



Progress in managing forest resources in a landscape in Orissa, India

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This paper reviews the experiences of the LLS landscape in Orissa to draw out major lessons learned relevant for application in similar landscapes and also relevant to policy discussions on resources and livelihoods. The paper presents both the content of lessons learned (as 'policy messages') and outlines strategy for scaling outwards and upwards.

Contents

A note on methodology for developing this report.....	2
1.0 Introduction: The Resource and the landscape.....	3
2.0 Defining the Landscape.....	6
3.0 Goal of the Landscape/Intervention.....	7
4.0 Methods Used So Far.....	8
4.1 Baseline Analysis.....	9
4.2. Socio-economic baseline.....	11
4.3. Markets.....	11
4.3 Institutional Baseline.....	11
4.4 Policy and political change.....	11
5.0 Implementation: Successes and Failures.....	12
5.1 Successes.....	12
5.2 Failures.....	12
6.0 Results and Outcomes.....	13
6.1 Biodiversity/landscape component.....	13
6.2 Socio-economic.....	13
6.3 Markets.....	13
6.4 Institutions.....	13
6.5 Political and policy change.....	14
6.5.1 Major Lessons Learned.....	14
7.0 Scaling Outwards.....	15
8.0 Scaling Upwards.....	16

A note on methodology for developing this report

Rationale : In LLS we have hypothesized that landscape approaches are better than other approaches both for protecting biodiversity and for sustaining and improving livelihoods. In order to capture the best of what we have learned both from landscapes where conservation is the primary goal, and from places where we are working with multiple-use mosaic landscapes, a variety of landscapes in Asia and Africa are engaged in a collaborative writing process so we can do so.

Methodology: We develop questionnaire templates that take people our staff and partners who work in landscapes through the evidence they have for progress in each of the key landscape assumption areas. We record the subsequent discussion on voice recorder. Each country facilitator then drafts up a chapter from the structured interview material, highlighting the topics for which each landscape has most evidence, and on which it has made most progress. We ask not only about progress, but also about the analytical tools the country participants have used to move forward, the data they feel is still lacking and how this might be captured in future. The country participants then take the chapter and enrich and improve it with other evidence that is triggered by the process.

Outputs : The final chapter is the result of the knowledge of the country landscape managers, but the process helps them to stand back from, and analyse what they have achieved - and to record it - in a way which would be difficult for them alone.

1.0 Introduction: The Resource and the landscape

The area selected for the landscape is Kaptipada Block of Mayurbhanj District, Orissa. The landscape is within the buffer zone which lies between the Simlipal Tiger Reserve and hilly areas. There are six pilot villages in the selected landscape. These six villages are considered to be fairly typical of the wider landscape, containing some 850 villages within an area of approximately 4,000 sq Km.

The area is a tribal area, populated by several different tribes, including Santhals, Gonds and Bhuiyals. There are a total of 249 households in the LLS landscape. The largest of the villages has 75 households. See Table 1.

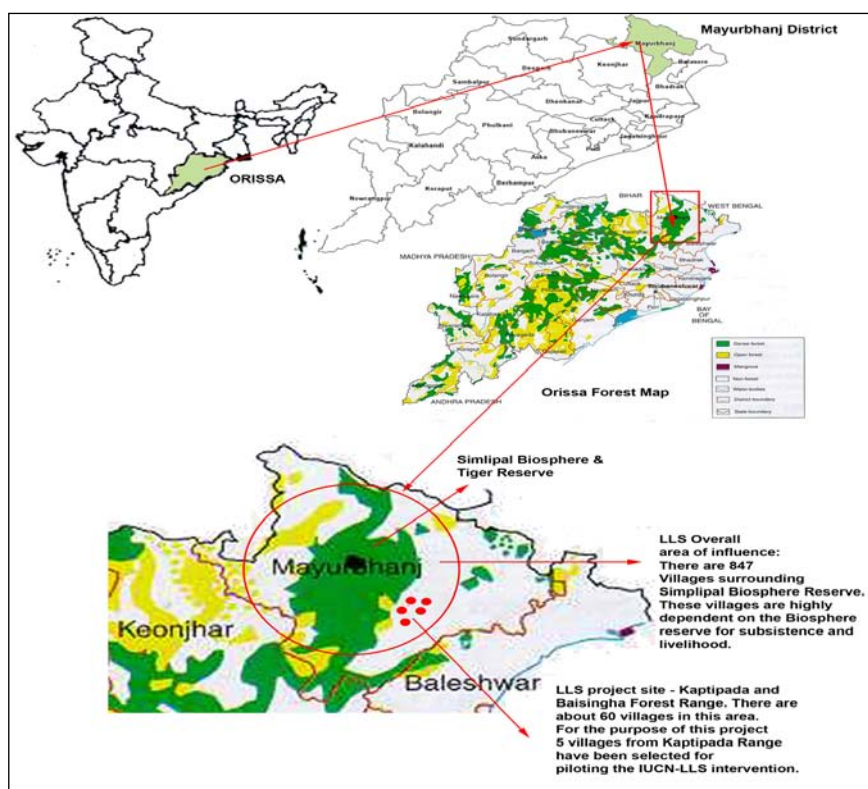


Table 1: Socio economic description of the pilot villages

Name of the village	Total no of households (N=249)	Type of Institution (JFM/CFM)	% of BPL families	% of ST
Bholaghathi	28	CFM	89	100
Jharanghati	31	JFM	90	100
Bhajusahi	21	CFM	95	100
Khadikhania	65	CFM	88	95
Tangiria	29	JFM	93	97
Raikali	75	CFM	65	85

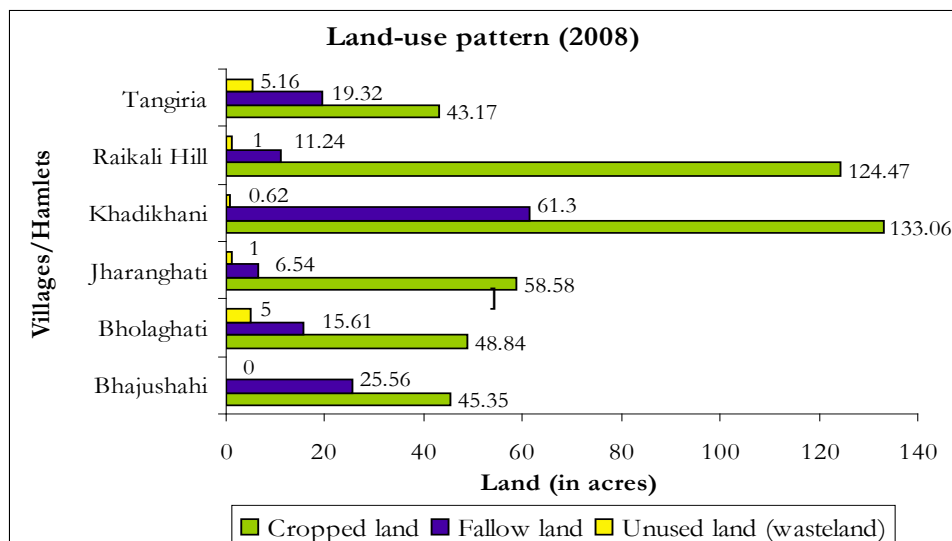
ST = Scheduled Tribes, BPL = Below the poverty line

The landscape adjoins forests on one side (the Protected Forest within the Simlipal Tiger Reserve). There are village (community) forests and agricultural lands within the boundaries of each village. All

farming in the pilot landscape is rainfed. There is no irrigated agriculture. There are two seasons – rabi (spring) and kharif (autumn/wet season).

Rice is the main crop grown, along with some gram (lentils). There is virtually no commercial agriculture, with crops grown mostly for subsistence. Average land-holdings are 1.5-2.5 acres. Three quarters of the land is under cultivation. One quarter is classified as ‘wasteland’ or fallow, although, in practice no land is really unused. (See Figure 1)

Figure 1: Land-use pattern (2008)



Agricultural labour is the main source of income (48%). There is a high degree of forest dependence, although the actual income from forests is limited. Forests are important as a safety net rather than a source of income. Table 2 summarises aspects of livelihood diversity. Women and men are both involved in farming and on-farm labour. In addition to this, women also collect NTFPs.

Table 2: Household livelihood options by village

Villages/hamlets (N=249)	No. of HHs having one livelihood option	No. of HHs having two livelihood options	No. of HHs having three livelihood options	No. of HHs having four livelihood options	No. of HHs having five livelihood options	No. of HHs having more than five livelihood options
Tangiria	0	1	0	5	16	7
Khadikhania	0	0	1	15	48	1
Raikali Hill	2	2	5	29	37	0
Bhajushahi	0	0	0	5	16	0
Bholaghati	0	2	1	14	11	0
Jharanghati	0	0	3	16	12	0

The main NTFPs collected are:

- Sal (*Shorea robusta*) leaves and seeds (sal leaves are used to make leaf plates and bowls and the seeds are processed into fat and oil and used in global food and cosmetic industry)

- *Mahua* flowers and seeds. (The mahua flowers are dried and are edible (used as a vegetable and also local wine, the seeds yield oil used to light lamps)
- *Kusum* seeds (The seeds yield oil which has medicinal values)
- *Chiranjee* (a seed used to make sweets)

Sal leaves are an important source of cash income. There is a very large commercial trading system. The collectors do not get a large share of the income generated and increasing their share of income is a potential opportunity.

Total income from sal remains limited, despite considerable potential.

In general, sal seed, mahua flower and wild mushrooms are collected mainly for self consumption. Sale of sal leaf is one of the major sources of income in all the villages, since there is a ready market available for it. However the total income from sal remains limited, despite considerable potential.

Table 3: Households dependent on different resources

Villages/ NTFPs Collected	Chironjee		Sal Leaves		Sal Seed		Mahua Flower		Mahua Seed		Kusum Seeds	
	No. of HH	% HH	No. of HH	% HH	No. of HH	% HH	No. of HH	% HH	No. of HH	% HH	No. of HH	% HH
Tangiria	1	3	16	55	0	0	2	7	24	83	0	0
Khadikhania	0	0	55	85	1	3	25	38	5	8	12	18
Raikali	0	0	62	83	0	0	0	0	0	0	0	0
Bhajusahi	5	24	20	95	4	19	13	62	3	14	3	14
Bholaghathi	13	46	21	75	2	7	0	0	1	4	1	4
Jharanghati	11	35	29	94	1	3	24	77	22	71	17	55

(Source: Primary data)

Table 4: Contribution of different NTFPs to the total household income

Village	sal leaves	sal seeds	chironjee	mahua flowers	mahua seeds	kusum seeds	others	Total amount (in Rs.)
Bhajushahi	76,200	3,250	1,650	76,000	2,220	550	2,509	162,379
Bholaghathi	157,000	10,000	4,500	68,000	1,440	850	1,798	243,588
Jharanghati	141,060	3,000	25,665	33,200	1,795	1,000	2,500	208,220
Khadikhania	130,000	4,050	4,200	40,080	-	-	3,750	182,080
Raikali Hill	120,000	-	-	800	-	-	1,340	122,140
Tangiria	112,540	-	2,250	40,000	-	-	2,118	156,908
Total	736,800	20,300	38,265	258,080	5,455	2,400	14,015	1,075,315
Average	122,800	3,383	6,378	43,013	909	400	2,336	179,219
Median	121,270	3,125	13,658	54,600	2,008	775	2,505	197,940

(Source: Primary data)

The contribution of NTFPs to the total household income as evident in *table 5* ranges between 25-35%. The contribution assessed is only of the NTFPs that are collected, minimally processed and sold to the local traders. Most of the harvested NTFPs, except sal leaves, are for household consumption. It is also evident from the table that NTFPs are important source of non cash income in the landscape, meeting the needs for nutrition, healthcare, construction and household implements.

Table 5: Total contribution of NTFPs to household income

Village	Total amount from sale of NTFPs (in Rs.)	HH nos	Income/HH from NTFPs	Annual income from all sources (in Rs.)	% contribution of NTFP to total income
Bhajushahi	162,379	21	7,732	22,100	35.0
Bholaghathi	243,588	28	8,700	20,522	42.4
Jharanghati	208,220	31	6,717	23,282	28.8
Khadikhania	182,080	65	2,801	24,130	11.6
Raikali Hill	122,140	75	1,629	28,000	5.8
Tangiria	156,908	29	5,411	23,109	23.4
Total (from ALL NTFPs sold)	1,075,315	249	32,989		
Average	179,219		5,498	23,524	25
Median	197,940		8,046	22,691	

(Source: Primary data)

The implementing partner for the work in the landscape is Winrock India, which works in close collaboration with a local group called MASS (the Mayurbhanj Swechasevi Samkhya) which is a federation of NGOs working on improved natural resource management in Mayurbhanj. Other actors involved are:

- All of the households in the six villages
- The JFM and CFM committees. (These actually consist of all adult residents of the particular villages.)
- The Orissa Forest Department (involved to make forest management legal and acceptable).
- Other line departments – the Agricultural Land Department, the Horticultural Land Department, Fisheries.
- Higher levels of the Forest Department including the PCF.
- The Gram Panchayat.

2.0 Defining the Landscape

It is important to realise that MASS and Winrock have been working in Mayurbhanj for many years, involved in supporting local community forestry institutions and building a federation of forest village committees to enhance their role and voice in participatory forest management.

Defining the specific LLS landscape began with recognition of the fact that all of the villages in the wider area are basically similar in terms of the types of people who occupy them, the type of economic activity and the basic land use. Selection of a specific landscape for LLS was, thus, somewhat arbitrary. Winrock approached MASS for suggestions. It was decided that a landscape in the buffer zone would be useful.

Once the landscape was identified, the team visited the villages and explained the concept, saying something like “we have selected the landscape for these reasons”. The people agreed, although selection was not based on their ideas. In other words, the landscape was not selected by stakeholders, but they agreed with the choice.

The selected landscape was fairly representative of the wider landscape. Kaptipada was purposively selected because the Ford Foundation was already involved (opportunities for leverage).

The Forest Department is one of the most powerful stakeholders, along with the District Collector, who is particularly important for LLS.

The team visited the villages and explained the concept (LLS) saying something like 'we have selected the landscape for these reasons'.

The Forest Department is key to implementing National Rural Employment Guarantee Scheme (NREGS) at the landscape level. (This scheme guarantees that all households will be paid for a minimum of 100 days labour each year.)

The Ministry of Tribal Affairs is becoming an important stakeholder in tribal affairs, although there has been no interaction at village level yet.

An important institutional player is the Federation. This evolution of this federation has been supported by MASS and continued support and capacity building is a major focus of the LLS activities as the federation is emerging as an institution which will integrate livelihoods and conservation at the landscape level. There are several levels of the federation:

- Each village has a forest development committee which provides members to the federation at the cluster level (20-25 villages)
- The cluster level provides members at an area level
- The area provides members at the district level

At present the cluster and area level federations are working well. It is satisfactory at the district level, but still needs strengthening. There are plans to try to expand the federation to the state level.

NGO representatives are part of the federation at all levels.

3.0 Goal of the Landscape/Intervention

There has been a change in understanding of what LLS is. When the intervention started it was more about sal leaf enterprise development. The scope has now expanded to livelihood enhancement in a more integrated manner looking at promoting/exploring other options of livelihood enhancement like agriculture development, bee keeping, fisheries, etc., The emphasis is currently on facilitating the mainstreaming of LLS approach in Government implemented development programs and schemes in the area.

The main problem being addressed is livelihoods. Landscape degradation is not a major problem as the CF committees have been working on that for years. The problem is how to turn the natural resources into assets for livelihoods. This mainly involves institutional interventions and also substantial amount of technical capacity building of the local communities.

The team is focusing on one main tool – the Village Development Plan. The approach is to prepare a plan (for each village) for each of several issues and then to call in the various line departments and ask how they can help. The Forest Department will get all the line departments to participate. (Village Development Plans are mandated under the current convergence program of the

Government of India and in Mayurbhanj, the Forest Department is the nodal agency responsible for coordinating the Convergence program in the state.)

There is an underlying philosophy that the only way to influence policy is to demonstrate an approach (ie in pilot villages). Being able to demonstrate success at a pilot village gives credibility.

The main problem LLS is addressing is the challenge of securing livelihoods focused on sustainable natural resource management (water, agriculture and forests).

Identifying priorities at a village level means that there is a bit of a drift away from straight conservation issues towards issues like education (which then turns to issues like lighting so people can study at night). Some people within Winrock have questioned this approach – why are you doing this – it's not conservation?

The JFM committee members in all six villages have played an important role in shaping the overall goal in this site. The LLS team developed the goal conceptually (MASS being major players in this) and went with the ideas to the village. The village committee members were involved in contextualising the goal and process. The Forest Department and other Line Departments then endorse the new focus by collaborating in the implementation of the Village Development Plan.

The main problem LLS is addressing is the challenge of securing livelihoods focused on sustainable natural resource management (water, agriculture and forests). This involves making the development planning process more needs-based and driven at the local level. An underlying principle is the need to maintain equity in benefit sharing and decision-making.

Winrock and MASS have an advantage in doing this, because they have been working for 15 years in strengthening the local forest protection committees (JFMCs/CFMCs). Ultimately the aim is to enhance the mandate of the JFM/CFM committees to be responsible for managing the landscape not just small patches of forests

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With regard to marketing, the LLS intervention is trying to move people up the value chain.

4.0 Methods Used So Far

The intervention has involved a lot of scoping research including:

- A baseline study
- A market assessment and value chain analysis
- An NTFP resources assessment
- Assessment of institutional strengths and weaknesses
- Wealth ranking.

A major method applied has been social mobilisation. This has involved:

- Awareness building
- A jungle festival involving thousands of tribal people from without the district
- Frequent village meetings (not at fixed times but as necessary). Records of decision-making are kept from all village meetings.

4.1 Baseline Analysis

4.1.1. Biodiversity/landscape components

The harvesting systems have been documented in terms of how forests are harvested and managed. This has been done as a basis for work on participatory silviculture.

A study by the Winrock forestry advisor¹ has demonstrated that there has been tremendous regeneration over the last 15 years. This refers to community forests and was based on rapid forest appraisal. This baseline covers the period since LLS started in the landscape.²

4.1.2. The Approach/ Methodology

A transect walk was taken on 19th Nov 08 to the forests protected for nearly 2 decades by the villagers of Bholaghati. The transect walk with a group of villages was followed by Focused Group Discussion in the village. The group involved members of Gramya Jangal Samiti and other village elders. Some of the observations from the field visit were taken in the brain storming meeting held in Bhubneshwar on 19th December.

4.1.3. Field observations

This is Village Forest (notified as Village Forest under IFA, in 1986) that has been protected by the villagers for nearly 2 decades. The area has both teak plantations (approx one tenth of the area) and natural forest regrowth.

Due to very effective protection of the forest area and given the root stock that the area had, the forest has shown tremendous regeneration and increment in growing stock. A simple visual appraisal of the transected forest area gives suggests the following:

1. Twenty years of protection has allowed good increment in girth of the Sal dominated vegetation. The predominant girth class seems to be 20-30 cm and the height in the range of 10 to 15 meter. Per hectare stem density may range 800 to 1300 and the volume range between 80 to 110 cubic meters/ha. This will compare well with yield table data (with the volume of same age class and of approx. similar site quality).
2. The regeneration status also seems to be reasonably good, a range of species show good regeneration along with that of Sal.
3. The villagers have devised a system of management which is need based, the needs are duly verified and usually pertain to poles and wood for house construction, the produce required is

This is a Village Forest that has been protected by the villagers for nearly 2 decades

¹ Issues in Participatory Silviculture (based on the field visit to forests of Village Bholaghati and brain storming meeting at Bhubneshwar)

² BMS Rathore (2008): Brief note on existing forest quality in LLS areas

generally of diameter 31- 45 cm (Danda, Chhani, Khunto, Roh , Ghudia), the committee members visit the area and mark the trees which are dead, top broken, wind fallen. No green felling is done in general.

4. There are patches within the village forest where the community performs socio-cultural customs and worship. Such spaces continue to reinforce community linkages with the forest.
5. There is no system adopted for crop management as evident from multiple coppice shoots even at the age class of 10-20 years. Congestion in the stand is evident. Silvicultural operations (multiple shoot cutting, singling and thinning) have not been attempted because there is a lack of clarity concerning whether they can be applied in forests where land tenure is vested with the state.
6. Villagers also depend on adjoining Reserve Forest of Balma which is part of Simlipal PA and sited at distance of some 3 Km. The dependency on Balma forests is for NTFP collection, mainly Sal leaves, Mahua and Chironji Tendu and Bamboo. Infact, the villagers told that about 50 villages now access the RF which has now taken shape of open access resource.
7. The brainstorming meeting held on 19th with a group of foresters and NGOs highlighted the need to bring in community driven silviculture for effective management of both timber and non timber resources. It also highlighted the challenges to be met on knowledge/skill, institution, marketing and policy front if successful NTFP based community enterprise is to be firmly grounded. Minutes of the meeting appear at attach-A.

There is a lack of clarity concerning whether silvicultural operations can be applied in forests where land tenure is vested with the state.
8. The key management issue from villagers point of view is that of declining availability of Sal leaves as the pole crops is fast growing in height and diameter. For sal leaves the best diameter is 10-20 cm while, in the patch visited most of it now is between 20-30 and above. There is also declining yield of grass as the canopy tends to close in large chunk of the forest
9. As pointed out in the field observations, tending operations are need to improve the crop conditions. The congestions in the stands; multiple shoots on single stump need be attended to. Also canopy lifting to allow sunlight to allow two-three tier crop management is called for.
10. The assessment as to what volumes of forest goods in terms of fuel wood, small timber and a range of NTFPs can be procured on long term (sustainable) basis does not exist at the community level. The inventory for the village forests
11. Plantations are due for thinning as they approach 20th year, such plantations can yield handsome income to village community in addition to meeting their bona fide needs.

4.1.4 The way forward

1. Effective community protection of forests in village Bolaghati and other villages in Kaptipada block have shown encouraging signs in terms of growing stock and regeneration status. Harvesting from these forest is done on very conservative basis by the community. There is however opportunity to allow for continuous flow of forest benefits to the community while improving the growing stock.
2. Participatory silviculture in the project villages would require building a capacity for inventory and mapping, assessment of growing stock & regeneration surveys appropriate for timber and on-timber products. The villagers should be able to assess how much biomass can be removed on annual basis and be able to divide the forest into appropriate coupes for annual

exploitation. Silvicultural tools like multiple shoot cutting, singling, thinning & canopy lifting can then be effectively applied by the community to get forest sustained annual flow of products.

The lessons from such initiatives will have the potential to inform the management of community forest resources elsewhere.

3. The Community Forest Rights provision of the newly enacted Forest Rights Act 2006 can be invoked to enable the communities in the project area to exercise the legal right to protect, manage and regenerate the forest
4. The second phase of the project can build on the elements outlined above. It could go a long way in evolving participatory silviculture and community led adaptive forest management. The lessons from such initiatives will have the potential to inform the management of community forest resources elsewhere as well.

4.2. Socio-economic baseline

Very detailed socio-economic baseline data exists.

It is too early to identify improvements to the quality of life as the institutional and other arrangements are just being put into place. Given that the primary collectors are very low in the value chain of NTFP trade, concentrating only on NTFP promotion will not lead to a significant positive impact on income in two years, In order to achieve a 30% reduction in poverty in the area, it is important to promote/explore the promotion of alternative income generating options in the area.

4.3. Markets

There has been a full separate report providing a baseline on markets.

So far there have been no effects positive or negative as the work on markets is still being done. A system for monitoring changes and impacts is in place. There is a full data management system, which includes registers of stock, already set up. MASS will compile the data and keep receipts. MASS has set up a separate account for user fees.

4.3 Institutional Baseline

See the earlier list of involved institutions. The activities of these institutions were previously uncoordinated, but there is now a strategy to streamline roles and get these agencies working together. This can be demonstrated if the VDPs are planned and implemented.

4.4 Policy and political change

When the LLS commenced the initial concentration was on NTFPs. At that time the first scoping report provided a rationale for the intervention.

The Ministry of Environment and Forest had issued a study on recommendations to ensure fair returns to primary collectors.

A document has been prepared on the need to incorporate LLS into programs and policies. This could be modified to be used as a baseline³.

5.0 Implementation: Successes and Failures

5.1 Successes

The following are regarded as successes. Note that some of these are not entirely achievements of LLS, because the activities started before LLS commenced.

- The user fee concept has raised more than Rs5,000
- The jungle raksha bandhan
- The oil processing unit (for mahua seeds)
- The link up with Agricultural Extension Department training
- The link up with the Cooperative Society, leading to micro-credit in the six pilot villages and outside
- The collective aggregation and sale of sal seeds (6 villagers and others)
- Training on SHG management, oil extraction etc
- Progress with the process of Village Development Plans (entirely an LLS activity)
- Bee keeping – by leverage
- A landscape workshop held for senior foresters from the Ministry of Environment and various state Departments of Forest (an important exercise in scaling outwards and upwards)
- The Ministry of Environment and Forest had issued a study on recommendations to ensure fair returns to primary collectors. LLS team members were part of the core team to provide input on this issue based on the experience from the LLS site.
- Plans for a state-level “knowledge forum” to promote LLS

5.2 Failures

Many mistakes have been made. The following are identified as being particularly important.

- Communication material has not been prepared. There is a need for brochures, movies, reports in local languages). Steps have been made to remedy this: there is a draft brochure on LLS and there is a plan to make a “flash movie”.
- The team has not been able to do participatory silviculture yet, although this is regarded as important. The feeling is that the team was ‘side-tracked’ (too much to do?).
- Linking with the market. Again, the team seems to have been side-tracked on this.
- Overall it is fair to say that the last two things are still pending rather than that they were carried out incorrectly.
- The approach to the state level knowledge forum was probably a mistake. The team did not follow up and did not do the necessary relationship building. The approach was not well thought out.

³ WII (2009): Seeing beyond boundaries: landscape livelihood approach to conservation and livelihood enhancement.

Adaptive management is essential to the way the team works. There is a very conscious process of reflection and sharing of ideas between staff. Quite a lot of time is devoted to this and it is seen to be very useful.

There are no baseline omissions, but some baselines could be updated. The one problem without an apparent solution is the lack of credit for enterprise development.

Adaptive management is essential to the way the team works. There is a very conscious process of reflection and sharing of ideas between staff.

6.0 Results and Outcomes

6.1 Biodiversity/landscape component

The landscape has been recovering successfully (under community forestry) for 15 years. The process continues.

Further improvements of both forest quality and productivity are expected when the participatory silviculture aspect of the LLS intervention is planned and implemented.

6.2 Socio-economic

There are no measurable socio-economic results so far, but it is believed that key elements are being put into place. A monitoring and evaluation system has been set up, including a comprehensive data management system. There will be relevant data by the end of 2010.

6.3 Markets

There are no results in markets yet.

6.4 Institutions

Institutional development is the key to the whole process in the landscape, just as it is central to LLS in general. The essential indicators of institutional development is that decisions are made (and implemented) differently and that people recognise that they are being done differently. The LLS intervention is trying to 'institutionalise' a way of doing things.

Some specific institutional results are:

- The various line departments are working better together as evidenced in the VDP process.
- There has been a continued development of the federation and the village committees as their mandates change. (An important strategy and goal institutionally is that the mandates of the CF and KFM committees should be broadened beyond community forestry to landscape management.)
- Within the committees the situation is developing where all decisions are recorded as a resolution. This is an important development in terms of institutionalising planning and decision-making processes.

Institutional development is the key to the whole process in the landscape, just as it is central to LLS in general.

It is important to note that the Ford Foundation has made a grant to MASS of US\$250,000 over two years to replicate the LLS approach in another 60 villages. (This is a good example of scaling sideways.)

6.5 Political and policy change

There have been relevant policy initiatives each of which indicates that notice is being taken by other actors and players:

- The Ford Foundation project
- Within Winrock there is now a larger LLS team who want to try the LLS approach in three other projects.

6.5.1 Major Lessons Learned

The following have been identified as significant lessons learned:

- Examples of success are required to build trust in long term processes. In other words the LLS strategy of linking landscape “policy experiments” with policy advocacy is well founded.
- To promote LLS it is necessary to identify existing schemes within line agencies and to provide attractive incentives.
- Communication products should clearly define LLS concepts and how they are different from conventional approaches.
- There is uncertainty as to whether primary collectors can move up the market chain (to processing, etc.).
- There is a need to understand the limitations of the LLS team as development partners (they are not business people and have no experience with business development) and thus to identify other partners with relevant experience.
- The concept of LLS in Orissa is evolving from one based on NTFP based enterprises towards whole landscape planning.

The Ford Foundation has made a grant to MASS of USD250,000 over two years to replicate the LLS approach in another 60 villages

The size of the selected landscape was correct in the context of the funds available. The stakeholders were self-selected. The presence of the Federation structure has meant that scale is not so important.

In terms of the LLS approach, one useful simplification would be to simplify the M&E system which is very complicated. The LLS team is very happy with the TOC approach (using the CMap software).

Some factors were underestimated at the start of the intervention:

- “The whole business thing.”
- Although work on institution building had been going on for 15 years (or perhaps because of that), the team thought institution building could be done quickly. However, it is still a slow process which will take time.

The concept of LLS in Orissa is evolving from one based on NTFP based enterprises towards whole landscape planning.

- The team underestimate how much staff time would be required. This is much more than the budget provides.

In assessing prospects for sustainability the following points need to be considered:

- Enterprise development – not project driven.
- Sustainability of the market system. The objective is to get a Memorandum of Understanding between the traders and the committees so that all purchases are made through the committee. It is not certain that this can be done.
- Participatory silviculture is a way to enhance sustainability of the natural resource.
- A positive step towards sustainability is that training (such as for bee-keeping) has been carried out by providing a link to KVK or to training sources identified through the VDP rather than providing training by Winrock itself. In other words the training activities are built into a larger structure/system.

The last point highlights the most important strategy for institution building – trying to mainstream all aspects of LLS and the concept.

The Federation structure already exists and has legal standing. There are no special project committees. Although people have raised the question about when and whether MASS should withdraw (as a factor affecting sustainability), MASS has had a long term role as a major actor in Mayurbhanj and will probably be around a long time. Continued support from MASS is likely to be sustainable. The real question may be how long Winrock should be there.

The whole approach to the landscape changed completely as early experiences were modified following reflection.

7.0 Scaling Outwards

This section and the following section (on scaling upwards) deals with the content of the lessons learned (what we think it might be useful for other people, in other landscapes, to try out) as well as strategies for promoting and spreading the messages.

Lessons and messages that can be scaled outwards:

- Perhaps one of the most important lessons is the value of disciplined adaptive learning/critical reflection in dealing with the complexity of the landscape. The whole approach to the landscape changed completely as early experiences were modified following reflection.
- Participatory silviculture can be scaled sideways in future.
- Building social capital is very important. One way this was done was through the Jungle Mahotsav (Jungle festival). There is not yet evidence of how long it lasts, but it seems clear that all the social movements help to bring people together in ways that foster wider cooperation.

[Data is needed to confirm the circumstantial evidence of success of social capital building.]

- A note of caution on replicating institutional development. While models like the federation obviously have great potential, it took 10 years to develop the federation to the current level in Mayurbhanj. It is unlikely this sort of process can be done quickly in other districts and states. While the process provides useful lessons, the model cannot be mechanically or quickly copied.

On the other hand processes like the VDP process could probably be copied and implemented widely.

- Collective action for sale of sal has started. This involves collectors selling through the JFM or CF committee. It leads to higher prices as it gives sellers more power in negotiations. People are reimbursed in proportion to the quantity of leaves they contribute, so individual shares are maintained. Even the Forest Department sees this as a good idea. This is one way of moving people up the value chain. (Note: A similar approach was applied by the Lao NTFP project. This is a good example of the potential for “scaling sideways.”)
- The use of new technology to help value adding has not worked well in India. Providing a machine has not proved to be enough. There is a need to address institutional issues. An example would be the issuing of instructions by the Forest Department that sal leaves can only be purchased from JFM committees. Another possibility would be an MOU with traders.
- Establishing an enabling environment is critical. This includes arrangements for providing credit, training on running enterprises, machine management, SHG management. Literacy training fits here as well.
- The Village Development Plan process. One lesson here is that it is important to provide incentives for the parties to come together. The FD has an incentive because the VDP helps it to complete a planning task for which it is responsible.

While the process provides useful lessons, the model cannot be mechanically or quickly copied.

Data need for 2010: Watch closely to see what happens. If successful the VDP could be picked up at the National level.

8.0 Scaling Upwards

Winrock has already undertaken one major activity aimed at promoting the LLS concept. This was a training course for forestry officials from the Ministry of Forests and a number of state forest departments. The main idea was to introduce the landscape concept.⁴

In order to promote the VDP process at the National level a strategy is the District Convergence Action Plan. According to the guidelines for implementing NREGS, every district must have a district development plan. An idea for scaling upwards is to tap into this structure and to see whether the VDPs can be taken up at a higher level.

Winrock will try to see if the landscape approach can work in district level planning.

Winrock is trying to incorporate the idea of environmental services into the plan. This is already being done in another project. They will try to see if the landscape approach can work in district level planning. As with the VDPs, the idea is to prompt a move away from the usual approach of

⁴ See *Training Workshop on Landscape Approach to Conservation and Livelihoods, July 1-2, 2009; TERI Retreat, Gurgaon. Summary of Proceedings.*

planning separately for each line department towards identifying what needs to be done, then looking to see who can do it.

An ITTO funded Grazing Project provides travel funds which can be used to test this idea in the seven states where the ITTO project operates.

Other ideas (strategies) for scaling upwards are:

- The Orissa State Knowledge Forum will demonstrate different ways of doing things. If the forum accepts the ideas they can be copied by other projects.
- A national level knowledge learning forum is being considered.
- Trying to influence donor programs: ITTO, Ford Foundation, DfID and SIDA.
- Links with the National Rainfed Area Program (NRAP) and the ITTO Grazing Project.
- Influencing NREGS and NRAP.
- Broadening LLS framework to adaptation to climate change and REDD. Winrock will try to influence the IUCN MFF in this regard.
- Promoting a 'landscape attitude'. Lots of attitudinal changes are required for promoting the LLS approach. The strategy here is to push the idea opportunistically – in training activities, casual meetings, etc.

The main message for these strategies is that an LLS approach can help with livelihood security and natural resource management – there will be better returns on investment if it is done this way.