

PROBLEM STATEMENT:

1. Development of an application to help reduce illegal trawling in Ghana's coastal waters (proponent: Government of Ghana)

Ghana's coastal waters are protected by law from bottom trawling for fish, which can both damage sensitive natural habitats needed to support the country's fisheries, and also come into direct conflict with small-scale fishing activities in the same area.

To help address this problem, together with broader enforcement of fishing laws and regulations, the Government of Ghana recently established a Fisheries Enforcement Unit (FEU). While this unit has a number of patrol boats and surveillance tools available to it, perhaps none could be as effective as the thousands of small-scale fishers who are active on the water every day, and could serve as eyes and ears for the authorities - and who in fact have the most to gain from a reduction in illegal bottom trawling.

Neighboring countries have already begun to pilot such an approach, and in Liberia a 'trawler-spotter' application has been developed for use on analogue phones distributed to volunteer fishers, to take pictures of illegal trawlers, where the GPS location is automatically recorded when the photo is taken, and the information transmitted to authorities (and considered as evidence in a court). The challenge for Ghana would be to build on this pilot and experience, and for example to utilize the open source software already available such as ushahidi (<http://ushahidi.com/products/ushahidi-platform/>) to develop a specific application and forms for use on any kind of smartphone in Ghana, that fishers could use to take photos and record key information (e.g. time, date, location, what the vessel is doing, etc.) for use by authorities - and potentially civil society and the media - to prosecute and reduce illegal trawling.

We expect that the challenge is not so much a function of writing new software code for this problem, but rather to utilize existing software and platforms to customize an application suitable for Ghana, that could help local fishers spot and communicate illegal trawling activities. This would probably not take a lot of time and volunteers, so perhaps the easiest way to do it may be through a webex communication between the resource persons and some dedicated volunteers at the event, over the course of several hours to develop a specific application and form that would be workable for Ghana (taking into account the time difference for the resource persons in Accra and Lyon).

It should of course be noted that the application is not the end of the story - i.e. the tech solution - the actual systems and process for communities and fishers to use this technology and report infractions must be linked to the next steps of what will happen with the information reported (who will reports go to? what action will be taken to verify the report and act - by whom and by when? how will the report be responded to and by whom? how will reports be logged and used for monitoring?). Consideration will also be given to as many uptake mechanisms as possible in addition to smartphone applications, given the number of challenges that can arise with use of the app such as network coverage, phone credit, power supply, etc. Paper-based reporting and waterproof cameras with GPS may be used to supplement the app for some volunteers.