilience of rural producers livelihoods to climate change
- Host organization: FAO Guatemala, and Ministries of Guatemala government
- Programs:
  - Capacity development of agro-forestry producer organizations
  - Climate smart interventions
  - Capacity building of public institutions for integrated forest, climate and food security

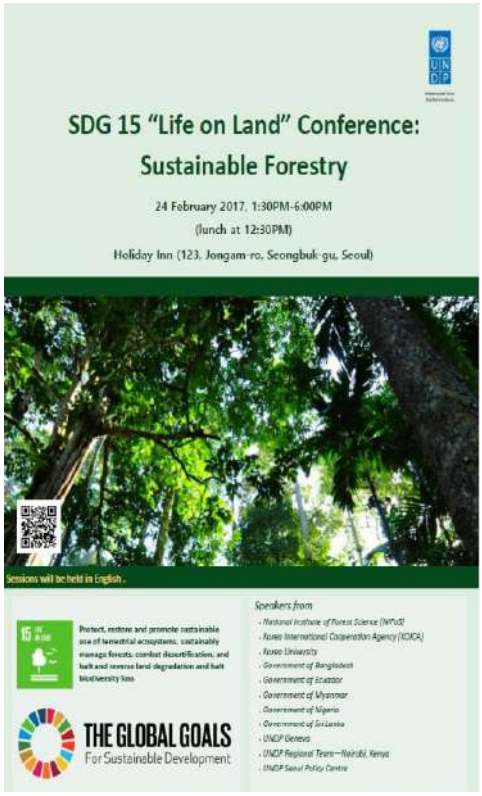
Future tasks

- Development of tools for strategy implementation
  - Partnering with international and regional organizations and private sectors for SFM
  - Systemic approach model for agriculture, forestry, rural development and climate change
  - Contents for capacity building: best practices of the regional agro-forestry system, resilient technology and biodiversity business for addressing climate change as well as improving livelihoods

Presentation 3

Valuation of reforestation in terms of disaster risk reduction: A technical study from the Republic of Korea

Prof Yowhan Son, Prof W.K. Lee, Dr. Anil Markandya, Dr. Sarwat Chowdhury



Why Look at Forestry Experience in Korea

The Republic of Korea is one of only four countries and the only (former) developing country that has a successful history of forest rehabilitation following World War II.

Reforestation in Korea is well studied

We are looking at synergy between forestry and relevant areas; including in the SDG context

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Linkages between Reforestation & DRR in Korea- technical study and follow up consultations

First technical study: disaster risk reduction (DRR related to landslides, forest fire and flooding) and other benefits (carbon sequestration, soil erosion control and water yield enhancement) resulting from forestation in Republic of Korea in the last 50 years.

- USPC presented initial findings of this study at the COP 22 in Marrakech Korea Pavilion side event on 15 Nov 2016 on *Sustainable Resource Management and Energy Security in Asia and Europe*.

Study findings discussed further at a Technical Meeting organized by UNDP in Seoul 8 Dec 2016

The interactive technical meeting included panel contributions from National Institute of Forest Science of Korea Forest Service; Seoul National University, Korea University and Asia Forest Organization

Innovations in Forestry: Korea's Development Experience in SFM: Focusing on Experimental Forests in Jeju Island

- Second study looks into the Sub-tropical Experimental Forestry (EF) research in ROK, lessons learned esp. in terms of sustainable forest management in developing countries
- USPC hosted delegations visiting from Ethiopia (March 2016),

Nigeria (Feb 2017)

Valuation of reforestation in terms of disaster risk reduction:
A technical study from the Republic of Korea

Yowhan Son, Woo Kyun Lee, Anil Markandya, Sarwat Chowdhury

2017. 2. 24.

1. Background of the study

Source: KNU. 20

Korea (1910s)

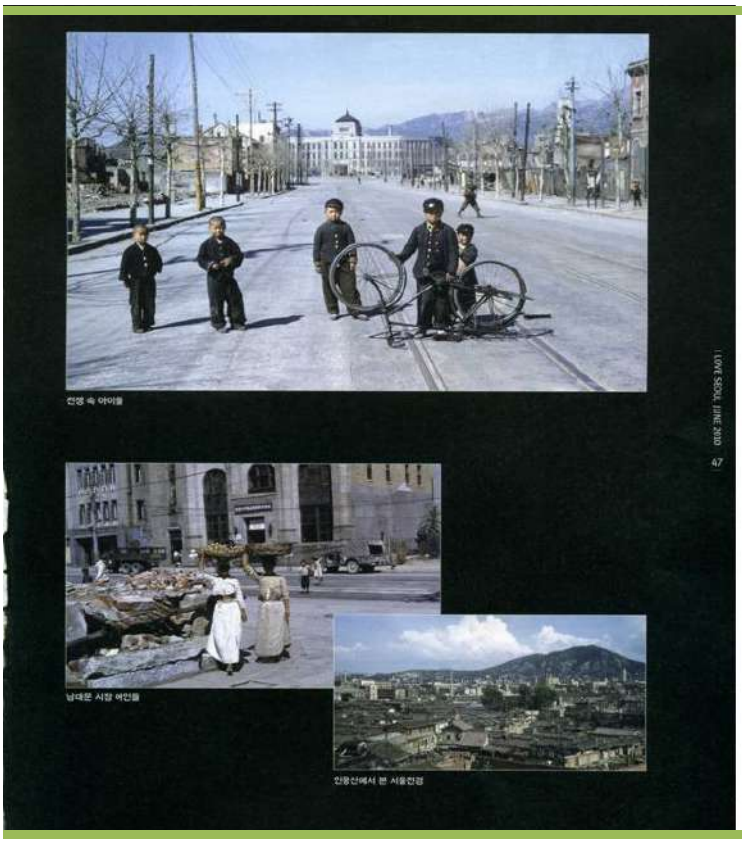
Source: KNU. 2012.

Source: KNU. 2012.

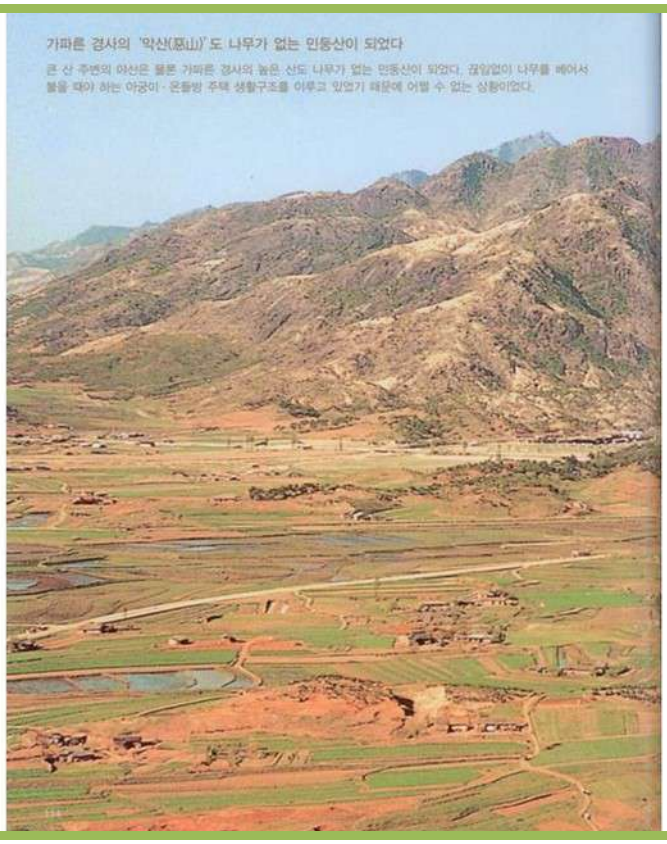
Korea (1910s)

Seoul, Korea (1925)

Seoul, Korea (1925)



After the Korean War
Seoul, Korea (1952)



Source:
Forestry Newspaper

Korean landscape in 1960s

Reforestation activities

- 1967: Korea Forest Service under the Ministry of Agriculture and Forestry established

- 1972: The First National Forest Plan- Forest rehabilitation project (1973-1982) planned

- 1973: Korea Forest Service moved to the Ministry of Internal Affairs for active reforestation

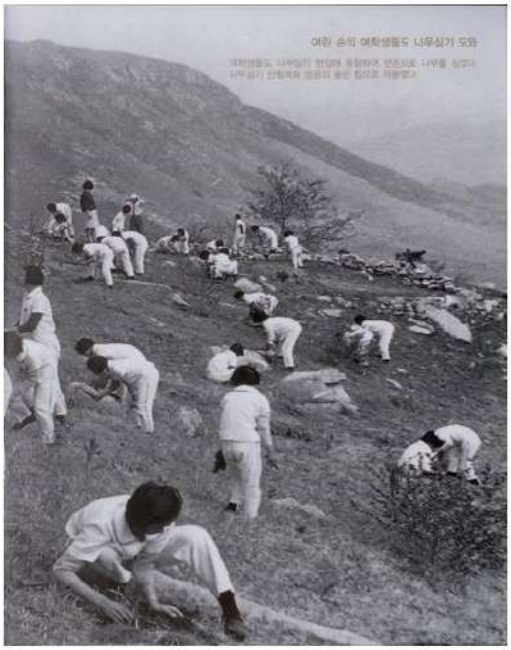
Three main principles

1. Nationwide tree planting:
   Public participation in planting and tending

2. Fast-growing tree planting:
   Poplars, black locust, alders to prevent floods and erosion as a first phase

3. Economically valuable tree planting:
   Pines, larch, spruce, firs and other economically valuable trees for long-term goal

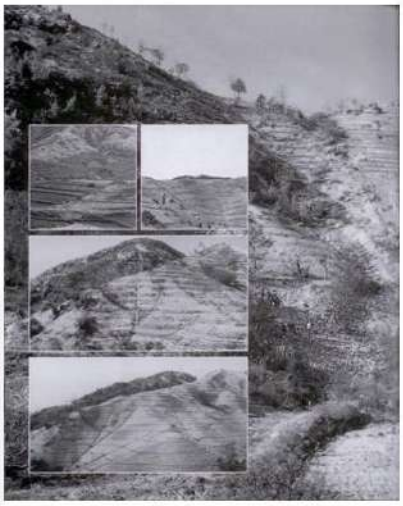
Nationwide tree planting

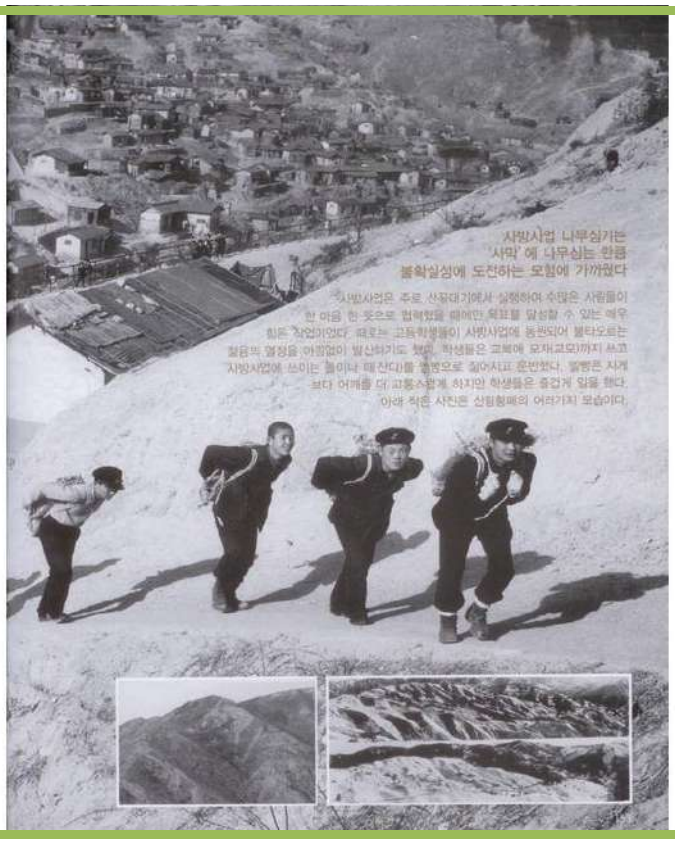


Source: KFS

Fast-growing tree planting to prevent floods and erosion

Source: KFS





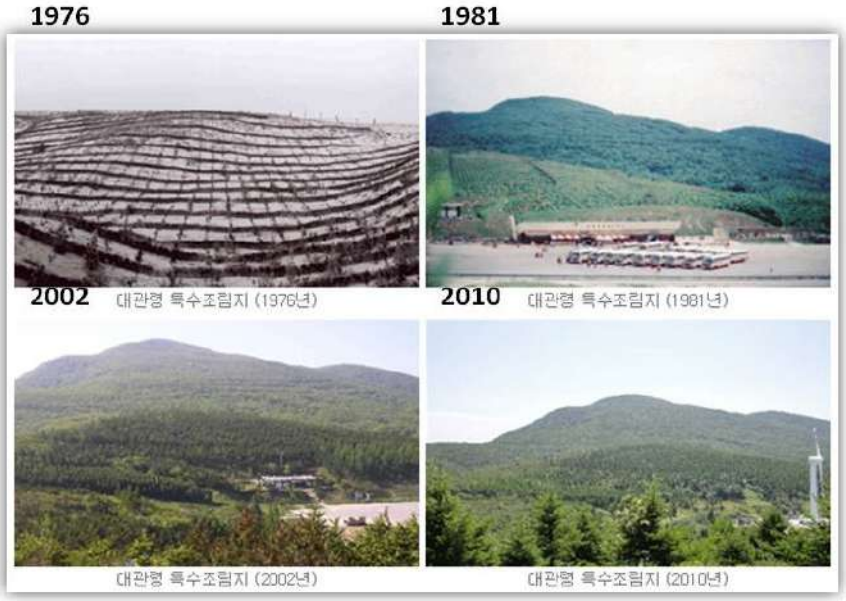
Reforestation activities

1960s, 1970s

Economically valuable tree planting for long-term goal

Source: KFS

Changes in Korean landscape after reforestation



Source: KFRI

Lessons from reforestation experience

- Comprehensive project: combining related components together, i.e., cultivating seedlings, planting, tending, fuel, and income

- Three key factors:
strong leadership, public-private partnership, and administrative and technical supports

- Forest ecosystem of the Republic of Korea provide a substantial amount of ecosystem services after reforestation (Kim et al., 2012)

  The ecosystem service includes disaster risk reduction (DRR), carbon sink, water yield, erosion control and etc.

- However, investigation economic feasibility of reforestation program at national scale is highly lacking.

  Many developing countries have considered reforestation programs but economic feasibility is uncertain.

  Investigation at national scale is highly limited because only four countries (Germany, New Zealand, Republic of Korea, UK) succeeded in reforestation after World War II.

Objective

A preliminary analysis on economic feasibility of national scale forestation program focusing on disaster risk reduction (DRR)

Considering costs of forestation and benefits of DRR and other main ecosystem services (soil erosion control, water yield and carbon sequestration) in the Republic of Korea

A short report and need further studies on the topic based on UNDP SPC and KFS's interests

1. Scheme of the study

- **Forest ecosystem of the Republic of Korea provide a substantial amount of ecosystem service after reforestation (Kim et al., 2012)**

  The ecosystem service includes disaster risk reduction (DRR), carbon sink, water yield, erosion control and etc.

- **However, investigation economic feasibility of forestation program at national scale is highly lacking.**

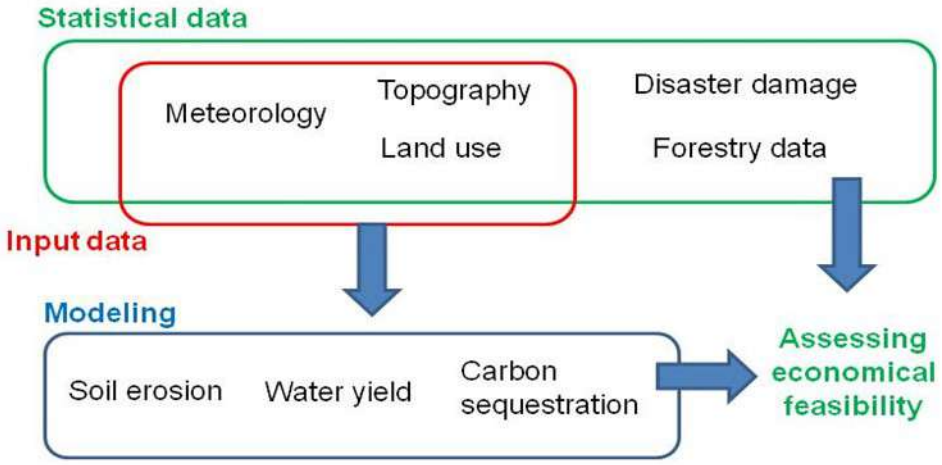
  Many developing countries have considered forestation programs but economic feasibility is uncertain.

  Investigation at national scale is highly limited because **only four countries** (Germany, New Zealand, Republic of Korea, UK) succeeded in forestation after World War II.

1. Scheme of the study

Objective

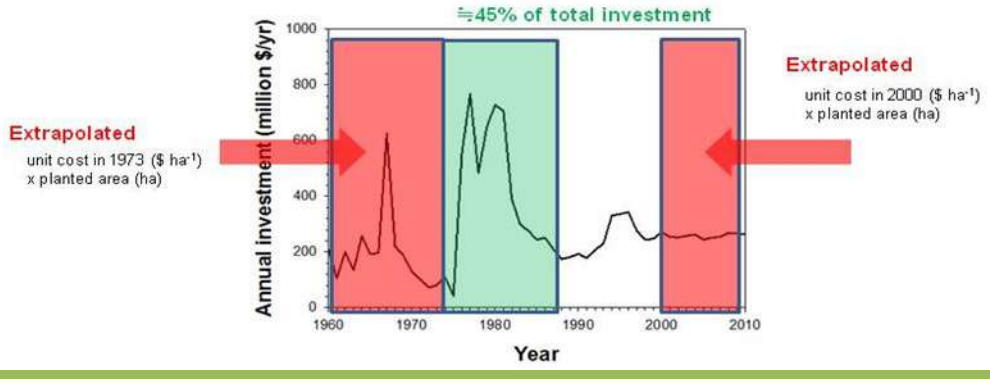
Developing a historical analysis on economic feasibility of national scale forestation program, including investment on forestation and ecosystem services in the Republic of Korea



2. Estimation of investment and ecosystem services

Investment on forestation program

- Korea Forest Service annually report forestation activities (area and monetary investment) in Statistical Yearbook of Forestry (1973–2000).
- Annual investments were converted to present value (PV) in 2010 by annual consumer price index (CPI) and exchange rate (₩ : $)
- The annual investment on forestation program was 279 million $ yr^{-1} on average from 1960 to 2010, in terms of PV in 2010.



Ecosystem services in this study

- **Disaster risk reduction (DRR)**

  Forest ecosystem can affect disaster risk, normally suppressing occurrence and magnitude.

  including **landslide, forest fire and flooding**

- **Water yield enhancement**
- **Soil erosion control**
- **Carbon sequestration**

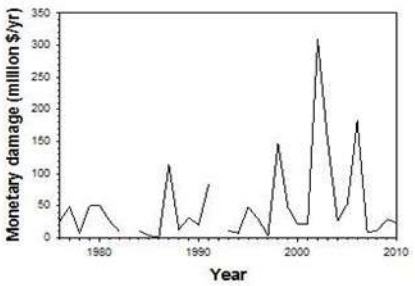
* Annual benefits were converted to PV in 2010 by annual CPI and exchange rate (₩ : $).

Quantification of damage by disasters

Landslide

Statistical data of damaged area was provided by Korea Forest Service (1976-2010).

Annual damage = **unit cost** of recovery (96 million ₩ ha^{-1}; Korea Forest Service) x damaged **area** (ha)

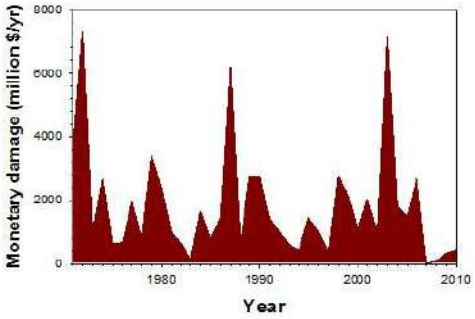


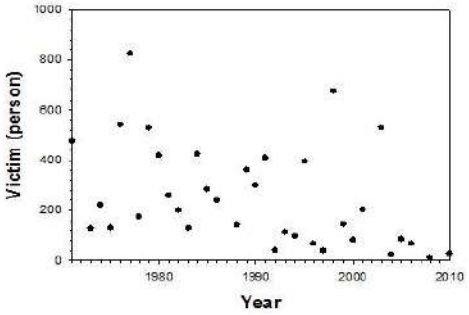
- **The damage (million $ yr^{-1})** had been fluctuated during the period, ranging from 1.4 to 308.7.
- There was **no significant trend** in the damage with time passage.

Quantification of damage by disasters

Flooding

Water Resources Management Information System (WAMIS) directly provides annual monetary damage by flooding (1971-2010).





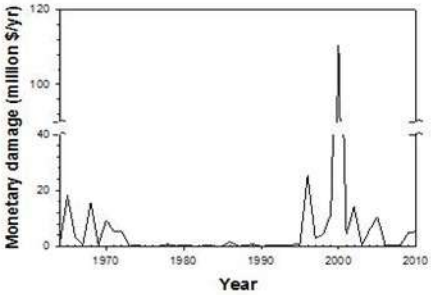
- The minimum, average, and maximum of annual monetary damages (million $ yr^{-1}) were 75.9, 1766.3 and 7334.9, respectively.
- **A decreasing pattern** of victims by flooding with time passage was observed.

Quantification of damage by disasters

Forest fire

Statistical Yearbook of Forestry provides monetary damage by fire (1980-2010; Korea Forest Service).

The damage before 1980 was extrapolated by a regression model of monetary damage (Damage (1,000 ₩) = 59.79 x volume (m^{-3}))



- The annual monetary damage by forest fire (million $ yr^{-1}) ranged from 0.1 to 110.6 with an average of 5.8.
- There was **no significant trend** in the damage with time passage.

Quantification of other ecosystem services

Soil erosion

- When there is heavy rainfall, surface runoff occurs in watershed and causes soil erosion. The amount of soil erosion is decided by precipitation, soil property, land cover and slope.
- Soil and Water Assessment Tool (SWAT) model was used to estimate hydrologic runoff and sediment yield with land cover map as input data.

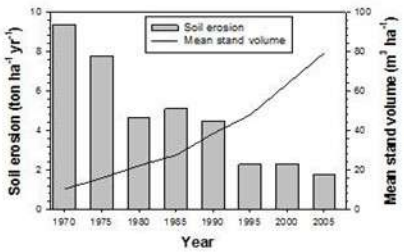
- Input Data

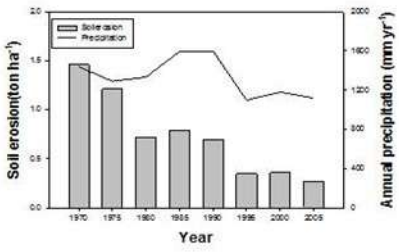
Variables	Content	Time scale	Source
Topographical data	Slope, aspect, elevation	-	National Geographic Information Institute (NGII)
Land cover map	Distance from the cities	1975–2008	Water Resources Management Information System (WAMIS)
Forest cover map	Forest cover	1970–2005	Simulated from 5th National Forest Inventory (NFI) and forest scenario (Lee et al., 2014)
Soil map	Soil series	-	National Institute of Agricultural Sciences (NAAS)
Weather data	Precipitation, Wind, Relative humidity, Temperature	1970–1979	Korea Meteorological Administration (KMA)
		1980–2005	Climate Forecast System Reanalysis (CFSR)

Quantification of other ecosystem services

Soil erosion

- During 1970-1985, Precipitation slightly increased, but soil erosion was reduced by half strongly suggesting that forestation can help soil erosion to be reduced.
- 82% decrease in soil erosion during 35 years due to the increase in forest area





Quantification of other ecosystem services

Water yield

- Water yield is the concept for quantifying the forest's functionality of providing water resources which can calculate the total amount of water resources provided by the forest.
- The Water Yield model included in the InVEST model based on the ecosystem service concept

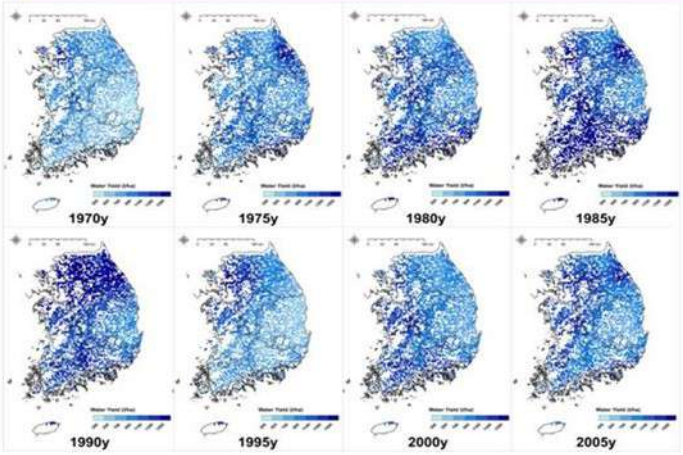
- Input Data

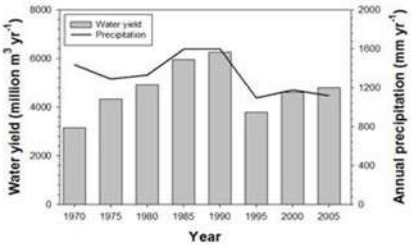
Variables	Content	Time scale	Source
Precipitation data	Annual Precipitation	1970–2005	Korea Meteorological Administration (KMA)
Evapotranspiration	Annual Evapotranspiration	1970–2005	Global Land Data Assimilation System (GLDAS)
Soil & Plant	Depth to root restricting layer Plant available water fraction	-	Constructed from Song et al.(2015)
Land cover	Forest cover	1970–2005	Simulated from 5th National Forest Inventory (NFI) and forest scenario (Lee et al., 2014)
Watershed	Soil depth	-	Water Resources Management Information System (WAMIS)

Quantification of other ecosystem services

Water yield

- Water yield correlated with forest area until 1990 but it correlated with precipitation after 1990.
- The forestation program was especially effective at the early stage.

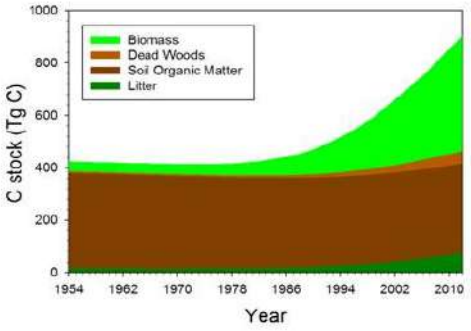


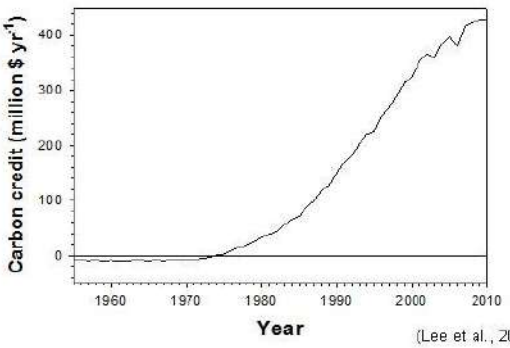


Quantification of other ecosystem services

Carbon sequestration

- Simulation of FBDC model (Lee et al., 2014)
- Quantification of change in total forest carbon sequestration





(Lee et al., 2014)

2. Estimation of investment
and ecosystem services

- **The damage by soil erosion** was estimated by being multiplied to 7,515 (substitutional unit cost for dam (₩ m^{-3}); Kim et al., 2012).
- **The benefit of water yield** was estimated by being multiplied to 969.5 (substitutional unit cost for dam (₩ m^{-3}); Kim et al., 2012).
- **The benefit of carbon credit by carbon sequestration** was estimated by being multiplied to 16.73 \$ ton^{-1} (EU ETS).

Evaluation of DRR and other benefits

We should set a reference level of disasters and ecosystem functions in order to compare decrease in DRR and increase in ecosystem functions.

DRR

- Normal reference disaster level: Disaster levels before 1976 (average)
- Conservative reference disaster level: Disaster levels before 1976 (average) without **one** extreme event

Others

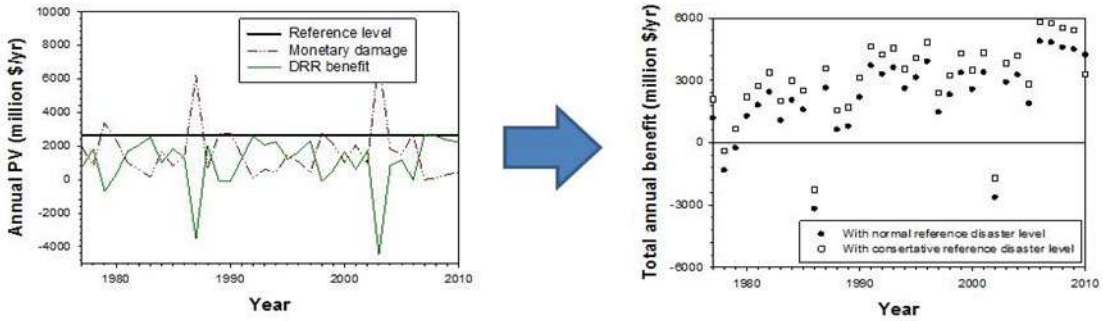
- Amount of soil erosion and water yield before1976 (average)
- Carbon sequestration had no reference level because Korean forests were almost carbon neutral before forestation program (Lee et al., 2014).

2. Estimation of investment
and ecosystem services

- **Benefit of the ecosystem service for each category was estimated as follows:**

DRR: Reference level of damage-annual damage

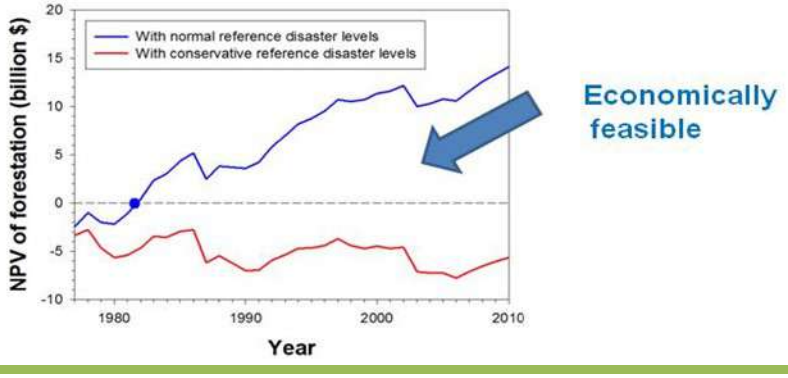
Others: Annual benefit-reference level of benefit



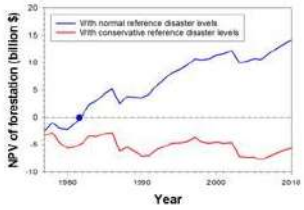
3. Analysis on economic feasibility of the forestation program

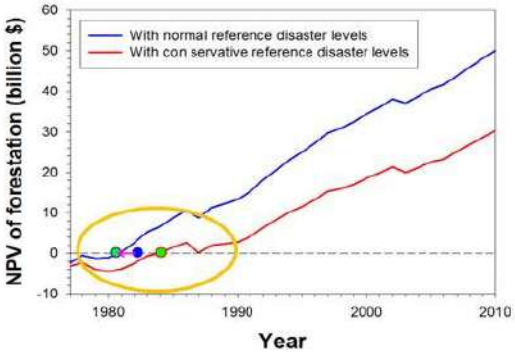
Cost Benefit Analysis: only including DRR

- The minimum and maximum net present value (NPV; billion $) were -2.44 in 1977 and 14.16 in 2010, respectively, with the normal reference disaster level.
- The NPV became positive from 1982.
- The NPV was negative with conservative reference disaster level.



- Including all benefits, the minimum and maximum NPV (billion $) were shown in 1977–1980 (-4.5–-2.3) and 2010 (30.2–50.0), respectively.
- Compared to the case of including only DRR, including all benefits made the break-even point shorten.

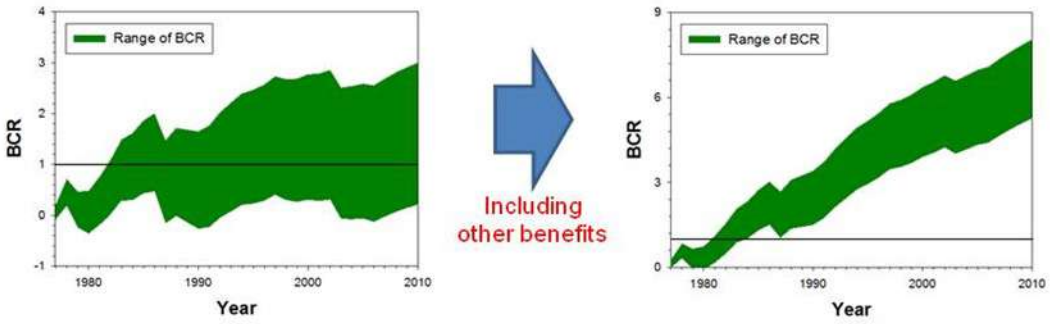




3. Analysis on economic feasibility
of the reforestation program

Cost Benefit Analysis: Benefit-cost ratio (BCR)

- BCR showed overall increase, ranging from -0.4–-0.1 to 3.0–8.1.
- The BCR implied the cost-effectiveness of the forestation program.



4. Conclusion

Lessons

- **The forestation of ROK was economically valuable in terms of enhancing ecosystem services (DRR, soil erosion control, water yield enhancement and carbon sequestration).**

  → Forestation is highly recommendable policy!

- **A certain level of investment after forestation is constantly required for protection and management.**

- **Intensive investment for short period will be effective.**

  The benefits from forestation started increasing after intensive investment on the 10-year-intensive forestation program of ROK from 1970s.

  Considered with annually occurring benefits throughout time passage, rapid and intensive forestation seems highly beneficial in the long-term.

Limitations

- **More social and environmental factors should be considered.**

  Monetary damage can be changed not only by forestation but also population density, urbanization, extreme climatic events and etc.

- **Setting reference levels**

  As the benefits of DRR and other functions highly varied with reference level, setting the level should be investigated further.

- **Unit cost and benefit of ecosystem functions**

  We used single price for each ecosystem function but previous studies reported large range of the price.

What will be done in the future

- **Further analysis on reference level and pricing**

  providing more reasonable ranges of NPV and BCR

- **Integration of model simulation results**

  detailed scientific analysis and policy implications

  considering other social and environmental factors

References

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Sharp R, Tallis HT, Ricketts T, Guerry AD, Wood SA, and et al. 2014. InVEST Tip User's Guide. The Natural Capital Project, Stanford.

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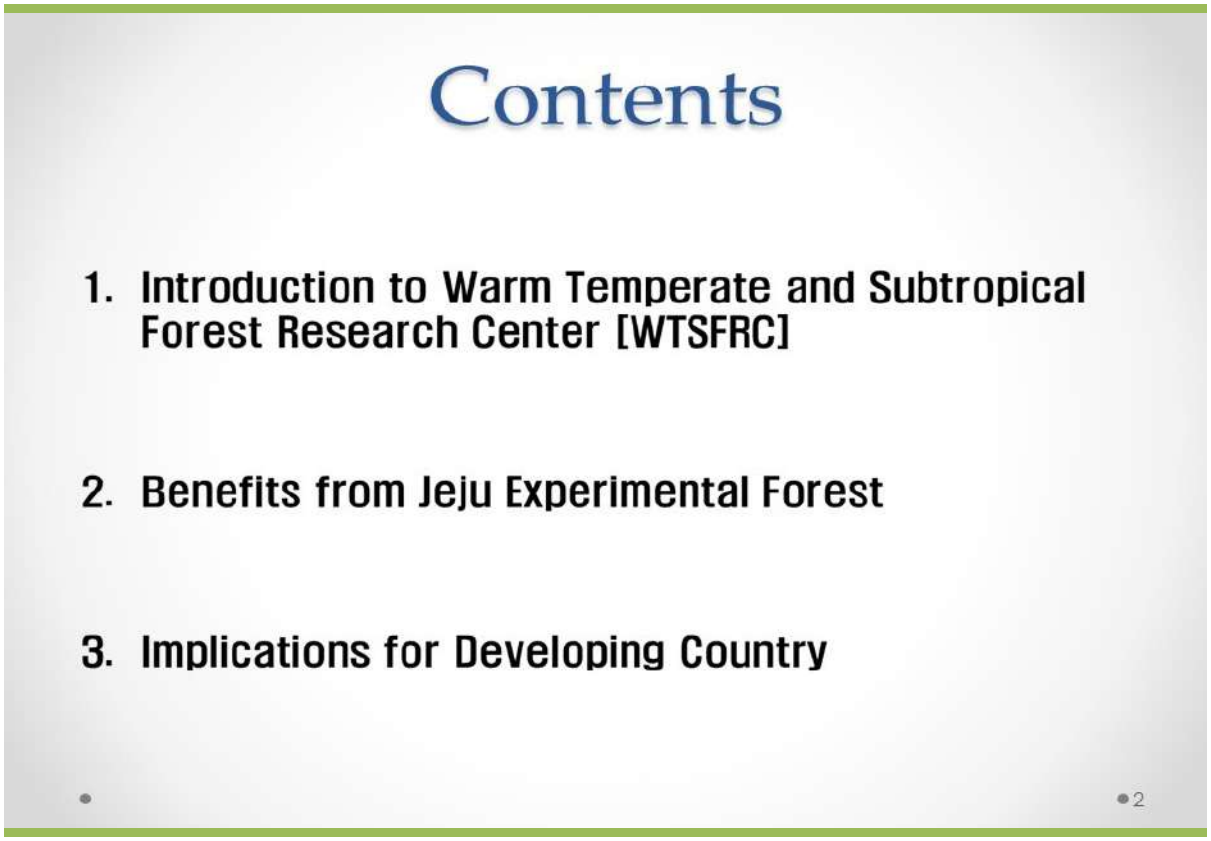
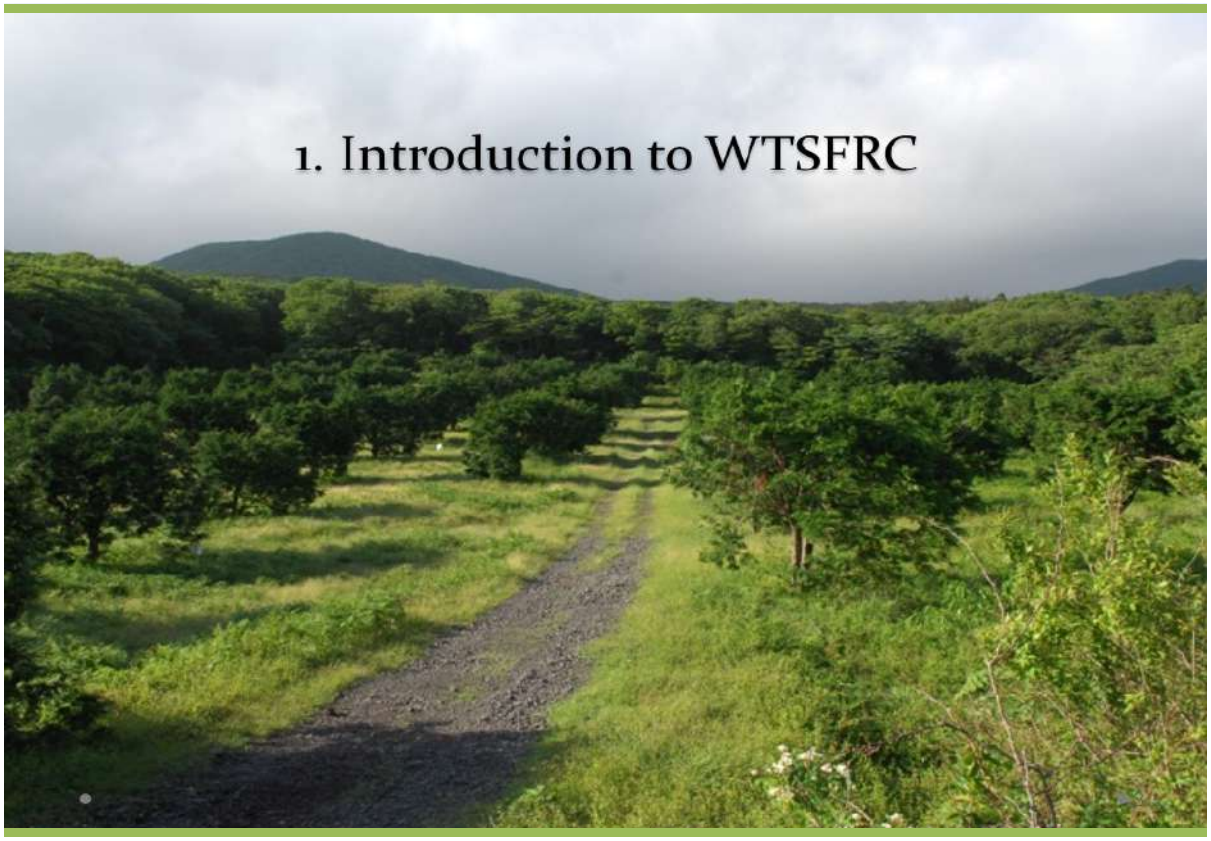
Presentation 4

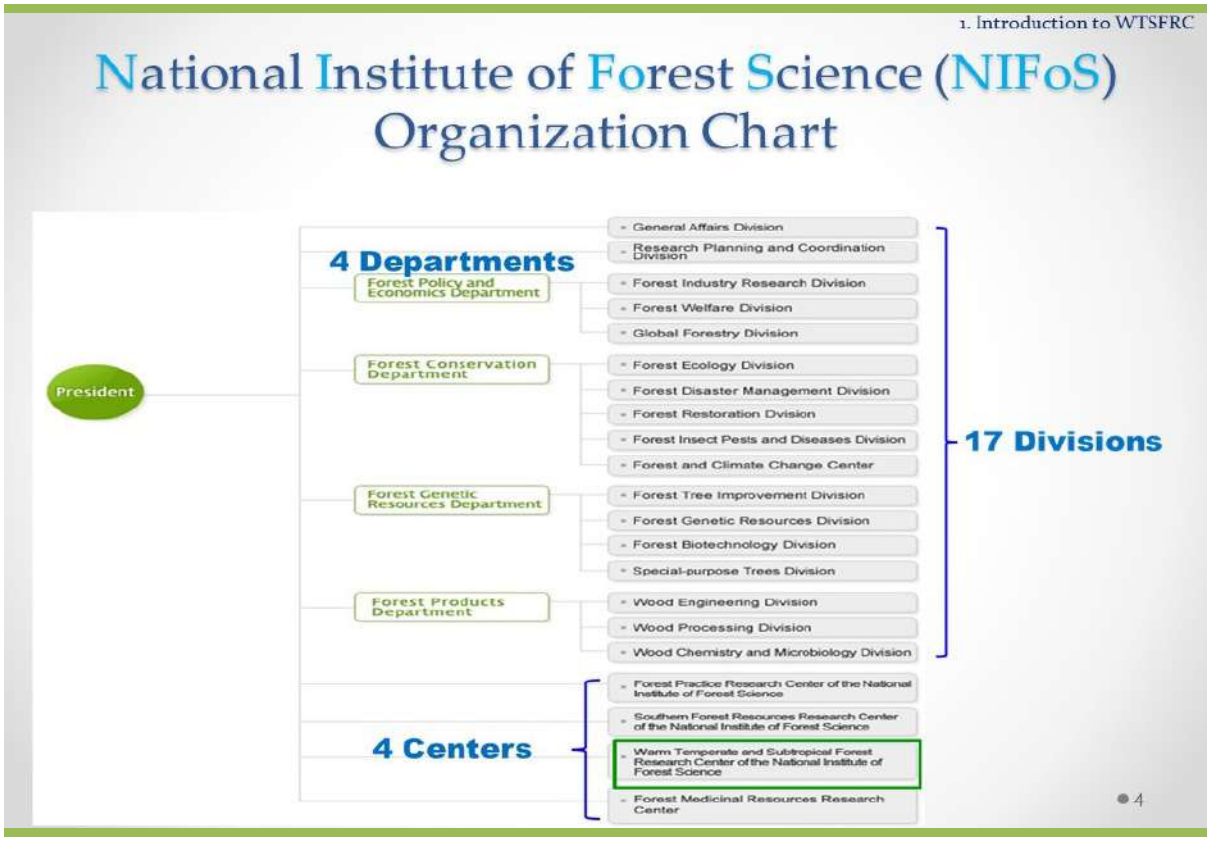
Lessons learned from sub-tropical experimental forestry(EF) research in ROK and their potential application in other countries

Dr. Jaehoon Kim


Lessons learned from Jeju Experimental Forest in the Republic of Korea
and their potential application to other countries
February 24, 2017
Korea Forest Service
National Institute of Forest Science
Warm Temperate and Subtropical Forest Research Center


Contents
1. Introduction to Warm Temperate and Subtropical Forest Research Center [WTSFRC]
2. Benefits from Jeju Experimental Forest
3. Implications for Developing Country
2


1. Introduction to WTSFRC


1. Introduction to WTSFRC
National Institute of Forest Science (NIFoS)
Organization Chart
President
4 Departments
Forest Policy and Economics Department
Forest Conservation Department
Forest Genetic Resources Department
Forest Products Department
General Affairs Division
Research Planning and Coordination Division
Forest Industry Research Division
Forest Welfare Division
Global Forestry Division
Forest Ecology Division
Forest Disaster Management Division
Forest Restoration Dvision
Forest Insect Pests and Diseases Division
Forest and Climate Change Center
Forest Tree Improvement Division
Forest Genetic Resources Division
Forest Biotechnology Division
Special-purpose Trees Division
Wood Engineering Division
Wood Processing Division
Wood Chemistry and Microbiology Division
17 Divisions
4 Centers
Forest Practice Research Center of the National Institute of Forest Science
Southern Forest Resources Research Center of the National Institute of Forest Science
Warm Temperate and Subtropical Forest Research Center of the National Institute of Forest Science
Forest Medicinal Resources Research Center
4

NIFoS Locations

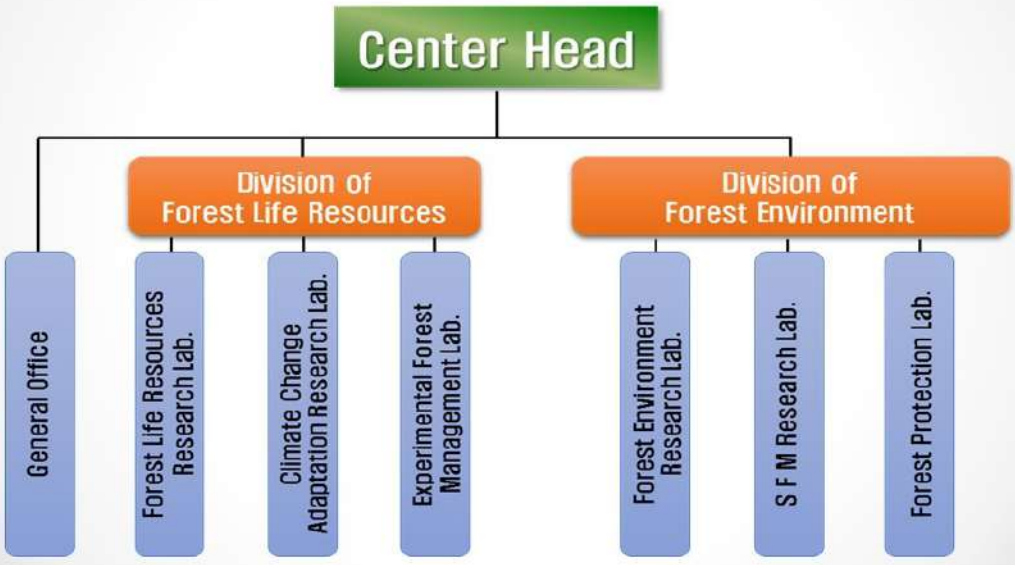
Major History

April 1, 1965	Hamyang District Office of Forest Genetics Institute
	• 1970: Move to Seoqwipo, Jeju
August 1, 1998	Jeju Forest Experimental Station of Korea Forest Research Institute (KFRI)
	• 2002: Experimental Forest (2,741ha)
January 1, 2004	Warm Temperate Forest Research Center of KFRI
	• 2006: First FSC certification in the Republic of Korea
July 26, 2012	WTSFRC of KFRI
	• 2015: Additional Experimental Forest (529ha)
January 12, 2017	WTSFRC of NIFoS
	• 2017: Total Experimental Forest (3,366.6ha)

Goal and Mission

Goal	• Conservation on warm temperate and subtropical forest ecosystem and forest resources
Mission	• Conservation and development on forest life resources • Implementation on sustainable forest management • Establishment on forest welfare foundation
Research Projects	• Climate change adaptation on forest life resources • Breeding and supply system establishment on warm temperate and subtropical forest life resources • Development on Pine Wilt Disease[PWD] control technology customized in Jeju area • Enhancement and technology development on forest welfare

Organization Chart



Major Facilities

Facilities

- Total Area: 2,911 ㎡
- Main Build.: 1,207 ㎡
- Research Build.: 904 ㎡
- Residence: 184 ㎡
- Storages: 616 ㎡

Experimental Forest

- Total Area: 3,366.6 ha
- Hannam: 1,203.1 ha
- Seogwipo: 1,550.4 ha
- Gotwawal: 605.0 ha
- Nursery: 8.0 ha

Major History

1922	National Forest Designation
	● 1939: Boundary survey
2002	Transferred from Jeju-do to Korea Forest Research Institute
	● Experimental Forest of 2,741 ha
2006	First Forest Stewardship Council (FSC) certification in the R.O.K.
	● Region: Hannam and Seoqwipo Experimental Forests
2015	Experimental Forest Designation
	● Gotjawal(a Lava Forest) areas, 529 ha

Jeju Experimental Forest Locations

Hannam Experimental Forest

Seonhul and Cheongsu-Jeoji Experimental Forest

Value investigation and sustainable utilization on Gotjawal

Research Projects related to Jeju Experimental Forest

- Conservation and restoration on Korea Fir in Mt. Halla - [Hannam]
- Forest genetic resources conservation - [Hannam and Seoqwipo]
- Forest pest and disease control - (Hannam, Seonhul and Cheongsu]
- Forest vegetation monitoring - [Seonhul]
- Gotjawal, Lava forest value investigation and evaluation - [Seonhul and Cheongsu]
- Sustainable forest management indicator monitoring - [Hannam and Seoqwipo]
- Forest management and system development - [Hannam and Seoqwipo]
- Long term forest ecologic information monitoring – [Seoqwipo Experimental Forest]
- Long term runoff monitoring on forest watershed - [Seoqwipo Experimental Forest]
- Urban forest evaluation - [Hannam and Seoqwipo]

First FSC Certification in the Republic of Korea in 2006

- Certification duration: 5 year
- Recertified in 2015
- Every year desk and field examination performed
- Jeju Experimental Forest is maintained by FSC criteria

- Establishment of 7 Criteria and 47 Indices for SFM

1) Biodiversity Conservation
2) Forest Ecosystem Productivity Maintaining and Promotion
3) Forest Ecosystem Health and Vitality
4) Soil and Water Resources Conservation
5) Carbon Exchange
6) Social and Economic Benefits
7) Laws, policies, plans

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2. Benefits from Jeju Experimental Forest

Biodiversity Conservation

❖ Investigated Endangered species and forest reliant species:
20 plants and 23 animals

17

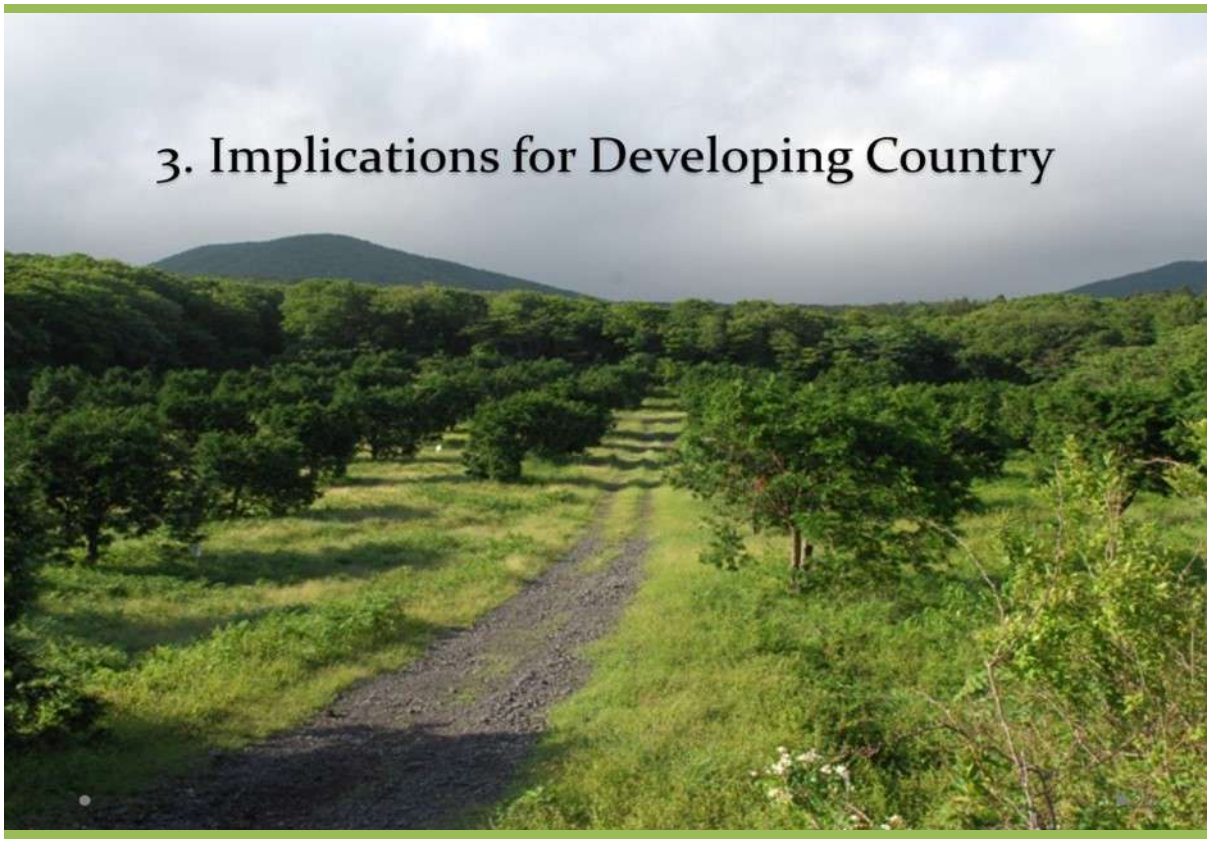
2. Benefits from Jeju Experimental Forest

Forest Productivity Maintaining

18

Presentation 4


2. Benefits from Jeju Experimental Forest
Social and Economic Benefits


3. Implications for Developing Country

3. Implications for Developing Country

Conservation of Forest Ecosystem

- Endangered and forest reliant species monitoring for forest ecosystem enhancement
- Tree height and diameter measurement for Forest health evaluation
- Seed orchard management for genetic diversity enhancement
- Carbon exchange monitoring for climate change adaptation

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3. Implications for Developing Country

Sustainable Forest Management

- Fuel and stock farming – non planting – forest decline – grassland ⇒ desertification [vicious circle]
- Regulated afforestation, thinning, harvesting for sustainable timber production
- Soil physicochemical properties analysis for determining suitable tree on a site
- Regulated forest road construction and prevention of soil erosion
- Forest management for water resources retention enhancement

22

Contribution to Local Community

- Hiring local people at experimental forest management for income improvement of local community
- Eco-tour program development for visitor
- Advisory committee foundation for communication with local people
- Education on forest guide and forest therapy program for improving forest welfare

Presentations of Session II

Moderator

Dr. Sarwat Chowdhury

Presenters

Dr. Thaung Naing Oo

Mr. Anura Sathurusinghe

Ms. Elsie G. Attafuah

Md. Sukur Ali

Md. Abdul Latif Mia

Presentation 5

Sustainable forest management: Challenges and opportunities from Myanmar

Dr. Thaung Naing Oo

SDG 15 "Life on Land" Conference with focus on Sustainable Forestry

Sustainable Forest Management; Challenges and Opportunities from Myanmar

Thaung Naing Oo Ph.D.
Director - Forest Research Institute
Forest Department
Ministry of Natural Resources and Environmental Conservation
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24 February 2017

Holiday Inn Hotel, Seoul

Background information

Background information of Forestry Sector in Myanmar

- Myanmar has been managing its forest resources on a sustainable basis. Myanmar Selection System was started in 1881 to achieve the sustainable yield.
- Silvicultural operations are carried out to improve the quality of the forests. Forest plantations are also established in the degraded forest areas for various purposes.
- Forests are managed through 10 years District Forest Management Plan for each of 69 Districts across the country. Currently, 10 year District forest management Plan (2016-2017 to 2025-2026) is being implemented.
- According to FRA 2015, Myanmar was the a country of third highest deforestation rate among countries in the world.
- Strengthening SFM practices and large scale reforestation and rehabilitation is urgently needed in order to increase forest cover, and to compliance with the international agreement related to climate change mitigation and adaptation.

3

Forest Policy and Legal Aspect

- National Environmental Policy (1994)
- Myanmar Forest Policy (1995);
- Land Use Policy (2016)

Myanmar Forest Policy 1995
POLICY IMPERATIVES

PROTECTION of soil, water, wildlife, biodiversity and environment;
SUSTAINABILITY of forest resources to ensure perpetual supply of both tangible and intangible benefits

BASIC NEEDS of the people for fuel, shelter, food and recreation;

EFFICIENCY to harness, in the socio-environmentally friendly manner, the full economic potential of the forest resources;

PARTICIPATION of the people in the conservation and utilization of the forests;

PUBLIC AWARENESS about the vital role of the forests in the well being and socio-economic development of the nation.

Forest Policy and Legal Aspect

- Forest law (1992);
- Protection of wildlife and wild plants and conservation of natural areas law (1994);
- Community forestry instructions (1995) and
- Environmental Conservation Law (2012)

Forest Resource Based

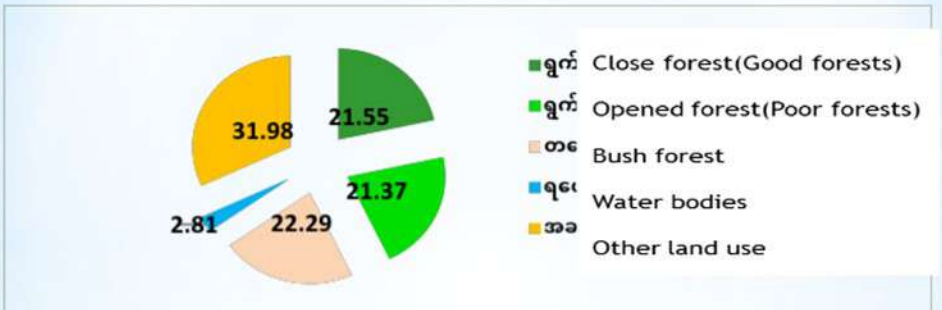
Population: 51.2 millions (Population Census, 2014)
Total forest area: 29 mill ha (42.97% of total country area)

Forest Cover Status	Area (,000 ha)	% of total country area
Closed forest	14585	21.56
Open forest	14456	21.36
Total forest	**29041**	**42.92**
Other Wooded land	15080	22.28
Others	21634	31.97
Water body	1903	2.81
Total	67658	100

Permanent Forest Estate (PFE)	Area (acres)	% of total country area
Reserved Forest (RF)	20,810,415	17.92
Protected Public Forest (PPF)	11,718,243	6.97
Protected Area System (PAS)	9,807,490	5.75

Current Status of Forest in Myanmar

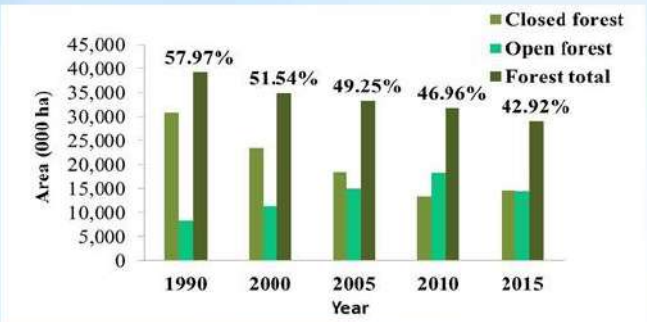
1. Forest Cover status in Myanmar



- **Definition of forest**
  - Area covered by forest with the minimum of 0.5 ha (1.24 Acre) and 5 m (16 feet) height of tress and 10% minimum canopy density
- **Close Forest**
  - Greater than the 40 % of forest canopy
- **Opened Forest**
  - Forest canopy cover between 10% and 40%.

4

Forest Cover Changes in Myanmar



Deforestation inside reserved forest and Protected Public Forestry	1.38%
Deforestation outside reserved forest and Protected Public Forestry	2.36 %
Average deforestation at national level	1.73 %

Drivers of Deforestation in Forestry Sector

- Over-exploitation of forest: timber (legal-illegal)
- Unstable or pioneering shifting cultivation
- (Not permanent conversion of forest into agricultural land)
- Over-harvesting of fuel wood and charcoal
- Over-grazing, Forest fires, Storms, Pests

Drivers of Deforestation in outside Forestry Sector

- Expansion of Agriculture (Subsistence and Commercial)
- Mining
- Hydro-power Development
- Infrastructure (road, pipeline, Special economic zones, power lines)
- **Urbanization and resettlement**
- Development of aquaculture

Sustainable Forest Management in Myanmar

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Elements of SFM

1) Extent of forest resources
2) Forest biological diversity
3) Forest health and vitality
4) Productive functions of forest resources
5) Protective functions of forest resources
6) Socio-economic functions of forest resources
7) Legal, policy and institutional framework

Sustainable forest management

- National Forest Management Plan (2002-2031)

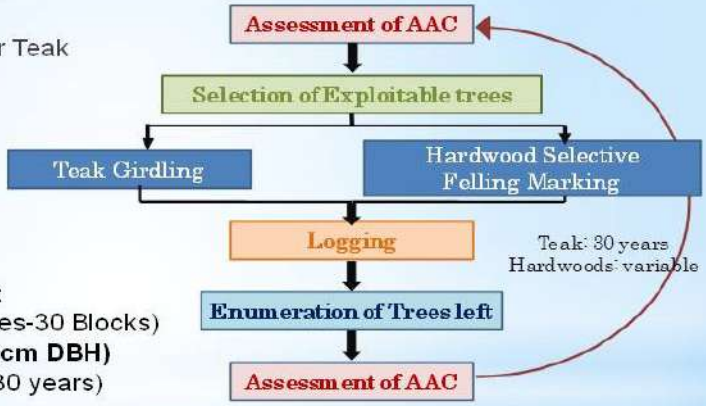
- Forest Management Unit (FMU) is District Level.
- 68 District (68 FMU) across the country.
- It includes 6 categories:
  - Production Working Circle (PWC),
  - Planted Forests Working Circle (PFWC),
  - Local Supply / Community Forestry Working Circle (LS/CFWC)
  - Watershed Forests Working Circle (FWC) and
  - Non-wood Forest Products Working Circle (NFPWC)
  - Protected areas working circle
  - Special Working Circle (eg. Mangrove, bamboo, pine etc.)

10

Natural Forest Management

Myanmar Selection System (MSS)

* Over 34 million ha (natural forests)
* Systematic forest management in Myanmar since 1856, especially for Teak forests
* Myanmar Selection System (MSS)
* Selection-cum-cultural system



MSS is practiced within the bound of :
(1) Space/Area limit (Felling series-30 Blocks)
(2) Size/Girth limit **(63 cm or 73 cm DBH)**
(3) Time limit (a felling cycle of 30 years)

Fixing of Annual Allowable Cut (AAC) for teak and hardwood
Cultural treatments: Improvement felling, thinning, climber cutting etc.

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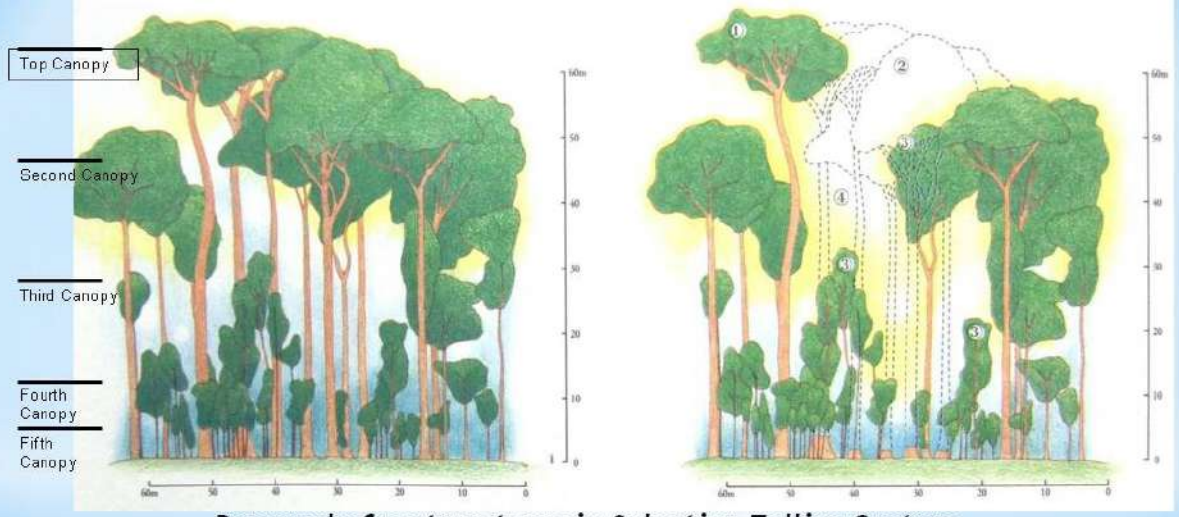
SELECTIVE FELLING SYSTEM



Removal of mature trees in Selective Felling System.

- **Criteria and Indicators (C&I) for SFM**
  - There are 63 districts (Forest Management Unit-FMU) across the country.
  - 7 Criteria and 73 Indicators were identified for Forest Management Unit (FMU) level.
  - 7 Criteria and 78 Indicators were identified for National level.

Unique feature of in Myanmar forestry sector

* Utilization of elephant in forestry sector is a very unique in the history of Myanmar forestry sector.
* Timber extraction is being carried out by using Elephants because of geographical conditions as well as for environmental least impacts.
* Myanmar still using elephant for timber extraction and there are about 3500 trained elephants have been working for timber extraction.

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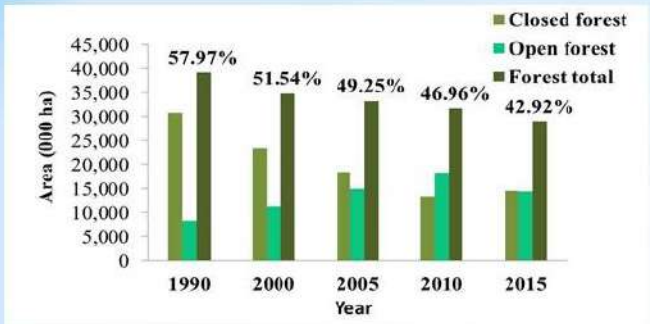
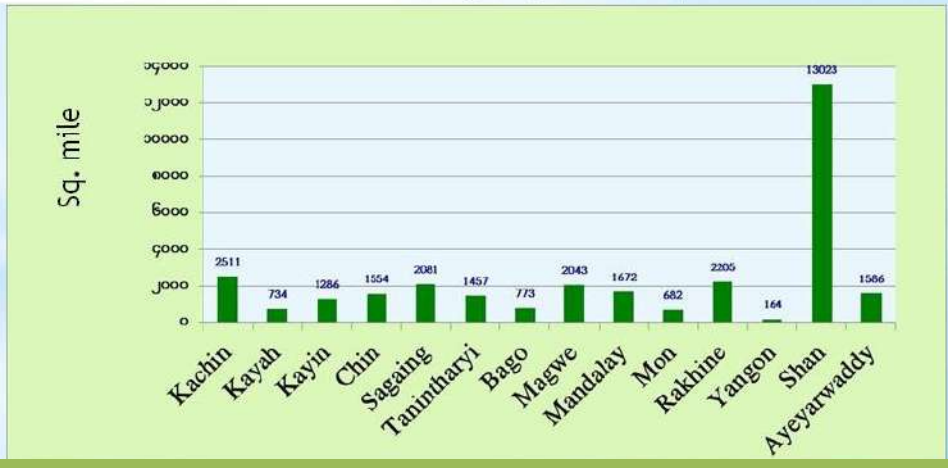
Reforestation of Degraded Forests

14

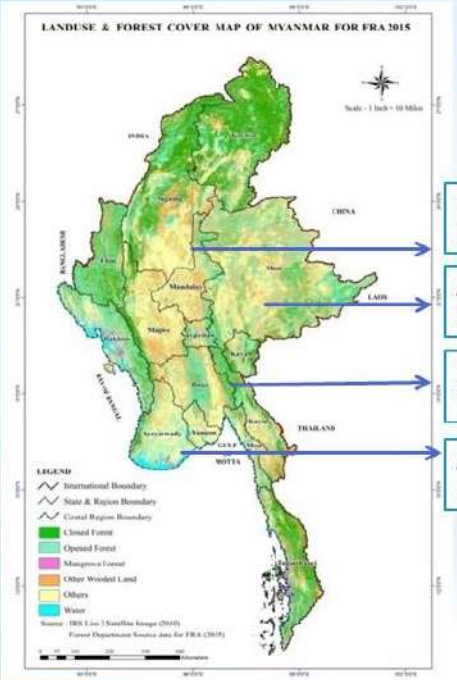


Forest Cover Change

Area of Deforestation in States and Region (2010-2015)



National-Level Large-scale Reforestation Zones



Why reforestation in these areas?

Central Dry Zone: Rainfall 600 mm/yr	Desert-like formation and land degradation
Mountain Watershed Zone: Rainfall 1473 mm/yr	Serious soil erosion
Bago Yoma Zone: Rainfall 1993 mm/yr	Rapid deforestation
Mangrove-Delta Zone: Rainfall > 3500 mm/yr	Natural disaster and livelihood

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REFORESTATION OF DEGRADED FORESTS

- Government (FD)
- Communities
- Private

- Conventional plantation
- Enrichment planting
- Taung-ya planting (Agro-forestry)
- Community forestry

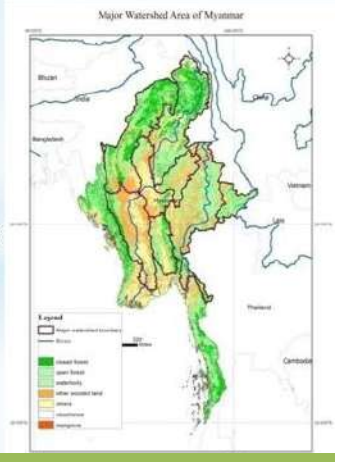
Plantation type	Area (ha)	% of total area
Commercial	490,565	55.6
Watershed	72,519	8.2
Industrial	136,846	15.5
Village supply	182,019	10.6
Total	881,948	100

REFORESTATION OF DEGRADED FORESTS

Major watershed areas of Myanmar

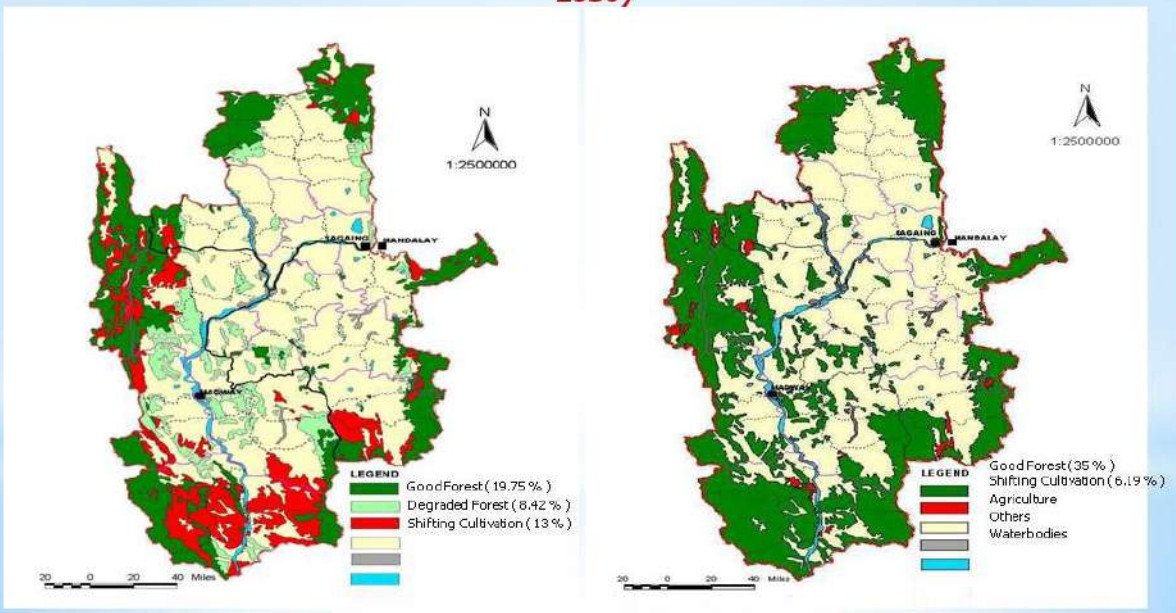
1. Ayeyarwady-Chindwin Rivers ,
2. Rakhine coastal region
3. Sittaung River
4. Thanlwin River
5. Taninthari coastal area
6. Mekong River Basin

	Catchment area (km^2)	Runoff (km^3)
Total	737,800	1,081.88



Combating degradation of land, drought and desertification in the Dry Zone of Central Myanmar

Comparison of Land Use Conditions Before and After of Thirty Years Plan (2001-2030)



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Reforestation of Mangrove in Myanmar

No.	State/Region	Area (acre) 1920	Area (acre) 2007	Area (acre) 2013
1	Rakhine State	414,470	400,050	4,124
2	Ayeyarwady Region	079,019	228,747	111,317
3	Taninthari Region	647,571	427,120	373,131
	Total	**1,741,060**	**1,063,928**	738,575

2016

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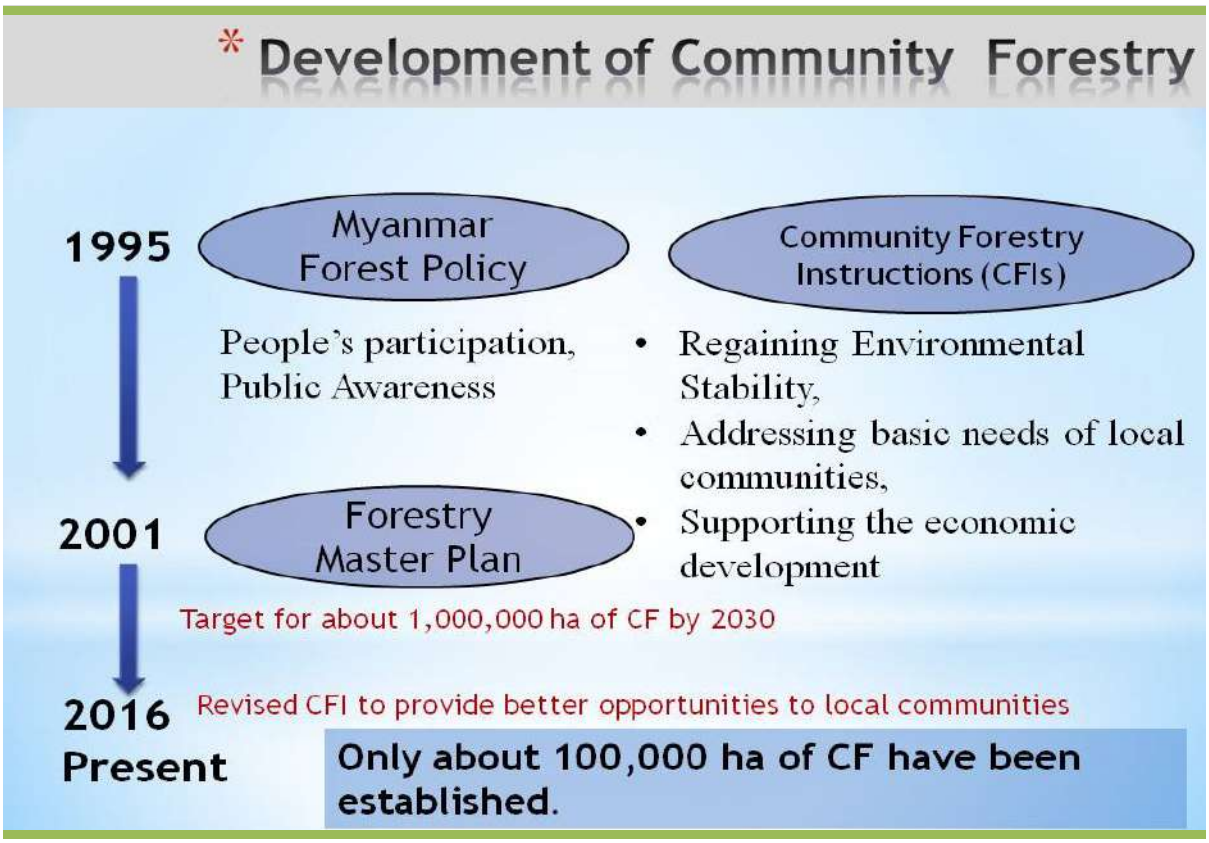
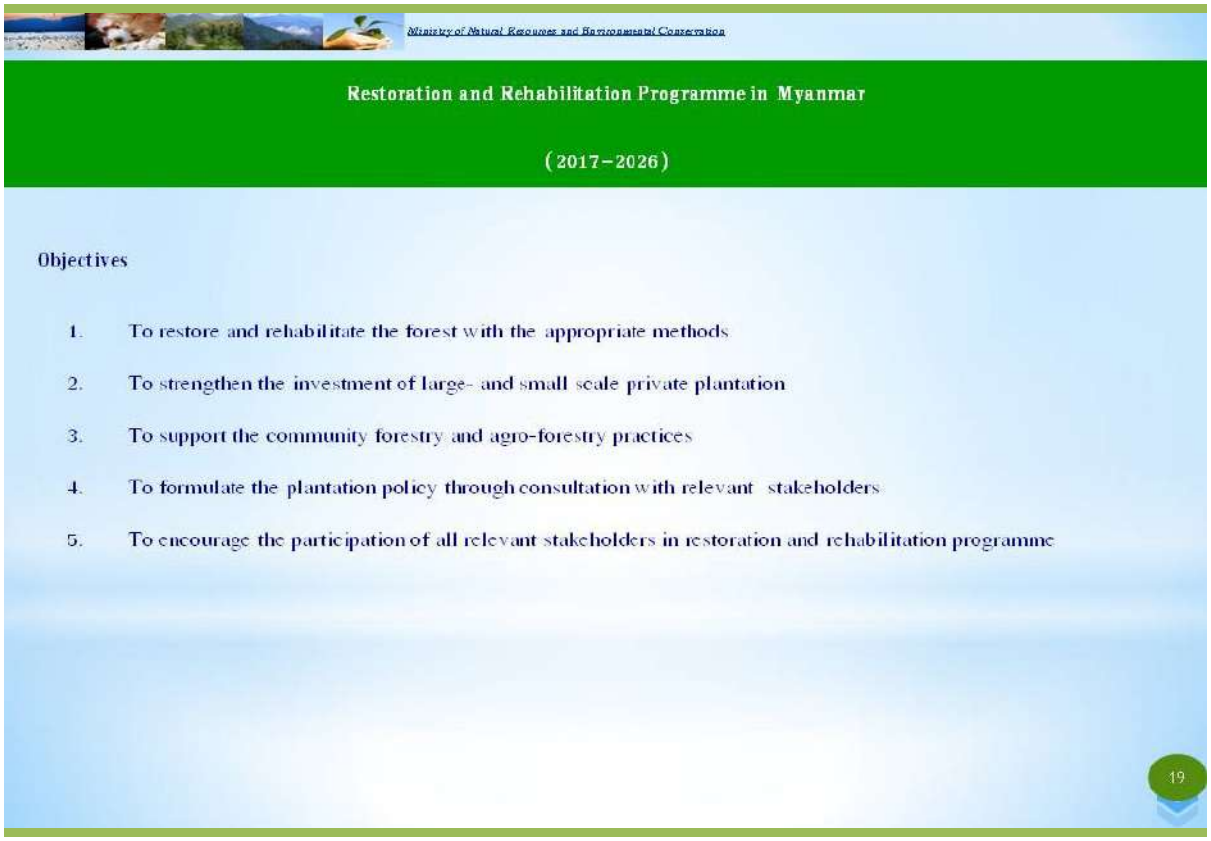
REFORESTATION THROUGH COMMUNITY FORESTRY

- Community forestry (CFI 1995 & 2016)
  - Community Forestry Instructions (CFI) was issued in 1995 and revised in 2016.
  - Afforestation of areas insufficient in fuelwood and other forest products for community use
  - for the planting of trees and extraction and utilization of forest products to obtain food supplies, consumer products and income by local community participation
  - Revised CFI 2016 allows local community enterprise led CF

* Salient points of Community Forestry

- Any land at the disposal of the state can be alienated as community forests
- Land tenure is initially granted for 30 years
- The tenure right is inheritable
- Forest products harvested from CF for local use are tax-free
- Seeds and seedlings needed for the first rotation and technical assistant are provided by FD free of charge
- No restriction is imposed on the selling and pricing of the surplus forest products


* Development of Community Forestry
1995
Myanmar Forest Policy
People's participation, Public Awareness
Community Forestry Instructions (CFIs)
• Regaining Environmental Stability,
• Addressing basic needs of local communities,
• Supporting the economic development
2001
Forestry Master Plan
Target for about 1,000,000 ha of CF by 2030
2016
Revised CFI to provide better opportunities to local communities
Present
Only about 100,000 ha of CF have been established.


Ministry of Natural Resources and Environmental Conservation
Restoration and Rehabilitation Programme in Myanmar
(2017-2026)
Objectives
1. To restore and rehabilitate the forest with the appropriate methods
2. To strengthen the investment of large- and small scale private plantation
3. To support the community forestry and agro-forestry practices
4. To formulate the plantation policy through consultation with relevant stakeholders
5. To encourage the participation of all relevant stakeholders in restoration and rehabilitation programme
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Restoration and Rehabilitation Programme in Myanmar

(2017–2026)

Expected outputs

1. Formulation of Forest Plantation Policy
2. Establishment of (352,438)Acre of forest plantations owned by the State
3. Establishment of (285,104) Acre of private plantations
4. (818,538) Acres of Assisted Natural Regeneration in the Production Forests
5. Conservation of (500,000)Acre of remaining natural forests in Central Dry Zone
6. Establishment of (770,332)Acre of Community Forests
7. Reservation of (1610) square mile (6.19 5% of country area) to fulfil the national target of 30% of PFE in accordacne with Myanmar forest policy 1995.
8. Socioeconomic development, climate change mitigation and adaptaion and other co-benefits

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Restoration and Rehabilitation Programme in Myanmar

(2017–2026)

Project period of the programme

- 10 years programme
- Phase I – 2017-2018 to 2021-2022 (5 years)
- Phase II _ 2022-2033 to 2026-2017 (5 years)

Project Area

- Reforestation will be implemented in 68 Forest Districts in 15 States and Regions

Implementing Agencies

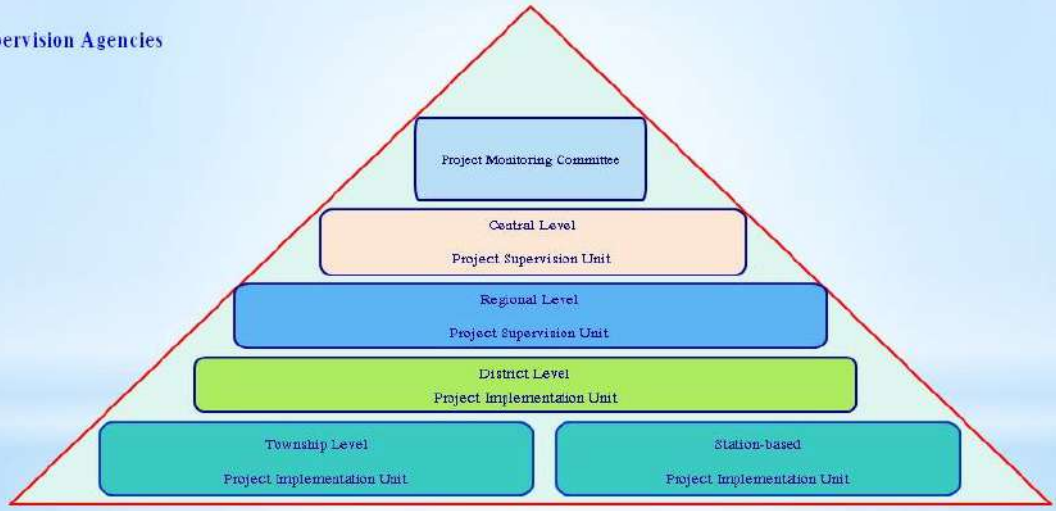
- Forest Department
- Dry Zone Greening Department

22

Restoration and Rehabilitation Programme in Myanmar

(2017–2026)

Supervision Agencies



- Addressing the ToR of each Unit for the Project Supervision and implementation

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Challenges and Opportunities for SFM in Myanmar

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CHALLENGES FOR SFM

- Lack of integration of forestry policies and planning into other sectoral policies as well as national development plans
- Heavily dependent on forests and developmental matters
- Actual and potential tradeoffs - forests vs. other landuse
- Lack of recognizing - full range of values of forests
- Isolation of forest-dependent community - poverty-limited market access
- Limited resources, insufficient mobilization and man power
- Under-valuing rights, interests and traditional knowledge of indigenous people and local communities

Challenges

Direct Causes of deforestation

1. Over Exploitation
2. Illegal logging
3. Fuel wood extraction
4. Agricultural land expansion
5. Shifting Cultivation
6. Mining
7. Hydropower/irrigation Dam Construction
8. Urban Development
9. Fish and Shrimp farming/ponds in Mangrove area
10. Natural Disaster such as Cyclone, forest fire, etc

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Challenges

Indirect Causes of deforestation

1. Poverty and limited job opportunity
2. High market demands of forest products
3. Lack of Land use policy in the past
4. Weak monitoring and assessment in natural resource management
5. Limited budget
6. Weak Law Enforcement
7. Ever increasing population
8. Weak coordination among stakeholders
9. Corruption
10. Weak political support

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Opportunities for SFM

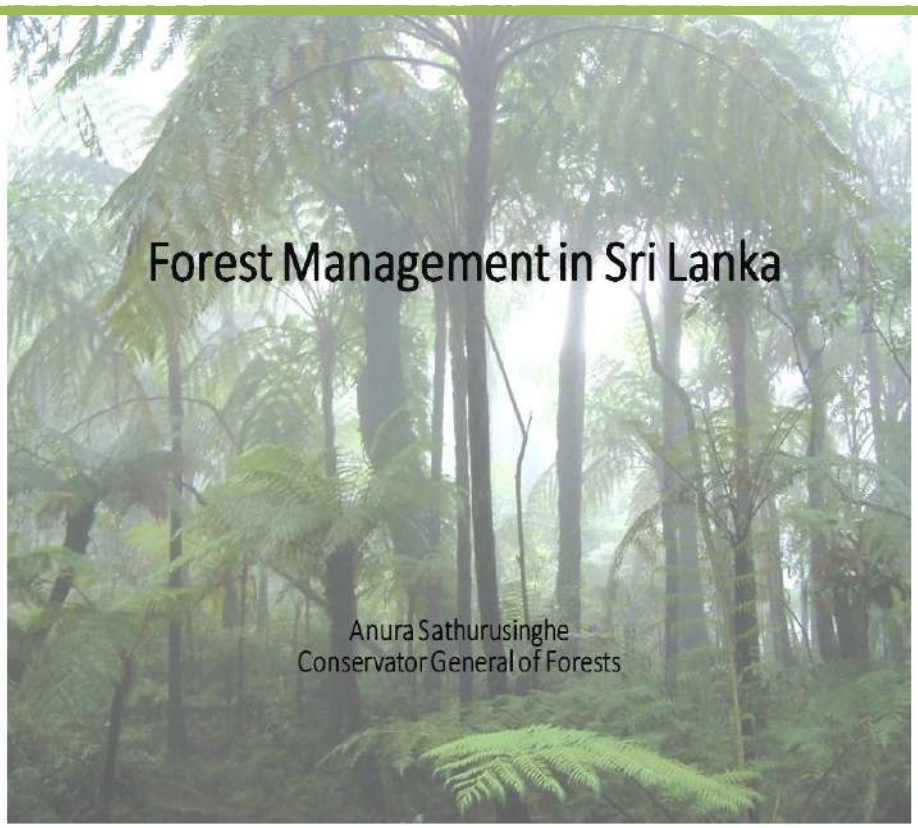
- Strong political Supports for Forestry and Environmental Sector
- Log Export Ban (LEB) since April 2014
- Logging Ban (2016-17) across the country
- Logging Ban for 10 years in Bago Yoma Range
- Initiative of large-scale reforestation plan (10 years)
- Reducing logging (well below Annual Allowable Cut-AAC) across the country
- Implementation of REDD+
- Initiative of FLEG-T and EU VPA process
- Adoption of National Use Policy (2016)
- Forming National Environmental Conservation and Climate Change Committee
- Accelerating to combat illegal logging in cooperation with Policy Force and Armed Force
- Decentralization of forest management and scaling up Community Forestry
- Forestry Sector as an important component of Nationally Determined Contribution (NDC)
- Improving coordination mechanism with line Ministries and States/Regional Government


THE GLOBAL GOALS
SUSTAINABLE DEVELOPMENT GOALS 2030
GOAL 15
15 LIFE ON LAND
15 LIFE ON LAND
Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
Thank you for your kind attention!

Presentation 6

Sustainable forest management:
Lessons from Sri Lanka

Mr. Anura Sathurusinghe



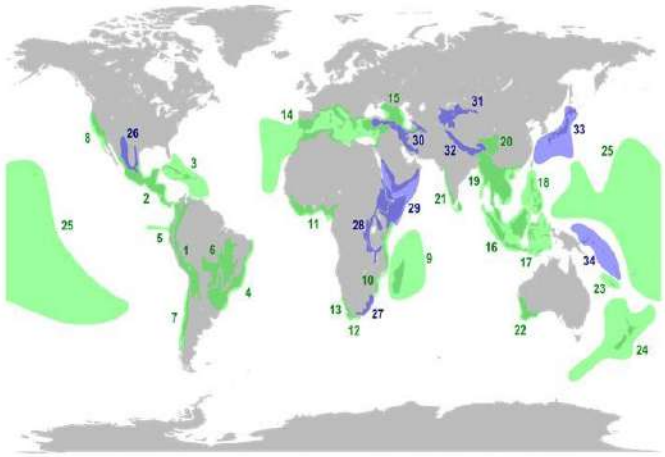
Presentative Overview:

- Background
- Present Forest Policy of Sri Lanka
- Drivers of Deforestation & Forest Degradation
- Objectives of Forest Management
- Approaches
- Sri Lanka UN-REDD Programme
- Way forward
- Conclusion

Background: Facts about Forestry in Sri Lanka

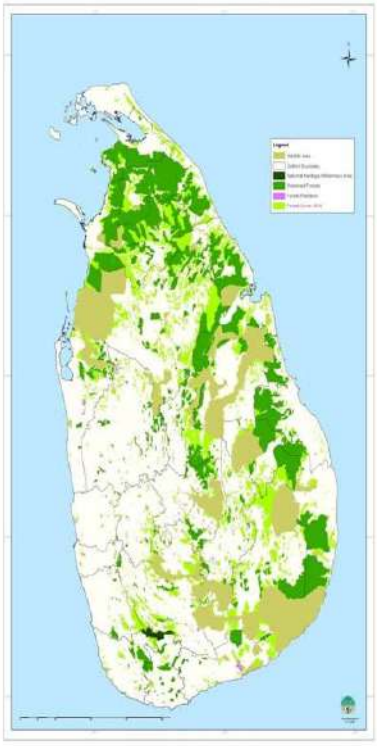
- Sri Lanka is classified as a low forest cover country with low rate of deforestation – Total area under forest cover is 2.0 million ha (30% of the total land area while area under tree cover is > 65%).
- All forms of biological diversity in forests are very high and Sri Lanka together with Western Ghats of India has been declared as one of the 34 biodiversity hot spots in the world.
- Protected areas occupy considerable extent of land when high population density is considered.
- Existing forest cover (29.7% of total land area) to be increased to 32% by 2030

Sri Lanka along with Western Ghats is one of the 34 Biodiversity hotspot of the World



Out of 3154 flowering plants in Sri Lanka1385 are endangered.

Map of Protected Areas in Sri Lanka



Forest

Definition:

- **All lands at the disposal of the (Crown) state**

  - National Heritage Wilderness Area
  - Conservation Forests
  - Reserved Forests
  - Other state Forests
  - Village Forests

Forest - Other Definitions:

- **Based on Canopy Cover:**
  - Dense Forest or High Forest or Closed Canopy Forests
  - Sparse or Open Forests
  - Other

- **Based on Agro-ecological Zones:**
  - Dry Zone Forests or Dry Monsoon Forests
  - Intermediate Zone Forests or Moist Monsoon Forests
  - Wet Zone Lowland Forests or Tropical Rain Forests
  - Wet Zone Mid-country Forests or Sub montane Forests
  - Wet Zone Up-country Forests or Montane Forests
  - Riverine Forests or Gallery Forests
  - Savannah Forests
  - Mangroves

Forest Policy (1995) Objective 1.

To conserve forests for posterity, with particular regard to biodiversity, soils, water and historical, cultural, religious and aesthetic values.

Policy Objective 1.

To conserve forests for posterity, with particular regards to biodiversity, soils water and historical, cultural, religious and aesthetic values.

- World Heritage Sites - 2
- International Man & Biosphere Reserves - 3
- National Heritage Wilderness area - 1
- Conservation Forests
- Reserved Forests
- Other state Forests
- Environmentally sensitive areas
- Elephant Management Ranges

Forest Policy (1995) Objective - 2

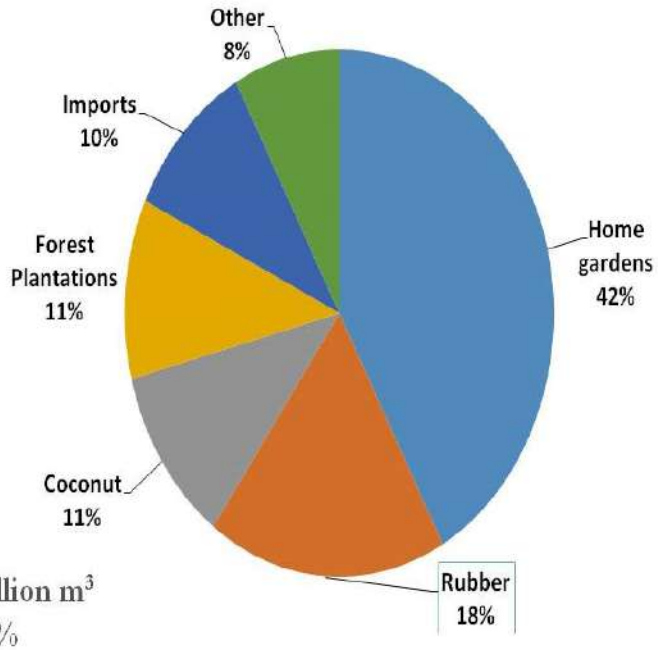
To increase the tree cover and productivity of forests to meet the needs of present and future generations for forest products and services.

Policy Objective 2.

To increase the tree cover and productivity of forests to meet the needs of present and future generations for forest products and services

- Reforestation
- Afforestation
- Forest restoration
- Trees outside Forests – Home gardens
- Other miscellaneous plantings

The share of wood supply by various sources - 2006



Total supply: 1.24 million m^3
ToF contribution: 71%

Forest Policy (1995) Objective - 3

To enhance the contribution of forestry to the welfare of the rural population, and strengthen the national economy, with special attention paid to equity in economic development.

Policy Objective 3.

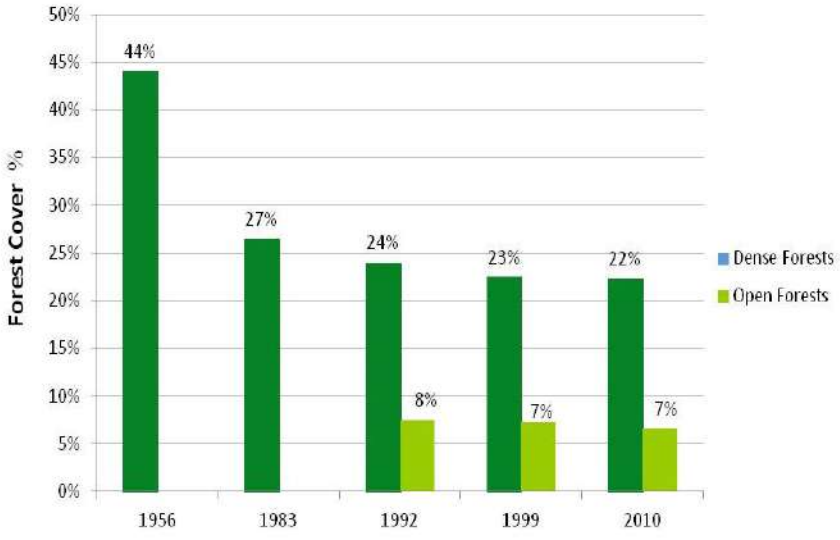
To enhance the contribution of forestry to the welfare of the rural population, and strengthen the national economy, with special attention paid to equity in economic Development.

- Home Garden Development
- Farmers' Woodlots
- Miscellaneous Planting Programmes
- Community Forest Management Programmes
- Nature-based Tourism

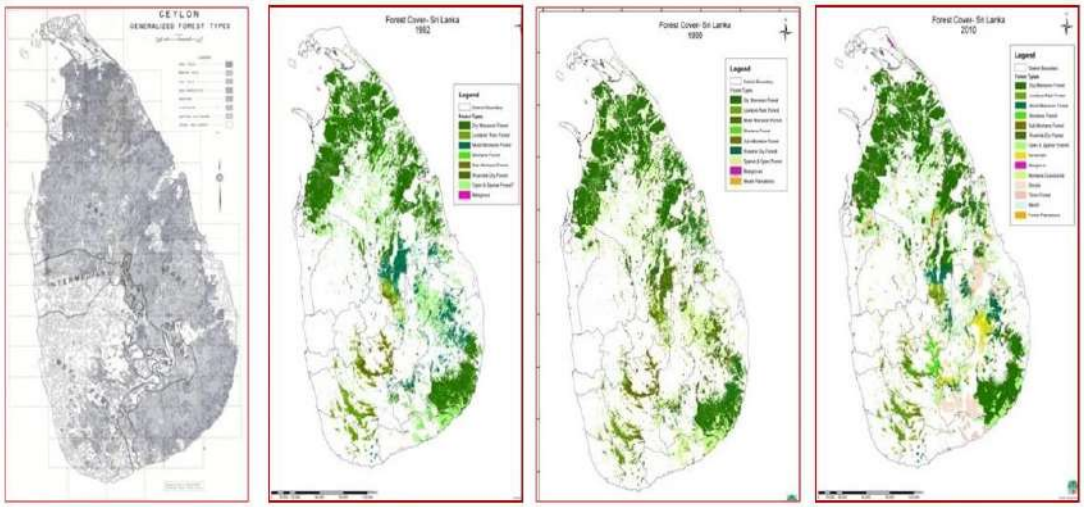
Extent of Forests by forest types in 2010

Forest Type	Extent-ha	Percentage
Lowland Rain Forests	123,302	1.9
Moist Monsoon Forests	117,885	1.8
Dry Monsoon Forests	1,121,392	17.1
Montane Forests	44,758	0.7
Sub Montane Forests	28,513	0.4
Riverine Dry Forests	2,425	0.0
Mangrove Forest	15,669	0.2
Savannah Forest	68,043	1.0
Open and Sparse Forest	429,485*	6.5
Total	**1,951,472**	**29.7**

Deforestation in Sri Lanka



Change of Forest Cover



1956 (44.1%) 1992 (35%) 1999 (32%) 2010 (29%)

Causes of Deforestation and Forest Degradation

Shifting cultivation

Cattle Damages on Natural Regeneration

(No of Cattle and Buffaloes in Sri Lanka is above 1.5)

Causes of Deforestation and Forest Degradation

Illegal cultivation

Encroachments

Planned Development Projects

Extraction of gravel, metal and minerals from forests

Causes of Deforestation and Forest Degradation

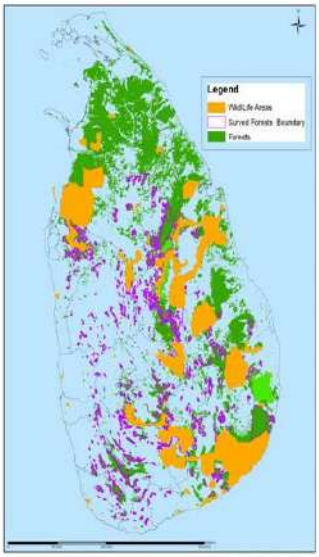
Cardamom cultivation

Forest Fires

Natural Forest Management

- Forest Survey and Boundary Demarcation
- Declaration of forests
- Forest Restoration
- Forest Fire Protection
- Eco-tourism

Survey and demarcation of forests.



Around 11,000 km of forests boundaries surveyed

Ecosystem services of Forests

Provisioning Services	Regulating Services	Cultural Services
Products obtained from the ecosystems Food, Freshwater, genetic resources, Fuel wood, Biochemical, Ornamental resources	Benefits obtained from regulating ecosystem processes Air quality maintenance, Climate regulation, Water regulation, Water Purification, Regulation of human diseases, Strom protection, Biological Control, Pollination, erosion control	Non material Benefits obtained from ecosystems Spiritual and religious, Recreation tourism, aesthetic, education

Supporting services

Services Necessary for production of all other ecosystem services

Soil formation, Nutrient recycling, Primary production

Community Forest Management

Involve local communities in forest management while ensuring conservation of forest through improvement of livelihoods of local community

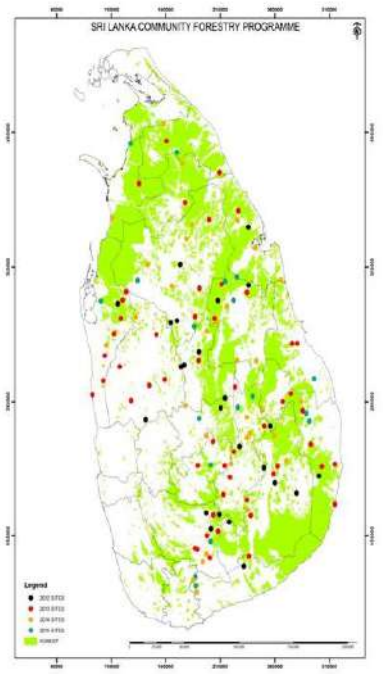
Participatory Planning

- Income generation activities

❑ Production of handicraft

❑ Fresh water fishing

Sri Lanka Community Forestry Program (SLCFP) 2012- 2015

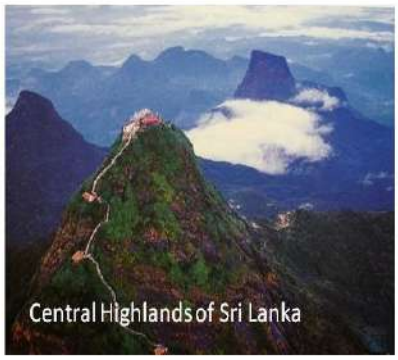


Goal: Improve the management of natural resources to support livelihoods and contribute to poverty reduction in the dry and intermediate zones of Sri Lanka	
Number of districts	18
Number of sites	167
Area of forest (ha)	23,000
Participating households	10,000
Total beneficiaries	90,000

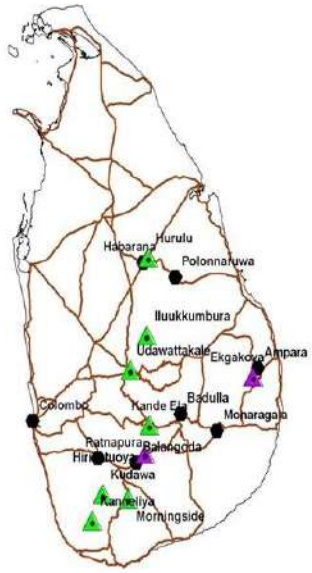
Nature-based Tourism (Ecotourism)

Ensure protection and conservation of existing forest through participation of different stakeholders – specially local community in the area

- Open natural forests for education and recreation
- Develop positive attitude towards forests among general public
- Improve livelihoods of local communities



Eco-tourism destinations



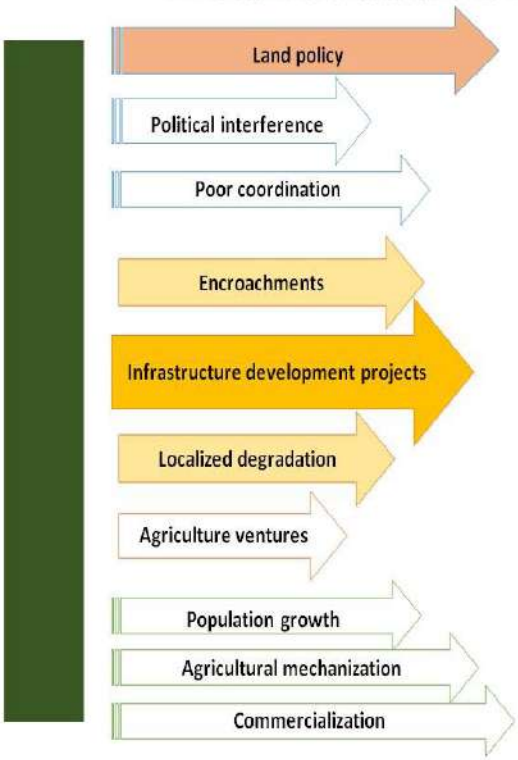
- Ekgal oya
- Hirikatu Oya
- Knuckles Conservation forest
- Hurulu Conservation Forets
- Kanneliya forest reserve
- Sinharaga World Heritage
- Udawattakale forest Reserve

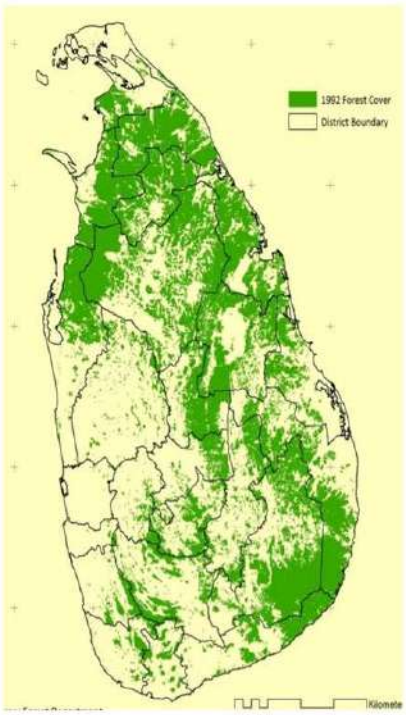
Sri Lanka UN-REDD Programme

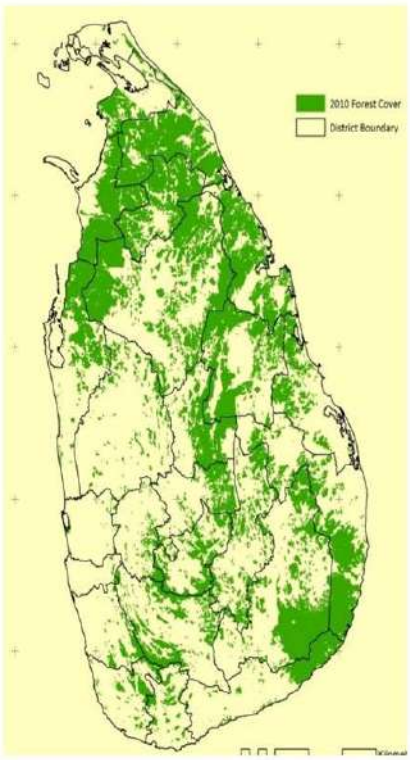
Beyond forests, sustaining life and livelihoods in a greener Sri Lanka

How REDD+ will contribute to improve sustainable land management to maximizing environmental services, maintaining economic growth and minimizing risks of natural disasters through a stepwise, decentralized and nested approach

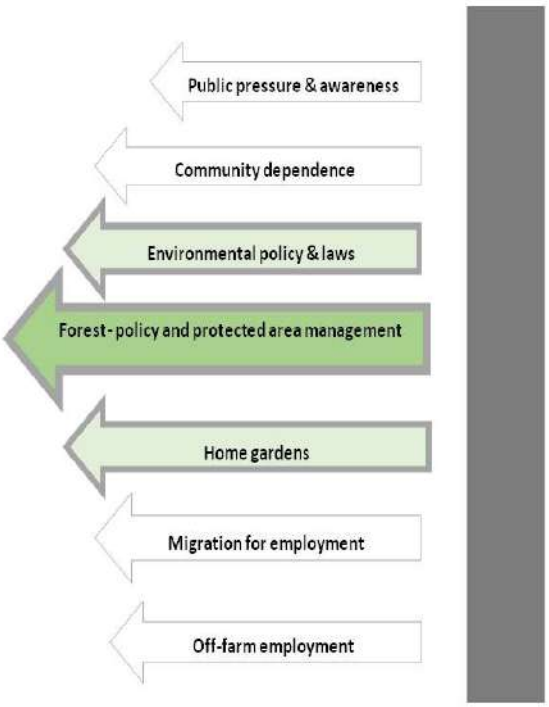
Drivers of Deforestation and forest Degradation (D&D)



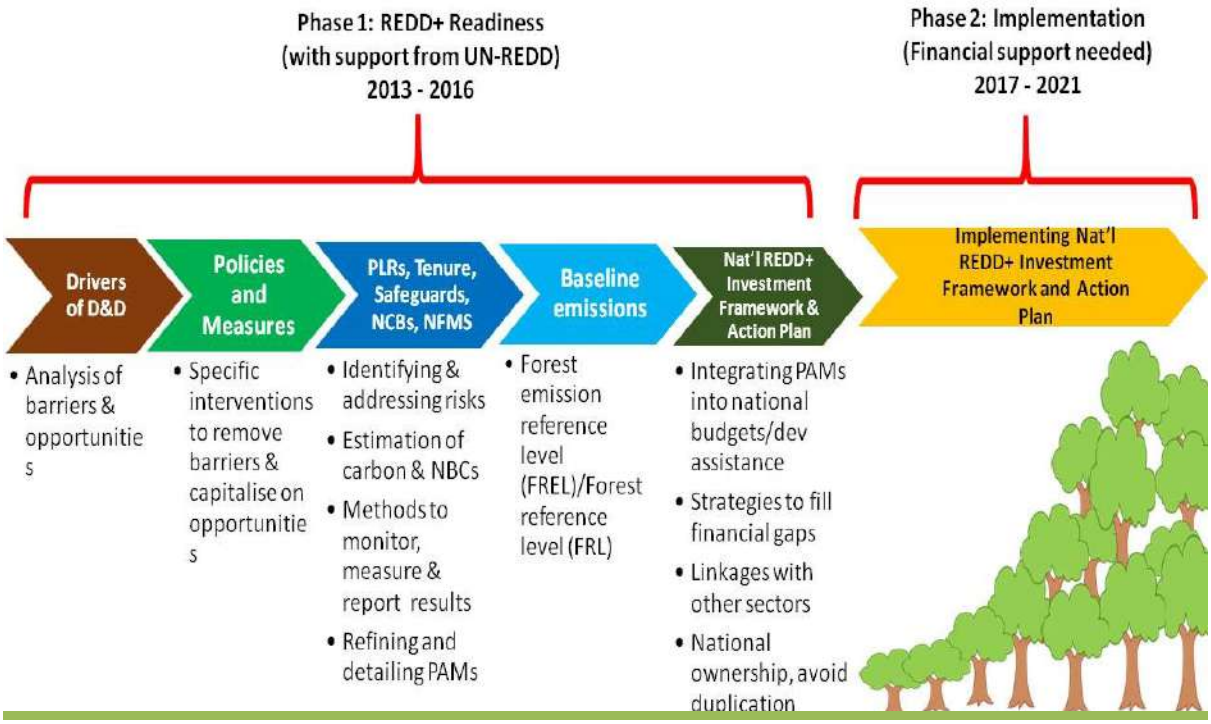




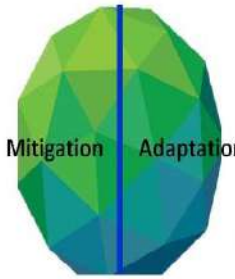
Measures to halt D & D



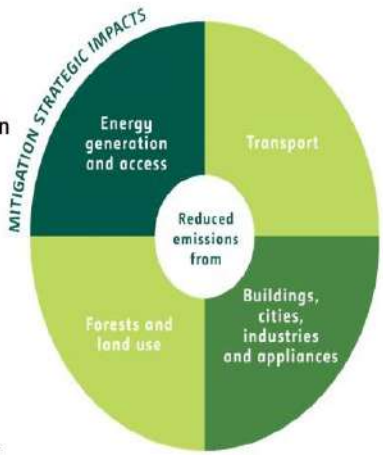
Sri Lanka's REDD+ Process



GCF to REDD+ Implementation



- $10.3 billion in pledges; $6.85 billion in signed contributions
- Geographic balance as well as 50:50 split for mitigation/adaptation



Paradigm Shift Objective: Shift to low-emission sustainable development pathways

Indictor: Degree to which the Fund is achieving low-emission sustainable development impacts

REDD+ Relevant Strategic Impact Area of GCF: Reduced emission from land use, deforestation, forest degradation, and through sustainable management of forests and conservation and enhancement of forest carbon stocks

Indicator: t CO2eq reduced or avoided as a result of GCF finance

Project Outcome: Improved management of forest and land areas contributing to emission reductions

Indicator: Ha. of land or forests under improved and effective management

Proposed CFF Project for REDD+ implementation

Project Title: Implementation of National REDD+ Investment Framework and Action Plan (NRIFAP)

Project Goal: to reduce emissions from deforestation and forest degradation and to enhance forest carbon stocks in Sri Lanka

Expected Project Outcome: REDD+ impacts resonating beyond the forest sector to benefit the country's overall sustainable land management efforts to maintain and enhance ecosystem services, biodiversity and economic growth while minimizing risks of natural disasters.

Expected Outputs:

Output 1: Evidence of REDD+ Policies and Measures addressing targeted drivers of deforestation and forest degradation/removing barriers for forest enhancement

- Implementation of the 15 priority PAMs to address key drivers of deforestation and degradation and remove barriers to sustainable forest management and forest enhancement

Output 2: Forest data generated through the National Forest Monitoring System to enable effective and accurate monitoring, measurement, reporting and verification of REDD+ results

- Operationalization of National Forest Monitoring System and upgrading of forest reference levels

Output 3: Information on nationally defined REDD+ safeguards made available to and accessible by the public

- Operationalization of safeguards and information system and necessary capacity support

Expected Outputs (continued)

Output 4: Evidence of full and effective stakeholder engagement through the implementation of the NRIFAP

- Continuation and expansion of support to the established stakeholder forums/networks, and communication material development and dissemination.

Output 5: Evidence of technical and functional capacity development by institutions and individuals with key roles and responsibilities in implementing the NRIFAP

- Coordination and management of all the above outputs & supporting necessary technical and functional capacity needs of institutions/individuals with key roles to play

Above outputs are designed to operationalize the necessary mechanisms, processes and information streams required under the Warsaw Framework for REDD+ (UNFCCC CoP Decisions 9 - 15 /CP.19).

Anticipated Emission Reductions

Proposed GCF funding period 2017 - 2021

REDD+ Activity	Year									
Reduction of Deforestation	1	2	3	4	5	6	7	8	9	10
PAM1: Improvement of law enforcement & monitoring on the ground										
PAM8: Support the identification, declaration and management of Environmental Protection Areas										
PAM9: Support inclusion of Strategic Environmental Assessment under Land Use Planning (LUP)										
PAM10: Strengthening of Environmental Impact Assessment process										
PAM11: Improve land productivity and rehabilitation practices										
Avoided Emissions per year (tC/year)	137,546	137,546	137,546	137,546	137,546	137,546	137,546	137,546	137,546	137,546

REDD+ Activity	Year									
Enhancement of carbon stocks	1	2	3	4	5	6	7	8	9	10
PAM2: Forest boundaries survey and demarcation as well as declaration in appropriate managerial categories										
PAM3: Restoration of degraded forests and wildlife ecosystems										
PAM5: Sustainable management of forest plantations										
Enhancement per year (tC/year)	212,500	280,068	357,108	434,148	511,188	511,188	511,188	511,188	511,188	511,188
Total (tC/year)	350,046	417,614	494,654	571,694	648,734	648,734	648,734	648,734	648,734	648,734
Total (tC02e/year)	1,283,500	1,531,250	1,813,730	2,096,210	2,378,690	2,378,690	2,378,690	2,378,690	2,378,690	2,378,690
Cumulative Total (tC02e/year)	1,283,500	2,814,750	4,628,480	6,724,690	9,103,380	11,482,069	13,860,759	16,239,449	18,618,139	20,996,829

Total Emission Reductions (year 1 to 5):	**9,103,380 tCO2e**
Total Emission Reductions (10 years):	**20,996,829 tCO2e**

Expected Timeframe

2017 - 2021

Expected Budget

Total: US$ 100 milion

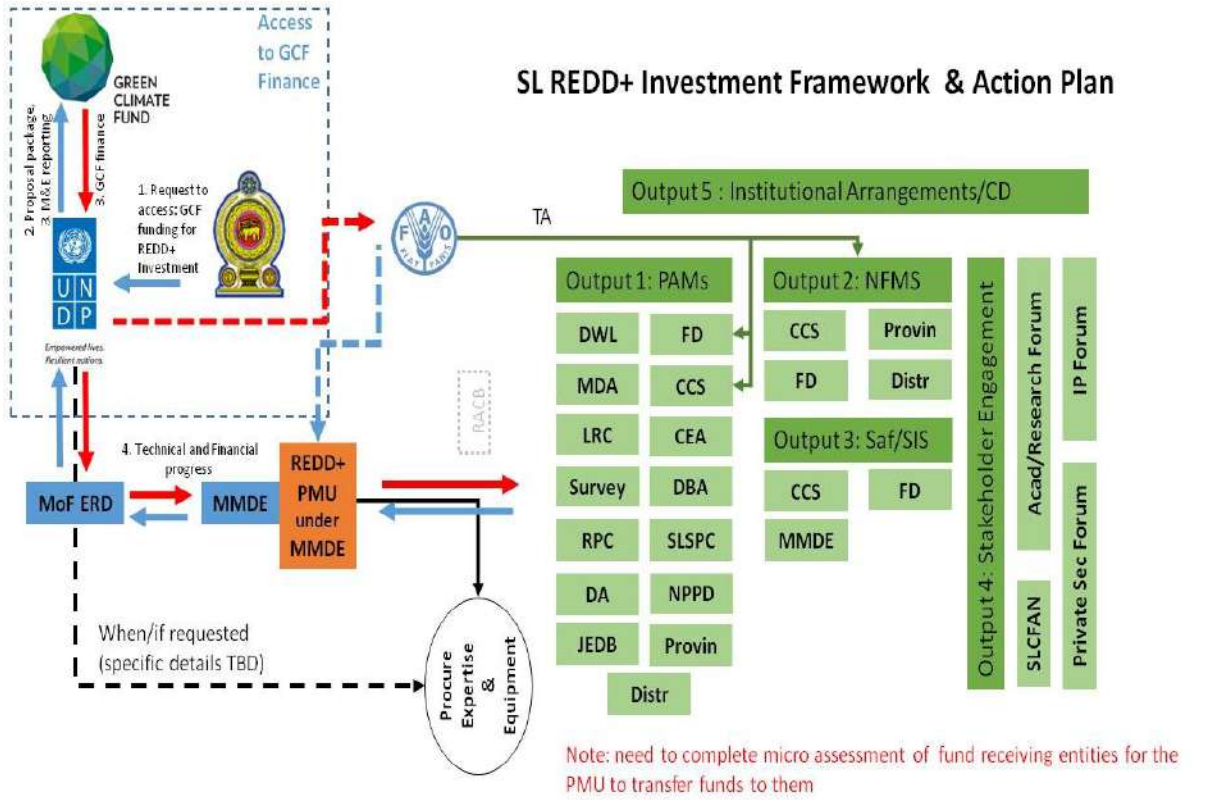
Government co-finance (both soft & hard): US$ 65 million
(mostly from Output 1: Polices and Measures)

GCF: US$ 35 million

Nominated Accredited Agency : United Nations Development Programme

UN Executing Partner: Food and Agriculture Organization

Proposed Institutional Arrangements



Presentation 7

Sustainable forest management:
Gender, Inclusiveness and Benefit Sharing

Ms Elsie G. Attafuah

Empowered lives.
Resilient nations.

INCLUSIVENESS, GENDER & BENEFIT SHARING:
EXPERIENCES, OPPORTUNITIES AND STRATEGIC DIRECTIONS IN AFRICA

Presentation by Elsie G. Attafuah
Senior Regional Technical Advisor, REDD
UNDP, SDG Cluster, BPPS, Nairobi
24th February, 2017

Outline

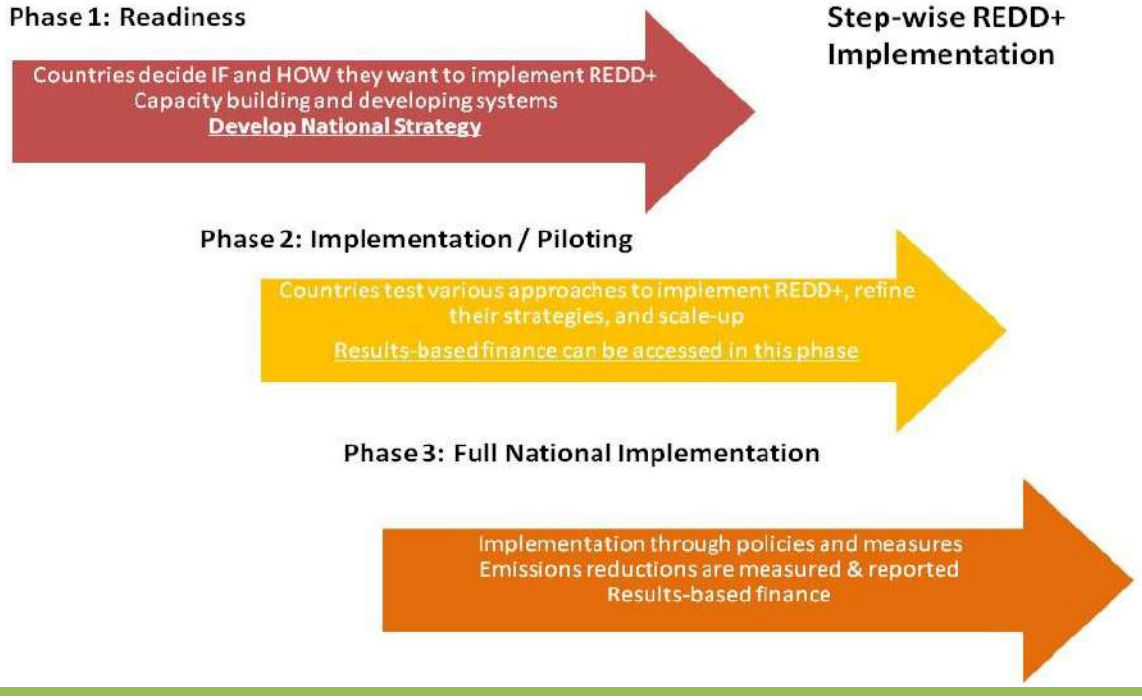
1. Background and Context
2. Strategy and Approach for Promoting Inclusiveness, Gender and Benefit Sharing
3. Examples from Selected Countries
4. Opportunities and Strategic Directions

CONTEXT: REDD+ UNDER UNFCCC

Policy approaches and positive incentives on issues related to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries

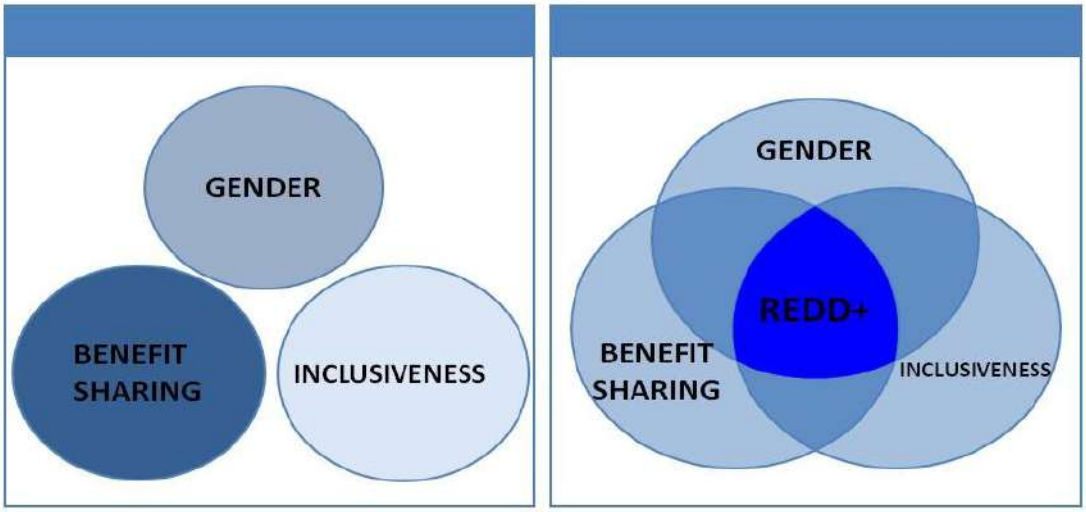
REDD+ under UNFCCC

- UNFCC stresses the importance of inclusiveness, gender and equitable benefit sharing mechanisms
- Inclusiveness, gender and equitable benefit sharing mechanisms should be part of the implementation of the four Warsaw Framework elements
- REDD+ Policies and Measures (PAMs) to be implemented in all phases must integrate inclusiveness, gender and benefit sharing mechanisms



UNDP'S STRATEGY AND APPROACH

Inter-Connectivity: Inclusiveness, Gender and Benefit Sharing



STRATEGY AND APPROACH (CON'T)

Resource Mobilization

- Supporting resource mobilization and investments for activities that promote inclusiveness, gender equality and benefit sharing in the context of REDD+ PAMs (e.g. readiness, implementation and results-based payments phases)

Monitoring Framework

- Technically sound monitoring framework to measure progress and achievements based on quality data to improve decision-making, policymaking at all levels, transparency and accountability (UN-REDD Gender Methodological Brief)

Partnerships

- Mobilize strategic partnerships including with civil society, private sector on innovative approaches on inclusiveness, gender equality and benefit sharing
- Foster enabling and mutually supporting policy environment

Strategic Policy and Technical Advisory Services

EXAMPLES OF OUR STRATEGIC APPROACH

→ GENDER

1. Gender-responsive assessments and gender-specific analyses
2. Awareness raising and capacity building on gender
3. Gender-responsive participation
4. Gender-responsive planning and monitoring
5. Knowledge management on gender

→ INCLUSIVENESS

1. Developing Stakeholder Engagement Guidelines
2. Developing Free, Prior, Informed Consent guidelines
3. Conducting Participatory Governance Assessments
4. Promoting Community Based REDD+
5. Promoting Safeguards as part of PAMS

→ BENEFIT SHARING MECHANISMS (BSM)

1. Supporting the establishment of National Funds
2. Ensuring efficient, effective and equitable incentive allocation systems/BSM
3. Integrating BSM into national REDD+ Strategies, Country Approach to Safeguards, and PAMs

Strategic Policy and Technical Advisory Services

REGIONAL/COUNTRY LEVEL EXPERIENCES AND LESSONS

Snapshot of Africa Portfolio

28 Countries out of 64 UN-REDD Countries	44% UN-REDD Portfolio	Active in 50% of Portfolio and punctual interventions in other 50%

COMIFAC/ CAFI	Central African Republic, Chad, Congo (the), Cameroon, DR Congo, Equatorial Guinea, Gabon
ECOWAS	Benin, Burkina Faso, Cote d'Ivoire, Ghana, Guinea, Guinea Bissau, Liberia, Nigeria, Togo
EAC/IGAD	Ethiopia, Kenya, Uganda, Tanzania
MAGHREB	Morocco, Tunisia
COMESA	Malawi, Madagascar, Zambia, Zimbabwe, The Sudan, South Sudan

GHANA: MAINTREAMING GENDER INTO NATIONAL REDD+ PROCESSES

- Development of a Gender and REDD+ Roadmap
- Establishment of a National REDD+ Gender Sub-Working Group (GSWG)
- GSWG has developed a Gender and REDD+ Action Plan to support the operationalization of the Gender and REDD+ Roadmap; reviewed and informed Ghana's draft National REDD+ Strategy
- Establishment of a safeguards and gender desk within National REDD+ Secretariat to coordinate REDD+ safeguards and gender issues
- Capacity building on gender and REDD+ for various institutions

NIGERIA: INTEGRATING GENDER INTO COMMUNITY PROJECTS

- CBR+ Country Plan includes gender considerations among criteria for project selection and within their monitoring frameworks, with targets and/or indicators related to women's participation and/or gender equality
- Women were specifically identified and included among the stakeholder groups participating in the consultations
- Specific emphasis was further placed on projects that will benefit young and unmarried women in particular, as they tend to be particularly marginalized

CENTRAL AFRICA FOREST INITIATIVE MONITORING FRAMEWORK

- A couple of sex- disaggregated indicators, such as:
  - Total amount of wood energy a) produced per inhabitant (disaggregated by sex) and b) consumed
  - Number of people migrating from non-forests to forests and vice versa, disaggregated by sex
- Indicators that directly relate to women's empowerment:
  - Existence of instruments a) developed b) enacted c) implemented to promote the rights of communities to access and sustainably use forest resources, with due regard given to gender, vulnerable people, local communities and indigenous people

KENYA: PROMOTING INCLUSIVENESS AS PART OF NATIONAL REDD+ PROCESSES

- Development of first FPIC guidelines by Indigenous Peoples' Organization (IPO)
- Establishment of an Anti-Corruption Taskforce to review Kenya Forest Service (KFS) Code of Conduct
- KFS code of conduct approved and guides Sustainable Forest Management and REDD+ processes in Kenya
- Mainstreaming of REDD+ into policy processes in Kenya (e.g. Climate Change Act, Climate Finance Policy recognize the importance of community participation and County leadership)

ETHIOPIA: PROMOTING INCLUSIVENESS AS PART OF SUSTAINABLE FOREST MANAGEMENT

- Ministry of Environment, Forests and Climate Change (MEFCC) established to support Sustainable Forest Management, amongst others
- Leadership by Government to ensure Regional Governments' full engagement in Sustainable Forest Management and REDD+ processes
- Institutional strengthening programme for the Forest Sector ongoing to build capacity of Regional Governments and key agencies
- National Forest Sector Development Programme under development
- MoU signed between Ethiopia and South Korea in 2016 to support Forest Sector development

COTE D'IVOIRE, LIBERIA & GHANA: ENGAGING PRIVATE SECTOR IN COMODITY VALUE CHAINS

- National REDD+ processes and National REDD+ Strategies emphasize the engagement of private sector
- Discussions ongoing with private sector to reduce deforestation along Cocoa, Palm Oil, and Shea value chains
- Both Private sector and Government investing resources to reduce barriers and risks
- Potential investment programmes, including GCF, to focus on commodity value chains

DRC: ESTABLISHMENT OF A NATIONAL REDD+ FUND

- Development of National REDD+ Framework Strategy as the basis for incentives and benefit sharing for REDD+
- DRC REDD+ Investment Plan developed
- A National REDD+ Fund established to mobilise, leverage and disburse funds for REDD+ activities
- National REDD+ Fund guidelines and standards promote inclusiveness, gender and BSM (e.g. calls for proposals from civil society)
- It serves as a model and inspiration for many countries in the region and globally

OPPORTUNITIES AND STRATEGIC DIRECTIONS

Building on Country and Regional experiences:

- Strengthen future design of REDD+ programmes to better integrate inclusiveness, gender and incentive allocation systems
- Upscale and build on good practices, particularly during REDD+ implementation and Results based finance phase investment planning phase
- Begin to establish connections and patterns between themes, within countries, within the region and amongst regions
- Enhance programme delivery through full implementation of the Warsaw Framework to make the case for additional resource mobilization and investments

Conclusions and Key Messages

- **Ambitious and transformative REDD+ agenda** require inclusive, gender equitable and credible stakeholder and institutional engagement (e.g. civil society, IPs, local communities and private sector)
- REDD+ countries can provide leadership
- We need to move from **"Business as Usual"** to "**Business Unusual"** – We need new thinking, and new knowledge
- However, it will require country-led, country-owned initiatives, collaboration and strategic partnerships
- The Good News is that **IT CAN BE DONE**!!

Let's 'travel together' so we can go farther

THANK YOU

Acknowledgement: UNDP REDD+ team

For more information contact:
Elsie Attafuah, elsie.attafuah@undp.org

Presentation 8

Sustainable forest management perspective: Co-management practices in protected areas of Bangladesh

Md. Sukur Ali, Md. Abdul Latif Mia

Sustainable Forest management

Perspective: Co-management practices in protected Areas of Bangladesh

Venue: Holiday Inn Hotel, Seoul

Date: 24 February

Md. Sukur Ali
Joint Secretary
Ministry of Environment and Forests
and
Md. Abdul Latif Mia
Conservator of Forests,
Chittagong Circle

Key SDG for forest resources and protected area

TRANSFORMING OUR WORLD: THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

15 LIFE ON LAND

GOAL 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification; and reverse land degradation and halt biodiversity loss

by 2020,

- ensure **conservation, restoration of ecosystems**;
- promote **implementation of sustainable management** of all types of forests;
- **halt deforestation;**
- **reduce the loss of natural habitats and biodiversity;**
- take **urgent actions to reduce the degradation** of natural habitats;
- introduce measures to **prevent invasive alien species** on ecosystems;
- integrate ecosystem and **biodiversity values into national/local planning;**
- promote fair and **equitable sharing of the benefits;**
- take urgent action to **end poaching and trafficking** of flora and fauna;

by 2030,

- ensure the conservation of mountain ecosystems;
- combat desertification, restore degraded land and soil.

SDG in Forest Resource Management and Protection: Bangladesh

Bangladesh Constitution: Article 18 A, (Addition in 2010)	The state shall Endeavour to protect and improve the environment and to preserve and safeguard the natural resources, biodiversity, wetlands, forest and wildlife for the present and future citizens...
Country wide development endeavors	❑ Millennium Development Goals (2000-2015) ❑ Perspective plan 2010-2021 (Forest coverage to 15% from 13% by 2021) ❑ 7th Five Year Plan (2016-2020)
Policies and strategies in forest sector	❑ Forest Policy 1994 : Revised forest policy (2016) finalized ❑ Forestry Master plan 1995: Revised Master Plan for 2016-2035 finalized ❑ National Biodiversity Strategy and Action Plan (NBSAP 2016-2021)
Related policies and strategies	❑ National Adaptation Plan of Action (NAPA), 2005 ❑ Bangladesh Climate Change Strategy and Action Plan, 2009

SDGs for forest resources management and protection : Bangladesh

Sustainable Development Goals followed by Targets	Actions to achieve the SDG target within 7th FYP (2016-2020)	Actions to achieve the SDG target beyond 7th FYP (2021-2030)	Proposed Global Indicators for Performance Measurement	Current status
15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	* Forestry Master Plan updating for 2016-2035 * National Forest Policy 1994 (updating for 2016) *Co-management: 20 PA * Country Investment Plan * National Biodiversity Strategy and Action Plan		15.2.1 Progress towards sustainable forest management	•The Forest Act, 1927 (Amended 2010), * Wildlife (Management and Protection) Act 2012; * Forest Policy, 1994 (revised 2016); •Forestry Master Plan(2016-2035), * Bangladesh Biological Biodiversity Act 2012; •National Biodiversity Strategy and Action Plan (NBSAP) 2016-2021 * Natural Water Reservoir Conservation Act 2000;

SDGs for forest resources management and protection : Bangladesh

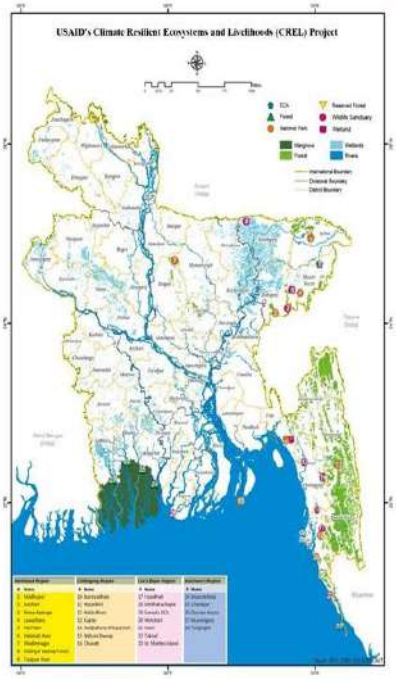
Sustainable Development Goals followed by Targets	Actions to achieve the SDG target within 7th FYP (2016-2020)	Actions to achieve the SDG target beyond 7th FYP (2021-2030)	Proposed Global Indicators for Performance Measurement	Current status
15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	- Species Red List of Bangladesh (Flora) - Updating Species Red List of Bangladesh 2016 (Fauna) - Ecosyatem Red List		15.5.1 Red List Index	Flora and Fauna red list, 2000

SDGs for forest resources management and protection : Bangladesh

Sustainable Development Goals followed by Targets	Actions to achieve the SDG target within 7th FYP (2016-2020)	Actions to achieve the SDG target beyond 7th FYP (2021-2030)	Proposed Global Indicators for Performance Measurement	Current status
15.7 Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products	* Bring down illigal wildlife traffiking to nil or zero		15.7.1 Proportion of traded wildlife that was poached or illicitly trafficked	* Averagre yearly seized wildlife : Mammal: 26 Birds :2309 Reptile :1563 Trophy :78

Protected Areas in Bangladesh

- Total PA: 38 (Wildlife Sanctuary: 20, National Parks : 17,Marine protected Area: 01)
- Area under PA's: 0.266m ha
- Total Forest Area: 2.52m ha
- Protected Areas in relation to country Area: 1.8 % (Excluding marine protected area)
- Protected Area in relation to Forest Area: 17 %



Major Forest Types & Protected Areas of Bangladesh

Hill Forest

- Tropical evergreen and semi evergreen forests
- Exists in south-east part of the country
- Area- 6,80,000 ha (FD)
- Protected Area 85,466 ha (12.56%)

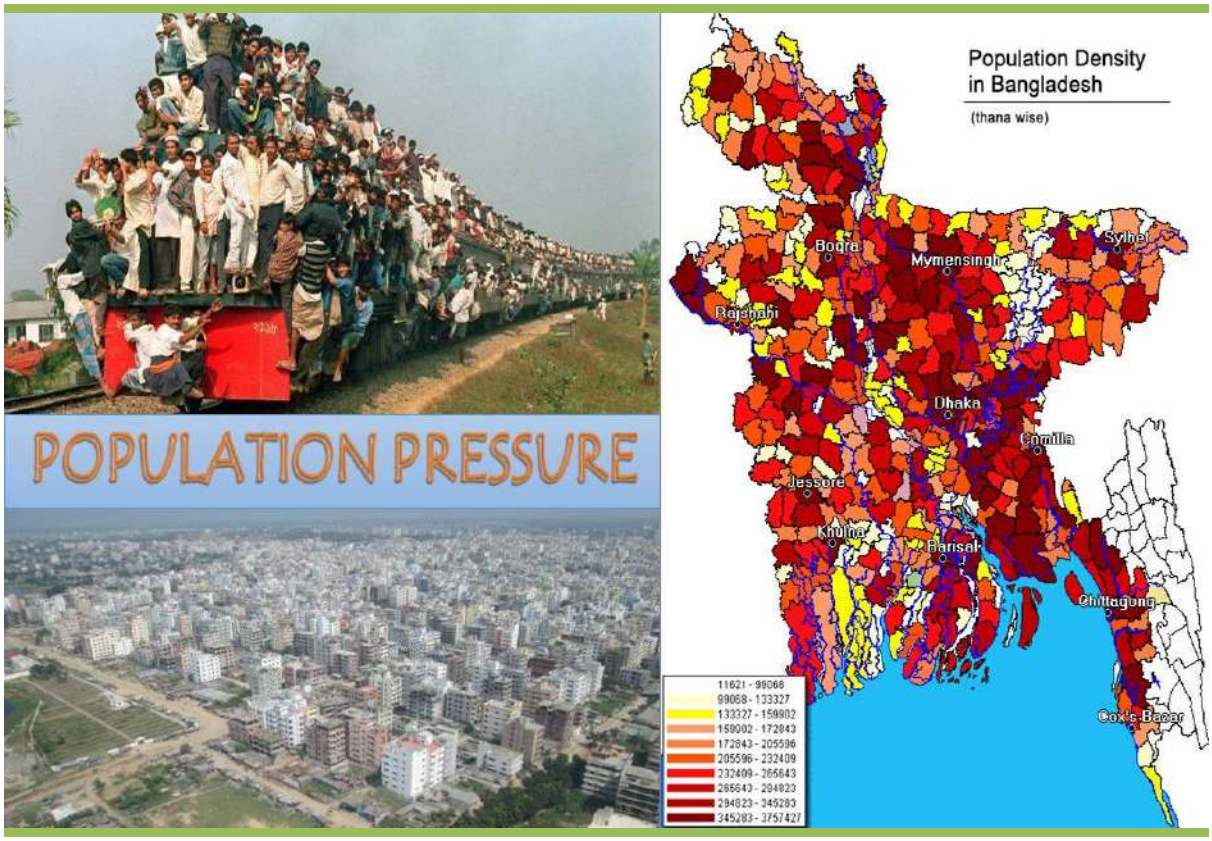
Sal Forest

- Tropical Moist Deciduous forests
- exists in the central and western parts of the country
- Area- 1,20,000 ha.(FD)
- Protected Area 17,423 ha (14.51%)

Mangrove Forest

- Exists in the south-west of the country
- Area- 6,00,000 ha.(FD)
- Protected Area 1,40,769 ha (23.46%)


WHY
Co-MANAGEMENT?


POPULATION PRESSURE
Population Density
in Bangladesh
(thana wise)
Bogra
Mymensingh
Sylhet
Rajshahi
Dhaka
Comilla
Jessore
Khulna
Barisal
Chittagong
Cox's Bazar
11621 - 99068
99068 - 133327
133327 - 159902
159902 - 172843
172843 - 205596
205596 - 232409
232409 - 265643
265643 - 294823
294823 - 345283
345283 - 3757427

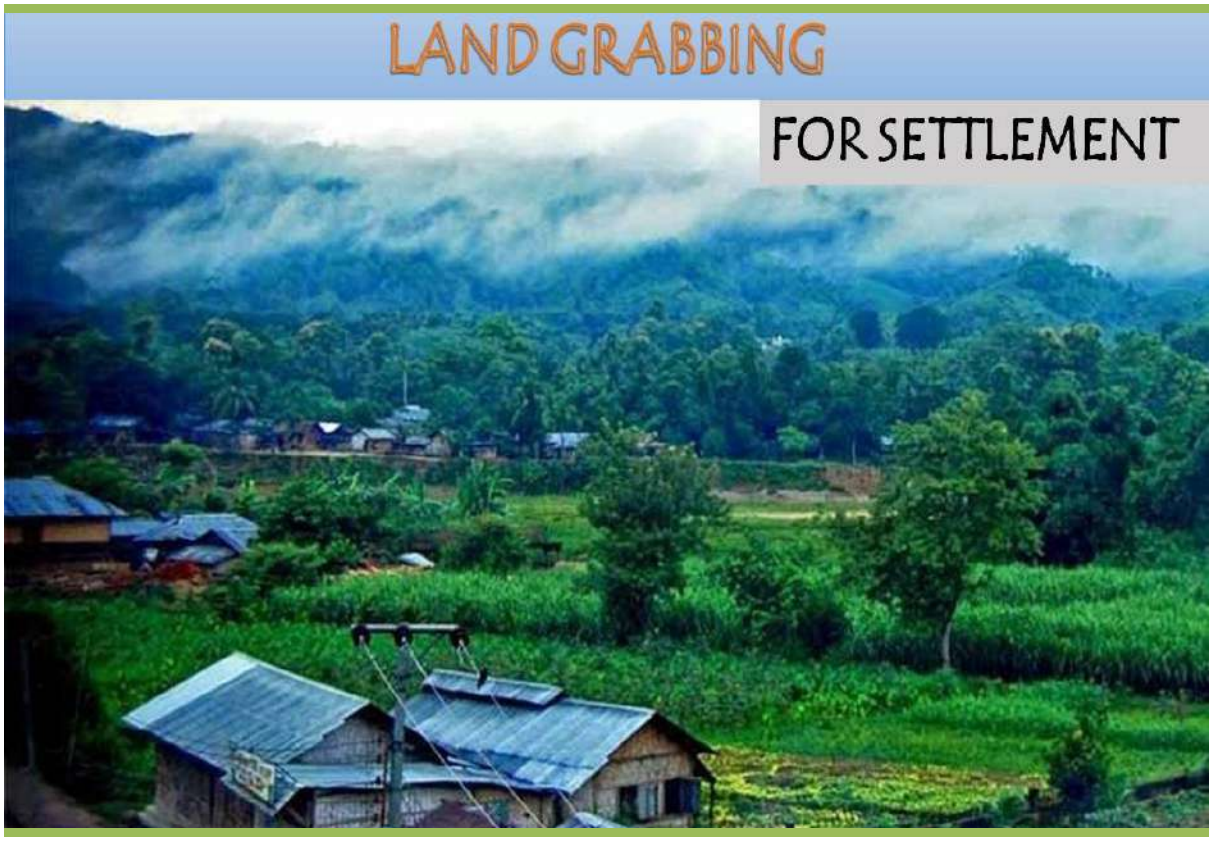
DEMAND FOR FOREST PRODUCTS

TIMBER

DEMAND FOR FOREST PRODUCTS

FUEL WOOD COLLECTION


DEMAND FOR FOREST PRODUCTS
OTHER COMMERCIAL PRODUCTS


LAND GRABBING
FOR SETTLEMENT


LAND GRABBING
AGRICULTURAL
EXPANSION


LAND GRABBING
BRICK FIELDS

Development of Co-management

2003	• Pilot Co-management in 5 PA's
2005	• 1st Management Plans for 5 PA's
2006	• Formation of 1st 8 CMC's in 5 PA's
2008	• Expand Co-management in 18 PA's (22 CMC's)
2012	• Co-management incorporated into Act
2015	• Expand Co-management in 20 PA's (27 CMC's)

17

Legal Reform for Co-management

1. The Wildlife (conservation and security) Act, 2012 provided a legal basis for co-management approach under section-21.

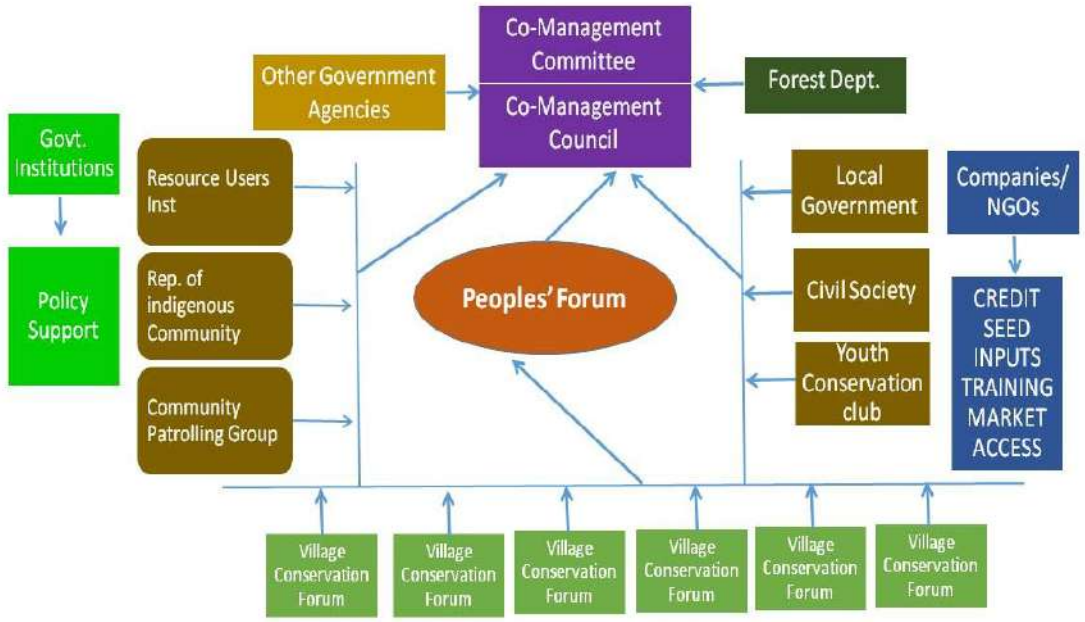
2. Formulation of PA Rules, 2016 (now waiting for final approval)

3. Gazette notification (2009) regarding formation of Co-management Organization and approval of 50% sharing of revenue earned from visitor entry fee from PA's with the Co-management Committee.

4. Social Forestry Rules (2004)

18

Co-management of PA's in Bangladesh



Challenges of PA Management in Bangladesh

- Sustainability
- Huge Resource Dependency
- Settlement inside PA's
- Encroachment and Land Use Changes
- Shortage of Resource Substitutes for dependent people
- Lack of Conservation Financing

International Recognition of Co-management & Forest Conservation

- Wangiri Mathai Award 2010
- Equator Prize of UN (2012)
- Earth Care prize 2015

Mr. Akbor Hossain Jitu receiving Prime Minister Award-2013 on forest conservation

Equator Prize 2012, The Chunoti Co-Management Committee (CMC)

Kurshida Begum, CPG member, receives a special Honourable Mention prize from CPF Chairperson Eduardo Rojas-Briales, 2012

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