



# Community fire management program

Q&A with Form Ghana

Form Ghana has implemented a solid community fire management program. Time to ask the people on the ground what the story is behind this successful project.

Q

*Fires continue to be a significant issue in and around the Tain II Forest Reserve. What is the difference between controlled and uncontrolled fires and what are the main sources of these uncontrolled fires?*

A

In our area, the transitional zone in Ghana, where the ecosystem transfers from a wet forest type to savannah, all fires are human induced and not a natural phenomenon. Uncontrolled fires only occur in the dry season. In this season the harmattan winds from the Sahara make the humidity drop below 10% during day-time, which dries all vegetation and dust prohibits your vision. Especially in non-managed, degraded, and deforested areas in the landscape, fire spreads incredibly rapidly, causing a threat to biodiversity and the health of Forest Reserves, and poses is big risk to investments of farmers and other land users.

A controlled burn is a prevention measure: by burning the vegetation on a strategic location, in a planned and demarcated area you create a low fuel load zone, which will stop or slow down uncontrolled fires during the dry season. Controlled burns are always scheduled for a time when the fire will not pose any threat.

**Programme**  
Landscape restoration in Tain II Forest Reserve, Brong Ahafo, Ghana.

**Goals**  
Restoration of 1,000 hectares of indigenous forest within Forest Reserve Tain II, improving the health of 400 hectares of existing neglected forest, and promoting climate-smart farming and establishment of agroforestry farms on 800 hectares of community farmland around the reserve. These activities will turn the Forest Reserve into a refuge for biodiversity, secure sustainable land use and actively improve the livelihoods of farmers in and around the reserve.

**Partner**  
Form International and Form Ghana.





[Watch the video here](#)



Two video's of the succesful programm



[Watch the video here](#)



Q

*Why are these fires such a big threat?*

A

These large wildfires are major threats to property, lives, and ecosystems. They increase the likelihood of adverse impacts at both local and landscape level, including soil degradation and loss of key wildlife habitat, next to other economic values. Most importantly, in our program's area these uncontrolled fires make farmers hesitant to invest in tree crops or agroforestry systems on their farms. When your farm burns every year, you will make sure to only plant annual crops and harvest these before the dry season starts. Planting trees or investing time and energy in agroforestry farms is risky in an area of which you know will surely burn during the dry season. On the other hand, because the land is unmanaged during the dry season, wildfire outbreaks run out of hand freely and without hindrance. That is why our program implements an Integrated Community Fire Management Project, to stop this negative downwards spiral. The effect is that farmers are now willing to develop agroforestry farms again. By incentivising farmers to plant permanent crops, the land is managed, also during the dry season, which creates buffer zones around for example Forest Reserves and stops fire from running through protected areas.



Q

***Can you offer farmers an alternative if they are not allowed to use 'slash & burn' practices anymore?***

A

This question is not applicable to our situation as farmers are still allowed to use fire for land clearing. Fire is a traditional tool in Ghana's farming system and has been a longstanding practice in Ghanaian agriculture, although it went through a period of taboo, due to past bylaws that outlawed burning. However, we recognized that this was one of the major reasons why burns turned into wildfires: prohibiting the use of fire stripped farmers of their own control, leaving them without an economically feasible way to clear their lands. As such, we have worked together with the government to reverse these bylaws: farmers are now allowed to use fire as a tool for controlled burns, if they receive support from the National Fire Service or from specific support programmes. We believe that you cannot tell farmers to stop using fire because it is part of their way of life, but you can support them in using it responsibly.

Q

***You have successfully revived Community Fire Squads to play an active role in your Integrated Community Fire Management Project. What turned out to be an essential ingredient to this success?***

A

There are a couple of components in this program that are essential for its success. First of all, the engagement of and endorsement by the traditional authorities and community leaders. In the past, Ghana National Fire Service was the only body that was responsible for the community fire squads. Traditional leaders were not involved with the appointment and operations of the community fire squad, resulting in conflict of interests between several parties and therefore friction and unproductive fire squads at village level. Revision of the bylaws and therefore a change in perception within communities of how people look at fire was also crucial for the program's success. Instead of fire being a taboo and focusing on punishment, we can now focus on making people capable and responsible for taking preventive measures to reduce the fire risk within the landscape. To increase capacity, the fire volunteers were reactivated and supported. The program supports the squad with making a fire management plan for their farms and area around the community and they are trained to become community trainers who now assist farmers with controlled burns and with farm preparations before fire season.

FORM Ghana's Fire Monitoring system

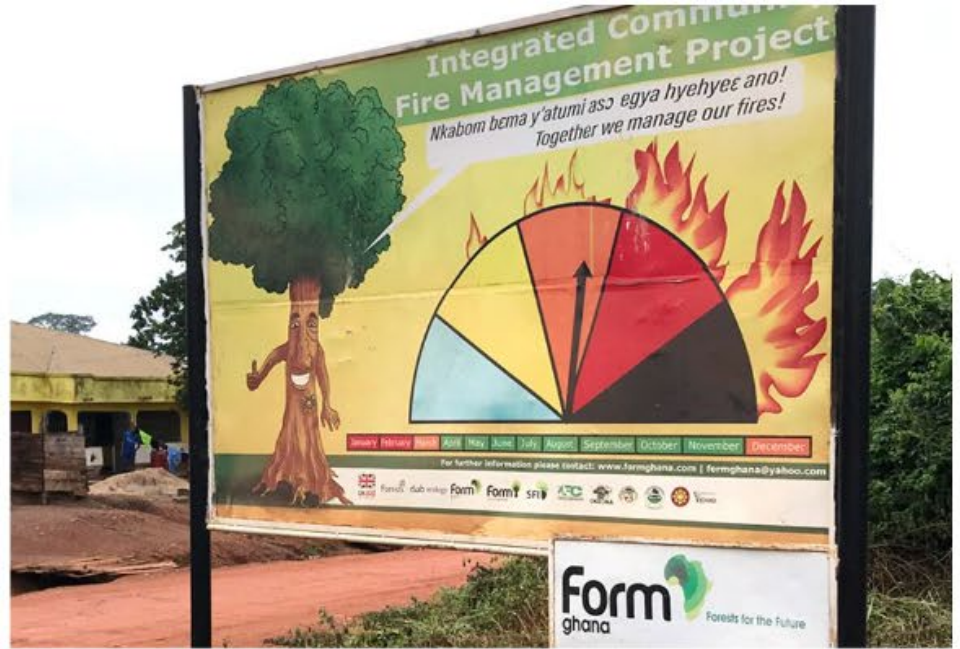
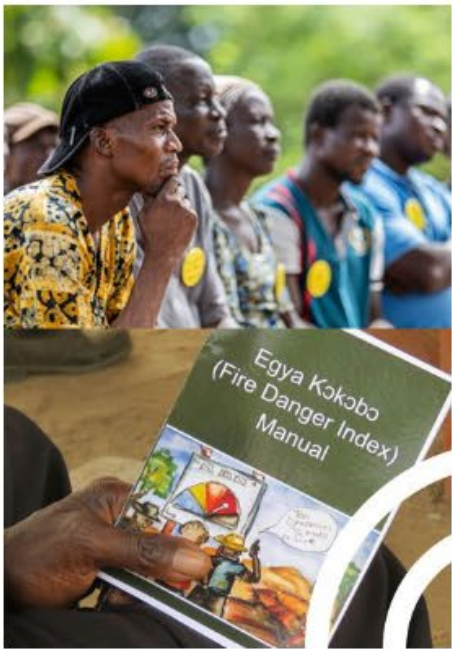


## Fire Hawk System & Camera's

The Fire Hawk System consists of fire danger computer software that indices fire, based on a calculation on wind, temperature and humidity (as explained in the article). Next to that, FORM monitors fire outbreaks with cameras. In three towers cameras have been established that are able to detect smoke and fire thanks to the Fire Hawk System. The camera system is connected to the operations room, which is manned 24/7 during dry season. Thanks to the cameras the operation team can observe the area on large computer screens. If the camera system detects a fire, an alarm goes off. The team then immediately contacts the community fire squad leader and the responsible supervisor of our project team, for them to take the appropriate action.

This way FORM facilitates farmers to take early action when a fire is detected, resulting in less fire damage to farms. Next to that, it is possible to monitor fire outbreaks and determine whether a fire is uncontrolled or controlled (because of the communication platforms that are established with the community squad leaders). With this system the impact of the project can be tracked and FORM has calculated that uncontrolled fire outbreaks were reduced by 79%.





*"Uncontrolled fire outbreaks reduced with 79%."*

Q

**You introduced the Fire Danger Index. How does the Fire Danger Index work and does the community accept this Index?**

A

The Fire Danger Index is a tool to measure the potential for a fire to start at a specific location, during a specific time of the day. The index combines the records of wind speed, temperature and humidity and based on the score on a reference scale you are informed about the fire situation of that moment.

During the inception meetings that we held with stakeholders, this tool was presented and discussed elaboratively. Together with farmers, representatives of the community and the squad members we have adjusted the tool and gave it a new name in Twi, the local language: Egya Kokobo. Now everybody is using this term. The program communicates the Egya Kokobo on a daily base during fire season to the fire squad leaders. Based on the Egya Kokobo, the leaders give permission to farmers to burn or not.

Q

***Have you seen a change in attitude or behaviour of the farmers after introducing the community fire management project?***

A

Yes. The most significant impact of this program has been that people - squad members, but also farmers - took responsibility back into their own hands regarding fire management. In principle, all land users have wildfires as common enemy. Now that people are supported, allowed and equipped to take action and decisions regarding fire management themselves, we have been able to make a large impact on a large scale. Also the fact that the program solely promotes prevention and management, rather than pointing fingers and punishment has created a positive vibe amongst community members. As a result, we see that in the high fire risk areas of the past, farmers now start planting tree crops and indigenous timber trees.

Q

***What is an essential ingredient for a community fire management plan to be successful?***

A

Empowering people on local level with the right tools, equipment, knowledge, etc., while making sure these people are fully supported by the right authorities on institutional level, will create a safe, supportive and motivating environment to the people on the ground who need to do the actual work. Giving people back leadership and power to manage their landscape, creates a common ground to collaborate on topics such as stopping degradation, conservation, and reforestation.