COMMUNITY STEWARDSHIP

ASSESSMENT TOOLKIT

Version 3.0

April 2025

Venture Philanthropy

What is Stewardship

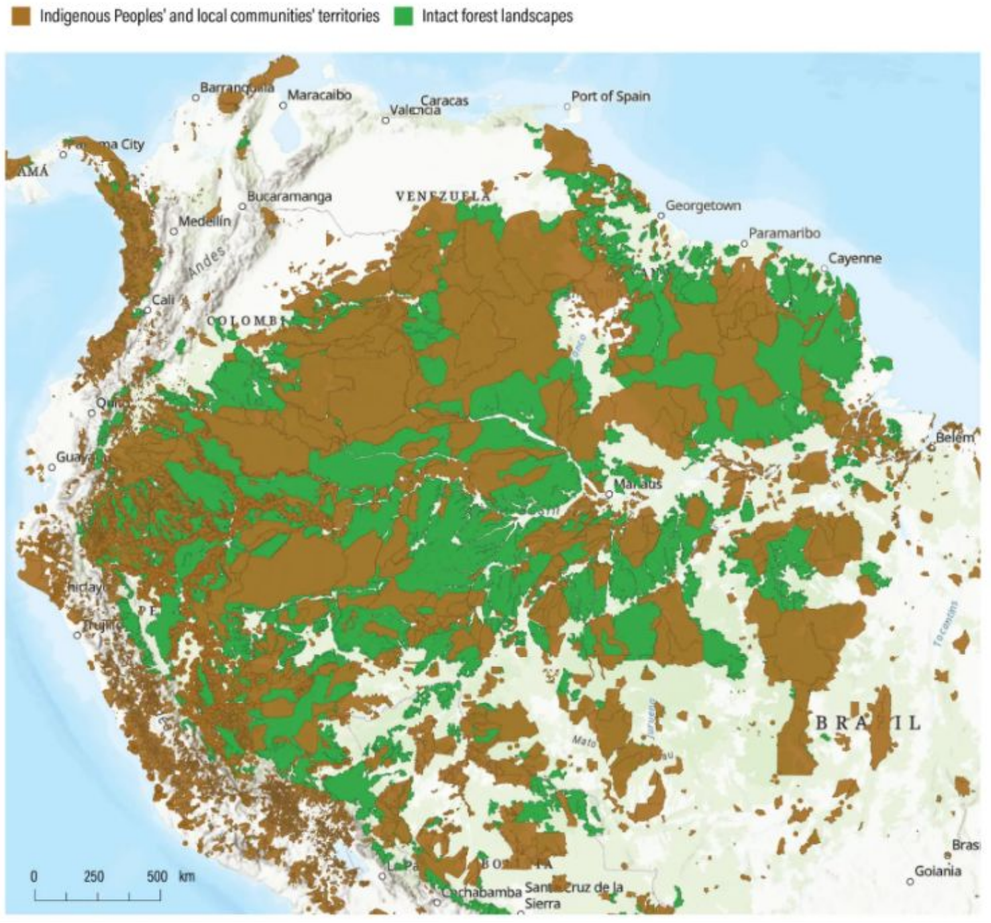
Stewardship

Environmental stewardship can be defined the actions taken by individuals, groups or networks of actors, with various motivations and levels of capacity, to protect, care for or responsibly use the environment in pursuit of environmental and/or social outcomes in diverse social-ecological contexts

- Bennett, et al (2018:597)

LGT Venture Philanthropy LANDSTACK FES FOUNDATION FOR ECOLOGICAL SECURITY CIFOR

Overlap between intact forest landscapes and Indigenous Peoples' and local communities' territories in the Amazon



2) Over 40% of Key Biodiversity Areas intersect with Indigenous Peoples' and local communities' lands and territories.

Stewardship framework

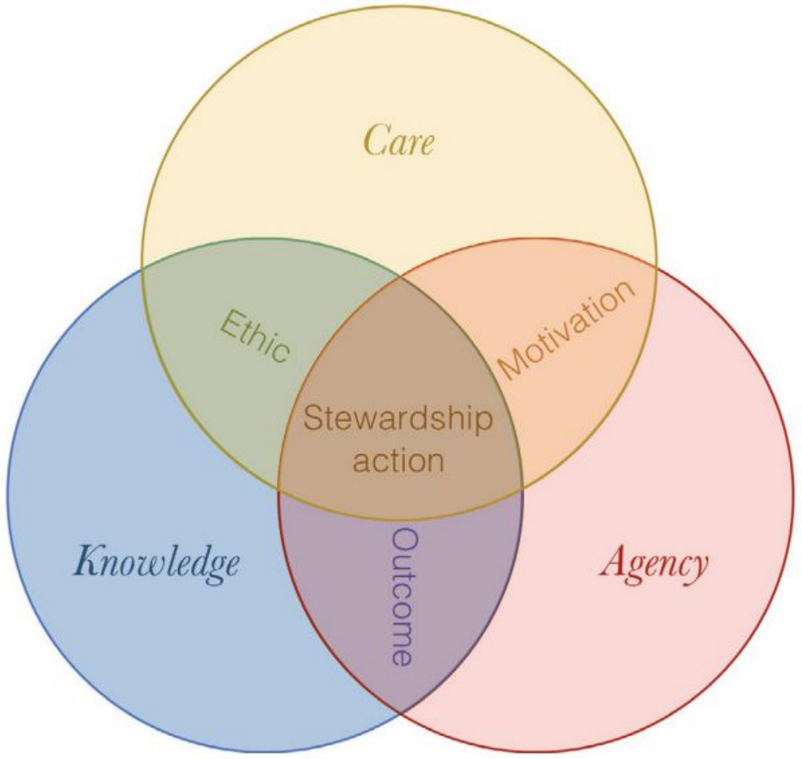


Fig. 4. *Care*, *knowledge* and *agency* help relate the different meanings of stewardship observed in reviewed literature, with the bulk of articles focusing on specific Actions and activities, and to various extents also on Ethic, Motivation, and Outcome – which lie in the interface between the different dimensions.

- Enqvist et. al. (2018)

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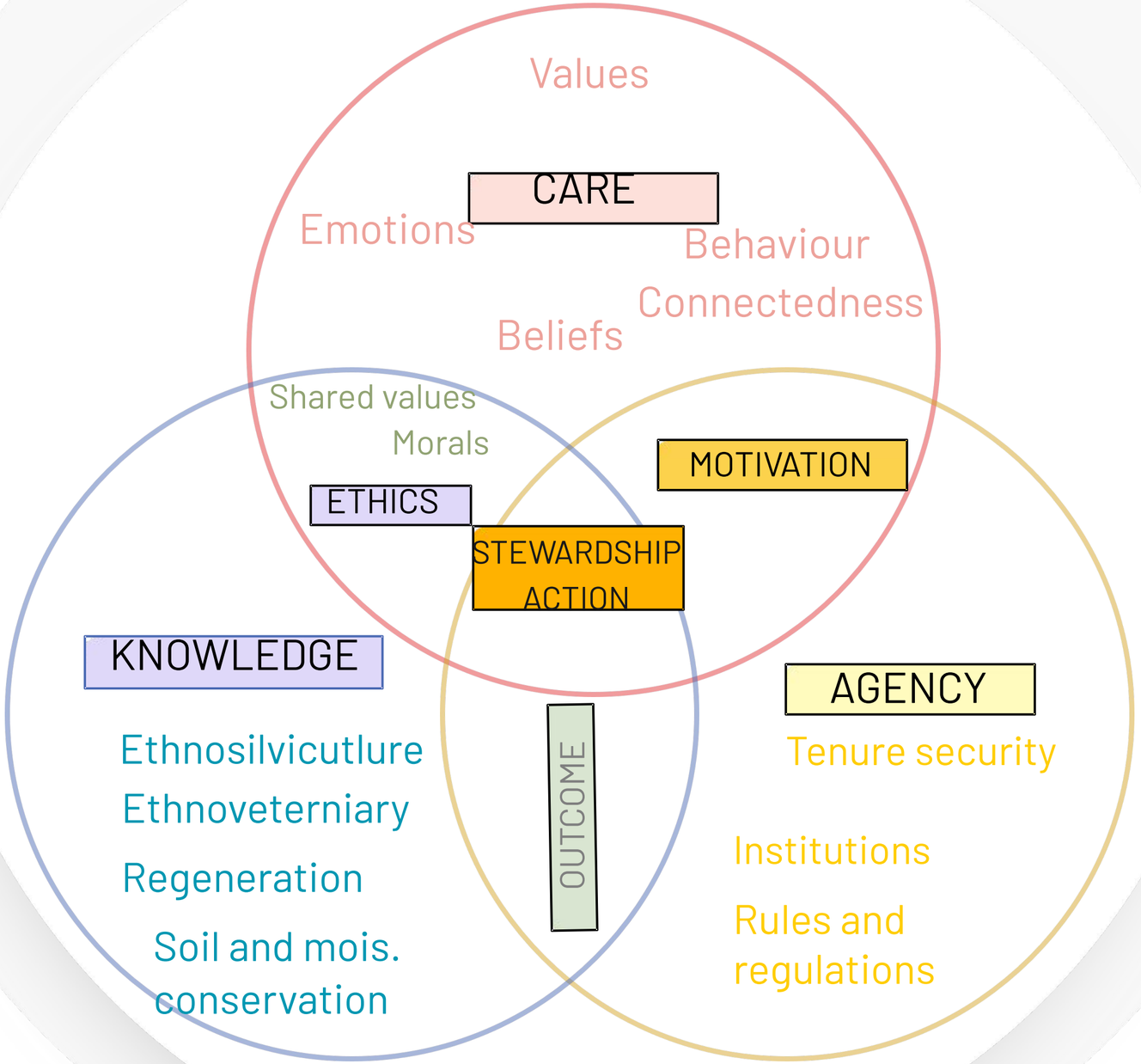
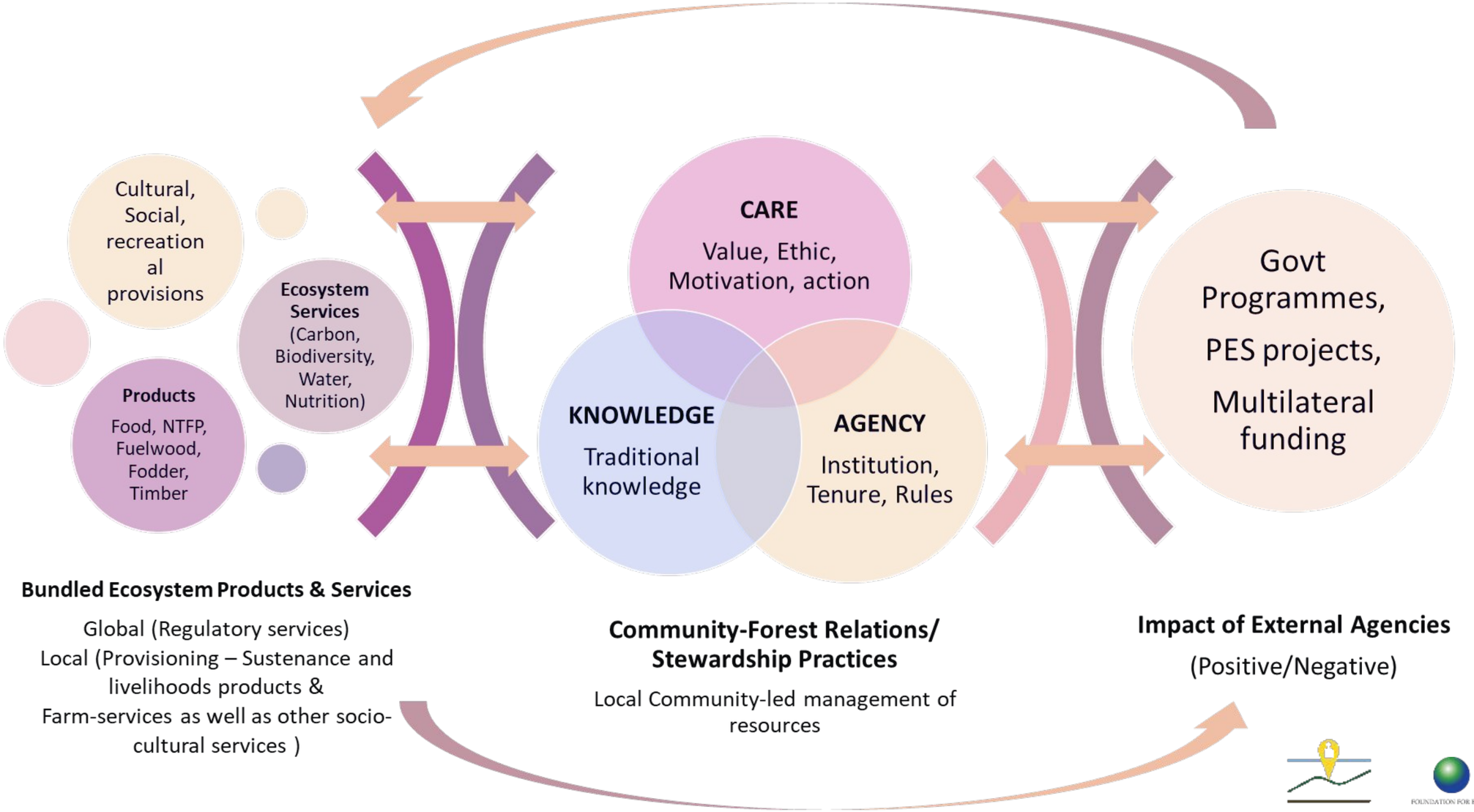
STEWARDSHIP ATTRIBUTES



- Enqvist et. al. (2018)

THE GUIDING FRAMEWORK



HYPOTHESIS

Community Stewardship leads to better socio-ecological outcomes

Research Question	How can stewardship be understood and how does it manifest?
Research Question	Does stewardship lead to better socio-ecological outcomes?
Research Question	What is the impact of external influence on community stewardship?

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STEWARDSHIP ASSESSMENT TOOLKIT

FOREST PRA (7 Tools)

Purpose:
To understand various aspects of community stewardship

Methods used:
Appreciative and visual inquiry through PRA

Data Collection Tools:
Resource mapping, transect walks, care economy mapping, knowledge mapping, venn diagram

1

Forest health Assessment (3 tools)

Purpose:
To assess the ecological health of the community forest

Methods used:
Quadrat method

Data Collection Tools:
Transect walk, Questionnaire survey in Kobo toolbox

2

Household forest interface assessment

Purpose:
To collect household level information about forest dependency and interaction

Methods used:
Household level Survey

Data Collection Tools:
Questionnaire in Kobo toolbox

3

Participatory Forest Interaction assessment

FOREST FLOWS TO COMMUNITY

1. RESOURCE MAPPING
2. SERVICE FLOWS

CARE FLOWS FROM PEOPLE TO FORESTS

3. CARE & KNOWLEDGE MAPPING
4. CARE ECONOMY

UNDERSTANDING AGENCY AND CONTEXT

5. VILLAGE HISTORY
6. TIME TREND
7. INSTITUTIONAL MAPPING

FOREST HEALTH ASSESSMENT

EVALUATING THE ECOLOGICAL HEALTH OF THE FOREST

1. TRANSECT WALK
2. FOREST CLASSROOM
3. BIODIVERSITY & BIOMASS ASSESSMENT

PARTICIPATORY FOREST INTERACTION ASSESSMENT

FOREST FLOWS TO COMMUNITY

1. RESOURCE MAPPING (CURRENT AND PROPOSED)
2. SERVICE FLOWS

1 A. RESOURCE MAPPING (CURRENT)

The objective is to map the nuanced resource access, use, interaction and governance regimes existing in the village

RESOURCE LAYERS

1. Land use
- Forest, Pasture, cultivation

2. Land Tenure Linking
- Community land
- Private land
- Government/FD control

3. Site characteristics
- Type of soil
- Type of vegetation
- Species diversity

INTERACTION LAYERS

4. Local Name
- Meaning, significance

5. Functional use
- chief use of patch - fuelwood, NTFP, etc.
- Food items collected
- freq. of visit to forest

GOVERNANCE LAYERS

6. Access regimes
- who can collect, when, seasons

7. Governance rules
- what is allowed, not allowed, fines in the village

8. Project activity undertaken
- Plantation, soil moisture conservation, Water harvesting, fire line

1 A. RESOURCE MAPPING (CURRENT)

Materials

Projector, plain wall, reverse side of a flex sheet, Printed Google Earth image with traditional boundaries (for low-power backup) sketch pens, chalks of different colours

Participants

10-12 community members including elderly, women and youth

Time

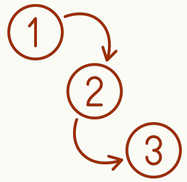
180 minutes

Outputs

1. Resource map
2. Resource mapping table
3. Narrative write-up

Pre-Process:

Obtain the KML file of the village with traditional resource boundaries, if available



RESOURCE MAPPING PROCESS

1. Initiate visual mapping - Project & Trace / Use Print Map –
   - *If electricity is available*: Project Google Earth image with traditional boundaries onto the back of a flex sheet for tracing. Simultaneously, the facilitator traces community-drawn polygons live on Google Earth Pro (offline). *Save and back up*
   - *If not*: Use printed image as base for drawing.
2. Facilitate the mapping
   - Suggest starting with main road → add paths, forest, farms, water, settlements, village boundary, and direction.
   - Encourage participants to demarcate as many land use patches as possible: forests, cultivation land, pastures, settlements.
3. Fill the attribute table
   - After mapping, seek patch-wise details on interactions, access, use and governance
4. Capture stories, anecdotes, quotes
   - Assign someone to document key narratives, stories, quotes

1 A. RESOURCE MAP (CURRENT)

EXAMPLE OF SKETCH MAP

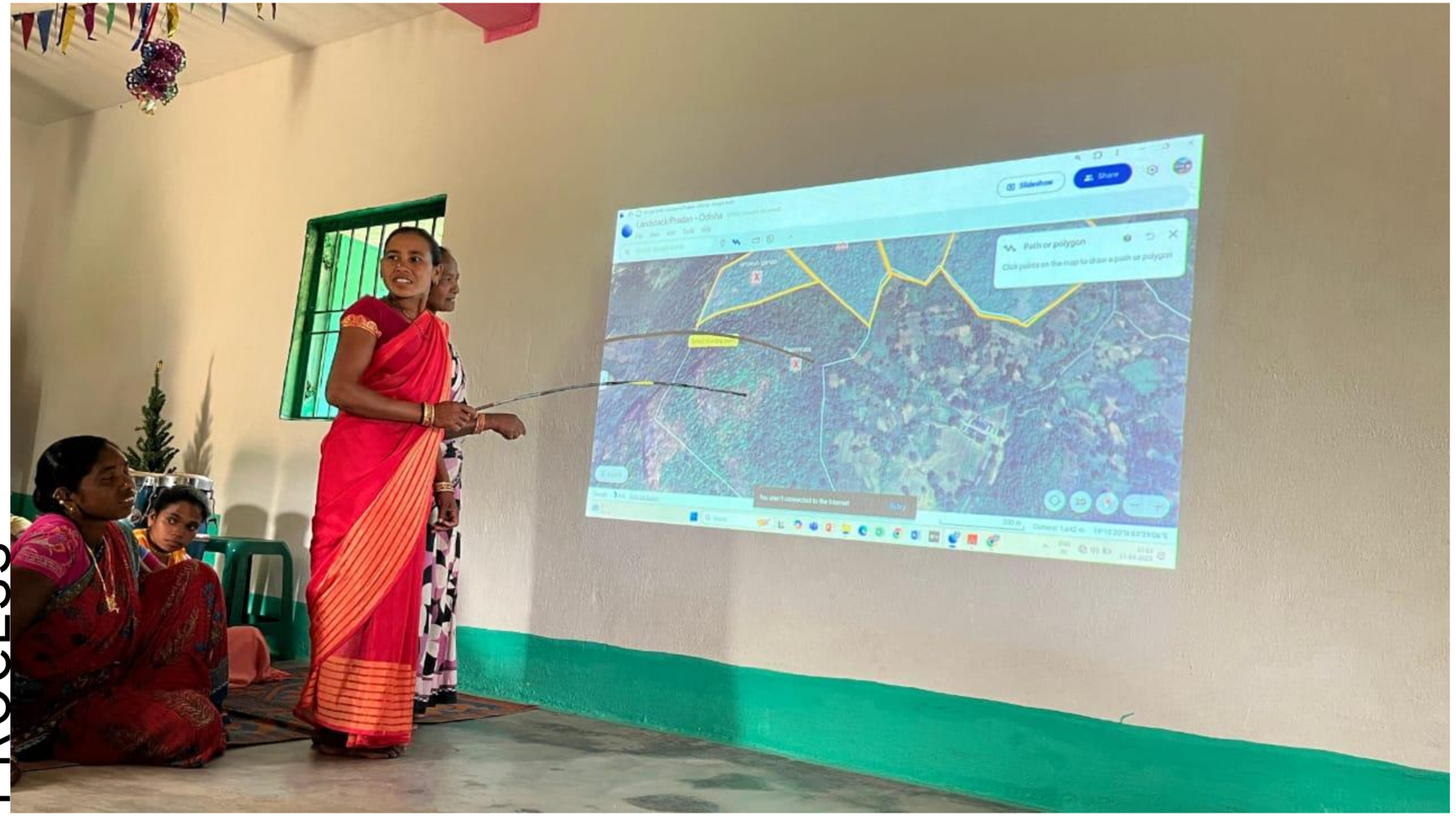
1. Taudaipuijang
2. Rikiam
3. Taukokjang
4. Tupuat-thaonam
5. Chongdan
6. Changthui/pumpilaujam
7. Phengliang
8. Takamvbianluang
9. Tulaojang
10. Aroulang
11. Peitampang
12. Gulaipang

13. Taopangruam
14. Nruai tazeijang
15. Duisatiang
16. Duikanlong
17. Khaguakpang
18. Suniankhonglong
19. Chagangbangtiang
20. Taotuanlong
21. Peilaonaek
22. Chakhangbijang
23. Joukhiangchanglong
24. Mailong

- **Local name**
- **Land use –** Forest, pasture, jhum, terrace, settled agriculture, settlement
- **Projects areas** - Areas of external projects: JICA, NABARD, PRADAN
- **Other features** - Roads, rivers, forest routes
- Cardinal directions and Bordering villages

1 A. RESOURCE MAP (CURRENT)

PROCESS



1 A. RESOURCE MAP (CURRENT)

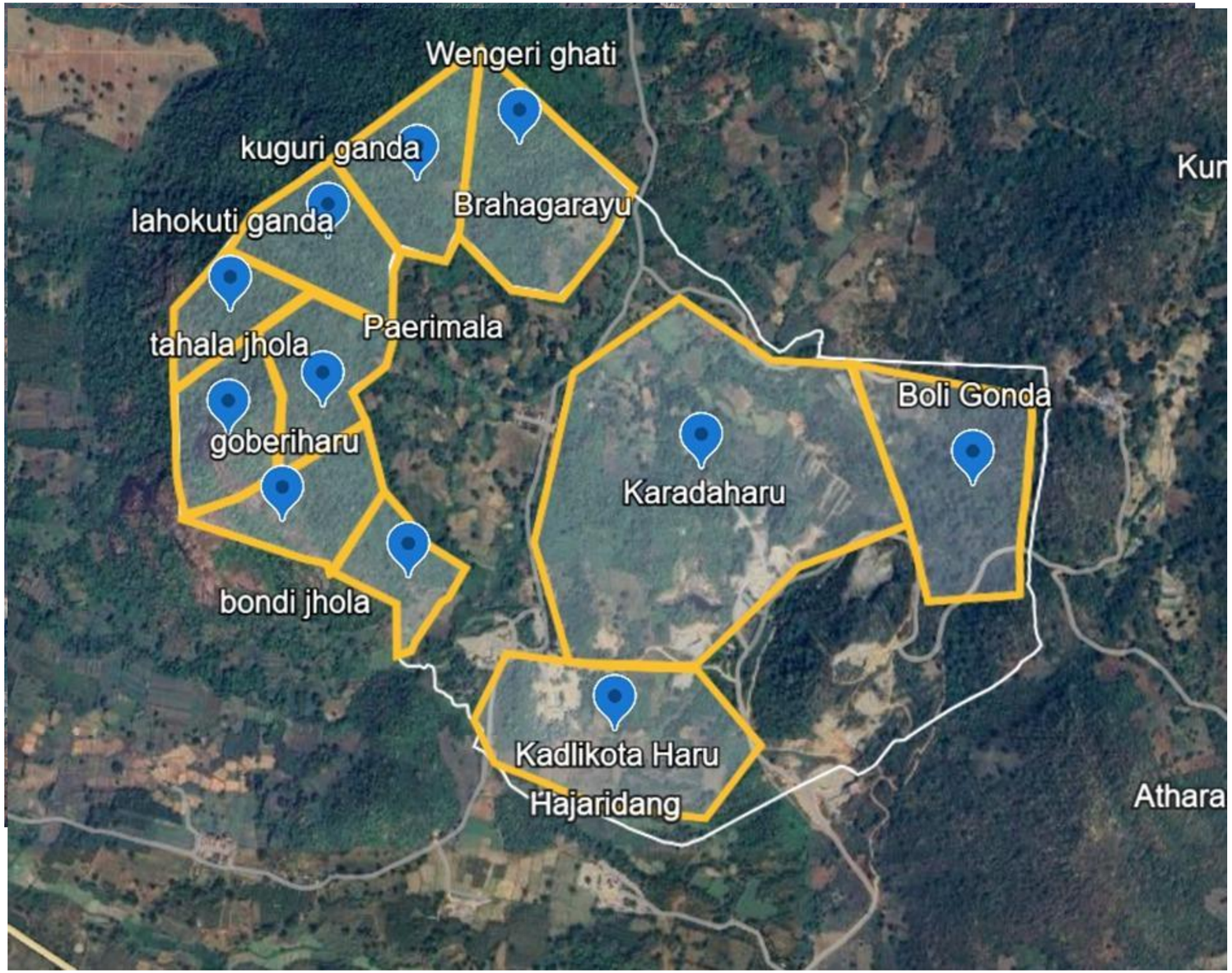
SAMPLE

BASIC INFORMATION FOR VISUAL RESOURCE MAP

- **Local name**
- **Land use** - Forest, pasture, jhum, terrace, settled agriculture, settlement
- **Projects areas -** Areas of external projects: JICA, NABARD, PRADAN
- **Other features -** Roads, rivers, forest routes
- **Cardinal directions and Bordering villages**

1 A. RESOURCE MAP (CURRENT)

SAMPLE



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A. RESOURCE MAPPING (CURRENT)

Village:
Date:
Participants:

Resource Map Layers	Land Use	Land tenure	~~Care attributes~~	Functional use –food items	Site characteristics	Access Regimes	Governance rules	Project activi
Guiding questions	What is the main land use/uses?	Who controls land, who manages?	~~How does community care for forest? and Who (men/women) does what?~~	How is the patch used? Who uses, Which food items, and freq. of use?	How is the patch: in terms of vegetation, soil quality, species diversity	Who can access? village/outside? seasonal access regimes?	What is allowed, what is not allowed, fines, allowance for other villages	What project activity, when and by whom?
 Forest 1 or Local name	*Grazing land, forest land, habitation area, jhum area*	*Community land, clan land, private land, reserve forest, JFM*	*~~Wildling collection, seed collection, fire control, patrolling, plantation drive, pond construction,~~*	*mainly Fuelwood twice a week by women* *bushmeat, honey, occasionally by men* *likewise for fodder, timber, leaves, flowers, medicine,*	*moderate humus, young saplings, high undergrowth, dominant species*	*All village can access,* *For grazing in 'x' season* *For fuelwood in 'x' season* *Outside village access - yes/no?*	*NTFP all year* *fuelwood quantity allowed during 'x' season,* *timber/tree cutting* *Harvest limits, grazing rules, fines*	*JICA plantation by FD in 'year' Cashew* *Plantation by horticulture dept. in 'year'*
 Forest 2								
 Grazing land								
 Cultivation 1								

1

A. RESOURCE MAPPING (CURRENT) NARRATIVE PROMPTS

Village:
Date:
Participants:

GUIDING QUESTIONS

1. Local Name - Meaning, significance or story behind the local name of the land use patch
2. Land use and tenure - Capture the differences among forest patches, for instance, patch 'xxx' is a community conservation reserve, while patch 'yyy' is a community access forest, patch 'zzz' is for communal vegetable cultivation
3. Site characteristics - How is the soil quality, vegetation structure, species diversity, vegetation density ? Based on these parameters, understand according to them whether site is healthy or not? Capture other local site health indicators - bees, mushrooms.
    a. try to capture their reasoning behind the indicators, for instance, bees because they help in pollination
4. Care activities - Quotes around how they care, for instance quotes around regeneration, seed dispersal, plantation drive, etc.
5. Functional use - How is patch used, mainly for fuelwood, any rare products collected
    a. quotes around cultural significance or uses of products if uncovered during discussion
6. Access regimes - Narratives about who can access the land and under what conditions,
    a. Capture anecdotes about seasonal restrictions, capture grazing access and seasonality

1 A. RESOURCE MAPPING (PROPOSED)

The objective is to build a shared, community-led action plan for forest and commons stewardship, using the existing resource map to envision future care activities.

EXISTING LAYERS

1. Local names

2. Land use

- Forest
- Pasture
- Farm

3. Land Tenure

- JFM
- CFR
- Reserve forest
- Revenue land

PROPOSED ACTIVITIES

4. Status of Patch

- Degraded/poor
- Good

5. Key activity needed

- Restoration
- Conservation
- Both

PROPOSED ACTIVITY DETAILING

6. Regeneration

- Planting wildlings
- Seedballs

7. Tending

- Weeding/Thinning
- Coppicing/pollarding

6. Harvesting

- Pre-Processing practices
- Processing practices

7. Ecosystem maintenance

- Grazing
- Fire mgmt.
- Soil and water conserv.

1 B. RESOURCE MAPPING (PROPOSED)

Materials

Current resource map, Chart papers, sketch pens, pencil, eraser, chalks of different colours

Participants

10-12 community members including elderly, women and youth

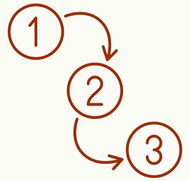
Time

60 minutes

Outputs

1. **Resource map (proposed)**
2. **Resource mapping table**
3. **Narrative write-up**

Process



1. Ice-Breaking & Introduction

2.Explaining the Tool & why it is being deployed

3. Start with displaying the current resource map prepared

4. Ask community members to reflect on what actions are needed in each zone to maintain or improve forest condition — e.g., regeneration, protection, water conservation, or resource harvesting improvements.

5. For each patch and activity, fill out the attribute table collectively. Capture details such as the type of activity, who will do it, how often, and support required. This will help formalize the action plan.

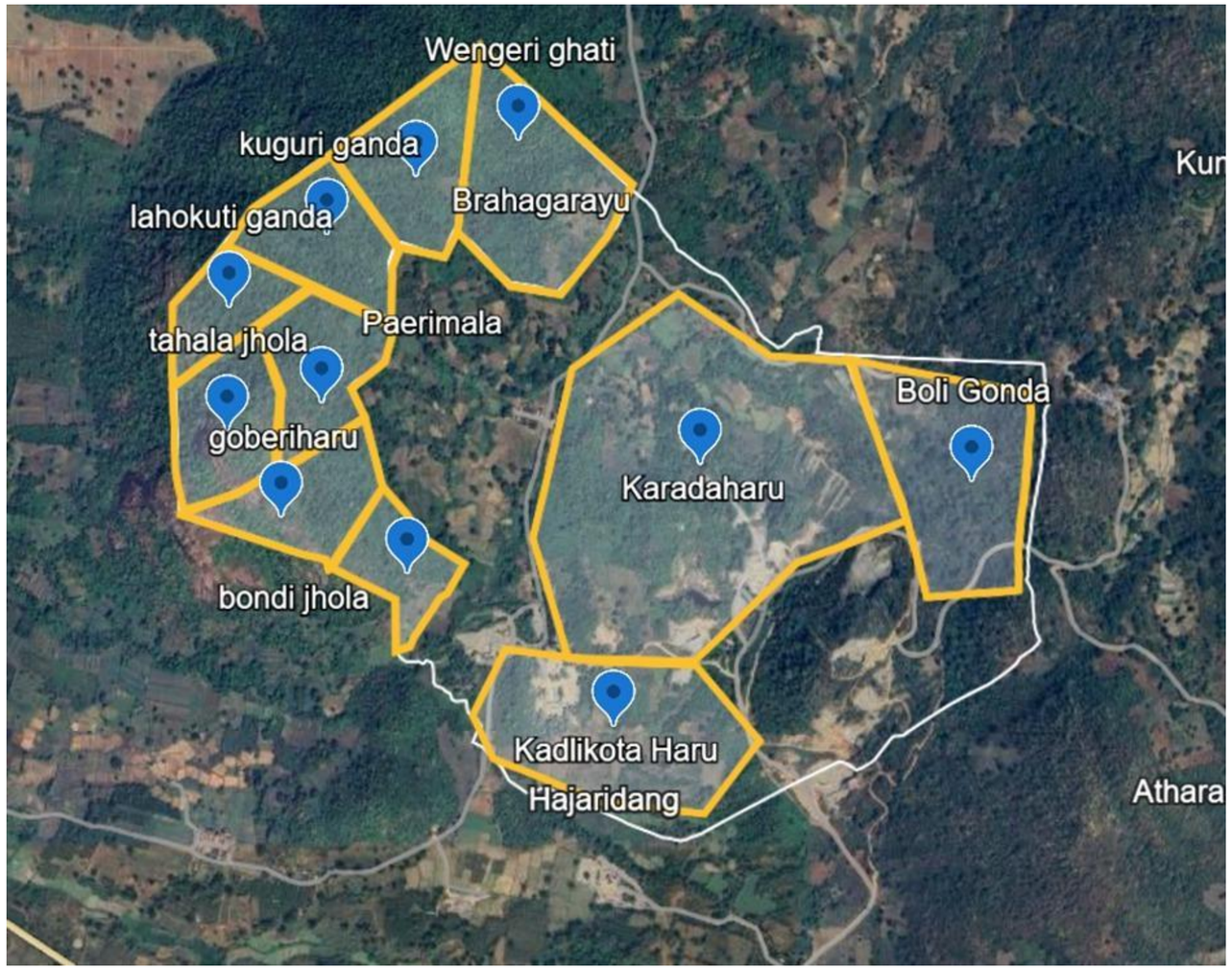
7. Capture stories, anecdotes, quotes

- Assign someone to document key narratives, stories, quotes emerging from discussions.

1

B. RESOURCE MAP (PROPOSED)

SAMPLE



- **Local name**
- **Proposed Key activity –**Identify and mark **patches which need conservation as ‘C’** and those **which need restoration as ‘R’**
- **Identified activities**- Plantation, pruning, lopping, fire control

1

B. PROPOSED RESOURCE MAPPING TABLE

Village:
Date:
Participants:

Resource Map Info	Current land use	Status of patch	Regeneration	Tending	Sustainable Harvesting	Fire mgmt.	Grazing	Soil and water conserv.
Guiding questions	What is the main land use/uses? (shall be prefilled)	Patch status and key activity needed- Conservation or restoration	Is regeneration activity req. if yes what? ? How? Enter species name with activity)	What tending activities will you do to care for the patch? Species name	How do you plan to ensure sustainable harvesting?	What actions will you take to prevent and control fire?	Will grazing be allowed? When and how?	What will you do to conserve soil and water?
 Forest 1 or Local name	*Grazing land, forest land, habitation area, jhum area*	*Good condition Conservation*	*Planting of wildlings of 'x' species*	*Weeding, pruning, thinning, pollarding, coppicing,*	*Leaving some tuber roots while harvesting*	*Fire lines, cleanliness drives, collection of dead wood, shifting cultivation fires*	*Grazing allowed in 'x' season*	Plantation in stream catchment,
 Forest 2		*Poor degraded condition Restoration*	*Seed collection and preservation for 'y' species*		*Harvesting limits*	*Dousing fire with branches of (species name)*		
 Grazing land			*Seed ball propagation for 'x', 'y' species*					
 Cultivation 1								

C. MATRIX RANKING

Materials

Chart papers, sketch pens, pencil, eraser, chalks of different colours

Participants

5-8 community members including elderly, women and youth

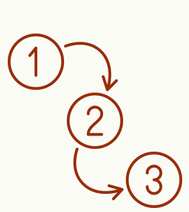
Time

40 minutes

Outputs

1. **Matrix Ranking table**
2. **Narrative write-up**

Process



1. Ice-Breaking & Introduction

2.Explaining the Tool & why it is being deployed

3. Start with listing important species as identified during the proposed resource mapping process.

4. Use criteria setting

- Identify and agree upon use criteria (e.g., fuelwood, food, fodder, medicine, income, etc.)

5. Scoring

- For each species-use pair, give a score from 1 to 5, with 1 being least useful and 5 being most useful, based on relative importance.

6. Tallying

- Count the total scores for each species across all uses and enter in the “Tally” column

7. Ranking

- Rank the species from highest to lowest based on tally scores

C. MATRIX RANKING

TIPS

Criteria for ranking to be decided by communty

Species	Use 1	Use 2	Use 3	Use 4	Use 5	Use 6	Use 7	Use 8	Tally	Rank
Sal	*****	*****	x	****	*****	***	***	*** *	29	1
Mahua	*****	****	*	x	x	***	****	*	18	3
Siali	*****	****	*	x	x	***	****	x	17	4
Kendu	*****	****	x	***	***	***	****	x	22	2
Chara	*****	****				***	****	x	16	5

2 Flow of Ecosystem services from the forest

Understanding flow of service from forests and commons inside and outside village

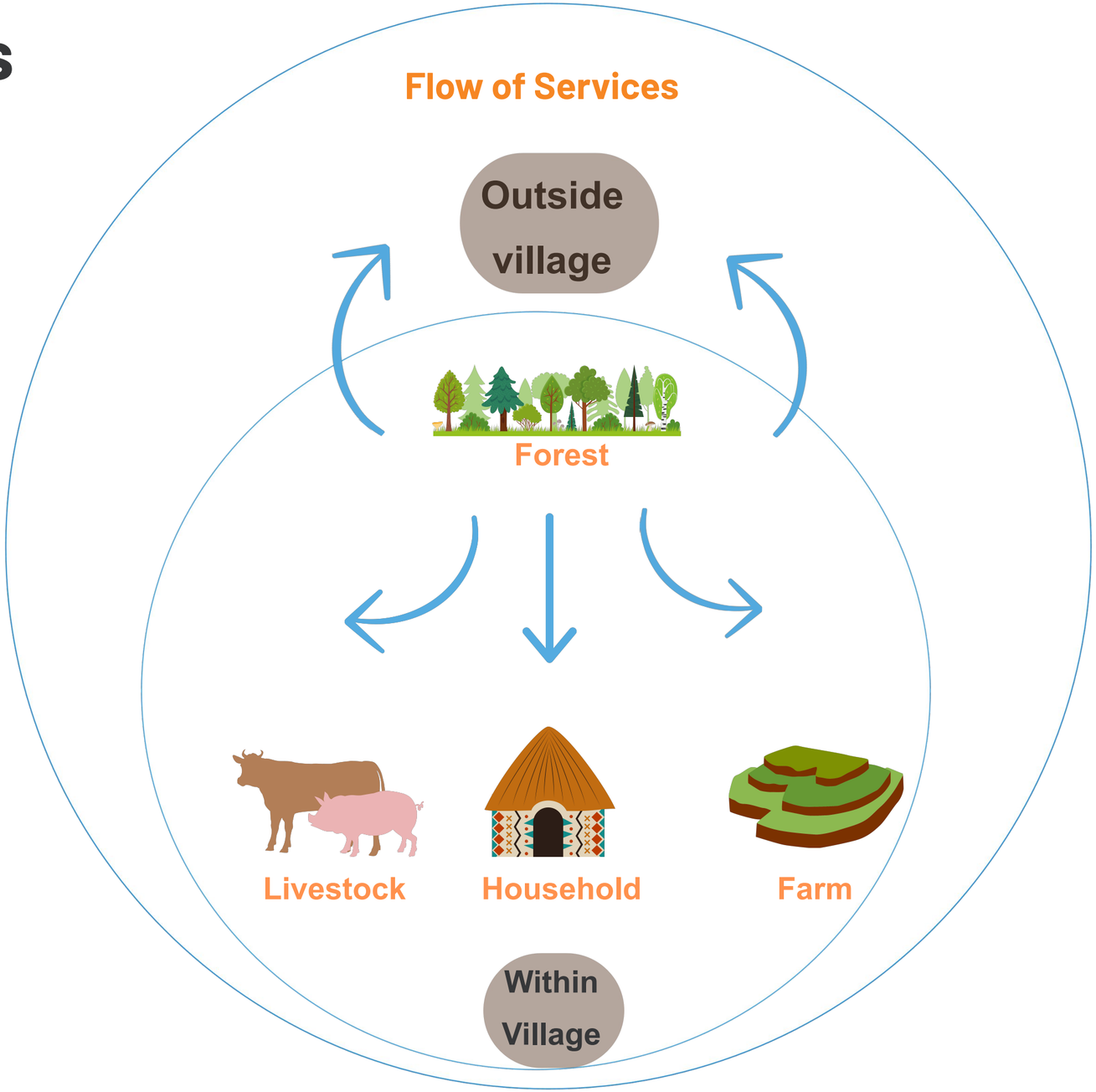
Attributes to capture

Q. What are the benefits from the forest for the farm

Q. From the forest to Livestock

Q. From forest to household

Q. What are the benefits flowing outside village?



2 Flow of Ecosystem services from the forest

Materials

Chart papers, sketch pens, pencil, eraser

Participants

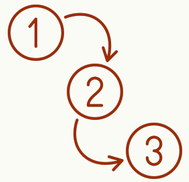
6-8 community members including elderly, women and youth

Time

90 - 150 minutes

Outputs

1. **Ecosystem service flows diagram**
2. **Ecosystem service flows table**
3. **Narrative write-up**



Process

1. Ice-Breaking & Introduction
2. Explaining the Tool & why it is being deployed
3. Ask guiding questions to cover
   - the benefits that flow from the forest to farms, livestock, households, and outside?
4. Map or tabulate the flows
5. Parallelly document narratives and perspectives of ‘ecosystem services’ as shared by participants

2 Flow of Ecosystem services from the forest

SAMPLE

Example of service flows from forest in Dollang village, Manipur

To Livestock	To household	To farm	Outside village
Source of water to fisheries	Source of water to household	Source of water to terraces below the forest	Gives fresh air
Maintains good health of the livestock (cattle and cows)	Waterfall near Vangrep pang serves as an ideal spot for recreational activities (picnic, swimming)	Nutrient flow from forest to terraces	Maintains the water quality of Tupan river which flows to Shangi village and Oinupangba stream which flows to Lungleban village
Seed dispersal/ pollination from the droppings	Give fresh air for healthy life	Protect terraces from landslides	Protect from storm from damaging the crops/ paddy of Longsai and Jaojangtek villages
Provides shed and shelter to the livestock	Nutrient/ manure flow to homestead & flowers	Protect from storm which damages the crops/ paddy	Nutrient flow from forest to Longsai and Jaojangtek villages
	Forest protects the house from storm		Absorbs carbon dioxide/ cleanse the air
	Big trees protect vehicles & people from falling down the cliff in case of accidents		Occasional grazing habitat for livestock from Longsai and Jaojangtek villages
	Protect from the sunheat, rain and storm while foraging in the forest		Improve health condition of forest product buyers in Bishnupur and Imphal markets
	Absorbs carbon dioxide/ cleanse the air		

2 Flow of Ecosystem services from the forest

GUIDING QUESTIONS

Some suggestive pointers are mentioned below for each of the flow points:

1. Forest to Household
    a. What are the key products collected from the forest for household use (e.g., fuelwood, food, medicine)?
    b. How does the forest support your household during lean or crisis seasons?
2. Forest to Farm
    a. How does the forest contribute to farming activities (e.g., irrigation, soil fertility, pollination)?
    b. Are there specific plants or products you collect from the forest to enhance farm productivity?
    c. Can you describe any community practices that link forest and farm management?
3. Forest to Livestock
    a. What resources from the forest are used for livestock (e.g., fodder, grazing, water)?
    b. How do you manage grazing patterns within or outside the forest?
4. Benefits Flowing Outside the Village
    a. Which services (grazing, water flows) flowing from your forest benefit outside villages.

PARTICIPATORY FOREST INTERACTION ASSESSMENT

1. CARE FLOWS FROM PEOPLE TO FORESTS
3. CARE & KNOWLEDGE MAPPING
4. CARE ECONOMY

3 CARE AND KNOWLEDGE MAPPING

The purpose of this tool is to discover, recognize and appreciate the valuable knowledge held by communities about their forests and commons.

TIPS

A transect walk with community members to their forests will reveal deeper and richer understanding of the ecological knowledge held by them.

Different aspects of Traditional Ecological Knowledge

Regeneration

Tending

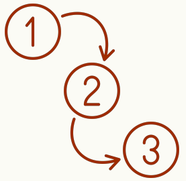
Sustainable harvesting

Soil and water conservation

Forest farm linkage

Fire management

3 CARE AND KNOWLEDGE MAPPING



Materials

Chart papers, sketch pens, pencil, eraser

Participants

8 - 10 community members including elderly, women and youth

Time

90 - 150 minutes

Outputs

1. TEK mapping as per different dimensions of knowledge
2. accompanying narratives

Process

1. Ice-Breaking & Introduction
2. Explaining the Tool & why it is being deployed
3. Initiate the discussion by posing the question, "In your opinion, what is good about the forest or what do you like about the forest?
4. Ask guiding questions to cover various dimensions of Traditional ecological knowledge (TEK)
5. Capture the TEK as per to different dimensions
6. Parallelly document narratives, stories and quotes emerging from the discussion.

3 CARE AND KNOWLEDGE MAPPING

GUIDING QUESTIONS, CONVERSATION TRIGGERS

Regeneration Seed/saplings

1. Do you collect and preserve seeds from forest? For which species? why?
2. How do you propagate seeds?
3. Do you plant wildlings, for which species? why?
4. which other regeneration methods

Tending operations

1. Firewood collected from which species, how, and when ?
2. Which species coppice well?
3. Fodder from which species, how and which season?
4. What tending operations carried out in the shifting cultivation, on which

Sustainable harvesting

1. Do you celebrate planting and/or harvesting festivals, which ones, when and why?
2. How do you harvest different parts of the plant to allow regeneration?
3. Rules and mechanisms around harvesting -

3 CARE AND KNOWLEDGE MAPPING

GUIDING QUESTIONS, CONVERSATION TRIGGERS

Soil and water conservation

1. Understand practices around Composting, Fallow periods in Jhum, planting particular species for soil fertility, manuring.
2. Traditional method of water harvesting?
3. Water harvesting structures developed ?
4. How is soil moisture managed in dry period?

Forest farm linkage

1. What do you get from forest for farm and livestock? forest medicine for pests and animals? plants for composting,
2. Grazing and forest connections?
3. Does forest patch near farm affect crop health, how?
4. Are certain trees retained

Fire management

Control and prevention

1. Traditional methods of fire prevention
2. Do logs of certain species help in dousing fire? which ones?
3. How are controlled fires done? in which season?
4. Do you know when fire risk is high in forest? how?
5. Rules around fire

4 CARE ECONOMY

The objective is to understand and appreciate the different types of care activities undertaken by the communities while interacting with their forests

Identify care activity

Map seasonality

Regeneration

- Wildling planting
- Seed preservation
- Plantation drives

Tending

- Weeding and mulching
- coppicing, pollarding
- pruning, lopping

Harvesting

- leafy vegetables, fruits
- Mushrooms, tubers
- flowers, shoots

Ecosystem Maintenance

- Soil and moisture conservation
- Fire management (control and prevention)
- Grazing
- Group patrolling

4 CARE ECONOMY

Materials

Chart papers, sketch pens, pencil, eraser

Participants

6-8 community members including elderly, women and youth

Time

90 - 150 minutes

Outputs

1. Care Economy mapping
2. Narrative writeup

Process

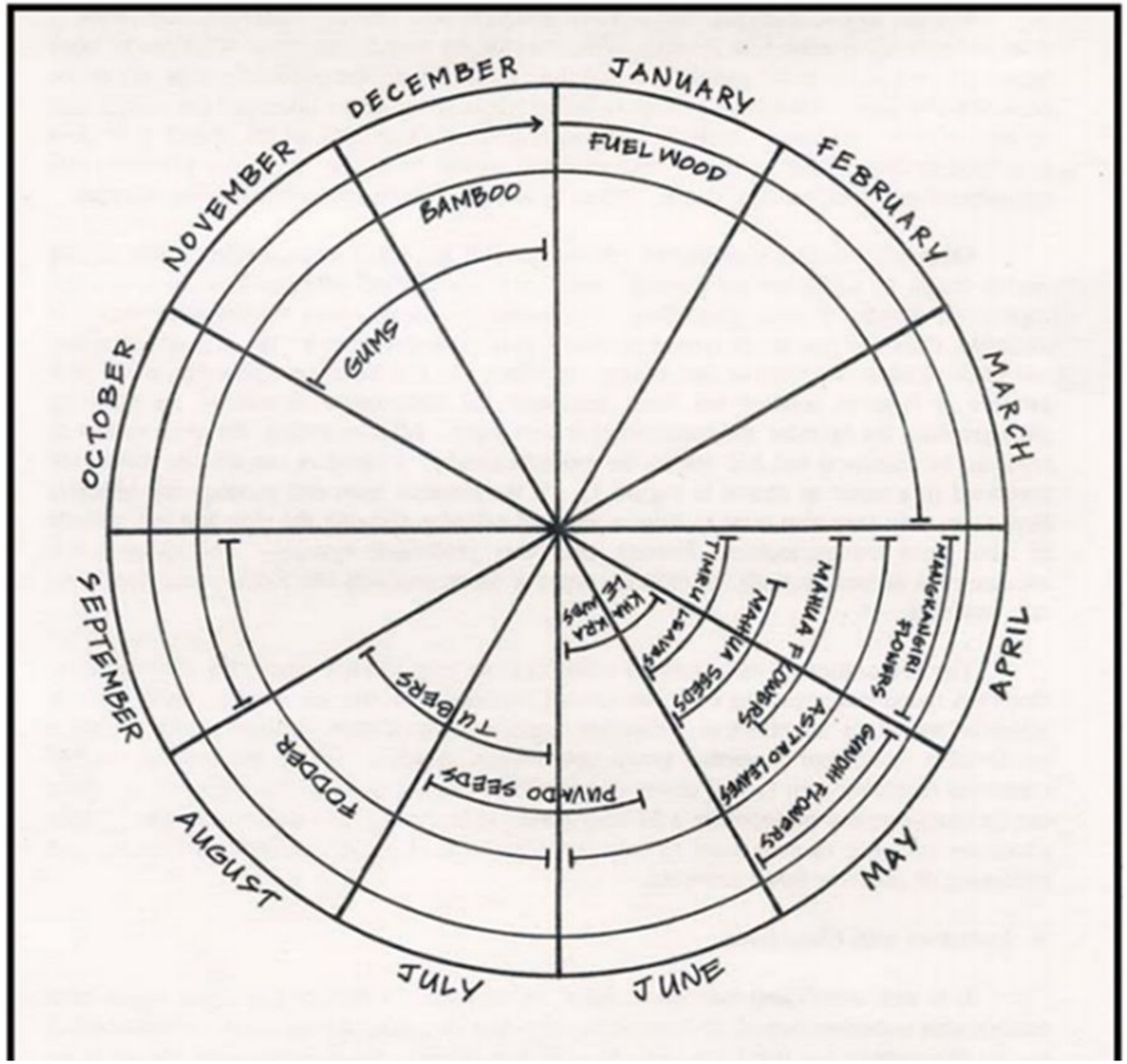
1. Ice-Breaking & Introduction
2. Explaining the Tool & why it is being deployed
3. Season identification
    - Identify key seasons as per communities' local calendars
4. Identify and map according to season,
    - regeneration activities
    - who is chiefly responsible
5. Similarly identify and map different tending operations, harvesting as well as Ecosystem maintenance activities
6. Parallelly document narratives, stories, quotes focusing on gendered perspectives

4 CARE ECONOMY MAPPING

S.No	Care category	Care Activity	Season 1	Season 2	Season 3	Season 4	Women	Men
1	Regeneration	Wildling, Sapling planting	**	***		*	***	**
2	Regeneration	Seed preservation			**	**	**	
3	Tending	Coppicing/fuel wood collection	***	***	*	*	****	
4	Tending	climber cutting	*	*	*	*	*	**
5	Tending	lopping, fodder collection	**	**	***	***	***	
6	Harvesting	Leaves collection	***	***	***	**	***	
7	Harvesting	Tubers, roots	**	**			***	
8	Ecosystem main.	Fireline			**		*	**
9	Ecosystem main.	Seasonal grazing	**	**			*	***

SAMPLE 1

4 CARE ECONOMY MAPPING



SAMPLE 2

Instead of the products as shown here, map the activities undertaken by communities in different seasons here.
Also map who does more, men or women – by scoring from 1to 5

4 CARE ECONOMY MAPPING

GUIDING QUESTIONS

1. Identify key seasons
    a. Which are key seasons observed here?
    b. (Identify the approximate duration, including its start and end months, for better understanding.)
2. Identify and Map care activities
    a. Regeneration
        i. do you collect wildings from the forest, why, in which season, for which species, who collects?
        ii. Do you preserve seeds, what are the methods, why, in which season, which species, who does?
        iii. Does village community undertake plantation drives, when, for which species, who does?
    b. Tending operations
        i. Do you collect fuelwood, how (coppicing, cutting branches, dead wood), in which season, who does?
        ii. Do you collect fodder, how (lopping, cutting), in which season and who does?
    c. Harvesting
        i. What products are harvested
        ii. For each product ask in which season, and who does?
        iii. Do you celebrate any harvest festivals, in which season, why and who does?

PARTICIPATORY FOREST INTERACTION ASSESSMENT

UNDERSTANDING THE COMMUNITY AND THE CONTEXT

5. VILLAGE HISTORY
6. TIME TREND
7. INSTITUTIONAL MAPPING

5 VILLAGE HISTORY

HISTORICAL TIMELINE

The aim is to this exercise is to construct the history of the forest and the village

HISTORICAL TIMELINE

Year	Description of Event
XXXX	*Establishment of Village*
XXXX	Bifurcation of village
XXXX	*NGO 'X' entry with 'y' project*
XXXX	Government plantation
XXXX	Conservation reserve declared by community covering area

TIPS

Only events related to forests, pasture lands and other common resources are to be captured here.

5 VILLAGE HISTORY
HISTORICAL TIMELINE

Materials

Chart papers, sketch pens, pencil, eraser

Participants

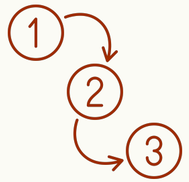
6-8 community members including elderly, and youth

Time

30 minutes

Outputs

1. Historical timeline
2. Narrative writeup



Process

1. Ice-Breaking & Introduction
2. Explaining the Tool & why it is being deployed
3. Identify a starting point for the timeline by establishing key milestones (e.g. village establishment)
4. Chronological mapping
    - Organize events year-wise or by significant periods (e.g., decades)
5. Include events like government initiatives, NGO interventions, and conservation declarations
6. Specifically, document events related to forests, pastures, water bodies, and other commons.
7. Parallelly document narratives, stories, quotes such as story of village establishment, meaning of village name

5 VILLAGE HISTORY
HISTORICAL TIMELINE

SAMPLE 1

VILLAGE HISTORICAL TIMELINE

Before 1950	1950	1968	1978
Settled in the village since many years back	Shifted Bwanruangh to Taudaizaeng	Shifted Taudaizaeng to Sukuangluang area of 25houshold	Settled to Diamchangluang or Bwanruangh Taudaizaeng(present village)

Year/Period	Event
1970	Primary school established
1993-1995	Sand quarry developed at Irang River. Introduction of orange, lemon, pineapple in horticulture farm to large scale
1997-2000	plantation of lemon grass, sandal wood
2003	Banana plantation to large scale and upgraded junior high school to High school
2018	Hunting banned completely till date, RNBA initiated agroforestry Activity called FORLIS (Forest Restoration of Locally Important Species).
2018-2024	Spring shed based water shed program undertaken under NABARD.
2019-2021	Identified as one of the model villages under HADP.
2020-2024	Increase access to entitlement: Ration, revival of school, community Hall construction, Swachh Bharat, Anganwadi, Housing scheme, health insurance. Main crop of livelihood is banana

5 VILLAGE HISTORY

GUIDING QUESTIONS

1. Identifying Key Historical Events
    a. When was the village established?
    b. Have there been any major changes in land use or boundaries (e.g., bifurcation, expansion)?
    c. Have there been any natural disasters (floods, droughts, forest fires) that affected the village and its resources?
2. Forest and resource management
    a. Since when has community been conserving forest and natural resources?
    b. Has jhum been practiced, since when?
    c. Has any major plantations taken place, when? why?
    d. Have there been efforts to conserve specific species or declare conservation areas/reserves? If so, when and why?
    e. Are there any festivals tied to history of the village
    f. When were invasive species first observed?
3. Mapping Significant Interventions
    a. When did any outside organizations (NGOs, government) start intervening in forest or natural resource management?

6 TIME TREND

The aim is to this exercise is to understand how land use, resource conditions and the accessibility and utilization of these resources over time across two to three time periods.

ASPECTS THAT CAN BE COVERED IN TIME TREND

Land use change


Forest


Pasture


settled Cultivation area


Shifting cultivation


Stone quarrying

Forest Resource change


Plant& animal biodiversity


Age gradation


Forest density


Forest fire


Soil/ humus

Land access and use change


forest food access


livelihood access


sustenance access

6 TIME TREND

Materials

Chart papers, sketch pens, pencil, eraser

Participants

6-8 community members including elderly, and youth

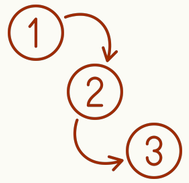
Time

45 minutes

Outputs

1. Time trend mapping
2. Narrative writeup

Process



1. Ice-Breaking & Introduction
2. Explaining the Tool & why it is being deployed
3. Identifying Time Periods
   - Define three key time periods based on significant events.
4. Land Use Change
   - List dominant land uses (forest, agriculture, settlements) for each period.
   - Use stones/stars to mark proportional land area, where the total land area under all uses for any one period = 10
5. Forest Resource Change
   - SCORE out of 5 STARS for biodiversity, species density, age gradation, fire intensity, and soil/humus stars) for each period.
6. Land Access & Use Change
   - Rate access changes on a scale of 1 to 5, where 1 means least access and 5 means full access.
7. Document changes in land use, resource conditions (forest, fish) and access (e.g., forest food, medicinal plants) in a

6 TIME TREND MAPPING

Land use change

SAMPLE 1 - Land use change

Period	1947	1985	2023	Remarks
FOREST	7.5	6	4	
SHIFTING CULTIVATION	2	2	1	
HABITATION	0.5	1	1	
HORTICULTURE	0	0	1	
USED TERRACE	0	1	0	
UNUSED TERRACE	0	0	1	
FOREST TO HIGHWAYS	0	0	2	
TOTAL	**10**	**10**	**10**	

TIPS

The total of land uses listed for each of the time periods should be equal to 10

6 TIME TREND MAPPING

TIPS

A score of 1 means the lowest level of the attribute, while a score of 5 means the highest.

Forest Resource change

Period	1947	1985	2023	Remarks
PLANT BIODIVERSITY	*****	****	***	
ANIMAL BIODIVERSITY	*****	****	***	
AGE GRADATION (multiple age trees)	****	****	***	
FOREST DENSITY	****	***	***	
FOREST FIRE	**	***	***	
HUMUS/LEAF LITTER	****	***	**	

SAMPLE 2 - Resource availability change

Land access and use change

Period	1947	1985	2023	Remarks
FOREST FOOD ACCESS	*****	****	***	
FIREWOOD ACCESS	****	****	***	
MEDICINE ACCESS	****	***	**	
GRAZING ACCESS	***	**	**	
LIVELIHOOD ACCES	****	**	*	

TIPS

Also capture the **'why'** behind the change in resource change and land access and use change

6 TIME TREND MAPPING

GUIDING QUESTIONS

Past

1. What stories have elders shared about the forest and land use in the past?
2. Were there specific customs, rituals, or beliefs associated with land and forests?
3. How were community decisions about land use made? Who had authority?
4. How did people experience the availability of forest products (was there abundance or scarcity)?
5. What were the traditional rules for accessing and using forest resources?

Middle

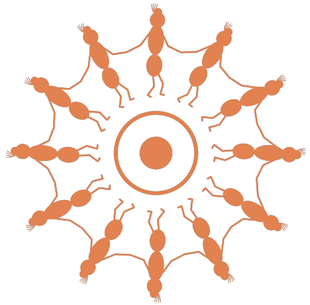
6. What were the biggest events or changes that affected forests and land use? (e.g., government policies, migration, development projects, natural disasters)
7. How did the community react to these changes? Did they resist or adapt?
8. Did new groups (e.g., government, private companies) get involved in land decisions?
9. What kind of new opportunities or challenges arose in this period?

Present

10. What are people most concerned about regarding forests today?
11. How has climate change affected forests and resource availability?
12. What conservation or restoration efforts are happening, and who is leading them?
13. Have younger generations' interactions with the forest changed compared to older generations?

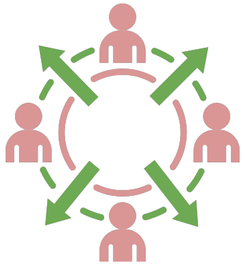
7 INSITUTIONAL MAPPING

The aim is to map out and understand the roles of different traditional and external institutions/agencies functional in the village



Traditional Institutions

Carved institutions



External Agencies

7 INSITUTIONAL MAPPING

Materials

Chart papers, sketch pens, pencil, eraser

Participants

6-8 community members including elderly, and youth

Time

45 minutes

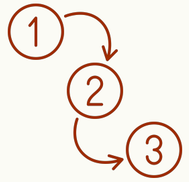
Facilitators

2 persons

Outputs

1. **Institutional mapping table**
2. **Narrative writeup**

Process



1. Ice-Breaking & Introduction
2. Explaining the Tool & why it is being deployed
3. Institution listing
   - List out all traditional institutions who play a key role in decision making and governance of natural resources
   - List out all carved institutions related to natural resources. These are the institutions which have been created due to external agencies and their associated projects.
   - Link the carved institutions to the external agency and project which led to the creation of the institution

1. For each of the identified institutions, map out the roles and responsibilities, regulations they create, benefit sharing arrangements, dispute redressal mechanisms
2. Ask the community to rank the institution's power and influence on a scale of 1 to 5, with 1 being the least powerful and 5 the most.
3. Gather community perspectives on each institution—whether they see it as good or bad and why.

7 INSTITUTIONAL MAPPING

Traditional Institution		Intervention list	Regulations/ Rules	Benefit sharing arrangements	Good or bad or mixed
Gram Sabha					
Carved Institutions	**Associated agency**				
VSS	JICA				
Committee name	PRADAN				
Committee name	NABARD				
Self Help Groups	Livelihood mission				
Watershed Committee	Soil and Moisture conservation department (SWCD)				

7

IMPACT OF EXTERNAL AGENCY

POSITIVE OR NEGATIVE

The aim of this additional tool is to understand whether the actions by external agencies have a positive or negative impact on Community Stewardship.

IMPACT OF EXTERNAL AGENCY SAMPLE

Fire control

- Forming fire lines
- Introduction of rules to prevent fire control

Soil knowledge

- Staggered contour trench in sloppy area to avoid erosion of soil

Market influence

- Increase in demand of stones leading to increase in stone quarry

7

IMPACT OF EXTERNAL AGENCY

Quantum of external investment

The aim of this exercise is to understand the quantum of investment from external agency into the village

QUANTUM OF EXTERNAL INVESTMENT SAMPLE

S. no.	Institution/Agency/Programme	Activity	Investment
1.	JICA	*1.1 Plantation* *1.2 Nursery*	*1.1 Rs. XXXXX* *1.2 Rs. XXXX*
2.	WATERSHED DEPARTMENT	*2.1 Check dam* *2.2 Plantation* *2.3 contour trenches*	2.1 Rs. XXXXX 2.2 Rs. XXXXX 2.3 Rs. XXXXX
3.	MGNREGA	*3.1 Check dam labour component* *3.2 CC road labour component*	*3.1 Rs. XXXXX* *3.2 Rs. XXXXX*
4.	Forest Department	*4.1 Plantation*	*4.1 Rs. XXXX*
5.	Livelihood mission	*5.1 Loan to SHG members* 5.2 Enterprise development fund	*5.1 Rs. XXXXX* *5.2 Rs. XXXXX*
	TOTAL		**Rs. XXXXXX**

7 INSITUTIONAL MAPPING

GUIDING QUESTIONS

1. **Understanding Institutional Roles & Responsibilities**
   - What are the key responsibilities of this institution?
   - How are decisions related to natural resources made within this institution?
   - Who participates in decision-making, and how are decisions enforced?
   - How has the role of this institution changed over time?
2. **Governance Mechanisms & Regulations**
   - What rules or regulations has this institution established for managing natural resources?
   - How are these rules enforced? What happens when someone violates them?
   - Have there been changes in these rules over time? If so, what led to the changes?
3. **Benefit Sharing & Resource Distribution**
   - How are benefits (e.g., forest produce, plantations, soil and water conservation, project funds) distributed by this institution?
   - Are there specific eligibility criteria for benefit distribution?
   - Do some groups benefit more than others? Why?
4. **Traditional vs. Carved Institutions**
   - How do traditional institutions differ from externally created (carved) institutions in their approach to governance?

PARTICIPATORY FOREST INTERACTION ASSESSMENT

HOUSEHOL FOREST INTERFACE ASSESSMENT

HOUSEHOLD SURVEY

Household forest Interface

The aim is to understand the household level interactions with the forest

1. Livelihood Basket

Understand the activities undertaken for sustenace such as collection of products from forest, jhum, etc.

2. Land Details

Identify different levels of access: possession, leased, ownership, use for different land types.

3. Forest People Interactions

What is a good forest, knowledge of forest routes, frequency of visiting forest, purpose of visiting forest, reason for protecting forest

Understanding time invested in forest activities through 7-day recall

4. Institutional access and participation

Understand the level of participation of the household in forestry-related institutions.

5. Emerging Opportunities /Risks

Understanding the household's view of the various opportunities and risk present.

FOREST HEALTH ASSESSMENT

EVALUATING THE ECOLOGICAL HEALTH OF THE FOREST

1. TRANSECT WALK
2. FOREST CLASSROOM
3. BIODIVERSITY & BIOMASS ASSESSMENT

1 TRANSECT WALK

Materials

Field note book, andriod phone installed with koboCollect app

Participants

5-6 community members including women, elderly, and youth

Time

60 minutes

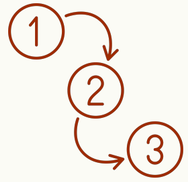
Facilitators

2 persons

Outputs

1. **List out community indicators of forest health**
2. **Narrative writeup**

Process

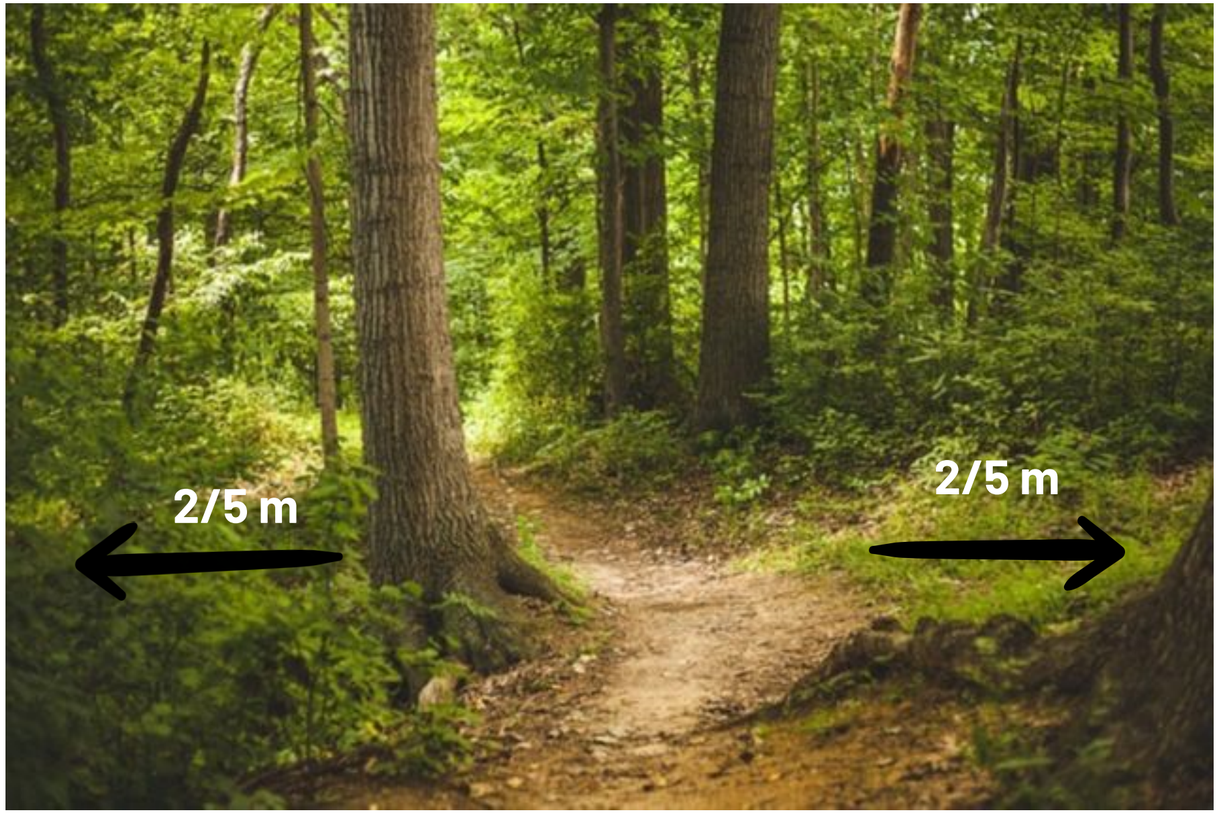


1. Ice-Breaking & Introduction
2. Explaining the Tool & why it is being deployed
3. A 250-meter transect with a 2+2 m belt for dense forests and 5+5 m for open forests will be followed
4. Start the Transect
   a. Take the initial GPS reading to mark the starting point of the transect start (walk few meters inside the forest)
5. Data Collection
   a. Observe within the defined belt.
   b. Team splits: Left side observes site indicators (droppings, humus, deadwood, etc.), Right side does the same.
   c. Count steps (around 400) as you walk along
6. End the transect
   a. End the transect at 250 meters and record the GPS endpoint

1 TRANSECT WALK

Community forestry interaction and indicators to be observed

No. of lopped trees/ cut stump
No. of dead standing trees
No. of ant/ termite mound
Thickness of humus (in inch)
Signs of edible mushroom
Sign of poisonous mushroom
Well-defined stand age gradation
Presence of water bodies
Sign of dead dying wood/ debris
Sign of diseased plant/ leaf discoloration
Sign of pollinators (Bees, wasps, butterflies, moths, birds, beetles)



Sign of wildlife droppings
Sign of livestock droppings
Sign of fire instances
Sign of regeneration after fire
Sign of soil erosion (landslides)
Sign of coppice shoots
Sign of logging
Sign of climber cutting
Sign of pollarding/ lopping
Sign of girdling
Sign of lichen/ mosses on the tree barks/ rocks/ ground

2 FOREST CLASSROOM

Materials

Field note book

Participants

5-6 community members including women, elderly, and youth

Time

60 minutes

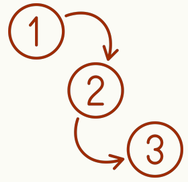
Facilitators

2 persons

Outputs

1. **Understand "why" are these considered as indicators**
2. **Their impact on the structure & function of forest**

Process



1. Ice-Breaking & Introduction
2. Explaining the Tool & why it is being deployed
3. Sit together with the community members like that of a classroom environment
4. Brainstorm on the observations made during the transect walk
5. Identify community's indicators for defining the health of the forest based on their intrinsic knowledge
6. Understand the reasoning behind recognizing certain community-defined indicators (eg: nature of land, water, flora and fauna, productivity etc.) as valid indicators of the forest health
7. Also explore how specific indicators or activities such as FOOD, FIRE, GRAZING and HUMUS influence the structure and function of the forest
8. Simultaneously take notes/ narratives of the conversations

2 FOREST CLASSROOM

STRUCTURE

- Reduce weed
- Regeneration of new species
- Increase/ decrease regeneration based on tending operations
- Increase/ decrease seed germination
- Maintain plant diversity
- Maintain habitat diversity

IMPACT

IMPACT

FUNCTION

- Control pest & diseases
- Provide nutrition & livelihood
- Maintain food sovereignty
- Enhance soil fertility
- Water retention & infiltration
- Soil carbon sink
- Produce meat, milk, dung
- Maintains grassland habitat

3 BIODIVERSITY & BIOMASS SURVEY

Materials

Field note book, andriod phone installed with kobocollect app

Participants

5-6 community members including women, elderly, and youth

Time

120 minutes

Facilitators

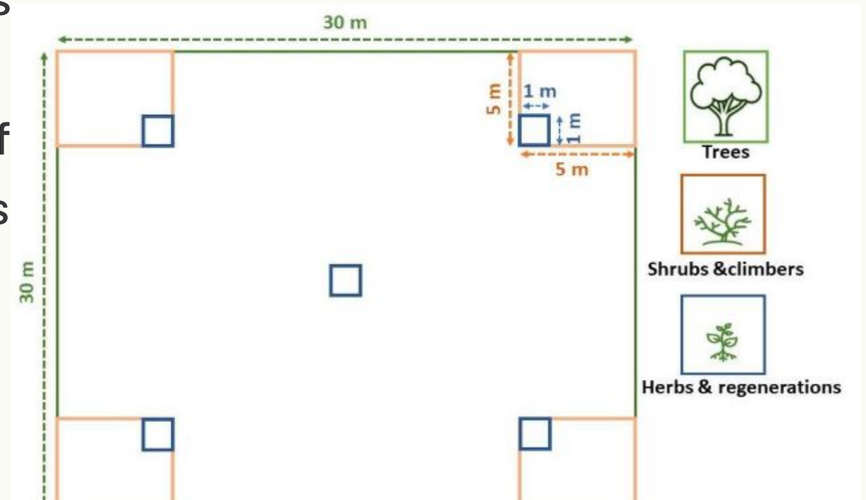
22 person

Outputs

Data collection/entered in the kobocollect app

Process

1. Ice-Breaking & Introduction
2. Explaining the Tool & why it is being deployed
3. Start lying quadrat with the participants
4. Within 30X30 m :
   - Identify all unique tree species within the plot and count the number of individuals for each species
   - Measure the girth of the tree at 1.37 m from the ground (Diameter at Breast Height) and a rough estimate of the tree height
5. Within 5X5 m:
   - Identify & count the number of shrubs & climbers/ Lianas
6. Within
   - Identif tubers



Stratification in a forest

Tree

- Single trunk/ stem with branches
  - Pole: Height 2-10 m
- Adult tree: Height > 10 m

Shrub

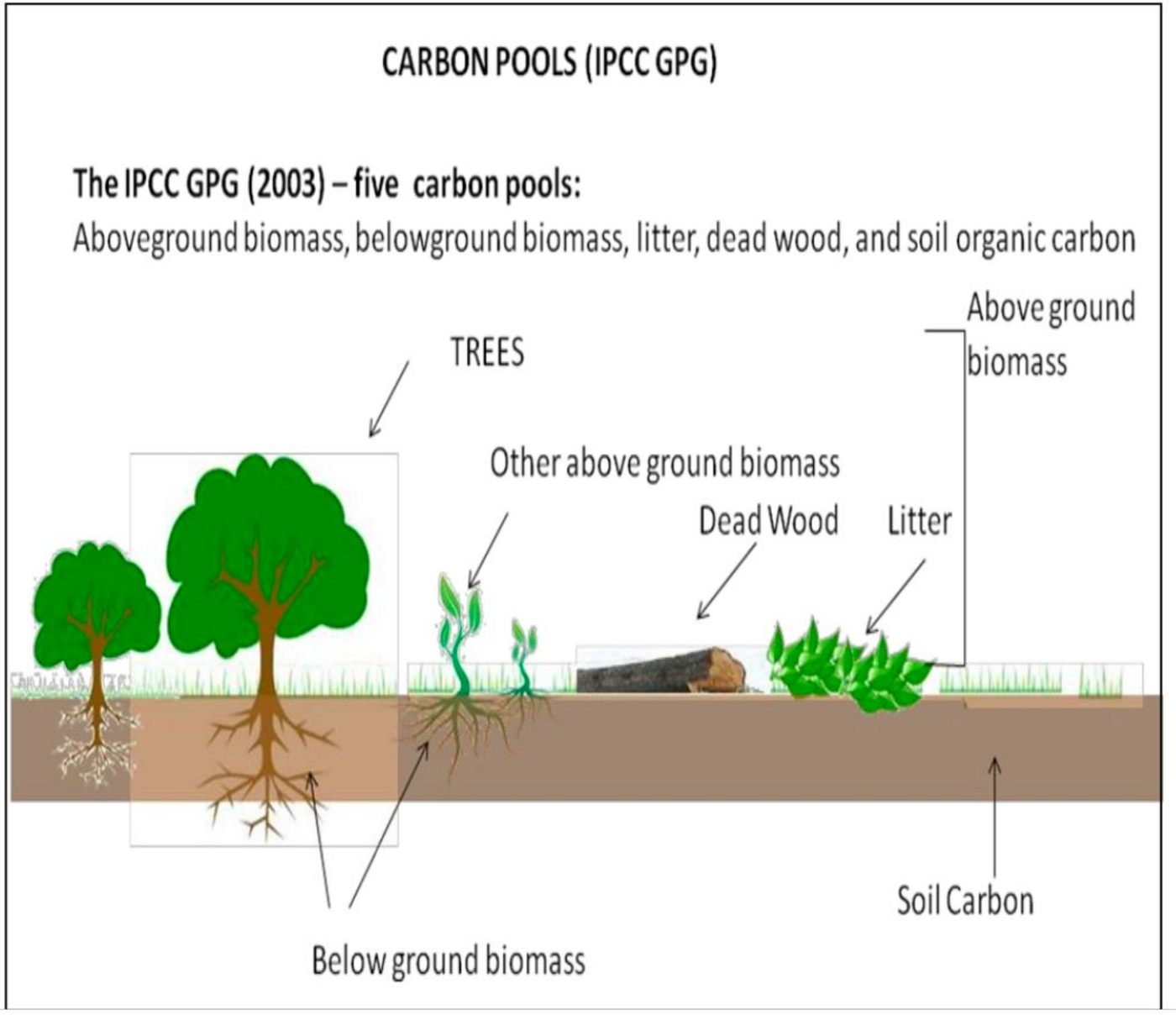
- Lack a trunk, rather have many woody stems
- Height < 10 m

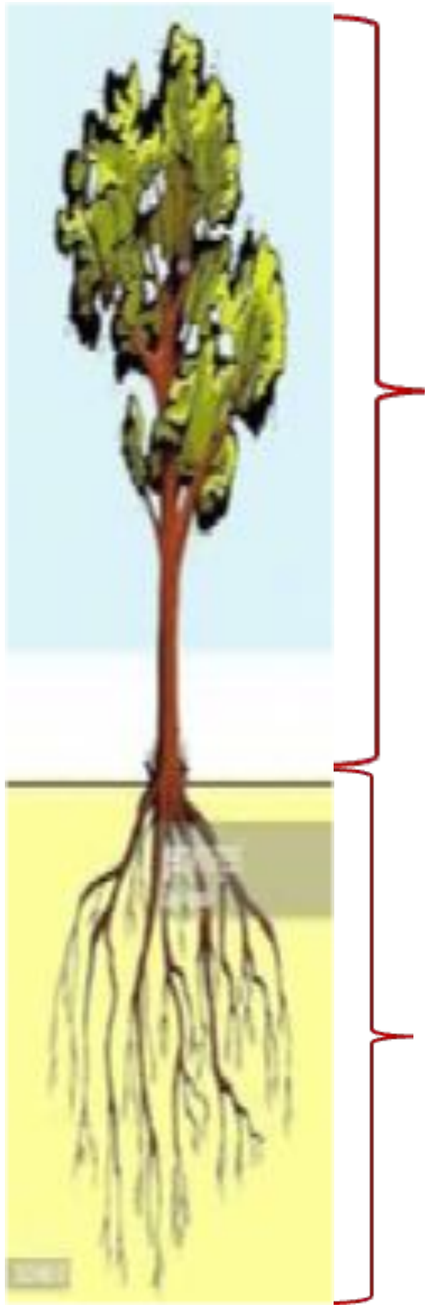
Herb

- Soft, green, delicate stems without woody tissues

UNFCCC recognizes following 5 pools

- Living Biomass
  1. Above ground
  2. **Below ground**
- Dead Organic Matter
  3. Dead wood
  4. Litter & forest floor
- Soils
  5. Soil Organic Carbon





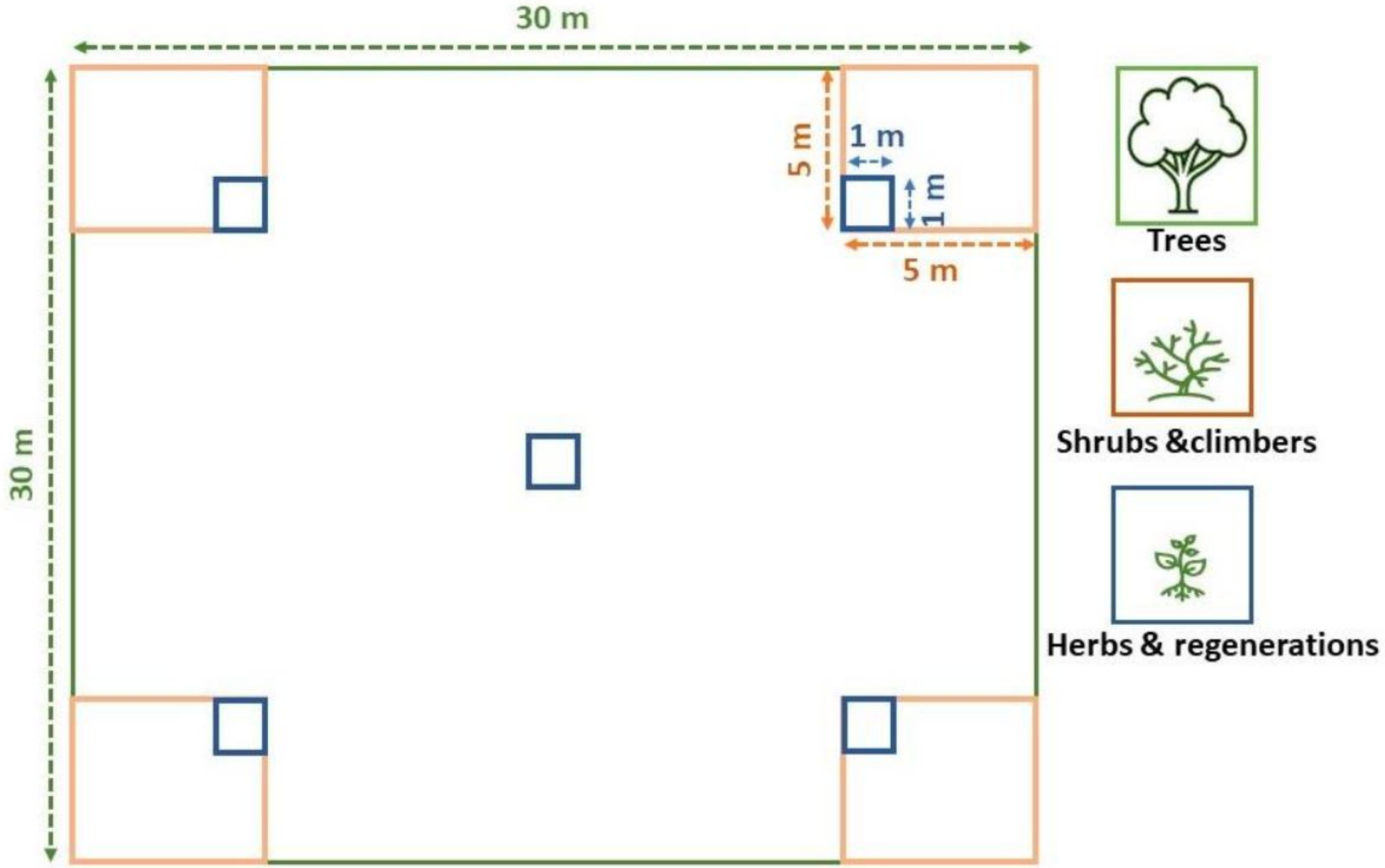
Methods for estimation of Above Ground Biomass (AGB):

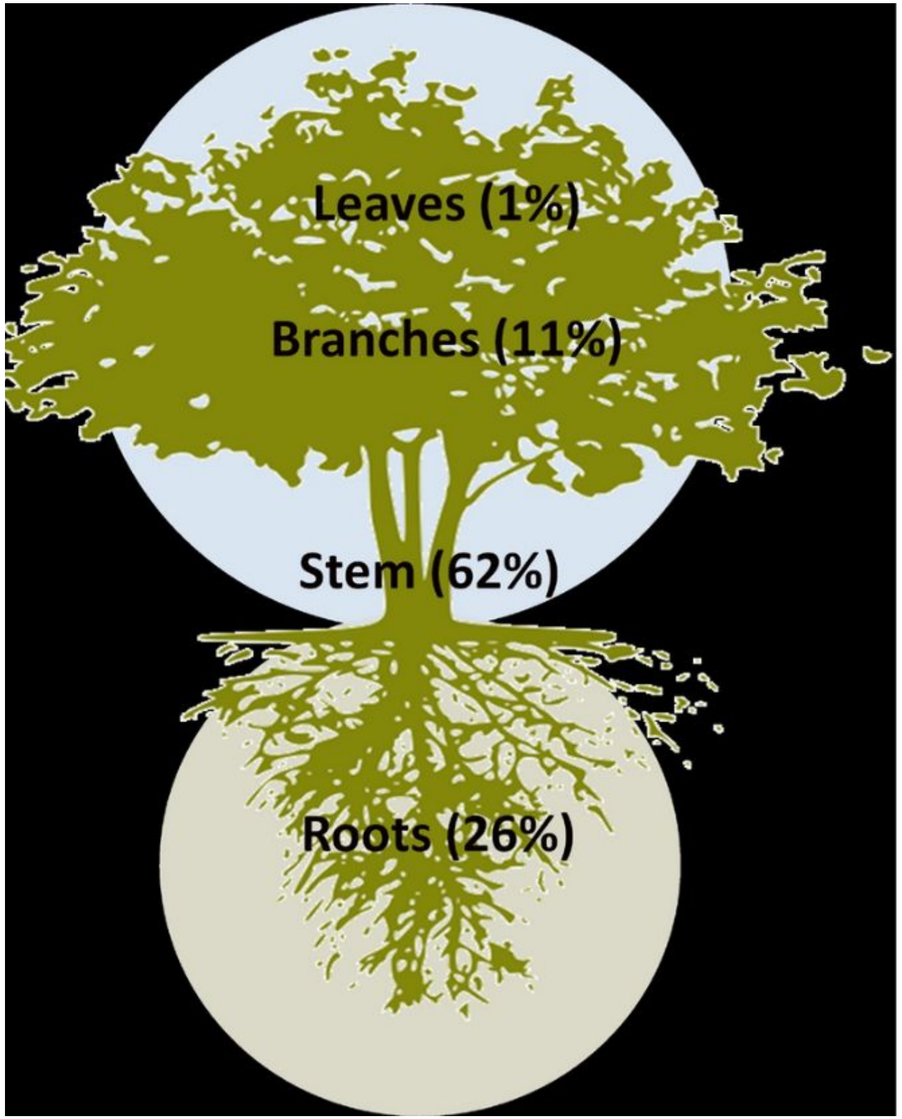
- Destructive method
- Species-specific volume equation (FSI 1996)
- Allometric equation
- Remote Sensing & Geographical Information System

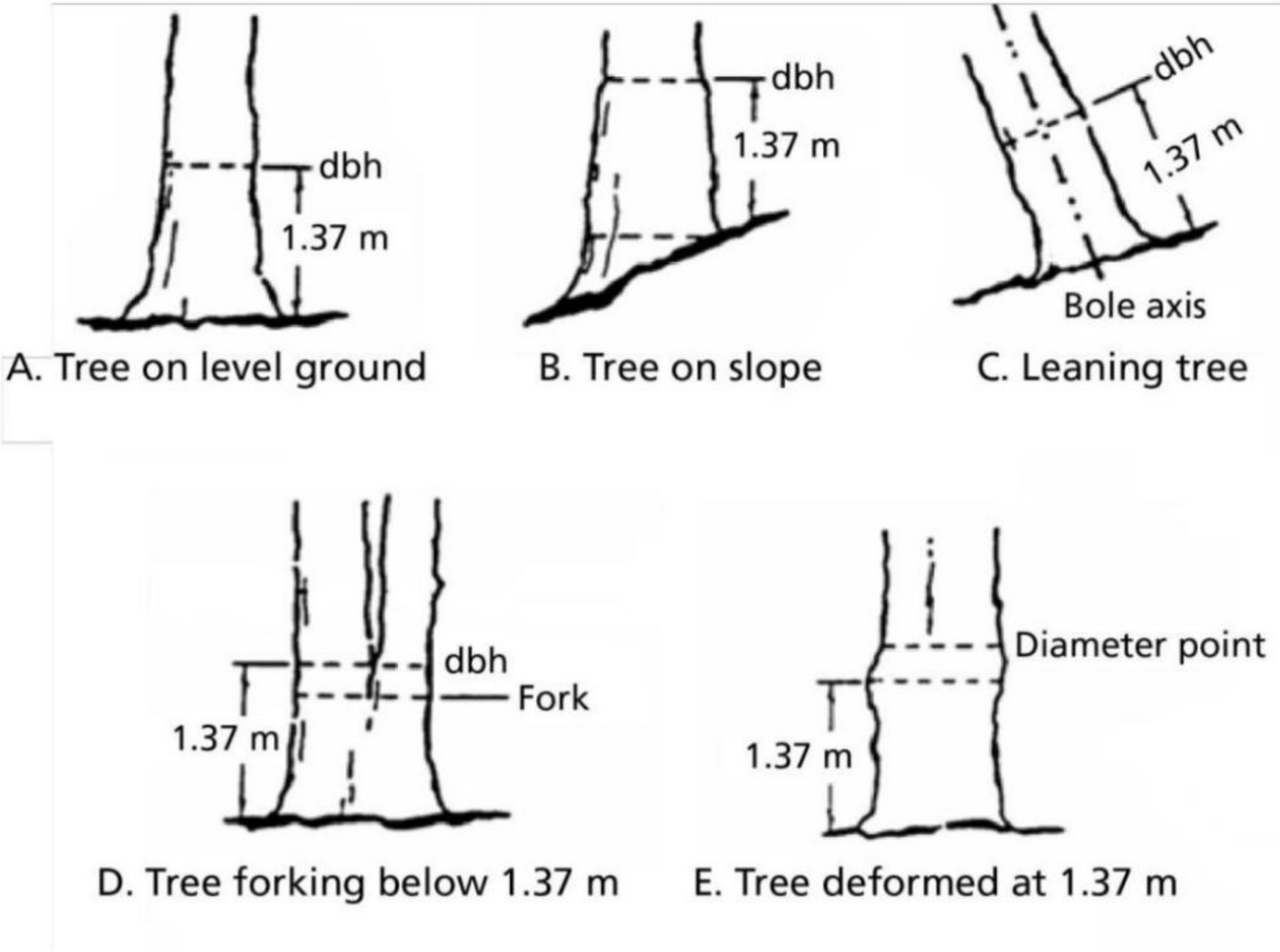
Methods for estimation of Below Ground Biomass (BGB):

- Root-to-shoot Ratio (IPCC 2003, Mokany et al., 2006
- The conversion factor depends on the value of AGB

Quadrat method:



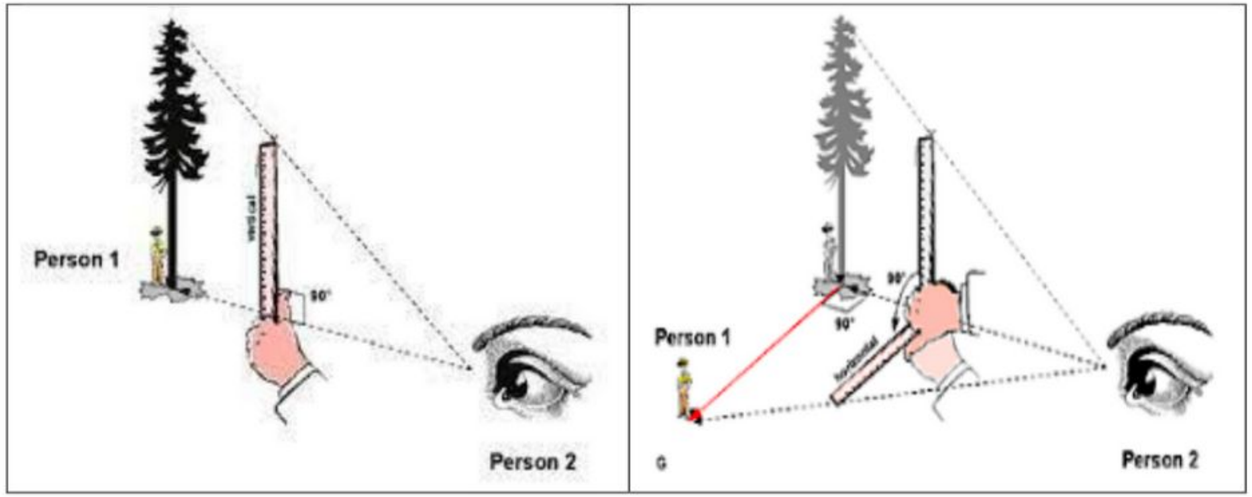




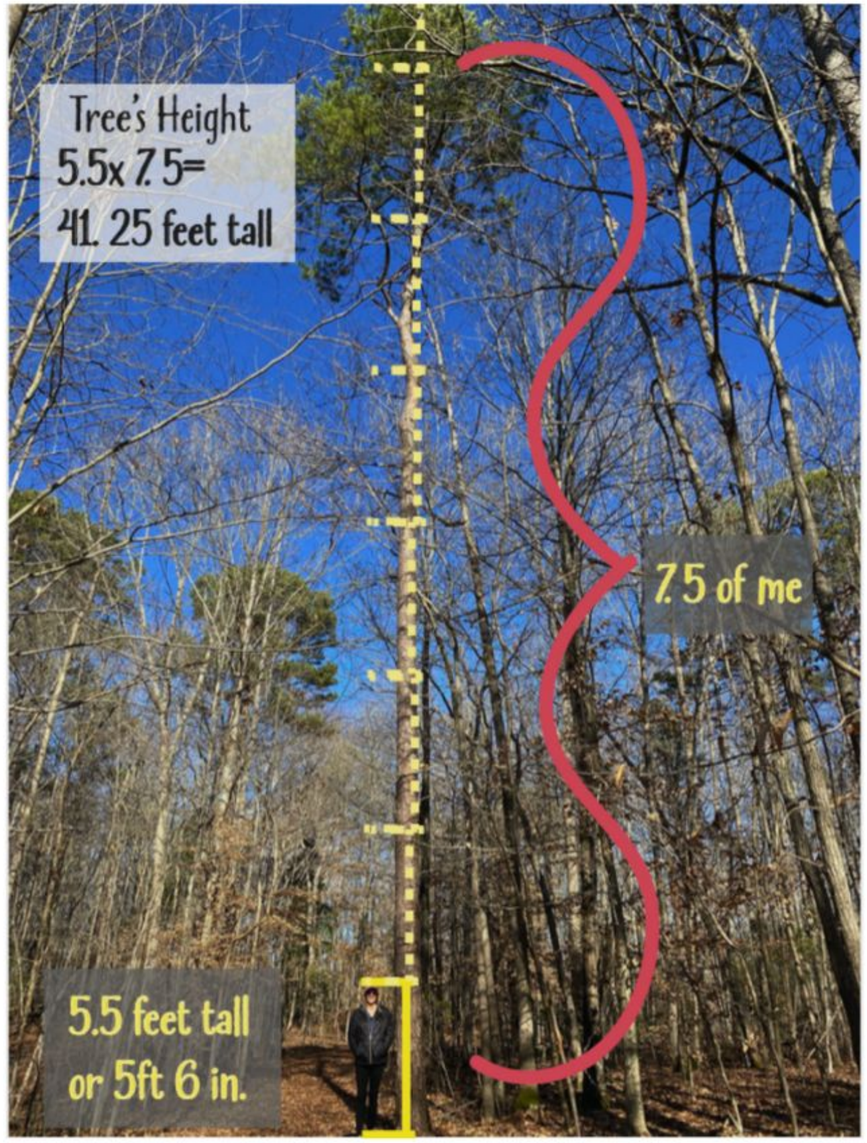
Tree biomass percentage

How to estimate tree height?

1. With a pencil/ scale and an assistant



2. With a stick/ person of known height

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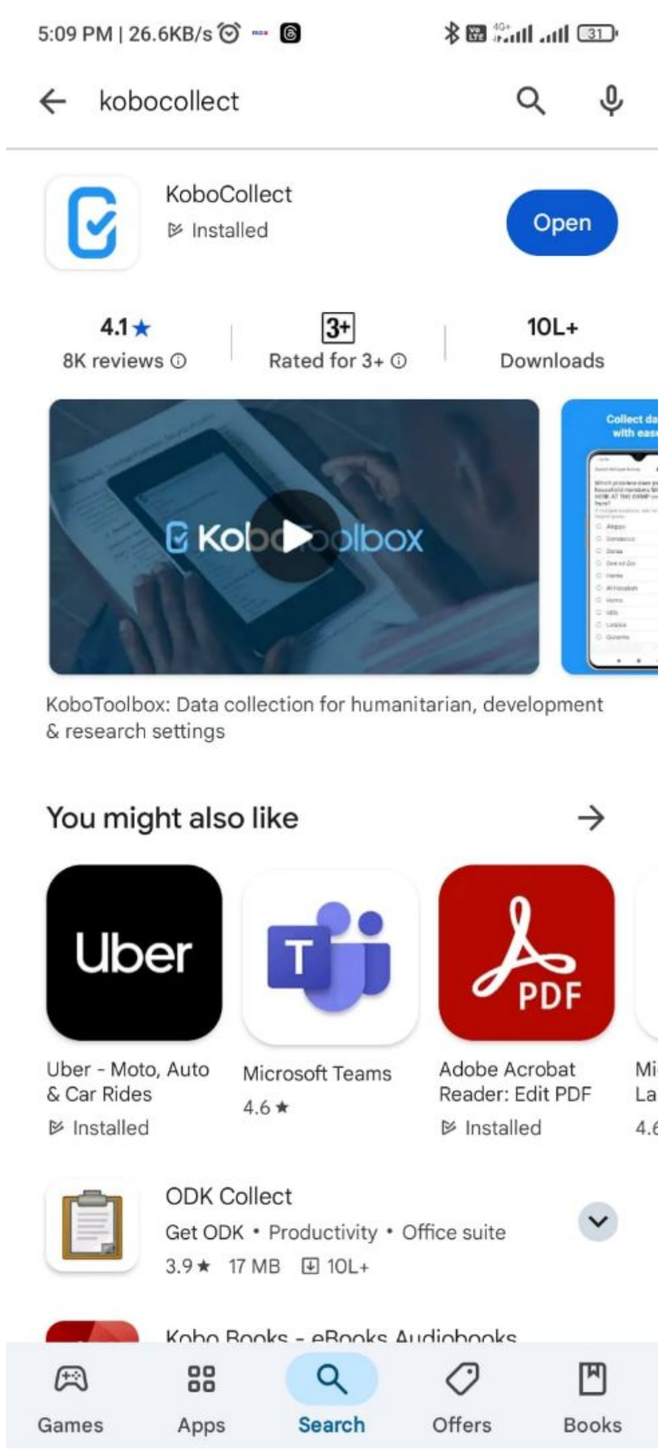
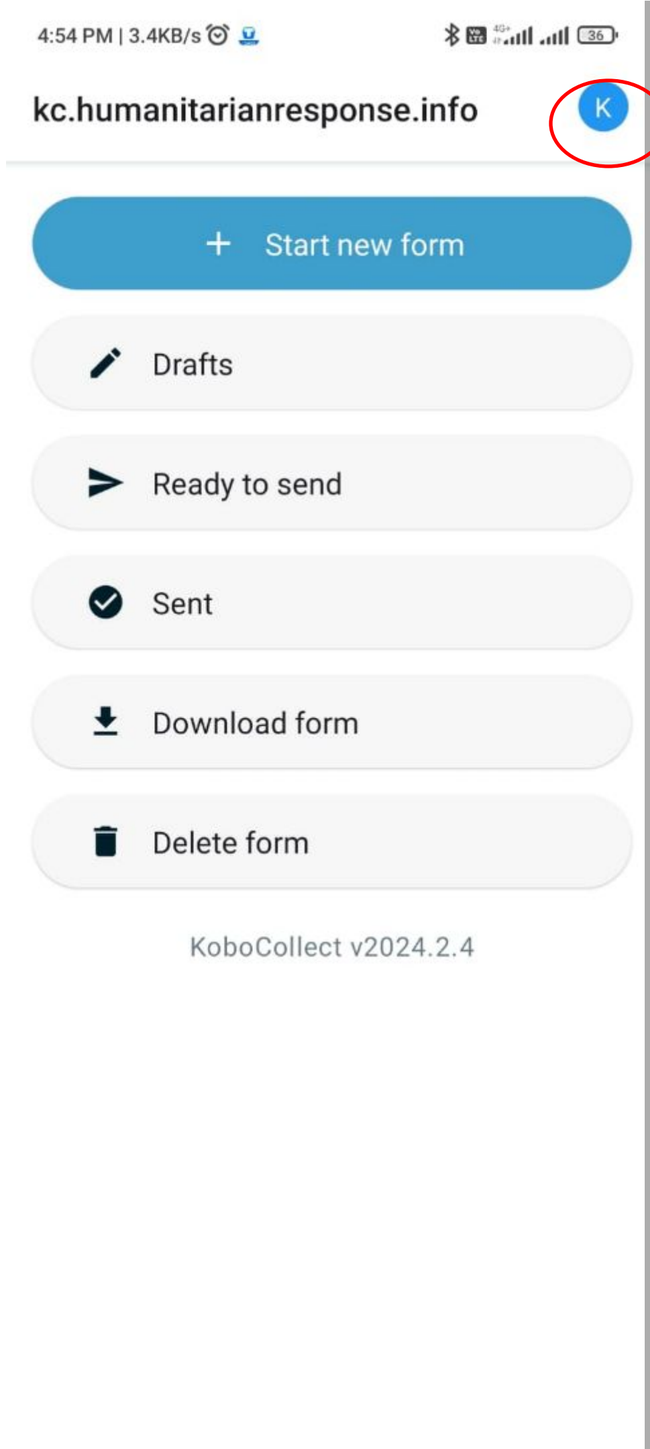
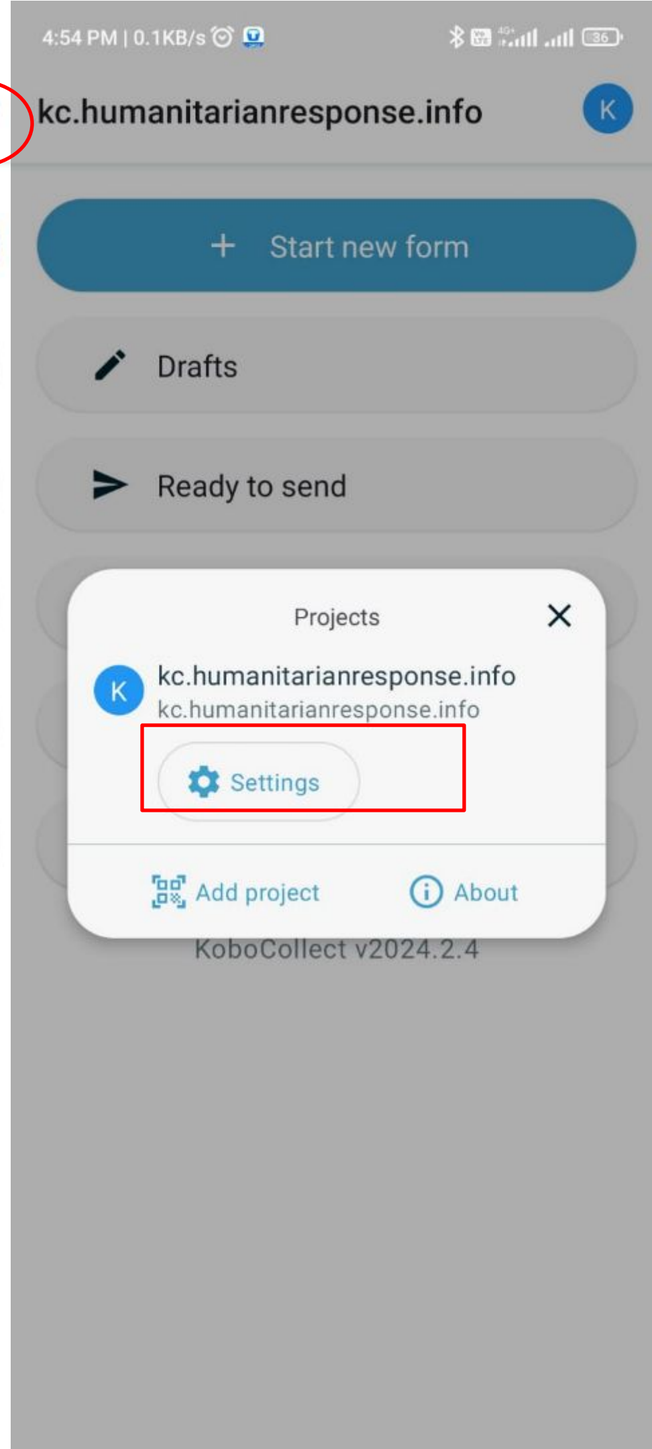
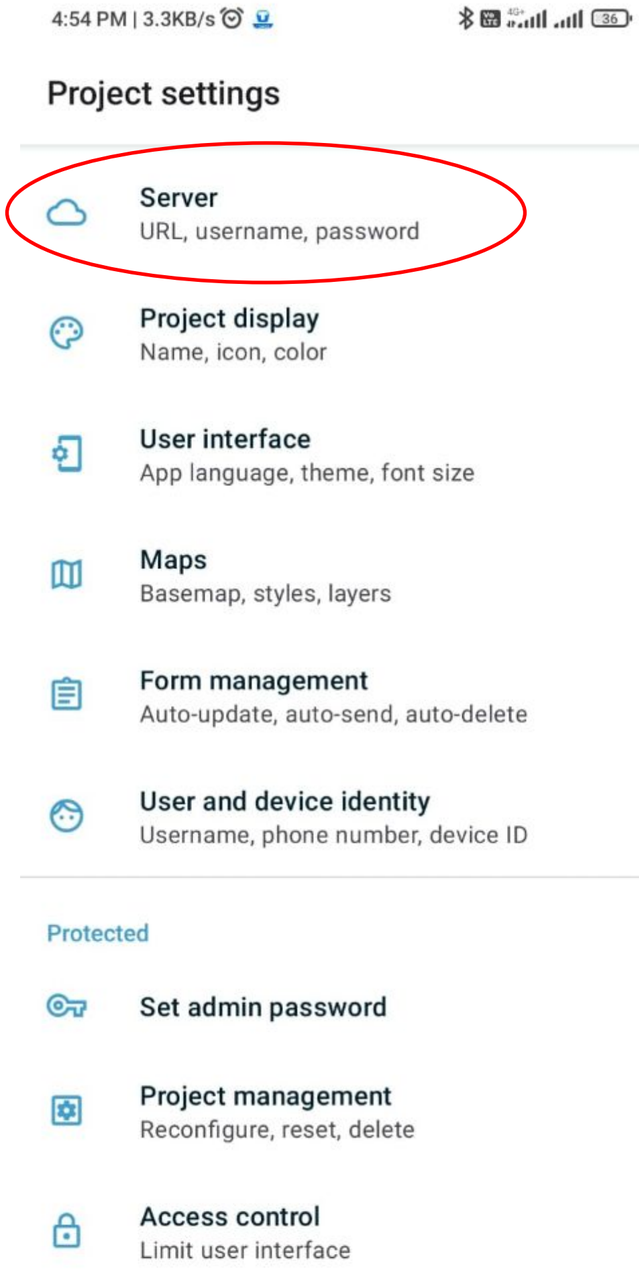
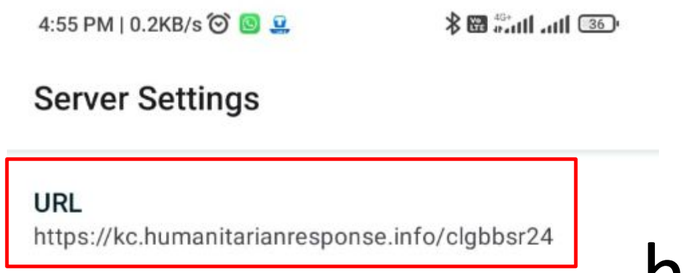
Installing and using Kobo toolbox for data collection











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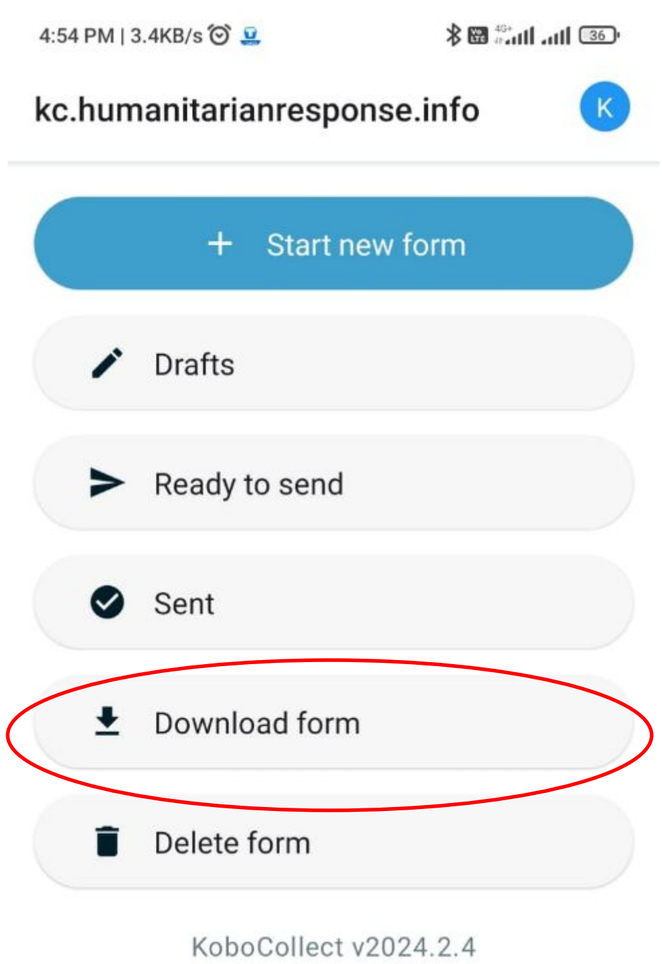
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Start new form
Drafts
Ready to send
Sent
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Landstack team has been curating and refining this toolkit through iterative processes learning from field exercises with local communities in Odisha, Meghalaya & Manipur in collaboration with field teams of FES, RNBA, PRADAN & GramVikash