Objectives of the project

The global objective is to promote agro-sylvo-pastoral production systems that are economically profitable, ecological sustainable and socially equitable in the North Region of Cameroon. The specific objective is to strengthen the agro-sylvo-pastoral innovation systems in their processes of inclusive planning, negotiation, cocreation and implementation of technical, organisational and social innovations.

Members of NARRAL Cooperative harvesting crops from their demonstration plots in Rural Resource Centre (RRC) of Bawan, North region of Cameroon. © CIFOR-ICRAF Cameroon, 2022

Background

In the North of Cameroon, livestock, agriculture and protected areas use the same territory of 65,000 km^2. There are 3 national parks and 28 hunting zones that occupy about 45% of the total area of the North region. Against this background, the major challenges for the agricultural sector are to secure access to land while preserving a sustainable and balanced use of natural resources. Priority actions to accompany economic development without compromising biodiversity, should consider the often-conflicting interests of the different actors involved.

The following contexts and themes are considered for the target zone, i.e. the corridor between Garoua and the Adamawa plateau in the North Region of Cameroon:

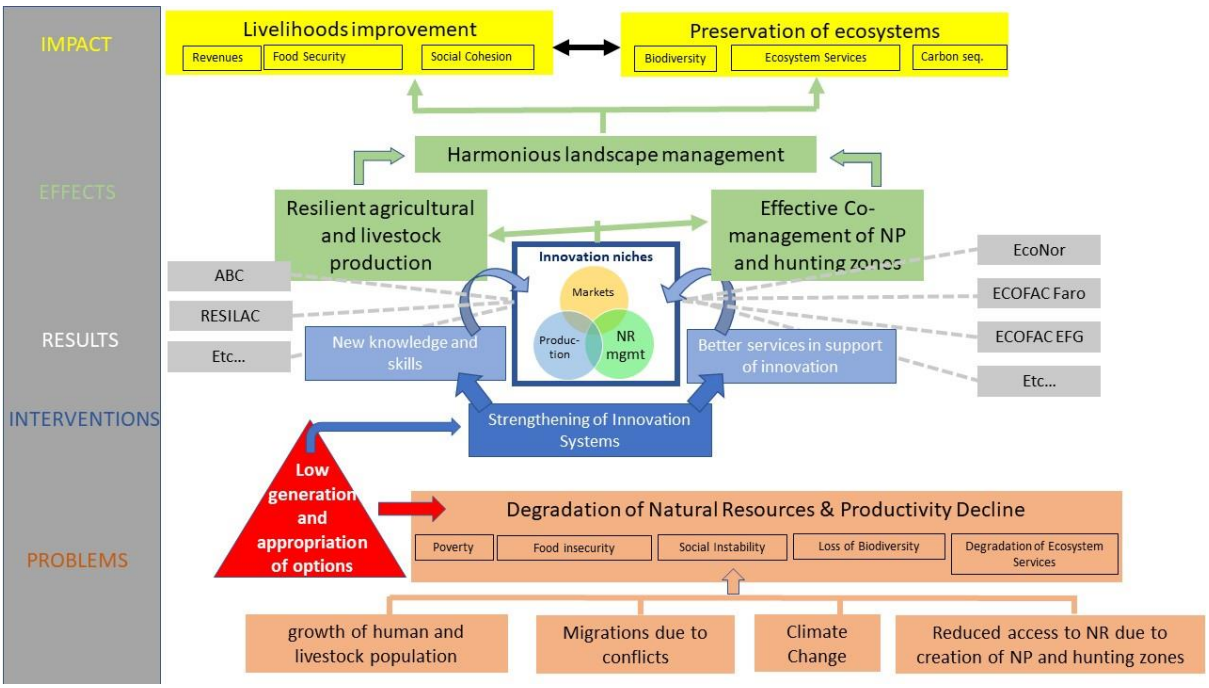
- ✓ High populated zone south of Garoua, highly degraded where the promotion of agro-ecological and climate smart practices are required, as well as a better integration of agriculture and livestock.
- ✓ Zones bordering national parks and hunting zones where there is a lot of tension and conflicts over access to land and natural resources. Here, organisational innovations for co-management of protected areas are needed.
- ✓ More recent cotton production areas (south-east of Benoue, between Bouba-Ndjida and Touboro), where there is a clear move to clear forest/natural vegetation to establish new farms. Here, intensification of agriculture (soil fertility improvement) would help to preserve the remaining tree savannah while sustaining production of cotton and food crops.

Several methods and tools for the planning of development interventions allowing different actors to converge at various levels (e.g. community, district, landscape, value chain) were developed and tested in Cameroon. While these tools usually succeed in diagnosing land uses, challenges, opportunities and support needs, they rarely go beyond that stage to identify and apply solutions in a participatory way. Hence, the implementation of interventions, whether technical, organisational or social, requires approaches that facilitate participatory research, thereby enabling the design, experimentation and adaptation of innovations by a set of actors. In the context of North Cameroon, these actors include farmer and herder associations, private sector, government, research institutions, development programmes, conservation organisations and civil society, etc. Examples of such approaches supporting innovation processes are Rural Resource Centres (RRC) and Innovation Niches (IN), that are places where farmers come together and meet with other stakeholders for demonstration, experimentation, and training on agro-sylvo-pastoral innovations, adapted to the local context and the needs of the beneficiaries.

The theory of change to achieve the objectives

The expected impact of this project is the livelihoods' improvement of people in the North of Cameroon through a harmonious management of the landscapes allowing integration of agriculture and livestock, and the management of natural ecosystems. The project takes advantage of existing projects and programmes in the region, those oriented towards the improvement of agricultural production, livestock or rural development in general on the one hand, and those focused on co-management of protected areas and hunting zones on the other hand.

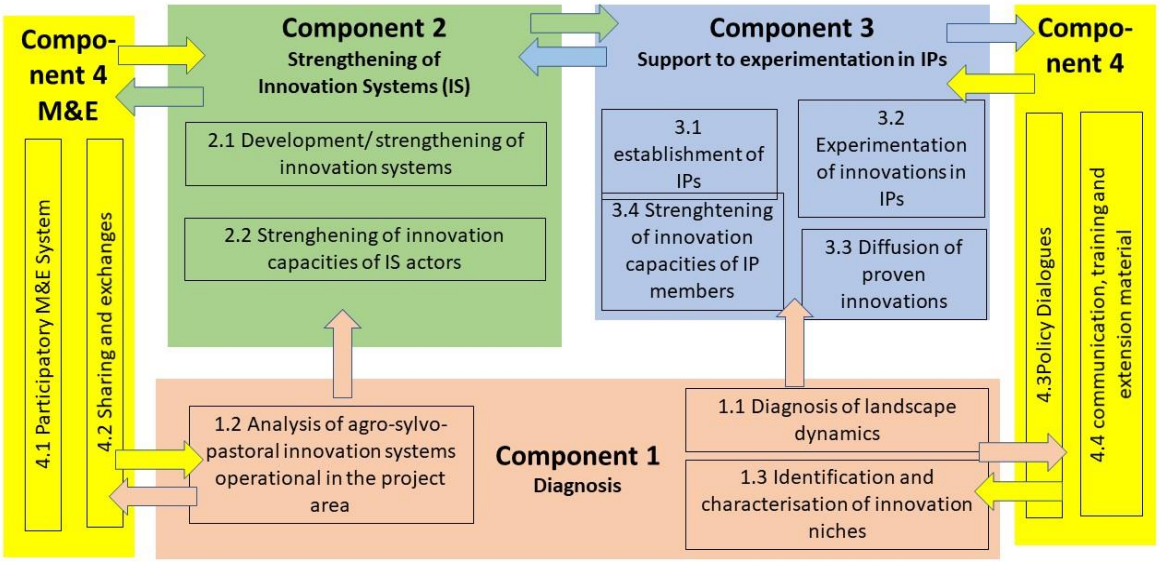
Our hypothesis is that agricultural innovation systems in Cameroon are not able to facilitate the generation and appropriation of sustainable solutions to the realm of challenges in the North of Cameroon. Therefore, the project intends to strengthen '*capacities to innovate'* of actors operating in the project area. While this work at landscape level is important, most interventions of the ReSi-NoC project take place in the 'innovation niches', which are areas for learning, experimentation and micro-transformation. Groups of actors come together in those innovation niches and become stakeholders in the learning process, which then creates an enabling environment for agricultural innovation. The actors that make up the agricultural innovation system at regional and national level (research, extension, private sector, civil society) work with the innovation niches to generate new knowledge and skills in the domain of agro-sylvo-pastoral production, markets and management of natural resources that can be disseminated subsequently beyond the innovation niches. At the same time, this learning will result in improved services in support of innovation in the region.



The implementation of the project follows three prongs: i) diagnosis of population dynamics, livelihood activities, impact on natural resources, evolution of climate and impact on practices, as well as an in-depth institutional analysis of the existing agricultural innovation systems; ii) establishment of rural resource centres bringing together relevant actors in sites around protected areas ; iii) experimentation, adaptation and diffusion of technical, organisational and social innovations in RRC and IN using a participatory approach.

Main activities

Activities are structured in 4 components, as detailed in the graph below.



Results achieved to date (30th September 2022)

After 2 years of the project, significant progress has been made in the diagnosis of land dynamics with the production of vegetation change maps from which explanatory models identifying the factors of change in the use of space will be developed at the regional, village and household levels. The analyses already show that the main factor at the origin of the observed dynamics is demography, and in particular the population flows from the Far North and neighbouring countries, associated with the new modes of access to land. In addition, the widespread use of herbicides has facilitated the sowing of large surfaces and thus contributed to increasing agricultural pressure on protected areas. As part of the evaluation of agroforestry practices in the project area, two studies were carried out, one concerned farmers' perception of the ecosystem functions of trees and agroforestry practices, and the other examined the effect of tree diversity on soil fertility and maize production.

With regard to the Agro-Sylvo-Pastoral Innovation Systems (SIASP) operating in the project area, a characterisation was done based on the objectives pursued by the actors and the relationships between them. Actors were further categorized into research and education, bridging institutions, business ventures and conservation organizations. The SIASP includes public organizations, civil society organizations, Producer Organizations (POs) in the agricultural sector, and nature conservation organizations. It was also noted that the links between SIASP actors in the North region are diversified. In-depth characterization of 21 previously selected innovation niches has been finalised. After this step, 12 niches were selected given their impact on well-being (food security, income, employment, social cohesion) and ecosystem adaptation (preservation of biodiversity, protection of natural resources). Three innovation niches (01 per thematic area) were chosen as pilot niches to initially receive support and test the support tools: (i) the Mbé/Ngahan IN on the structuring of a pro-biodiversity shea value chain; (ii) the Lagdo IN on community management of transhumance; and (iii) the IN of Touboro on the platform for the promotion of agroecological practices. Soon the team will be using the OCATI tool (Organizational Capacity Assessment Tool for Innovation) to assess organizations that support innovations in agriculture in terms of their technical capacities, functions, needs and organizational skills and influential structural conditions to effectively support innovations.

Four Rural Resource Centres (RRCs) are being developed to serve as a mechanism for promoting environmentally friendly agro-sylvo-pastoral practices. Located in the peripheries of protected areas, they support the conservation of national parks. So far, work has been done to secure the sites physically and legally, the preparation of the well drilling works (drilling in Tchamba already completed) and the construction of training rooms, and on the revitalization, training and coaching of the members of the RRCs. This work was done in close collaboration with the conservation services of the Ministry of Forest and Wildlife (MINFOF) and other conservation (African Wildlife Foundation (AWF), Wildlife Conservation Society (WCS)) and development (Deutsche Gezellschaft für Internationale Zusammenarbeit (GIZ), Centre de Ressources Agroforestières, Forestières et Formation continue (CERAF), Association Noé) actors. In the interests of sustainability, a lot of effort has gone into raising awareness and supporting the community and especially the members in charge of the management of the RRCs towards the appropriation of project activities. Discussions have taken place with a view to structuring the RRCs into cooperative societies. As for activities in the RRCs, demonstration fields with improved varieties of food crops (groundnuts, soybeans, rice, sorghum, maize, etc.) and fodder crops (Bracharia, Stylosanthes) have been set up, as well as seed multiplication plots, and market garden crops. In the area of agroforestry, seed orchards of mango, citrus, cashew, and living hedge species have been established in the resource centres. Also, the installation and monitoring of nurseries for exotic and local fruit trees and species for living hedges have been continued in the 4 resource centres.

Official of the Ministry of Forest and Wildlife sensitising the population of Bawan in North region of Cameroon on the role of RRC in supporting protection of Benoue National Park
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In order to determine the baseline of the results indicators, a baseline study which takes stock of the current situation of socio-economic indicators at the start of project activities was carried out with 600 households in 34 villages in March-April 2022.

With the aim of creating synergies and sharing experiences, the staff of the ReSI-NoC project participated in several activities organized by the actors of the agro-sylvo-pastoral innovation system in North Cameroon.

Organization

The project is implemented by a consortium composed of research centres working in the area on relevant themes (Centre for International Forestry Research - World Agroforestry (CIFOR-ICRAF), Institut de Recherche Agricole pour le Développement (IRAD), Centre de coopération Internationale en Recherche Agronomique pour le Développement (Cirad)), with ICRAF as the lead. The field team is composed of an innovation facilitator and a junior scientist in innovation systems who are implementing field activities, scientists from IRAD who ensure anchorage with the national innovation system, and support staff. In addition, a pool of national and international experts in the domains of innovation, participation and gender, agroecology, agroforestry, value chain analysis &

entrepreneurship, and climate change provides technical assistance to the field team for the diagnosis, the strengthening of the innovation systems, the experimentation of innovations, as well as for Monitoring &Evaluation, policy dialogues and communication. Further, 3 PhD students carry out their research in support of the project.

To build synergies and efficiency with other projects operating in the same area under Team Europe Initiative, close collaboration has been developed with the EcoNorCam project, led by WCS around Benoue National Park, with AWF active in and around Faro National Park and with BSB-Yamoussa project (WCS and GIZ) around Bouba-Ndjidda National Park.

Implementing organization
World Agroforestry (ICRAF)

Co-applicants
- ✓ Institut de Recherche Agricole pour le Développement (IRAD),
- ✓ Centre de coopération internationale en recherche agronomique pour le développement (Cirad),
- ✓ Centre for International Forestry Research (CIFOR).

Main stakeholders
Collaboration for different purposes and of variable duration are developed with other actors in the innovation systems, including:
- ✓ Centre de Ressources agroforestières, forestières et Formation continue (CERAF),
- ✓ Association Noé,
- ✓ Actions pour la Biodiversité et Gestion des Terroirs (ABIOGeT),
- ✓ SODECOTON,
- ✓ Amélioration de la Compétitivité des Exploitations Familiales Agropastorales (ACEFA),
- ✓ Deutsche Gezellschaft für Internationale Zusammenarbeit (GIZ),
- ✓ Ministry of Forest and Wildlife (MINFOF),
- ✓ universities and agricultural schools.

Location
Corridor between Garoua and the Adamawa plateau in the North Region of Cameroon.

Funding and co-funding

EU	€ 2,500,000
Total budget	€ 2,500,000

Duration
4 years (Oct 2020 – Sept 2024)

Website
Strengthening Agro-sylvo-pastoral Innovation Systems in the North of Cameroon | World Agroforestry | Transforming Lives and Landscapes with Trees

Updated on 28/07/2023