

# VOICES FROM THE FIELD

Community-based Flood and Drought Management in the  
Volta Basin

Benin, Burkina Faso, Côte d'Ivoire, Ghana, Mali, Togo



**Volta Flood and  
Drought Management**

Developed by Knowledge & Innovation in joint collaboration with the World Meteorological Organization, Global Water partnership-West Africa, the Volta Basin Authority and other supporting partners.

## BACKGROUND



## OBJECTIVE



## SUCCESS STORIES



## STAKEHOLDER CONTRIBUTIONS



## LESSONS LEARNED AND SUSTAINABILITY



## CONCLUSION



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# LIST OF ACRONYMES

- ANAMET - Agence Nationale de la Météorologie
- APFM - Associated Programme on Flood Management
- CBFDM - Community-based Flood and Drought Management
- CFDMC - Community Floods and Drought Management Committee
- CRP - Community Restoration Project
- DPAEDR - Direction Préfectorale de l'Agriculture, de l'Élevage et du Développement Rural-Lacs
- GWP - Global Water Partnership
- GWP-WA - Global Water Partnership-West Africa
- JVE - Jeunes Volontaires pour l'Environnement
- MS - Multi-Stakeholder
- NGO - Non Governmental Organization
- SODEXAM - Société d'Exploitation et de Développement Aéroportuaire, Aéronautique et Météorologique de Côte d'Ivoire
- VBA - Volta Basin Authority
- VFDM - Volta Flood and Drought Management Project
- WAP - WhatsApp
- WMO - World Meteorological Organization



## BACKGROUND

Under the Associated Programme on Flood Management (APFM) – a joint initiative of the World Meteorological Organization (WMO) and the Global Water Partnership (GWP) – together with the Volta Basin Authority (VBA) and other supporting partners implemented the Volta Flood and Drought Management Project (VFDM) between June 2019 and June 2024. The VFDM is funded by the Adaptation Fund.

The project has the overall objective of assisting national agencies in the six Volta Basin countries (Benin, Burkina Faso, Ivory Coast, Ghana, Mali, and Togo) to implement coordinated and joint measures to improve their existing floods and drought management strategies and plans at the regional, national and local levels, building on lessons learned from the past as well as current and ongoing projects related to disaster risk reduction and climate change adaptation.

Under the framework of community-based floods and drought management (CBFDM), activities were implemented in six sites of the Volta Basin: Tabota (Benin), Badara (Burkina Faso), Sangabili (Côte d’Ivoire), Kunkua (Ghana), Kandé Commune de Bakass (Mali) and Daoudé Commune de Assoli (Togo).

The CBFDM activities were implemented between August 2021 and June 2022 and were aimed to increase the self-help capacities for flood and drought risk reduction, strengthen preparedness and enhance resilience, starting at individual household level, and spreading throughout to the entire community.

This document highlights “Voices from the field” from the pilot sites mentioned above and lessons learned, along with the sustainability of the implemented activities.

# OBJECTIVE

Floods and droughts have been treated together because the effects of these two hazards can be cumulative and above all have been indicated jointly to pose a severe threat for the communities and governments of the Volta basin. Communities involved in the designing and development of any solution have more chances of sustaining it for a longer period. It is an important step towards enabling communities (and societal actors in general) to be recognized as leading actors in this context and to help themselves in this regard and sustain those efforts.

Under the VFDM project, the CBFDM project developed self-help capacities and increased the resilience of communities in selected vulnerable areas of the Volta basin where flood and drought pose a prominent risk. This support improved the effectiveness of preparedness and response measures and fostered community project ownership eventually sustainability of the activities beyond the project duration.

The overall objective of this voices from the field document is to present some of the success stories of the CBFDM activities implemented in the pilot communities and the benefits provided to the individuals participating in various activities.





## SUCCESS STORIES

The VFDM implemented CBFDM activities in a participatory and inclusive approach to better understand the challenges and identify tailored, affordable and sustainable solutions generated and designed by communities to meet their specific needs.

Integrating local knowledge in flood and drought management through the CBFDM project, empowered communities to share their past experiences, building joint capacities and connections, and reducing susceptibility to disasters.

Success stories highlighted the positive short- and mid-term effects of project activities on community members.



# PREPAREDNESS MEASURES FOR FLOOD AND DROUGHT RISKS





**Expansion of the bushfire committee to the floods and drought management committee**

*"The Volta Flood and Drought Management project was very interesting and important. We already had a Committee in Sangabili for the management of bushfires. Thanks to the project, this Committee broadened its scope and skills to the management of floods and drought. We have frequent meetings of the Committee, and we deal with a lot of problems. As a youth, I am very happy to go to the Committee meetings and attend them. What the Committee does is important for the development of the village.*

*Now, Sangabili has a natural hazards management plan. The Committee played the leading role in its preparation."*

(Ernest Dongo Kouamé, Vice-President of the Flood and Drought Community Management Committee of Sangabili, Côte d'Ivoire)

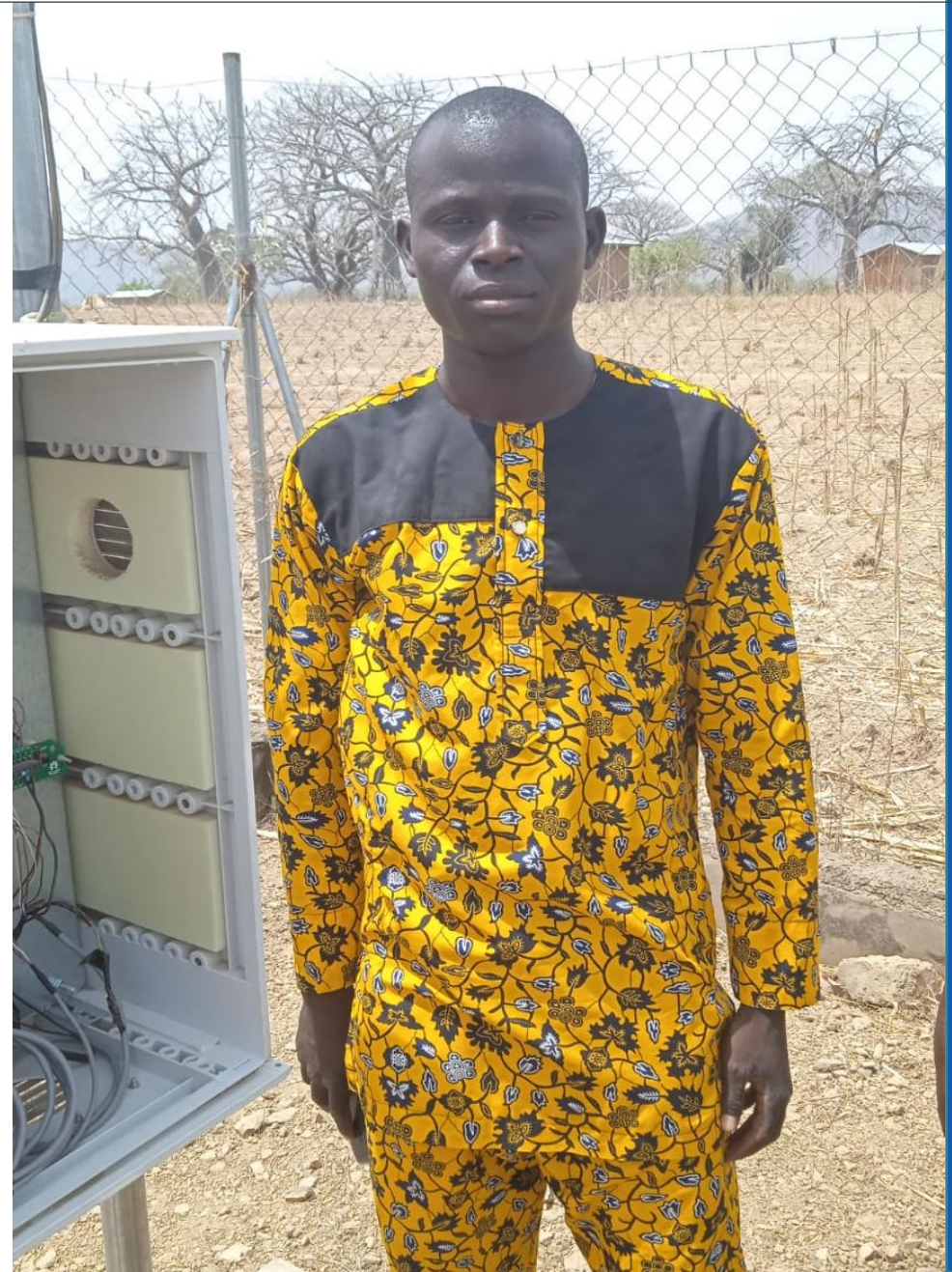
**COMMUNITY-BASED FLOODS AND DROUGHT MANAGEMENT COMMITTEES**

**The floods and drought management committee in Tabota is still working**

*“18 months after the formal end of the Floods and Drought Management Community project, Management Committee (CFDMC) set up in Tabota continues its prevention and management activities of natural hazards. An important milestone in the life of the committee was the set-up of the Floods and Drought Community Management Plan of Tabota with the prioritization of the activities to be implemented. This has been done regrouping the members of the CFDMC and resource persons, such as the chef of the village and one of his advisors and the various actors of the community.*

*Also, after the end of the project, the CFDMC met regularly (last meeting one week ago from the collection date of this success story which was the beginning of March 2024), at least once a month and we try to deal with all the important issues affecting this village (presently, we are discussing a lot on hygiene issues). We are continuing with reforestation and strengthening of plant cover and in raising awareness among the community about the risks they run in the lowlands or beds of watercourses. Committee members continue their work and Community members recognize the authority of the Committee and respect its decisions (for example, the ban on defecating in the open air or the ban on building in floodable areas that we have defined as "red zones"). In the Committee, all the neighbourhoods of Tabota are represented and it is also a place where community-related updates are shared. However, to preserve and continue to promote development based on the achievements, support is needed.”*

(Sengo N’Tcha Armel, President of the Floods and Drought Community Management Committee in Tabota, Benin).





**GENDER MAINSTREAMING IN  
FLOOD AND DROUGHT  
MANAGEMENT ACTIVITIES**

**Empowering women**

*“Community flood and drought management project activities in Sangabili have strongly involved women. Whether through our association, among the youth, or in the floods and drought management committee, we women are leading role. Our skills have been greatly strengthened in the management of flood events.*

*And just a few months after the conclusion of the CBFDM project, we were able to play a leading role in a project to produce mahogany-based edible juice. This allows us to increase our incomes. So, thanks to the initial CBFDM project, we now have additional income sources.*

*This project also includes the rehabilitation of the forest cover which will protect us from flood water.”*

(Mariam Kamegate, Women Association of Sangabili President, Côte d’Ivoire)

### WOMEN IN THE COMMITTEE

*“8 out of the 21 members of the Management Committee in Tabota are women. Through their presence in the committee, the position of women in Tabota has improved and we can make our voices heard much more than in the past. Raising awareness among women continues and our awareness has clearly improved. We are very aware of the existence of the Flood and Drought management plan which provides necessary guidance on what actions we must take to prevent or reduce floods and droughts related impacts. And we are also committed to implementing further development actions, such as the promotion of improved stoves for cooking and hygiene measures in the village area” which was a challenge before this project.”*

(Philomène M. Betti, Woman member of the Floods and Drought Community Management Committee in Tabota, Benin – picture below)



*“There were no women in the Bushfire Management Committee that existed before. Thanks to the VFDM project, the existing Committee expanded its scope and became the Flood and Drought Management Committee, and women were invited to join this revamped committee. Moreover, this CBFDM revamped Committee includes both women of the Koulango Community and representatives of the Lobi Community. During the meetings of this Committee, the women can actively share their concerns and be part of the decision-making. Very often, the problem to be addressed is brought by a woman to the Committee’s attention and the Committee works on these issues, taking into account the opinion of all its members. I am happy that this project provided this opportunity for the integration of community individuals to work together on common issues.”*

(Salamata Kadou, Lobi Woman leader, Sangabili, Cote d’Ivoire – picture above)



WOMEN'S CAPACITY BUILDING



*“Before the awareness raising activities carried out by the VFDM project partners in Daoudé, I did not know the practical importance of weather information. A lot of useful training has been done here for the women and all the people in the canton of Daoudé. We have now gained knowledge to sow seeds at a minimum distance of 35-40 meters from the edges of streams which can reduce the flood impact on the crop. We have also learned to fight against soil erosion and to replace the trees we cut down. Awareness has also been raised to prevent the risks of children falling into flooded streams when they go to school: we now accompany them, or even identify and point out safer routes for them.”*

(Djibril Meri, President of the Groupement des femmes of Daoudé Canton; agricultural farmer, Togo – picture below)



*“Inspired by the Tabota’s experience, we have established the women’s association of Gouffarou. We already participated in training activities and some among us, have already cultivate a plot of land. However, the authorities have granted us a large enough area where we could cultivate and manage all together. The (solvable) problem is getting water to irrigate the area appropriately.”*

(President of the women association in Gouffarou, Benin – picture above)

*"The community flood and drought management project has helped the community at large, and I particularly appreciate the support to women. This project has brought out the best in many people, especially women. The Imam today is here to welcome all those who are doing good things in Sangabili, especially the women", God bless us!"*

(Abou Kamakate, Sangabili Imam, Côte d'Ivoire – picture below)



*"The community-based activities implemented in the Kunkua village, Bongo district of Ghana provided opportunity for me to learn various aspects of floods and drought management. I am happy to be part of the village committee now and will be involved in capacity development activities and decision-making. Also, the local meteorological station data and warning from the project EWS will provide daily and weekly bulletins which will help us to take timely decisions on harvesting and drying of millet crops."*

(Ms Asakibila Erica, Kunkua village, Bongo, Ghana – picture above)

### WOMEN'S EMPOWERMENT

*"The NGO CIBES would never have been able to formulate a new project (and obtain the related funding) functional to the generation of income for the Sangabili women's association without the activities of the Floods and Drought Management Community Project funded under the VFDM. Through this project, the sustainability of the VFDM results in Sangabili will be also ensured."*

(Sylvestre Beugré, President of LaCIBES, - NGO responsible of the Floods and Drought Management Community project in Sangabili, Côte d'Ivoire – picture below)





**YOUTH ENGAGEMENT IN FLOOD AND DROUGHT MANAGEMENT**

**Youth inclusion**

This project enabled greater inclusion of young people in the prevention and management of floods and drought. Firstly, endogenous knowledge which previously belonged only to the elderly, is now also the heritage of young people. Secondly, their awareness has increased, also thanks to all the training actions and other activities they participated in. Thirdly, being, some youths, members of the CFDMC, have more weight and more responsibility in the community. Finally, young people also share their knowledge with friends in the village and from neighbouring villages.

(Noel N'toaua – Youth student in Tabota, Benin – picture on the left)



The young people both among the Koulango and Lobi communities play a considerable role in the management of floods and drought in Sangabili. They actively participated in awareness-raising and training activities and are strongly involved in the operation of early warning system. It is especially young people who have mobile phones, which allow them to receive (in French) weather information through the WAP group “Alertes hydro-météorologiques Sangabili” (see the slide p.34). So, they translate this information into the local languages and spread it to the whole community via loudspeakers (Côte d’Ivoire).





*“The Flood and Drought Community Management program enhanced social cohesion in Sangabili. The two Sangabili communities – Koulango and Lobi – live in two separated neighbourhoods and are relatively distant from each other. Before, each community lived in isolation, though this is still partly true, social cohesion is being strengthened through the management of similar needs. In the Management Committee there are representatives of the two communities who work together for community development especially the women and young people who work together (much more than in the past), managing multiple problems of the entire village.”*

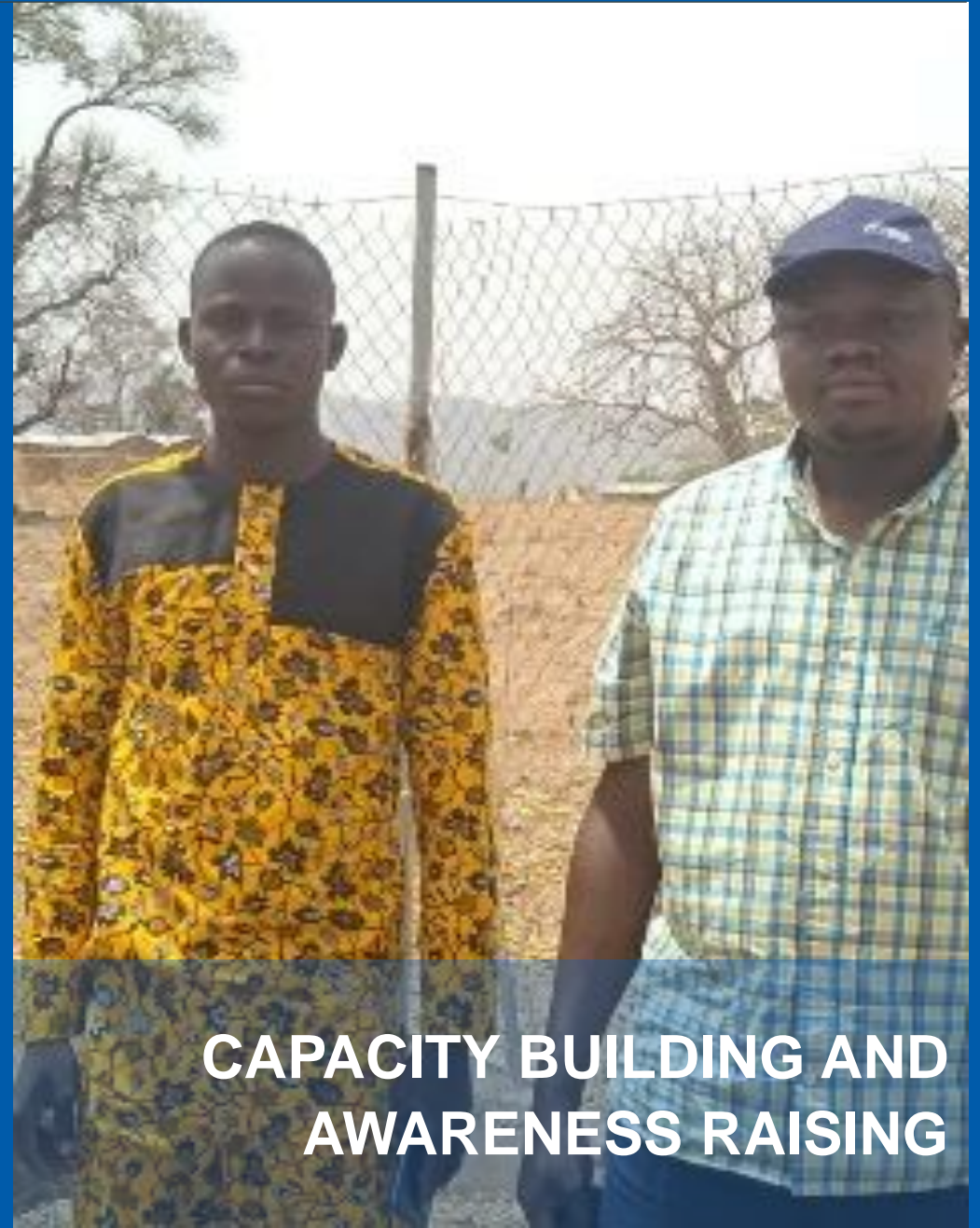
(Antoinette Koussia, Women Association of Sangabili Vice-President, Côte d’Ivoire)

**IMPROVEMENT OF SOCIAL COHESION**

### Enhancement of traditional knowledge in drought and flood forecasting

*“In the community of Tabota, a survey was conducted at the local level to gather indigenous knowledge of floods and drought occurrence. 27 people were surveyed (most among the elderly), including 6 women. Based on the responses received on the initial signs of drought occurrence, the following ones were recorded: the early foliage of Cassia siamea; the presence of fog from May to July; and the abundant appearance of locusts and caterpillars during May and June. Among the signs of flood occurrence, the following ones were recorded: strong frequency of a wind blowing from North to South; long duration of the harmattan (November to February); the late foliage of Cassia siamea; migration of wild ducks; long duration of heat from February to May. Based on these results, in a workshop organized by NGO with the community, some endogenous measures for preventing floods and drought were also identified. For preventing floods: Cultivation of short-cycle agricultural products, e.g., Fonio, small millet, small beans, (70 days); Predominance of the cultivation of moisture-resistant agricultural products (rice, yams, taro potatoes, etc.); Avoid making fields on water streams; Hasten seeding. For adapting to drought: Growing heat-resistant crops (Millet, Vandzou, Sorghum, Maize); Growing long-cycle crops (Millet, Vandzou, Sorghum, 3-month-old maize, etc.); Make sacrifices to attract rain; Growing short cycle crops in the lowlands; Suspension of certain less important ceremonies (initiations or funerals) to save food). A further activity to be highlighted is the set-up of an environmental club, with a focus on climate change, has been set up at Tabota College”.*

(Théophile Djabgé leader of the NGO Alpha & Omega, responsible of the implementation of the floods and drought community management project in Tabota, Benin)



**CAPACITY BUILDING AND  
AWARENESS RAISING**



*“The community project in Sangabili has been very helpful in terms of strengthening our capacity to manage certain natural hazards which we could not handle before. We worked a lot, and this project allowed us to learn how to manage the environment (in particular, the management of waterways and lowlands). There have been very effective training and awareness-raising actions to identify floods and protect ourselves (for example where you should not build or grow crops). There have also been activities for reforestation (and awareness raising in this regard too) and to improve economic production. The Community has perfect control over what has been done, thanks to the CFDMC which still continues to function. However, other problems persist, particularly linked to water supply.”*

(Manta Kombeti, schoolteacher and “Chef d’arrondissement” de Tabota, Benin – picture above)

CAPACITY-BUILDING AND AWARENESS RAISING

*We are much more aware of what needs to be done to prevent and manage floods and droughts. Before, only the elders had local knowledge about this; now what they know has been shared with everyone especially the younger generation. We equally learned about this indigenous knowledge from the local ONG Alpha & Omega to broaden our knowledge. We created also a community map of Tabota evidencing what has happened related to floods (the floods in Tabota, however, do not affect the centre of the village but only boundary/surrounding areas and, in particular, the crop fields – which are now for us “the red zones”). We identified the activities to be implemented.”*

(Nasile Tchanati, farmer in Tabota, Benin – picture below)





### Communication and community involvement

*“At the beginning of VFDM's activities in Daoudé, we carried out awareness raising in the communities, to give a solid basis of the work to be done, and we set up a management committee. We collaborated with the Weather Service and the Red Cross and Civil Protection. On the flood risk management side, concrete results have been achieved. For example, awareness has been raised about the need to plant crops away from waterways and this has lessened many problems usually derived as a result of flood. An early warning system has also been put in place, with markers being installed to signal flooding. On the drought side, awareness has been raised among producers about water retention practices to sustain income-generating activities (e.g., tomato production). There are a number of lessons learned from our work: flood victims are often left alone, so people's collection centers or otherwise shelters should always be provided; to cope with the impact of flood, it is important to multiply dams and water retention systems which will be beneficial during water stress periods; and the educational dimension toward children and their families is crucial in risk management.*

*Today the community is more attracted to information about flood and drought risks, and how to cope with them. Communication is important, and it is crucial that it reaches everyone. For the durability of interventions, it is essential that there are shared responsibilities between project implementing partners and communities. Communities must not only be sensitized, but also fully involved.”*

(Eugène Kokoti, regional branch coordinator, JVE, Kara, Togo)

### Strengthening media capacity related to flood management

*“Mali Météo is a very reliable structure to which the population pays a lot of attention and for us, members of the media, being trained by Mali Météo allows us, I think, to take up the challenge on future risks and prevention. We thank the organizers of this training workshop (edit addressed to journalists/media and held in Bamako on 29 April 2024) for capitalizing on data and for sharing information on everything related to weather, risks and hydrometeorological disasters. This was something that the press has always lacked. It tells public structures to open the doors even more... because we are in contact with the populations. We are there for civil society and the press is also there for political decision-makers. We are “information relayers”. And if Mali Météo organizes a day of workshop for the capitalization and sharing of information and ideas on issues related to the hydro-climatic and meteorological sector, I think that it would be very important ... In the coming days, there will be many things to do together (edit – Mali Météo with journalists).”*

(Amadou Kouyaté – Journalist, Mali)



**Flood management**

*“The population really learned a lot through this community project which was promoted by the VFDM. They now know how to behave in the event of flooding and how to manage water resources. We also have a much better understanding of how to manage wetlands and their drainage. This project included significant capacity building and institutional strengthening in Sangabili. Communities are now stronger.”*

(Laurent, Sonh, Governor of Bondoukou Prefecture, Côte d’Ivoire – picture below)



**Flood and Drought management**

*“I am Asumbela Maurice a community Volunteer, I did not even know about how we can manage floods and drought, but until I gained knowledge and understanding of community preparedness to floods and drought management, I am very happy and well informed on measures of mitigating floods and drought in our communities. I also build on my experience during a flood and drought management training safety tips as well as measure to take that influence drought. I aspire and work hard to be a game changer of the narratives of floods and drought by contributing to problems of floods and drought in my community.”*

(Kunkua, Ghana – picture above)

**CAPACITY-BUILDING AND AWARENESS RAISING**

**Flood management**

*“The project explained to us everything about water, including the consequences of water. We checked where water can arrive and clearly understood when there could be a flood. We understood when it is dangerous to travel through the roads and to go to the fields that we cultivate.”*

(Gilbert Krakouame, President of the youth’s association of Sangabili, Côte d’Ivoire – picture below)



**Medical care**

*“Mr Atanga Ernest is my name, and I am a religious leader in the community and a member of the CFDMC, I have gained knowledge of first aid in CRP, managing injured persons, etc. to help assist patients recover before proper medical care. I am taking this knowledge to the church congregation and my family to also impact knowledge to my co-workers and any person in the community that needs my service. The training will help not only during response to floods and drought but also any injured person as a result of non-climate related issues such as farming, construction etc in the community. This training is a good experience, and I am very ready to serve my community anytime!”*

(Atanga Ernest, Kinkua, Ghana – picture below)



**Drought management**

*“Several actions and techniques to be undertaken in order to better manage the risks of droughts were presented to the Community. During training meetings, several measures to be taken before, during and after droughts were indicated in an interactive way between the project team and the community of Sangabili. Based on the actions indicated to participants, information and experience sharing contributed to the success of the session. A table with different components according to the type of drought was submitted to them. This table made it possible to identify, in a succinct manner, the actions to be taken according to the components presented. The objective was to ensure their level of understanding of the different actions to be carried out for a better management of drought risks.”*

(Philippine Essis, Manager of the Flood and drought community management project in Sangabili, Côte d’Ivoire – picture above)

**CAPACITY-BUILDING AND AWARENESS RAISING**

**Drought management**

*“We learned how to avoid wasting water. How to deal with drought. There has been capacity building. We know what to do when water is scarce. We know how to deal with bushfires. We know how to manage the only hydraulic pump that works. Our capabilities in managing bushfires are also significantly improved. Children also know the danger signs and know how to behave.”*

(Lucien Kouassi Kamagate, Sangabili village Secretary, Côte d’Ivoire – picture below)



### Preventing environmental risks and curbing rural exodus

*"Our community flood and drought management committee consists of six people. The committee, with the support of the NGO JVE, has been conducting awareness-raising activities in the 11 villages of the Daoudé canton on what people and the community can do to cope with floods and droughts, to cope with climate change, and to stem the rural exodus, which is very strong in this area. Topics of these activities include moving crops away from vulnerable waterways; reforestation and avoiding anarchic cutting of trees; preventing early bush fires; and more. Practical prevention activities have also been carried out, such as the planting of markers to signal stream growth in the event of flooding. Meetings attended by people with disabilities were also held to understand what to do to support them. A special awareness-raising activity was aimed at women, which also involved promoting income-generating activities. Almost 90% of the population here is Muslim, and there is also the imam on the committee, who takes advantage of the festivities to give advice on the issues the project deals with. We have an updated management plan and a calendar of meetings that will continue."*

(Abou-Bakari N. Salissou, Mayor of Assoli I and chairman of the management committee – Daoudé, Togo)





KNOWLEDGE SHARING

**The new capabilities of the population**

*“In our department, we can now easily connect with the weather service to get useful information on what to do for better production (e.g., doing counter-season crops). Thanks to VFDM, people have realized that weather info is important, they pay more attention to it, and they have matured an ability to understand and explain it. It will be good to continue along the path of improving the relationship between the population and the various services, to make the best use of weather data, manage waterways to reduce risks, and create forms of water retention to cope with drought.” (Ouro-Groungou Horoumila, Prefect of Assoli)*

*(from left: Daniele Mezzana, K&I consultant for OMM; Ouro-Groungou Horoumila, Prefect of Assoli; Latifou Issaou, ANAMET-Togo Director General; Jeanette Abla Agboto, Head of Meteorological Watch and Forecast Division at ANAMET General Management; Abou-Bakari N. Salissou, Mayor of Assoli I and chairman of the management committee – Daoudé; Yerima Morou, Daoudé Canton chief, picture below)*



**Among farmers**

*“Thanks to a VFDM project workshop, I was able to realize that there is a Volta Basin and that the problems are regional. I was also able to get to know other producers, farmers, fishermen with whom I had meetings and exchanges. In addition, I learned how to collect the weather info made available by ANAMET and how to circulate it in my village through dissemination meetings with the producer association. In 2023, rain came three times in March, but this year there was a big change: it did not rain like last year, and the first rain came in May. I called the weather service, and they provided accurate forecasts, which allowed us to sow seeds timely.”*

*(Babake Tchao-Kao, yam farmer, Koumea, Togo – picture above)*





### Changing mindsets in the face of climate challenges

*“With my organization we process agricultural products into a finished product that we export. For some of our activities we use the sun to dry products, so it is useful to have reliable weather info. This information is also useful for planting times or other activities, such as deciding whether or not to go to a particular market. With climate change, we can no longer behave like our parents, and this project, with its meetings, has helped us adapt to the new situation, which involves a change in mindset and a change in practical choices. For example, because the rainy period has shortened, we now use the grain sorghum that matures in 3-4 months, whereas before we used the grain sorghum that matured in 7-9 months. The weather information that is currently provided is helpful because it reaches specific groups. Certainly, a challenge for the future will be increasingly accurate weather information, accompanied by training to explain to people how this information works.”*

(Kpiki Kadabi Awi, Agroalimentaire Interprofession Conseil Interprofessionnel de la Filière Soja; member of the women's group Emancipation de développement économique de la femme, Kara-ville, Togo)



## A SIMULATION EXERCISE CÔTE D'IVOIRE

*“A simulation exercise took place on Thursday December 21, 2023 ‘from start to finish’ through a scenario which illustrates in detail the different stages of the simulation (the broadcast of the alert; the action to take in the event of an alert; the appropriate operational response in the event of flooding), as well as the role of all the actors involved at each stage.*

*Among the lessons learned from this exercise, for the Sangabili community, are the importance of instruments such as the WAP group, loudspeakers and Zanzan radio for disseminating hydrometeorological warnings.*

*A further lesson learned is related to the knowledge of the different actions to be implemented in the village depending on the alert level received during the rainy season.*

*Actions such as: raising the colored flag corresponding to the alert level broadcast, taking shelter towards the highest points, reporting people’s presence to the emergency alert, checking on news from loved ones, paying attention to markings yellow, orange and red safety paint (installed as part of the community management activities mentioned above)”.*

*(Firmin Yao, General Direction on Water Ressources Protection and Management, Water and Forest Ministry, Côte d’Ivoire)*

## BURKINA FASO SIMULATION EXERCISES

*"The Municipality of Bagré, as part of the VFDM, benefited from a certain amount of rescue equipment for the benefit of local rescuers. There was a case of flooding where the equipment was actually used to find a child of 7 years old drowned, notably the chief's son, during the last heavy rain. Following the simulation exercise, we became aware of the risk linked to flooding, we considered evicting the residents from the site of the exercise, particularly in the flood-prone areas. In the Municipality of Pâ, the simulation exercise allowed us to raise awareness among populations about the risks of flooding and strengthen the capacities of stakeholders while situating their role in the flood management mechanism."*

(Doukom Aimé – National Water Partnership, Burkina Faso)





VOICES FROM THE FIELD



# FLOOD AND DROUGHT RESPONSE MEASURES



*"We have installed markings relating to flood levels and flooded areas, but these markings are not done in the area which is prone to flooding but rather towards the lowlands at the borders of the village. There are people who live there and who are affected. So, we identified the red zones - the ones that are normally hit in the event of flooding and where to be careful – and we put signs there – we can no longer build. However, pre-existing houses in these areas remain and are often affected by flooding ... and then are repaired/rebuilt in the same place. That said, any building that still exist in red zones is marked with paint. Until now we have never benefited from meteorological data captured by our station or provided by weather services. Our early warning system continues to operate based on traditional knowledge."*

(Sengo N'Tcha Arnel, President of the Floods and Drought Community Management Committee in Tabota, Benin – picture above)

## FLOOD MARKING SIGNS FOR WARNING AND RESPONSE ACTION

*"Marking with different colored signs and panels saved many lives in Sangabili." (Dongo Kouassi, Sangabili village chief, Côte d'Ivoire)*

*"Safety marking is very important for us. This safety marking was done with the help of different colored paint (Yellow-Orange-Red) which calls for vigilance for a safe evacuation. Three markers were installed in the community of Sangabili at the level of flooded surfaces.*

*Each marker has a designated person who will report the water level to the head of the Management committee during times of flooding. Now we know how we should behave accordingly. We didn't know it before, and it was dangerous. We now also know much better how to behave when we move with motorcycles on rural tracks. Now we are trained. We learned what can lead to the development of the village."*

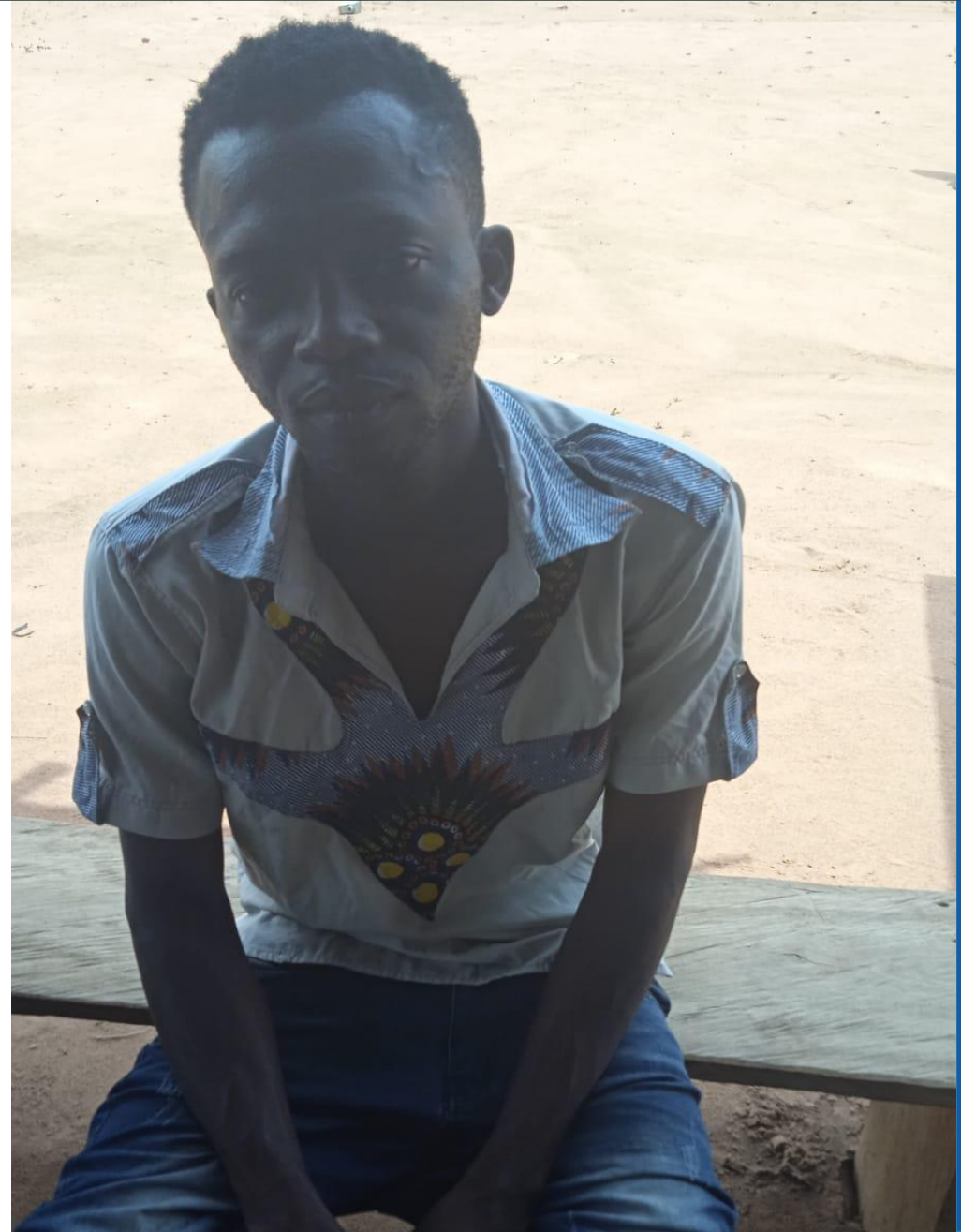
(Basile Krapakouman, Youth's committee of Sangabili, Côte d'Ivoire – picture below)



### Use of loudspeakers for early warning communication

*“The loudspeakers we received allow the dissemination of climate information throughout the village in order to prevent and avoid the loss of human life, goods and services and also to reduce the material and economic impacts of the risks of floods and droughts. Loudspeakers are very important to enable early warning. Also, through this activity, the Sangabili youth association provides its contribution to the early warning.”*

(Emile Kramobeman, Ad-Interim President of the Flood and Drought Community Management Committee of Sangabili, Côte d’Ivoire)





*"I wanted the installation of the hydrological-meteorological station with the antenna in Sangabili. The meteorological equipment arrived some time ago and was symbolically handed over to the community on the site dedicated to the installation. The station is very important in providing us with timely information. The information passes and we must receive it quickly. This information arrives in a comprehensive manner to users and is understood by those who did not go to school. This station is very important to me since it contribute to the provision of hydrometeorological information and I will do my utmost best to preserve the existence of the station."*

(Dongo Kouassi, Sangabili village chief, Côte d'Ivoire – picture above)

HYDROLOGICAL - METEOROLOGICAL STATION

*"I was tasked by the Sangabili Management Committee and the Youth Association to ensure cleanliness inside the enclosure where the hydrological-meteorological station is located (inside the enclosure). This became my daily job."*

(Emmanuel Ko Enin, young student, Côte d'Ivoire – picture below)





### Hydrological - meteorological station

*“The installation of the weather station went very well for a while and even today the station captures all the data in a satisfactory way. But subsequently there was a problem connecting to the telephone network and recently we intervened to resolve the problem by replacing the SIM and changed the battery with a more powerful one as well as the central plate which was causing the problem, and we succeed to have the data again. The population was very well briefed on what the station is for as well as its usefulness for them. They will have useful information to safeguard their belongings. The last time we were in Tabota, a few weeks from the recording of this success story , we were very well received, and the community consider this station as their crown jewel. They took ownership of it, and already provide us with useful data on seasonal forecasting as well as other data. People are now much more aware of the importance of weather data and, in particular, early warning systems.”*

(Boris Polynice - Director of forecasting and the meteorological observation network of Benin – MéteoBENIN, Benin)

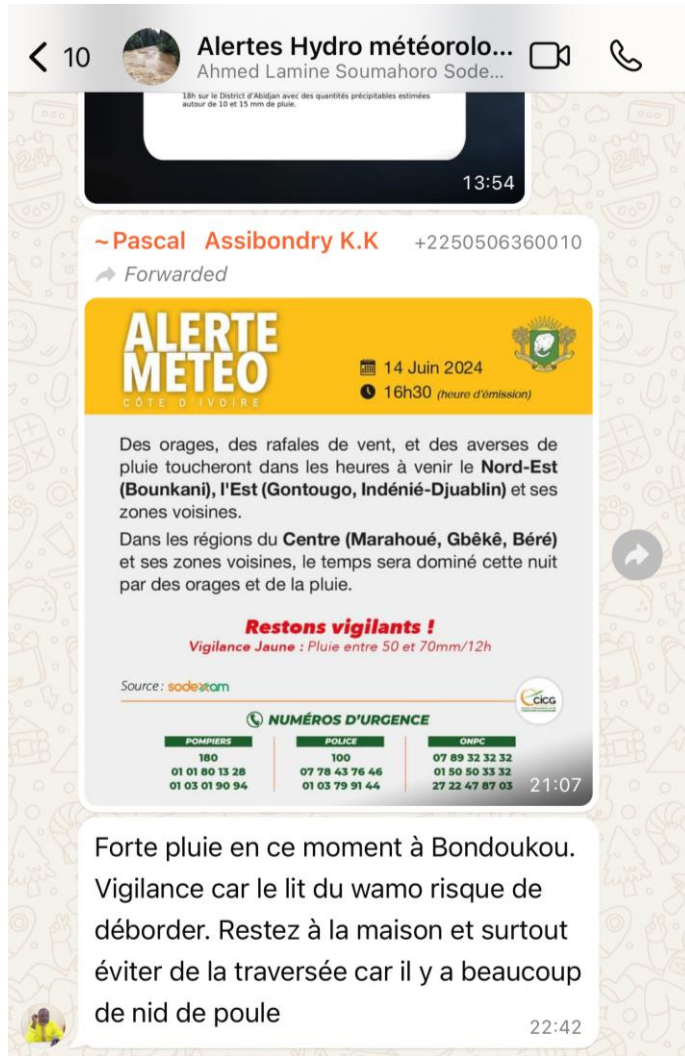


WAP group on “Alertes hydro-météorologiques Sangabili” and radio ZANZAN

“To respond to the right need of the population of Sangabili to promptly have functional information for an early warning of floods and droughts and, also, to return to the Community of Sangabili the information captured by the hydro-meteorological station installed in their village (and having in mind the situation of relative isolation of Sangabili, when the track is not practicable), SODEXAM created a WAP group on 18December 2023 for the dissemination of this information. This is a special procedure for Sangabili. Normally, SODEXAM provides information to local authorities, who, in turn, have the task of transmitting it to the communities. In this case, however, there is a direct channel (via the WAP group) between SODEXAM and other technical services (e.g. General Direction on Water Resources Protection and Management in the Water and Forest Ministry, among others) and the Community of Sangabili. Through this WAP group a HYDRO METEO bulletin reaches in real time the Community, since representatives of the Flood and Drought Management Committee of Sangabili, as well as other people in Sangabili belong to this WAP group (in particular people of the Youth Association). And they themselves can enter information - including feedback - into the WAP group. The information that the citizens of Sangabili receive through the WAP group in French can then be disseminated to the rest of the population in local languages through the Community’s loudspeakers (all the members off the youth association understand French fluently and are able to translate in one or both the community languages). Moreover, through the WAP group the HYDRO METEO bulletin reaches in real time also the ZANZAN radio (a “radio de proximité”), which provides for the dissemination of information translated into the languages of the two communities (Lobi and Koulango), also resorting to specific visual and audible codes corresponding to the various alarm levels.

So, the Sangabili community is receiving Meteo information through two channels: the WAP group + the loudspeakers and/or the radio Zanzan. It should be emphasized that this mixed communication system was not conceived by SODEXAM alone, but instead in a participatory and joint manner between SODEXAM and community representatives, especially young people (who were also trained for managing effectively). So, it is an “agreed” and “shared” system that allow to solve, as far as possible, issues, such as the poor connectivity in Sangabili, the little number of people from Sangabili having a mobile phone suitable for accessing the WAP group (and related capacities and available credit).”

Ahmed Lamine Soumahoro – Head of Office Hydrometeorology and Energy Services SODEXAM, Côte d’Ivoire



WEATHER INFORMATION

*“Before the VFDM project, some farmers sowed at the first rain, which sometimes was not the useful one and there was a big gap between the next rain and this affected the seeds and the harvest. Now with the weather station we get, through a WhatsApp group, information with the exact dates of rains, to sow corn, peanut and other products.”*

(Yacoubou Boulsour, farmer, speaking at assembly in Daoudé, Togo)

*“Thanks to the project, we now know that the first rain is not always the right one and we better understand the vegetative cycle of plants.”*

(Kpadja Zahari, farmer, speaking at assembly in Daoudé, Togo)



*“In our ‘groupement’ there are also people with disabilities. Before this project, yields were often poor, and we had debts. Now, with the weather station, we know when to sow, and poverty has decreased, and it would be important to continue on this path.”*

(Ouroagouda Aoudi, President Groupement Dininadama, speech at assembly in Daoudé, Togo)

*“Through the implantation of the weather station in Daoudé, the population has learned the importance of weather information and to reduce existing environmental vulnerabilities; they had no climate information before. Data from the station is centralized and then disseminated widely through many channels, including WhatsApp. Now the population has strong support, for example to understand the best planting times, and higher crop yields are achieved. An agrometeorological station will be installed in Daoudé, which will ensure an even wider service.”*

(Jeanette Abla Agboto, Head of the Weather Watch and Forecast Division at ANAMET-Togo General Management, Togo – picture below)



*“With the project, a lot has changed in the community, which is now better equipped in flood and drought prevention. There has been a sensitization to the population on climate information and weather warnings, in the Daoudé pilot site. Before people used traditional empirical systems, now they can also use scientific findings: they are systems that complement each other. But not everyone still has access to radio channels, TV, WhatsApp groups, so sometimes the information transmitted from Lomé does not arrive in a timely manner. It would be useful to have more instrumentation and means of communication in place and to provide for maintenance and surveillance of the systems in the future.”*

(Pagouya Konzouu, Meteo Kara Regional Manager, Togo – picture above)

### WEATHER INFORMATION

*“In my capacity as Director General of ANAMET-Togo, discussions with the people of Daoudé canton reveal great satisfaction with the VFDM project and also an indication of major challenges. For example, the difficulty of managing water to continue productive activities, both during floods and drought situations and through deep drilling or water retention remain a challenge.”*

(Latifou Issaou, ANAMET-Togo Director General, Togo – picture below)



# SENSIBILISATION-INONDATION

## Après inondation



Écouter une radio et ne retourner pas à la maison jusqu'à ce que les autorités indiquent qu'il est sûr de faire ainsi.



Rappelez-vous d'aider vos voisins tels que les enfants à bas âge, les personnes âgées et les personnes en situation de handicap qui peuvent avoir besoin d'aide spéciale.



Rappelez-vous d'aider vos voisins, tels que les enfants à bas âge, les personnes âgées et les personnes en situation de handicap qui peuvent avoir besoin d'aide spéciale.



Faire attention aux serpents venimeux possibles de s'infiltrer dans la maison.

KNOWLEDGE AND AWARENESS RAISING



Agro-ecological practices adoption

*“We have abandoned the use of phyto-sanitary products because they have an impact on human health through the consumption of the agricultural products we grow. Pesticides and chemical fertilizers used to enrich the soil must be stopped.”*

Alexis Hienge, Youth Association Lobi Vice-President, Côte d’Ivoire – picture below)

Hygiene, reforestation, seeding production, and better sanitation

*“This small project on flood and drought community management provided an opportunity for significant growth in community; for institutional strengthening thanks to the CFDMC and to intervene in several areas, such as reforestation, hygiene and the widespread of popular knowledge. training on the implementation of the “Community-led Total Sanitation” approach, training on seedling production (for example now knowing the right seed, taking into account climate change), training for women on how to make improved stoves for cooking, as well as community awareness-raising activities on the damaging effects of vegetation fires, the adoption of improved seeds and the adoption of short-cycle crops have been successfully implemented. The situation in Tabota has improved, particularly with regard to hygiene (many latrines have been built to avoid open defecation) and standard of living.”*

(Fouta Kantapoua, Tabota’s management committee member, Benin – picture above)



### The use of drought-resistant seeds

*“This project has brought many satisfactory results. First of all, weather forecasts make it possible to plan agricultural activity; then we raise farmers' awareness of planting times, depending on floods and droughts, so that, for example, they use improved drought-resistant seeds. Rainfall bulletins come to the prefecture and are then disseminated to the canton level, where further dissemination to organizations and individuals then takes place. Weather information also allows farmers to know in advance when it will rain, so they can plan grazing times. A challenge of the future is to have increasingly accurate, widespread and localized weather communication. This will also help increase people's confidence.”*

(Tchabi Issifou, Prefectural Director of Agriculture, Livestock and Rural Development - DPAEDR, Assoli, Togo)



*“The activities implemented within the VFDM in Tabota then allowed the NGO Alpha&Omega to promote further gender mainstreaming actions in other locations in the Kandé-Boukombé area where Tabota is located. More specifically, in the Pessoulou and Gouffarou village.”*

(the President, the General Secretary and the financial responsible of the women association of Pessoulou, Benin – picture below)



*“As a follow-up of the Floods and Drought Management Community project and the set-up on the CGCIS in Tabota, women are now at the core of many activities, such as reforestation, the promotion of environmental friendly stoves for cooking (now installed in all households); the production and marketing of bissap beverage; and the reinforcement of plant cover (nééré seedlings, gméline seedlings and seedlings for fruit trees). These activities generate income for women in Tabota. Women are well satisfied about what has been done in Tabota and hope that an external support could continue also in a near future.”*

(Philomène M. Betti, Woman member of the Floods and Drought Community Management Committee in Tabota, Benin – picture above)

### WOMEN'S INCOME GENERATION

*“We have a large irrigated area where we grow vegetables and tomatoes. Thanks to the Tabota's experience, we have all together formed an association, to which we pay a portion of our income, and which deals with the management of our expenses and common problems. The local authorities want to kick us out and give us unirrigated land a couple of kilometres away, with the promise that water will reach the land and the current land for cultivation will be transformed for transhuman activities. This resulted to a conflict that has been dragging on for some years now.”*

(General Secretary of the women association in Pessoulou, Benin – picture below)





# STAKEHOLDER CONTRIBUTIONS

Funded by the Adaptation fund and implemented jointly by the World Meteorological Organization (WMO), the Global Water Partnership-West Africa (GWP-AO) and the Volta Basin Authority (VBA) with other partners (see slide 3).

The Community-based flood and drought management activities were implemented in the six pilot sites of the Volta Basin with the support of

- Alpha & Omega international in Tabota (Bénin)
- PNE BF - Programme National de l'Eau du Burkina Faso in Badara (Burkina Faso)
- LaCibes - La Colombe Ivoirienne pour le Bien-Etre social in Sangabili (Côte d'Ivoire)
- ORGIIS - Organisation for Indigenous Initiative and Sustainability in Kunkua (Ghana)
- DEMESSO/DELTA SURVIE in Kandé Commune de Bakass (Mali)
- Jeunes Volontaires pour l'Environnement in Daoudé (Togo)

We would also like to thank all communities and individuals who shared their experiences and enabled the well development of the CBFDM activities in the frame of the VFDM project.



# LESSONS LEARNED AND SUSTAINABILITY

Based on these “Voices from the field” a few lessons learned to organizing CBFDM emerge:

- An effective participatory process with a clear understanding of the expected role of each stakeholder and communities' actors and high degree of their involvement during planning, implementation and reporting processes is experienced
- Resources have been maximized through the integrated use of local knowledge with the technical and scientific information provided from the national agencies; the knowledge increase and awareness enhancement through relevant capacity-building of all the communities' actors, valorizing everybody with their specificities (women, youths, etc.)
- Communities' resilience was strengthened improving social cohesion also thanks to institutional arrangements, such as the set-up of Management Committees where all the community's actors are represented; and through a shared vision
- a Community Risk Management Plan (based on the above) was drafted (or updated) in each community
- Coordination and collaboration between various stakeholders at local, national and regional levels is needed
- **Local and national agencies should identify resources (financial, human) through yearly budgets or internationally funded projects especially to update, vulnerability maps, conduct simulation exercises, ensure the maintenance and continuous training, etc.**





## CONCLUSION

The overall objective of CBFDM is to involve all stakeholders in the management of these hazards and their consequences.

A multi-stakeholder (MS) approach is much more likely to save lives and reduce damages by taking advantage of the fact that, as much as possible, everyone is actively involved, everyone's efforts are pooled, potential conflicts are reduced. The few examples reported in this document show that such an approach is possible. MS management contributes to reducing the vulnerability of the communities concerned and to increasing their resilience.

Therefore, drought and flood management is not the business of one person or one family but rather a concerted management of the entire community.

CBFDM is a complex process, and its implementation can hardly be perfect, especially at the beginning. Only gradually can a MS approach be fully functional and effective.

But above all, CBFDM is a dynamic approach with new ideas being learned every day.

These "Voices from the field" should offer a contribution in this path.

# COMMUNITY-BASED FLOOD AND DROUGHT MANAGEMENT

## VOLTA BASIN



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