MARIGO - Development of an agroecological peri-urban market gardening project encouraging a pooling of resources between territorial actors

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Conventional vegetable production around lakes in the peri-urban area of Yamoussoukro, Côte d'Ivoire (A) transport of leafy vegetables (B)

Project goals

The MARIGO project sets out (i) to perform a diagnosis of the peri-urban market gardening sector in Côte d'Ivoire, (ii) to generate multidisciplinary knowledge off the value chain, and (iii) to steer stakeholders (producers, farmers, sellers and consumers) towards an agroecological transition that will secure healthy and sustainable production in a context of climate change.

Background

The vegetables most consumed in urban areas in Côte d'Ivoire are onions, African aubergines, okra, tomatoes, chillies, spring onions, cabbage and leafy vegetables[1]. Domestic vegetable production represented about 700,000 t in 2013 with 161,000 ha of rainfed and irrigated crops. Today, this vegetable production is barely higher than the figure recorded for the years 1995-2000, which stood at 800,000 t. It is insufficient to meet the demand of a rapidly growing (2.6% in 2014) and urbanised population[2]. The study conducted in Abidjan in 1999 by AGRISUD estimated the daily vegetable consumption at 74 grams/day/person. For the population of a city like Abidjan, estimated at 4.4 million (UN, 2016), a supply of about 325 t/day or 120,000 t/year is needed. This is why the country continues to import vegetables regularly. In terms of quality, the availability of diversified and healthy products is also a major issue from the perspective of food security and the changing habits of urban consumers. One of the goals of the MARIGO project is to contribute to this diversification by promoting local vegetables known for their rich nutritional properties[3], produced in cropping systems adapted to agroecological niches and meeting the expectations of local stakeholders.

The theory behind the change

The activities of the MARIGO project are (i) the establishment of a multi-stakeholder platform (producers, private partners, public authorities, civil society and consumers) to share information, identify innovative solutions based on the pooling of resources and seek a consensus for their

[1] SNDC 2014. Study into the Elaboration of the National Strategy for the Development of Food Crops other than Rice. Final Report

[2] http://www.ins.ci/. Perspective Monde

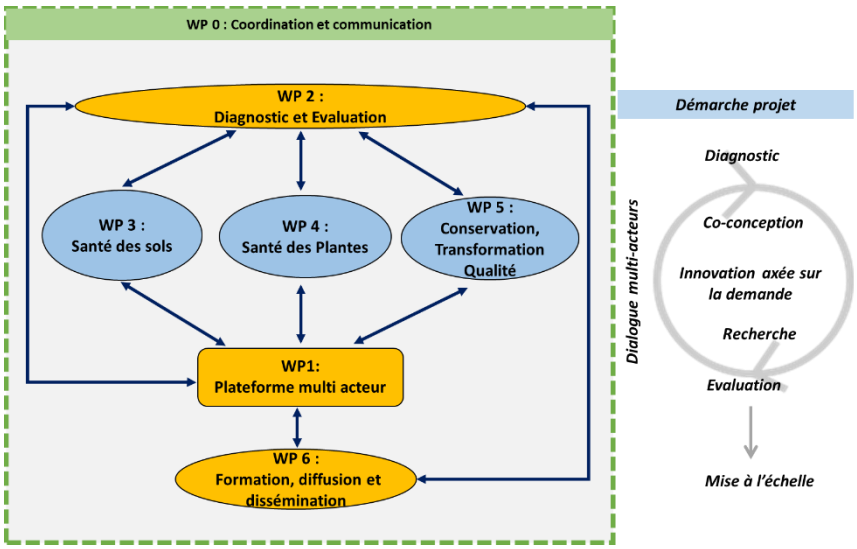
[3] Dawson, I. K., Hendre, P., Powell, W., Sila, D. et al. (2018). Supporting human nutrition in Africa through the integration of new and orphan crops into food systems: placing the work of the African Orphan Crops. Consortium in context

implementation, (ii) the co-design of agroecological and resilient market garden production systems by sharing the knowledge gained from previous projects, multidisciplinary knowledge (plant and soil health, post-harvest quality) and innovations resulting from the project, (iii) support for the actors involved in the agroecological transition of market garden production systems through training and demonstration activities in schools, vocational training centres and pilot farms, (iv) the strengthening of agroecological market gardening production systems through advocacy with public decision-makers, communication with civil society actors and the development of academic training modules, (v) the evaluation of the environmental impact of these new agricultural practices through the monitoring of soil and plant health indicators and product quality and, finally, (vi) the drawing up of a quality charter with a view to the national organic labelling of local products and farmers' networks.

The main outcomes and deliverables of the MARIGO project are: (i) a sustainable multi-stakeholder platform on agroecological market gardening will be available, (ii) 12 leading market gardeners in each of the four study sites on a South-North axis (Abidjan, Yamoussoukro, Bouaké and Korhogo) will be trained in agroecology, and eight young researchers (theses) and 12 engineers (end-of-study traineeships) will also be trained in agroecological tools and techniques, (iii) a network of labelled farmers committed to respecting a local charter of good agroecological or even organic practices will be set up, as well as a national committee representing the stakeholders in the market gardening sector in order to define, award and ensure compliance with an Ivorian organic label (iv) pilot post-harvest conservation equipment will be developed, audio/video clips, user manuals and guides to good agroecological practices will be produced and made available to stakeholders, (v) academic and vocational training modules will be developed for universities, schools and agricultural training centres (vi) a varietal catalogue of local vegetable species adapted to the environmental conditions of Côte d'Ivoire will be produced and, finally, (vii) multidisciplinary knowledge in plant health, soil health, post-harvest technology, Life Cycle Analysis and the socio-economics of vegetable production systems will be produced.

The main risks for the MARIGO project are (i) non-acceptance and/or disengagement of stakeholders, (ii) lack of institutional and political support for these changes, (iii) lack of resources and willingness of stakeholders to implement the activities on a 'regular' basis, (iv) the inability of actors to travel to the intervention zones for security and health reasons, (v) the difficulty of deploying the logistics necessary for the day-to-day implementation of actions in the intervention zones and, finally, (v) the mismatch between the project's deliverables and the needs of the actors.

Structure of the MARIGO project



Main activities

The main activities of the MARIGO project will consist of (i) **setting up a multi-stakeholder exchange platform** for the development of a sustainable and inclusive market garden economy, (ii) **establishing an inventory** of current agricultural practices, soil and plant health, and post-harvest systems for market garden products, (iii) **acquiring multidisciplinary knowledge** on the supply and demand of market garden production systems, on the value chains of market garden production, on the quality potential of market garden production and on the impact of production systems (conventional vs agroecological) on this quality, on the pests and diseases affecting the main crops, (iv) **developing a set of methodological and technical tools** to support market garden actors in the agroecological transition of their production systems, (v) **developing teaching aids and training modules** for academic (schools and universities) and vocational training, (vi) **producing a varietal catalogue of local vegetable species** adapted to the environmental conditions of Côte d'Ivoire.

Organisation

The MARIGO project is built around seven work packages, each coordinated by a complementary two-person team reflecting the nature and competences of the different institutions. Under the coordination of WP0, WP1 is dedicated to the multi-stakeholder platform, WP2 is focused on the diagnosis and analysis of current agricultural practices, WP3 and WP4 are dedicated respectively to soil and plant health, WP5 is dedicated to post-harvest product quality and WP6 is dedicated to training.

The project is headed by a consortium composed of four co-applicants: Centre for International Cooperation in Agricultural Research for Development (CIRAD), Institute of Research for Development (IRD), Swiss Centre for Scientific Research (CSRS), Institut National Polytechnique Félix Houphouët-Boigny- École Supérieure d'Agronomie (INPHB-ESA),
It includes one (1) third party partner: National Agricultural Research Centre (CNRA)

It also includes seven (7) associated institutions: the National Agency for Rural Development (ANADER), non-governmental organisations (IECD, NITIDAE, FERT), the Universities of Nangui Abrogoua (UNA), Félix Houphouet Boigny (UFHB-WASCAL) and Pelefero Gon Coulibaly (UPGC).
CIRAD will coordinate the project. A steering committee will be tasked with monitoring and validating the project's progress, and a scientific committee will be responsible for the project's scientific and technical coordination.

Implementing organisation

Centre for International Cooperation in Agricultural Research for Development (CIRAD)

Project partners

- ✓ Institute of Research for Development (IRD),
- ✓ Swiss Centre for Scientific Research (CSRS),
- ✓ Institut National Polytechnique Félix Houphouët-Boigny- École Supérieure d'Agronomie (INPHB-ESA),
- ✓ Félix Houphouet Boigny University (UFHB),
- ✓ Nangui Abrogoua University (UNA),
- ✓ Pelefero Gon Coulibaly University (UPGC),
- ✓ National Agricultural Research Centre (CNRA)
- ✓ National Agency for Rural Development Support (ANADER),
- ✓ European Institute for Cooperation and Development (IECD),
- ✓ FERT,
- ✓ Nitidae.

Other stakeholders

- ✓ The local vegetable producer platform *Plateforme collaborative des producteurs maraichers de Yamoussoukro (PCOPMAYA)*,
- ✓ The regional vegetable producer union *Union Régionale des Maraichers du Gbeke (URMAG)*
- ✓ The national environmental body *Association Ivoire Eco Responsable (AIER)*

Location

Côte d'Ivoire and four (4) intervention zones: Abidjan, Yamoussoukro, Bouaké, Korogho

Financing and co-financing

EU	€2,000,000
Total budget	€2,500,000

Duration

4 years (December 2020- November 2024)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