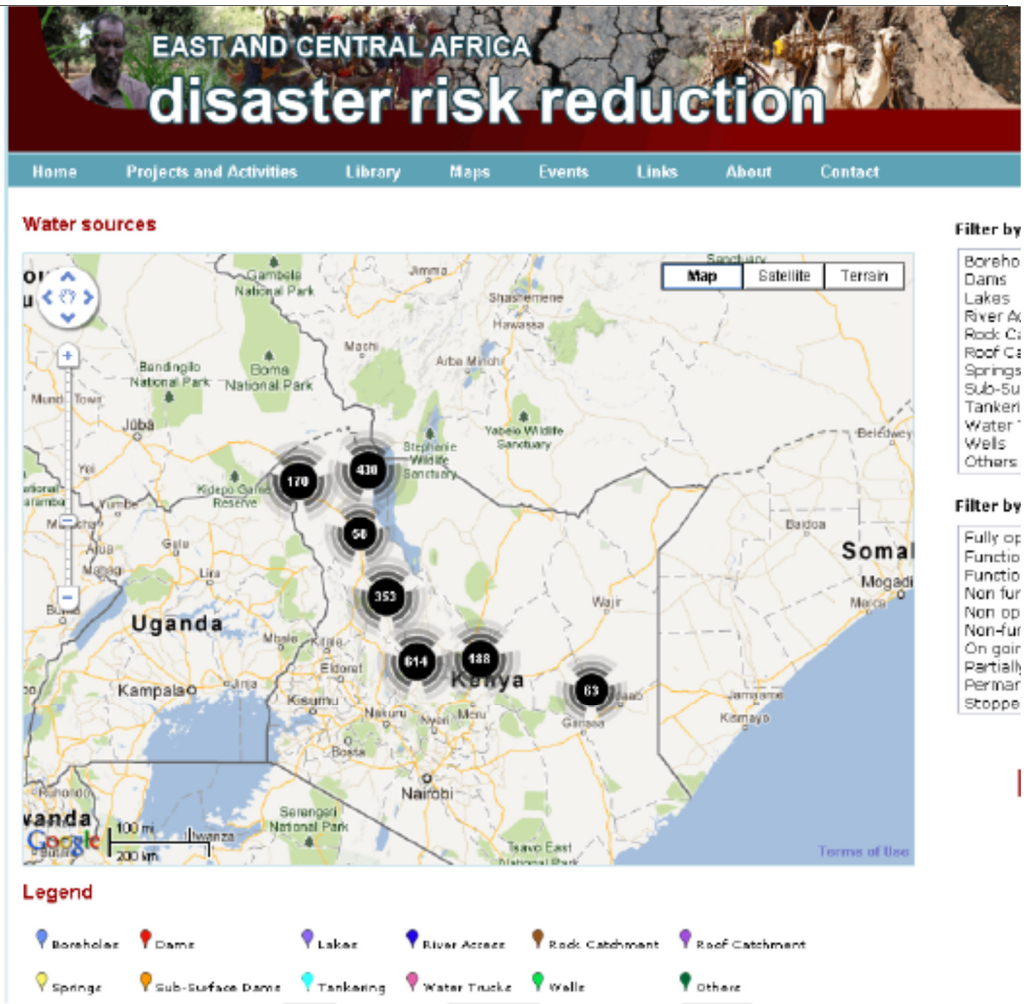
CASE STUDY PIA 1: Natural Resources and Environment Management

1. Creation of a Regional Information Platform: the example of Water Data Gathering	
INTRODUCTION	In order to improve the Early Warning system and move toward real-time information dissemination, the use of new technologies is more and more developed and advocated. The Nokia Data Gathering system is collects pictures, description and GPS information on water resources through the use of mobile phone. This information is sent in a web-based GIS mapping application showing the analysis directly on a map. In Ethiopia, this activity has mostly been developed in partnership with Oxfam.
LOCATION /GEOGRAPHIC COVERAGE	This system is currently implemented by Oxfam in Ethiopia. Other NGOs as ACTED are working in the Horn of Africa.
STAKEHOLDERS AND PARTNERS	Oxfam: implementation of the project on the field FAO Regional Emergency Office for Africa (REOA), Regional and National offices: development and support of the web-based monitoring/mapping system, coordination of the projects Oxfam field teams, water point operators, and local stakeholders (mostly members of the Ministry of Water of each country): involved in the collection of data on the field after technical trainings. Nokia: technical support
METHODOLOGICAL APPROACH	Data on water points and water trucking locations are collected directly from the water-points in a survey questionnaire using NDG and loaded onto a GPS enabled Nokia mobile phone. 2. After processing in the NDG server, the data is transmitted through the mobile network (SMS or data network) to the web-based monitoring and mapping system 3. The different partners gather the data on the common web-site. Then, the maps and monitoring reports are available for the different countries in the HoA. Example of the work done in Kenya, in Turkana: http://www.disasterriskreduction.net/east-central-africa/Databases/Water-sources



VALIDATION	<u>The use of the data-base:</u> Different NGOs use the platform to gather the data (VSF, Oxfam, ACTED …). The base is updated frequently and provides Regional information. <u>Improvement of the Early-Warning system:</u> "Existing monitoring systems within Oxfam in the arid lands of the Horn of Africa rely on staff travelling to field sites and collecting information by hand, which adds to the time required to analyze the data and make decisions on the same. On average, 2 weeks are required to collect the data, which then need to be compiled in a spreadsheet and circulated for independent analysis. Monitoring data is frequently received 4 weeks after it was first collected." Now the information system transmits the data quasi-immediately.
IMPACT	Creation of a database accessible to every development partner and which gathers and compiles information from different sources. - Improvement of the information on water points, even for remote ones: the real-time diffusion of information improves the evaluation of available strategic resources and needs of maintenance. - Improvement of the understanding of the water resource: where are the strategic

	points, where are the gaps along the routes …
INNOVATION AND SUCCESS FACTORS	Innovation: - Creation of a Regional Platform to manage and understand Natural Resource - Use of new technologies and real-time systems Success factors from the 'Agriknowledge Sharefair for the Horn of Africa': - Provide training and awareness on data collection, build capacity of users - Before implementing mobile technologies, in-depth piloting, understanding change management, and stakeholder involvement are necessary pre-conditions to success and sustainability.
CONSTRAINTS	- Debate on the use of the data in order not to generate conflicts on the resource - Build the capacity on each scale and for each partner
LESSONS LEARNED	The management of Natural Resource has to be harmonized and the use of a common platform is a step toward fast and efficient information dissemination and early warning systems. Cheap and well-spread technologies are a simple and cheap tool to help in achieving this goal.
SUSTAINABILITY	Economic sustainability: The use of a unique platform is far cheaper than the duplication of effort to gather information. Moreover, according to the outputs of the Agriknowledge Sharefair: Mobile technology is cheap, fast and important for project monitoring. However, its sustainability might require donor financing. - Social sustainability: The use of the technology is easy and simple training could empower the data collectors to it.
UP-SCALING	The objectives are: - To improve the collection of data by extending the technology and multiplying the data loggers with other actors - To improve the Regional use of the data, the role of IGAD in this task should be enforced. - To extend the process with other kinds of data (non-functional water points, mobility, sanitation, rangeland …).
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RELATED WEB SITE(S)	http://www.disasterriskreduction.net/east-central-africa/Databases/Water-sources
Case Studies Adapted from : Flora Baudron, Good Practices Building Resilience Experience from Ethiopia and IGAD countries, FAO-SFE, 2013	