

Toward sustainable forest conservation <Part 5>

Restoration of *Satoyama* with the cooperation of local residents in Mali

As a field staff of NPO “*Sahel-no-Mori* (Sahel Forest)”, I have been working on *Satoyama* (villager’s common woodlands) restoration in the Republic of Mali. Regarding the current situation of “forests” in Mali, they have very few of them of significant height and volume except for protected forests. Most forests have been deforested and become devastated areas comprised of scrub, bushes and wastelands. The challenge is how to restore and reformulate *Satoyama* as a sustainable forest paradigm.

1. Cooperation with local villagers

We have no connection with the Mali government in conducting our activities. We have been distributing seedlings of fruit trees and useful woods to villagers directly, trying to spread the afforestation movement. Villagers can realize the effectiveness of trees which they planted by themselves through being able to use and sell their produce. We visited 77 places including villages and schools in 2017, and provided over 21,000 seedlings. We deliver technical training to motivated villagers who would work as leaders in *Satoyama* restoration. Those trainees are now able to exchange information with the lecturer/ seedling producers after the training, when necessary.

2. Steps and appropriate technologies for *Satoyama* restoration

After a period of trial and error, villagers have become able to grow trees with success. Vegetable gardens are also effective for growing tree seedlings because surrounding fences are now well established. By increasing this type of base for afforestation in villages, production of useful woods and fruit trees will be encouraged. In addition, we are considering measures so that villagers will concern themselves with the restoration of abandoned farmlands, scrub and bush around their farms.

Conditions of the land to be planted are various such as hardened silty soil or weathered soft rock, and many places other than farmlands are degraded lands. We are establishing demonstration by applying appropriate technologies at degraded plantation sites and rented



Afforestation trial at an anthill



Planting a natural fence

farmland so that villagers can learn when continuing to promote afforestation by themselves in future. This includes afforestation trials on anthills, use of spiny hedges, and pruning of fruit trees. Anthills offer underground space where roots of seedlings can be placed. We are experimenting with the planting of *Acacia Senegal* on anthills.

3. Towards sustainability of the activities

- Utilizing useful species linked to income and benefit creation from sound natural resource management

Being useful to villagers is the driving force of the activity. Shea butter has been relatively often left in the fields as it serves as an oil crop. *Eucalyptus* is popular because it adapts even in wastelands, grows faster, is easy to use with its straight wood, and regenerates by coppicing. Neem and dry mahogany are used as green shade trees.

- Value-addition by processing raw materials

Generally, most fruits are harvested during a short period, and large amounts of products are sold in markets at one time, so fresh fruits are usually cheap. Therefore, processing is important to adding value. Proper facilities for processing should be prepared since the work is done during the rainy season and sanitation is an issue.

- Promotion of agro-forestry types of cultivation

Combined cultivation has already been carried out by villagers growing sorghum/millet (cereal) and shea butter (tree) together, and other combinations could be explored such as vegetables and fruit trees in farmlands. For example, three-dimensional use of farmlands will be examined, by arranging fruit and useful trees at the upper part to provide adequate shading to vegetables and hedges. It would be possible to generate income if they grow fruit and/or useful trees in the vegetable gardens. There are several issues to be considered such as securing water during the dry season, marketing of the products to urban consumers, and coexistence with livestock.

4. Conclusion

It is a definite sign of progress if villagers start their own activities with simple techniques and methods that can be used by themselves in a sustainable manner. This will support livelihoods yielding income, however small, and we hope this cycle will further grow and spread. It always takes a long time before full restoration of *Satoyama* can be achieved.

(March 2018, By Mr. Mitsuo Sakaba, *Sahel-no-Mori*)