Food and Agriculture Organization of the United Nations

Ministry of Agriculture & Farmers' Welfare

Ministry of Environment, Forest & Climate Change

सत्यमेव जयते

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gef global environment facility INVESTING IN OUR PLANET

Green-Ag : Transforming Indian Agriculture for Global Environmental Benefits and the Conservation of Critical Biodiversity and Forest Landscape

Rajasthan State Inception Workshop Report

Venue

State Institute of Agriculture Management (SIAM), Durgapura, Jaipur

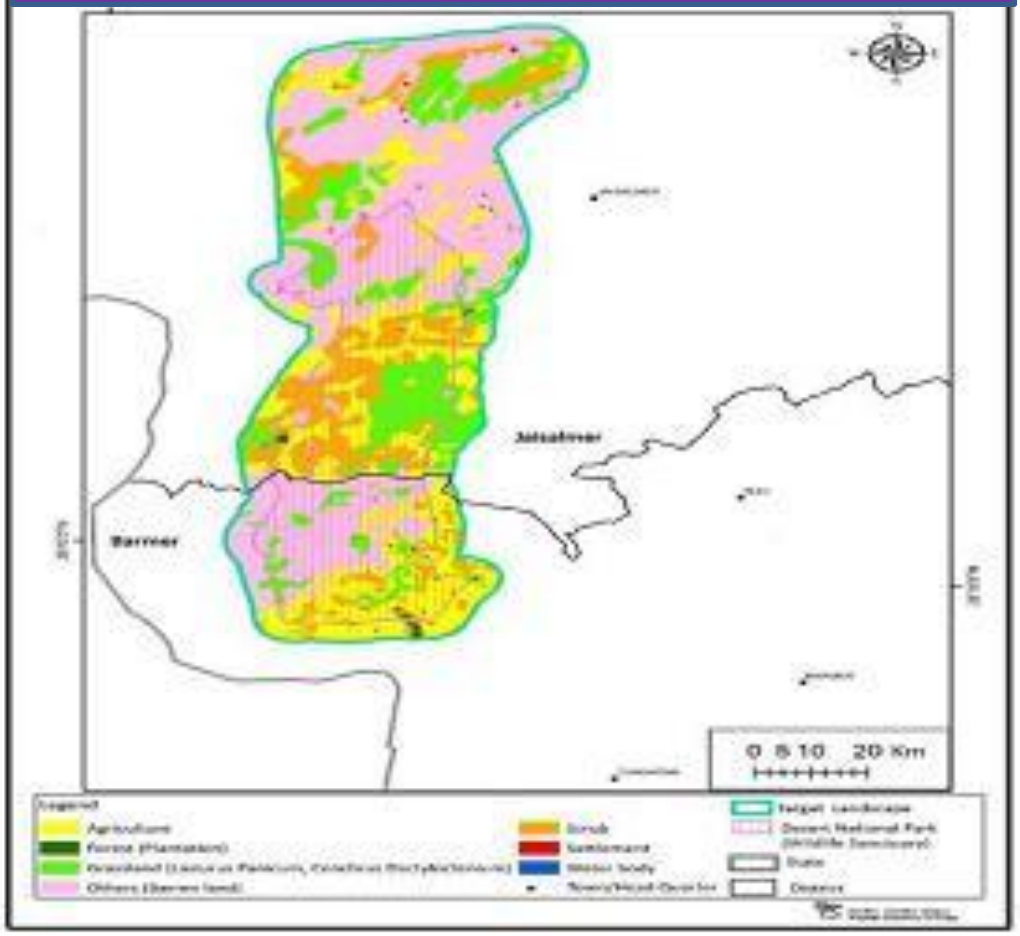
23-25 September 2021

Workshop Objectives

A three-day Rajasthan State Inception Workshop for the project titled 'Green Agriculture: Transforming Indian Agriculture for Global Environmental Benefits and the Conservation of Critical Biodiversity and Forest Landscapes' was held from 23-25th September, 2021 at State Institute of Agriculture Management (SIAM), Durgapura, Jaipur, Department of Agriculture, Government of Rajasthan. In this workshop, a total of 62 participants including the State and District level officials of line departments, State Agriculture Universities & KVKs, ICAR Institutes, Boards & Institutes and National Project Management Unit (NPMU) team. The objectives of the State Inception Workshop were:

- Project Introduction, organizational structures, technical concepts, objectives, the implementation plans
- The formal acquaintance between NPMU and SPMU teams
- To clarify project scope, work plan, activities, key themes, outputs, outcomes, etc
- To provide a trajectory/road map for project implementation and management
- Outlining roles and responsibilities of the project staff

Green Landscape: Desert National Park



Inception Workshop Day – 1

23rd September 2021

Session 1 & 2

Dr. Om Prakash, Commissioner Agriculture, Government of Rajasthan gave the welcome address, expressing the support of Department of Agriculture for the implementation of this very important project. He emphasized the importance of protection of environment, challenges due to climate change and the relevance of this project, especially in the desert area of Rajasthan.

Mr. Tomio Shichri, FAO Representative drew attention towards what is happening to natural resources in the context of climate change by the over exploitation of natural resources. He concluded his address by emphasizing the need to bring a change in farmers behaviour and the Department of Agriculture and other line departments have a major role in bringing about this behavioural change.

Mr. Konda Reddy, Assistant FAOR, introduced the project in terms of background, objectives, project components, proposed institutional arrangements, expected outputs and outcomes, and indicative work plan of the Green-Ag project. He advised all the line departments to avoid working in silos and enhance inter-departmental coordination.

The Session 1 of Workshop Day-1 concluded with Vote of thanks by **Mr. Arjun Lal**, Joint Director Agriculture (ATC), Government of Rajasthan.

In Session 2, participant introduction & expectations were summarised by **Mr. H. S. Meena**, Additional Director Agriculture (Research), Government of Rajasthan.

Session 3

Implementation architechitecture, Roles and Responsibilities:

Mr. Konda Reddy, Assistant FAOR, presented the implementation architecture, roles and responsibilities. The presentation highlighted the Proposed Interventions, Project Innovativeness, Key Results and Targets, Project Implementation Units, Project Policy Guidance and Coordination, Project Funding etc.

Key points discussed-

- **GEF's Goal & Mission**
- **Project Rationale**
- **Project's Objective**
- **Agro biodiversity in Desert Landscape**
- **Threats to Desert Landscape**
- **Project Innovativeness**
- **Proposed Interventions**
- **Project Institutional Architecture**
- **Project implementation Units**
- **Project Funding.**

The presentation in detail is enclosed as Annexure-I.

Session 4

Landscape approach & Landscape planning:

A presentations on the Landscape Approach & Planning was deilivered by Ms. Divya Shah & Mr. R. B. Sinha (Project Director), NPMU. The presentation highlighted the concept & definition of landscape, characteristics of landscape, role of landscape management & sustainable use of natural resources for maintaining invaluable & productive ecosystem. NPMU officials outlined the components of the landscape approach and elaborated on the need for planning with multi stakeholder approach & requirements of multi-stakeholder intervention for assessment of the landscape, landscape-level planning and effective implementation.

Key points discussed-

- **What are landscapes?**
- **Landscape approach: what & why?**
- **Project landscapes**
- **Landscape planning including convergence.**

The presentation in detail is enclosed as Annexure-II.

Session 5

Result Framework (Brief):

Ms. Sravani Avula, NPMU presented the Green-Ag results framework and the results framework matrix. She initiated the presentation with a real-life illustration of the results chain outlining inputs-activities, outputs-outcomes and impact. The results framework matrix was discussed in detail with reference to indicators, baseline, targets and means of verification against various components of the project strategy.

Key points discussed-

- **What are Results?**
- **What is a Results Chain?**
- **What is a Results Framework?**
- **Results Framework and M&E**
- **Green-Ag Results Framework**

The presentation in detail is enclosed as Annexure-III.

Gender Mainstreaming & Social Inclusion:

The session elaborated by, Ms. Vardhani Ratnala, NPMU that Gender mainstreaming is a strategy to improve the quality of public policies, programmes and projects, ensuring a more efficient allocation of resources. Better results mean increased well-being for both women and men, and the creation of a more socially just and sustainable society. She presented the importance of social inclusion also in the project. It was also emphasized that the contribution of women to agricultural and food production is significant but it is impossible to verify empirically the share produced by women. In rural areas women play a proactive role in contributing to various economic and social activities. However, this is not captured or accounted for or recognized adequately. The discussion also elaborated that empowering women is essential to the health and social development of families, communities and countries. When women are living safe, fulfilled and productive lives, they can reach their full potential. contributing their skills to the workforce and can raise happier and healthier children.

The presentation in detail is enclosed as Annexure-IV.

Inception Workshop Day – 2

24th September 2021

Session 1

Most important lessons learnt yesterday:

The first session of Inception workshop day-2 began with round up of the significant topics of most important lesion learnt on day-1. Conducting lesson learned session may help with building trust among the team members; allowing them to share their own perspective on what went right & wrong and encourage them to be more supportive of the project management process.

Session 2

Landscape Management:

Ms. Divya Shah, NPMU presenting the Landscape mamagement system. The presentation highlighted the meaning & components of landscape, holistic management of landscape approach, role of landscape management, Management of production systems and natural resources in an area large enough to produce vital ecosystem services, common challenges in project landscape, Identification of High Priority Areas & development of green landscape management plan and its effective implementation.

Key points discussed-

- **What are landscapes?**
- **Landscape approach: what & why?**
- **Implementing landscape approach**
- **Project landscapes**
- **Green-Ag's Approach to Landscape Management:** Landscape assessment, identification of High Priority Areas, Development of landscape management plans, implementation & monitoring.

The presentation in detail is enclosed as Annexure-V.

Community Engagement Strategy and VICs:

Ms. Sravani Avula, NPMU, delivered the presentation on Community engagement strategy and village implementation committees (VICs). She highlighted the concept & significance of Community engagement for effective Project Design & Planning and Free Prior & Informed Consent (FPIC) for indigenous communities in landscapes). She further elaborated that the Community engagement is the process of building relationships with tribal members, stakeholders, citizens and interest groups to work side-by-side as long-term partners—building a coalition of support on a range of integrated waste management policies, programs and service issues—with the end goal of protecting the environment and making the community a better place to live. Together they come up with recommendations that can help with public decision-making. Community Stakeholder Mapping, preparing of Village Level Plans/Green Landscape Management Plans (GLMPs) etc.

Key points discussed-

- **Community Engagement Framework**
- **Stakeholder Mapping and Analysis**
- **Community Stakeholder Engagement during Project Planning and Landscape Assessment**
- **Village Implementation Committees (VICs)**
- **Landscape Assessment and Value Chain Analysis with communities**
- **Develop grassland management plans with various livelihood activities, soil and water conservation measures.**
- **Plan Implementation, Monitoring and developing action plans for next year.**

The presentation in detail is enclosed as Annexure-VI.

Session 3

Communication Strategy:

Ms. Vardhani Ratnala, NPMU presented the Communication Strategy quoting that a planned and strategic use of the communication process is effective to support development of policies and implementation of projects that are able to promote environmental sustainability. In her presentation she emphasized the importance of clear and effective communication to highlight and disseminate the best practices, learning, outcomes and ongoing status of project implementation among different stakeholders. The presentation elaborated on the media of communication, steps to be followed, the target audience, messages and the timing of communication were discussed in detail with the activities, indicators and targets of communication and Dos & Don't of Publication Workflow and State communication plan.

Key points discussed-

- **Steps in Communication**
- **Communication Indicators & Targets**
- **Key Communication Activities**
- **Green Landscape Information Platform (GLIP)**
- **Policy Dialogues**
- **State Communication Plan**

The presentation in detail is enclosed as Annexure-VII.

Session 4

Natural Resource Management:

The session elaborated by, Mr. Ajay Kumar Saxena, NPMU that Natural Resource Management (NRM) deals with managing the way people and natural landscapes interact. It brings together water management, land use planning, biodiversity conservation, sustainability of agriculture, forestry, and fisheries.

The sustainable utilization of major natural resources, such as land, water, air, minerals, forests, fisheries, and wild flora and fauna. Together, these resources provide the ecosystem services that underpin human life. The concept of Sustainable Agriculture, Sustainable Land Management and Sustainable Forest Management were discussed.

Sustainable management of natural resources helps protect them from being overused or destroyed by humans. It also helps to provide proper care for these resources, which will help them survive long periods without any problems.It provides a truly sustainable production system, not only conserving but also enhancing the natural resources and increasing the variety of soil biota, fauna and flora (including wild life) in agricultural production systems without sacrificing yields on high production levels.

He presented the current scenario and threats that are posing to the natural resources, biodiversity and agro-biodiversity in the project landscape. The conservative measures taken by the local communities and existing government schemes concerned with conservation of environment and promotion of livelihood were briefly highlighted.

The presentation in detail is enclosed as Annexure-VIII.

Agroecology:

In this session, Ms. Divya Shah, NPMU, delivered a presentation on the Agroecology. The presentation focused on on the elements of sustainable agriculture and agro-ecological practices. Further, she explained the relevance of agroecology as an integrated approach that simultaneously applies ecological and social concepts and principles to the design and management of food and agricultural systems.

Key points discussed-

- **Rajasthan Agriculture –Salient features**
- **Sustainable Agriculture in Green-Ag project**
- **Proposed Interventions in Sustainable Agriculture**
- **Different Schemes & programmes related to Agriculture, in Rajasthan**
- **Green-Ag Results Framework related to Sustainable Agriculture**
- **Co-finance commitments**

The presentation in detail is enclosed as Annexure-IX.

Session 5

Livestock Management:

Mr. R. B. Sinha, Project Director, NPMU highlighted the current scenario of the livestock sector in Rajasthan. The presentation dealt with the concept of livestock management and the major focus area of the project. He discussed the major focus area of the livestock management approach into economic factors, environmental factors, social factors and livestock challenges/impacts with respect to Protected Areas.

He further elaborated the role of the livestock sector in Green House Gas (GHG) emissions and its effect on biodiversity conservation. The importance of traditional breed management and the promotion of appropriate value chains of animal products would be adding to the incomes of cattle rearers as. The presentation further elaborated on issues of availability and access to animal health care facilities at the village level and simultaneously stressed the need to promote indigenous livestock breeds.

Key points discussed-

- **Livestock scenario in Rajasthan**
- **Major focus areas under livestock sector**
- **Rajasthan livestock Sector and its challenges**
- **Livestock related Activities and Targets in Results Framework**

The presentation in detail is enclosed as Annexure-X.

Group Discussion and clarification:

The core scale-related challenges regarding management of landscape, community engagement, NRM, sustainable agriculture, livestock etc, identified by the participants, were contained ecological, social and social-ecological complexities that potentially lead to became impractical. As ways to address these challenges the participants highlighted innovations, and an aim to develop new interdisciplinary approaches to support the processes aiming to solve current scale challenges.

Inception Workshop Day – 3

25th September 2021

Session 1

Most important lessons learnt yesterday:

The first session of Inception workshop day-3 began with memorizing the significant topics of most important lesion learnt on day-2.

Session 2

Results Framework (Detailed):

A detailed presentation on Green-Ag results framework & results matrix was presented by Ms. Sravani Avula, NPMU. She defined it that a results framework is an explicit articulation (graphic display, matrix, or summary) of the different levels, or chains, of results expected from a particular intervention—project, program, or development strategy. She told the house about the results matrix which is a schematic representation of the relationship of a project´s specific and general objectives. It lists indicators and targets for project teams to verify their achievement. It also lists indicators and targets for project teams to verify the delivery of goods and services (outputs). She also elaborated on each element of results chain and broadly categorized them into processes and results.

Key points discussed-

- **What are Results?**
- **What is a Results Chain?**
- **What is a Results Framework?**
- **Results Framework and M&E**
- **Green-Ag Results Framework**
- **Interconnectedness between components in the project**
- **Decoding Results Framework**
- **Green-Ag Outcome & Outputs indicators**
- **Developing indicators for specific activities**

The presentation in detail is enclosed as Annexure-XI.

Session 3

Annual Workplan Budget, Monitoring & Record Management:

Ms. Uma Balaji, NPMU presented the execution of operational partner agreement, proper staff management, travel management, working as per the Annual Work Plan Budget, Procurement, Monitoring, and Reporting.

Key points discussed-

- **Operational Partner Agreement**
- **Staff management**
- **Travel management**
- **Annual Workplan Budget**
- **Procurement**
- **Monitoring**
- **Reporting**

The presentation in detail is enclosed as Annexure-XII.

Session 4

Budget & Procurement Plan:

Mr. Sumanta Sahoo, NPMU presented the presentation on Budget and Procurement plan. The presentation dealt with financial architecture, accounting system (Data entry), accounts records, uses and benefits of the Management Information System (MIS). Along with this, the MIS web portal and MIS data collection methodology were also discussed.

He emphasized the expendable and non-expendable procurements, maintaining the book keeping in accordance with the State Government rules/regulations/ instructions. Stock management post procurement was also explained. The formulation of the Annual Work Plan and Budget for the project were also elaborated on during the presentation.

He also reiterated that each component-wise estimate along with proper justification for each head of the budget was to be prepared while formulating the budget. Additionally, the presentation reiterated that for online accounting supporting documents must be uploaded for each entry.

The presentation in detail is enclosed as Annexure-XIII.

Session 5

Management Information System (MIS):

Mr. Abhishek Saini and Mr. Manoj Semwal delivered the presentation on the Management Information System (MIS). The MIS is introduced as a system of collecting, storing and disseminating data in the form of information. needed to carry out the functions of management. MIS is used to significantly improve the efficiency of report generation and data analysis by taking the information gathered by various members of staff and storing it in a uniform and accessible manner. It is an important tool to relate managerial planning and control. MIS increases the data processing and storage capacity as well as reduces the cost with the help of computer. It enhance the managements capability to evaluate and improve performance.The Green-Ag MIS is a web-based application that is being developed at the NPMU level.

Key points discussed-

- **Why we use MIS?**
- **Objectives of MIS**
- **Benefits of MIS**
- **Functional specification of Green-Ag MIS**
- **Data Entry Methodology**
- **Roles & Responsibility**
- **Data Entry Time Framework**

The presentation in detail is enclosed as Annexure-XIV.

Session 6

Open session on feedbacks and improvement:

This the last session of inception workshop and the house is open for feedbacks and suggestions for improvement. Following points were emerged out during the session-

- The main focus of the project must be the farmer.
- Mitigate impact of agricultural practices on environment.
- Focus on the landscape approach with inter-disciplinary planning.
- In the Desert National Park (DNP), livestock (cattle, sheep, goat, and camel) is the main source of livelihood and agriculture is rain dependent (every three out of five years are drought years).
- Need for integrated approach that is inter-departmental
- Need for climate smart agriculture.

Valedictory Session:

The last session of the State Inception workshop concluded with a message from Mr. Prashant Kumar Swain, Additional Secretary, Department of Agriculture and Farmers' Welfare, MoA&FW, GoI, Mr. Dr. Konda Reddy Chavva, AFAOR-India, Mr. R.B Sinha, Project Director, NPMU and Mr. Arjun Lal, Joint Director Agriculture (ATC), Govt. of Rajasthan. Mr. Arjun Lal, expressed his sincere gratitude to the all officials of line departments, Agriculture scientists and NPMU experts for their active participation & valuable inputs with the hope to work as a team. It was suggested to meet frequently and work in a collective approach to accomplish the convergence approach through proper inter-departmental coordination. Then he invited Mr. Prashant Kumar Swain, Additional Secretary, Department of Agriculture and Farmers' Welfare, Govt. of India, to give a guidable address.

Mr. Prashant Kumar Swain, in his address highlighted that the farmers are the Annadata and are crucial to ensuring the food security of the country. He reiterated that eco-friendly and sustainable agriculture is the way forward. He also mentioned that species for carbon sequestration were identified, planted & conserved in the biosphere, can help in enhancing the carbon sink. He also emphasized in his speech that bottom-up approach in planning and implementation with proper hand holding could help achieve better project deliverables.

Dr. Konda Reddy Chavva, AFAOR-India, appreciated the participants for their thematic discussion during all over 3 day workshop. He said that the project is well aligned with all the key objectives, which include the maintenance and improvement of unique desert ecosystem in its natural form; protection of rare, threatened and endangered elements of flora and fauna of the desert; increase in the population of Great Indian Bustard by enriching its habitat.

Mr. R.B Sinha, expressed his gratitude to house and emphasized that the project will facilitate the process of collectivization of farmers to avail the benefits of economies of scale in production and marketing. In the landscape of the project, farmers will be organized into smaller groups, many of which will come together to form Farmer Producer Organization (FPO) and may be helpful in promotion of eco-development and ecotourism to achieve the overall development of the villages.

Mr. H.S Meena, Additional Director Agriculture (Research), GoR, thanked the FAO and NPMU team for organising the inception workshop, acknowledging the importance of project activities in better livelihood. He emphasized the participatory approach and Community engagement will ensure the smooth implementation of the project to achieve intended results.

Agenda for State Inception Workshop, Green-Ag Project

23-25 September 2021, Jaipur

Venue-State Institute of Agriculture Management (SIAM), Durgapura, Jaipur

Day -1

Date: 23.09.2021, Thursday, **Time: 9:30 AM – 17.00 PM**

Sessions	Time	Topic	Speaker / Facilitator
Session 1:	9.00-10.00 AM	Registration of participants	Sh. Nagar Mal Jyotishi & Pooja, ATC, H.Q.
	10:00 -10:15 hrs	Welcome address	Dr. Om Prakash, Commissioner Agriculture, Government of Rajasthan
	10:15 - 10:20 hrs	Special Address	Principal Secretary, Agriculture, Government of Rajasthan
	10:20 -10:30 hrs	Keynote Address	Mr. Tomio Shichiri, FAOR
	10:30- 11:15 hrs	Project Overview	Mr. Konda Reddy, AFAOR
	11:15 - 11:20 hrs	Vote of Thanks	Mr. Arjun Lal, Joint Director Agriculture, GoR
11:20-11:40 hrs - Tea Break			
Session:2 Participant Introduction	11:40 - 12:00 hrs	Participant introduction and Expectations	Rajasthan state team (SPMU)
Session 3: Project Implementation Architecture	12:00 -12.45 hrs	Implementation architecture, roles and responsibilities	Mr. Konda Reddy AFAOR
Session 4: Landscape approach	12:45- 013:30 hrs	Landscape Approach	Ms. Divya Shah & Mr. R.B. Sinha (Project Director), NPMU
013:30- 14.00 hrs - Lunch Break			
Session 5: Results Framework and Gender	14.00- 15.00 hrs	Results Framework (Brief)	Ms. Sravani Avula, NPMU
	15.00- 16.00 hrs	Gender Mainstreaming	Ms. Vardhani Ratnala, NPMU
16.00- 16.15- Tea Break			
	16.15- 17.00 hrs	Group discussion and clarifications on any issue	NPMU

Day -2

Date: 24.09.2021, Friday, **Time: 9:30 AM – 17.15 PM**

Sessions	Time	Topic	Speaker / Facilitator
Session 1: Recap	09:30-10:00 hrs.	Most important lessons learnt yesterday	Selected participant(s)
Session 2: Landscape Management and Communication	10:00- 11:00 hrs.	Landscape Management	Ms. Divya Shah, NPMU
	11:00 -11:45 hrs.	Community engagement strategy and VICs	Ms. Sravani Avula, NPMU
11.45-12.00 – Tea Break			
Session 3: Community Engagement	12.00 -13:00 hrs.	Communication strategy	Ms. Vardhani Ratnala, NPMU
13:00 – 14:00 Lunch Break			
Session 4: Natural Resources Management	14:00 - 14:45 hrs	Natural Resource Management	Mr. Ajay Kumar Saxena, NPMU
	14:45 – 15:45 hrs.	Agroecology	Ms. Divya Shah, NPMU
15:45 Hrs to 16.00 hrs – TEA BREAK			
Session 5	16.00 -16:45 hrs	Livestock Management	RB Sinha, Project Director, NPMU
Group Discussion	16.45-17.15 hrs	Group Discussion and clarification	NPMU

Day -3

Date: 25.09.2021, Saturday, **Time: 9:30 AM – 16.30 PM**

Sessions	Time	Topic	Speaker / Facilitator
Session 1: Recap	09:30-10:00 hrs	Most important lessons learnt yesterday	Selected participant
Session 2: Results Framework	10:00- 11:30 hrs	Results Framework (Detailed)	Ms. Sravani Avula, NPMU
11:30-11:45 hrs. - Tea Break			
Session 3: Work Plan, Monitoring and Record Mgt.	11:45-12.30 hrs	Annual Work plan Budget, monitoring and record management	Ms. Uma Balaji, NPMU
Session 4: Budget and Procurement	12:30 - 13:15 hrs	Budget and Procurement plan	Mr. Sumanta Sahoo, NPMU
013:15 – 14.00 hrs - LUNCH			
Session 5: MIS	14:00 -15:15 hrs	MIS	Mr. Manoj Semwal and Mr. Abhishek Saini, NPMU
Session 6: Feedback	15:15 –16:00 hrs	Open session on feedbacks and improvement	Responses to the feedbacks
16:00 to 16:15 hrs – TEA BREAK			
Valedictory	16:15–17:00 hrs.	Valedictory Session	SPMU

List of Participants

S. N.	Name of Participant	Designation	Name of Office
1	Mr. Tomio Shichri	FAO Representative	FAO-IN, New Delhi
2	Mr. P. K. Swain	Additional Secretary	Department of Agriculture and Farmers' Welfare, GoI, New Delhi
3	Mr. Omprakash	Commissioner Agriculture	Commissionerate of Ag., Jaipur
4	Mr. R. B. Sinha	Project Director, Green-Ag	FAO/NPMU, New Delhi
5	Mr. C. K. Reddy	A-FAOR	FAO-IN, New Delhi
6	Ms. Vardhani R	M & E expert	FAO/NPMU, New Delhi
7	Ms. Srauani Avula	Asstt. Project Officer	FAO/NPMU, New Delhi
8	Mr. Ajay K. Saxena	Landscape Specialist	FAO/NPMU, New Delhi
9	Ms. Divya Shah	NRM Expert	FAO/NPMU, New Delhi
10	Ms. Uma Balaji	Admin & Operation Officer	FAO/NPMU, New Delhi
11	Mr. Sumanta K. Sahoo	Finance & ME Expert	FAO/NPMU, New Delhi
12	Mr. Manoj Semwal	Sr. MIS Expert	FAO/NPMU, New Delhi
13	Mr. Abhishek Saini	MIS Expert	FAO/NPMU, New Delhi
14	Mr. Ravindra Modi	Dy. Director	Directorate of FW & AD, M. P.
15	Mr. H.K. Panda	Director, SC & Watershed deptt.	Directorate of Soil Conservation & Watershed, Odisha
16	Mr. Sukanth Samal	State Technical Coordinator	SPMU, Odisha
17	Mr. D.P. Gupta	Additional Director, SJED	Social Jusice & Emp. Deptt, Jaipur
18	Mr. Madhu S. Sharma	Director ATMA	SIAM, Dugapura, Jaipur
19	Mr. H.L. Meena	Addtional DAg. (Ext)	Commissionerate of Ag., Jaipur
20	Mr. H.S. Meena	Additional DAg. (Research)	Commissionerate of Ag., Jaipur
21	Mr. Arjun Lal	JT DAg ATC	Commissionerate of Ag., Jaipur
22	Mr. Davendra Chodhary	Joint Director (Horti.)	Commissionerate of Horti., Jaipur
23	Mr. Hitendra Gera	Joint Director WDSC	Commissionerate WDSC
24	Dr. Rajesh Verma	Dy. Director	Directorate of Animal Husbandry, Jaipur
25	Mr. V.S. Solanki	Dy. Director Agri.	Office of Dy. DAg (Ext.), ZP, Barmer
26	Mr. R.S. Narwal	Dy. Director Agri.	Office of Dy. DAg (Ext.), ZP, Jaisalmer
27	Mr. K. C. Jat	Dy. Director Agri.	SIAM, Dugapura, Jaipur
28	Mr. M.K. Jain	DD Ag. (ATC)	Commissionerate of Ag., Jaipur
29	Dr. Pradeep Pagaria	Sr. Scientist	Agriculture University, Jodhpur
30	Dr. Deepak Chaturvedi	SS & Head	KVK, Jaisalmer
31	Dr. B.L. Jat	Scientist	KVK, Gudamalani
32	Mr. Umesh Gupta	Manager (Tech.)	Raj. State Biodiversity Board, Jaipur
33	Ms. Khushbu Jain	Accounts Officer	Commissionerate of Ag., Jaipur
34	Mr. Shiv Lal Yadav	ARO (ATC)	Commissionerate of Ag., Jaipur
35	Mr. J.N. Yadav	ARO (ATC)	Commissionerate of Ag., Jaipur
36	Mr. Abdul Khan	ARO (ATC)	Commissionerate of Ag., Jaipur
37	Mr. Kishan Lal Naga	Ag. Officer (Res.)	Commissionerate of Ag., Jaipur
38	Mr. Padam Singh Bhati	Agri. Officer	Office of Dy. DAg (Ext.), ZP, Barmer
39	Mr. C.S. Rathore	AO Jaisalmer	Office of Dy. DAg (Ext.), ZP, Jaisalmer
40	Dr. Subhash Chand	Ag. Officer (Horti.)	Commissionerate of Horti., Jaipur
41	Dr. Mukesh Kumar Man	AARO	Commissionerate of Ag., Jaipur
42	Ms. Vibha Singhal	Assistant Programmer	Commissionerate of Ag., Jaipur
43	Mr. Nagar Mal Jyotishi	Sr. Asstt.	Commissionerate of Ag., Jaipur
44	Ms. Pooja Jat	AS	Commissionerate of Ag., Jaipur

Green-Ag Project : State Inception Workshop, Rajasthan

Annexure-I:

Global Environmental Facility

Green-Ag Project

GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

- Established in 1991 ;
- Global funding mechanism for 5 major international environmental conventions:

1. United Nations Convention on Biological Diversity (UNCBD)
2. United Nations Convention to Combat Desertification (UNCCD)
3. United Nations Framework Convention on Climate Change (UNFCCC)
4. Minamata Convention on Mercury
5. Stockholm Convention on Persistent Organic Pollutants (POPs)

GEF's Goal and Mission

Green-Ag Project

Goal: to address *global environmental issues* while supporting *national sustainable development initiatives*.

Mission: the GEF is a mechanism for *international cooperation* for the purpose of providing *new, and additional grant* and concessional funding to meet the *agreed incremental costs* of measure to achieve agreed global environmental benefits.

Project Rationale

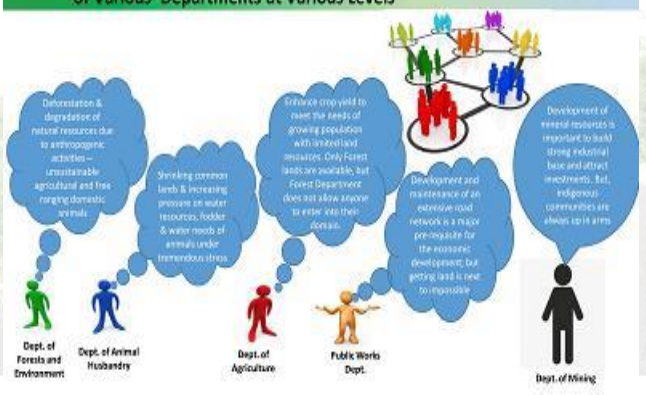
Green-Ag Project

- *Unsustainable agriculture and loss of agrobiodiversity*
- *Developmental Activities*
- *Unsustainable Livelihood Practices*

- *Threats to Protected Areas (PA) and connectivity between them*
- *Loss and degradation of natural ecosystems and wild species*
- *Negative impacts on land and water*
- *Increased Greenhouse gas emission*

Current Scenario – Conflicting Mandates of Various Departments at Various Levels

Green-Ag Project



Current scenario

Green-Ag Project

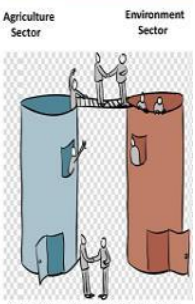
Project's Objective

Green-Ag Project

Working independently to attain their individual mandates with activities which are adversely impacting each other

GREEN-AG PROJECT

- Acts as bridge for a dialogue between both the sectors
- Supports harmonization between GoI policies, investments and institutions concerned with conservation and agricultural production for mutual compatibility
- No compromise on food and livelihood security of the local communities



Communicating with each other and aligning their activities in such a way to minimize or reduce damage to each other to create a win-win situation

Global Biodiversity Significance in Desert Landscape

Green-Ag Project

- Last ecological refuge for the critically endangered Great Indian Bustard (GIB)
- Largest population of spiny tailed lizard
- One of the richest plant diversity among the deserts of the world
- *Sewan* grass one of the finest fodder grasses in the country

Photo credit: Great Indian Bustard : Encyclopaedia Britannica

Agrobiodiversity in Desert Landscape

Green-Ag Project

- Wheat (*Triticum aestivum*): *Kharchiya* - Salt Tolerance and *Kathia* - Terminal heat tolerance
- Pearl millet (*Pennisatum glaucum*): *Sulkhania* and *Jakhrana*- Long panicle, high quality fodder; and Chadi - drought tolerance.
- Wild mustard (*Brassica tournifortii*): Tolerant to Powdery mildew and drought
- Khejri (*Prosopis cineraria*): Multi-purpose tree for vegetable & fodder; highly adapted to desert conditions
- Fauna: Cow (*Bos indicus*) Tharparkar, and Kankrej; Sheep (*Ovis aries*) Jaiselmeri, and Marwari; Goat (*Capra hircus*) Marwari; and Camel (*Camelus dromedories*) Jaiselmeri.

Threats to Desert Landscape

Green-Ag Project

- **Changes in land use** – Encroachment of natural desert areas for illegal cultivation of Guar Gum crop which has also resulted in loss of agrobiodiversity
- **Overgrazing** - Livestock density being higher than the ecological carrying capacity of the landscape has resulted in overgrazing of community grasslands and depletion of food and cover for wildlife
- **Invasive Alien Species** - Desert ecosystem is severely invaded by Prosopis juliflora, Lantana camara, Parthenium hysterophorus, Ageratum conyzoides, Argemone Mexicana etc. are posing threat to survival of native biodiversity of the desert

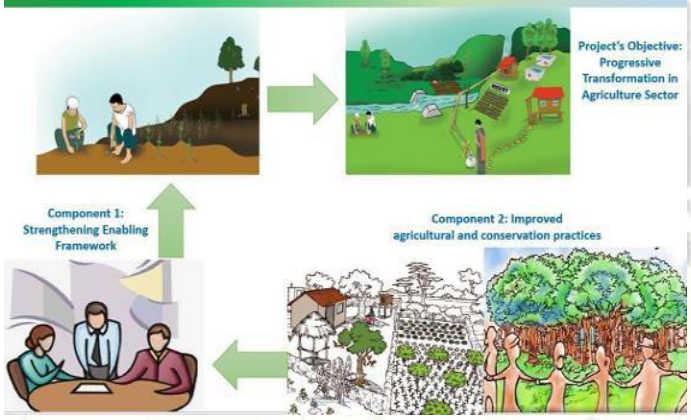
Threats to Desert Landscape

Green-Ag Project

- **Infrastructural Activities** - Wind mills and network of transmission lines disrupt the flight corridors of Great Indian Bustard and prove fatal to the movement of birds ;
- **Attack by Domesticated Dogs of villagers on wild animals** – Ferocious domesticated dogs pose a serious threat to wild animals inside the park;
- **Excessive use of pesticides for locust attack control** - Lethal pesticides such as Organophosphates used to counter locust swarms irrevocably harm the fragile desert ecology

Project Design

Green-Ag Project



Project Innovativeness

Proposed Interventions – Sustainable Agriculture

- Identifying **indigenous/suitable agriculture produce** for sustainable value chains ;
- Incentivize farmers to **grow local land-races/suitable crops with minimal damage to environment ;**
- Support **community seed banks** for identified agriculture produce;
- Promote **agroecological practices**, including sustainable soil and water management;
- Strengthen/ establish **green value chains ;**
- Facilitate **linkages for local procurement** by social safety net programs.

Proposed Interventions –Improved Livestock Management

- Identifying **indigenous breeds for sustainable value chains;**
- **Disease Management** - Deworming and vaccination;
- Support **community fodder banks/ Feed supplies;**
- Sustainable **management of pasturelands;**
- Promoting **stall feeding;**
- Improved **market access and value chain**

Proposed Interventions – Community based Natural Resource Management

- Support **community-based grassland management plans** and their implementation
- Participatory **assessment of existing natural resources** in the landscape and **drivers of degradation**
- Protect **critical habitat** for globally important biodiversity
- **Address Human-Wildlife Conflict** (HWC)

Proposed Interventions

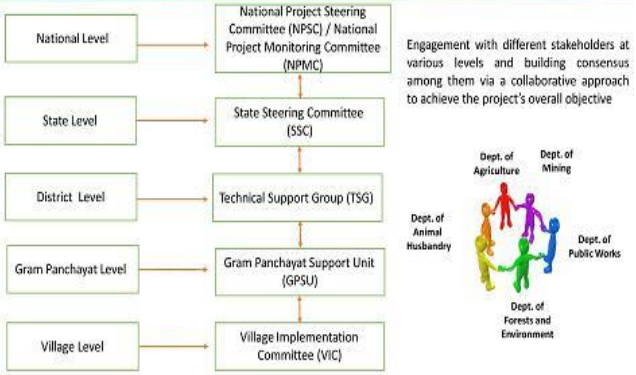
- Promote and conserve **indigenous medicinal and aromatic plants;**
- **Participatory management** of natural resources and usufruct sharing;
- Promote **Community-based Ecotourism;**
- Support documentation and use of **Indigenous Traditional Knowledge**

Project Institutional Architecture

Green-Ag Project

Policy Guidance and Coordination Units Multisectoral Platforms

Green-Ag Project



Engagement with different stakeholders at various levels and building consensus among them via a collaborative approach to achieve the project's overall objective

Policy Guidance and Coordination

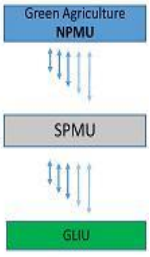
Green-Ag Project

National Project Steering Committee (NPSC)	• Overall **guidance & strategic leadership** • **Multi-sectoral coordination** in project implementation • **Facilitates 'mainstreaming'** of relevant project findings and recommendations in **National policy.**
National Project Monitoring Committee (NPMC)	• **Monitors project implementation** • Responsible for **general oversight** in the project execution.
State Steering Committee (SSC)	• Overall **guidance to the SPMU** in project implementation • **Facilitates mainstreaming** of relevant project findings and recommendations into **state policy.**
Technical Support Group (TSG) District	• Led by the **District Collector,** • **Monitor project implementation** at the field-level • Facilitates **convergence that align government programmes and investments with Green Landscape management objectives**
Gram Panchayat Support Unit (GPSU)	• Plays a critical role in **project implementation.** • **Facilitate synergy** between GP development plans and project activities.
Village Implementation Committee (VIC)	Plays a critical role in **landscape level planning, implementation and monitoring of project activities**

Project implementation Units

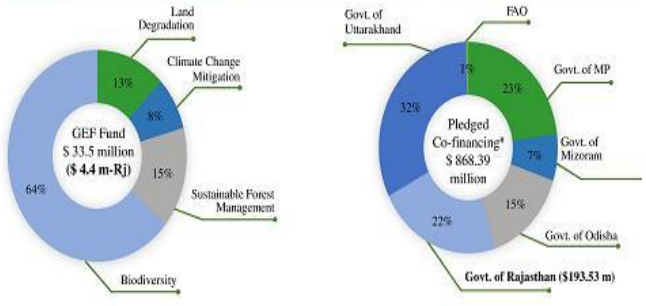
Green-Ag Project

• Implementation Units	• Primary Responsibilities
• **National Project Management Unit (NPMU)**	• Established by the **FAO.** Provides **technical assistance** and ensures effective **implementation of project components** and coordinates all **monitoring and reporting tasks** at national-level.
• **State Project Management Unit (SPMU)**	• Established by the **Operational Partner (OP)** in each state. Works in close coordination with the NPMU for **effective implementation** of project components and **coordinates all monitoring and reporting tasks at state-level.**
• **Green Landscape Implementation Unit (GLIU)**	• Established by the **Operational Partner (OP)** in the landscape. The GLIU will be responsible for **the day-to-day project implementation in the landscape.** GLIU works in close coordination with the SPMU for effective implementation of project components and coordinates all monitoring and reporting tasks at land scape level.



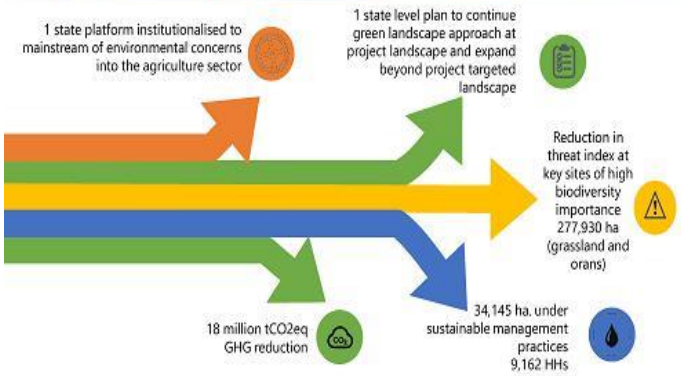
Project Funding

Green-Ag Project



Key Results and Targets

Green-Ag Project



Annexure-II:

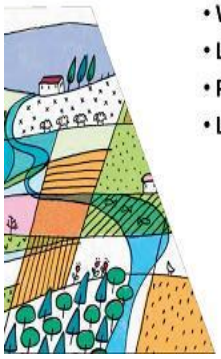
Landscape approach & Landscape planning- Role of Departments

State Inception Workshop- Rajasthan

Green-Ag: Transforming Indian Agriculture for Global Environmental Benefits and the Conservation of Critical Biodiversity and Forest Landscapes

Flow of Presentation

Green-Ag Project



- What are landscapes?
- Landscape approach: what & why?
- Project landscapes
- Landscape planning including convergence

Green-Ag Project

Landscape Approach

Landscapes

Green-Ag Project

*All the **visible** features of an **area of land**, often considered in terms of their aesthetic appeal*

or

Everything you can see when you look across a large area of land

What are landscapes? (II)

Natural landscape

Space delineated by land use or activity

Production landscape

Urban landscape

What is a landscape?

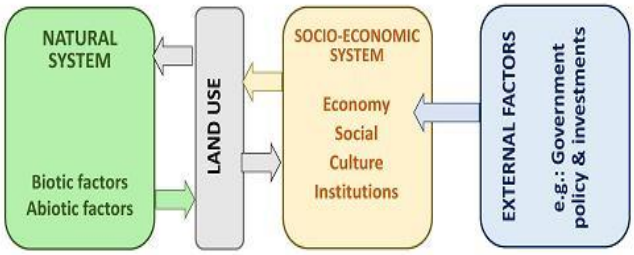
Green-Ag Project

A socio-ecological system that consists of a mosaic of natural and/or human-modified ecosystems

Typically comprises of farmlands, pastures or rangelands, forests, water courses, wetlands, sometimes mining and other industrial zones, communication and transportation infrastructure, and built-up areas of habitation etc.

Landscape Components

Green-Ag Project



Landscapes or **territories** are characterized by a set of **physical, environmental, human, economic, institutional, and cultural resources** that jointly constitute their assets and potential.

Landscape approach: why is it important?

Green-Ag Project

Landscape management and sustainable use of natural resources are essential to maintaining healthy and productive ecosystems, they are very **positive for agriculture and food security**

Key Elements in Landscape approach

Green-Ag Project

- Deals with processes in an **integrated and multidisciplinary** manner;
- Combines **natural resource management** with **environmental** and **livelihood** considerations;
- Factors in **human activities** and views them as an **integral part of the system**;
- Requires **multi-stakeholder interventions**.

Green-Ag Project

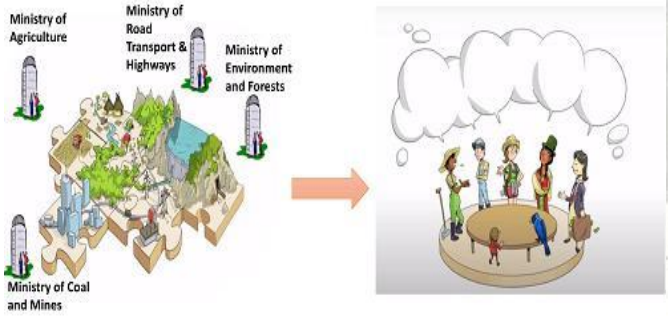
Landscape Planning

What is a landscape approach – It is about the full picture

Green-Ag Project

Compartmentalization
(concerned with one's own interests)

Multistakeholder interactions
(To consider different world views, special interests and concerns for win-win situations)



Landscape planning- How to do it?

Green-Ag Project

- Before making Departmental Plans, can we start **talking**:

Amongst Departments

All Departments collectively with communities

Landscape planning- How to do it?

Green-Ag Project

Concerns: Listen to

- **Core concerns of each department**
- **Communities' concerns and views on each departments actions and their expectations on how all departments should work**

Landscape planning- How to do it?

Green-Ag Project

Consensus:

- **No compromise** on own core concerns
- Accommodate **other's priorities**
- Reaching a **Consensus-Collaboration**
- List **disagreements**

Landscape planning- How to do it?

Green-Ag Project

Group Activity-

Prepare a Developmental plan for implementation in a village. Activities should be related to

- Agriculture
- Livestock (cattle and small ruminants)
- Agroforestry
- Water harvesting, Soil and water conservation, Water-use efficiency
- Other livelihoods
- Forest and wildlife conservation
- Promotion of local agricultural crops/ breeds
- Equitable opportunities in participation and decision making for women and weaker sections

Planning- How to do it?

Green-Ag Project

- Prepare comprehensive **village development plan**
- Map **sector wise activities-** Agriculture, Animal Husbandry, Forests, etc.
- Set **timelines** for these activities
- **Identify Departments** undertaking these activities
- **Identify activities** within Programmes/Schemes/Mission of each Department
- **Identify activities/ interventions not being covered** by any programme of any department- Make provision for that activity/intervention from Green-Ag Project's budget

Implementation-How to do it?

Green-Ag Project

- Get programme wise **Physical** and **Financial** requirements of landscape from district.
- Get the **Action Plan** for implementation-Activity wise with timelines.
- Get the **Budget allocation** done for the district
- Get the **Budget transferred** to the District.
- All **plans implemented** in a **coordinated manner** at the landscape level.
- **Inter-departmental coordination** and **collaboration** will be the **mantra** with each playing their respective roles- **No infringement on each other's mandate.**

Monitoring - How to do it?

Green-Ag Project

- Have **capacities** for **landscape management** and **implementation** been **built**?
- **Requirement** of various **inputs assessed** and inputs **procured** following the **due process**?
- Have the **inputs reached** the **panchayat** or **village** as per **schedule**?
- **Field preparation** and **activities** taken up in time?
- Is the growth /development normal? If not, can something been done to retrieve the situation?
- Sowing/planting/structures created **as per plan- done or delayed**?
- **Analyse** what is going **as per plan** and **what went wrong**? Can something be done to **retrieve** or **minimise damage**.

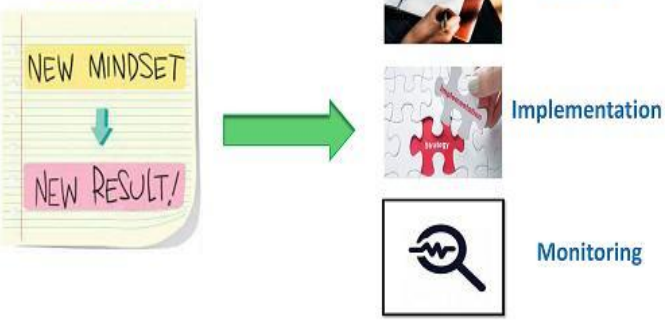
Monitoring - How to do it?

Green-Ag Project

- **Document learning** (what worked, what did not worked and what remedial measures were taken) and **disseminate** to all concerned –In future, avoid repetition of what did not work
- If any interdepartmental issues, immediately **reach out** to the department concerned to find a solution.
- **Periodically apprise other departments** about project implementation and further fine tune, if any.
- **Result – everyone gains without losing anything**

Changes required

Green-Ag Project



Annexure-III:

GLOBAL ENVIRONMENT FACILITY INVESTING IN OUR PLANET

Ministry of Agriculture & Farmers' Welfare
Ministry of Environment, Forest and Climate Change

Food and Agriculture Organization of the United Nations

Green-Ag Project

Results Framework

Flow of Presentation

Green-Ag Project
State Project Inception Workshop

- What are Results?
- What is a Results Chain?
- What is a Results Framework?
- Results Framework and M&E
- Greer-Ag Results Framework
- Interconnectedness between components in the project
- Decoding Results Framework
- Greer-Ag Outcome & Outputs indicators
- Developing indicators for specific activities

What are Results- A Real-Life Illustration

Green-Ag Project
State Project Inception Workshop

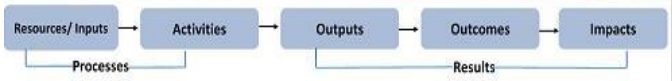
Results Chain – A Real-Life Illustration

Green-Ag Project

Inputs	Activities	Outputs	Outcomes	Impact
Money, Time, Human Resources (Trainers/Coaches, Friends and Family), Plan, Material Resources, etc.	Exercising (gym or outdoors); Eating Healthy; Vacation; Quality Time with family &friends etc. Sleeping for 8 hours; Vacation	% of body fat reduced; Reduced anxiety and disorders ; Sound sleep; Healthy relationships with family and friends etc.	Stronger Immune System; Longer Life; Energy, Strength and Endurance, Improved Appearance, Better Moods, Effective Work-Life Balance etc.	Holistic Lifestyle and well-being

Results Chain

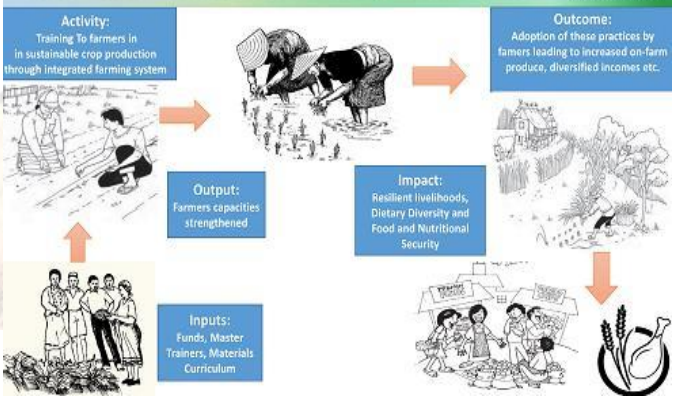
Green-Ag Project



- Linear flow diagram that links activities to outputs, outcomes and impacts
- Depicts a logical relationship of
  - inputs leading to activities,
  - that produce outputs,
  - which result in a medium-term change (or outcomes), and
  - subsequently result in a long-term change (impact).

Results Chain – An Illustration of a Project Intervention

Green-Ag Project

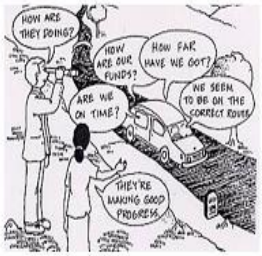


What is a Results Framework

Green-Ag Project

- Organizes the expected results of a project into a series of **"if-then" relationships**
- Shows what the project wants to achieve and how it wants to achieve its overall objective.
- Serves both as **planning and management tool**
- Provides the basis for **monitoring & evaluation**

IF {THAT}
THEN {THIS}



Results Framework Matrix

Green-Ag Project

	Project Strategy	Indicators	Baseline	Targets	Means of Verification
Where the project wants to be?	Objectives/ End Goals/ Impact				
	Outcomes				
	Outputs				
	Activities				

How the project gets there?

How does the project know that it has got there? (Variables to measure achievements)

What was the situation prior to project's intervention (Enables to measure change over time)

What is the mark that the project intends to hit?

Achieved (e.g., xx, % change) by the / Project Year or Project end

Indicates where and how information about project achievements can be obtained

Key Results in Green-Ag Project

Outcome 1.1 National and state-level institutional, policy and programme frameworks strengthened to integrate environmental priorities and resilience into the agriculture sector to enhance delivery of global environmental benefits (GEB) across landscapes of highest conservation concern.		
1.1.4.2	National / state agricultural programmes integrating measurable indicators on agrobiodiversity	1
1.1.4.11	Inclusion of Green Landscape in State's Development plan/ Vision Doc (MP, Od, Uk, Mz, & Rj)	5(1/state)
Outcome 1.2: Cross-sectoral knowledge management and decision-making systems at national and state-levels to support development and implementation of agro-ecological approaches at landscape levels		
1.2.2.2	State monitoring system and protocols (including grassland index and carrying capacity)	5(1/landscape)

Key Results in Green-Ag Project

Outcome 2.1: Institutional frameworks, mechanisms and capacities at District and Village levels to support decision-making and stakeholder participation in Green Landscape planning and management strengthened		
2.1.4.2	Documentation of local indigenous knowledge (Co-finance)	5 documents (1/landscape)
2.1.5	District level "convergence plans' align Govt. programmes and investments with Green Landscape management objectives, which incentivize agro-ecological approaches	8 convergence plans (1/district)
Outcome 2.2: Households and communities able and incentivized to engage in agro-ecological practices that deliver meaningful GEBs at the landscape level in target high conservation priority landscapes		
2.2.4.4	Development of Grassland Management Plans inside DNP (Rajasthan) at Gram Panchayat (GP) level	31 plans
2.24.5	Grassland Management Plans outside DNP – (Rajasthan) at GP level	40 plans

Annexure-IV:

Gender Mainstreaming & Social Inclusion

(Green-Ag project)

Rajasthan Inception workshop
(23-25 Sep 2021)

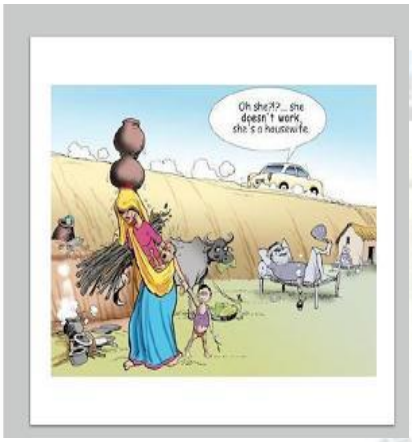
Woman/Man?

Profession	Words
Cook	Dancing
Farmer	Cars
Nurse	Office
Plumber	Cleaning
Builder/Construction worker	Pink and Blue

- Why do most of us agree?
- How do we know?
- Do we truly think – in terms of girls or boy's things?

What is Gender?

- Socially constructed attributes and opportunities associated with being male and female
- how our society defines masculinity and femininity in terms appropriate behavior for men and women
- Both men & women play a crucial role



What is Social Inclusion?

Improving the terms on which individuals and groups take part in society – improving ability, opportunity, and dignity of those disadvantaged on the basis of their identity.

- Poor
- Landless
- Women
- Indigenous

Women constitute **30%** of agri labour and all workers – **79%**
Landowners - **13.96%**
(Rajasthan – **3.8 %**)

Social norms and practices affect land ownership, increase HH burden, reduce access to education and training, participation in decision-making, wage gap

Extension services and Credit
Only **11%** have deposit a/cs and **5%** receive extn services
10% of the aid *(agri, forest, fishing)* to women

Women in Agriculture (Current Status)

Feminisation of Agriculture
Additional burden, access to credit/trainings, machinery

Climate change magnifies existing inequalities and vulnerabilities – crop failure, water scarcity, displacement

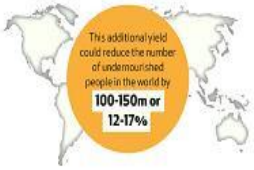
Social/caste diff. – Dalit and STs women – illiteracy, low access to legal/health, lack awareness about rights

Why Mainstream?

Women's participation increases agricultural output and food security

The yield gap between men and women farmers averages around **20-30%** mostly due to differences in resource use

Given equal access to resources as men, women would achieve the same yield levels, boosting total agricultural output in developing countries by **2.5-4%**



Women's participation in sustainable forest management leads to improved forest conservation and enhanced livelihoods

Women as agents of change contribute to climate resilience building

When you invest in the health, rights, and wellbeing of girls and women, there is a ripple effect and everybody wins.

Girls and women spend **90%** of their **earned income on their families**, while men spend only **30-40%**.

Gender & Social Inclusion

in

Green-Ag project

Gender in Green-Ag project

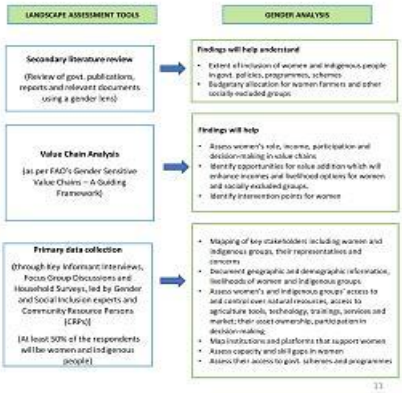
Green-Ag project will focus on

- Improving women's participation and decision-making
- Building women's skills and capacities
- Promoting sustainable livelihoods and income opportunities for women

Results Framework

OUTCOME/OUTPUT/ACTIVITY	INDICATOR	TARGET
1.1.3.4. Studies conducted on issues related to environment/ agriculture and allied activities/ wildlife/ biodiversity, etc. (Gender, social inclusion and Indigenous Technical Knowledge—ITK to be cross-cutting themes across all studies).	1.1.3.4-I1 No. studies conducted on issues related to environment/ agriculture and allied activities/ wildlife/ biodiversity/ gender and social inclusion	29 (MP-7; Mz-5; Od-7; Rj-5; Uk-5)
1.2.3.1. Sustainable agriculture "best practices" captured and disseminated	1.2.3.1-I2. Best practices related to women's initiatives in sustainable agriculture documented and disseminated	5 (1 Doc per landscape)
1.2.3.2. Document lessons learnt from Field Schools approach and strategies of mainstreaming (gender mainstreaming & social inclusion	1.2.3.2-I1. Lessons and strategies for mainstreaming documented from the field school approach	5 (1 Doc per landscape)
1.2.3.4. Knowledge and communication products – (NPMU)	1.2.3.4-I1. Number of knowledge and communication products developed which are gender sensitive	14
2.1.1.4. Capacity development on incorporating gender & FPIC (States)	2.1.1.4-I1. Number of staff trained on gender and FPIC issues	5 teams
2.1.1.9. Capacity building of State-level project implementation unit on incorporating gender and FPIC issues – (NPMU)	2.1.1.9-I1. Number of capacity development workshops	5
2.1.2.5. Implement Field Schools on Green Landscape Governance – (MP, Mz, Od, Rj, & Uk)	2.1.2.5-I2. Number of Key local decision-makers (GPSU) trained on Green Landscape Governance (Gender disaggregated; ethnicity)	Field Schools x 20
2.2. Households and communities able and incentivized to engage in agro-ecological practices that deliver meaningful GEBs at landscape level in target landscapes	2.2-I9. Number of women participating in and benefitting from Green-Ag (agro-ecological) Farmer Field Schools	40,000 females RJ-3,000; OD-12,000; UK-19,000; MZ-2,000; MP-4,000

Gender Analysis



Gender & Social Inclusion - Project Interventions

Multi-sectoral Committees	GP Support Units, Village Implementation Committees (GPSU & VIC)	Capacity building	Farmer Field Schools	Community interven
• **NPSC:** MoAFW, MoEFCC, MoRD – women specific interventions • **SSC/TSG:** WCD & Dept of Social Welfare; ST/SC Welfare	• At least one-third of the members shall be women. • At least two members from indigenous communities • At least one member of the landless class	• **Gender-specific and gender sensitive curriculum** with engagement of women • Training of district-level **Technical and Extension Staff** • **Green Landscape Governance** - At least one third representation of women	• 40,000 women (RJ-3,000) will be participating and benefitting from FFSs. • Women exclusive FFSs – culture related or if certain topics require a women-specific FFS • FFSs at venues accessible to women and convenient times (farm, non-farm and household chores)	• NRM and Value Chain interventions for wo and indigenous peop • 33% representation exclusive women VC • Enhance access to c inputs, trainings and markets • FPO participation • Enhance livelihoods Incomes

Convergence Plans: MGNREGA, National Agri Policy, Policy for Empowerment of Women, NRLM, etc.

Gender in Communication

1 Policy Dialogue & Studies

- Dialogues to promote gender and social inclusion
- Background/Concept note gender-specific data/information
- Participation of organization's working for empowerment of women & Schedule Tribes

2 Awareness raising

- Communication channels and tools preferred by women and indigenous groups

3 Communication products

- **Equitable representation of women and men** e.g. Equal no. of pictures of women and men

- **Break gender stereotypes** e.g. portray women in written and visual communication as leaders, owners, speakers and experts rather than as passive participants

- **Use culturally appropriate images and language** (especially in all communication with indigenous people)

Gender & Social Inclusion Project Resources

Budget

- Earmarked within project activities

Staff

- 1 Gender & FPIC expert (NPMU)
- 5 Gender & Social Inclusion experts (GLIU)

Capacity development

- Gender & FPIC trainings at regular intervals

Monitoring and Evaluation

- Results framework – gender sensitive and gender specific indicators
- Gender disaggregated data
- Evaluation – UNEG guidance and Gender Equality in Evaluations

Annexure-V:

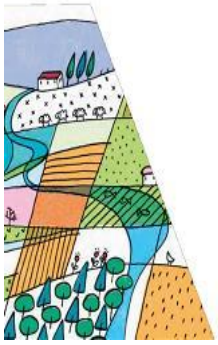
Landscape Management

State Inception Workshop- Rajasthan

Green-Ag: Transforming Indian Agriculture for Global Environmental Benefits and the Conservation of Critical Biodiversity and Forest Landscapes

Flow of Presentation

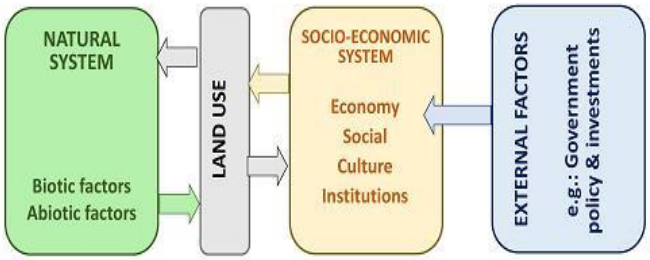
Green-Ag Project



- What are Landscapes?
- Landscape approach: what & why?
- Implementing landscape approach
- Project landscapes
- Green-Ag's Approach to Landscape Management: Landscape assessment, identification of High Priority Areas, Development of landscape management plans, implementation & monitoring

Landscape Components

Green-Ag Project



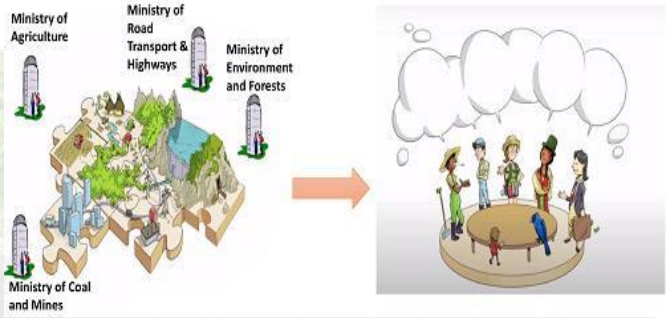
Landscapes or **territories** are characterized by a set of **physical, environmental, human, economic, institutional, and cultural resources** that jointly constitute their assets and potential.

What is a landscape approach – Holistic Management

Green-Ag Project

Compartmentalization
(concerned with one's own interests)

Multistakeholder interactions
(To consider different world views, special interests and concerns for win-win situations)



Landscape approach: why is it important?

Green-Ag Project

Landscape management and sustainable use of natural resources are essential to maintaining healthy and productive ecosystems, they are very **positive for agriculture and food security**

Key Elements in Landscape approach

Green-Ag Project

- Deals with processes in an **integrated and multidisciplinary** manner;
- Combines **natural resource management** with **environmental** and **livelihood** considerations;
- Factors in **human activities** and views them as an **integral part of the system**;
- Requires **multi-stakeholder interventions**.

Implementing the landscape approach

Green-Ag Project

- Management of **production systems** and **natural resources** in an area large enough to **produce vital ecosystem services**;
- **Long-term collaboration** among **different groups** of land managers and stakeholders to **achieve their multiple objectives**

Common Challenges in Project Landscapes

Green-Ag Project

Unsustainable agricultural practices in the project landscapes have negative impacts which are as follows:

- Loss of agrobiodiversity
- Degradation of land, soil and increasing water scarcity
- Loss and degradation of natural ecosystems and wild species
- Forest degradation and declining forest cover
- Threats to Protected Areas and connectivity between them hampering the movement of wild animals in the corridor areas
- Increasing Greenhouse gas emissions

Green-Ag's Approach

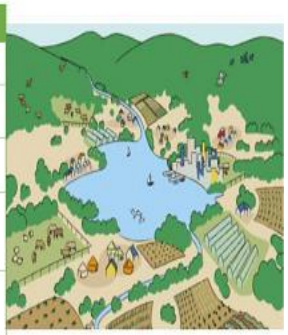
Green-Ag Project

Degraded Landscapes → Green Landscapes

Green Landscapes

Green-Ag Project

Alphabet	Expansion
G	Grass-root & Participatory Governance
R	Resilience of people, communities and ecosystems
E	Economically & Ecologically Sustainable Livelihoods
E	Equity – Equitable access to natural resources, including by marginalized groups
N	Natural Resources Management – conserve, protect, enhance sustainable use



Green-Ag's Approach – A Holistic Management of Project Landscapes

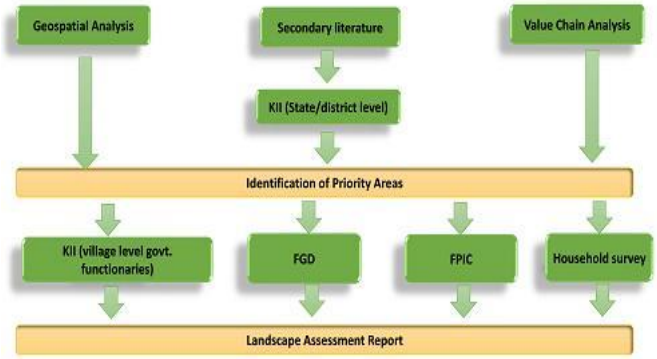
1. Landscape Assessment Framework

A preliminary assessment undertaken by the project to understand key aspects of the project landscapes

Key thematic areas for Landscape Assessment	Key methodologies for Landscape Assessment	Key results from Landscape Assessment
• Landscape characterisation • Threats to landscape • Stakeholder analysis • Socio-economic assessment • Institutional assessment • Policy environment • Supply and value chain analysis	Geospatial Analysis (• Third Party/ SPMU) Secondary Literature (• SPMU & GLIU) Key Informant Interview (• SPMU & GLIU) Focus Group Discussion (• GLIU & CRP) Household Survey (• GLIU & CRP)	• Geography & topography, • Land use and land change, • Bio-physical environment, • Climate, • Threats and drivers of land use change, • Stakeholder platforms, • Socio-economic and demographic patterns, • Livelihood options, • Institutional mechanisms & governance structure, • Policy & programme performance, • Ongoing baseline investments • Demand and supply mechanisms • Challenges, strengths & opportunities

Process Flow of Landscape Assessment

Green-Ag Project
State Project Inception workshop



2. Identification of High Priority Areas

Green-Ag Project
State Project Inception workshop

The areas prioritised will be based on local needs and in consultation with district officials (Technical Support Group-TSG)

3. Development of Green Landscape Management Plans

Green-Ag Project
State Project Inception workshop

Collaborative planning for management strategies and action plans

Mapping the Priority Zones based on the findings from landscape assessment through Village Implementation Committees (VICs)

- Participatory planning for priority zones (micro plans)
- Review management approaches and prioritize (e.g., Cost benefit analysis for proposed interventions)
- Convergence with ongoing govt. initiatives
- Finalize Action Plan for IY 1, which specify interventions and areas, clear timelines, resources, financial allocation and monitoring plan
- Rolling Plans: Review implementation of IY 1 and develop Action Plan for IY2

4. Implementation and Monitoring of Green Landscape Management Plans

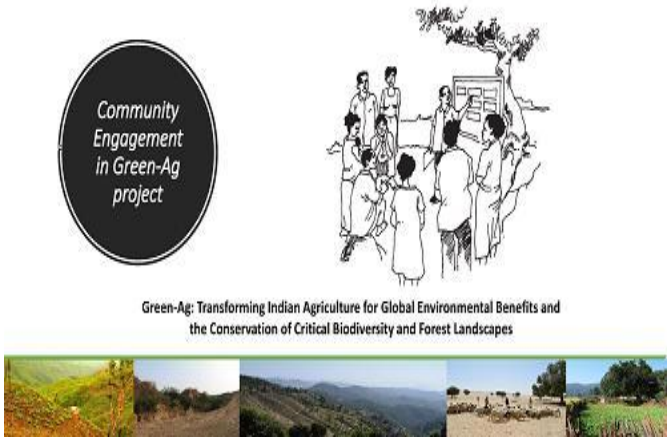
Effective implementation of Green Landscape Management plans :

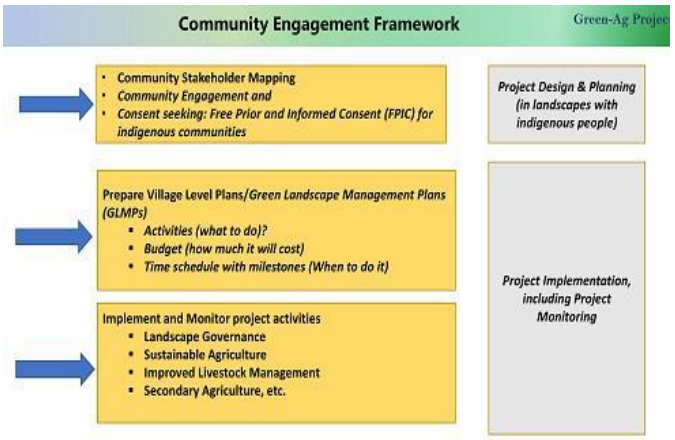
- Interventions on Value chains, Sustainable Agriculture, Livestock, Alternative livelihood options, soil and water conservation based on landscape assessment findings and Spatial Decision support system;
- Capacity enhancement through Farmer Field Schools;
- Engagement with Technical Support Group (TSG) and *Gram Panchayat* Support Unit (GPSU), Village Implementation Committees (VICs) in the Landscape
- Documentation of challenges and learning from implementation and Identification of feasible remedial/alternate measures

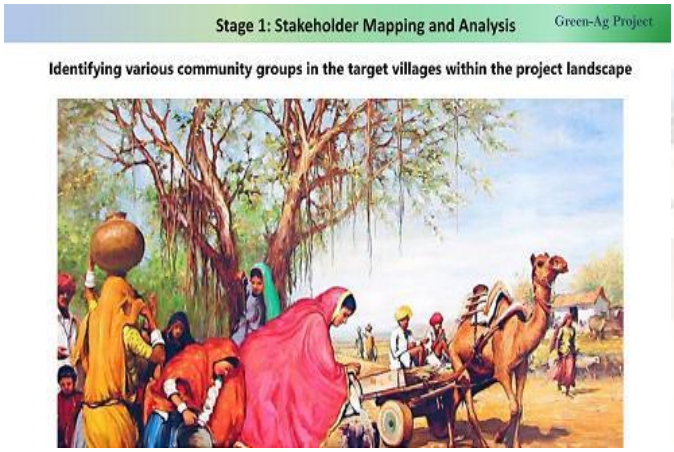
Monitoring for adaptive management and accountability

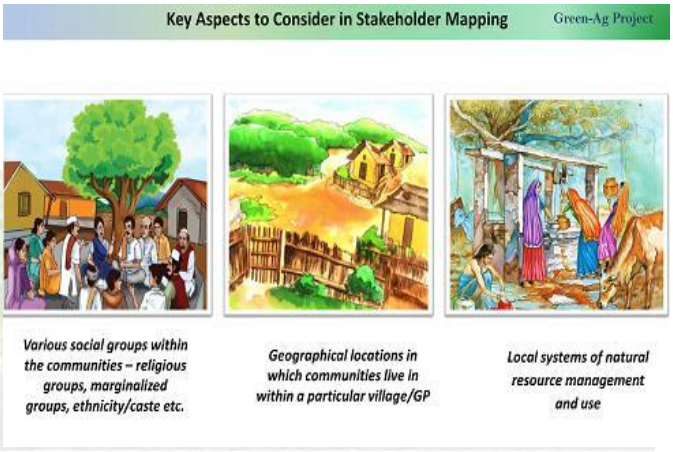
- Regular review and feedback by communities in VIC meetings
- Periodic monitoring of landscape health through landscape monitoring indicators, Threat Reduction Monitoring Protocols and Spatial Decision Support System

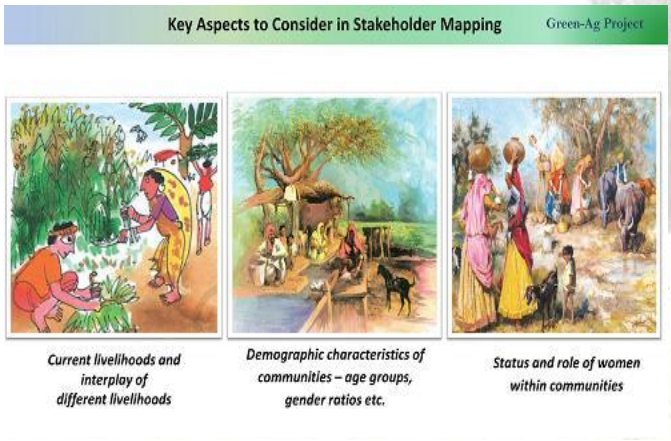
Annexure-VI:

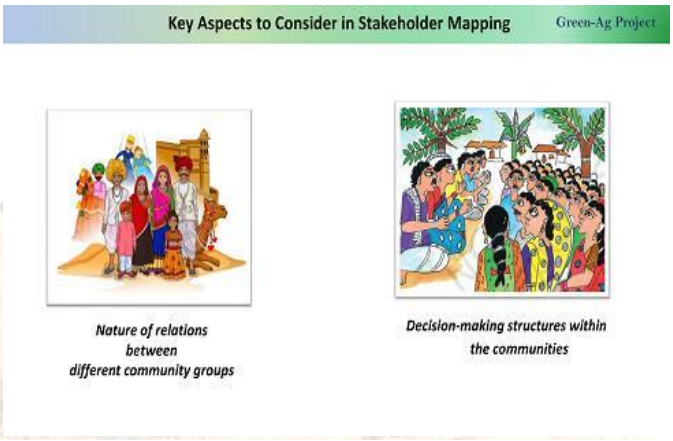


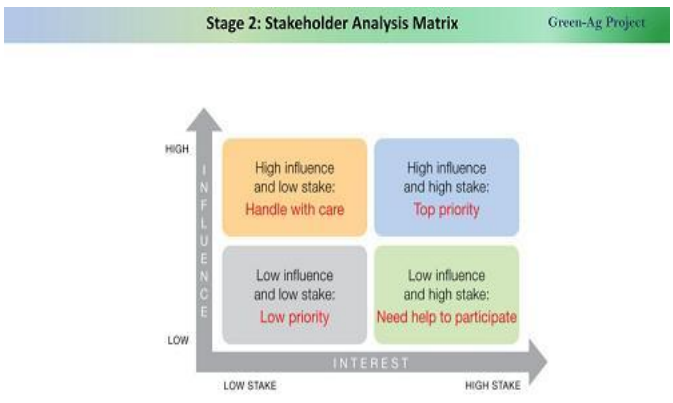












Stage 2: Community Stakeholder Engagement during Project Planning and Landscape Assessment

A) Stakeholder Engagement Plan

Green-Ag Project

Key Stakeholders	Role in Communities	Project's Relevance to Stakeholder	Information Needs	Communication Channels	Mode & Place of Engagement
Women	Play a key role in supporting the households and communities Food and nutritional security Generating income through agriculture and rural enterprises, fuelwood collection	Improving women's participation and decision making; and Creating sustainable livelihoods for women.	Nature and mandate of the project Proposed interventions and role of women in these interventions How will the project benefit women?	Project Handouts Radio messages	Community Meetings Focus Group Discussions

B) Project Sensitization

Green-Ag Project

Phase 1: *Sarpanch/ Village President and other members of the GP/VC and community representatives*

Phase 2: *Gram Sabha*

Key aspects to be covered while introducing the project

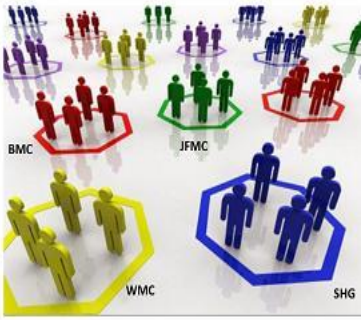
Green-Ag Project

- **Project Design:** roles of District, State and National Govts.
- **Why was this site chosen?**
- **Global Environmental Values in the landscape** – forests, biodiversity, agrobiodiversity
- **Summary of existing threats** in the landscape
- **Focus Areas** –
  - Importance of forest ecosystems for local communities
  - Increased dependence on hybrids and exotic breeds undermines ecosystems
  - Increased production doesn't translate into increased incomes
- **Need for smart livelihoods**
- **Project's Objective** is to improve incomes while sustaining and improving local ecosystems
- **How will the project be beneficial to the communities?**

Current Status of Community Institutions in the Project Landscapes

Green-Ag Project

Existing Community Institutions in the project landscapes focus on furthering their own mandates

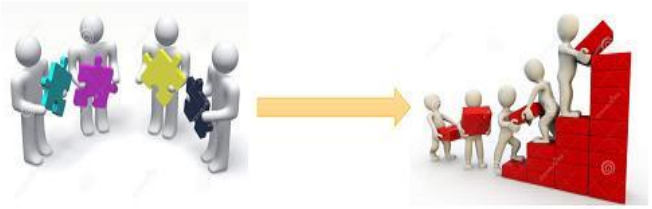


What the Green-Ag project aims to do?

Green-Ag Project

Create Multistakeholder platforms to discuss: core concerns of different stakeholders, existing problems in the landscape, their causes and solutions

Enables different stakeholders to work collaboratively to create sustainable landscapes



Village Implementation Committees (VICs)

- **Multisectoral committees at the community level** in villages within the landscape
- Lead/coordinate **planning, implementing and monitoring of Village level plans, part of Green Landscape Management Plans**

Gram Panchayat Support Unit (GPSU) at GP level

- With functionaries of Gram Panchayat

C) Community Deliberations – A prerequisite to collective decision making

Green-Ag Projec

- Give communities the **time and space to deliberate and discuss among themselves** until they have gained confidence to undertake their collective decision.
- Be ready to **provide clarifications and address any of their key questions, opinions, concerns** of the communities.
- Ensure that **decision-making process is inclusive** with active participation of women and other socially marginalized groups.
- The collective decision must be **free from any coercion, manipulation or pressure from anyone.**

D) Document the Proceedings of Meetings

- Record the proceedings of the of the meeting
- Take photographs, audio, and video recording of the meeting
- Distribute attendance sheet and get it duly signed by the participants.

Project Implementation

Green-Ag Project

Stage 3- Sharing the Findings of Landscape Assessment and Value Chain Analysis with communities

Stage 4 – Community members discuss and deliberate on livelihood activities and conservation measures in the landscape

Livelihood Interventions

Green-Ag Project

On-farm Livelihoods with focus on local landraces and indigenous breeds

Alternative Livelihood Interventions

Green-Ag Project

Community -Based Ecotourism

Project Implementation

Green-Ag Project

Stage 5 – Community members develop grassland management plans with various livelihood activities, soil and water conservation measures to be undertaken in a project year

Stage 6 – Plan Implementation

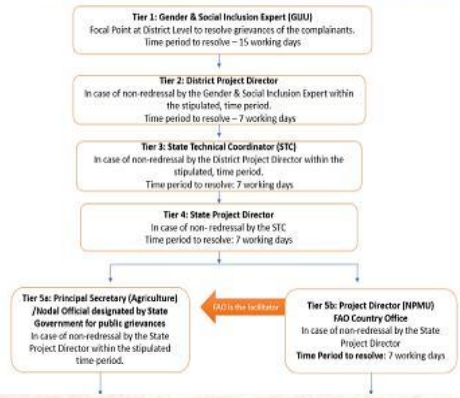
Project Implementation

Green-Ag Project

Stage 7 – Monitoring (identify issues/ challenges, take remedial measures, document learning), and developing action-plans for next year

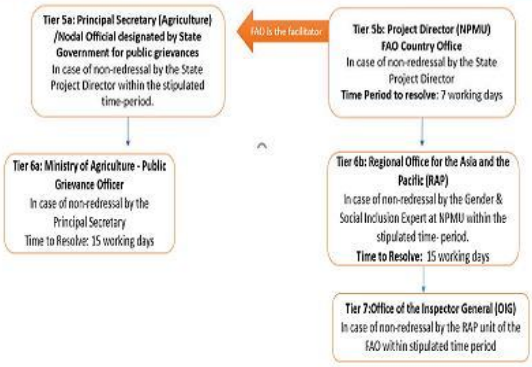
Project's Grievance Redressal Mechanism

Green-Ag Project



Project's Grievance Redressal Mechanism

Green-Ag Project



Village Implementation Committees (VICs)

Green-Ag Project
National Project Inception Workshop

- **Multisectoral committees** in villages within the High Priority Areas of the landscape
- Lead/coordinate **planning, implementing and monitoring of Village level plans, part of Green Landscape Management Plans**
- VICs **will federate at the GP / VC level into Gram Panchayat Support Units/Village Council Support Units.**
- VICs **will meet every month** to discuss progress made against planned activities, identify issues/ challenges, take remedial measures, document learning, and develop road-map for subsequent plans

Indicative List of VIC Members

Green-Ag Project
National Project Inception Workshop

- **Chairman:**
  - Sarpanch or Panch; Chairman, Village Council or
  - Any member of GP/VC who is resident of a particular village and acceptable to Sarpanch/ Chairman, Village Council;
- **Representatives from:**
  - Biodiversity Management Committees (BMCs)
  - Eco development committee
  - Joint Forest Management Committee
  - SHG groups and Federations
  - Farmers Collectives and Co-operatives
  - Field level functionaries of different line departments
  - Indigenous communities and landless people living in the village
  - Community Resource Person - Member Secretary

Note: This list is only indicative and may vary as per local conditions and circumstances

Provisional Membership of VIC

Green-Ag Project

- Chairman of VIC (Sarpanch or Panch/ Chairman, Village Council)
- Government Officials from different Line Departments – (Ex-officio members of a VIC)
- At least One-third of the members will be women
- At least two members from indigenous communities and one member from the landless class
- Community Resource Person (CRP) – Member Secretary

Steps in the Formation of Village Implementation Committee

Green-Ag Project

Step 1: Stakeholder Mapping

Green-Ag Project

Stakeholders to be Mapped in the Target Village	Responsibility
• Active Community Institutions • Various Social Groups including indigenous communities • Relevant Government Departments operating in the village	• Green Landscape Implementation Unit (GLIU) to undertake the mapping exercise and present the findings to the Technical Support Group (TSG) • GLIU to request TSG to add to their meeting agenda a "discussion on the constitution of VICs

Step 2: Discussion on formation of VICs in TSG meetings

Green-Ag Project

- Relevance and Usefulness of the VICs in planning, implementation and monitoring of project activities.
- Institutions, government departments and other stakeholders working in the priority villages
- Steps in the formation of VICs
- Decision on formation of new VICs or continuation of existing bodies,

Expected Outcomes
Issuance of official circulars with specific instructions from the Chairman of TSG to all the District Heads of the Government and Panchayati Raj Institutions (PRIs)

Step 3: Consultations between the GLIU Team Leader and District Heads of Govt. Depts &PRIs

Green-Ag Project

Brief orientation to the District Heads by the GLIU team leader on the following:

- About Green-Ag project and its aim
- Green Landscape Management Plans (GLMPs) and process of their preparation
- Role of VIC in planning, implementation, and monitoring of GLMPs
- Indicative list of members of VIC
- Provisional structure of VIC

Expected Outcomes
Issuance of official circulars with specific instructions from the District Heads to the field functionaries and Sarpanch or Panch/ Chairman, VC

Step 4 : Copy of Instructions to be shared with the CRPs

Green-Ag Project

GLIU Team leader to provide CRPs with the following documents

- Copy of circular issued by the TSG Chairman to District Heads of all concerned Government departments and PRIs.
- Copy of circular issued by the District Heads to their respective field functionaries and Sarpanch or Panch/ Chairman, VC

Step 5: Consultations between the CRPs and Sarpanch/Panch/Chairman

Green-Ag Project

Brief orientation to Sarpanch/Panch/Chairman of VC by the CRPs on the following:

- About Green-Ag project and its aim
- Green Landscape Management Plans (GLMPs) and process of their preparation
- Role of VIC in planning, implementation, and monitoring of GLMPs
- Indicative list of members of VIC
- Provisional structure of VIC

Expected Outcomes:
Sarpanch/Panch/ Chairman of VC to call the for a meeting to constitute VIC
Approval of meeting agenda and meeting notice
Meeting invites sent to concerned individuals for participation in the VIC constitution meeting

Step 6: VIC Constitution Meeting

Green-Ag Project

The CRPs will take lead in convening the meeting at a time and place selected by the Sarpanch/Panch/ Chairman of VC. In this meeting, the CRPs will share:

- About Green-Ag project and its aim
- Green Landscape Management Plans (GLMPs) and the process of their preparation
- Role of VIC in planning, implementation, and monitoring of GLMPs
- Indicative list of members in VIC (Please note that the Sarpanch/Panch/ Chairman of VC may add anyone deemed relevant or modify the list based on the local circumstances)
- Provisional structure of VIC

Further, Sarpanch/Panch/ Chairman, VC will take over and inform the villagers about the potential benefits of the Green-Ag project and request their support for constitution and effective functioning of VICs.

Expected Outcomes:

Constitution of Village Implementation Committee

Role of Field Functionaries from different Line Departments in VICs

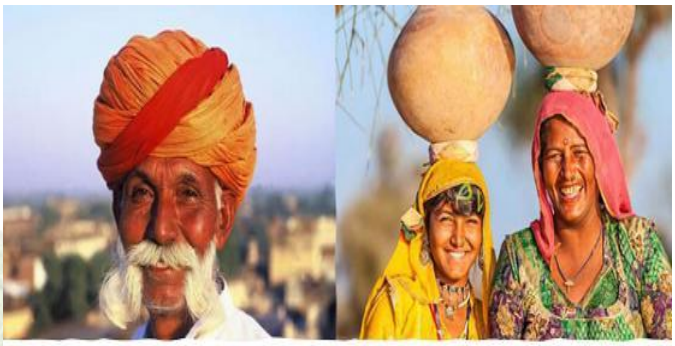
Green-Ag Project

→ *Review the choice of commodities (crops/livestock) to be produced as a part of livelihood interventions and provide their technical inputs and advisories.*

→ *Provide inputs on convergence for the planned activities with ongoing Government Programmes in their respective Departments*

What are Green Landscape Management Plans

Green-Ag Project



Annexure-VII:

Communication

Rajasthan Inception workshop
(23-25 Sep 2021)

Green-Ag: Transforming Indian Agriculture for Global Environmental Benefits and the Conservation of Critical Biodiversity and Forest Landscapes

Why Communicate?

Green-Ag Project
State Project Inception Workshop

Project Development Objective

Catalyze **transformative change** for India's agricultural sector to support **achievement of national and global environmental benefits** and **conserve critical biodiversity and forest landscapes**



- Who will understand? Why?
- How should we communicate?
- What should be communicated?
- When? And How?

Steps in Communication

- Purpose
- Audience
- Message
- Tools
- Channels

Purpose

Why do we need to communicate?

- To create awareness on high conservation landscapes to agriculture
- Promote adoption of sustainable practices within community
- Facilitate convergence
- Share information on innovations, best practices, lessons for replication
- To aid project implementation

Audience

Whom to communicate with?

- National, state and district govt. officials
- Community members (GP members, community groups, farmers, women, indigenous people)
- Media (print and broadcast)
- GEF/FAO
- Green-Ag project staff

Message

What to communicate?

- Green Landscape approach
- Project innovations, best practices, lessons, project progress and results achieved
- Keep it simple and straightforward
- Encourage community voices, especially women & IPs

Tools & Channels

How to communicate?

- **Products:** Brochures/Fact sheet/Policy Briefs/Reports etc.
- **Formal channels**: Newspaper articles, presentations, website
- **Events**: Policy dialogues
- **Awareness raising activities:** Eco clubs, Information platforms

- **Audience** (Different channels for different audiences. Well-educated audiences need printed, technical information they can refer to, audio-visual for semi-illiterate/illiterate etc.)
- **Message** (Technical messages written medium preferred than say Radio)
- **Cost-effectiveness** (reach out, options available)
- **Repeat a message and using mix of several channels**

Communication in Green-Ag project

Communication in Green-Ag project

- Communication and KM has a key role
- Communication Specialist at NPMU
- Five Communication Officers (one per state)

Outcome 1.2: Cross-sectoral **knowledge management and decision-making systems** at national and state levels to support **development and implementation of agro-ecological approaches at landscape levels** that deliver global environmental benefits as well as socioeconomic benefits enhanced

Communication Indicators & Targets

1.2.3-I1 Number of Communication platforms and plans designed and implemented	1 National & 5 Landscape
1.2.3.1-I1 "**best practices**" related to sustainable agriculture documented and disseminated	5 (1 Doc per landscape)
1.2.3.1-I2 best practices related to women's initiatives in sustainable agriculture documented and disseminated	5 (1 Doc per landscape)
1.2.3.2-I1 lessons and strategies for mainstreaming documented from the field school approach	5 (1 Doc per landscape)
1.2.3.3–I1 Communication Teams at State-level established	5 (1/landscape)
1.2.3.4-I1 Number of knowledge and communication products developed, which are gender sensitive	14
1.2.3.6-I1 Number of **Knowledge sharing initiative** between states	Target as per Pro Doc: 12 (2/Landscape & 2 NPMU)
1.2.3.7-I1 Number of Knowledge sharing initiatives within states	10 (2/landscape)
1.2.3.8 –I1 Number of Knowledge sharing initiatives nationally and internationally	7 (1/landscape & 2 NPMU)
2.1.1.1-I1 Lessons documented at national level through project monitoring and review.	1 Doc
2.1.1.10-I1 Number of lessons documented at local level through project monitoring and review (Best practices/barriers)	**10 (2/landscape)**
2.2.4.3-I1 Number of FPIC assessments undertaken and documented	5 (1/GL)

Communication Indicators & Targets

1.2-I1. Number of **stories published in newspapers and other media reports** on Green Landscape approach	**At least 30** (National & Landscape level) – to split into NPMU and SPMU
1.2-I4 Number of lessons learnt reports published on different themes (environmental, economic, social) documenting relevant lessons learnt.	12
?? 2.1.4.2 - Document local indigenous knowledge (Co-finance) – (MP, Mz, Od, Rj, & Uk)	5 (1/landscape)
2.2.3.1 - Raising awareness through Eco-clubs and volunteers - (MP, Od, Uk, Mz, Rj)	**250-Ecs**
2.2.3.2 - Establishment of Green Landscape Information Platforms (MP, Od, Uk, Mz, Rj)	**450 - GLIPs**
1.1.2.1-I1 Number of National Dialogues on agriculture environment and development	1
1.1.2.2-I1 No. of State Dialogues on agri, environ and development	**55 (11/State)**
1.1.3.1. Discussion Paper on development of National Green Landscape Mission	1
1.1.3.2 - Studies to support/ provide inputs to National dialogue (details below)	5
1.1.3.4 - Studies conducted on issues related to environment/ agriculture and allied activities/ wildlife/ biodiversity, etc.	**29 (MP-7; Mz-5; Od-7; Rj-5; Uk-5)**
1.1.3-I1 Number of knowledge products developed	(5 National + 29 State)

Key Communication Activities

Full Name: Green-Ag: Transforming Indian Agriculture for Global Environmental benefits and the Conservation of Critical Biodiversity and Forest Landscapes

In short: Green-Ag project. State name can be added

Colour schemes to use: Shades of green and blue

Logo guidelines
- *Top left – GEF, Middle – Govt., Top right – FAO*
- *Project logo*

Visual/Brand Identity

GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

Ministry of Agriculture & Farmers' Welfare
Ministry of Environment, Forest and Climate Change

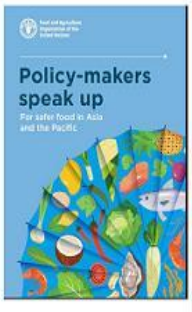
Food and Agriculture Organization of the United Nations

Visual/Brand Identity

www.greenag.nmsa.gov.in

Human Interest Story

- Identify good/ successful stories
- Issue – Action – Impact
- Tie your message with something which people can relate to
- Quotes & Quality pictures with credits



Brochure

- Simple and straightforward
- Good quality pictures
- Representation of men and women

Reports/Briefs

144 million stunted children + 1,000 day window of opportunity to improve nutrition

- Technical reports, policy briefs, lessons learnt, best practices
- Data and visualisations
- Ethics and confidentiality in photos and audio/video
- Dissemination important

Eco Clubs

- Awareness raising for Children and youth
- School/College based (or local youth groups) - Volunteer Eco-Clubs in the landscape
- Raising awareness on Green landscape approach and importance of agro ecological practices
- Eco-volunteers undertake ecosystem assessments/ biodiversity monitoring and implement community awareness campaigns. (supported with equipment)

Eco Club

Green Landscape Information Platform (GLIP)

- Community awareness & information centre
- Internet computer, audio-visual equipment, Community Organizer

1. Hub for communities to **discuss issues, showcase project innovations**.
2. **Maintains GL database** on protected areas, biodiversity, hydrological and meteorological data, local knowledge, including soils and livestock;
3. **Literature on GEB** friendly practices
4. Access to **extension services, weather forecasts, prices,** data etc.
5. Farmers learn to **use ICT tools** - mobile-based info & advice systems
6. **Farmers make decisions** - crop selection, if monsoon is delayed
7. Ensures **inclusion of socio-economically disadvantaged** groups

- To facilitate discussion and action on priority issues (agriculture, environment, climate change, development, gender)
- 5 National and 55 state level (11 per state)
- Platform to bring together national and state steering committee members, policy makers, experts, academia, NGOs, farmer organisations
- Will lead to formulation of **policy recommendations** on mainstreaming environmental concerns into agriculture

Policy Dialogues

How to organise a policy dialogue

STEP 1	STEP 2	STEP 3	STEP 4	STEP 5
Scoping study on the enabling policy environment	Participatory analysis of a policy constraints to innovation	Local and national policy dialgue events	Preparation of actions plans and policy briefs	communication and application of action plans

Source: Organising a Policy Dialogue – A Practical Guide (FAO, 2019)

Publication Work Flow

SPMU/GLIU should engage the State Communications Officer

↓

Product design, content and dissemination plan should be shared with NPMU

↕

NPMU will provide inputs to SPMU Communication Officer

↓

SPMU Communication officer - approval from the State Project Director and OP on design, content, no. print copies, budget and dissemination plan

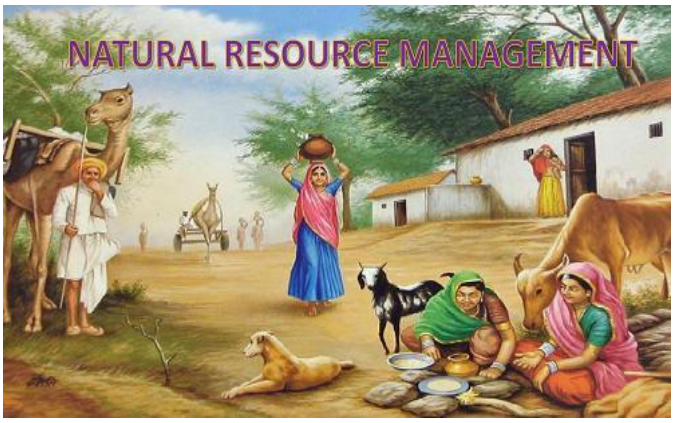
↓

The printed version (pdf) of all publications should be shared with NPMU

Annexure-VIII:

प्राकृतिक संसाधन प्रबन्धन
Natural Resource Management

Green-Ag: Transforming Indian Agriculture for Global Environmental Benefits and the Conservation of Critical Biodiversity and Forest Landscapes



QUESTIONS TO PARTICIPANTS

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- What do you understand by the term natural resources ?
- Can you identify some of the critical natural resources around you?

NATURAL RESOURCES

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Natural Resource Management (NRM)

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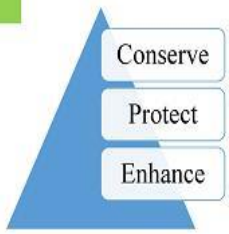
NRM refers to the management of –

- Land
- Water,
- Soil,
- Bio-resources

Sustainability for both present and future generations

- It brings together **land use planning, water management, biodiversity conservation**, etc.
- It recognizes **people and their livelihoods,** their **dependence** on these natural resources, and **community action** in enhancing quantity and quality of these resources



Why NRM is necessary?

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- To **prevent further degradation** of land, water, agriculture, forests and bioresources
- To **ensure sustainable supply** of natural resources
- To **resolve the water related issues**
- To **improve quality** of these resources

Land Characteristics of Landscape

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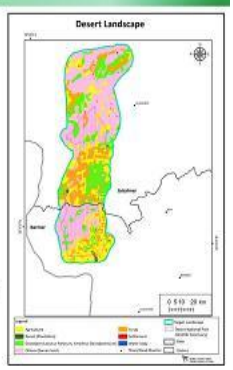
- A part of the Great Indian Thar Desert, landscape is **sandy, dry and scorched.**
- The terrain is **barren, undulating** with its famous **sand dunes.**
- The soil here is grateful even to a little rain and turns **lush green during mansoon.**
- There is no perennial river in the Jaisalmer. The main river of the Barmer is Luni which is 480 km in length and meets the Gulf of Kutch flowing through Jalore.



Land Uses in Landscape

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Class	Description	Area in (ha.)
Agriculture	Agriculture are available within Desert national park and also outside area	160081.83
Forest (Plantation)	Very few patches of plantation are shown in national park and outside of national park	1671.85
Grassland	Grassland are well found in entire landscape	115047.12
Others (Barren land)	Barren land are distributed entire landscape	293515.21
Scrub	Scrub are distributed almost entire landscape	100887.72
Settlement	Settlement are distributed in national park and also outside of national park	2742.35
Water body	Only few area of waterbody available in outside of desert national park within study site in Jaisalmer distt	136.40
	Total Area	**674082.47**

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Soil Characteristics of Landscape

- Landscape has **Aeolian sandy, alkaline and saline soils** with a **calcareous base**.
- Due to the presence of **limestone layer** under the soil, the percolation of water to deeper layers is minimal.
- There is some **nitrate** concentration in the soil of these regions.

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Water Resources in Landscape

- Primarily Jaisalmer and Barmer districts are **deserts** with **average rainfall 164 mm and 277 mm** respectively (State - 575 mm. High inter-annual variability and extreme aridity increase the demand for water.
- Extremely hot during summer (51°C). Drops to 0°C in winters.
- People store rainwater in **underground cemented tanks**. Some rely on old Wells with water table around **125 to 150 feet** deep.
- During droughts, people bring/buy water from nearby cities at a heavy cost through commercial tankers. Sometimes government send water tankers in far-flung areas.

Drought Frequency

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Biodiversity in Landscape

- Original ecosystems suitably **adapted to the harsh climate**. Vegetation comprises of thorny bushes/cactuses. Animals have to move from one place to another in search of fodder and water.
- Plants such *Acacia nilotica* (Babul), *Acacia senegal* (Kumta), *Azadirachta indica* (Neem), *Capporis aphylla* (Jal or Karer Karira), *Commiphora mukul* (Guggul), *Salvadora persica* (Khari Jhal), *Zizyphus mauritiana* (Ber), *Tecomella undulata* (Rohida), etc. dominate the flora.
- Sheep, cow, goat, camel, chinkara, wild boar and jackals dominate mammalian livestock/fauna. Birds like bustards, peacock, parrot, vultures, eagles, larks, etc.
- **DNP** established to conserve Desert Fauna and Flora, particularly GIB.

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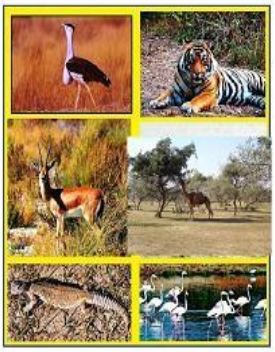
Biodiversity in Landscape

- Most of the undisturbed areas covered by **Sewan** (*Lasiurus scindicus*) - one of the finest fodder grasses.
- Spiny-tailed lizard, Jaisalmer Toad Agama, Desert Fox, Desert Cat, *Ephedra ciliata, Zizyphus truncata* - **Some Endemic spp.**
- ***Orans*** - traditional forest resources are repositories of biodiversity - source of food, medicines, and water.
- **Major ecosystems changes**: grasslands degradation, neglect of water bodies; exploitation of groundwater, urbanization and agricultural modernization.
- **IGNP** and **tube wells, mechanization** and extensive **cultivation**, too drastically affected the biodiversity.



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Agrobiodiversity in Landscape

- The villagers cultivate bajra, guar, wheat, cumin etc.
- About one fourth of the plant species in landscape are used as food, fodder, medicine, etc.
- **Local varieties** of crops: Wheat (*Triticum aestivum*): *Kharchiya* - Salt Tolerance and *Kathia* - Terminal heat tolerance: Pearl millet (*Pennisatum glaucum*): *Sulkhania* and *Jakhrana*- Long panicle, quality fodder; and *Chadi* - drought tolerance. Wild mustard: Tolerant to Powdery mildew and drought.
- **Khejri**: Multi-purpose tree

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Threats to the Landscape

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QUESTIONS TO PARTICIPANTS

Can you identify some of the threats being faced by the Desert Landscape?

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Threats and Drivers of Natural Resources Degradation in Landscape

- **Erosion of Traditional NRM Systems**
- **Open grazing** resulting in degradation of grassland habitat.
- **Unsustainable Livestock Population**: Livestock load greater than the bearing capacity of the ecosystem
- **Declining Health of Livestock:** Mixed breeds of poor / lower quality pedigree cattle, poorly fed, some of them affected by "botulism".
- **Feral Cattle:** degenerating breed, competing with livestock
- **Invasive Alien Species** (e.g. *Prosopis juliflora, Acacia tortilis*)

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Threats and Drivers of Natural Resources Degradation in Landscape

- **Poaching and Human Wildlife Conflict**
- **Agriculture:** Replacement of traditional crops with cultivation of cash crops like Guar threatening unique ecosystem and causing decline of soil fertility.
- **Loss of Agrobiodiversity:** Loss of traditional varieties and knowledge of cultivation due to shift towards marketable and hybrid varieties.
- **Agriculture inside DNP**
- **Lack of Alternate Sources of Livelihood**

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QUESTIONS TO PARTICIPANTS

Can you identify some of the conservation measures to deter natural resource degradation in the Desert Landscape?

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Soil and Water Conservation Measures in Landscape

- Several kinds of **rainwater harvesting systems** - *bawari, jhalara, talab, nadi, tanka, khadin, etc.* Some of these systems neglected, but attracting growing attention.
- **Modern technologies** (e.g. anicut, percolation tank, pond with infiltration wells, etc.) have recently been developed to rejuvenate depleted freshwater aquifers.

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Khadin

- Since 15th century, people around Jaisalmer practice **runoff farming**, known as khadin cultivation. Rainwater harvested in the lower reaches during kharif is used for rabi crops cultivation.
- **Embankment** built across the drainage line that **collects rainfall and sediments.** Sluices and spillways to drain away excess water.
- **Crop productivity** of khadin cultivation **remains low** due to edapho-climatic constraints including nutrients deficiency, salt encrustation, sodicity and water logging.

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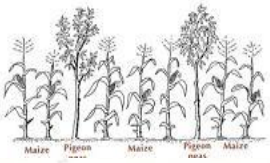
Soil and Water Conservation Measures in Landscape

- **Agroforestry** – need intensification of traditional systems with suitable tree & herbaceous components.
- **In-situ Water Harvesting and Moisture Conservation:** Low-cost, location-specific technologies e.g. *Contour furrowing, Contour bunding, Contour vegetative barriers (CVB)* of grass and shrub.
- **Utilisation of N-fixers** - Legumes in combinations e.g. catch crop, intercrop and fallow crop improves soil health management through **symbiotic** association with Rhizobium.

Mulching

Khejri Agroforestry

Leguminous Plants – N fixers



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Biodiversity Conservation Measures in Landscape

- Rural communities such as ***Bishnois***, been conserving the flora and fauna to the extent of sacrificing their lives.
- Adoption of **Joint Forest Management** Programme involving local people in planning, implementation and monitoring of forest management
- **Afforestation** and plantation of fruit bearing trees.
- **Conservation of *Orans*** and other commons, play very important role in conservation of wildlife in general.

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Biodiversity Conservation Measures in Landscape

Strategies:-

- **In situ:** Habitat conservation (PAs), CCAs, Biodiversity Heritage Sites: e.g. Akal wood fossil Park, Jaisalmer, etc.
- **Ex situ:** in vitro cultures, botanical gardens, gene banks, etc.
- Biodiversity **awareness** and **education** programmes
- Raising of plants for conservation of **threatened** species
- **Synergies** with other initiatives e.g. Rajasthan Forestry and Biodiversity Project

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QUESTIONS TO PARTICIPANTS

Keeping in view of the alarming scenario of depleting natural resources, how can we manage the resources sustainably at the community level in the Desert landscape?

Community Based Natural Resource Management

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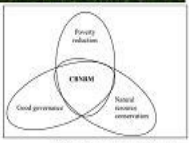
People centric approach for integration of conservation of natural resource base (land, water, soil and local biodiversity) and development to overcome poverty, hunger and disease.

Some Key Elements of the Approach: Public participation, mobilization, Collaborative partnerships, equity, communication, research and information development, devolution and empowerment, public trust and legitimacy, monitoring, feedback, accountability, adaptive leadership and co-management, Conflict resolution



Proposed Project Interventions on Community Based Natural Resource Management in Desert Landscape

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- Participatory **assessment of existing natural resources** in the landscape and **drivers of degradation**
- Support **Community Based NRM plan** development and implementation
- **Grassland Management Plans**
- **Develop value chains** based on selected crops and medicinal plants to enhance farmers' income
- Identification of **high priority areas** needing urgent action
- **Protect critical habitats** for globally important biodiversity
- **Address Human-Wildlife Conflict** (HWC)

Existing Schemes/ Programmes in Rajasthan for Convergence with the Project Activities

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Schemes /Programmes/Authorities	Objectives
Integrated Watershed Management Programme (IWMP)	Restore ecological balance by harnessing, conserving and developing degraded natural resources such as soil, vegetative cover and water
Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)	Works taken up under NRM include check dam, ponds, renovation of traditional water bodies, land development, embankment, field bunds, field channels, plantations, contour trenches etc.
Pradhan Mantri Krishi Sinchai Yojana (PMKSY)	• Formulated with the vision of extending the coverage of irrigation 'Har Khet ko pani' and improving water use efficiency 'More crop per drop' in a focused manner with end to end solution on source creation, distribution, management, field application and extension activities • Enhance recharge of aquifers and introduce sustainable water conservation practices
Sub-Mission on Agroforestry (SMAF)	To encourage and expand tree plantation in complementary and integrated manner with crops and livestock to improve productivity, employment opportunities, income generation and livelihoods of rural households, especially the small farmers.
Paramparagat Krishi Vikas Yojna (PKVY)	• Sub-component of Soil Health Management(SHM) scheme - aims at development of sustainable models of organic farming through a mix of traditional wisdom and modern science to ensure long term soil fertility buildup, resource conservation and helps in climate change adaptation and mitigation. • aims to increase soil fertility and thereby helps in production of healthy food through organic practices without the use of agro-chemicals.

Existing Schemes/ Programmes in Rajasthan for Convergence with the Project Activities

Green-Ag Project
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Schemes /Programmes/Authorities	Objectives
National Horticulture Mission	• To provide holistic growth of the horticulture sector through an area based regionally differentiated strategies which include research, technology promotion, extension, post harvest management, processing and marketing, in consonance with comparative advantage of each State/region and its diverse agro-climatic feature;
National Bamboo Mission	• To address issues relating to the development of the bamboo industry in the country, provide a new impetus and direction and enable the realization of India's considerable potential ir bamboo production. • Multi-disciplinary and multi-dimensional in its approach, major interventions planned under it were to focus on research and development, plantation on forest and non-forest lands through Joint Forest Management Committees (JFMCs) or Village Development Committee (VDCs) and to ensure the supply of quality planting materials by establishing centralized and kisan/mahila nurseries.
Rashtriya Krishi Vikas Yojana (RKVY)	• Umbrella scheme for ensuring holistic development of agriculture and allied sectors by allowing states to choose their own agriculture and allied sector development activities as per the district/state agriculture plan. • States have been provided flexibility and autonomy for selection, planning approval and execution of projects/programs under the scheme as per their need, priorities and agro-climate requirements.
Project Tiger	Aims at ensuring a viable population of Bengal tigers in their natural habitats, protecting them from extinction, and preserving areas of biological importance as a natural heritage forever represented as close as possible the diversity of ecosystems across the distribution of tigers in the country.

Existing Schemes/ Programmes in Rajasthan for Convergence with the Project Interventions

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Schemes/Programmes/Authorities	Objectives
National Afforestation Programme	• Ecological restoration of degraded forests and to develop the forest resources with peoples' participation, with focus on improvement in livelihoods of the forest-fringe communities, especially the poor. • Aims to support and accelerate the on-going process of devolving forest conservation, protection, management and development functions to the Joint Forest Management Committees (JFMCs) at the village level, which are registered societies. The scheme is implemented by three tier institutional setup through the State Forest Development Agency (SFDA) at the state level, Forest Development Agency (FDA) at the forest division level and JFMCs at village level
Compensatory Afforestation Fund (CAF)	To promote afforestation and regeneration activities as a way of compensating for forest land diverted to non-forest uses.

CURRENT CO-FINANCE SCHEMES IN LANDSCAPE

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Schemes/ Programmes	Department/ Ministry	Jaisalmer district (INR in Crores)	Barmer district (INR in Crores)	Total for districts (INR in Crores)
Soil Health Card	Department of Agriculture Cooperation and Farmers Welfare, Ministry of Agriculture and Farmers Welfare (MoA&FW)	1.87	4.31	6.18
Gypsum distribution	Department of Agriculture Cooperation and Farmers Welfare, MoA&FW	0.65	1.51	2.16
National Mision on Oil Seeds and Oil Palm (NMOOP)	Department of Agriculture Cooperation and Farmers Welfare, MoA&FW	13.98	6.22	20.20
Ag Implement	Department of Agriculture Cooperation and Farmers Welfare, MoA&FW	5.94	14.09	20.03

CURRENT CO-FINANCE SCHEMES IN LANDSCAPE

Green-Ag Project
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Schemes/ Programmes	Department/ Ministry	Jaisalmer district (INR in Crores)	Barmer district (INR in Crores)	Total for districts (INR in Crores)
National Food Security Mission (NFSM)	Department of Agriculture Cooperation and Farmers Welfare, MoA&FW	94.67	46.10	140.77
Rastriya Krishi Vikas Yojana (RKVY)	Department of Agriculture Cooperation and Farmers Welfare, MoA&FW	5.61	2.99	8.60
Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) – (MIF/ Watershed)	Department of Agriculture Cooperation and Farmers Welfare, MoA&FW	257.81	370.51	628.32

CURRENT CO-FINANCE SCHEMES IN LANDSCAPE

Green-Ag Project
State Project Inception Workshop

Schemes/ Programmes	Department/ Ministry	Jaisalmer district (INR in Crores)	Barmer district (INR in Crores)	Total for districts (INR in Crores)
National Mission on Sustainable Agriculture (NMSA) - RAD	Department of Agriculture Cooperation and Farmers Welfare, MoA&FW	1.50	1.50	3.00
PKVY	Department of Agriculture Cooperation and Farmers Welfare, MoA&FW	3.00	3.00	6.00
SMSP – Seed Village	Department of Agriculture Cooperation and Farmers Welfare, MoA&FW	5.69	3.13	8.82
National Horticulture Mission	Department of Agriculture Cooperation and Farmers Welfare, MoA&FW	12.85	15.75	28.60
National Medicinal Mission	Min. of Medical Science	2.60	1.40	4.00

CURRENT CO-FINANCE SCHEMES IN LANDSCAPE

Schemes/ Programmes	Department/ Ministry	Jaisalmer district (INR in Crores)	Barmer district (INR in Crores)	Total for districts (INR in Crores)
JLN National Solar Energy Mission	Renewable Energy, Min. of Energy	230.35	107.50	337.85
Livestock and Poultry Insurance Scheme	Department of Animal Husbandry, Dairies and Fisheries	0.77	2.01	2.78
FMD-CP	Department of Animal Husbandry, Dairies and Fisheries	2.84	7.39	10.23
Integrated Development of Wildlife Habitats (IDWH)	Ministry of Environment, Forest and Climate Change	15.22	15.22	30.44

Community Based NRM within Green-Ag project context

Outcome	Output	Activities
2.2 Households and communities able and incentivized to engage in agro-ecological practices that deliver meaningful GEB at the landscape level in target high conservation priority landscapes	**2.2.4** **Community based *natural resources management*** plans designed and implemented in target Green Landscapes (including community grassland/ ravines/ forests/ watershed management)	**2.2.4.1** Green Landscapes management plan implementation support Identifying potential intervention Developing convergence plan Identifying funding gap Implementation through Green-Ag

Targets for Rajasthan

Green Landscape Plans – 6
Green Value Chains (established/strengthened) – 4
Grassland Management Plans inside DNP – 31
Grassland Management Plans outside DNP – 40

Annexure-IX:

Sustainable Agriculture & Agroecology

State Inception Workshop- Rajasthan

Green-Ag: Transforming Indian Agriculture for Global Environmental Benefits and the Conservation of Critical Biodiversity and Forest Landscapes

Flow of Presentation

Green-Ag Project

- Indian Agriculture – *At a glance*
- Rajasthan Agriculture – *Salient features*
- Sustainable Agriculture in Green-Ag project
- Proposed Interventions in Sustainable Agriculture
- Different Schemes & programmes related to Agriculture, in Rajasthan
- Green-Ag Results Framework related to Sustainable Agriculture
- Co-finance commitments

Indian Agriculture- *At a glance*

Green-Ag Project

- **Net Sown area** is 139.5 million ha; 42.4% of total geographical area
- **Gross Cropped Area** 200.2 million ha;
- **Cropping intensity** 143.6%

- **Net Irrigated area** 68.60 million ha;
- **Area under rainfed conditions** 72.20 million ha

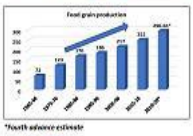
Source: Saha et.al. 2017

- **Agriculture** engages **54.6%** of total workforce
- Agriculture accounts for **17.8%** of the country's Gross Value Added (GVA) for the year 2019-20 (at current prices).

Source: Agriculture Census, Census of India

Indian Agriculture- *At a glance*

Green-Ag Project



*Fourth advance estimate

Food grain production has increased from **72.03 million tonnes** in the year 1965-66 to **296.65 million tonnes** in the year 2019-20

Horticulture production has increased from **212.9 million tonnes (2001-02)** to **311 million tonnes (2018-19)**

Globally, country ranks **first** in **pulse** production and **second** in **wheat** and **rice**

Source: Agricultural Statistics At A Glance 2020

Rajasthan Agriculture – *Salient features*

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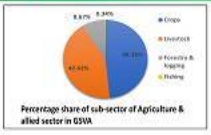
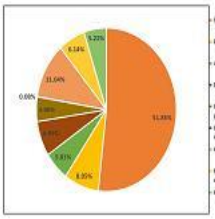


Percentage share of sub-sector of Agriculture & allied sector in GSVA

- Agriculture and allied sector contributed to **29.77%** in Rajasthan's Gross State Value Added (GSVA), with a growth rate of **3.45%** over 2019-20.

Land Use Statistics

- Total area of the State is **342.87** lakh hectare.



Land Use	Area (lakh hectare)
Net sown area	177.78
Culturable waste land	37.84
Forest	27.6
Barren & Unculturable land	23.83
Fallow lands other than current fallow	21.06
Area under non agriculture use	19.93
Current fallow	17.89
Permanent pastures & other grazing lands	16.68
Land under miscellaneous tree crops and groves	0.26

Source: Economic Review 2020-21

Rajasthan Agriculture – *Salient features*

Green-Ag Project

Operational land holding

Operational land holdings	Change	Figures
Total Area under land holdings	Decrease	211.36 lakh ha (2010-11) to 208.73 lakh ha (2015-16)
Area under marginal land holdings	Increase	19.79% (2010-11 & 2015-16)
Area under small land holdings	Increase	10.50% (2010-11 & 2015-16)
Area under small-medium land holdings	Increase	5.67% (2010-11 & 2015-16)
Area under female land holdings	Increase	13.30 lakh ha (2010-11) to 16.55 lakh ha (2015-16)

Source: Economic Review 2020-21

Rajasthan Agriculture – *Salient features*

Agriculture production

Crop	Percentage increase in 2019-20 (compared to average productivity of 1997-98 to 2001-02)
Cereals	89.66%
Pulses	50.21%
Oilseeds	44.80%
Cotton	85.76%

Rajasthan Agriculture – *Salient features*

Green-Ag Project

Horticulture Production

Year	Fruits (kg per hectare)	Vegetables (kg per hectare)	Spices (kg per hectare)
2002-03 to 2006-07 (Average)	12,144	5,257	917
2019-20	16,011	10,534	1083

Source: Rajasthan Agriculture Statistics at a glance_2018-19

Irrigation

- An area of **1,40,373.5 hectare** under **drip** irrigation and **1,94,626.3 hectare** under **sprinkler** has been covered up from 2015-16 to 2020-21 under Pradhan Mantri Krishi Sinchayee Yojana- Per Drop More Crop (PMKSY-PDMC).

Source: https://pmksy.gov.in/mis/rpt6chievement.aspx

- Net irrigated area (2017-18) 79,84,937 ha

Source: Rajasthan Agriculture Statistics at a glance_2018-19

District Agriculture profile- *Jaisalmer & Barmer*

Green-Ag Project

	Jaisalmer	Barmer
Cropped Area		
Net area	8,40,042 ha	16,74,379 ha
Gross cropped area	11,20,724 ha	19,09,391 ha
Cropping Intensity	133%	114%
Irrigated area		
Net irrigated area	1,31,292 ha	2,58,876 ha
Gross irrigated area	4,07,664 ha	3,87,844 ha

Source: Rajasthan Agriculture Statistics at a glance_2018-19

District Agriculture profile- *Jaisalmer & Barmer*

Green-Ag Project

Major crops- Kharif

Kharif Crops	Jaisalmer	Barmer
Bajra (Pearl millet)	✓	✓
Moth	✓	✓
Til (Sesame)	✓	✓
Ground nut	✓	✓
Guar (cluster bean)	✓	✓
Moong (Green gram)	✓	✓
Castor	✓	-
Jowar (Sorghum)	-	✓

District Agriculture profile- *Jaisalmer & Barmer*

Green-Ag Project

Major crops- Rabi

Rabi Crops	Jaisalmer	Barmer
Wheat	✓	✓
Barley	✓	✓
Jeera (Cumin)	✓	✓
Mustard	✓	✓
Gram	✓	✓
Taramira	✓	✓
Isabgol	✓	✓

Challenges of Agriculture in Rajasthan

Green-Ag Project

Challenges

- Land degradation
- Low soil organic carbon content
- Erratic rainfall and extreme temperature
- Drought
- Over exploitation of ground water

Sustainable Agriculture and Green-Ag

Green-Ag Project

Current Challenges

- *Loss of **agrobiodiversity***
- *Negative impact on **land and water***
- *Degradation of **forest, natural ecosystem** and **wild species***
- *Increased **Greenhouse gas emission***
- *Vulnerable rural **livelihoods***

Proposed Action

Sustainable Agriculture

Strengthened policy and institutional framework for mainstreaming BD, SLM, SFM

Expected Impact

- ***Enhanced** Global Environment Benefits*
- ***Improved** Biodiversity*
- ***Reduced** green house gas emission from agricultural operations*
- ***Sustained** Livelihoods & income*
- ***Increased** resilience*

What is Agroecology?

Green-Ag Project

- An **integrated** approach that simultaneously applies **ecological** and **social** concepts and principles to the **design** and **management of food** and **agricultural systems**.

Annexure-X:

Green-Ag: Transforming Indian Agriculture for Global Environmental Benefits and the Conservation of Critical Biodiversity and Forest Landscapes-

Livestock Approaches

Contents

Rajasthan Livestock Scenario

Green-Ag Project

Details	Population (2012) (in million)	Population (2019) (in million)	% change in population
Cattle	13324462	13937630	4.60
Buffalo	12976095	13693316	5.53
Sheep	9079702	7903857	-12.95
Goat	21665939	20840203	-3.81
Poultry	8024424	14622975	82.23
Camel	325713	212739	-34.69

Rajasthan Livestock Scenario

Green-Ag Project

S No.	District	Cattle			Buffalo	Sheep			Goat
		Exotic 2019	Indigenous 2019	Total 2019	2019	Exotic 2019	Indigenous 2019	Total	2019
1	Barmer	1560	903639	905199	222727	221	1013198	1013419	2946662
2	Jaisalmer	18154	388894	407048	4638	1345	835647	836992	1104272

Cattle Breeds of Rajasthan

Green-Ag Project

S.NO	Name	Districts
1	Tharparkar	Barmer,Jaisalmer, Jodhpur
2	Sahiwal	Sri Ganganagar
3	Rathi	Bikaner, Sri Ganganagar, Hanumangarh
4	Nagori	Nagour, Bikaner and Jodhpur
5	Kankarej	Barmer and Jodhpur
6	Malvi	Jhalawar

Goat Breeds of Rajasthan

Green-Ag Project

S.NO	Name	Districts
1	Sirohi	Ajmer, Bhilwara, Tonk, Jaipur
2	Marwai	Barmer, Jodhpur, Jaisalmer, Bikaner, Nagaur, Jalore
3	Jakhrana	Jakhrana and Alwar district

Sheep Breeds of Rajasthan

Green-Ag Project

S.NO	Name	Districts
1	Chokla	Sikar, Churu, Jhunjhunu, Nagur (Part)
2	Magra	Jaisalmer, Bikaner,
3	Nali	Sriganganagar, Hanumangarh
4	Pugal	Bikaner
5	Marwari	Jodhpur, Pali, Nagaur
6	Malpura	Tonk, Jaipur
7	Sonadi	Udaipur
8	Jaisalmeri	Jaisalmer, Barmer

Camel Breeds of Rajasthan

Green-Ag Project

S.NO	Name	Districts
1	Bikaneri	Bikaner, Ganganagar, Churu & Hanumangarh
2	Jodhpuri	Jodhpuri and Nagaur
3	Nachna	Jaisalmer
4	Jaisalmeri	Barmer, Jaisalmeri, Jodhpur
5	Kutchi	Barmer and Jalore
6	Jalori	Jalore & Sirohi
7	Gomat	Jodhpur & Nagaur
8	Gurha	Nagaur, Chura

Estimated Livestock Production in Rajasthan

Green-Ag Project

Year (2017-18)	Milk Production (000 Tonnes)	Eggs Production (Million No.)	Wool Production (Lac.kg.)	Meat Production (000 Tonnes)
	22427	1454.79	142.87	188.49

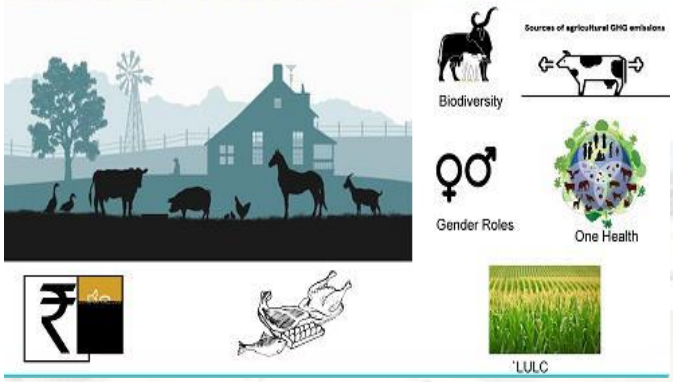
Fisheries in Rajasthan

Green-Ag Project

- Four major river basins viz. Chambal river basins, Mahi river basin, Luni river basin and Ghaghghar river basi in Rajasthan
- Fish production was 28200 tons in 2010-11 from the average 35% of the total water area (FTL) utilized for fish culture with average productivity of 203 kg/ha. I
- It has grown at the annual rate of 12.2% during last 8 years, above the national average 8%.

Role of livestock sector

Green-Ag Project



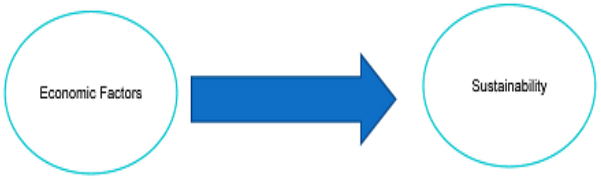
Role of Livestock Sector

Green-Ag Project

Economic factors	• Farm incomes • Livelihoods • Value chains
Environmental Factors	• Traditional breeds improvement, promotion through value chain, Sustainable livestock management • Disease management, monitoring and reporting • Land use and land conversions
Social factors	• Gender roles • Household nutrition • Resource ownership and access • Support institutions

Economic Factors

Green-Ag Project



Environmental Factors

Green-Ag Project


Species Diversity – Integrated farming


Breed Diversity – Traditional breeds

Environmental Factors

Green-Ag Project

Social Factors

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Challenges in the Livestock Sector

Green-Ag Project

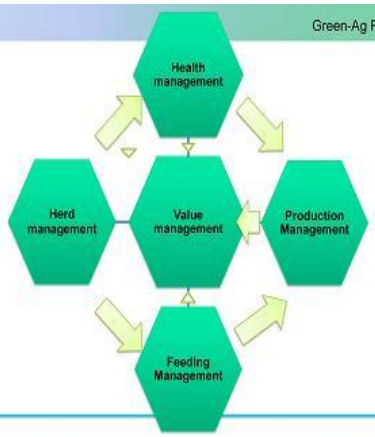
- **Free Grazing** - Open grazing resulting in degradation of grassland habitat
- **Unsustainable Livestock Population** – Livestock load greater than the bearing capacity of the ecosystem
- **Declining Health of Livestock** - Mixed breeds of poor / lower quality pedigree cattle, poorly fed, and some of them affected by "botulism".
- **Feral Cattle** - Stray bulls degenerating the breed, and competing with other livestock population for fodder, water
- **Stray dogs** – big menace within DNP for small wild animals in general and GIBs eggs in particular

Green-Ag Project

Livestock intervention architecture

5 components of the framework (HHFPV)

1. **Herd Management**
2. **Health Management**
3. **Feeding Management**
4. **Production Management**
5. **Value Management**



Result Framework and targets

Outcome:

2.2: Capacity-building program established with local communities engaging in agro-ecological production and conservation learning

Number of households implementing improved livestock management – including nutrition and fodder management (e.g community fodder banks) –contributing to conservation of global environmental values.	Madhya Pradesh: 8,000 Mizoram : TBC Odisha: 22,500 Rajasthan 6,000 Uttarakhand 10,000

Green-Ag Project

Output 2.2.1:

Capacities for implementation of FFS on Livestock Management built/ enhanced

- Activity 2.2.1.1: Orientation in FFS on livestock management
- Activity 2.2.1.3: Curriculum development workshops on Livestock Management
- Activity 2.2.1.5: Capacity development on FFS in Livestock Management

Output 2.2.2

Local stakeholders trained in Green Value Chain development and Ecotourism-

- Activity 2.2.2.2: Curriculum development support for Green Value Chains linked to agro-biodiversity

Output 2.2.3

Raise community awareness-raising for wider stakeholder support for in Green Landscape management

- Activity 2.2.3.2: Establishment of Green Landscape Information Platforms
- Activity 2.2.3.3: Capacity development on Green Value Chains

Annexure-XI:

Green-Ag Project

Results Framework

Flow of Presentation

Green-Ag Project
State Project Inception Workshop

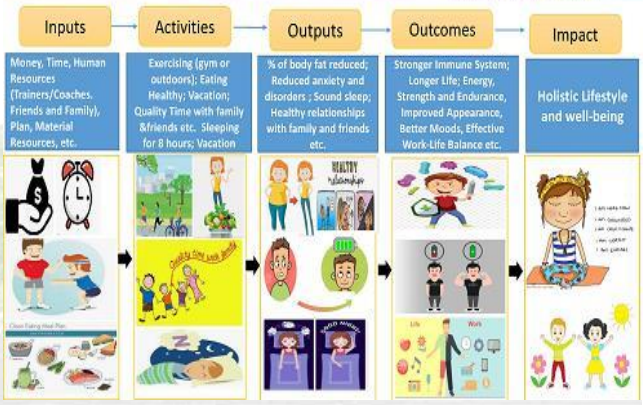
- What are Results?
- What is a Results Chain?
- What is a Results Framework?
- Results Framework and M&E
- Green-Ag Results Framework
- Interconnectedness between components in the project
- Decoding Results Framework
- Green-Ag Outcome & Outputs indicators
- Developing indicators for specific activities

What are Results- A Real-Life Illustration

Green-Ag Project
State Project Inception Workshop

Results Chain – A Real-Life Illustration

Green-Ag Project
State Project Inception Workshop



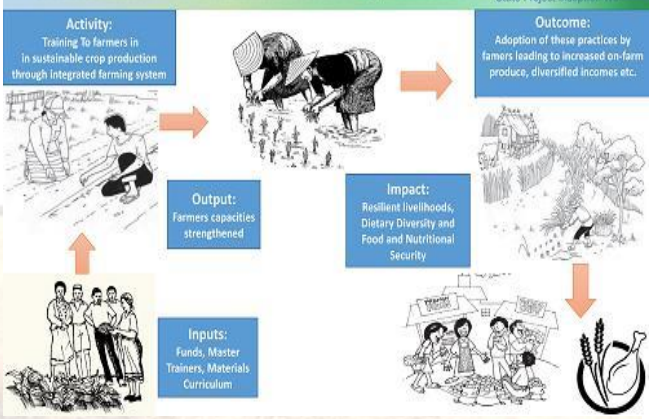
Results Chain

Green-Ag Project
State Project Inception Workshop

- Linear flow diagram that links activities to outputs, outcomes and impacts
- Depicts a logical relationship of
  - inputs leading to activities,
  - that produce outputs,
  - which result in a medium-term change (or outcomes), and
  - subsequently result in a long-term change (impact).

Results Chain – An Illustration of a Project Intervention

Green-Ag Project
State Project Inception Workshop



What is a Results Framework

Green-Ag Project
State Project Inception Workshop

- Organizes the expected results of a project into a series of **"if-then" relationships**
- Shows what the project wants to achieve and how it wants to achieve its overall objective.
- Serves both as **planning and management tool**
- Provides the basis for **monitoring & evaluation**

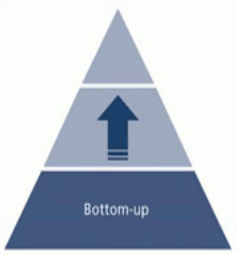
IF {THAT}
THEN {THIS}

Results Framework Matrix

Green-Ag Project
State Project Inception Workshop

Green-Ag Project
State Project Inception Workshop

Green-Ag's Approach



Policy Level

Grassroots Level

Project's Objective: Progressive Transformation in Agriculture Sector

Component 1: Strengthening Enabling Framework

Component 2: Improved agricultural and conservation practices

Outcome 2.2: Households and communities able and incentivized to engage in agroecological practices

Green-Ag Project
State Project Inception Workshop

Development of Community-Based Landscape Management Plans

Farmers trained on sustainable agriculture and livestock management practices

Adoption of sustainable farming practices and strengthening linkages to markets

Outcome 2.1: Institutional frameworks, mechanisms and capacities at District and Village levels in Landscape Planning and Management

Green-Ag Project
State Project Inception Workshop

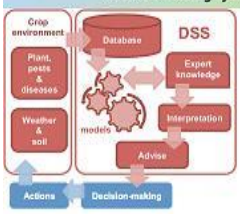
District and sub-district level officials trained on Landscape Approaches and Governance

Inter-sectoral mechanisms established at district and sub-district levels – TSG, GPSU/VCSU, VIC

District level "convergence plan" that align government programmes and investments with Green Landscape management objectives

Outcome 1.2: Cross-sectoral knowledge management and decision-making systems at national and state levels

Green-Ag Project
State Project Inception Workshop



SDSS for landscape planning, implementation and monitoring

Comprehensive monitoring through MIS to track physical and financial progress of the project

- Capturing 'best practices' of activities carried out under 2.2
- facilitate knowledge sharing
- mainstream and replicate of lessons learned

Outcome 1.1 : National and state level institutional, policy and programme frameworks strengthened

Green-Ag Project
State Project Inception Workshop

Informed Decision Making by Policy Makers for mainstreaming environmental concerns into agriculture sector

Evidences – Best-practices, lessons learnt through landscape approaches presented before NPMC and NPSC

Policy Dialogues on priority issues through policy briefs/advocacy materials

Decoding Green-Ag Results Framework

Green-Ag Project
State Project Inception Workshop

1.1 stands for Component 1, Outcome 1

1.1-I1 stands for Component 1, Indicator 1 of (Outcome 1)

1.1.1 stands for Component 1, Outcome 1, Output 1

1.1.1-I1 stands for Component 1, Outcome 1, Output 1, Indicator 1 (of Output 1)

Component 1: Strengthen enabling framework and institutional structures to mainstream GEBs (policies, priorities and practices) into India's agricultural sector

CODE	OUTCOMES / RESULTS INDICATORS	TARGET
1.1	National and state-level institutional, policy and programme frameworks strengthened to integrate environmental priorities and resilience into the agriculture sector to enhance delivery of GEBs across landscapes of highest conservation concern	
1.1-I1	Number of new policy recommendations (similar new policies in different states will be counted separately) to strengthen agro-ecological approaches in agriculture and allied sectors	12 (at least 2/State & 2 National)
1.1-I2	Number of State plans to continue Green Landscape approach with committed financing in five landscapes and expand beyond project-targeted landscapes	5 state plans
1.1.1	National and state-level inter-sectoral coordinating committees established and institutionalized to facilitate cross-sectoral support to mainstream environmental priorities in the agriculture sector	
1.1.1-I1	Number of National and state-level inter-sectoral coordinating committees established	6 (1 National, 5 State-level)
1.1.1-I2	Number of National and state-level inter-sectoral coordinating committees institutionalized	6 (1 National, 5 State-level)

Decoding Green-Ag Results Framework

Green-Ag Project
State Project Inception Workshop

1.1.1 stands for Component 1, Outcome 1, Output 1

1.1.1-I1 stands for Component 1, Outcome 1, Output 1, Indicator 1 (of Output 1)

1.1.1.1 stands for Component 1, Outcome 1, Output 1, Activity 1

1.1.1.1 –I1 stands for Component 1, Outcome 1, Output 1, Activity 1, Indicator 1 (of Activity 1)

CODE	OUTCOMES / OUTPUTS/RESULTS INDICATORS	TARGET
1.1.1	National and state-level inter-sectoral coordinating committees established and institutionalized to facilitate cross-sectoral support to mainstream environmental priorities in the agriculture sector	
1.1.1-I1	Number of National and state-level inter-sectoral coordinating committees established	6 (1 Natl, 5 State)
1.1.1-I2	Number of National and state-level inter-sectoral coordinating committees institutionalized	6 (1 Natl, 5 State)
1.1.1.1	National Project Monitoring Committee Meetings (NPMC) Meetings	
1.1.1.1-I1	Number of NPMC meetings conducted	28 (Qrly)

Activity

Green-Ag Project

Identify the outcome, output, activity and indicators for all these elements in the below table

2.1	Institutional frameworks, mechanisms and capacities at District and Village levels to support Green Landscape Management Plans development and implementation for target landscapes.
2.1-I1	Number of Green Landscape management plans promoting agro-ecological approaches, within the landscape endorsed(developed) and under implementation by stakeholders.
2.1.5	District level "convergence plans' align Govt. programmes and investments with Green Landscape management objectives, which incentivize agro-ecological approaches
2.1.5-I1	Number of convergence plans developed (8 districts)
2.1.5.1	Convergence and Planning Workshops with TSG (aligned with 2.1.2.3)
2.1.5.1-I1	Number of Convergence and Planning Workshops with TSG
2.1.5.1-I2	Number of line departments represented in each Convergence and Planning Workshops

Key Results to be achieved in Rajasthan

Green-Ag Project

CODE	OUTCOME/ OUTPUT/ ACTIVITY/ RESULTS INDICATORS	RAJASTHAN TARGETS
1.1	National and Sate-level institutional, policy and programme frameworks strengthened	
1.1-I1	Number of new policy recommendations to strengthen agro-ecological approach in agriculture and allied sectors at national and State-levels.	12 (at least 2/State & 2 National)
1.1-I2	Number of State plans to continue Green Landscape approach at five landscapes and expand beyond project-targeted landscapes	1 plan
1.1.4.2	National / state agricultural programmes fully incorporate measurable indicators to conserve and mainstream critical agrobiodiversity through their programmes and forest landscapes (e.g., NMSA) National programmes instead of national policies	1 programme
1.1.4.11	Inclusion of Green Landscape in State's Development plan/ Vision Doc (MP, Od, Uk, Mz, & Rj)	1 plan

Key Results to be achieved in Green-Ag project

Green-Ag Project

CODE	OUTCOME/ OUTPUT/ ACTIVITY/ RESULTS INDICATORS	RAJASTHAN TARGETS
1.2: Cross-sectoral knowledge management and decision-making systems enhanced		
1.2-I1	Number of Protected Areas (PAs) with landscape level threat reduction monitoring protocols and indicators (such as hunting, encroachment, carrying capacity, grassland index) integrated into PA management.	1 Desert National Park
2.1: Institutional frameworks, mechanisms and capacities at District and Village levels strengthened		
2.1-I1	Number of Green Landscape management plans with clear environmental targets and sustainable livelihoods under implementation by stakeholders.	RJ - 1 plan
2.1-I2	Number of district level agencies (line departments) using Green Landscape plans to realign multi-sectoral investments in project areas.	10 (at least 5 Depts. each in Jaisalmer and Barmer districts)

Key Results to be achieved in Green-Ag project

Green-Ag Project

CODE	OUTCOME/ OUTPUT/ ACTIVITY/ RESULTS INDICATORS	RAJASTHAN TARGETS
2.2: Households and communities able and incentivised to engage in agroecological practices		
2.2-I1	Number of households that have adopted sustainable agriculture practices on their farms, including agrobiodiversity conservation measures	RJ- 3,162 households
2.2- I2	Number of households involved in community natural resources management plans development and implementation	Grassland management plans in RJ (31 plans inside DNP and 40 plans outside DNP)
2.2 – I5	Number of new value chains and associated business plans developed for landscape products	At least 3 to 4 value chains in the landscape
2.2 – I6	Number of households implementing improved livestock management – including nutrition and fodder management	RJ – 6,000 households
2.2.4.4	Development of Grassland Management Plans inside DNP (Rajasthan) at Gram Panchayat (GP) level	31 plans
2.2.4.5	Grassland Management Plans outside DNP – (Rajasthan) at GP level	40 plans

Key Results to be achieved in Green-Ag project

Green-Ag Project

CODE	OUTCOME/ OUTPUT/ ACTIVITY/ RESULTS INDICATORS	RAJASTHAN TARGETS
2.1.I3	Amount of Government's agriculture sector investment at district levels realigned to support objectives of Green Landscape plans in five landscapes per annum	To be decided at TSG
2.1.2	Key local decision-makers from each target Gram Panchayat trained in Green Landscape governance through Field schools	To be decided after landscape assessment
2.1.3	District level technical and extension staff from different government sectors trained in Green Landscape approaches	At least 20 individuals (10 from Jaisalmer and Barmer)
2.1.4.2	Documentation of local indigenous knowledge (Co-finance)	5 documents (1/landscape)
2.1.5	District level "convergence plans' align Govt. programmes and investments with Green Landscape management objectives, which incentivize agro-ecological approaches	2 convergence plans (1 plan for Jaisalmer and 1 from Barmer)

Annexure-XII:

Green-Ag: GCP/IND/183/GFF

Operation Management : Staff management Procurement, Record Keeping, Monitoring and Reporting

&

Annual Workplan Budget

What is Operations management?

Outlay of my presentation

-Operational Partner Agreement
-Staff management
-Travel management
-Annual Workplan Budget
-Procurement
-Monitoring
-Reporting

Operational Partner Agreement (OPA)

For implementation of project activities, we require a formal agreement to be signed.
So FAO has entered into an Operational Partner Agreement (OPA) with Department of Agriculture, Government of Rajasthan

Staff Management

- Most of the recruitments have been completed under SPMU except for GLIU positions.
- Regarding other HR rules like leaves, office holidays, office timings the Operational Partner may decide based on STATE HR rules/policies
- It is a good practice to collect these information and keep record of the same

Leave approval process	
Leave Register	Attendance register

Travel Management

The Operational Partner may decide the travel rules / norms / entitlements based on State travel rules /norms.
Process could be

- Request for travel
- Approval
- Tour Report/approval
- Travel claim settlement

Record Keeping

- SPMU/GLIU **maintains books and records** that are accurate, complete and up-to-date

Procurements	Recruitments	Trainings
Contracts	Trainings	Others as required

- For procurements and recruitments all documents related to approvals and the process followed to be documented and recorded in their respective files

Procurement (Purchases)

- **There are three types of purchases**

Expendable Procurement : Purchases such as (stationery, printer cartridges and small items etc.) required for office use

Non Expendable Procurement : Purchases such as Hardwares like computers /laptops/laser printers/office furniture etc)

Procurement for services: Procurement for services such as conducting studies, printing of publications etc

Procurement

- OP uses the state government procurement policies/guidelines for the procurement process.
- Document the process followed and keep the quotations/bid document/any other related information in office files for audit inspections.

Procurement

- All Procurements to be carried out as per State Steering Committee (SSC) approved Annual Workplan Budget & Procurement Plan
- OP to review the procurement plan after six months and make additions/changes if required.
- The revised Procurement Plan should be approved by the SSC.

Procurement (Services)

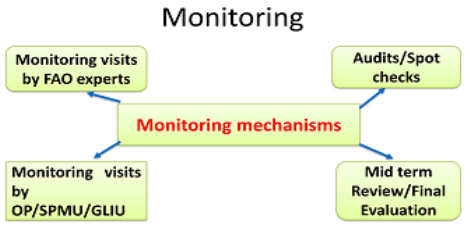
- In the case of procurement for services (contracts), SPMU/GLIU can finalize the ToRs in consultation with the OP, taking NPMU support if required.
- NPMU to provide technical assistance for the procurement of technical agencies, if requested

Annual Workplan Budget

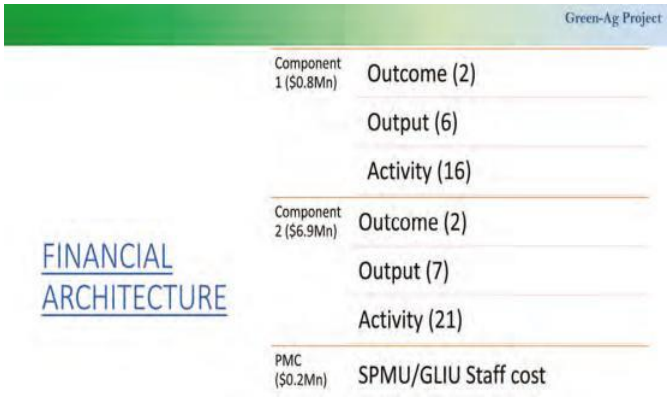
- Annual Workplan Budget approved by SSC and NPMC (first year) : USD 564,778
- Advance payment transferred based on the request for funds submitted by Department of Agriculture : USD 52,000

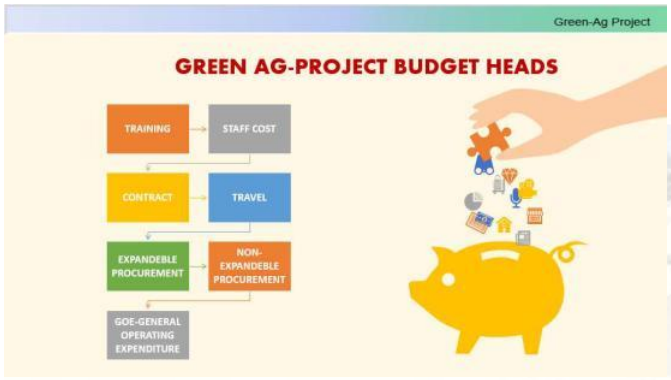
Annual Workplan Budget

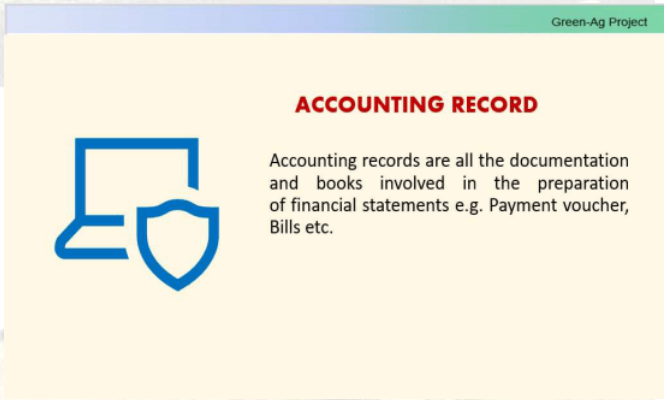
- Expenditure beyond allocated budget – Disallowed
- For any deviation – Needs approval of State Steering Committee (SSC) and National Project Monitoring Committee (NPMC)
- For any emergency situations, consultation with detailed justification with FAO



Annexure-XIII:







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INTERNAL CONTROL

Internal controls are the mechanisms, rules, and procedures implemented by a organization to ensure the integrity of financial and accounting information.

- Program Strategy
- Transaction Process
- Financial Reporting

Green-Ag Project

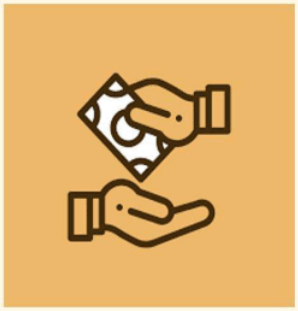
FINANCIAL MONITORING

Financial monitoring of the project concerns comparing the actual costs to the planned costs in the project budget

Green-Ag Project

DISBURSEMENT

- Donor Agency
- FAO
- SPMU
- GLIU



Green-Ag Project

REPORTING

Annexure-XIV:

GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

Ministry of Agriculture & Farmers' Welfare
Ministry of Environment, Forest and Climate Change

Food and Agriculture Organization of the United Nations

MIS

Green-Ag: Transforming Indian Agriculture for Global Environmental Benefits and the Conservation of Critical Biodiversity and Forest Landscapes

What is Management Information System (MIS) ?

Green-Ag Project

MANAGEMENT INFORMATION SYSTEM

Management Information System is a computer-based information system which is basically concerned with processing data into information which is then communicated to the various departments in an organization to support the operations, the management and the decision-making function in the organization.

Why we use MIS ?

Green-Ag Project

- **MIS** plays a very important role in any organization; it creates an impact on the organization's functions, performance and productivity.

A well defined structured of MIS gives us :

- ✓ Right Information
- ✓ At right place
- ✓ In the right form
- ✓ To the right person
- ✓ At right time

Objectives of MIS

Green-Ag Project

MIS has five major objectives which include:

OBJECTIVES OF MIS

1. DATA CAPTURING
2. PROCESSING OF DATA
3. STORAGE OF INFORMATION
4. RETRIEVAL OF INFORMATION
5. DISSEMINATION OF INFORMATION

BENEFITS OF MIS

Green-Ag Project

- Data can easily be accessed and analyzed without time consuming manipulation and processing.
- Decisions can be made more quickly and with confidence that the data are both time-relevant and accurate.
- Integrated information can be also kept in categories that are meaningful to profitable operation.
- Significant cost benefits, time savings, productivity gains and process re-engineering opportunities are associated with the use of data warehouse for information processing.

Green-Ag MIS Web Portal

Green-Ag Project

Green-Ag MIS is a **web-based application** which is being developed at NPMU level.

Green-Ag Web application cover the following activities like:

- Policy Dialogues
- Studies of Landscape assessment
- Procurement Plans
- Capacity developments, Trainings and Orientation programme
- Convergence & Co-financing Plan
- Green Landscape Management strategies and action plan (GLMP)
- Green Landscape Management Field School
- Financial Management Information System (FMIS)

Green-Ag Project

Functional specification of Green-Ag MIS

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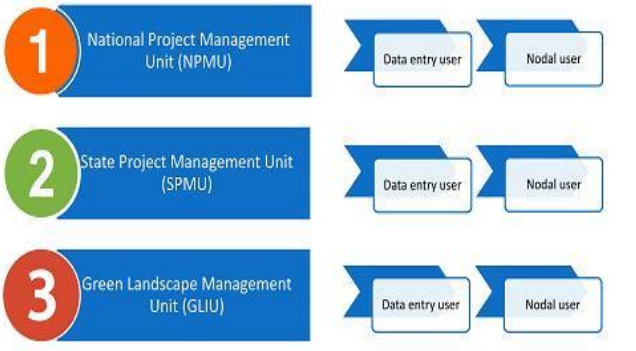
Data Entry Methodology

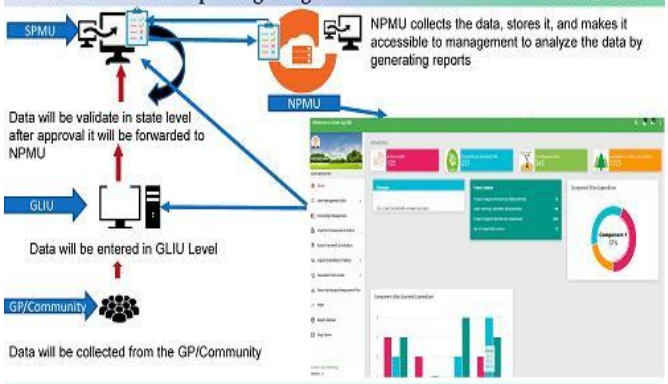
User's Level

Green-Ag Project



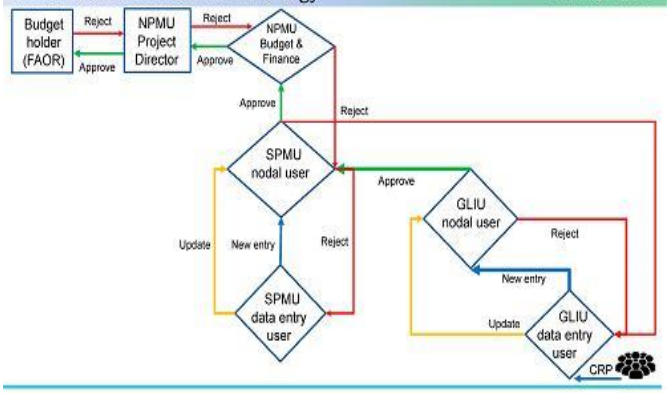
Data Collection & Reporting Diagram

Green-Ag Project



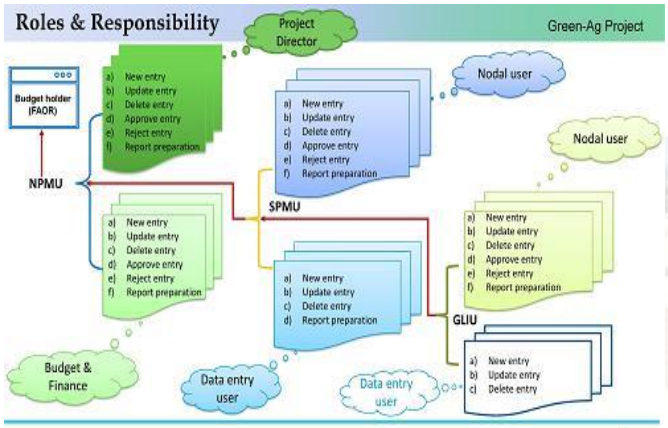
MIS Data Collection Methodology

Green-Ag Project



Roles & Responsibility

Green-Ag Project



Data Entry Time Framework

Green-Ag Project

User level	User level type	New data entry timeline	Data approval timeline	Entry locked	Reject entries
NPMU	Project Director	Upto 10th of every month (day of 1st - 10th)	25th of every month of SPMU/GLIU data		Project Director have the rights to reject any incorrect entries at NPMU, SPMU and GLIU level after reconciliation of data.
	Budget & Finance			New data entry will be auto locked after 11th of every month or After approval from Nodal officer (NPMU Level)	
SPMU	Nodal User	Upto 10th of every month (day of 1st - 10th)	11th -20th of every month	After approval from Nodal officer (NPMU Level) then data locked automatically or New data entry will be auto locked after 11th of every month	SPMU nodal officer have the rights to reject any incorrect entries at SPMU and GLIU level after reconciliation of data.
	Entry User			New data entry will be auto locked after 11th of every month or After approval from Nodal officer (SPMU/NPMU Level)	
GLIU	Nodal User	Upto 10th of every month (day of 1st - 10th)	Upto 10th of every month	After approval from Nodal officer (SPMU Level) then data locked automatically or New data entry will be auto locked after 11th of every month	GLIU nodal officer have the rights to reject any incorrect entries at GLIU level after reconciliation of data.
	Entry User			New data entry will be auto locked after 11th of every month or After approval from Nodal officer (GLIU/SPMU Level)	

Data Entry Forms

Green-Ag Project

- Annual Work Plan Budget (AWPB)
- Request for Fund (RFF) – Six Monthly basis
- Monthly Expenditure / Vouchers
- Inventory forms
- Training / Meetings
- Procurement plans
- Vendors
- Document Management
- Studies
- Policy dialogues

Reports

Green-Ag Project

The MIS report module will be generated various kinds of project reports and used for Monitoring & evaluation.

- Physical & Financial Achievement of Landscape Intervention
- Expenditure of Project administrative components (Request for Fund, Financial)
- Capacity building/training –National, State Level and Landscape level
- Co-finance and convergence plans
- Green Landscape Management Field schools
- Green Landscape Management Plan
- NRM Activities
- Livestock Management
- Other reports as per the requirement