CoRE Stack: 2nd Workshop on Landscape Solvability[1]

Ground floor, SIT building, IIT Delhi

December 15-17, 2025

Venue: SIT 001, SIT building, IIT Delhi campus, Hauz Khas, New Delhi - 110016

https://maps.app.goo.gl/EuZGFmeGuYjAGwxB6

You have to come in straight from the main gate about 500m, and the Bharti building will then come on your right and the stadium on your left. The SIT building is behind the Bharti building.

To call for directions: Rajesh - 8826169293

To join online:
https://us02web.zoom.us/j/3537765596?pwd=aXIzenQwM2hObTBGcURZLzBsVmd5Zz09

Google group: Please consider joining https://groups.google.com/g/core-stack-nrm/ to stay updated on the latest developments on the CoRE stack and relevant news on environment and sustainability.

Video recordings of the main sessions

MAPs talk by Ravindra, KYL demo (can skip the first 32min or so)

KYL feedback, reflections by Vivek (WELL Labs) and Faiz (IWMI), waterbody rejuvenation: Missed recording, sorry!

Waterbody rejuvenation feedback, Commons Connect experiences

Water budgeting feedback, Agroforestry talk by Manisha and Selva (Utthan), chatbot demo

Agroforestry and chatbot feedback, Stewardship presentation

Stewardship feedback, Restoration presentation

A key hypothesis with the CoRE stack vision is that with the rapid advances in remote sensing and other tools for precise instrumentation of the environment, communities and other stakeholders working towards these challenges can benefit from a data and technology infrastructure that can enable them to arrive at a shared understanding of the landscape, improve transparency, respect the need for equitable allocation of welfare resources, and undertake timely

[1] Credit for the term *solvability* goes to Subrata from FES, with the vision of equipping communities and landscape stewards with data and tools for them to "solve" for their landscapes.

and correct strategic action for socio-ecological sustainability. More specifically, these tools when put in the hands of landscape stewards – people belonging to local communities that have been dependent on natural resources and have historically managed their landscapes in a sustainable manner – can enable an accelerated uptake of relevant ecosystem action by communities to reverse the precarity they currently experience and prevent further exploitation and appropriation of their ecosystems by external stakeholders.

This vision is shared by many of us in the CoRE stack network who have been working in the space of ecological restoration and sustainability for many decades. FES mentors such Community Resource Persons (CRPs) who are trained on various tools like CLART, CLM, GMT, and others; PRADAN and WASSAN have a similar structure of CRPs who assist with data collection for GIS-based planning and aquifer mapping; Gram Vikas calls them Jala Bandhus; INREM has built a network of JalDoots to monitor water quality; WELL Labs has conceptualized the role of community hydrologists; Common Ground calls them village-level catalysts; Gram Vaani calls them Community Development Entrepreneurs; all acknowledge the need for communities to build their own capability to manage their landscapes, make claims to get access to relevant resources, deploy the resources more effectively and equitably than how they are used as of now, and leverage data and technology tools to do this well.

The CoRE stack team has built several datasets and tools that are now being actively used in the network. These include the Know Your Landscape dashboard for landscape situation analysis, Commons Connect for bottom-up governance and site-level planning, and several modules for impact assessment of agro-forestry and watershed development interventions.

In the first edition of this workshop held last year, several knowledge and implementation partners came together to understand *what* data representations of landscapes can strengthen bottom-up NRM planning. The insights from the workshop paved the way for the Know Your Landscape dashboard, designed for CSOs and government departments to do risk-opportunity analysis and prioritization mapping for their landscapes (primarily at the level of a Tehsil or a Block). In the second edition of the workshop, the key goal is to understand *how* these landscape data representations are actually put to use — by CSOs and government departments working across different verticals (watershed development, agro-forestry, and landscape restoration) to propose landscape-scale programmes, by landscape stewards for data-driven site level planning, and followed through with ex-ante impact projection and ex-post impact assessment of the interventions, which can further potentially be used for mobilizing funds for landscape stewardship. We will trace the end to end journey of planning landscape interventions, starting from programme initiation to impact reporting.

Detailed agenda

Day 1: Towards data-driven design of natural resource management programmes		
9:00 - 9:30 am	Tea and snacks	
9:30-10:00 am	**Welcome and introductions** Introductions and updates ● CoRE Stack developments and partnerships ● Overall agenda for the workshop	Lead: Aadi [Presentation] [CoRE stack ecosystem]
10:00-10:30 am Session #1	**Building a Multi-Actor Platform (MAP) for landscape sustainability** WASSAN's experience of building a Multi-Actor Platform (MAP) Followed up by a Q & A session, where participants can share their own experiences of actualizing multi-actor platform processes in their geographies	Lead: Ravindra A (WASSAN) [Presentation]
10:30-11:15 am Session #2	**Unpacking Know Your Landscape** How the Know Your Landscape dashboard facilitates evidence based landscape planning, especially for MAP processes - vision, current developments, and way forward To be followed by a Q & A session Introduction to breakout activity	Lead: Aadi/Taru/Sami [KYL]
11:15-1:00 pm Session #3 Tea/Coffee served in breakout rooms	**Activity session: NRM programme design using Know Your Landscape** Breakout teams will be formed based on area of expertise and the nature of ongoing/upcoming NRM programmes. Across the groups, we will cover diverse NRM domains ranging from watershed development to landscape restoration. Core activity: Through a *mock* MAP process, design landscape sustainability programmes for your landscapes: ● CSOs begin with describing their considerations and processes of programme design for NRM interventions: How they identify priority locations, propose action strategies, raise funds, and report impact. ● Donors and policymakers share their considerations while funding climate action programmes.	Four groups, each constituting of: CSO program manager, CSO field expert, Donor / CSR representative, Policymaker, Geospatial researcher / developer [Templates] [Patterns, Filters, Layers and data points]

	● Keeping these points in mind, the team jointly designs a detailed programme plan for a landscape using KYL and provides feedback on the tool, especially to refine the given social-ecological patterns and build relevant ones for their locations. <u>Key outcomes</u>: ● Participants build an understanding of various data layers and filters on KYL. ● Identify to what extent the current version of the dashboard is helpful to build the plans and what additions will be useful. ○ Additional data layers? ○ Additional filters? Design of filters? ○ Feature changes? ○ Data issues noticed? ○ Where would KYL fit in your organization's workflow? Who would be its primary user? ● Use-cases for participants to consider and relate with their current processes: ○ Does KYL serve the purpose to validate known issues in familiar landscapes? Does KYL serve the purpose to understand new and unfamiliar landscapes? ○ Is KYL helpful to build a baseline before programme launch? ○ Is KYL helpful to transfer learning, i.e. programmes known to work well in one area can be adapted easily to other similar areas - based on past experience, identify which other areas can benefit from the same approach? ○ Is KYL helpful to monitor programmes over time to trace their impact?	
1:00-2:00 pm	Lunch	
2:00-2:45 pm	**Shareback session** Different groups share key takeaways on the integration of KYL in their current processes of programme design.	
2:45-3:15 pm Session #4	**Landscape Evaluation and Assessment: Perspectives from WELL Labs and IWMI** Introduction to LEAF (Landscape Evaluation and Assessment Framework) by the IWMI team, Diagnose-Design-Assess framework by the WELL Labs team	Lead: Faiz (IWMI presentation), Vivek (WELL Labs presentation)
3:15-4:00 pm Session #5	**Waterbody Rejuvenation - Decision Support and Impact Assessment**	Lead: Ramneek/ Moumita (ATECF)

	CoRE Stack team to unveil waterbody analytics dashboard for decision support and impact assessment of waterbody rejuvenation interventions. Outline future plan to augment secondary data derived indicators with primary data collected from farmers in the proximity of the waterbody. Discuss secondary data indicators of a waterbody (E.g. waterbody is on/off a drainage line, what is its catchment area, trend over the years in surface water availability, seasonal differences in surface water availability) and primary data indicators (E.g. blocked inlet channels, criticality of waterbody for various needs), which can be integrated into the next version of Commons Connect. ATECF team to share how this design for impact assessment shapes policymaking and sustained donor investment into waterbody rejuvenation programmes. Introduction to breakout activity	[Presentation] [Methodology] [RWB dashboard]
4:00-5:00 pm Session #6	**Activity session: Decision support system for implementing waterbody rejuvenation programmes** Each group would give feedback on the framework for *decision support, monitoring*, and *impact assessment* of waterbody rejuvenation interventions. Groups will jointly come up with feedback on the following for all three stages or decision support / monitoring / impact assessment, for different types of waterbodies (those on/off drainage lines, in drought protection/sensitive regimes, etc.): ● List of indicators, decision tree ● Data source: primary / secondary ● Frequency of data collection Feedback will also be provided on suitable modalities to source primary data required for the framework.	[Templates] [Concept Note, Indicators list]
5:00-5:30 pm	**Shareback session** Groups share their outcomes from the activity session on waterbody rejuvenation programme implementation	
5:30-6:00 pm	High Tea	

Day 2: Behind the scenes of site-level planning		
9:00 - 9:30 am	Tea and snacks	
9:30-9:45am	**Goal setting for the day**	Lead: Aadi

	Expert-led sessions on detailed walkthroughs on: ● Watershed development planning and new features on Commons Connect ● Agro-forestry interventions and integration on Commons Connect ● Community engagement whatsapp bot ● NRM plans data moderation dashboard ● NRM project management dashboard	[Commons Connect case study reports - field testing, pilot insights, user stories, partner report, outcomes (Taru)]
9:45-10:30 am Session #7	**Creating water security plans** A guide on how water security plans are created at FES, Odisha. Dron from FES will take us through: ● Water budgeting method ● Processes for training CRPs in watershed development ● Site-suitability assessment of water structures using the CLART++ methodology ● Pathways in which Commons Connect is used for site suitability assessment	Lead: Dron (FES) [Presentation] [Download Commons Connect]
10:30-11:30 am Session #8	**Field stories on water security planning: Panel discussion** Partner CSOs including PRADAN, SUPPORT, SEWAK, Abhivyakti, and will share their processes of strengthening water security in their landscapes. Key aspects would include: 1. How does data drive discussions during community consultations? 2. What are the ways in which local ecological knowledge guides water security planning, beyond data-driven decision support? How does this integration of various knowledge systems shape planning processes and outcomes - does Commons Connect support such integration / what is currently missing? 3. What kind of historical wisdom related to watershed development is getting lost? 4. What has been the impact of Commons Connect on NRM planning and governance processes? What did the process of presenting DPRs generated via Commons Connect to Gram Sabha authorities look like? 5. Is the explicit focus on equity in Commons Connect helping draw focus to this aspect?	Lead: Ajmal (SUPPORT), Barsha/ Abhishek (SEWAK), Prakash Dutta (Abhivyakti), Sayathan/ Kanad (PRADAN)

	This will be followed by a brainstorming session on improving landscape stress assessment and site suitability analysis of water structures via Commons Connect. Pathways of integrating Commons Connect into NREGA / GPDP planning will also be discussed.	
11:30-11:45 am	Introduction to breakout activity	Lead: Shivani [presentation]
11:45-1:00 pm Session #8 Tea/coffee will be served in breakout rooms	**Activity session: Analysis of water budgeting methods. Familiarization with CLART++ methodology** Core activity: Review of various water budgeting methods ● Participants will begin sharing their respective methods for water budgeting. They can review each others' methods, as well as the current implementation in Commons Connect. ○ FES, for example, uses data on the number of irrigations and depth of flooding to compute per-crop water use, assumes infiltration from irrigated water, and computes water stored in surface waterbodies. FES also separately models requirements for protective irrigation for rainfed crops during Kharif/Rabi, and groundwater use for irrigated crops during Rabi/Zaid. ○ Utthan uses crop water requirements during Rabi and subtracts from it any surplus water from Kharif rainfall, which in turn is estimated as an approximate % of rainfall. ○ Commons Connect uses secondary data to estimate the water budget in a micro-watershed as rainfall - runoff - evapotranspiration, where runoff is calculated using the rainfall data and evapotranspiration is assumed as equivalent to crop water consumption. ● Participants discuss any merits and demerits of each method in terms of complexity of data collection, assumptions which could be deemed invalid in some areas, and the need for configurability of having different methods implemented on Commons Connect or to go with a standardized methodology that combines both secondary and primary data. Key outcomes:	[Templates]

	● Groups provide final recommendations after coming to a consensus and provide a water budget computation methodology and required fields in Commons Connect forms. For instance, Commons Connect uses only secondary data right now and does not account for water use by humans and livestock, but this can be added. <u>Additional activities (distributed amongst various groups):</u> ● Participants will review the CLART++ methodology implemented in Commons Connect to gain familiarity and provide feedback. ● ~~Participants will review a mock-up of equity analysis reports on resource ownership and usage, which can strengthen a focus on equity during supply-side intervention planning.~~ ● ~~Participants will review the Detailed Project Reports (DPRs) generated via Commons Connect, with a focus on stronger integration of primary and secondary data and requirements from the Gram Panchayat.~~	
1:00-1:45 pm	**Shareback session** Teams share their key outcomes of water budgeting formats and other improvements to build into Commons Connect	
1:45-2:45 pm	Lunch	
2:45-3:15 pm Session #10	**Starting agro-forestry in an area** A presentation from Utthan on considerations for agro-forestry planning and implementation. ● How are areas prioritized? ● Choice of crops and trees to be planted together ● Differences between converting a farm versus a fallow area to agro-forestry ● Taking care of agro-forestry interventions	Lead: Selva kumar / Manisha Patel (Utthan) [Presentation]
3:15-3:45 pm Session #11	**Unveiling new features and tools for strengthening bottom-up governance of natural resources** 1. Showcase of the agro-forestry planning module on Commons Connect and monitoring dashboard on Landscape Explorer 2. Demo of community engagement features via the Commons Connect whatsapp bot 3. Presentation on the data moderation dashboard to ensure data quality 4. Demo of the CoRE stack project management dashboard	Leads: Aman/Kapil/Ankit/ Manvi [Methodology, Indicators list] [Presentation]

3:45-5:00 pm Session #12	**Activity session: Gain familiarity with agroforestry features, community engagement bot, moderation dashboard, and project management dashboard** <u>Activities distributed amongst various groups:</u> 1. Participants will review the agro-forestry planning pipeline on Commons Connect, and compare with their own workflows 2. Participants will review the new community engagement bot 3. Participants will review the data moderation and project management dashboards	[Templates] [Admin dashboard]
5:00-5:30pm	**Shareback session**	
5:30-6:00 pm	High Tea	

Day 3: Sustaining landscape stewardship		
9:00 - 9:30 am	Tea and snacks	
9:30 - 9:45 am	**Goal setting for the day** Discovering and highlighting the work done by landscape stewards and creating a sustainable income stream for them	Lead: Aadi [Stewardship note]
9:45 - 10:15 am Session #13	**Unveiling the landscape stewardship map** Showcase the extent of problems requiring a strong bottom-up landscape stewardship practice, active areas of work by landscape stewards, and the projected impact from their work. Vision of a pan-India stewardship network united with a common set of underlying social-ecological principles.	Lead: Aadi [Stewardship map]
10:15 - 11:45 pm Session #14 Tea/coffee served in breakout groups	**Activity Session: Pathways for building sustained financial flows for landscape stewards** <u>Core activity</u>: Flesh out engagement modalities between landscape stewards – CSOs – donors. ● CSOs begin with describing their considerations and processes of steward selection and training, and challenges with retention and engagement after programme completion. ● Donors and policymakers share their perspectives on continued engagement in landscapes beyond programme funding duration.	Four Groups. Each consisting of a CSO partner, a donor, and a policymaker [Templates] [Impact projection and assessment methodology]

	● The team jointly designs a detailed long-term plan to build a regular income stream for landscape stewards. ● Different social-ecological typologies may need different stewardship models and the team should feel free to create variants, E.g. to have income streams for village committees to undertake stewardship activities jointly rather than through one deputed landscape steward Key outcomes: ● Participants to identify key indicators to track for landscape stewardship. Indicators can span ecological aspects (groundwater savings, biomass, drought protection), socio-economic aspects (HH income, equity in benefits distribution), and stewardship aspects (degree of collectivization, durability of activities). Identify which indicators can be tracked through secondary data and which ones would require primary data collection. ● Participants to build out a model day-to-day job description for landscape stewards suited to different social-ecological typologies of landscapes. ● Participants discuss modalities to connect landscape stewards in a federated network. Examples of Gram Vaani, watershed federations, and aquifer-based groundwater collectives, where regular experience sharing and mutual accountability is able to sustain stewardship efforts. ● Participants to discuss potential revenue channels that can be stacked up to build a robust income stream for stewards, E.g. donor-led grants, data collection activities, enrollment in social entitlements and other programmes, Panchayat funds. **Parallel activity session: Expressing community insights and aspirations** Landscape stewards are also representatives of communities, and convey to external stakeholders like government departments, donors, CSOs, etc. about community insights - what works and what doesn't in their landscapes, what are their aspirations, and what problems do they want to solve. What systems can be put in place to enable them to aggregate and collate this information? Core activity: Think about the shape and form that such community reports should take. Think about different	[Landscape stewardship indicators list]

	modalities of collecting community inputs, such as through regular surveys, repeat PRAs, voice-recordings of community discussions and individual insights, community engagement bot, etc. Think how such community insights should be presented on various dashboards and tools like Commons Connect and Know Your Landscape. Key outcomes: ● A mocked-up community report of insights and aspirations. ● A conceptual setup of tools and processing that should be considered to set up the community reports.	
11:45 - 12:30 pm	**Share back session**	
12:30 - 1:15 pm Session #15	**Biodiversity and restoration innovations** New directions in drone imagery and bioacoustics experiments for continuous ecological monitoring - work in progress. Demo session followed by Q&A	Lead: Dhruvi/ Jayakrishna [Presentation] [Tools for restoration - Bioacoustics, Continuous ecological monitoring, SiteSim, Drone mapping (slides 41-54)]
1:15-2:15 pm	Lunch and Departure	

Sincerely

CoRE stack development team: IITD – Aadi, Shivani, Ramneek, Ashima, Dhruvi, Anamitra, Vaishnavi, Raman, Jayesh, Atharv, and team; CommonsTech – Samitha, Taru, Ankit, Aman, Kapil, Ksheetiz, Nirzaree, Pawan, Shiv, Sukriti, Vishnu, Manvi.