**Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006**

*[Forest Rights Act, 2006]*

# Vision Document

By

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# Contents



# Annexures

Background: Forest Rights Act at its core has three vital goals. One, correcting the historical injustice of alienation from forests, that resulted in severe socio-economic deprivations, meted out to the Tribes and other traditional forest dwellers of this country. Two, ensuring security of tenure and livelihood. Three, institutionalisation of community approach to conservation.

With 44% of the geographical area categorised as forests and close to a third of the population belonging to Scheduled Tribe (ST) category, Chhattisgarh state decisively moved towards realisation of rights enabled by the Act. Dantewada district with more than 70 % of its area covered by forests and 75% STs has been a forerunner in this entire process. The District Administration and Forest Department, have enabled 9541 Individual Rights, 986 Community Forest Rights (CFR) and 61 Community Forest Resource Rights (CFRR).

The next step post granting of rights concerns with the most critical aspect of its prudential use. This can set the tone for sustainable development, a principle embedded in the act, and correct any deviations which could have potentially jeopardising consequences in the conservation and development domain.

Individual Forest Rights based Cluster Development is a step in that direction. Clusters leverage the advantages of scale and community. Developmental interventions can be socially and economically more effective, if group rather than an individual is the focus. More importantly, negotiations with the market forces, a reality to live with today, is more secure when done in organised groups.

Along with it, Community Forest Resource Rights (CFRR) and Community Forest Rights (CFR) wherein committees under section 4 e (1) of the rules of Act have to be formed, shall frame the management plans for their respective areas and resources. The aim of this document is set the tone for the above developments and provide a broad framework to carry this process forward realising the goals as enshrined in the Act.

Objectives: 1. Food and Nutritional Security

Food Security is a quantitative measure that concerns itself the amount of food available. Whereas nutritional security emphasises on the quality of the food consumed measured through its diversity. Essentially the former focuses on the calories consumed and the later on the essential vitamins and minerals available. Only when both are ensured can there be a significant and sustained improvement in the health indices of the community.

2. Forest Productivity Improvement

Forests dependent communities collect various types of Non-Timber Forest Produces (NTFP) and wood primarily for subsistence purposes. However, destructive harvesting practices of late with other factors such as Invasive Alien Species , Climate Change among others are having their degrading impact on the forests. A comprehensive approach focussing upon IEC (Information, Education and Communication) activities, restoring natural balance and climate proofing could go a long way in improving the forest productivity.

3. Ensuring an Increase and Sustainability in Income Levels

Produces do not hold value until and unless the markets provide adequate returns for the same. Markets demand a sustainability in supply qualitatively and quantitatively along with right produce at the right time. Hence income levels are a function of production, productivity, quality, right produce, value addition and capacity to negotiate with the markets. Only when all the above come together there can be a sustained increase in the income levels, essential for improved standards of living.

4. Environmental Sustainability

The very essence of the Forest Rights Act is to give back the rights of conservation to the communities which have historically been at the forefront of conserving the forests. The consumerist tendencies that have seeped into the society are now having their negative consequences for the forests too. Clearing vegetation for paddy cultivation is recorded at many places where rights have been granted. Destruction of trees and extraction of soil have also been observed. These tendencies and practices have to be arrested. Parametrisation for measuring sustainability, in terms of Soil moisture and carbon content, organic farming practice adopted among others needs to be evolved.

5. Preserving Heritage and Traditional Ways of Life

As the societies here are primarily agrarian and forest dependent in nature, their traditions and identities are deeply grounded in the same. The essence of which is diversity, community bonding and seasonality of life activities. Any socio-economic intervention needs to account for and more importantly respect these realities.

6. Convergences

An integrated and holistic approach to development makes it sustainable and relevant. Often critical gaps derail the entire process resulting in the waste of crucial resources, efforts and time. Any intervention could be beneficially and successful in FRA areas only when the various arms of the District Administration (Panchayat, Revenue, Agriculture, Social Welfare among others) and Forest Department work in tandem.

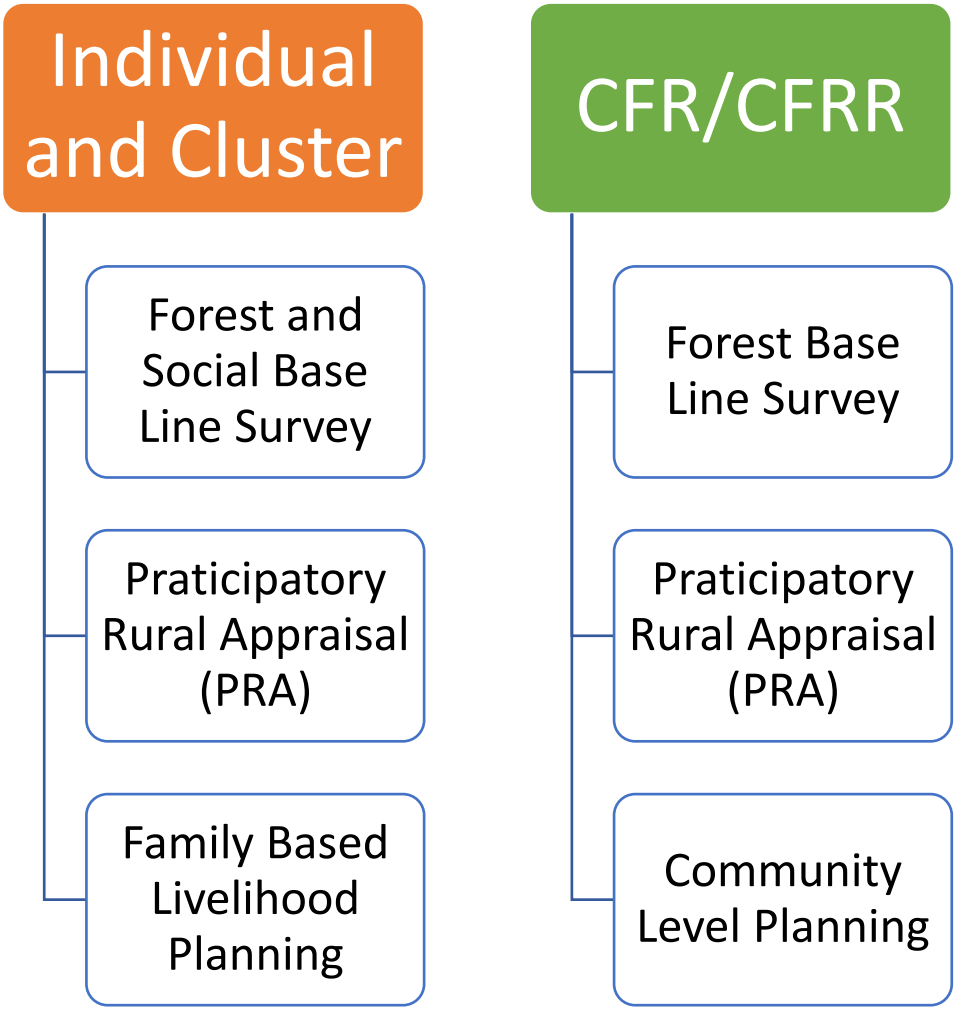
Approach:

The approach aims at categorising Individual & Clusters and CFR (utility emphasis)/CFRR (Management emphasis) into separate domains and then focus on data collection, planning and community participation.

For Individuals and clusters, since the micro level planning is reasonably possible the direction is towards conducting social base line survey (and also Participatory Rural Appraisal PRA, for identification of group concerns in clusters) and devising Family Based Livelihood Plans.

For CFR/CFRR emphasis is on PRA and identifying group concerns as the population we are dealing with is large and then devise a broader plan at community level.

***Process Flow Scheme***




Surveys are followed by Capacity building and infrastructure development for furthering the process.

For District and Block levels professional trainers will be placed on a remunerative basis whereas at village/community level emphasis will be on promoting volunteerism. This will ensure that both independence, stakeholder participation and competency is made available at appropriate levels.

Details of the Social and Forest Baseline surveys are as given below.

1. Base Line Survey

The essence of baseline survey is to gather data of certain critical parameters so as to monitor their variations over the period of time. This tremendously helps policy making and analysis, also in course corrections needed, for successful interventions.

A. Forest Baseline Survey

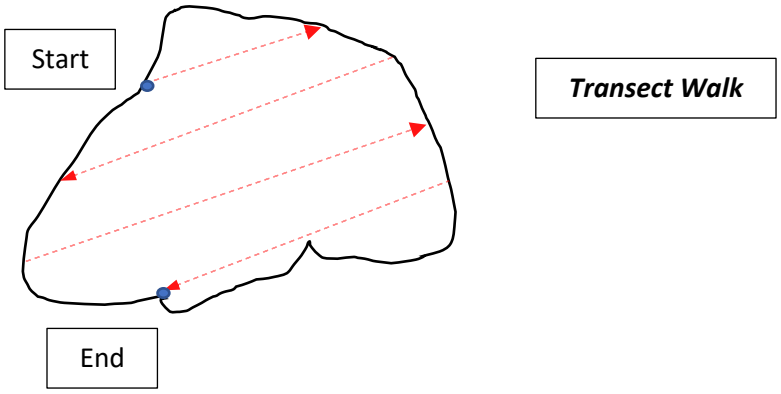
In Forestry, characterised by systematic variations and heterogeneity of parameters, statistical sciences concerning sampling comes handy for effective policy making concerning these expansive natural resources. Depending upon the resource availability and accuracy needed, the number of sample plots are finalised which

determine the confidence levels and error margins. Hence, at Division level or traditionally demarcated boundary level, sample plots could be laid out and appropriate generalisations about the population parameters could be arrived at.

Forest Baseline Survey would essentially concern itself with three forms:

a. Forest area description

Forest area description form (**Annexure A**) contains 5 categories of information, as given below primarily. Through transect walks a general assessment of the focus area, essentially those within the traditional boundaries, are done. Hence, the description form gives an overall picture of the forest area.




- Location and legal status of the forest area.
- Land related information focussing on terrain, soil and land use pattern mainly.
- Vegetative composition of the forest.
- Signs of fauna especially flagship species.
- Threats to the forest in the form of fire, grazing, invasive alien species among others.

b. Enumeration

Laying out sample plots and enumeration of trees, shrubs and herbs forms the second major step in the conduct of Forest Baseline Survey. The number of sample plots is decided based on the needs for accuracy. The data as collected during this phase forms the basis for planning especially biodiversity assessment and carbon stock estimations.

**Annexure B** contains all forms in series required for enumeration purposes.

c. Biodiversity Assessment

Biodiversity is an expression of diversity of lifeforms at various levels of the biological system – ecosystem level, species level and genetic level. Generally, greater the diversity better the resilience to stresses from biotic and abiotic sources. Hence, essentially quantitative assessment of biodiversity at species level is done through proper understanding of species richness and evenness.

The number of species in a community is referred to as species richness (assuming homogeneity of topography). The relative abundance of all species is called evenness. Species diversity includes both species richness and evenness. A community demonstrates a high

species diversity if many equally or nearly equally abundant species are present. Communities with a large number of species that are evenly distributed/populated are the most diverse and communities with few species that are dominated by one species are the least diverse (i.e. a community is composed of only a few species, or if only a few species are abundant, then the species diversity is low).

Species diversity indices like Shannon-Wiener Index is calculated separately for trees, shrubs and herbs as their individuals differ in size and are sampled differently.

The data collected during enumeration such as the number of individuals of each species and the DBH of each tree are utilized to derive secondary attributes like basal area (BA, m2/ha), density (D, trees per ha) and frequency (F, number of quadrates where trees are present in relation to total plots observed). Relative values of BA, D and F will be calculated.

The Importance Value Index (IVI), which indicated the dominance of a species, is calculated by adding up relative dominance (RDO), relative density (RD) and relative frequency (RF). However, in case of shrubs, herbs, saplings and for regeneration, the IVI is calculated on the basis of relative frequency and relative density alone. It is assumed that the dominance of a species increases with an increasing importance value and that the species with lowest importance value is the least dominant one.

**Annexure C** contains all details pertaining to the calculation of Shannon-Wiener Index, Importance Value Index (IVI) and an Area Biodiversity Assessment Table.

d. Carbon Stock Estimation

Improving and retaining carbon storage through developing and protecting of forests is one the most cost-effective methods of dealing with Climate Change crisis. For these purposes carbon stock estimation becomes a fundamental quantitative tool.

Nested quadrates of size 1 X 1 m and 3 X 3 m are made, along with it two more quadrates of size 5 X 5m at NE and SW direction are also demarcated. In 5 X 5 m plot, all the dead wood above 5cm diameter would be collected, weighed and recorded. In 3 X 3m, all the woody litter, that is all branches below 5cm diameter, would be collected, weighed and recorded. All shrubs and climbers in 3 X 3m plots would be up-rooted, weighed and recorded. For trees, allocation of carbon in root, stem, branch, twigs and leaves may be obtained separately.

In 1 X 1m plot, all the herbs/grasses including leaf litter would be collected, weighed and recorded. Dry biomass would be converted into carbon stock. For collecting data on humus and soil carbon, forest floor of 1 X 1m plot at the NE and SW corner of the main plot would be swept and materials thus collected, would be weighed and a portion of the same would be kept for the carbon analysis. After that a pit of 30 X 30 X 30cm would be dug at the centre of these 1 X 1m plots and a composite sample of soil weighing 200 g would be kept for organic carbon analysis.

**Annexure D** contains all Tables and calculations concerning Carbon Stock Estimation.

B. Social Baseline Survey

For Individual and Cluster domains the Individual/Family baseline survey **(Annexure E)** essentially concerns itself for family-based livelihood planning- that is micro planning. It captures Demographic details, livelihood options exercised, Land use patterns, Consumption basket and Agriculture related information.

However, certain inputs are not well captured or are missed at family level surveys, so it here that Participatory Rural Appraisal (PRA) **(Annexure F)** comes into picture. It effectively fills the gaps in surveys done at individual/family levels.

PRA essentially captures Dependencies on forests, Location of titles, Threats from community perspective, Community Resource use patterns among others including wealth ranking. More importantly PRA throws light on Community based interventions needed especially watershed, plantations etc.

In so far as the Individual & Cluster domain is concerned after the individual/family survey and PRA, family-based livelihood planning is done **(Annexure G)**. Here for each problem/ issue identified a solution is evolved along with actionable pointers.

In the case of CFR / CFRR PRA in itself along with Forest Baseline survey is sufficient for making community level interventions. Hence there is a very distinctive emphasis on forest productivity, Minor Forest Produce (MFP) and forest conservation unlike individual/cluster domains, where emphasis is on Agro-forestry, Agriculture and Horticulture.

Activities: Suggestive List

| Plantation | Protection | Livelihood Interventions | Soil and Moisture Conservation |
|---|---|---|---|
| Emphasis on growing forestry crops with potentials for Non-Timber Forest Produce (NTFP), for Biodiversity enhancement, those RET (Rare, Threatened and Endangered) Species and those with commercial utility. | 1. Fire Management<br>2. Grazing Management<br>3. Felling<br>4. Identification and protection of Seed collection areas and plus trees.<br>5. Boundary Demarcation<br>- Chain link fencing<br>- Bio-fencing<br>- Cattle Proof Trenches (CPT) | 1. Sustainable extraction of Non-Timber Forest Produces (NTFP)<br>2. Agro-forestry<br>3. Horticulture crops<br>4. Medicinal plants<br>5. Focus on growing indigenous varieties of millets and pulses<br>6. Livestock<br>7. Fisheries<br>8. Apiculture<br>9. Lac Cultivation<br>10. *Vanya* Silk based Sericulture<br>11. Development of Nurseries and seed collection<br>12. Value addition of Minor Forest Produces. | 1. Levelling activities<br>2. Loose Boulder Check Dams (LBCD)<br>3. Gabion Structures<br>4. Percolation Tanks<br>5. Ponds<br>6. 30-40 Structures<br>7. Contour Trenches (CT)<br>8. Water Absorption Trenches (WAT) |

**Setting the Tone**

In conclusion, the focus of this document is to set the tone and to an extend systematise our approach towards achieving the objectives as enshrined in the Forest Rights Act, 2006. Broadly, institutionalisation of community participation, maintenance of biodiversity, improving forest productivity, enhancing & sustaining the standards of living of the marginalised tribal communities and more importantly reforming & rethinking of forest management.

As this domain is vast and dynamic there can be neither be a single approach nor an all-encompassing framework. It is a continuously an evolving and learning approach. Hence flexibility and openness are key towards achievement of any tangibles. Therefore, any framework should consider these dimensions for it be of utility and vitality. This document too is a step in that direction.

## Annexure A

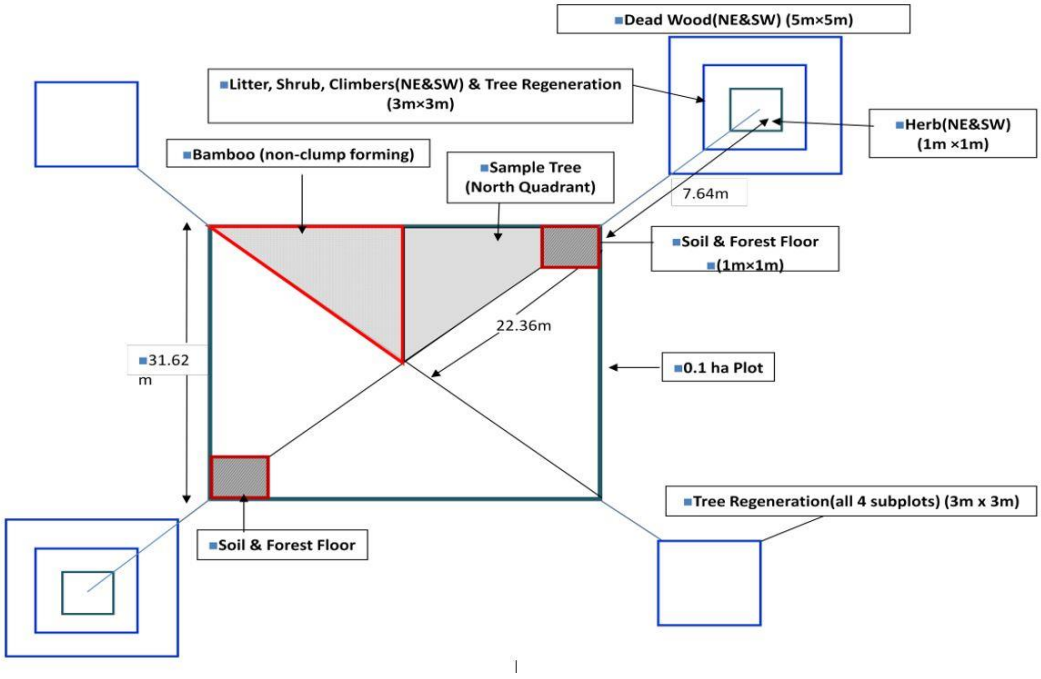
**Forest Area Description Form**

| | |
|---|---|
| Name of the Area | |
| Area (in Hectares) | |
| Situation | |
| Boundaries | N, S, E, W (mention boundary pillars, ridges, spurs, streams, etc.) |
| Legal status | Legal status of the forests may be as reserve forest, protected forest, un-classed forest, national park, private forest, private land with tree owned by government and undetermined, etc. |
| Land Use | The land use type of the plot may be categorised as closed forests, dense forests, open forests, scrub, bamboo brakes, shifting cultivation, young plantations of forestry species, tree in line, forest roads, grass lands, and barren, agricultural land without trees in surround, agricultural land with trees in surround, non-forestry plantations, habitation, and water bodies. |
| General topography | The topography of the area may be determined from the toposheets and the same may be confirmed by field observations. It may be categorized as flat, gently rolling, hilly and very hilly. |
| Altitude | In meters. In case of hilly areas give lower and upper limits. |
| Aspect | Main aspect and variations if any; The direction of the slope may be recorded as northern, north-eastern, eastern, south-eastern, southern, south-western, western, north- western and no aspect. |
| Gradient/slope | Precipitous, very steep, steep, moderate, gentle, etc. |
| Configuration | Rugged, undulating, flat, etc. |
| Rock and geology | Mention main underlying rocks including alluvial deposits |
| Soil | Texture, depth, permeability, drainage, surface compaction, humus, etc. |
| Soil erosion | Heavy/ moderate/ mild/ no erosion |
| Crop composition | Mention of major tree species predominant in the area and extent of their representation in terms of percentage may be made. |
| Regeneration status | Regeneration status may be observed and recorded as adequate/ moderate/poor/absent for major tree species. |
| Injury/ damage to crop, if any | Insect attack, fungal infestation, leaf defoliator, top drying, girdling, scarring, lopping, damage by natural calamities/ wildlife/fire may be observed assessed and recorded. |
| Grazing incidence | Depending upon the pressure of grazing exerted on the forests by livestock the incidences of grazing may be categorized as heavy/ moderate/ light/ none. |
| Presence of bamboos | If yes, brief description of bamboo density, bamboo quality, bamboo regeneration and bamboo description may be made. |

| | |
|---|---|
| Presence of grasses | Ground cover on an area of about 2 ha around the plot (grid) centre may be intensively observed to classify the area for grasses as very dense, dense, moderate, scanty and absent. |
| Presence of weeds | Ground cover on an area of about 2 ha around the plot (grid) centre may be carefully observed to classify the area for presence of weeds as very dense, dense, moderate, scanty and absent. |
| Plantation status | If a plantation is in existence in a plot (grid) area fully or partially, the details of the plantation with regard to its area, year of plantation, species, spacement, general growth conditions, average crop diameter, any specific events or happenings related to plantations may be observed, assessed and recorded. |
| water bodies | Name, type, extent, seasonality of the water body may be explored and recorded. Potability i.e., safe enough for drinking has to be ascertained. |
| Drivers of degradation | Biotic: Brief account of degradation sources may be given and on the basis of various factors of degradation like grazing, browsing, fire, lopping, girdling, illicit fellings, mining, encroachment, etc. the intensity of degradation may be categorized as heavily degraded, moderately degraded, mildly degraded and not degraded.<br>Natural calamities: Degradation due to calamities such as landslides, avalanches, floods, frost, cyclones, droughts may be categorized as heavily degraded, moderately degraded, mildly degraded and no calamities. |
| Faunal sighting, if any | The flagship species including mammals, birds, reptiles, amphibians, plants, etc. which may be very significant to the area may be identified. Suitable habitats and micro-habitats for such key faunal species may be identified and recorded so as to prescribe appropriate measures needed to conserve and improve. |
| Faunal traces of flagship species | The entire 2 ha area around the centre of plot (grid) may be scanned for any faunal traces of flagship species. If found the details of the same may be observed and recorded. |

## Annexure B

## Sample Plot - Schematic




**TREE ENUMERATION FORM –A (31.62mX 31.62m Central Plot/lateral plot)**

This form is used to record data of all the trees and bamboos measured in the sample plots of 0.1 ha. Separate form will be used for each of the sample plot. All trees with 10cm and above diameter at breast height are measured and recorded. Diameter of bamboo clumps will be measured at its base.

| S. No | Species name | Local name | DBH (OB) in cm | Height of selected dominant trees | NTFP utility | | Remarks, if any, about the tree condition |
|---|---|---|---|---|---|---|---|
| | | | | | Part of the tree | Approx. weight and or no. | |
| | | | | | | | |
| | | | | | | | |

**Tree Enumeration Table**

| Species | Diameter class in cm. (Number in each class) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 | 70-80 | 80-90 | 90 & over | Total |
| | | | | | | | | | | |

**BAMBOO CLUMP ENUMERATION FORM-B (31.62mX 31.62m Plot)**

This form is used to record data of all the clumps occurring in the plot. Separate form will be used for each of the quadrant.

| Sl. No | Species name | Local name | Clump dia in cm | Green sound culms | | | | | | | | | Green damaged/ twisted | Dry culms | | Remarks, if any, about the clump condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Current years | | | One to two years | | | Over two years | | | | Sound | Damaged/ twisted | |
| | | | | a | b | c | a | b | c | a | b | c | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

***a*** *denotes diameter class of culm between 2<5cm;* ***b*** *denotes diameter class of culm between 5<8cm;* ***c*** *denotes diameter class of culm above 8cm*

**SHRUB PLOT ENUMERATION FORM – C (3m X 3m Plot)**

Separate form will be used for each of the 3m X 3m quadrant. All individuals with 2 to 10 cm collar diameter at the base or dbh will be measured and recorded. All tree-plants having dbh equal or more than 5cm and less than 10cm are called adults while other young tree plants with 2 to 5 cm collar diameter at the base are called saplings for assessment of regeneration status.

| Sl. No | Species name | Local name | Collar dia at base in cm | DBH In cm (if any) | Height | NTFP utility | | Remarks, if any, about the condition of shrub vegetation |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Part of the plant body | Approx. weight and or no. | |
| | | | | | | | | |

**PLOT ENUMERATION FORM – D (1m X 1m Plot)**

This form is used to record data of all the herbs (including medicinal and aromatic plants) and seedlings counted in the 1m X 1m quadrants. Separate form will be used for each of the quadrant. All individuals below 2 cm collar diameter at the base will be measured and recorded. Tree plants below 2 cm collar diameter at the base are called seedlings for assessment of regeneration status.

| Sl. No | Species name | Local name | Height | NTFP utility | | Remarks, if any, about the condition of herbal vegetation |
|---|---|---|---|---|---|---|
| | | | | Part of the plant body | Approx. weight and or no. | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

## Annexure C

1. Shannon-Wiener Index

$$H = \sum \{ (P_i) * ln (P_i) \}$$

Where,

$$P_i = Propotion\ of\ the\ Total\ Sample\ represented\ by\ the\ species\ \left(\frac{i}{N}\right), Where$$

$$'i'\ is\ the\ number\ of\ individuals\ of\ the\ species$$

$$'N'\ is\ the\ Total\ number\ of\ Individuals\ of\ all\ species$$

$$H = Shannon\ Weiner\ Index,$$

$$if\ abundance\ is\ concentated\ in\ one\ species\ the\ index\ will\ be\ Zero\ 0$$

$$Maximum\ Diversity\ possible\ (H_{max}) = \ln(S)\ ,$$

$$Where\ S = Total\ Number\ of\ Species\ (Species\ richness)$$

$$Species\ Eveness\ E = \frac{H}{H_{max}}$$

2. Importance Value Index (IVI)

$$Density\ of\ a\ species\ (D_S) = \frac{Total\ number\ of\ individuals\ of\ a\ species}{Total\ area\ of\ the\ quadrants\ studied}$$

$$Frequency\ of\ a\ species\ (F_s) = \frac{Number\ of\ quadrants\ in\ which\ the\ species\ occurs}{Total\ number\ of\ quadrants} * 100$$

$$Relative\ Density\ of\ a\ species\ (RD_S) = \frac{Density\ D_S\ of\ a\ species}{Total\ number\ of\ species} * 100$$

$$Relative\ Frequency\ of\ a\ species\ (RF_S) = \frac{Frequency\ F_s\ of\ a\ species}{Sum\ of\ frequencies\ of\ all\ species} * 100$$

$$Relative\ Dominance\ (RDO_S) = \frac{Total\ Basal\ area\ of\ a\ species}{Total\ Basal\ area\ of\ all\ species} * 100$$

$$Importance\ Value\ Index\ IVI_S = RD_S + RF_S + RDO_S$$

**3.** Area Biodiversity Assessment Table

| **Name of the species** | **Density (No. of tree/unit area)** | **Frequency (%)** | **Total basal area ($m^2$/ha)** | **IVI** |
|---|---|---|---|---|
| Trees | | | | |
| Shrubs | | | NA | |
| Herbs | | | NA | |

## Annexure D

**Carbon Stock Estimation**

**Dead Organic Matter (Dead Wood & Litter)**

**A. Quadrate size: 5m x 5m**

| S.No. | (Dead wood + Stump) above 5cm diameter | |
|---|---|---|
| | Volume (in m3) | Weight (in Kg) |
| Plot no.1 | | |
| Plot no.2 | | |
| Total | | |

**B. Quadrate size: 3m x 3m**

| S.No. | Weight of all woody litter below 5cm diameter | Green Weight of all uprooted shrubs & climbers | |
|---|---|---|---|
| | | Woody | Non-Woody |
| Plot no.1 | | | |
| Plot no.2 | | | |
| Total | | | |

**C. Quadrate size: 1m x 1m**

| S.No. | Green Weight of all uprooted herbs & grasses |
|---|---|
| Plot no.1 | |
| Plot no.2 | |
| Total | |

**(Within the main plot of 0.1 Ha)**

**Organic Matter in Soil and Forest Floor**

**A. Forest Floor: Quadrate size: 1m x 1m (within the main plot)**

| S.No. | Weight of all materials collected by sweeping floor<br><br>(Humus, fresh, partially & fully decomposed biomass) |
|---|---|
| Plot no.1 | |
| Plot no.2 | |
| Total | |

**B. Soil Carbon:** Collect 200 gm of soil from a pit size 30cm x 30cm x 30cm dug at the centre of 1m x 1m quadrate in the main sample plot of 0.1 Ha.

Total Carbon Stock is calculated based upon the Above Ground Biomass (AGB), Below Ground Biomass (BGB), Litter, Humus and Soil Carbon data calculated and acquired.

Above Ground Biomass (AGB) = Growing Stock * Expansion Factor * Density * 0.45 (g)

Below Ground Biomass (BGB) = 0.26 * AGB (g)

## Annexure E

Family Based Baseline Survey format for Individual FRA Clusters

**Personal Information**

| | | | |
|---|---|---|---|
| Name/Father's name of FRA title | | | |
| AADHAR No | | No. of family members who have studied above 8th grade | |
| Category | | | |
| Education | | Age | |
| No of members in family | | No of members above the age of 16 years | |
| Hamlet | | | |
| Village | | Gram Panchayat | |
| Mobile No | | Job Card No. | |

**Annual Income of the family (Rs.) (Please include income of all the members)**

| Farming | Vegetable and Fruits | Animal Husbandry | MFP | Labour | Masonry | Shop | Mahua/ Any other liquor | Other (Mention details) |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| **If any members migrates out of district for work** Yes ☐ No ☐ | | | **Location of work :** | | **Duration of Migration:** | | | |
| **If any member is in government/ non-government job? Mention details of all members:** | | | | | | | | |

**Annual Livelihood based occupancy**

| Month | Jan | Feb | Mar |
|---|---|---|---|
| Type of work | | | |
| Days occupied in month | | | |
| Month | Apr | May | Jun |
| Type of work | | | |

| | | | |
|---|---|---|---|
| Days occupied in month | | | |
| Month | July | Aug | Sep |
| Type of work | | | |
| Days occupied in month | | | |
| Month | Oct | Nov | Dec |
| Type of work | | | |
| Days occupied in month | | | |

## Information of the Landholding

| | | | |
|---|---|---|---|
| **Main revenue Land holding ( Patta no. : )** | | | |
| **Type of Land** | Upland | Midland | Lowland |
| **Area (acre)** | | | |
| **Crop** | | | |
| **Type of irrigation** | | | |
| **Status of land levelling** | | | |
| **Status of soil erosion** | | | |
| **Land under FRA title ( Patta no. : )** | | | |
| **Type of Land** | Upland | Midland | Lowland |
| **Area (acre)** | | | |
| **Crop** | | | |
| **Type of irrigation** | | | |
| **Status of land levelling** | | | |
| **Status of soil erosion** | | | |

## Crop Information

| Crop | Variety | Area (Acre) | Production (Quimtals) | Crop | Variety | Area (Acre) | Production (Quimtals) |
|---|---|---|---|---|---|---|---|
| Paddy | | | | Udad | | | |
| Maize | | | | Moong | | | |
| Kodo | | | | Arhar | | | |
| Kutki | | | | Kukthi | | | |
| Raagi | | | | Cow Pea | | | |
| Gatka | | | | Ramtil | | | |
| Chikma | | | | | | | |

| | |
|---|---|
| **If farmers transplants paddy :** Yes☐ No ☐ | |
| **Method of Trabsplantation:** Nornal ☐ Line ☐ SRI ☐ | **Area under transplantation (Acre) :** |
| **If farmers sells paddy to LAMPS :** Yes☐ No ☐ | **Quantity (quintals) ? :** |

## Status of Nutrition in food

| | |
|---|---|
| If the family consumers Kodo/Kutki/Gatka/Chikma regularly? Yes☐ No ☐ | If yes, how is it milled ? : |
| How many times in a week lentils are consumed? : | If pulses are procured from market ?: Yes☐ No ☐ |
| How many times in a week meat/fish is consumed?: | If meat/fish is procured from market ?: Yes☐ No ☐ |

## If farmer procures vegetables for family from the market?

| Season | Name of Vegetables | Expense per week |
|---|---|---|
| Kharif | | |
| Rabi | | |
| Summer | | |

## Information of Baadi (Homestead Garden) of farmer

| Season | Crop | Area (Acre) | Income (Rs.) | Name of Bazaar |
|---|---|---|---|---|
| Kharif | | | | |
| Rabi | | | | |
| Summer | | | | |

| | |
|---|---|
| **Source of Irrigation:** Bore-well ☐ Open well ☐ Canal ☐ Sream ☐ River ☐ Talab ☐ Farm pond ☐ | **Availability of Pump :** Electric ☐ Solar ☐ Diesel ☐ |

| | | |
|---|---|---|
| **Electricity Connection for Irrigation:** Yes ☐ No ☐ | **Irrigation Pipe:** Yes ☐ No ☐ | **Drip:** Yes ☐ No ☐ |

## Information about production of fruits

| **Fruit** | **No of Trees** | **Sale in Market** | **Income** | **Fruit** | **No of Trees** | **Sale in Market** | **Income** |
|---|---|---|---|---|---|---|---|
| Papaya | | Yes ☐ No☐ | | Coconut | | Yes ☐ No☐ | |
| Nimbu | | Yes ☐ No☐ | | Custard Apple | | Yes ☐ No☐ | |
| Banana | | Yes ☐ No☐ | | Jack fruit | | Yes ☐ No☐ | |
| Muringa | | Yes ☐ No☐ | | Grafted Mango | | Yes ☐ No☐ | |
| Guava | | Yes ☐ No☐ | | | | | |

| **No of animals** | | | | **Fish farming in farm pond:** Yes ☐ No ☐ | | |
|---|---|---|---|---|---|---|
| Cows | Bullocks | Buffalos | Pigs | Goats | Poultry | Ducks |
| | | | | | | |
| **Until which month the cattle is graized? :** | | | | **Who grazes the cattle?:** | | |

## Details of infrastructure and equipment with farmers?

| | | | |
|---|---|---|---|
| NADEP | Yes ☐ No ☐ | Drum for Jeevamrit | Yes ☐ No ☐ |
| Cow urine tank | Yes ☐ No ☐ | Tractor | Yes ☐ No ☐ |
| Vermi compost pit | Yes ☐ No ☐ | Rotavator | Yes ☐ No ☐ |
| Bio gas | Yes ☐ No ☐ | Power tiller | Yes ☐ No ☐ |
| Poultry shed | Yes ☐ No ☐ | Sprayer | Yes ☐ No ☐ |
| Goat shed | Yes ☐ No ☐ | Ambika Weeder | Yes ☐ No ☐ |
| fencing | Yes ☐ No ☐ | Cycle wheel hoe | Yes ☐ No ☐ |

## Economic status of the farmer

| | | |
|---|---|---|
| **Vehicles owned:** Cycle ☐ Bike ☐ Pick-up ☐ Car/SUV ☐ Tata-magic ☐ **Other :** | | |
| **Smart Phone:** Yes ☐ No ☐ | **Refrigerator :** Yes ☐ No ☐ | **TV :** हाँ ☐ नहीं ☐ |
| House: Earth ☐ Bricks ☐ | Roof : Terracotta ☐ Sheet ☐ Concrete slab ☐ | Pradhanmantri/ Indira Awas: Yes ☐ No ☐ |

| Manua | Imli | Mango | Chironji | Amla | Neem | Jack-fruit | Kusum | Bamboo | Teak |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

| | |
|---|---|
| If farmer uses chemical fertilizers : Yes ☐ No ☐ | If farmer uses chemical pesticides : Yes ☐ No ☐ |
| In which crop? : | When was use of chemical inputs stopped? : |
| Names of bio-inputs produced by farmer: Cow-dung Manure ☐ NADEP ☐ Jeevamrit ☐ Vermi Compost ☐ Green manuring ☐ | |
| If farmer procures cow-dung from other farmer/ outside Yes ☐ No ☐ | |

| | |
|---|---|
| If any woman member of family is member of SHG: Yes ☐ No ☐ | Name of group : |
| If any male member of family is member of Farmer's group? : Yes ☐ No ☐ | Name of group: |

**Annexure F**

# Participatory Rural Appraisal (General Guidelines)

1. **Resource Map**
   A map of resources situated in cluster and surrounding mountains, forests, waterfalls, rivulets, ponds, fields, open fields, marhans, dabri, wells, roads, houses, schools, aanganwadis, hand pumps, on which cluster People's livelihood and daily business is dependent.

**Resources:**

- Resource map can be created on the clean ground using rangoli, ash or sand.
- This map can also be made with colored chalk on the floor of the community building.
- Use different colors to show different things (eg mountains, fields, grooves)

**Method:**

- Explain to the people of the cluster about the resource map and what things should be shown in it
- Select a clean place in the cluster to create a resource map
- Start making a map by drawing a major route or a major drain in the cluster and show the remaining resources next to it
- At the begining of making the map, use different symbols to show different resources
- People of the cluster will help each other to create resource map.
- The job of government officials or assistants is to guide and help people in making maps. But they will not make the map themselves nor will they tell which resource to show. This work is to let people do it with their own understanding.
- People from all sections of the cluster, especially women, should be involved in making resource maps. Often 2-3 people of the cluster are more vocal, but it is not necessary that all the cluster agrees with their

views. So keeping such people under some control, other people should also be included in the discussion.

- Many times the women of the cluster do not attend the meeting. Special attention should be paid to the participation of the women in the meeting and they should be given a chance to speak
- Once the map is created, the cluster people should be asked once whether any important thing left or not
- Copy the map on a paper sheet
- Put the resource map in front of the people of the cluster and discuss it based on the following questions:
    - Which are the major drains? Which drains have water throughout the year and which dry up in summer?
    - Where is the farm of each family of the cluster located? Marhan, Tikra, Beda
    - Which fields are considered more fertile and which are not?
    - Where do rain water cause the most damage? - farm damage and soil erosion
    - Which fields have water available for irrigation? Which resource is used to irrigate the land? And where no resource is available?
    - What is the use of ponds of cluster (irrigation, drainage, fisheries etc.)? Which families are getting benefit from it? Which families are denied benefits - How do they fulfil their needs?
    - Which resources in the cluster need to be repaired? (pond, canal, check dam etc.)
    - Availability of roads - in summer and rain
    - How far people have to travel to get firewood? What is the status of availability of firewood?
    - Where are the animals taken to graze?
    - Where do you get drinking water?

- Based on the information found in this discussion, decide the following thing with the people of the cluster
    - Which drains in the cluster cause more loss of soil and fields?
    - On which drains water management work should be done so that maximum number of people get benefit?

- In which part of the cluster land repairing and bund development is needed most?
- Is there any area in which the fields need to be repaired and bund to be developed from top to bottom (from ridge to valley)?
- Is there any area in the cluster where there is a possibility of getting water by digging wells?
- Old resources which must be repaired to benefit the families
- Can the problem of firewood be solved by planting trees?
- Need for major road/culvert construction so that there is a facility of transport

## Participatory Rural Appraisal Questionnaire

Village Panchayat: Date:

Name of the officers who assisted in making the resource map:

On the basis of following questions, discuss this with the cluster people and fill this form:

1. which resources are lacking in the cluster?
   (Eg drinking water, water for irrigation, forest, land for grazing)

2. Which are the major drains in the cluster? Which drains have water throughout the year and which drains dry up in summer?
   (Nickname/number of drains in a cluster)

3. Which drains in the cluster cause more damage to fields and soil?

4. On which drains should water management work so that maximum number of people get benefit?

5. Where is the farm of each family of the cluster located? Marhan, Tikra , Beda
   (Try to show this in the resource map by discussing with people, especially find the fields of the very poor people of the cluster in the map)
   (Marhan - Red, Tikra - Yellow, Beda - Yellow can be shown in the map)

6. Where are the farms of most of the family located in the cluster?
   (Try to mark such areas in resource map)

7. Which fields are considered more fertile and which are less? (Discuss this with the people and try to show this in resource map)

8. Where does the rain water cause the most damage? (loss of crop and soil erosion) Which part of the cluster needs farm repair and bund development?
   Write names of families whose land falls in such area
   (Mark such areas in the map)

| S.No. | Name of the family |
|---|---|
| 1. | |
| 2. | |
| 3. | |

9. If there is any area where from ridge to valley area treatment I required and maximum no of families will be benefitted? Write names of the families
   (Mark such area in the resource map)

| S. No. | Name of the family |
|---|---|
| | |

10. Which farms have source of irrigation and which don't have? (Mark such areas separately in the resource map)

    Name the families who have source of irrigation

| S.No. | Name of the family | Source of irrigation |
|---|---|---|
| | | |

Name the families who do not have source of irrigation

| S.No. | Name of the family |
|---|---|
| | |

11. Identify areas where there is possibility of availability of water if open well is dug

    (Mark such area in the resource map)

12. Identify water reservoirs in the map? Use of these reservoirs? If there is need of any more reservoirs? (mark areas where reservoirs can be made)

13. Identify infrastructure already existing in the map and need of repairing

| S. no. | Name of infrastructure | Requirement of repairing |
|---|---|---|
| | | |

14. From how far do the families get fire wood? Availability of fire wood? (mark the area)

- If the there is shortage of firewood where can the plantation be made? (mark the area)

15. On which land does cattle grazing happen? If there is any shortage of fodder, where can the work for revival of grazing land happen? (mark the area)

16. If there are any water bodies around the FRA cluster, what infra-structure works can be taken up to develop them

| S.No. | Name of work |
|---|---|
| 1. | |
| 2. | |
| 3. | |

17. List of poorest of the poor in the cluster

- Families where widowed, disowned women are head
    1. Name Hamlet

2. Name Hamlet
3. Name Hamlet
4. Name Hamlet

- Families where disabled persons are head
    1. Name Hamlet
    2. Name Hamlet
    3. Name Hamlet
    4. Name Hamlet

- Families which do not have any other land apart from the FRA title
    1. Name Hamlet
    2. Name Hamlet
    3. Name Hamlet
    4. Name Hamlet

- Families which have less than 5 acres of total land (including FRA title (Tribal families)
    1. Name Hamlet
    2. Name Hamlet
    3. Name Hamlet
    4. Name Hamlet

- Families which have less than 5 acres of total land (including FRA title (Other families)
    1. Name Hamlet
    2. Name Hamlet
    3. Name Hamlet
    4. Name Hamlet

- Other Poorest of the poor families
  (Identify such families by discussing with the community, those cannot have sufficient grains, face shortage of food, those who have to always go for daily wag work to the other families)
    1. Name Hamlet
    2. Name Hamlet
    3. Name Hamlet
    4. Name Hamlet

18. If any road connectivity is required for access to the cluster? Write about the need of any such work

| S. No. | Name of work |
|---|---|
| 1. | |
| 2. | |
| 3. | |

19. If any road connectivity is required for access to any of the essential infrastructure in the cluster? Write about the need of any such work

| S. No. | Name of work |
|---|---|
| 1. | |
| 2. | |
| 3. | |

20. If there is any shortage of drinking water in the cluster? Write names of hamlets if drinking water facility is required

| S.No. | Name of hamlet |
|---|---|
| 1. | |
| 2. | |
| 3. | |

21. Any other essential work required in the cluster

| S. No. | Name of work |
|---|---|
| 1. | |
| 2. | |

**Annexure G**

## Family Based Livelihood Planning

### Important Instruction

- A family based action plan has to be chalked out with key male and female members of each family.
- Based on all the objectives of the program the family must be asked various questions and understand and discuss about their problems, aspirations, expectations.
    - How much and what type of land does family have
    - How many members of the family are eligible for work
    - What special skills do family members have
    - What kind of work family members want to do - their dreams, likes, aspirations
- After discussion on the points given above, to give information about various activities and schemes of the government and to make a proposed list of activities of tasks for each family and give them priority

| Objectives of the Program | Questions for discussion | Approach towards solution | Activities | Work |
|---|---|---|---|---|
| Food security | Can the family's year-round rice needs be met from its own farm? | 1. What can be done to increase the productivity of the paddy? | 1. SRI technique/line technique/dirsct seed sowing using SRI method<br>2. Manure and pest control | 1. Land levelling and bund-development for atleast one acre<br>2. Irrigation equipment to save crop in flat land<br>3. Ambika paddy weeder<br>4. Technical training<br>5. Essential facilities for compost and pest repellant |
| Nutritional Security | Apart from paddy if whatever is required for nutrition is | 1. Which crops are grown in Marhaan and homestedgarden?<br>२. How to diversify crops?<br>३. Does farmer has a mean of irrigation? | 1. Incentives for planting crops other than paddy in Marhaan<br>2. Vegetable production | 1. Availability of seeds<br>2. Technical training<br>3. Homested<br>4. Irrigation Facility |

| | | | | |
|---|---|---|---|---|
| | produced by the family | | 3. Finger millet, pulses production using SRI method<br>4. Pigeon pea on the bunds | 5. Cycle wheel-ho |
| Economic Security | What is the family's annual income? Is the family below the poverty line? | 1. On which means the family is dependent for their livelihood?<br>2. What resources, facilities and skills do family members have?<br>3. In which work family members are interested in?<br>4. How can productivity of livelihoods be increased?<br>5. What help is needed to connect with the market?<br>6. What new sources of livelihood can be created through available resources? | 1. Vegetable production<br>2. Production of Paddy, Finger millet and pulses using SRI method<br>3. Medicinal flora production<br>4. Production of crops like turmeric, ginger, black pepper and coffe in the shady area<br>5. Poultry, Goat rearing<br>6. Fisheries<br>7. Forest horticulture, fruit production<br>8. Food processing and value addition | 1. Availability of seeds<br>2. Technical training<br>3. Homested<br>4. Irrigation Facility<br>5. According to the means of the livelihood, necessary infrastructure and supply of resources<br>6. Necessary loan<br>7. Membership in farmer's group/Bhoomgaadi<br>8. Plantation |
| To increase the yield of forest produce | Conservation, promotion and productivity of forest producing trees | 1. Are any unscientific and plant damaging methods being used in collecting forest produce?<br>2. But does the family want to plant any new trees that will give forest produce?<br>3. What can be better methods of collecting forest produce?<br>4. How can forest produce be processed locally? | 1. Use of net under mahua tree<br>2. Separate method of cutting tree / fishtail palm / toddy tree so that tree will not die<br>3. Date palm jaggery<br>4. Planting of saplings | 1. Technical training<br>2. Means of processing<br>3. Net for collecting mahua<br>4. Plantation<br>5. Establishing Nursery |

| | | | | |
|---|---|---|---|---|
| | | | 5. Better processing of raw mango powder<br>4. Nursery production by collecting seeds of plants | |
| Protection of natural resources | Is there a loss of natural resources mentioned in the FRA title which will affect the livelihood and security of resources of the family? | 1. Is there any soil erosion in the area FRA title received by the family?<br>2. Is there any loss of crop due to flash floods on the land mentioned in FRA title?<br>3. If trees are being cut for firewood, what alternative can be provided to the family?<br>4. If trees are being cut for farming, can we encourage for alternative methods of farming?<br>5. If in the process of earning livelihood if the family is destructing natural resources then what other means can be provided? | 1. Survey and selection of tasks for water conservation and soil protection<br>2. Promotion of biogas and modern stoves<br>3. Planting Trees for Firewood<br>4. Agro-forestry<br>5. Production of crops like turmeric, ginger, black pepper, coffee under trees | 1. Various works for land reform, bund construction, water conservation and soil protection under MGNREGA<br>2. Construction of Biogas and Modern Stove through CREDA<br>3. Plantation<br>4. Training<br>5. Seed availability |
| Protection of traditional knowledge | Ensuring safety and availability of seeds and traditional knowledge | 1. How can the traditional knowledge of the family related to farming be documented and conserved?<br>2. How can the traditional seeds of the family be preserved? | 1. Documentation of traditional knowledge<br>2. Preservation of traditional seeds<br>3. Work for | |

| | | | | |
|---|---|---|---|---|
| | related to farming | 3. How can traditional seeds be available to the family for cultivation? | conservation of wild tubers | |

## Form for Selection of Work

1. Name of the FRA title holder :

2. Aadhar Card No.

| Sr. | Name of the Activity | Name of work (related to government scheme) | Name of the concerned department | Priority ranking |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |