Solidarity calabash for developing agroecology in Senegal

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Agroecology is increasingly recognised as a promising approach for transforming agrifood systems to become more sustainable and equitable, so that the right to food can be realised worldwide. Agroecology covers all ecological, sociocultural, technological, economic and political dimensions of food systems from production to consumption. It applies ecological principles to agriculture while ensuring good management of natural resources, and gives people the freedom to choose the food they eat and how it is produced. It is also an approach that allows farming communities to adapt to external change, including climatic.

However, financing the development of agroecology in agrifood systems – including value chains for nutritious food – is a challenge. According to a report by the International Panel of Experts on Sustainable Food Systems (IPES-Food) in 2020, agroecology remains marginal to most funding streams for agricultural research. For example, only 3% of the projects funded by the Bill and Melinda Gates Foundation included elements of agroecology.

Various financial instruments and approaches have been used to stimulate and support innovation in agroecology and to promote local participation in this process, but usually driven by actors external to farming communities. This poses a challenge to developing site-appropriate technologies, as well as to inclusion and sustainability.

The solidarity calabash

In Senegal, an indigenous social innovation – the solidarity calabash – has been adapted to address this challenge, generating local funds managed by local actors to enable a transition to agroecology.

The solidarity calabash is a voluntary savings systems managed by community members based on the principle of mutual support. It is formed by a group of people – usually women – who know and trust each other and seek to combat hunger and debt in their community. Originally developed by a women's group in Médina Wandifa Village in the Casamance, it was identified and supported by Fastenopfer, a Swiss development agency, and has since been adopted and adapted by several groups throughout Senegal. Fastenopfer's support involves raising awareness about and training groups in this approach.

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The solidarity calabash has four main characteristics:

1. the bowl is made from a plant that symbolises prosperity, as it spreads and climbs quickly; thus, group members hope for quick and enriching results from their joint action;
2. the circular shape of the bowl reminds the members of equity; no one is more important than another in the group;
3. the bowl is covered with a cloth, indicating the discretion that acts of solidarity must have and putting equity into practice: members with limited resources are not ashamed to make their anonymous contributions;
4. the cloth placed over the bowl is white, representing purity, which is essential for the relationships within the group.

The solidarity-calabash groups may be mixed male-female groups, or composed only of men or only of women. They may be groups of artisans, fishers or herders. Sometimes, groups of school-children or students also have their own solidarity calabashes. In addition to helping bridge gaps in members' resources, the solidarity calabash has been adapted locally to be used for other purposes, such as to avoid wastefulness during large family and religious ceremonies, to promote the local culture and to promote consumption of local products.

How the solidarity calabash works

Four principles govern the management of a solidarity calabash: solidarity, equity, transparency and confidentiality. Solidarity means that members' actions are not aimed at profit or power but rather at helping others without expecting anything in return. Equity means that all members have equal rights and duties. Transparency refers to how the resources mobilised around the calabash are managed: any member can always ask how much is in it and there must be information-sharing moments. Confidentiality refers to anonymity when mobilising resources from members.

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The solidarity calabash is filled from members' voluntary and anonymous contributions during periodic meetings, profits from group purchases of inputs, services provided by the group, and donations. In most cases, about 85% comes from contributions, 10% from group-purchase profits and 5% from other sources. Currently, about 1600 solidarity calabashes are known to exist in Senegal with nearly 50,000 members (about 80% women). These groups operate in 11 of Senegal's 14 regions. According to an evaluation made by AgriBioServices, an NGO that coordinates the programme supporting solidarity calabashes, they generated more than 90 million FCFA (about €137,000) in total over the past five years

Solidarity calabash to promote agroecology

The original function of a solidarity calabash was to help the poorest people in the community get through the lean season without resorting to usurious loans that kept them permanently in

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debt. However, in recent years, crop yields have fallen drastically, partly because of soil degradation and difficulties in accessing chemical inputs. Group members have therefore innovated in developing another function for their solidarity calabashes: promoting agroecology as a form of agriculture that is inexpensive, provides food for the family and the market, and preserves natural resources.

In 2015, Agrecol–Afrique – the host organisation of Prolinnova–Senegal – engaged in the solidarity-calabash programme, originally focusing on mutual aid related to human health, child education and food. In a participatory process involving solidarity-calabash groups and the governmental Regional Agencies for Rural Development, the idea emerged to use the calabash to help the groups identify agroecological techniques appropriate for resource-constrained small-scale farms and to experiment with adapting these techniques to local conditions. Members can take out loans from the calabash for experimentation, for obtaining natural inputs and/or for marketing their produce. The no-interest loan is paid back at a time defined by the group members.

Training of members in agroecology

Agrecol–Afrique trains leaders of calabash groups in principles of agroecology and in issues such as financing access to natural inputs, agrobiodiversity and fair marketing mechanisms. The leaders then train their peers.

In addition to residential training by a resource person, facilitated farmer-to-farmer exchange visits are organised. These events enable group members to discover and better understand locally appropriate agroecological techniques, especially those that allow farmers to produce more food in smaller areas. This is especially important for women in Senegal, who face great difficulties in accessing land. Over the past five years, 250 people (about 80% women) have been trained and 35 farmer-to-farmer exchange visits involving about 350 farmers (likewise 80% women) have been organised by the programme.

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Financing access to natural inputs for farming

Access to agricultural inputs is a major bottleneck for small-scale farmers in Senegal because of the high costs involved and and the low financial means of the farmers. A solution developed by some solidarity-calabash groups is to arrange group purchases of natural inputs from local or national suppliers. This reduces the costs for intermediaries and transport and allows access to better-quality inputs. Over the last five years in the 11 regions involved in the programme, solidarity-calabash groups have organised more than 50 group purchases of inputs with a total value of about FCFA 45 million (about €68,500).

Promoting agrobiodiversity

For thousands of years, farmers have been selecting varieties and producing their own seed. Generations of farmers have thus created innumerable varieties with different characteristics, well adapted to diverse local conditions in terms of soil, rainfall etc.

However, national legislation favours conventional seed from genetically uniform varieties, bred for high yields, adaptability to favourable

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environments and responsiveness to chemical inputs. Small-scale farmers have difficulty in obtaining such conventional seed. Moreover, they often find it unsuitable for the diverse conditions in their environment.

For this reason, solidarity-calabash groups have been holding farmer seed fairs, where they exchange primarily diverse local seeds, discuss strategies for seed saving and engage in policy dialogue for protecting their seed knowledge and gaining recognition for their contribution to agrobiodiversity. In the past five years, solidarity-calabash groups have held farmer seed fairs in five regions.

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Developing markets for agroecological products

The food system includes not only production but also processing and consumption – from fork to fork. Facilitated by the programme, the solidarity-calabash groups organise "product exchanges". Each year at harvest time, groups located in different agroecological zones of Senegal exchange products according to the rules of fair trade.

Those in Senegal's central zone exchange rice for millet from those in the north; those in the south exchange non-timber forest products for millet or groundnuts from other zones. This form of market development makes marketing less risky and contributes to developing a local food system within Senegal for greater food security. Over the last five years, about 120 tons of food products have thus been exchanged through solidarity-calabash groups.

Conclusion

Rural Senegalese people developed the solidarity calabash In order to combat hunger and debt and converted it into a tool to mobilise local capital for the "self-financing" of group members' activities related to agroecology: farmer-led experimentation, innovation, mutual learning, accessing natural inputs and fair marketing. The farmer-led savings approach embodied in the solidarity calabash provides an inclusive financial instrument to promote the development of agroecology in Senegal, managed by local farming communities and enhancing social equity, human nutrition and women's empowerment.

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