

## FAMILY FARMERS NEEDS BASED SOLUTIONS IN A CLIMATE CHANGE AND PANDEMIC SCENARIO

### Presenter

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### Description

Since the beginning of 1970s, Ivorian rain-fed agriculture has suffered the effects of climatic variability declined by a decrease in rainfall, increase in temperature (1), and worse repartition of rains, floods (2). From 1960 to 2010, rainfall deficit is of 28.9% in the humid forest zone, 7.7% in North region, 12.5% in Centre and North-East, 23.5% in South-West, with a barely perceptible decrease in Centre-West and East. Temperature increase is of 1.6 °C in average (Yao Nguettia et al., 2013). This led to disruption of the cropping seasons with advent of long-lasting dry sequences during the cropping seasons, shortening rainy season [late start and early end] (Kouame et al., 2020).

On the other hand, the measurement of the socio-economic impact of COVID-19 showed, that more than half of households whose head works in agriculture and the food industry, have seen their income decline. The increase in the number of people infected inducing a corresponding drop in overall demand, breakdown of production and supply chains, and fall in the prices of raw materials, constitute a real threat.

Thus, in short term, Ivorian State decided, mainly, to provide an immediate assistance to the most vulnerable households, distribute agricultural inputs kits (seeds, fertilizers, phytosanitary products) to farmers, strengthening the actions of crops grouping for their primary marketing, etc. Therefore, farmers have to adopt the recommended barrier measures for containing the level of contamination.

The projected decline in national agricultural production of 15 to 20 % (MINADER, 2020) related to COVID-19 impact (INS-MPD-BM, 2020), led to an inventory at the local level. Although not associated to this action by the Ministry of Agriculture and Rural Development (MINADER), the National Platform for Family Farming (PANAFCI) chaired by Cote d'Ivoire National Seeds Association (ANASEMCI) supported this initiative.

Our independent survey revealed a drastic disruption of agricultural inputs distribution, reduction of quality control activities, job and crop losses, producer's income decline, etc. (PANAFCI, 2020).

PANAFCI brought to the attention of MINADER its benchmarks for monitoring the application by the Ivorian State of the recommendations of ECOWAS Conference of Ministers of March 31, 2020, with regard to the outputs for the agricultural world, particularly for the family farming.

The following measures were recommended to the State: (i) Supply all producers with agricultural input kits (seeds, fertilizers, phytosanitary products); (ii) provide agricultural advice by using technological innovations (mobile applications devices for the monitoring of farmers); (iii) continue research, while ensuring the application of the health barrier measures recommended by WHO; (iv) identify the production sites, actors and their professional organizations, as well as their input needs for the 2020-2021 agricultural campaign; (v) preserve the free movement of trucks transporting agricultural products to the country's consumer markets; (vii) strengthen epidemiological surveys of transboundary animal diseases (CBPP, PPR, avian flu, swine flu, etc.) in member countries and develop information sharing between countries and the Bamako Regional Centre of Animal Health (RCAH/CRSA); (viii) coordinate information systems (production, markets, stocks, etc.) and strengthen them, so that they can continue to provide a basis for analysis and decision support.

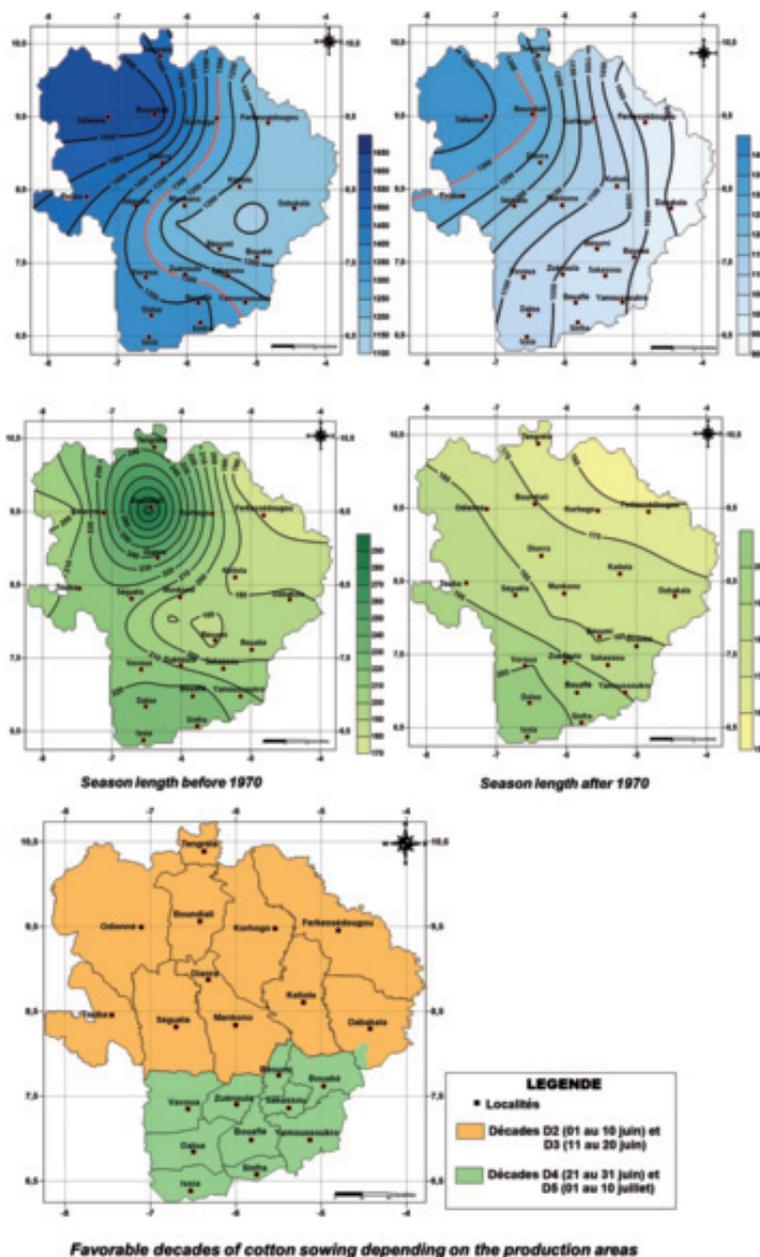
In order to impact all the emergency measures implemented by the Ivorian State, this proposal document was sent to the agricultural professional organizations' members of PANAFCI, as reference elements to be adapted to their regional context, for their proposals at the local level to the decentralized authorities. This made possible to ride up the needs of farmers from the basis.

## Description

More in depth, as part of the management of Coronavirus health crisis in the agricultural world, PANAFCI carried out the following actions: (i) Collection by phone of data on the impacts of COVID-19 on the life and activities of family farmers; (ii) elaboration of a PANAFCI proposal document to support the Ivorian State in its emergency strategy for agriculture revival; (iii) Submission of the elaborated proposal to the ministries in charge of agriculture (MINADER), of animal production and halieutic resources (MIRAH), and to the ministry of rice promotion [MPR]). This document retraces the favourable economic period in which the country was engaged, the intervention of COVID-19, the emergency measures taken by the Ivorian State to face the risks of food shortage and insecurity, and the recommendations of PANAFCI member organizations, with a view to containing the crisis and repositioning itself to pursue the agricultural development. In the meantime, PANAFCI also sent instructions to its members at local level, to translate their needs to the decentralized authorities, with a view to give their rapid feedback to political decision-makers.

Regarding the effects of climate change and the fight against those, several farmers' initiatives to adapting production systems have been recorded in the Country. These are summarized in the following points as an example, where to each product correspond one or more initiatives implemented by farmers:

- Cocoa tree: direct sowing plus seedling in bags-sowing under cashew were implemented.
- Rubber tree: Nursery, Planting and grafting instead of nursery, grafting and planting.
- Cashew: was introduced instead of coffee and cocoa trees.
- Annatto: was introduced instead of coffee and cocoa trees.
- Yam: shifting the date of ridging.
- Cassava: Cuttings on mounds, ridges (buried/inclined).
- Maize: shifting the date of planting.
- In addition to the above-mentioned solutions, to mitigate climate change effects, mulching is also used to protect crops from soil moisture losses.



# IVORY COAST

## Results

A response plan to COVID-19 negative impacts, including support to health system, of 171 838 565.02 USD was adopted by Ivorian State. Also, 1.5% of 2020 GDP will be used to assist the most vulnerable households and support agricultural production.

On the other hand, in order to mitigate climate change, the following measures were recommended by the MINEDD (YAO N'GUETTIA et al., 2013) to:

### Central and local Authorities

- Strengthen agriculture mechanization by providing accessible machines adapted to the soil characteristics.
- Carry out hydro-agricultural layouts by valorisation of floodplains and water control.
- Set up an agro-meteorological warning system providing reliable information on rainy seasons.
- Create a consultation and awareness-raising framework to prevent conflicts between rainmakers and local populations, who attribute climate change to them.
- Develop livestock and agro-food processing as sustainable sources of income.
- Promote credit for funding producers' activities in time.

### Extension services

- Prioritize climate change issues.
- Extend agroforestry systems (fruit species) to increase producers' income.
- Support farmers in reforestation and soil protection against erosion.

### Farmers

- Promote exogenous adaptation knowledges.
- Share producers' successful adaptation experiences.

### Research

- Develop short-cycle and resilient crop varieties.
- Improve existing farmer adaptation initiatives.



## Climate smartness

The ANASEMCI (Association Nationale des Sémenciers de Côte d'Ivoire [National Association of Seed Companies of Ivory Coast]) – PANAFICI (Plateforme nationale pour l'Agriculture Familiale en Côte d'Ivoire [National Platform for Family Agriculture in Ivory Coast]) initiatives have focused in large part on increasing the adaptation to climate change and climate variability by implementing a large quantity of Climate-Smart agricultural practices, which can be further strengthened with the use of the system of early-warning systems already established. A key element to consider in these initiatives is to strengthen the ability of the farmers to understand and use the climate information<sup>8</sup> generated through this network, understanding how the climate affects the crops, and what tools are available for better-informed decision-making processes in the short and medium term in order to enable scaling processes. This can also support the generation of production surpluses in addition to food production for self-consumption, so that the farmers can have additional incomes.

The project also has an important planning component based on vulnerability analysis and financing for practices implementation, which is also linked to the focus of climate-smart agriculture. In general terms, this project is very complete and rich in the implementation of portfolios of Climate-Smart agricultural practices and productive alternatives, for that reason it is recommended to maintain its operation over the time. As an additional recommendation, it would also be good for the project to be able to address activities related to the GHG emissions reduction and carbon sequestration.

<sup>8</sup> It is advisable to use climate information from official institutions. However, in case this information cannot be accessed, it is possible to use global secondary information such as CHIRPS (<https://climateserv.serviglobal.net/>). To transfer agroclimatic information, it is advisable to create spaces such as the Local Technical Agroclimatic Committees (LTACs) (<https://www.sciencedirect.com/science/article/pii/S2212096316300298>) and use methodologies such as PICSA (<https://climateserv.serviglobal.net/>).