

Multiplication of samata-trees (*Euphorbia stenoclada*) as an approach to minder environmental degradation and fodder scarcity in the Mahafaly Plateau region

Background information and problem stating

In the Littoral area, the climatic and edaphic conditions do not support livestock raising based mainly on fodder grasses. During a season of 6-7 month (May-November), the herders are dependent on supplementary fodder plants, especially the samata-tree. The utilisation pressure on this resource is immense and has led to a depletion of many stocks. Today, in many fokontany the samata stocks are not sufficient anymore to feed all local animals. This development is due to an increased demand on samata, but mainly to a decreased supply.

The lower supply of samata fodder is due to decreased precipitation rates and thus lower growing and regeneration rates of the trees, and an overuse of trees leading to a poor regeneration or even the death of trees. Furthermore, expansion of private crop fields implies the shrinking of the samata areas. Another factor leading to the depletion and scarcity of samata is that the villagers started to privatize the historically common samata stocks (*samata na fokonolo*).

The private samata stocks are unequally distributed among the villagers, as the privatization was a “first come first serve” process. Thus, many herders are obliged to buy most samata they need from the villagers who own big private samata stocks, or to overuse the remaining common stocks. In most fokontany, the *samata na fokonolo* is less in quantity and much worse in quality than the private stocks (see Pictures 1 and 2).



Picture 1: Heavily degraded fokonolo-samata (south of Anakao),



Picture 2: Private samata stock of good quality (Ankiririza)

The main problem is that the villagers have no knowledge how to multiply the trees for mitigating the pressure. The samata-tree is used by cutting most of its branches off and chopping these into small pieces to feed the animal. By this, the tree is severely harmed, but regenerates after 1-3 years if there are enough branches left. However, the scarcity of samata in the region has led to the situation that many trees are cut too heavily and thus do not regenerate properly or even die. Many villagers see the degradation of the samata-trees as a big problem for the region. Villagers talking to members of the SuLaMa team frequently showed a high interest in receiving assistance in learning how to reproduce samata.

Approach

The species of Euphorbia are worldwide known for being easily multiplied by cuttings. The SULAMA-project has realized multiplication trials in the region with the local variety of samata – with considerable success. The multiplication technique with using cuttings does not demand much material or technical knowledge, but only some general practical knowledge and tricks (see the *Guide pratique pour la bouture de samata*). Providing the villagers with knowledge about the multiplication is thus a promising approach to help the regional animal husbandry to survive and to beware the ecosystem from further depletion. SuLaMa-WWF has started a first samata community nursery in April 2015. Together with the local COBA, 90 small trees derived from cuttings were planted in the village of Ampotaka (see Pictures 3,4,5). Further nurseries were established in the communities of Efoetse and Marofijery, and in the school gardens of Ambola and Maromitilike.



Picture 3,4,5: Creating a samata plantation in Ampotaka

As the multiplication is – compared to other species – relatively easy and the small trees do not need much care, samata can also be multiplied out of professional plantations, but by the villager themselves. Today, the private lands in form of agricultural fields (*vala n baiboo*) and fenced grass enclosures (*vala n boka*) are already filled off with small samata trees, which the owners - in default of proper multiplication knowledge - dig out in the fokonolo-areas. The spreading of multiplication knowledge also helps reduce the utilization and removal of trees from the fokonolo-areas and thus may lead to a recovery of the wild stands. A first multiplication workshop took part in May with around 20 villagers from three fokontany. The participants visited the multiplication trials and after having discussed the technical tricks they planted their own cutting (see Pictures 6,7).



Picture 6,7: Multiplication workshop with villagers

Photos: J.Goetter (1,2), Y.Ratovomanana (3,4,5), C. Müller (6,7)