PROCEEDINGS OF THE FIFTH MEETING OF NATIONAL REDD+ THEMATIC WORKING GROUPS

(January 15-16th, 2018)

Readiness Preparation Proposal-Readiness Fund of the FCPF
National REDD+ Office
Ministry of Climate Change
Government of Pakistan

List of Abbreviations

AD	Activity Data
ADP	Annual Development Plan
AF	Additional Funding
AJK	Azad Jammu and Kashmir
CLP	Climate Law and Policy
CSO	Civil Society Organization
DD & FD	Drivers of Deforestation and Forest Degradation
ESMF	Environmental and Social Management Framework
FATA	Federally Administered Tribal Areas
FGRM	Feedback Grievance and Redressal Mechanism
FREL	Forest Reference Emission Levels
GCISC	Global Change Impact Studies Centre
GB	Gilgit Baltistan
KP	Khyber Pakhtunkhwa
NFI	National Forest Inventory
NFMS	National Forest Monitoring System
NPD	National Project Director
NRC	National REDD+ Coordinator
NSC	National Steering Committee
PES	Payments for Environmental Services
PFI	Pakistan Forest Institute
QA	Quality Assurance
QC	Quality Control
PRMC	Provincial REDD+ Management Committee
REDD+	Reducing Emission from Deforestation and Forest Degradation, Role of Conservation, Sustainable Management of Forests and Enhancement of Forest Carbon Stocks in developing countries
R-PP	Readiness Preparation Proposal
SDPI	Sustainable Development Policy Institute
SESA	Strategic Environmental and Social Assessment
SIS	Safeguard Information System
SLMS	Satellite Land Monitoring System
SoP	Survey of Pakistan
SUPARCO	Pakistan Space and Upper Atmospheric Research Commission
WG	Working Group

Table of Contents

Introduction & Background

During the REDD+ Roadmap development process, four Working Groups were constituted to provide a platform for stakeholder participation, technical and institutional support, advise National Steering Committee (NSC) and Provincial REDD+ Management Committees (PRMC) on related technical aspects of REDD+ (Reducing Emission from Deforestation and Forest Degradation, Role of Conservation, Sustainable Management of Forests and enhancement of Forest Carbon Stocks). The Working Groups regularly meet on six months basis for evaluating the progress of the REDD+ Readiness preparation activities in Pakistan. During meetings the working Group also provide valuable recommendations for the decision making bodies.

During Fourth REDD+ WG meeting National Forest Definition of Pakistan was recommended which was later on finalized and notified for adoption.

Objectives

1. To update Provincial Forest Departments and other stakeholders about the progress of R-PP process in Pakistan
2. Endorsement of strategic framework for National REDD+ Strategy
3. Launching of a study on REDD+ Payments for Environmental Services (PES)
4. Feedback on the institutional framework of NFMS

Day to Day Proceedings:

Session Plan (Day 1)

The meeting started with the recitation of verses from the Holy Quran.

Figure 1. Dr. Ghulam Akbar welcome address

Dr. Ghulam Akbar, National REDD+ Coordinator (NRC) formally welcomed the participants which included technical members of four REDD+ Working Groups from Provincial Forest Departments, Provincial REDD+ Focal Points, representatives of Civil Society Organizations (CSOs), local consultants from the respective hired firms, colleagues from Survey of Pakistan (SoP), Punjab University, Pakistan Space and Upper Atmosphere Research Commission (SUPARCO), Pakistan Forest Institute (PFI). He also praised the participation of national and international consulting firms of Indufor, Arbonaut and CLP. He briefed the audience about two day's sessions of the WG meeting and invited all for providing inputs and concrete recommendations. Agenda of the meeting and list of participants are attached as **Annex I** and **Annex II.**

Session 1: Introduction

A presentation on updates of REDD+ Readiness in Pakistan:

Figure 2. Mr. Qasim presenting the overall progress of R-PP in Pakistan

Mr. Qasim, National Forest Inventory (NFI) Expert gave an overview of Pakistan's progress on implementing R-PP. His presentation included a background on REDD+ Readiness activities and future requirements in order to access result based finances. He also updated the audience on existing Institutional structure of REDD+, Thematic Working Groups on REDD+, National Steering Committee, Provincial REDD+ Management Committee. He briefed about the engagement of National and International consulting firms for the development of National Forest Monitoring System/Forest Reference Emission Levels (NFMS/FREL), National REDD+ Strategy, Safeguards Information System (SIS) and Awareness Raising and Outreach. He further ensured the provision of Capacity building of stakeholders through ongoing nationwide training

and internship program. It announced that most of the provinces has started streamlining Provincial REDD+ activities from their Annual Development Plans (ADP). a detailed presentation is attached as **Annex III.**

Session 2: Updates on REDD+ Readiness Components

A presentation on Development of National REDD+ Strategy and its implementation framework by Jaime Serverino- Team Leader Indufor

Mr. Jaime Serverino, Team Leader Indufor briefed the audience on the approach towards the work while providing the update on the best practice and guidance methodological framework, monitoring and assessment tools. He further added that work is divided in three phases: Inception, implementation and finalization phase, while pointing that implementation phase is in finishing stage with the output in the form of strategy development. He highlighted the situation and condition for the preparation for REDD+. He mentioned that

Figure 3. Mr. Jaime updated the audience on National REDD+ Strategy

finalization of institutional arrangements are important for REDD+ Strategy to work. He emphasized on extended participation of all the stakeholders. During his presentation he also mentioned that under the implementation approach, two rounds of consultation with the provinces have been carried out with the key findings on direct and indirect Drivers of Deforestation and Forest Degradation (DD & FD). He also presented the Strategic Framework for REDD+ enlisting the guiding principles, policy foundations, vision, strategic objectives, strategic options and enabling pillars. Detailed presentation is attached as **Annex IV.**

Questions and Answers Session

Mr. Irtaza Qureshi raised a question on the findings of Drivers of Deforestation that in AJK there is no unsustainable/illegal wood extraction. Mr. Tayyab clarified to him that this is generic and is used for national level. In case of provinces, a discrete document containing Drivers of Deforestation and provincial strategy framework will be prepared and shared.

Mr. Niaz Kakar raised question how national strategy is made without provincial strategy. Mr. Tayyab said that based on consultations from within the provinces, provincial strategies remain intact. Dr. Akbar added that based on consensus with province wise consultation and their feedback this is a national strategy. This will set the conditions so that provinces can work on their own provincial REDD+ strategies. National REDD+ Strategy will provide a framework for provinces to streamline their activities for REDD+.

Mr. Ismail suggested that there should be an incentive based mechanism of services to be provided on regular basis and create awareness. Dr. Akbar added that most of the forests are

community forest and the communities are not getting incentives for it. Unfortunately Carbon financing will take years, but still, Payment for Environmental Services (PES) is an alternative option to support communities. He further added that PFI has been given this assignment and is working on it once potential ecosystem identified then communities will be benefited. Mr. Tayyab added that benefit sharing mechanism is part of governance scenarios and is being developed for National REDD+ Strategy.

Mr. Niaz kakar advised that that proceedings and reports should be shared with Balochistan. Dr. Akbar informed that all the reports have been uploaded on REDD+ website.

Mr. Ismail raised a concern on the effectiveness of the National REDD+ Strategy. Dr. Ghulam Akbar emphasized that each province should have their own provincial REDD+ strategy aligned with the National REDD+ strategy. Mr. Anwar Ali seconded this referring tho the Provincial REDD+ Strategy developed by Khyber Pakhtunkhwa. It was agreed upon that national redd+ strategy will be a dynamic document and need periodic revisions.

*A presentation on National Forest Reference Emissions Levels (FRELs) and National Forest Monitoring System (NFMS) for Pakistan by Jarno **Hämäläinen** from Arbonaut*

Mr. Jarno Hämäläinen, Team Leader Arbonaut briefed the Working Groups about the objectives and status of the project assignment. He mentioned about the progress of activities being carried out which included the review of the existing datasets, National Land use and Land cover classification and came up with the report of inconsistency in the forest area and other land area due to following reasons:

(i)   No authentic national boundary reference
(ii)   Inconsistent Land use/cover Classes
(iii) Missing Source data type and properties
(iv)   Multiple Standards and methodologies

Figure 4. Mr. Jarno Hämäläinen briefing house about FRELs/NFMS

During his presentation he also discussed about the provincial and territorial consultations on direct and indirect drivers of deforestation and forest degradation and also depicted an initial level trends of the emission and removal trends from 1996-2016 in respective entities. He also presented the design of operationalized system for forest land assessment and NFMS web portal. He explained the methodologies for Satellite Land Monitoring System (SLMS) and National Forest Inventory (NFI) processes and protocols keeping in view the Quality Control (QC) and Quality Assurance (QA) of field measurements and archiving of data. He highlighted that the team is facing difficulties in getting geospatial data of admin boundaries required the work. Detailed presentation is attached as **Annex -V.**

Questions and Answers Session

Dr. Irfan Ashraf, Assistant Professor Arid Agriculture University asked a question if data bases have been furnished. Mr. Jarno replied that most of the data is being generated by the Arbonaut and WWF-Pakistan team, however, some data has also been acquired from Khyber Pakhtunkhwa and Gilgit Baltistan.

Mr. Atif Shehzad raised a question if the NFMS web-portal will be dynamic and perform spatial analysis or is it just going to display data. Furthermore, he enquired if it will contain a monitoring component. Mr. Matti responded that we have used some data and still on going for monitoring purpose. Each provincial unit will provide statistics then second level of information that is geometry which will be displayed.

Mr. Anwar Ali clarified that this data is developed through consultation with provincial experts, people with GIS and inventory background provided their inputs and this is just a design. Provinces and consulting firms are gathering data and they will be provisioning data into model.

Mr. Ismail asked that what type of experts should be at provincial level for management of data and what should be the institutional arrangement. Mr. Afrasiyab responded to his question that if Activity Data is to be managed by provincial departments then they should have people who can handle these data and if it is to be managed by organization at national level then raw data is to be provided to them. It depends upon institutional arrangement which will be finalized by working groups.

A presentation on Strategic Environmental and Social Safeguards (SESA), Environmental Social Management Framework (ESMF), Safeguard Information System (SIS) and Forest Grievance Rederessal Mechanism (FGRM) by Daniella Rey- Director Climate Law and Policy (CLP)

Miss. Daniela Rey, Director-Climate Law and Policy presented the consultancy aims along with the progress on the delivery of tasks and way forward. She mentioned that for the assessment of the existing policies and regulations procedures, gap analysis is the first thing to assess the extent to which Pakistan's policies, laws and regulations (PLRs) reflect and regulate the rights and duties embodied by each component of the Cancun safeguards. She also added that the assessment of historical social and environmental issues in the forest/land use sector relevant to the assessment of potential risks and benefits arising from the proposed REDD+ strategy has been submitted

Figure 5. Daniella Rey presenting on SESA, ESMF, SIS and FGRM

along with the mapping of relevant stakeholders and platforms to be involved in the evaluation of potential risks and benefits associated with the implementation of REDD+ activities. Consultations in Sindh, Balochistan, Punjab, Azad Jammu and Kashmir (AJK), Federally Administered Tribal Areas (FATA), Khyber Pakhtoonkhaw (KP) and Gilgit-Baltistan (GB) have been carried out to identity potential social and environmental impacts that may arise from the

implementation of the proposed REDD+ interventions. Detailed presentation is attached as **Annex VI.**

Questions and Answers

Dr. Akbar appreciated the recommendations made in report but he was of the view that these are very extensive and directly influence the constitutions of Pakistan. He commented that it will take year to implement the proposed recommendations and there must be some short term solution. Ms. Daniella advised to use the recommendations as part of long term legal reforms as well as short term. For recommendations to be part of legislation, she suggested to prepare instructions for coherent and consistent application and institutional strengthening.

During the discussion it was pointed out that there are no legally defined indigenous communities in Pakistan. Daniela informed that one of the Cancun Safeguards is to protect and recognize rights of indigenous people/local communities and needs to interpret and contextualize through country's context. In case of absence of defined indigenous people so the aim should be to understand and protect the vulnerable groups existing in Pakistan.

Session 3: Development of National REDD+ Strategy

Group Work on the Draft National REDD+ Strategy and its implementation framework

Mr. Tayyab, General Manager-Chip Training and Consultant (CTC) briefly explained the participants about the group work. Three groups were formed which included representation from each of the province and territories.

- Group 1: Strategic Objectives and Guiding Principles
- Group 2: Strategy Options
- Group 3: Enabling Pillars and Policy Foundations

Figure 6. Group Work on the draft of National REDD+ Strategy

The main findings from the session was the agreed Strategic Framework which was signed by participants for endorsement.

Group Presentations

National REDD+ Strategy
Strategic Framework
January 15, 2018

Guiding Principles
- Safeguarding forest dependent livelihoods
- Recognition of ecosystem services
- Ensure equitable distribution of benefits
- Improving forest and land governance
- Ensuring Transparency and accountability
- Abiding by national/ international obligations, local culture & values.
- Inclusiveness and gender sensitivity
- Partnerships and coordination
- Harmonization of methodologies & practices among all federating units.

Vision
Forests in Pakistan provide ecosystem services and livelihood support on sustainable basis.

Strategic objectives
- Contribute significantly to **reduce country emissions & enhanced carbon stock** in order to mitigate climate change through avoided deforestation and forest degradation
- **Provision of sustainable environmental services** provided by forest ecosystems.
- Provide alternatives **for sustainable livelihoods** to people dependent on forest.
- Provide the required **institutional, legal, economic and governance conditions** to ensure the sustainable management of forest resources and ecosystems.
- Create the necessary **governance** for the implementation of cross-sectoral policies.
- Ensure **awareness of stakeholders** about; the role of forest in sustainable development, climate change and REDD+.

Strategic alternative	Mitigation activity	Strategy option
Enhancement of forests capacity to capture and maintain carbon	Enhancement of carbon stocks	• Restoration (including natural regeneration, assisted natural regeneration and enrichment planting), reforestation and afforestation/ Social forestry • Harnessing of waste land through Afforestation • Improved Regulatory mechanism (Governance, management and effective execution)
Reduction of pressure on forest ecosystems	Reducing deforestation Reducing forest degradation Conservation Sustainable forest management	• Sustainable Forest Management • Payment for Ecosystem Services • Introduction of efficient alternative energy sources (Micro-hydel, solar, bio-gas, wind, others) • Improvement of livestock sector (breed and stall feeding)
Promotion of alternative livelihoods and economic diversification	Reducing deforestation Reducing degradation Conservation Sustainable forest management Enhancement of carbon stocks	• Silvopastoral practices and sustainable grazing • Agroforestry • Sustainable tourism development and introduction of eco-tourism • Engagement of market for alternative livelihoods in forest communities (NTFPs etc)

Session Plan (Day 2)

## Session 4: Presentation on Awareness Raising and Outreach in Pakistan

Miss Maryam Shabbir, Advocacy and Outreach Officer-Sustainable Development Policy Institute (SDPI) updated the participants about the activities being carried out for raising awareness on REDD+. These included a training of journalists, publication of articles, Urdu and English press coverage on multifaceted topics on REDD+ and forests, REDD+ media awards and also mentioned about the talk shows, Radio programmes and social media pages for the awareness raising and outreach of REDD+. Detailed presentation is attached as **Annex VII.**

Session 5: Development of FREL and NFMS in Pakistan

A presentation on NFMS Model, standards and exchange protocols and linkages to SIS and GHG-I
Mr. Matti Ruhanen briefed the audience on the NFMS structure and data model. The data model is based on the databases like POSTGIS which contain geospatial functions. NFMS data model will contain within it the National boundary data, forest stratification as well as SLMS activity data, National Forest Inventory Plots and Forest Management data. Detailed presentation is attached as **Annex VIII.**

Mr. Jarno gave an overview of NFMS and its functions accompanied by the institutionalization process. He also explained the potential institutions involved in National/ Provincial activities along with their roles and responsibilities. He also presented a framework of the institutional arrangements followed by the inputs of stakeholders through group work. Group work was presented by
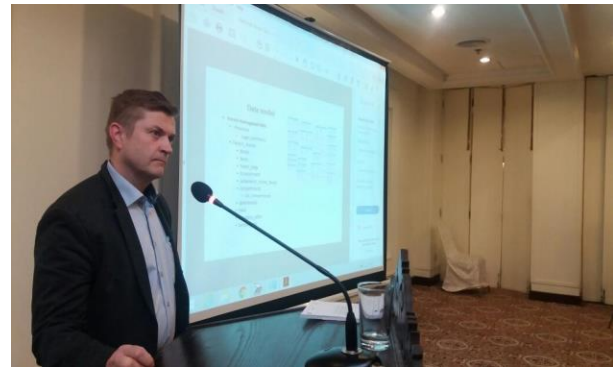
Figure 7. Mr. Matti briefing the participants on NFMS Data Model

representatives from provincial forest departments from each of the group on the institutional framework for NFMS including MRV and is attached as **Annex-A.**

Group Work

Session 6: Launching of the methodology and Workplan for designing of REDD+ PES in Pakistan

A presentation on methodology and work plan for designing of REDD+ PES in Pakistan

Mr. Anwar Ali briefed the participants on objectives of the study, criteria for site selection and designing of REDD+ in Pakistan. He presented about the methodological and analytical framework for the design and testing of REDD+ Payments for Environmental Services keeping in view institutional arrangements, potential benefit sharing mechanisms, conflict resolution arrangements, safeguards, identifying sources of payments, and governance system. He further added that payments under REDD+ are time taking, additional mechanism in form of PES is best option to provide incentives for forest owners to adopt good practices for land use which provide valuable ecosystem. A criteria has been set while selecting forest sites for piloting REDD+ PES in Pakistan attached as **Annex-B (i).** Stakeholders from different provinces were asked to evaluate the different ecosystems based on the developed criteria. They discussed and agreed on considering and assessing some

Figure 8. Mr.Anwar Ali presenting on designing of REDD+ PES in Pakistan

of the ecosystems from different parts of Pakistan as potential pilot sites. Based on the sites selection process, two promising sites that have been finalized and endorsed by the workshop participants for designing of REDD+ PES pilot schemes as follows: (i) Moist Temperate Forest Ecosystem of Kaghan Valley in Khyber Pakhtunkhwa (KP) Province (ii) Mangrove Forest

Ecosystem in the coastal areas of Pakistan **Annex- B (ii).** Detailed presentation is attached as **Annex-IX**.

Closing Remarks:

Dr.Ghulam Akbar appreciated participants for attending this important meeting as well as showed his immense gratitude to the consultants/friends from abroad.

Annex-I: Agenda of the meeting

Agenda
Meeting of Fifth REDD+ Working Groups
Date: 15-16 January, 2018
Venue: Hillview Hotel, Islamabad

Session Plan (Day 1)		Facilitation
Session 1 : Introduction		
09 :00-09 :30	Registration	
09 :30-09 :35	Récitation	
09 :35-09 :45	Introduction of Participants	
09:45 – 10:00	Welcome remarks by the National REDD+ Coordinator	NRC
10:00-10:30	A presentation on overall updates of REDD+ Readiness in Pakistan	National REDD+ Office
10:30 – 10:45	Tea Break	
Session 2 : Updates on the REDD+ Readiness Components		
10: 45– 11:15	Presentation on Development of the National REDD+ Strategy and its implementation framework	Indufor & CTC
11:15 – 11: 30	Questions and Answers	
11:30 – 12:00	Presentation on National Forest Reference Emission Levels (FRELs) and National Forest Monitoring System (NFMS) for Pakistan	Arbonaut OY & WWF-Pakistan
12:00 – 12:15	Questions and Answers	
12:15 – 12:45	Presentation on SESA, ESMF, SIS and FGRM	CLP and HB
12:45 - 13:00	Questions and Answers	
13:00 – 14:00	Lunch Break + Prayer	
Session 3: Development of National REDD+ Strategy		
14:00 - 15:45	Group Work on the Draft of the National REDD+ Strategy and its implementation framework	Indufor & CTC
15: 45-16:00	Tea Break	
16 :00 – 16 :30	Group Work continued	Indufor & CTC
16 :30 – 17 :00	Group presentations / recommendations / Endorsements	Indufor & CTC
End of Day 1		

(Day 2)			
Session 4			
09 :00 – 09 :30	Presentation on Awareness Raising and Outreach in Pakistan	SDPI	
Session 5: Development of FREL and NFMS in Pakistan			
09 :30 – 11 :30	NFMS data model, standards and exchange protocols, and linkages to SIS and GHG-I	Arbonaut OY & WWF-Pakistan	
11: 30-11:45	Tea Break		
11:45 – 12 :30	Institutional framework for NFMS including MRV (SLMS/NFI), MBIGS and carbon registry	Arbonaut OY & WWF-Pakistan	
12 :30 – 13 :00	Group Presentations / Recommendations / Endorsements	Arbonaut OY & WWF-Pakistan	
13:00 – 14:00	Lunch Break + Prayer		
Session 6: Launching of the study on designing of REDD+ Payment for Ecosystem Services in Pakistan			
14 :00 – 15 :00	Presentation of the methodology and Workplan for designing of REDD+ PES in Pakistan	PFI, Peshawar	
15 :00 – 15 :30	Questions and Answers		
15 :30 – 15 :45	Tea Break		
15 :45 – 16 :00	Concluding Remarks		

Annex-II: List of Participants

List of Participants

1. Mr. Usman Yaqub, National Project Director REDD+
2. Dr. Zakir Hussain, Conservator of Forests Baltistan Circle, GB Forest and Wildlife Department
3. Mehmood Ghaznavi, Conservator of Forests, Diamer-Astore Circle, GB Forest and Wildlife Department
4. Ismail, Provincial REDD+ Focal point, Project Director REDD+, GB Forest and Wildlife Department
5. Shehzad Sadiq Gill, Divisional Forest Officer, Sindh Forest and Wildlife Department
6. Abid Hussain Rind, Divisional Forest Officer, Sindh Forest and Wildlife Department
7. Abdul Jabbar Kazi, Conservator of Forests, Provincial REDD+ Focal point, Sindh Forest and Wildlife Department
8. Iftikhar Ul Hassan Farooq, DFO, Rawalpindi, North Forest Division, Forest Wildlife and Fisheries Department, Government of Punjab, Lahore
9. Mr. Saqib Mehmood, CF, Rawalpindi (South), Forest Wildlife and Fisheries Department, Government of Punjab
10. Mr. Alamgir Khan Gandapur, Consultant
11. Syed Sharaf Ud din, Deputy Conservator Forest, Balochistan Forest and wildlife Department
12. Mr. Niaz Khan Kakar, REDD+ Focal Point, Balochistan Forest and wildlife Department
13. Mr. Farid Shah, DFO Balochistan
14. Miss. Nelofer Jamil, Assistant Professor, SBKWU, Quetta
15. Muhammad Arif, DFO-II/PD REDD+ KP, Forest and Wildlife Department, KP
16. Mr. Anwar Ali, Project Director, REDD+, Pakistan Forest Institute, Peshawar
17. Mr. Hakim Shah, D.G Pakistan Forest Institute, Peshawar
18. Gohar Ali, DFO Silva, Chief Conservator of Forests, Southern Region-I KP, Provincial REDD+ Focal point, Forest and Wildlife Department, KP
19. Dr. Ghulam Ali Bajwa, Director Sericulture, PFI, Peshawar
20. Irtaza Qureshi, DFO, Working Plan, AJ&K Forest and Wildlife Department, Muzaffarabad
21. Mr. Bilal Ahmed, DFO AJK Forests
22. Mr. Manzoor Maqbool, DFO AJK Forests
23. Mr. Hayat Ali, DFO, Bajaur Forest Division Khar, Forest and Wildlife Department, FATA
24. Mr. Shahid Noor, DFO, Kurram Forest Division, Peshawar
25. Mr. Atif Shehzad, Manager, SAR Wing SUPARCO, Karachi
26. Mr. Asim Waqar, Deputy Director, Survey of Pakistan
27. Dr. Muhammad Irfan Ashraf, Assistant Professor (Forestry and Range Mgt), Arid Agriculture University, RWP
28. Riaz Muhammad Khan, President, Sarhad Awami Forestry Ittehad (SAFI)
29. Mr. Jarno, Team Leader, Arbonaut Oy, Finland
30. Daniella Rey, Director, Climate Law and Policy
31. Sebastien Korwin, Senior Legal and Policy Advisor, CLP
32. Mr. Iqbal Muhammad, Deputy Team Leader, WWF-Pakistan
33. Mr. Matti Ruhanen, Arbonaut Oy
34. Mr. Jaime Severino, Team Leader, Indufor, Oy Finland
35. M. Ahmed Aslam Chaudhry, Legal Consultant-CHIP and Indufor
36. Mr. Muhammad Tayyab, GM-CTC Islamabad
37. Miss. Mahjabeen Qazi, Consultant, CTC
38. Miss. Saba Zahid, Communication Department, CTC
39. Miss. Fareeha Irfan Ovais, Consultant Environmental Programs, Hagler Bailey
40. Dr. Waheed Chaudhry, Hagler Bailey

41.   Miss. Sumaira Noureen, Hagler Bailey
42.   Dr. Rao Nadeem Alam, Hagler Bailey
43.   Mr. Hasnain Ibrahim Kazmi, Advocates and Corporate Sector Consultants
44.   Mr. Raja Tariq, Hagler Bailey
45.   Dr, Ghulam Akbar, National REDD+ Coordinator, National REDD+ Office
46.   Muhammad Qasim, NFI, Expert, National REDD+ Office
47.   Muhammad Afrasiyab, GIS, Expert, National REDD+ Office
48.   Miss. Farhat Jabeen, Research Associate, National REDD+ Office
49.   Miss. Sumayyah Aleem Khan, Research Associate, National REDD+ Office
50.   Miss. Maryam Shabbir, Outreach Office, National REDD+ Office r
51.   Miss. Aysha Malik, Intern, National REDD+ Office
52.   Miss. Mubbashra Sultan, Intern, National REDD+ Office
53.   Syed Ghayoor Ali Shah, Intern, National REDD+ Office

REDD+
Pakistan

Update on REDD+
READINESS in Pakistan

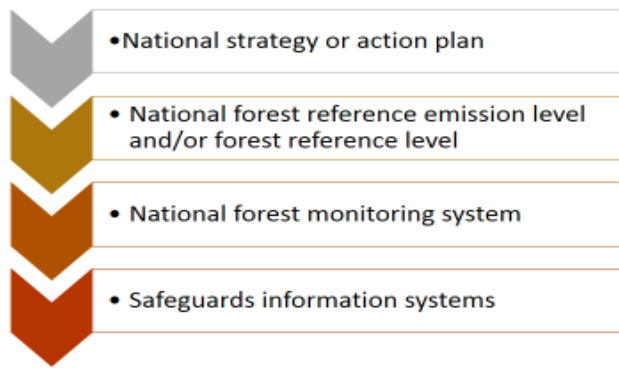National REDD+ Office

REDD+ Activities

DECISION 1/CP.16, PARA 70

a) Reducing emissions from deforestation;
b) Reducing emissions from forest degradation;
c) Conservation of forest carbon stocks;
d) Sustainable management of forests;
e) Enhancement of forest carbon stocks;

Government of Pakistan aims to prepare for implementing all the REDD+ Activities mandated by UNFCCC in a phased approach

REDD+ Requirements

DECISION 1/CP.16, PARA 71

- National strategy or action plan
- National forest reference emission level and/or forest reference level
- National forest monitoring system
- Safeguards information systems

Pakistan has been financially supported by
❖ UNREDD through TS Funds; During 2012, MoCC initiated training and capacity building programme and developed NFMS Action Plan
❖ Readiness Fund of FCPF; R-PP Grant Agreement was signed between Sec. EAD and WB on 12 June 2015 worth US $ 3.8 million for completing REDD+ Requirements by June 2018
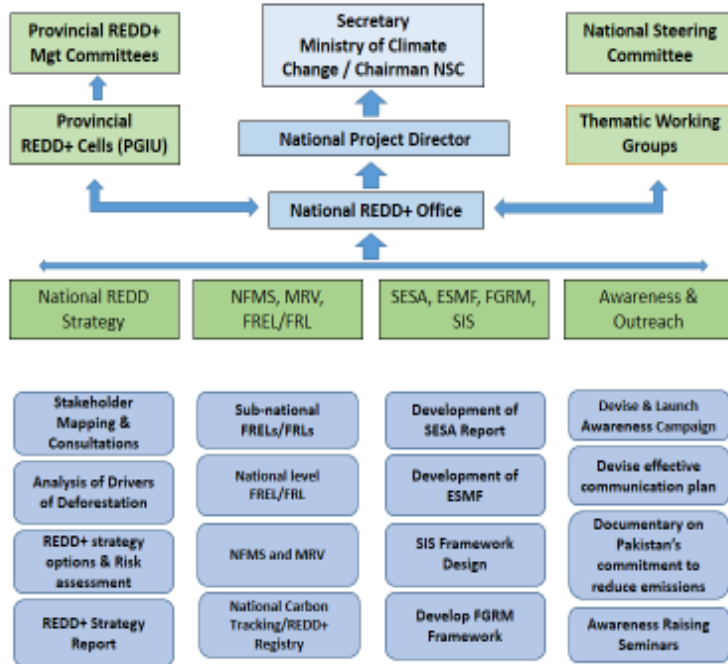
REDD+ Phases

DECISION 1/CP.16, PARA 73

Development of national strategies or action plans, policies and measures, and capacity-building (READINESS)

← Pakistan is currently in phase-1

Implementation of national policies and measures and national strategies or action plans that could involve further capacity-building, technology development and transfer and results-based demonstration activities

Results-based actions that should be fully measured, reported and verified (RESULTS-BASED)

18

Institutional Structure

Provincial REDD+ Mgt Committees
Secretary Ministry of Climate Change / Chairman NSC
National Steering Committee

Provincial REDD+ Cells (PGIU)
National Project Director
Thematic Working Groups

National REDD+ Office

National REDD Strategy	NFMS, MRV, FREL/FRL	SESA, ESMF, FGRM, SIS	Awareness & Outreach
Stakeholder Mapping & Consultations	Sub-national FRELs/FRLs	Development of SESA Report	Devise & Launch Awareness Campaign
Analysis of Drivers of Deforestation	National level FREL/FRL	Development of ESMF	Devise effective communication plan
REDD+ strategy options & Risk assessment	NFMS and MRV	SIS Framework Design	Documentary on Pakistan's commitment to reduce emissions
REDD+ Strategy Report	National Carbon Tracking/REDD+ Registry	Develop FGRM Framework	Awareness Raising Seminars

Thematic Working Groups

- 04 thematic Working Groups comprising Provincial Forest Officers, Representatives of Forest Communities, NGOs and, Academia on following themes.

  1. NFMS and FREL/FRL
  2. Governance & Management
  3. Drivers and causes of Deforestation and Forest Degradation and Strategies to address them
  4. Stakeholders & safeguards.

- In Fourth WG meeting National Definition of Forest was Finalized
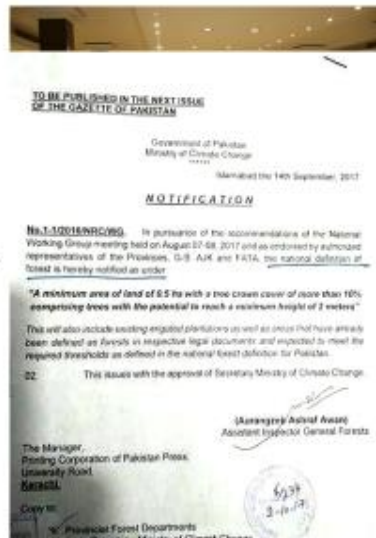
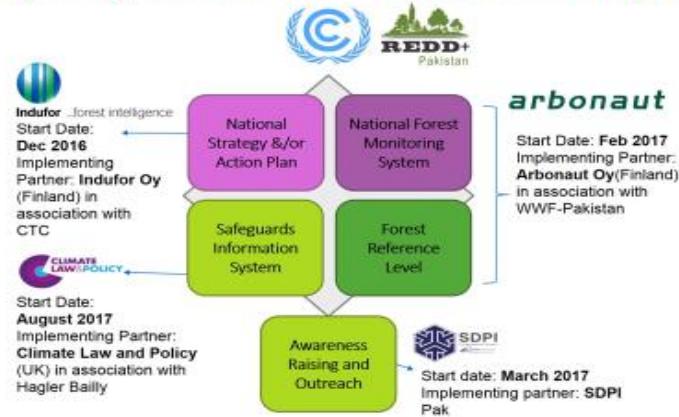## National Steering Committee (NSC) on REDD+

- The NSC was established on 19-August-2010 and re-notified on 25-October-2016.
- Two meetings of the National Steering Committee on REDD+ have been convened by NRO in December 2016 and July 2017. The progress of REDD+ Readiness activities reviewed.

4th NSC

5th NSC

Engagement of National & International Consultancy Firms

Internationa
engaged to (

Country Progress on REDD+ Readiness Preparation

Indufor ...forest intelligence
Start Date:
Dec 2016
Implementing
Partner: **Indufor Oy**
(Finland) in
association with
CTC

Start Date:
August 2017
Implementing Partner:
Climate Law and Policy
(UK) in association with
Hagler Bailly

| National Strategy &/or Action Plan | National Forest Monitoring System |
| Safeguards Information System | Forest Reference Level |

Awareness Raising and Outreach

arbonaut

Start Date: **Feb 2017**
Implementing Partner:
Arbonaut Oy(Finland)
in association with
WWF-Pakistan

SDPI
Start date: **March 2017**
Implementing partner: SDPI
Pak

Capacity Building Programme

- **Short Training Programme on National Forest Inventory from 21-25 August, 2017** by Arbonaut in Joensuu Finland.
  - 5 Trainees from Provincial Forest Departments
  - International Resource Person: Petri Latva-Kayra

- **Short Training Programme on Satellite Land Monitoring System from 04-08 September, 2017 conducted by Arbonaut at Finland**
  - 3 Trainees from Provincial Forest Departments
  - International Resource Person: Petri Latva-Kayra

Pakistan's delegation including representatives from all the provinces / territories visited Joensuu Finland for a short training course on National Forest Inventory from 21 - 25 August 2017

Liaison with WB and FCPF

- National REDD+ Office has to regularly maintain a contact with World Bank for seeking NoLs about all procurements, selection of Firms and other important issues as per agreement.

- Develop and prepare REDD+ National Reports under R-PP and submit to FCPF.

- Represent Pakistan on all national and international fora.

Provincial REDD+ Management Committees

- Provincial Coordination & Management Committees should be chaired by the respective Secretary Forests with membership from relevant provincial departments, Forest Communities, Academia and, NGOs.
- The Committees are responsible to;
  - Multi-sectoral coordination and cooperation for the planning and implementation of the REDD+ activities at the provincial level.
  - To oversee the REDD+ activities at the provincial level and provide necessary guidelines.
  - Deal with the issues referred by the Provincial Grievance and Implementation Units which will also act as the secretariat of the Provincial REDD+ Coordination & Management Committee.
  - Endorse Plans related to REDD+, and
  - Approve annual budget of Provincial Grievance and Implementation Unit (PGIU).
  - For matters involving higher authorities, the matters may be referred either to Provincial REDD+ Coordination & Management Committee OR to National Steering Committee.

First Round of Meetings with Provincial Management Committees on REDD+

Provincial Allocation on REDD+ from Provincial Annual Development Plans

S.No.	Province/Territory	Project on REDD	Amount (PKR)
1.	Balochistan	Development of Forest Mgt. Information System for REDD+ Readiness Approved project	90 million
2.	Khyber Pakhtunkhwa Forest Department	Carrob stock assessment of KP 2017-20 Already REDD+ Mainstreamed in KP Forest Department. Already working on REDD+ since 2012.	50 million for 2017-18
3	Pakistan Forest Institute, Khyber Pakhtunkhwa	Already working on REDD+ since 2012.	40 million for 2017-18
4.	Punjab	Establishment of REDD+ Cell in Punjab Approved project	30 million
5.	Sindh	No progress yet	
6.	Azad Jammu & Kashmir	Started work on Developing PC-1	
7.	Federally Administered Tribal Areas (FATA)	Strengthening of Forestry Sector in FATA Approved project	5.5 million
8.	Gilgit-Baltistan	Already REDD+ Mainstreamed in GB Forest Department	40 million
9.	National REDD+ Office	NRO has moved a case for mainstreaming REDD+ in MoCC and developing a project on Designing REDD+ Piloting in selected ecosystems in Pakistan	PC-1 in process

Capacity Building Programme
National REDD+ Internship Programme

Date of Start: 1st January 2018   Students of : MS/M. Phil & PhD   Date of End: 30th April 2018

S.No.	Province / Territory	1st Round	2nd Round	Universities
1	AJK	2	2	1. University of Arid Agriculture Rawalpindi 2. International Islamic University Islamabad
2	Balochistan	2	2	1. University of Baluchistan 2. Sardar Bahadur Khan women University, Quetta
3	FATA	2	2	1. NUST, Islamabad 2. Arid Agriculture University, Rawalpindi
4	Gilgit-Baltistan	2	2	1. Quaid I Azam University 2. Institute of Space and Technology, Islamabad
5	Khyber Pakhtunkhwa	2	2	1. NUST, Islamabad 2. University of Peshawar
6	Punjab	2	2	1. Bahauddin Zakariya University, Multan 2. University of Agriculture, Faisalabad
7	Sindh	2	2	1. University of Karachi 2. Fatimah Jinnah Women University, Rawalpindi
8	National REDD+ Office, Islamabad	2	2	1. NUST, Islamabad 2. International Islamic University Islamabad

Additional Grant from FCPF/World Bank

Pakistan requested FCPF for additional funding of USD 5.0 million as a continuum of REDD+ Readiness phase from July 2018 – June 2020.

The World Bank of its mail dated Dec 21, 2017, informed through its **Resolution PC/Electronic/2018/1** That:

1. Determines that Pakistan has met all five of the criteria laid out in Resolution PC/10/2011/1.rev.; and
2. Decides to allocate funding to Pakistan of an additional US$ 4.014 million to continue with its preparation for readiness.

Resolution PC/Electronic/2018/1 stands approved on 3 January 2018

Issues & Challenges

• Frequent changes of NPDs which have delayed payment schedule, decision making and overall progress

• Low disbursement which can adversely affect Additional Funding

Way Forward

1. Capacity building efforts will continue;
   - Trainings on NFI, GHG-I and SLMS (Feb-March)
   - SIS Training in January 19 2018

2. National REDD+ Internship Programme across the nation (to continue)

3. Monitoring of work of International Firms

4. Launching of study on REDD+/PES Piloting

5. Submission of Progress Reports to World Bank

6. Compilation of Readiness Package

Annex-IV: Presentation by Mr. Jaimie Severino Team Leader-Indufor, Oy Finland

ChiP TRAINING & CONSULTING — REDD+ Pakistan — Indufor

DEVELOPMENT OF THE NATIONAL REDD+ STRATEGY & IMPLEMENTATION FRAMEWORK

Indufor-CTC
January, 2018

Preparation for REDD+

National Strategy | FRL/FERL

Institutional arrangements

National Forest Monitoring System | Safeguards Information System

Stakeholders participation
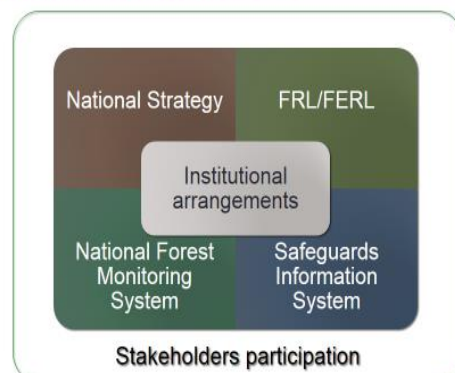
Integrating Best Practice and Guidance

FCPF Methodological Framework | PROFOR Benefit Sharing Options Assessment Tool | PROFOR Forest Governance Monitoring and Assessment | UN REDD Guidance Note on Gender Sensitive REDD+ | FCPF Readiness Assessment Framework Guidance | WWF Guide to Building REDD+ Strategies

National Best Practice

Approach to the Work

Inception	Implementation	Project Completion
Inception Presentation	Consultation Phase	Media Coverage
Detailed work planning	Diagnostic Phase	Final Workshop and Report
	Strategy Development	

Implementation phase

- FCPF Readiness Assessment Framework
- Literature review
- Consultations (2 rounds) (Forest Governance Assessment, Legal framework, Drivers of deforestation and forest degradation, Benefit Sharing
- Analysis
- Strategy development

Team Orientation

Inception Workshop and Surveys

Round-AJK Management Committee Meeting

Second Round-Balochistan Management Committee Meeting

Balochistan-Community and stakeholder Consultation
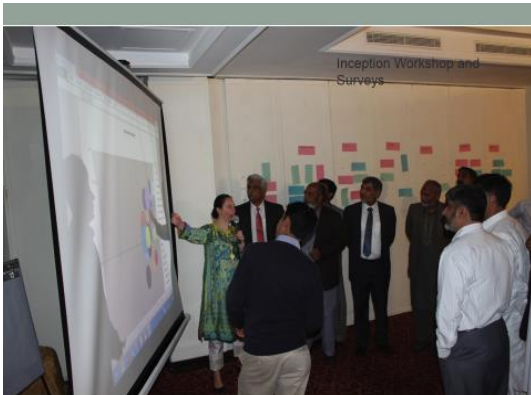
FATA Management Committee Meeting

GB Management Committee Meeting

Punjab-Kallar Kahar Community and Stakeholder meeting

Sindh Management Committee Meeting

Peshawar Management Committee Meeting

One of the Consultations with Users in Shangla

Village Level Consultation with Owners-Kohistan

24

Participants of a community consultation in Diamer-GB

Forest dependent communities in Diamer-GB

Forest dependent communities in Diamer

Forest Transition Theory
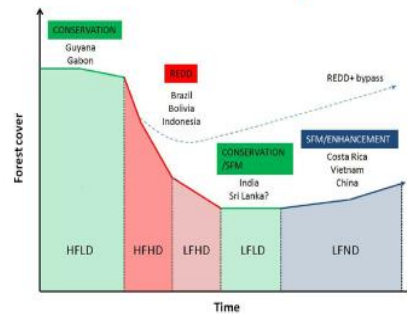
Pakistan is in the Late Transition (Phase 3) with recent efforts in reforestation programmes shifting into Post Transition (Phase 4)

Legal Classification of Forests

Legal category	Classification	Province (or territory) where operative
Government Forest	Reserved Forest	All provinces and Gilgit-Baltistan
	State Forest	Balochistan
	Demarcated Forest	AJK
	Protected Forest	All provinces and Gilgit-Baltistan
	Undemarcated Forest	AJK
	Village Forest	All provinces, AJK and Gilgit-Baltistan
	Community Forest	KP
	Unclassed Forest	Punjab
Private forest	Guzara Forest	Punjab and KP
	Protected Wasteland	KP
	Community Forest	AJK
	Chos Act Areas	Punjab

Key Findings

- Mapping of drivers of deforestation and forest degradation at national level does not exist.
- Localized studies – each province has its own deforestation dynamic.
- Common drivers of deforestation and degradation identified.

Key Findings

Direct Drivers of Deforestation
1. Unsustainable wood extraction (fuel wood, construction, illegal).
2. Habitation and urban expansion/commercial expansion.
3. Roads, infrastructure and developmental projects (including mining)
4. Forests converted to cropland (agriculture, horticulture)
5. Natural disturbances (land slides, floods diseases, climate change related factors and forest fires, natural and anthropogenic).

Drivers of Forest Degradation
1. Unsustainable / illegal wood extraction (fuelwood, timber)
2. Free grazing halts regeneration and causes degradation.
3. Forest fires (Natural and anthropogenic)
4. Infrastructure development in the forest lands providing easy access

Key Findings

- Indirect Drivers
  - General weak governance in other sector leading to forest degradation.
  - Lack of coordination among sectors provide perverse incentives.
  - Lacunas in legal and judicial system working as incentive for offenders.
  - Security related factors in AJK and FATA.
  - Dependence on forests for livelihood-lack of livelihood diversity.
  - Encroachments on forest land by different actors (legal and illegal).
  - Increase in population leading to demand from wood industry.

Key Findings

Common findings during consultations across provinces and territories:

- Forest officer education is well developed and technical knowledge on forest management is generally sound at officer level and low at lower levels, however education / awareness on climate change and REDD+ is generally low across the board.
- Institutional Architecture and its sustainability is an issue starting from REDD+ Office and to REDD+ initiatives at Provincial level.
- Further formulation of policies and laws to support REDD+ (e.g. Land tenure, benefit sharing) are needed.
- Forestry initiatives are undertaken (BTTP, GPP, SPFC, etc.) however public sector initiatives to address drivers (of deforestation and degradation) are not focused.
- Updates to provincial laws to support REDD+ are on-going in some provinces and territories, however sufficient legal studies have not been undertaken to understand the legal contexts and implications on different dimensions of forestry and particularly REDD+.

Key Findings

Common findings during consultations across provinces and territories (continued):

- Planning and decision making protocols exist in institutions, but participation from local communities is variable. Socialization in forestry needs a stronger emphasis in some areas including strengthening of extension services with it comes to community in forestry.
- Implementation and enforcement of forest laws remains a challenge usually due to resources (financial, institutional, capacities) constraints as well as commitment to enforce.
- Coordination among sectors is generally low, which reduces capacity for integrated actions.
- Forestry is a provincial subject however forestry education was centralized at PFI and its devolution has led to the need of educational institute at other provinces.
- Forestry curricula need introduction and strengthening in terms of REDD+ at PFI and forest schools.
- Stakeholders (policy makers, media, general public and others) are generally not aware of the particular issues related to climate change and REDD+.

Strategic Framework for REDD+

- **Guiding Principles**
- **Policy Foundations**
- **Vision**
- **Strategic Objectives**
- **Strategy Options**
- **Roadmap for Implementation**
- **Enabling Pillars**

Strategic Framework for REDD+

Guiding Principles

- Strengthening forest dependent livelihoods
- Enhancing ecosystem services
- Improving forest and land governance
- Transparency and accountability
- Contribution to global and national GHG reductions
- Inclusiveness and gender sensitivity
- Partnerships and coordination

Strategic Framework for REDD+

Vision

Forests in Pakistan provide ecosystem services and livelihood support on sustainable basis.

Strategic Framework for REDD+

Strategic objectives

- Contribute significantly to **reduce country emissions** in order to mitigate climate change through avoided deforestation and forest degradation and enhanced forest carbon stocks.
- Ensure the **provision of environmental services** provided by forest ecosystems.
- Provide alternatives **for sustainable livelihoods** to people dependent on forest to adapt to the impacts of climate change.
- Provide the **institutional, legal, economic and governance conditions** to ensure the sustainable management of forest resources and ecosystems.
- Create the necessary **governance** for the implementation of cross-sectoral policies.
- Ensure **awareness of stakeholders** about the role of forest in sustainable development, climate change and REDD+.

Strategic Framework for REDD+

Strategy Options		
Strategic alternative	Mitigation activity	Strategy option
Enhancement of forests capacity to capture and maintain carbon	Enhancement of carbon stocks	1. Restoration (including natural regeneration, assisted natural regeneration and enrichment planting), reforestation and afforestation
Reduction of pressure on forest ecosystems	Reducing deforestation Reducing forest degradation Conservation Sustainable forest management	2. Sustainable Forest Management 3. Payment for Ecosystem Services 4. Introduction of efficient energy sources e.g. Efficient cook stoves and kilns, solar, hydel
Promotion of alternative livelihoods	Reducing deforestation Reducing degradation Conservation Sustainable forest management Enhancement of carbon stocks	5. Silvopastoral practices and sustainable grazing 6. Agroforestry

Strategic Framework for REDD+

Enabling Pillars

- Institutional Arrangements and Governance
  - REDD+ Architecture
    - Environmental and social Safeguards, SIS
    - National Forest Monitoring System
- Cross Sectoral Coordination
- Excellence in Forest Education and Research
- Capacity Building
- Awareness and Outreach
- Faith-based Conservation
- Sustained Finance
- Monitoring, Evaluation and knowledge management

THANK YOU

Annex V: Presentation by Jarno, Team Leader-Arbonaut
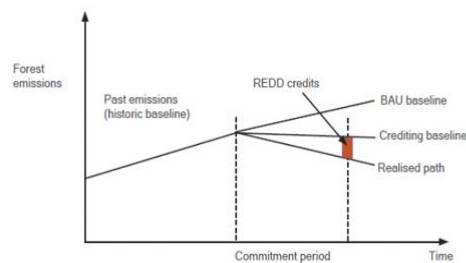

Develop Forest Reference Emission Levels/Forest Reference Level and National Forest Monitoring System (NFMS) Measurement, Reporting and Verification (MRV) System for REDD+

Meeting of REDD+ Working Groups
15 January 2018
Islamabad

Project Status
Jarno Hämäläinen
Team Leader, MSc. (For.)
Arbonaut Ltd, Finland

Project Objectives

1 — Development of a comprehensive and well referenced document that defines **Forest Reference Levels** for the main physiographic regions covering national FRL requirements (and considering both historic emissions and removals) and adjusted for any specific national circumstances

2 — Establishment of a robust, transparent **National Forest Monitoring System and Measuring, Reporting and Verification System** integrating Safeguard Information System/Multiple Benefits, Impacts, Governance and Safeguards Systems

Activity progress by and since the interim report delivery

1. Developing National/Sub-national FREL/FRLs

Source: www.redd-net.org.

REVIEW REPORT ON EXISTING DATA SETS, NATIONAL LAND USE AND LAND COVER CLASSIFICATION: National Datasets

• Forestry Sector Master Plan 1992
• National Land Use Plan 2004
• National Forest and Rangeland Resources Assessment Study 2004
• Land Cover Atlas of Pakistan 2012
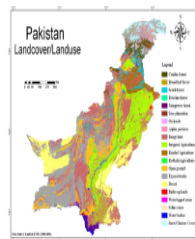
National land cover and use map prepared by MoE in 2004

REVIEW REPORT ON EXISTING DATA SETS, NATIONAL LAND USE AND LAND COVER CLASSIFICATION: Conclusions

• Inconsistency in the forest area and other land area reported
• It can be explained due to
   o National boundary reference
   o Land use/cover categories
   o Source data type and properties (satellite data)
   o Mapping standards and methodology
• It is imperative that the **definitions, data and methodology** for land use land use change estimation to be consistent overtime for the development of FREL/FRL and NFMS/MRV/SLMS

REVIEW REPORT ON EXISTING DATA SETS, NATIONAL LAND USE AND LAND COVER CLASSIFICATION: Sub-National Datasets

• District Wise (54) Forest Cover Assessment – WWF Pakistan (2007-2010)
• Land Cover Atlas of Pakistan – SUPARCO/FAO (2014-2016)
• District-wise Natural Resource Database of KP (2007-08)
• District-wise Land Cover Atlas of Punjab (2012-2013)
• Forest Carbon Inventory of Gilgit-Baltistan (2016)
• Forest Cover Mapping of Khyber Pakhtunkhwa (2012)

District Wise (54) Forest Cover Assessment
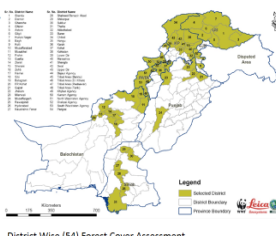
National Definition of Forest

• The REDD+ Working Group members endorsed the definition of forest as "minimum area of **0.5ha**, minimum crown cover of **10%** and minimum height of **2m** also including irrigated plantations, non-irrigated plantations and linear plantations also to be included"
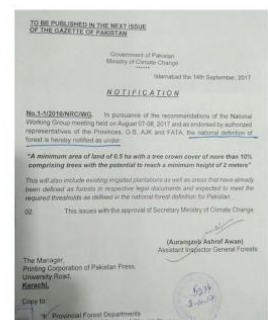
Harmonized land use categories with IPCC land-use categories

IPCC Land Use Categories	AJK	G-B	KP & FATA	Punjab	Sindh	National REDD+ Office
Cropland	• Agriculture land • Agroforestry	• Agriculture land	• Agriculture land • Terraced agriculture land • Agroforestry • Orchards	• Agriculture land • Crop land	• Agriculture land • Agroforestry	• Agriculture land • Agroforestry
Grassland	• Rangelands	• Alpine / Summer Pastures • Winter Pastures	• Alpine Pastures • Rangelands	• Grass lands	• Rangelands	• Rangelands • Grasslands • Alpine Pastures
Wetlands	• River • Lakes • Streams/ • Dams	• Rivers • Lakes	• Water bodies • Rivers • Streams • Reservoirs	• Canals • Rivers • Lakes/Ponds • Wet Land	• Mangrove • Lakes • Rivers • Canals • Estuary • Lagoon • Peat Land	• River • Dams • Lakes • Peat Land • Stream
Settlements	• Settlements	• Settlements	• Cities • Villages • Infrastructure	• Built-up areas	• Built-up areas	• Settlements
Other land	• Barren • Rocks	• Snow/Glacier • Rock/Barren land	• All other not covered above	• Others	• Rocks • Barren Land	• Snow/Glacier • Barren land • Rock • All other lands not covered under the above five land-use categories

Harmonized Sub-Categories/Classes for Forest

Sub Category	Stratification			
Forest Land Remaining in Forest Land	Climate Zone	Ecological Zone		Density Classes
		Main Ecological Zone	Sub-Ecological Zone	
	1. Tropical	1.1 Littoral and swamp forest (Mangroves)		Dense or Sparse
		1.2 Tropical dry deciduous		
		1.3 Tropical thorn forest		
		1.4 Riverine forests		
	2. Sub-Tropical	2.1 Sub-tropical broad- leaved evergreen forests	2.1.1 Montane sub-tropical scrub Forests	
			2.1.2 Sub-tropical broad-leaved forests	
		2.2 Sub-tropical pine forests		
	3. Temperate	3.1 Moist Temperate Forests		
		3.2 Dry Temperate Forests	3.2.1 Montane Dry Temperate Coniferous Forests	
			3.2.2 Dry temperate Juniper and Chilghoza Forests	
			3.2.3 Dry Temperate Broad-leaved Forests	
			3.2.4 Northern Dry Scrub	
	4. Alpine	4.1 Sub-Alpine Forests		
		4.2 Alpine Scrub		
	5. Plantations	5.1 Linear Plantations	5.1.1 Road side plantations	
			5.1.2 Railway side plantations	
			5.1.3 Canal side plantations	
		5.2 Irrigated Plantations	5.2.1 Farm plantations	

Emission and Removal Trends 1992-2016

Area	1992-1997	1997-2002	2002-2007	2007-2012	2012-2016
KP	DEF, DEG	DEF, DEG	DEF, DEG	DEF, DEG	REG
FATA	DEF, DEG	DEF, DEG	DEF, DEG	DEF, DEG	REG
AJK	DEG	DEG	DEG	DEG	DEG
Punjab	DEG	REG	DEF	DEF	REG
BN	DEF, DEG, REG, AFF	DEF, DEG, REG, AFF	DEF, DEG, REG, AFF	DEF, DEG, REG, AFF	REG, AFF
GB	DEG	DEF	DEG	DEG	DEG, REF
Sindh	DEF, DEG	DEF, DEG	DEF, DEG	DEF, DEG	DEF, DEG

Provincial and territorial consultations on Drivers Deforestation and Degradation: Direct Anthropogenic Causes

• Infrastructure Development (roads, canals): DEF/DEG
• Habitation / Settlements / Urban expansion / Shanty towns: DEF
• Mining (especially surface mining, wood for heating): DEF/DEG
• Forest fires (intentional or due to negligence): DEF/DEG
• Agricultural expansion: DEF/DEG
• Forest clearing for security purposes: DEF
• Unsustainable timber and fuelwood extraction: DEF/DEG
• Fish ponds: DEF
• Water-logging: DEF/DEG

Provincial and territorial consultations on Drivers Deforestation and Degradation: Direct Anthropogenic Causes

- Free / uncontrolled livestock grazing / overgrazing and browsing: DEF/DEG
- Land lease / hand over: DEF
- Tourism and hoteling industry: DEF
- Unscientific forestry operations and management: DEG
- Forest fragmentation: DEG
- Atmospheric pollution: DEG
- Freshwater pollution threatening marine ecosystem: DEF

Provincial consultations on Drivers Deforestation and Degradation: Non-Anthropogenic / Indirect Anthropogenic Causes

- Floods: DEF/DEG
- Diseases, and pest attacks: DEG/DEF
- Landslides, heavy snowfall, earthquakes: DEF
- Run off; erosion: DEF/DEG
- Droughts / reduced rainfall: DEF/DEG
- Oceanic intrusion and tsunamis: DEF

DESIGN OF OPERATIONALIZED SYSTEM FOR FOREST LAND ASSESSMENT: SLMS

Methodology and process based on FOSS software:

1. Satellite image acquisition and processing
2. Systematic sampling and visual LULC interpretation
3. Sample set and image training
4. Image pixel classification
5. Post classification processing
6. Accuracy assessment and area estimation

DESIGN OF OPERATIONALIZED SYSTEM FOR FOREST LAND ASSESSMENT: NFI

Forest inventory process and protocol manual including

1. Forest compartment boundary demarcation
2. Inventory planning
3. Field reference data collection
4. Result calculation
5. Quality control procedures
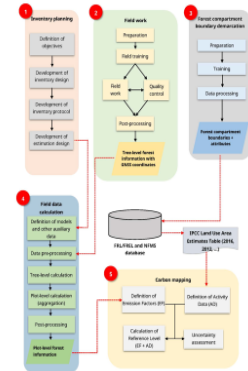
Pilot multi-purpose forest inventory

- an informed decision to include the most relevant pools in the national FREL/FRL,
- integrating recent provincial forest inventory data and newly collected data for developing national emission factors (Tier 2),
- collecting reference data for land use and cover map validation and ground-truthing,
- assessing and enhancing national and provincial capacities for forest inventories, and
- designing the National Forest Inventory as a component of the National Forest Monitoring System

Sampling Design

- Two Phase Systematic Sampling
- Nation wide wall-to-wall systematic grids
  - 10' x 10' systematic grids (≈ 18km x 16km)
- Sub-national grids
  - 5' x 5' (≈8 km x 9 km) or 2.5' x 2.5' (≈4 km x 4.6 km)
- Stratification
  - IPCC Land Use Categories
  - Visual Interpretation using VHR image – Google Earth
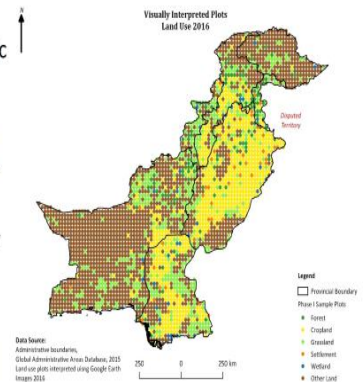
Cluster and Plot Layout

- Layouts adapted from KP carbon stock assessment
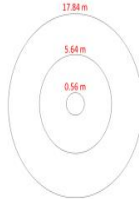
Full plot (1000 m^2)
- All All living trees and standing deadwood stems with DBH > 5 cm
- Stumps with diameter > 20 cm

Two subplots
- 100 m^2 for shrubs and saplings, downed and stump deadwood of DBH > 5cm
- 1 m^2 for non-tree, litter and soil biomass

Pilot Forest Inventory: Number of clusters and plots

- GB has 537 recent AGB plots
- KP has 1263 recent plots
- Security and accessibility in FATA

	PSU	SSU	Total
AJK	19	76	95
ICT	1	4	5
Punjab	26	104	130
Sindh	12	48	60
Balochistan	30	120	150
Total	88	352	440

Distribution of Forest Plots in different Eco-Zones
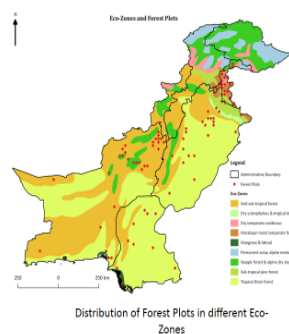
## Forest Inventory Protocol

arbonaut

Field forms

- FORM 1: Cluster Information (Primary Sampling Unit)
- FORM 2: Plot Information (Secondary Sampling Unit) – General and Forest Land Use
- FORM 3: Plot Information – Land Use and Land Use Change
- FORM 4: Above-ground and Below Ground Biomass of trees (DBH > 5 cm)
- FORM 5: Deadwood Information (Standing, Downed and Stumps with the minimum diameter > 5 cm)
- FORM 6: Seedlings (DBH1 ≤5 cm,), non-tree aboveground height < 1.3 meter) and litter pool
- FORM 7: Soil Organic Carbon (SOC) for mineral soils
- FORM 8: Plot Photographs
- FORM 10: Land Use Ground Truthing/Validation Form

Forest Inventory

Forest Inventory Database
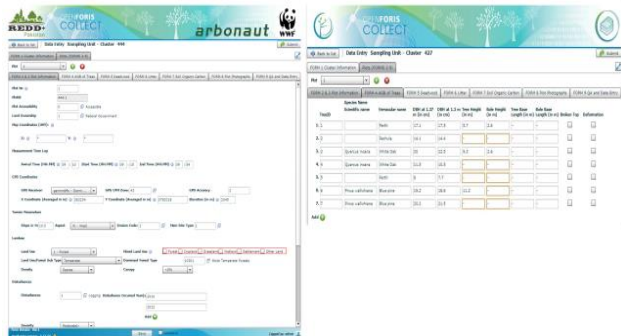
Quality Assurance/Quality Control

- QA/QC for Field Measurements
- QA/QC for Sample Preparation and Laboratory Measurements
- QA/QC for Data Entry
- QA/QC for Data Archiving

Methodology used to adjust FREL/FRL for national circumstances

- Review of the adjustment practices in other country submissions
- Analysis of the past observed changes in national and sub-national circumstances
- Review and statistical modelling of the secondary source future change scenarios (e.g CPEC, large-scale plantation programmes)
- Conducting necessary statistical modelling and uncertainty assessment based on the qualitative and quantitative socio-economic, environmental and political variables
- Preparing the national circumstances chapter contents for the FREL/RL submission document and annexing the relevant background information

Changes in sub-national circumstances in 1992-2016

| Area	1992-1997	1997-2002	2002-2007	2007-2012	2012-2016
KP	Ban on harvest	Ban, illegal cutting, reforestation projects	Ban, illegal cutting, reforestation projects	Military operations, ban on collection of wind fall trees	BTAP, Timber import, alternative energy sources
FATA	Ban on harvest	Ban, illegal cutting, reforestation projects	Ban, illegal cutting, reforestation projects	Military operations, ban on collection of wind fall trees	Timber import, alternative energy sources
AJK	Flood	Ban, conflict, forest fire	Earthquake in 2005	Flood	Energy shortages and high market price
Punjab	Ban on harvest	Mass afforestation programs	Land transferred to army (personnel) resulting in deforestation in 2005-2007	Rehabilitation Program, Amendment of Forest Act, ban on felling	Rehabilitation programme
Balochistan	Drought, refugee, low regeneration in Juniper, BNRMP	Drought, BNRMP afforestation programs	Poor security situation/ law and order, ongoing BNRMP afforestation programs	Poor governance in forestry sector, weak implementation of law, floods, ongoing BNRMP afforestation programs	Wildlife Act and Regulation enacted in 2014/15
GB	Ban on harvest	Working Plan implemented for Private forest	Reintroduction of ban on harvest	Continuation of ban on harvest	Continuation of ban on harvest, enhancement of social forestry
Sindh	Ban on harvest	Poor governance in forestry sector	Introduction of Lease Policy, ban on harvest, Poor governance in forestry sector	Lease Policy, ban on harvest, Poor governance in forestry sector	Lease Policy, ban on harvest, Poor governance in forestry sector

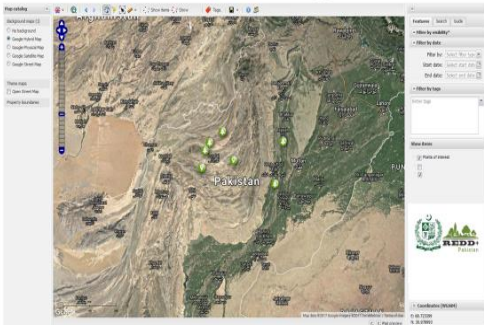## 2. Designing NFMS and its components
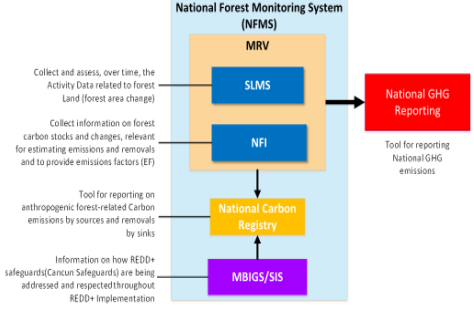
Forest Data Model
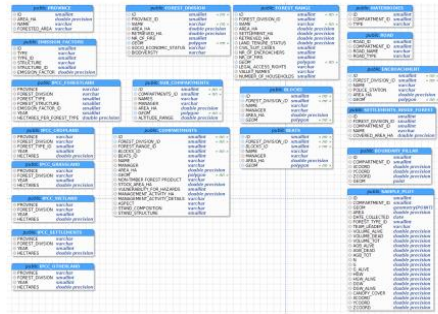
NFMS based on Open Source Software Components
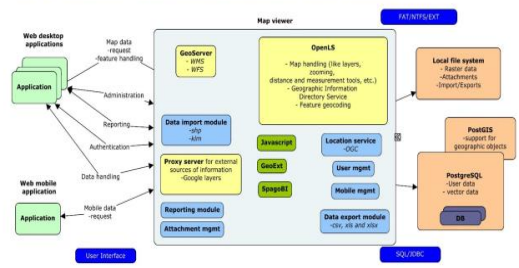
Web Based NFMS Interface (Prototype)

Main challenges to be solved

- Pending mapping approval from SOP
- National boundary and provincial data to be available for generating FREL/FRL

Next steps I

- TWG consultations for the NFMS institutional framework, data transaction mechanism, data standards and protocols
- Acquire topographic data from SOP to determine the exact boundary lines, provinces and districts and possibly tehsil-level boundaries.
- Activity data and LULUCF mapping (1996/2000/2004/2008/2012/2016)

Next steps II

- Pilot forest inventory completion in Balochistan
- Emission factors derived for all the harmonized forest sub-categories/classes
- Compiling national FREL/FRL based on sub-national activity data, emission factors, applying the needed adjustments on projections and quantifying uncertainty
- Validating a sample of demarcated forest boundaries in sample districts mapped by WWF

Thank you

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Annex VI: Presentation by Daniella Rey, Director-Climate Law and Policy

Interim Progress Report: SESA, ESMF, SIS and FGRM

CLIMATE LAW&POLICY

Hagler Bailly Pakistan

Daniela Rey Christen
Director

Fifth REDD+ Working Groups
15th January 2018

Objectives

- The present consultancy aims to assist the Government of Pakistan in meeting both the UNFCCC and FCPF safeguard requirements in a coordinated and cost-effective manner
- Examine progress on the delivery of tasks and outputs
- Outline upcoming/next tasks and outputs

Tasks	Objectives	Progress
1. **Assessment of existing policies, regulations, procedures and institutional structures that are supporting the implementation of environmental and social safeguards in Pakistan**	Provide the foundation for the design of a governance framework for safeguards, based on Pakistan's existing legal and institutional framework. Contributes significantly to the SESA and the development of the ESMF.	Report with analyses of legal and institutional and governance capacity to address safeguards has been submitted. The report will be presented in the National Safeguards workshop scheduled for the 17-18th January 2018

Tasks	Objectives	Progress
2. **Clarification/ interpretation of Cancun safeguards**	Helps to gain a shared understanding of the substantive rights and duties contained therein. Main input for identifying the types of information that will likely need to be gathered/provided by the SIS. The clarification will also be key to the preparation of the SOI.	Proposed clarification/ interpretation of the UNFCCC REDD+ safeguards in accordance with Pakistan's national circumstances has been submitted. The report will be presented in the National Safeguards workshop scheduled for the 17-18th January 2018

Tasks	Objectives	Progress
3. **Assessment of historical social and environmental issues in the forest/land use sector**	Seeks to identify what are the historical social and environmental issues (including, historical adverse impacts and conflicts) in the forest/land use sector. This report is a key input for the preparation of the SESA.	Assessment of historical social and environmental issues in the forest/land use sector relevant to the assessment of potential risks and benefits arising from the proposed REDD+ strategy has been submitted. The report will be presented in the National Safeguards workshop scheduled for the 17-18th January 2018

Tasks	Objectives	Progress
4. **Mapping of relevant stakeholders and platforms** to be involved in the evaluation of potential risks and benefits associated with the implementation of REDD+ activities.	Ensure that all relevant actors are involved in the SESA and overall assignment. Considers and builds upon previous stakeholder mappings and aims to provide recommendations for strengthening existing platforms.	Report with identification of relevant stakeholders and platforms to be used in the SESA has been submitted

Tasks	Objectives	Progress
5. **SESA-** Identification of social and environmental risks and benefits associated with the proposed REDD+ activities	Identify the key social, and environmental impacts of the proposed REDD+ interventions.	Consultations in Sindh, Balochistan, Punjab, AJK FATA, KP and GB have been carried out to identity potential social and environmental impacts that may arise from the implementation of the proposed REDD+ interventions. Further inputs will be gathered through the National Safeguards workshop scheduled for the 17-18th January Draft SESA report is available

Upcoming tasks and outputs

Tasks	Immediate next steps	Deadlines
Mid Term report: SESA REPORT- includes identification and prioritization of social and environmental risks associated with the proposed REDD+ activities	Discuss and gather final inputs on the draft identification and prioritization of the key social, and environmental impacts of the proposed REDD+ interventions.	Mid Term report will be submitted on the 22nd January 2018, incorporating inputs that will be gathered through the National Safeguards workshop scheduled for the the 17-18th January 2018

Tasks	Immediate next steps	Deadlines
Draft Final Report: - Draft ESMF report; - Assessment of feedback and grievance redressal mechanisms - REDD+ FGRM Design Framework, - Report with identification of SIS information needs; - Report with identification and assessment of information systems and sources in relation to SIS information needs; and - Concise framework document for the set-up of the National SIS.	- Discuss and gather final inputs on potential grievances that may arise from implementation of proposed REDD+ interventions - Gather inputs on preliminary identification of SIS information needs and sources - Gather inputs for SIS framework document - Gather inputs for ESMF	To be submitted on the **mid April 2018**, incorporating inputs that will be gathered through the National Safeguards workshop scheduled for the the 17-18th January and Training workshop of 19th January.

Tasks	Immediate next steps	Deadlines
Final Report: - Final ESMF report; - Technological platform of SIS - Report of Pakistan's approach towards meeting UNFCCC and WB safeguard requirements; - Standard Operating Procedures (SOPs) for filing and addressing complaints, - Friendly mobile app to enhance stakeholder engagement and respond to any request for feedback or complaint that stakeholders may have about REDD+ activities.	- Discuss and gather inputs for ESMF - Gather inputs for SIS framework document - Gather inputs for FGRM design, including SOPs and information sharing mechanisms	To be submitted on the mid **May 2018**

Thank you!

Contact details:

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Climate Law and Policy website:
http://climatelawandpolicy.com/

Annex VII: Presentation by Maryam Shabbir, Advocacy and Outreach Officer-SDPI

REDD+ Media Awards 2017

- Ms Shakeela Jaleel for her special supplement on REDD+.
- Ms Memoona to collect her award for her dedicated reporting in the REDD+ tool to address climate change.
- Ms Omaima Malik for her special package on Mangaroves cutting telecasted by GEO News.
- Mr, Adnan Khatri for his excellent article on Mangrove, riverine and agro-forests diminishing published in The Nation

Electronic Media

- SDTV Package on REDD+
- Radio Pakistan
- Talk Shows in the main stream media

Social Media

- Facebook Page @FOForestPK
- Twitter   @FOForestPK
- WhatsApp Group.   Friends of Forest
- WhatsApp group for the journalist

People-to-people interaction

SDC2017 Panel on REDD+

- Please spread policy messages & join us on social media

@S_Maryam8   @maryamshabbir08

Annex VIII: Presentation by Matti Ruhanen, Arbonaut

National Forest Monitoring System (NFMS) Data Model

16. January 2018
Islamabad

Matti Ruhanen
Oy Arbonaut, Finland

arbonaut

WWF

National Forest Monitoring System (NFMS) Functions
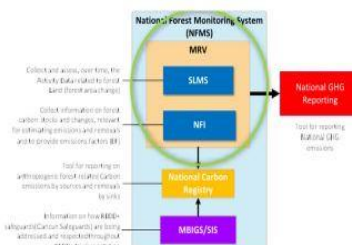
- **National Forest Monitoring function** - refers to a domestic tool that allows countries to assess a broad range of forest information including information specific to REDD+. Many forest-related monitoring tools already exist; it is important to build on existing tools and to harmonize existing and new tools for forest monitoring for REDD+.

- **MRV function** - refers to the estimation and international reporting of forest emission and removals for REDD+ drawing from information collected through the NFMS.

Data model
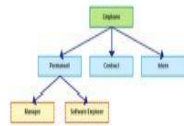
- Data model is *"an abstract model that organizes elements of data and standardizes how they relate to one another and to properties of the real world entities".* Database System Design, Implementation & Management, Rob & Coronel

- Data structuring

Data model
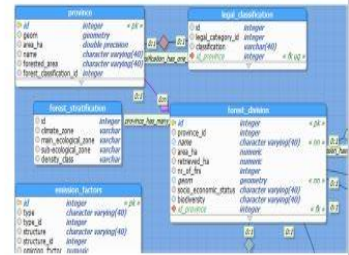
- It contains tables and attributes (fields)

- Tables (data) may have one or more relations
 - One to one, one to many, many to many

Data model

- Data model contain tables and attributes (data **fields**)

- Defined own "ID" unique primary key number for each table

- Attributes may defined as character, numbers, date/time, geometry, boolean...

Data model

- Modelled GIS data are stored into relation DB like POSTGIS
  - POSTGIS is Open Geospatial Consortium (OGC) compliant software

- PostGIS is used as an extender for open source PostgreSQL database which contain geospatial functions

- Data may contain geometries like point, polygons (multipolygons), lines with different styles (example line type or width, colors)
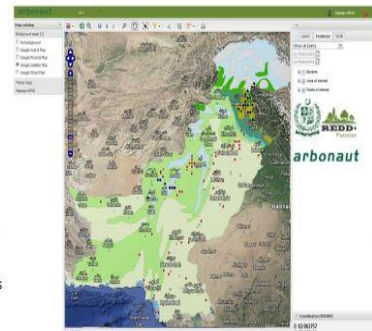
Data model
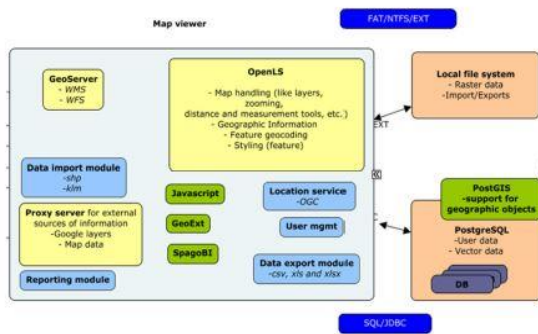
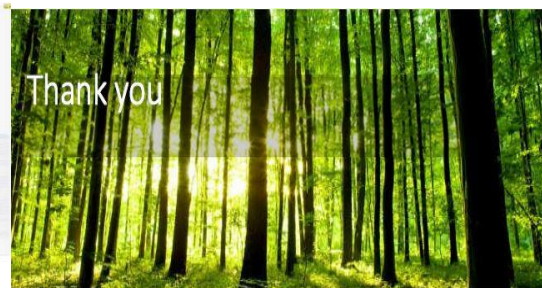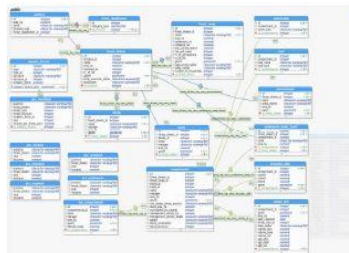Part of Web portal architecture

NFMS Data Model

- **National data**
  - National boundaries
  - Forest_stratification
  - Other data
- **IPCC land use**
- **SLMS ACTIVITY DATA**
  - Deforestation
  - Forest degration
  - Conservation of forest carbon stocks
  - Sustainable forest management
  - Enhancement of forest carbon stocks
- **Emission factors**
- **NATIONAL FOREST INVENTORY PLOTS**

Picture: User interface in NFMS web portal (proto), *Ecological zone*

Data model

- **Forest management data**
  - Province
    - Legal_classification
  - Forest_division
    - Blocks
    - Beats
    - Forest_range
    - Encroachment
    - Settlements_inside_forest
    - Compartments
      - Sub_compartments
    - Waterbodies
    - Road
    - Boundary_pillar
    - Sample_plot

Thank you

arbonaut

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Annex A: Presentation and Group Work on Institutional Framework for NFMS including MRV (SLMS/NFI), MBIGS and carbon registry
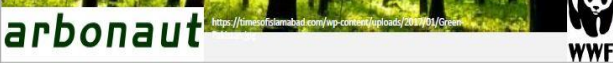
NFMS Institutionalization Process

- Which institutions?
- What roles and responsibilities?
- What level of coordination and collaborations?

1. **Institutions:** Defining which institutions are involved in national and sub-national MRV activities and what their respective roles and responsibilities are and how they should interact, how to intervene in case of challenges and who bears overall responsibility.

- Processes for collecting, processing reporting and verification
- Roles of institutions in collection, processing, reporting and verification

2. **Processes:** Defining the overall process of collecting, processing, reporting and verifying data. This includes determining which role individual institutions play within this process.

- National Forest Inventory methodology
- Satellite Land Monitoring System methodology
- Estimation and Projection methodology
- Reporting and Verification methodology

3. **Methodologies and tools:** Identifying and developing standardized methodologies and tools required to collect, process and store data.

1 Institutions

- Defining which institutions are involved in National/Provincial(sub-national) activities
  - NFMS / MRV (NFI & SLMS)
  - (MBIGS/SIS integration)
  - (GHG Inventory Support)
  - Information System and Web-Portal
- What are their respective roles and responsibilities and how they should interact, how to intervene in case of challenges and who bears overall responsibility?
- What are the levels of coordination and collaborations and what are the formal mechanisms?

Institutional Arrangement

- A solid, sustainable network of institutions with the required variety of expertise
- Clearly documented roles and responsibilities with a single body assigned for overall coordination
- Good coordination and clear lines of communication
- Continuity of staff and succession planning;
- High level of ownership by the participating stakeholders
- Efficient use of existing institutions and frameworks to minimize establishment and operational costs

| MoCC National REDD+ Office | National Stakeholders |
Provincial Forest Depts.	Other Provincial Stakeholders
Communities	Commercial Forest Businesses Organizations	Local NGOs/CBOs
Academic and Research Institutions	International REDD+ Partners
Forest Owners	Others....

Institutional Arrangement……(contd..)

- **National Focal Point** with the overall responsibility for coordinating the REDD+ MRV function and liaising with the UNFCCC (Decision 10/CP.19).
- **Institutional Body** to manage the work of institutions and organizations; and have overall responsibility for the coordination of administrative and technical arrangements, and the overall quality of reported estimates.
- Mandated **Institutions** to provide data or perform specific tasks
  - National Level Institutions
  - Provincial Institutions
  - Other Autonomous Institutions??

Institutional Arrangement……(contd..)

- Institutional arrangements should establish frameworks for:
  - Formalizing mandates for **data acquisition, processing and sharing** amongst relevant institutions to avoid duplication of efforts
  - Maintaining documented processes for **quality assurance and quality control**, so as to ensure the quality datasets (e.g. for spatial data and carbon pool measurements)
  - **Continuous improvement** including documentation of opportunities for improvement and process for the inclusion of such improvements
  - **Retaining skilled staff** through appropriate and ongoing **training** and **environments to encourage staff retention**
  - Securing **adequate budgets** to support the initial development of the MRV function as well as the ongoing operation and development.
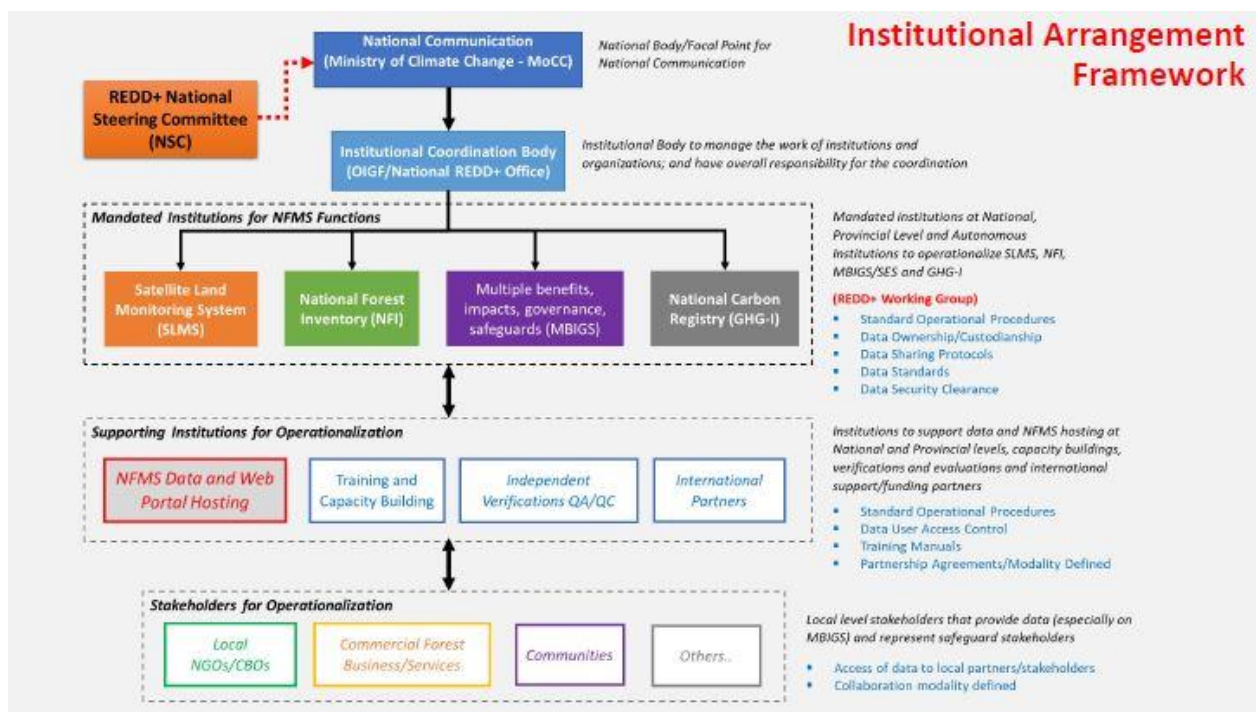
Group Discussion Works
Inputs for NFMS Institutional Framework

1. Which Institutions? What Roles? Why?
2. Types of Coordination Needed? Who will coordinate?
3. Mandates of Institutions and how to formalize?
4. Endorsement on common standard processes for data collection, archive/management, dissemination
5. Data Ownership and Custodianship
6. Data Policy and Sharing Protocol
7. Partnership and Co-Learning

NFMS Institutional Framework

Institutional Roles	Potential Organizations
MRV Functions	
• NFI	e.g. PFI / Forest Departments with uniform approach
• SLMS	e.g. SUPARCO at national and subnational level with uniform approach
GHG-I	e.g. GCISC
MBIGS/SIS	e.g. local stakeholders
Validation/Verification/Certification	e.g. National, International Organizations
NFMS Database and Web Portal Hosting	• e.g. Administration – National REDD+ office with technical support from Green Pakistan Project / SoP • e.g. Data hosting - National Data Center/National Telecommunication Corporation (NTC)
Data Ownership	• e.g. Provincial Governments/FDs
Data Custodianship	• e.g. MoCC
Community Monitoring	e.g. forest user's groups. Local NGOs/CBOs, tribal jirga
Method and System Development	e.g. PFI, SUPARCO, Independent National/International organizations

Data Transaction Mechanism

- Ownership of Data
- Custodianship of data
- Data Policy
- Data Transfer/Sharing Mechanism
- Data Transaction Format

Data Protocols and Standards

- Data development/collection standard protocol
- Accuracy assessment protocol
- Data Standards (data type, data format, metadata)
- Data Dissemination Protocol and Standards

Partnership and Co-Learning

- Partnership for Capacity Building and transfer of knowledge between provincial FDs/organizations
  - E.g. NFI Capacity Building Partner – PFI
  - E.g. SLMS Capacity building partner – PFI, SUPARCO
  - E.g. MRV/NFMS – OIGF/National REDD+ Office
  - National/International Organizations – WWF-P, IUCN, ICIMOD, FAO
  - Others

Thank you

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Group work Exercise:

Key Discussion on Institutional Framework for
National Forest Monitoring System (NFMS) Operationalization
Recommendation Template

1. Institutional Framework for National Forest Inventory (NFI)

1. Potential Institutions for Operational NFI:

	Institutions/Organizations	Reason/Rationale/Strengths (Why?)
National Level	National REDD+ Office/ Permanent REDD+ Cell (MoCC) PFI OIGF	*Needs to have GIS/NFI development capacity; Custodian with support from PFI.* *PFI - Peshawar: Leading institute regarding research and forestry; along with representatives in climate change cell* *Technical staff*
Sub-national (Provincial) Level	AJK; Forest Department Sindh; Working Plan/Inventory Circles of Forest Department Punjab; Working Plan Circles of Forest Department GB; REDD+ Cell, Planning and Monitoring Cell KP; Department, PFI in supporting role Conservator of Forest, Planning and Monitoring Circle Balochistan; Provincial REDD+ Cell FATA; Forestry Sector FATA	*AJK: Forest department has capacity since decades performing Forest Inventory in scope of working plans* *Sindh: It is the wing of SFD involved for forest working plan preparation* *GB: Has already mandate*

		FATA: Technical staff

2. Proposed Institution (in 1) to be mandated for national/sub-national level NFI and support for

	(Yes/No)	Reason if 'No'	Remarks
National NFI	Yes		*"But for coordination only. Provinces will do the actual work."* *"NFI is needed to have standard / authentic data custodian."*
Sub-national NFI	Yes		*REDD+ Cell, Planning and Monitoring Cell has the mandate* *Sub-national NFI is needed.*
NFI Capacity Building Trainings as a national institute/organisation	Yes		*PFI is the suitable organisation.* *It should be both at national and provincial level.*
NFI Service Provider/Support Service	Yes No	*Provincial forest departments have the capacity of forest inventory.*	*PFI (NFI support provider)*

3. Importance (Requirement) of NFI Standard Operational Protocol	(Yes/No) Yes	Reason if 'No'

4. Data Ownership of NFI Data at Provincial Level. (Who owns NFI data at Provincial Level?)	GB Forest, Wildlife and Environment Department Sindh: Conservator (Provincial forest department) of Forest working plan / inventory circle AJK: Forest department FATA: Conservator of Forests, FATA Secretary P&LDD	Remarks/Reason Provincial Government CF/WP/inventory is to be mandated for carbon data management As provincial subject data is owned by Forest Department
5. Data Custodianship of NFI Data at National Level. (Who do you recommend being Data Custodian at the National Level?)	IGF, MoCC National REDD+ Cell / Office National Forest Institute (PFI)	Remarks/Reason "MOCC is concerned ministry having jurisdiction at provinces, state FATA." "Because PFI has enough human resource as well as technical to maintain it" "PFI as leading institution at N/sub-national level"
6. Policy for NFI Raw Data. (What policy do you recommend for NFI raw data sharing) (Free of cost, Minimum Cost, Controlled Access, Restricted, Other <Specify>)	Controlled access (Restricted in initial stages) Controlled access with minimum cost Free of Cost	Remarks/Reason "The data should be restricted and shared for research purpose after written request of any organisation/individual" "It shall be discretion of data owner to share data in the format which he shall keep in separate file -?-" "Data can be shared on demand if it is necessary."
7. Policy for NFI Processed Data, (What policy do you recommend for NFI processed data sharing e.g. calculated data – volume, biomass, carbon content etc.)	Free of cost 3 On payment 1	Remarks/Reason Restricted, may be shared after proper written request.

(Free of cost, Minimum Cost, Controlled Access, Restricted, Other <Specify>)		Free data has no worth. Moreover, data collection costs may -?-, it should be -?- on payment of fee. Anything free is taken as granted and will not be used purposefully. Free of cost – as this data will be published
8. If NFI Data (raw/processed) sharing is NOT RESTRICTED, how should it be shared (mechanism)? (Paper form, digital media, on-line internet based)	Through already available channels Online internet Paper format or pdf. In paper form through AJK government, state forest department & MoCC	Remarks/Reason National level institutes can share data after getting consent from provincial forest departments. Uneditable data will be shared. Copy rights must be ensured → uses should acknowledge the institution who provides data. It may not be misused. Mechanism can be derived through mutual agreements / ToRs and data-sharing. It should be hard copy not be editable. So it may not be misused and should be copyright protected.

2. Institutional Framework for Satellite Land Monitoring System (SLMS)

1. Potential Institutions for Operational SLMS:		
	Institutions/Organizations	Reason/Rationale/Strengths (Why?)
National Level	MOCC 1 National REDD+ Office / Permanent REDD+ Cell (for sustainability of the programme) 2 PFI 3 SUPARCO 7 Survey of Pakistan 3 Institute of Space Technology 1 International/National Organizations 1	*REDD+ office: needs respective NFI/GIS expert capacities, jurisdiction and access for the whole country* *SUPARCO: Being only national organisation to access satellite operation (along Institute of Space Technology); jurisdiction and access for the whole country*
Sub-national (Provincial) Level *(If needed)*	AJK; Forest Department Sindh; Working Plan Circle/GIS Wing of Forest Department Punjab; Survey of Pakistan, Provincial GIS lab of Punjab Forest Department GB; REDD+ Cell / GIS Cell KP; Forestry, Planning and Monitoring Circle of Forest Department BN; Provincial Forest department with the help of REDD+ cell FATA; Forestry Sector	*AJK: Has the capacity* *GB: SUPARCO will help and support the province*

2. Proposed Institution (in 1) to be mandated for national/sub-national level SLMS and support for

National SLMS	(Yes/No) Yes	Reason if 'No'	Remarks
Sub-national SLMS	(Yes/No) Yes	Reason if 'No'	Remarks
SLMS Capacity Building Trainings as a national institute/organisation	(Yes/No) Yes	Reason if 'No'	Remarks *SUPARCO*
SLMS Service Provider/Support Service	(Yes/No) Yes	Reason if 'No'	Remarks *SUPARCO*

3. Requirement (Importance) of SLMS Standard Operational Protocol		(Yes/No) Yes	Reason if 'No' PFI/SUPARCO/International hired organisation
4. Data Ownership of SLMS source imagery and output Activity Spatial Data at Provincial Level. (Who owns imagery and Land Use/Land Use Change - Activity data at Provincial Level?)	GB Forest Department Board of Revenue Sindh, Sindh GIS section, Forest Department AJK Forest Department FATA CF Office		Remarks/Reason *BoR Sindh is the custodian of land management records whereas Forest department shall have to manage data.* *Currently not available but will be owned by Forest Department in the future (AJK).*
5. Data Custodianship of Land Use/Land Use Change - Activity Spatial data at National Level. (Who do you recommend being Data Custodian at the National Level?)	MOCC 3 PFI 2 Forest department/REDD+ (?) CF Office (?)		Remarks/Reason *MOCC -?- -?- coordination agency and PFI.* *PFI being a research institute with national mandate.*

6. Policy for SLMS Source Data. (What policy do you recommend for SLMS source imagery data sharing) (Free of cost, Minimum Cost, Controlled Access, Restricted, Other <Specify>)	*Controlled Access* *On cost.* *Minimum cost (for certain related organisation)* *Free of Cost*	Remarks/Reason *Minimum cost to have access to work on SLMS.*
7. Policy for SLMS processed output Activity Data, (What policy do you recommend for SLMS processed output data sharing e.g. temporal land use, land use change, degradation, forest types/strata, biomass map and spatial data etc.) (Free of cost, Minimum Cost, Controlled Access, Restricted, Other <Specify>)	Free 2 Controlled access 1 Minimum cost 1	Remarks/Reason
8. If SLMS (source/processed) sharing is NOT RESTRICTED, how should it be shared (mechanism)? (Paper form, digital media, on-line internet based)	*Online internet based 1* *Hard copy and PDF format 1* *Paper format 2*	Remarks/Reason *Through formal channel – request to see – forest* *Through TORs (predefined) in order to avoid misuse of data.* *Paper form in most of the time but in case of collaborative work it can be shared in soft form.*

3. Institutional Framework for National Forest Monitoring System (NFMS)

1. Potential Institutions for Operational NFMS Database and Portal Administration:		
	Institutions/Organizations	Reason/Rationale/Strengths (Why?)
National Level	Ministry of Climate Change through National REDD+ Office/ Permanent REDD+ Cell (MoCC) PFI SUPARCO	
Sub-national (Provincial) Level (If needed)	AJK; Forest Department SD; Working Plan Circle of Forest Department PB; Provincial REDD+ Cell, Chief Conservator of forest, planning, monitoring and evaluation, GIS lab, provincial cell. GB; Forest Department KP; Forestry, Planning and Monitoring Cirlce BN; Provincial Forest Department/ REDD+ Cell FATA; Forestry Sector	

2. Potential Institutions for NFMS Database and Portal Server Hosting:		
	Institutions/Organizations	Reason/Rationale/Strengths (Why?)
National Level	MOCC/REDD+ Office PFI	
Sub-national (Provincial) Level *(If needed)*	GB: REDD+ Cell AJK: Forest Department	

	(Yes/No)	
3. Requirement (Importance) of NFMS Standard Operational Protocol	Yes	Reason if 'No' PFI
4. Data Ownership of NFMS Database (various themes – refer data model)	MOCC PFI	Remarks/Reason
5. Data Custodianship of NFMS Database	GB: FD, CCF GB Sindh: PFI AJK: MoCC, PFI CF FATA Office	Remarks/Reason
6. Policy for NFMS Web Platform Accessibility. (What policy do you recommend for NFMS accessibility) *(Free of cost, Minimum Cost, Controlled Access, Restricted, Other <Specify>)*	*Controlled access* *Free*	Remarks/Reason *Free of cost to have knowledge about NFMS.*

4. Institutional Framework for Green House Gas Inventory (GHG-I)

1. Potential Institutions for Green House Gas Inventory		
	Institutions/Organizations	Reason/Rationale/Strengths (Why?)
National Level	MOCC 1 National REDD+ Office 2 PFI 2 GCISC 5 EPA	*REDD+ and PFI having capacity.*
Sub-national (Provincial) Level *(If needed)*	AJK; Forest Department Sindh; Working Plan Circle of Forest Department Punjab; Forest Department GB; Forest Department/EPA KP; EPA BN: Nil FATA; Provincial EPA KP.	*AJK Forest department having capacity.*

2. Potential Institutions for Green House Gas Inventory		
	Institutions/Organizations	Reason/Rationale/Strengths (Why?)
National Level	CGISC / MOCC / REDD+ Office / PFI / Federal EPA	

| Sub-national (Provincial) Level
(If needed) | GB: CCF, EPA
AJK: Forest Department | |
|---|---|---|

| 3. Importance (Requirement) of GHG-I Standard Operational Protocol | (Yes/No)
Yes | Reason if 'No' |
|---|---|---|
| 4. Data Ownership of GHG-I Data at Provincial Level. (Who owns NFI data at Provincial Level?) | GB Forest Department
Working plan circles of Sindh Forest Department
AJK Forest Department | Remarks/Reason
Main segment of Sindh Provincial Forest Department to control / deal with
AJK: Mandate based |
| 5. Data Custodianship of GHG-I Data at National Level. (Who do you recommend being Data Custodian at the National Level?) | IGF Office
MOCC/GCISC
PFI | Remarks/Reason
Mandate based |
| 6. Policy for GHG-I Raw Data. (What policy do you recommend for NFI raw data sharing)
(Free of cost, Minimum Cost, Controlled Access, Restricted, Other <Specify>) | *Controlled access*
Minimum cost
Free of cost | Remarks/Reason |
| 7. Policy for GHG-I Processed Data, Policy for GHG-I Processed Data, (What policy do you recommend for GHG-I processed data sharing e.g. emission statistics from land use and cover changes.) | *Free 2*
Controlled Access
Minimum cost | Remarks/Reason |

(Free of cost, Minimum Cost, Controlled Access, Restricted, Other <Specify>)		
8. If GHG-I Data (raw/processed) sharing is NOT RESTRICTED, how should it be shared (mechanism)?
(Paper form, digital media, on-line internet based)	*Online internet*
Hard copy / pdf format
Paper form	Remarks/Reason
So cannot be misused.
Paper form and may be digital form depending upon situation.

5. Community Monitoring and Reporting for NFMS

1. What are the Scope of Activities that can be monitored/reported by communities			
Activities (response received only from AJK and FATA)	Parameters	Mechanism
(report filing, verbal channels, online, mobile app, others)	Potential Community Actor
(forest user's groups, Local NGOs/CBOs, tribal jirga, others))
Deforestation (including illegal activities)	*-area based*
-information based	*report filing, verbal channels*
Group discussion
Focal group discussion	*CBOs registered with forest department*
All
Degradation (including illegal activities)	*-area based*
-information based	*report filing, verbal channels*
Group discussion
Focal group discussion	*CBOs registered with forest department*
Enhancement (enrichment planting/ afforestation / reforestation)	*-area based*
-information based
-figure based statistics	*report filing, verbal channels*
Group discussion
Focal group discussion	*CBOs registered with forest department*
Sustainable management of forests (wood harvesting vs. growth in forest management areas)	*-area based*
-information based	*report filing, verbal channels*
Group discussion
Focal group discussion	*CBOs registered with forest department*
Conservation		*Group discussion*
Focal group discussion	

Remarks

"Forest laws have legal provisions under which certain powers can be delegated to community members for monitoring / reporting regarding deforestation and forest degradation (GB)"
"Community should be involved in monitoring and reporting of NFMS to get better result-based monitoring in center of NFMS. (AJK)"
"Community should be responsible for monitoring all the activities above. (AJK)"
"The local communities needs capacity build up in the field of Redd+ and NFMS (FATA)"

Recommendation:

"A fee to be levied for the organisations/individuals who need NFI data, the revenue so earned be utilised for betterment of REDD+ interventions. A revolving fund to be established at national level for the sustainability of REDD+ Programme. The sources of fund can be: 1) International donors, GCF, GEF, IUCN, UNDP, WWF; 2) Share from provinces; 3) Data procurement fees"

"1) PFI given under the administrative and financial control of MOCC as centralised body; 2) A permanent institutional structure for REDD+ programme at national and sub-national level is strongly recommended."

"Short trainings for the staff and local community members (FATA)"

"Delineation of Community forests in compartments in Redd+ and in NFI etc (FATA)"

"The promulgation of joint Forest Management Chapter of the Forest Ordinance KP to FATA Forests (FATA)"

Conclusion:

Forests in FATA are communal. The community is co-operative and enthusiastic in Forestry enter premiership. So, if the above recommendations are implemented, community is get involved in the implementation of Redd+ and will significantly improve the socio-environmental benefits.

Technical Recommendations/Endorsement:
Name:

Organization:

Signature:

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QUESTIONNAIRE

Current sources of information for the drivers of deforestation and forest degradation events

Drivers of Deforestation and Forest Degradation	What is the current primary source for information to detect the degradation and deforestation event and its extent? (e.g. forest department staffs, a national mapping agency, community members, agricultural department, police department)	Is any additional verification carried out? By whom? How?
Infrastructure Development - roads (- canals) -hydropower generation	Forest Department Roads Department / Highway Local Government Department Department of Physical Planning and Housing Land use planning and development department PWD (Hydel Projects) LGRD Forest Conservation Committees Revenue Department (Irrigation, Agriculture Departments & NGOs) National/Provincial mapping agencies ("urban unit") and academic institutions (GIS/remote sensing Political administration Police Department (FATA Levies) Concerned department/agency approaches Forest department for NOC (legal)	B & R Land use planning and development department Irrigation Department Highway department Local government On reception of letter, a detailed report from field staff Forest officer (Block/Range officer) visit the site and take legal action (GIS)
Settlements Habitation Urban / Shanty town expansion	Forest Department (field staff) Revenue Department Municipal Corporation Local Government Administration Development Authority (concerned, prior request in legal cases) Local Community	Town Planning Department Revenue Department Municipal corporations / committees / local govt. (GIS/time-series by FD)

	PDA/LDA (Provincial Development Authorities) Researchers National mapping agency	
Mining	Forest Department (field staff/guard; illegal cases) Revenue department (illegal cases) Mining Department (requests NOC from forest Department in legal cases) Small Industries Department Community members Geological survey of Pakistan	Town Planning Department Mining department Forest Department (Forest officer spot verification)
Forest fires	Forest Department (Forest Guards) Local community (member) Police reports Meteorological department Political Administration	Police and disaster management staff Forest officer
Commercial agriculture expansion	Local Community Forest Department (field staffs) Development Authorities (concerned, prior request in legal cases (Land) Revenue Department Town and City Management Agriculture Department Crop Reporting Services	Local Administration Agricultural Department Forest Officer (GIS, forest history files/records)
Subsistence agriculture expansion	Local Community Forest Staff (Forest Department) Agriculture Department (Land) Revenue Department (Patwari) Crop Reporting Services	Local Administration Agricultural Department Forest Officer (Compartment history files) Revenue Department Police (reports)
Small-scale agricultural practice expansion	Local Community Forest Staff (Forest Department, (compartment / forest history files / police reports) Agriculture Department (field officer) (Land) Revenue Department (Patwari) Town and City Management, provincial mapping unit	Local Administration Agricultural Department Forest Department Revenue department
Encroachment	Forest Department (staff/guards) Local Community Revenue Department Police Journalists Area (Provincial) Development Agencies	Local development authorities Forest Department (Demarcation unit of FD; GIS) Revenue department
Forest clearing for security purposes	Forest Department (field staff) Revenue Department	Local development authorities

	Community Army-Police (sometimes) Security Agencies Govt. officials	Forest Department (ground verification) Revenue Department
Unsustainable timber and fuelwood extraction	Forest Department (field staff/guards) AKLASC (Azad Kashmir logging and saw mills corporation, timber) Local community (member) Police or another law enforcing agency (FATA levies) NGOs Media (In case of firewood extraction most people as beneficiaries silent)	Local development authorities Forest Department (forest office, damage reports ground verification, timber assessment reports, working plans /management plan data)) PFI Local community
Fish pond establishment	Fishery Departments Forest Department (field staff) Local community Irrigation Department WAPDA	Local development authorities Forest Department (Staff/Officer)

	Local administration	PFI
Atmospheric pollution	Govt. dep EPA Environmental Department Meteorological department Transport authority Small industries department Media	Forest Staffs Met Department
Freshwater pollution	Govt Dept Agriculture Department Fisheries Department (Flood &) Irrigation Department Municipal department EPA Forest Department Health Department	Forest Department Environmental Municipal Irrigation EPA Public Health
Floods	Flood Relief Department Flood Warning Centres Forest Department WAPDA PDMA+NDMA IRSA Irrigation Department Media Owners/Users GBOMA Pakistan Meteorological Department FATA Disaster Authority (FOMA)	WAPDA Meteorological Department
Forest diseases, and pest attacks	Forest Department (DFO, field staff) PFI Pest Control Department Community	Forest Department (Staffs/Officer) PFI
Landslide impact areas	Local community Forest Department (field staff) UNDP NDMA Geological survey of Pakistan FOMA	Road Maintenance bodies Forest Department (Forest officer) Survey of Pakistan AJK Land Use Planning RFO Communication & Works Department
Water-logging activities	Agriculture Department Land Department Forest Department (field staff) Local Farming communities Soil Survey of Pakistan national mapping agency Irrigation department	Local development authorities Forest Officer (forest inventory reports)
Free / uncontrolled livestock grazing Overgrazing and browsing	Forest Department / Forest Guards (local staffs) Livestock Department Revenue Department Local Community (members)	Any local person Forest officer (Surveys conducted by forest department and livestock, damage and other reports)
Land lease / hand over	Govt Dept/Provincial Development Agencies Municipal Department Forest Department (field staff/officer) Revenue Department Small industries Tourism dept. Mining department	Revenue Department
Hotel industry development	Forest Department (field staff) Tourism Department Local community PPH TDCP Local development agencies	Beneficiary Forestry Officer (spot verification/GIS map/forest records, impact assessment reports, notes)
Unscientific forestry operations and management	Forest Department (Forest officer) Community Media	Forest Department (Staffs, assessment, evaluation, offence case reports, department data / management plans)
Heavy snowfall impact area	Local community & members Forest Department (Staff) NDMA, PDMA Pakistan Meteorological Department	Climate / Met. department National News Forest Officer
Earthquake impact area	Local community & members Forest Department (Staff) Revenue Department Disaster Management Authority NDMA, PDMA (GBDMA) Meteorological Department ???	National Disaster Management Department / PDMA Forest Officer

	Geological department Political administration	
Run off/erosion impact area	Local community & members Forest department (Staff) WAPDA NDMA Pak. Meteorological Department Irrigation Department Soil conservation Department	Forest Officer
Drought impact area	Local District Administration NDMA+PDMA Disaster Management Authority Locals/Community Agriculture/Forest Department (Staff; Rangeland officer) Revenue Department Pak. meteorological department	Forest Officer Met Department
Oceanic intrusion and tsunami impact area	Locals / Forest Staff Pak. Meteorological department Pak. Navy. Coastal Development Authority / Coastal Management Department Marine Fisheries Department Sea Port Authorities Disaster Management Authority Revenue Authority WMO WAPDA	All national Dept.

Social and electronic media applies to get to know about all the drivers.

Annex IX: Presentation by Mr.Anwar Ali

REDD+ Readiness Preparation Proposal

Designing REDD+ Payments for Environmental Services

Pakistan Forest Institute

Background

- PES create incentives for forest owners for adopting good practices for those land uses that provide ecosystem services, they comply with certain rules of specific program
- PES will supplement REDD+
- Part of Preparation Package under FCPF
- Study will be carried out by PFI

Overall Objective

- To design a pilot programme to test payment for ecosystem services that supports results for REDD+ in at least two forest ecosystems.

Specific Objectives

- Identify policy, legal and institutional barriers and outline options for policy, legal and institutional arrangements that will facilitate and maintain an effective REDD+/PES linked with National REDD+ Strategy.

- Develop criteria for PES site selection and propose the potential site(s) and type of ecosystem service. After getting approval from Ministry of Climate Change, consultants should proceed with designing the PES scheme.

- To have programme design for REDD+ PES in at least two forest ecosystems, also including institutional arrangements, benefit sharing mechanisms, conflict resolution mechanisms, safeguards, identifying sources of payments, and governance system.

- To develop capacities and increase awareness of relevant stakeholders in PES schemes and its linkages with REDD+

Specific Tasks

1. Review of barriers and suggesting option
- Analysis and review of existing policy, legal and institutional framework with regards to REDD+ PES
- Propose measures to make these components conducive for supporting implementation of REDD+ PES.
- Identify appropriate ecosystems and their services in Pakistan for PES.
- Draw upon international research and experience on REDD+ and PES and select, describe and evaluate the most appropriate PES/REDD+ Benefit Sharing and Distribution System
- Determine governance and institutional arrangements for the REDD+ PES scheme in the proposed ecosystems.

2. Designing of REDD+PES Scheme
- Involve and consult a broad range of stakeholders
- Set clear boundaries of the ecosystems proposed
- Identify the buyers and sellers of the ecosystem services of the REDD+ PES scheme
- Develop independent, transparent, equitable, and accountable mechanism for the disbursement of benefits to stakeholders
- Ensure that the amount of benefits, the timing and the form in which these benefits are generated is based on close consultation with the stakeholders, and directly linked to actions agreed by them.
- Establish and compare business as usual and project scenarios
- Set requirements for measuring, reporting and verification (MRV)

Outputs

1. REDD+ PES proposal documents for at least two selected sites
- Ecosystem services identified
- Prices set for different ecosystem services
- Benefit sharing mechanism
- Land tenure issues identified
- Road map for implementation scheme
- MRV system in place
- Institutional arrangements and governance frameworks identified
- Conflict resolution mechanism

Outputs

2. Capacity building and Awareness raising material
- A cadre of trained community members and local CSO's at each of the pilot sites available
- Workshops / Training reports.
- Awareness raising material

Outputs

3. A report on measures identified for dealing with policy and legal issues including determination of clear land tenures
- Based on the review of the existing land policy, legal and institutional framework and land tenures, propose options conducive to the REDD+ PES.
- Establish baselines, identification of potential ecosystem service, modalities to monetize that service, payment design and its subsequent impact on increase in forest cover.

Duration

- 5 Months
- Starting from 3rd Week of January

Team

- Ms. Majella Clark: International REDD+PES Expert
- Dr. Jorn Laxen: International REDD+PES Expert
- Mr. Alamgir Khan Gandapur: Team Leader
- Mr. Anwar Ali: Deputy Team Leader/NFMS Expert
- Mr. Azhar Ali Khan: Sociologist
- Mr. Shabir Muhammad: NRM Expert
- Mr. Hakim Shah: Coordinator

Methodology & Work Plan

Methodology for site selection

- Develop criteria for site selection
- Discuss the criteria with stakeholders
- Finalize the criterion

Criteria for Site Selection

S.No.	Proposed Criteria	Site 1	Site 2	Site 3
1.	**Carbon Project Potential**			
1.1	Size of the forest/landscape			
1.2	Carbon density			
1.3	Compelling baseline			
1.4	Leakage risks			
1.5	Non-Permanence risks			
1.6	Additionality			
1.7	Biophysical risks			

Identification of Ecosystem Services

- Review existing documents & reports for identification of ecosystem services.
- Develop proforma for identification of available ecosystem services at the selected sites.
- Collect information/data from secondary and primary sources in data deficient situations.

Proforma for identification of ES

Ecosystem Services		Indicate Level of Importance					
		Not Important	Somewhat Important	Moderately Important	Important	Very Important	Not Applicable
Provisioning Services	Key Forest Products Category						
	Timber						
	Poles						
	Firewood						
	Other						
	Key NTFPs Category						

Proforma for identification of ES

Ecosystem Services		Indicate Level of Importance					
		Not Important	Somewhat Important	Moderately Important	Important	Very Important	Not Applicable
Regulating Services	Climate Change						
	Biodiversity						
	Water						
	Pollination						

Proforma for identification of ES

Ecosystem Services		Indicate Level of Importance					
		Not Important	Somewhat Important	Moderately Important	Important	Very Important	Not Applicable
Supporting Services	Nutrient cycling						
	Soil formation						
	Habitat						

Proforma for identification of ES

Ecosystem Services		Indicate Level of Importance					
		Not Important	Somewhat Important	Moderately Important	Important	Very Important	Not Applicable
Cultural Services	Recreation						
	Information, Education & Research						

ES Valuation Approaches

Valuation Method	Element of TEV captured	Ecosystem Services valued	Benefits of approach	Limitations of approach
Market prices	Direct and indirect use.	Those that contribute to marketed products e.g. timber, NTFPs, carbon.	Market data readily available and robust.	Limited to those ecosystem services for which a market exists.
Stated preference approaches	Direct and indirect use	Biodiversity, watershed	Data can be easily collected	Can potentially overestimate or underestimate actual value.
Revealed Preference Approaches	Direct use	Mostly recreation	Data can be easily collected	Can potentially overestimate actual value.

NFMS-MRV Methodology

- The national methodologies developed under RPP will be adapted and applied to measure carbon related benefits in the selected sites.

SIS & Benefit Sharing Methodology

- The national methodologies developed under RPP will be tested and adapted with needed modifications for SIS and Benefit Sharing Mechanism in the selected sites.
- Intensive consultation with local communities and other stakeholders.

Capacity Building and Awareness

- Develop training and awareness raising material and modules
- 8 Training and awareness raising workshops
- Awareness raising material will be developed on the following topics in English & Urdu.
  - What is REDD+. A Guide for Local Communities
  - Risks and Benefits of REDD+
  - Climate Change and the Role of Forests: A Community Guide
  - A community guide for REDD+ PES monitoring
  - A Manual to measure forest carbon stock.

Phased Approach to the Assignment

- 3 Phases.
  - Inception Phase
  - Field Data Collection, Consultations and Research Phase
  - Data Analysis, Trainings and Capacity Building, Reports Preparation, Feedback and Finalization Phase
- Inception Phase: 1-2 weeks
- Field Data Collection, Consultations and Research Phase: 8-10 weeks.
- Data Analysis, Trainings and Capacity Building, Reports Preparation, Feedback and Finalization Phase: 9-10 weeks

Inception Phase

- Team meetings to develop common understanding of the stated and implied expectations of the client.
- Prepare and submit an Inception Report detailing therein Technical Approach, Methodology and Work Plan.
- Collect and review relevant documents, reports, and international literature on the subject and distill important lessons and take home messages about different aspects of the ToRs.
- Design data and information gathering and survey instruments.
- Consult with and get feedback of the client on these instruments.

Inception Phase   contd...

- Build capacity of associate staff members and pilot test the instruments.
- Develop criteria for selection of pilot sites in consultation with the client.
- Tentatively short list potential sites based on the developed criteria.
- Hold discussions with the client about selection of pilot sites and finalize the sites.
- Hold an Inception workshop with the client, Forest Departments and Other Stakeholders groups.
- Assign and depute respective team members to their agreed assignments and work.

Data collection, consultations and research phase

- Field data collection and consultations for the identification of policy, legal, institutional, technical, economic and social barriers to effective implementation of REDD+ PES.
- Develop preferred policy, legal and institutional options for effective, efficient and equitable implementation of REDD+ PES schemes.
- Identify project boundaries of the REDD+ PES sites.
- Collect data on and hold consultations about the Types of Carbon and Non-Carbon Ecosystem Services under the REDD+ PES in the sites.

Data collection, consultations and research phase
Contd...

- Field data collection, consultations and research for the design of REDD+ PES at the two sites with particular reference to technical aspects, drivers of deforestation and forest degradation, institutional arrangements, benefit sharing mechanisms, conflict resolution, feedback and grievance redress mechanisms, REDD+ safeguards, sources of finance and payments, and governance system.
- Identify and consult with potential sellers and sellers organizations of ecosystem services.

Data collection, consultations and research phase
Contd...

- Identify potential buyers and buyers organizations for the ecosystem services.
- Identify and collect REDD+ PES Project Design Document related information.
- Identify and document Third Party Validators and Verifiers for REDD+ PES.
- Identify and collect REDD+ PES related Market Information.

Data collection, consultations and research phase
Contd...

- Identify and document Brokerage and Business Support Services for PES.
- Field data collection, consultations and research for capacity needs assessment of different stakeholders groups.
- Develop trainings and capacity building proposals for meeting the identified training, capacity development and awareness raising needs.
- Prepare and submit Mid-Term/Interim Progress Report.

Analysis, Trainings and Capacity Building, Reports Writing, Feedback and Finalization Phase

- Data collation, summarization and analysis.
- Prepare REDD+ PES proposal documents for the two selected sites as per agreed outline and contents.
- Develop awareness raising and capacity building material.
- Implement awareness raising and training program and prepare workshops/training reports.
- Prepare a report on measures identified for dealing with policy, legal and institutional issues including determination of clear land tenures.

Analysis, Trainings and Capacity Building, Reports Writing, Feedback and Finalization Phase
Contd...

- Submit first drafts of the reports.
- Obtain feedback and comments on the reports through workshop.
- Incorporate feedback in the reports.
- Prepare and submit final reports.
- Obtain assignment completion certificate from the client.

THANK YOU

Annex-B (i) Site Selection

S.No.	PES Site Selection Criteria	Site-1	Site-2	Site-3	Site-4	Site-5	Site-6	Site-7
1.	**Social & Environmental benefits.**							
1.1	Biodiversity conservation							
1.2	Water regulation							
1.3	Soil conservation							
1.4	NTFPs							
1.5	Cultural values (e.g. recreation and tourism)							
1.6	Potential for poverty alleviation.							
2.	**Carbon Project Potential**							
2.1	Size of the forest/landscape							
2.2	Carbon density							
2.3	Availability of baseline data							
2.4	Leakage risks							
2.5	Non-Permanence risks							
2.6	Additionality							
2.7	Biophysical risks							
3.	**Carbon related technical aspects for forest rehabilitation, restoration and carbon sequestration.**							
3.1	Size of degraded forest areas available for rehabilitation and restoration.							
3.2	Size of less vegetated, un-vegetated and barren areas available for reforestation and afforestation.							
3.3	Presence of restored forest area or plantation forest.							
3.4	Carbon sequestration potential.							
3.5	Site conditions.							
3.6	Environmentally Sensitive and Priority Areas.							
4.	**Feasibility of effective project implementation.**							
4.1	Likelihood of effective project implementation (the nature, type and magnitude of drivers of deforestation and forest degradation).							
4.2	Presence of potential partners.							
4.3	Opportunity cost of implementing the project in the area.							
4.4	Presence of conflicts over forests and forest resources.							
4.5	Population size of forest dependent communities.							
4.6	Level of local community cooperation.							
4.7	Level of local community organization.							
5	**Institutional Readiness**							
5.1	Availability of existing REDD+ Pilot initiative/other project							
5.2	Inventory data/other data availability							
5.3	Benefit Sharing Mechanism							

Annex-B (ii) Endorsement Statement on Potential pilot sites for REDD+ PES

ICEPTION WORKSHOP

DESIGNING REDD+PAYMENT FOR ENVIRONMENTAL SERVICES

Hill View Hotel, Islamabad

January 16, 2018

National REDD+ Office, Ministry of Climate Change, under REDD+ Readiness Preparation Proposal of the World Bank has awarded a study to Pakistan Forest Institute, Peshawar to "Design REDD+ Payment for Environmental Services" in atleast two ecosystems of Pakistan.

The PFI team presented the ToRs, methodology and Work Plan of the proposed study. The participants of the workshop gave their inputs and suggestions about the study. During the workshop an exercise was conducted wherein the participants and stakeholders provided their inputs about selection of sites/ecosystems for the proposed REDD+PES through a structured proforma.

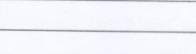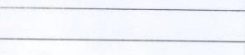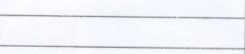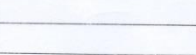On the basis of the feedback of the stakeholders, the following sites were selected for REDD+PES:
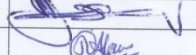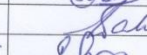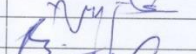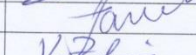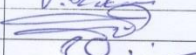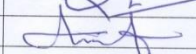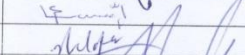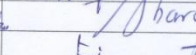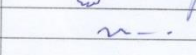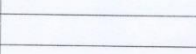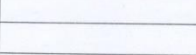
1. Moist Temperate Forests, Kaghan
2. Mangroves Forests

The above statement regarding sites selection for REDD+PES is endorsed by the participants:

Name	Designation & Department	Signature
Mehmood Ghaznavi	Conservator Forest GBFD	
A. Jabbar Kazi	CF SF, Sindh Forest Deptt.	
Hayat Ali	DFO FATA Forest	
Shahid Noor	DFO FATA	
Rang Muhammad Kha	President SAFI	
Dr. Zakir Hussain	CF GB Forest & Wildlife Deptt	
Ittaza Qureshi	DFO ATK Forests	
BILAL AHMED	DFO ATK Forests Deptt	
MANZOOR MAQBOOL	"	

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Name	Designation & Department	Signature
Dr. Ishfaq Ahmed	CF AJK Forest	
Dr. Rao Nadeem Alam	AP. Anthropology QAU / HB	
Dr. Waheed Chaudhry	Consultant HBP	
Dk. SOFIA BAIG	Assist. Prof IESE / NUST	
SHEHZAD SADIR GILL	DFO. SINDH FOREST DEPTT:	
Abid Hussein Rind	DFO - "	
Saleem Muhammad	Dy. Tea Leader	
Dr Ghulam Ali Panjwa	Director, NTFP, PFI	
Dr. Ghulam Akbar	NRC, MOCC	
Fareeha Ovais	Consultant, HBP	
V. ZAKARIA	MD, HBP	
Dr. Homayun Shaheen	Assistant Professor AJK University	
Gohar Ali	DFO/FP for KP.	
Muhammad Arif	DFO/PD REDD+ KP	
Farid Shah	DFO Forest Balochistan	
NELOFER JAMIL	Ass. Professor SBKWU, Balochistan	
Syed Sharafat-ud-din	Dpty conservator of Forests, Balochistan	
Peer Tariq al-Ismail	Cms-Mint CEO/HBP	
Ismail	Focal Person REDD+ GB	

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