



*Mapping and information management  
for humanitarian organizations*

**ANNUAL REPORT**

**2015**

**Association CartONG**

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# Introduction

2015 has been another exciting year for CartONG. We have continued supporting our partners in increasing their GIS & mapping capacities, started new promising collaborations – in particular on the topic of UAVs – and sent a record number of 3 volunteers to the field.

The permanent team is also getting larger, with two new positions created at HQ to offer reliable and qualitative services to our partners while increasing our portfolio and skill set. We also continued our effort to build relations with the humanitarian community and joined the Coordination Humanitaire & Développement (the main French coalition of humanitarian NGOs working in the field).

We are now preparing for a special 2016 year: this will mark both the 10<sup>th</sup> anniversary of our NGO and the 5<sup>th</sup> edition of our flagship event GeOnG!

*Charlotte Pierrat, President*



As a reminder, staff projects (funded by partners and implemented by employees) have a **blue Overview box**, and volunteers projects (limited or no funding and implemented mostly by volunteers) have an **orange Overview box**.



## ABOUT CARTONG

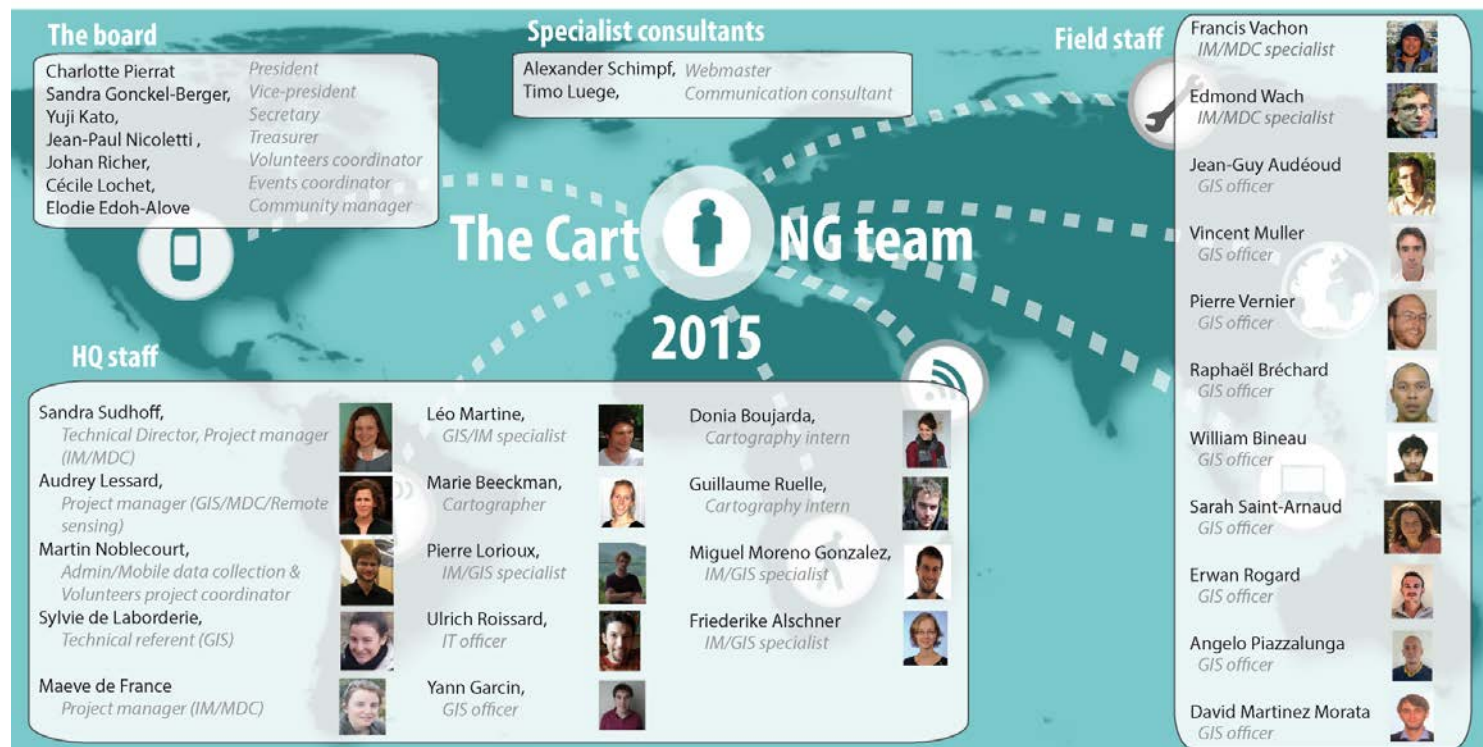
### Our expertise

CartONG offers services to humanitarian and development organizations on all the technologies of information management, and particularly geographic information. We offer our partners state-of-the-art tools, while being always sensitive to sustainability and cost-efficiency of the solutions.

### Our activities:

- Mapping, data collection on the field and digitizing
- Research, compilation and curation of geographic data
- Geoservers, webmapping and online data visualization tools
- Data collection, in particular with mobile devices (smartphones/tablets)
- Data analysis to support decision-making
- Information management workflows and procedures
- Visualization of data for reporting or communication
- Analysis of spatial data and satellite imagery
- Capacity building: training in GIS, GPS, mobile data collection, databases, data analysis
- Creation of e-learning modules
- Outreach on geographic information tools, awareness building inside the humanitarian community regarding adapted tools and procedures
- Research and compilation of best practices on information management & mapping

### Our team in 2015



And the volunteer team of course!

### Where CartONG works

In 2015, CartONG employees, consultants and volunteers, whose headquarters are in Chambéry, have been deployed in 21 countries. Check our website for more information: <http://cartong.org/where-we-work>

 All budget figures are rounded for better readability.

## 2015 HIGHLIGHTS

**February 14-15<sup>th</sup> General Assembly and Get2Gether in Savigny (France)**

**March 3<sup>rd</sup> Cergy university**, Conference “GIS for crisis response” and mapping party with the students

**March 12<sup>th</sup> Lyon**, CartONG receives the Crédit Coopératif Savoie award for project Atlas Solidarité Madagascar

**May 4 -8<sup>th</sup> MSF GIS training, Kampala** supporting the GIS Unit for the first GIS course for MSF on Google Earth and QGIS basics.

**May 29-31<sup>st</sup> State of the Map France, Brest**, now a milestone of our calendar!

**April Terre des Hommes training, Burkina Faso** on mobile data collection for nutrition surveyors

**April 18-19<sup>th</sup> Volunteers webmapping training, Paris**, to prepare the replication and sustainability of our webmapping projects

**July, 7-10<sup>th</sup> GI\_Forum, Salzburg** presenting the MSF GIS Unit and Ebola deployments

**July Geneva**, launch of the project “Drones in Humanitarian Action” with FSD, UAViators & Zoi Environment

**July 25<sup>th</sup>-September 9<sup>th</sup> Volunteer OSM training mission in Madagascar**, more than 70 contributors trained and 2 public events

**August 2<sup>nd</sup>-20<sup>th</sup> Volunteer exploratory mission, Madagascar**, testing in the field the concept of Atlas Solidarité Madagascar

**August Capacity building mission in CAR**, supporting a consortium led by Solidarités International

**September 4-5<sup>th</sup> Field GIS training, Chambéry** with CartONG & MSF staff and partners (MapAction, MissingMaps)

**September 7-9<sup>th</sup> Convergences Conference, Paris**, presenting on innovation and crisis management

**September UNHCR map portal launch** after several months of piloting

**October 12<sup>th</sup> CartONG nominated to European Commission Health award, Luxembourg**, for the work with MSF on the Ebola crisis

**October 24-25<sup>th</sup> Get-together, Jarsy**, working on volunteer projects, with a work session on strategic planning with the board

**November 5<sup>th</sup> Mapathon Missing Maps, Paris**, moving towards regular organization of mapathons in Paris

**December CartONG joins CHD**, the coordination of field humanitarian & development NGOs, part of Coordination SUD

## MAPPING AND GIS

*Mapping and GIS projects aim at helping our partners (both in the field and at headquarters) with operational maps for immediate decision-making.*

### 1. Mapping and GIS strategy for Doctors Without Borders-CH

OVERVIEW	Staff involved	18 staff (Manager, GIS officers, web developer IT, Designer)	Budget	381,300 €
	Contractor	Doctors Without Borders – Switzerland	Location	Global + Geneva, Sierra Leone, Liberia, Guinea, Nepal, Rep. Dem of Congo, Mozambique, Niger, Tanzania, South Sudan, Uganda, Honduras, Malawi
	Beneficiaries	MSF-CH teams at headquarters and in the field		
	Content	Implementation of GIS strategy, Map Centre for PDF maps, GeoKM, Remote support of GIS officers in the field, enhancement and structuration of Geodatabase guidelines and training as well as emergency mapping, remote and in-country.		

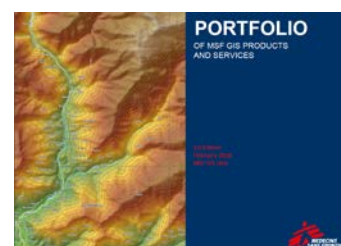
In 2013 CartONG had started a partnership with **Doctors Without Borders-Switzerland**. Following the strategy developed, CartONG implemented MSF-CH's **GIS Unit** in 2014.



GIS Unit

In 2015 MSF-CH's GIS Unit has been declared a service for the whole movement and became the MSF GIS Unit. This went together with defining of the 2016-2019 MSF GIS Unit Strategy.

The GIS Unit has consolidated and adapted its capacity in order to properly deliver a wider portfolio of services : data collection/management/visualization, production of static & dynamic maps, remote sensing analysis, support to connecting applications developed by other departments (i.e. HIS), development of specific applications; delivery of a training scheme and contribution to specialized HR roster management.



A network of GIS focal points from every Operational Center (OC) is promoted and put in place to ensure a smooth collaboration between OCs and to avoid duplication between initiatives.

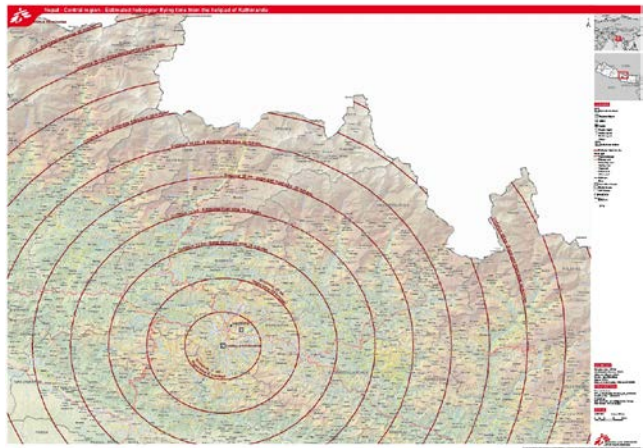
CartONG is also producing maps for MSF remotely to support the country operations with base maps: more than 700 over the year! This can also entail a "rush mode" to create maps in emergency during a crisis, such as South Sudan, Central African Republic, Cameroon, Democratic Republic of the Congo or Iraq.

We continued to support the Ebola outbreak response until April 2015. The success of the whole GIS response is visible through the deployment of **11 GIS specialists** in the field for supporting other outbreaks, natural disaster response in Nepal for a total of **21 missions or 138 weeks**.

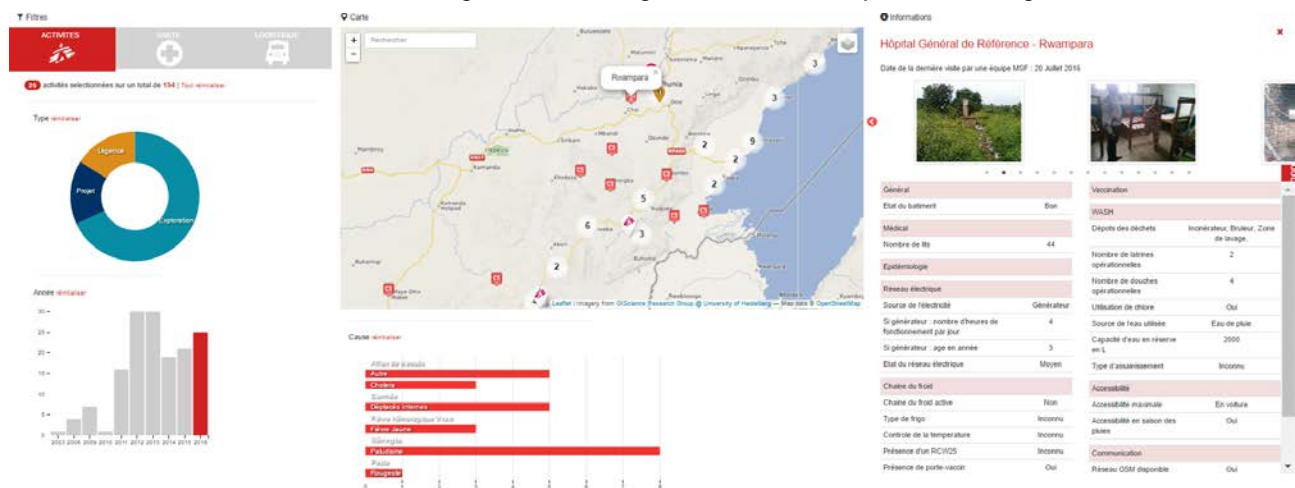


These frequent missions have also allowed to improve our skills and tools on many aspects: guidelines, templates, styles; management of decentralized databases; emergency deployment; as well as building a roster that will benefit all our partners.

The other key development has been the GeoKM (Geographical Knowledge Management). This platform has been developed for the Pole d'Urgence Bunia (PUB) in the East of the Democratic Republic of Congo. It is a good example to illustrate the new applications : the GIS Unit designed a database with the PUB team (GIS Unit on the technology aspect, PUB Team on contents), trained the PUB team on the tools selected and now they are entirely maintained up to date by the PUB team.



Estimated helicopter flying time from the helipad of Kathmandu



CartONG organized intensive trainings: a one week GIS training open to all OCs has been conducted for beginner level GIS interested staff. In 2015, 2 on-the-job trainings for national GIS specialists with higher GIS level skills also took place. This type of training was not initially foreseen, as weren't the national GIS specialists, but they are very useful to set communication channels between the GIS unit and the field.

Training for advanced users were requested during the beginners' training. The GIS Unit plans an advanced training on QGIS or ArcGIS in order to meet the demand in the coming years.

The MSF GIS Unit is also working in tight connection with the Missing Maps project team (cf. below), within CartONG and with the other partners of the project. This overall support to OpenStreetMap humanitarian activities & communities is a consequence of the frequent and direct use we're making in the field of the OSM data, and we look forward to continue and expand these collaborations in the coming years.

Last but not least the Map Centre, available for the whole movement, has been improved and minor functionalities such as catalog improvement or creation of a first briefing map has been done. 2015 has been also the time to define a version 2 for the Map Centre planned for 2016.



## 2. Improvement of the ArcGIS Server platform for UNHCR

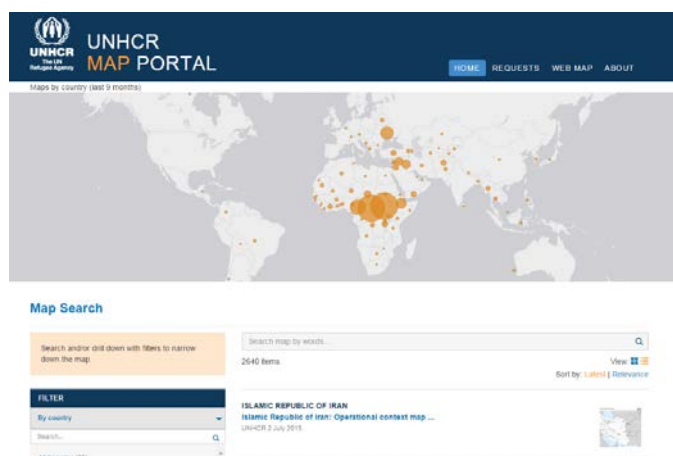
OVERVIEW	Staff involved	12 staff (Manager, GIS officers, IT)	Budget	67,600 € <sup>1</sup>
	Contractor	UNHCR (FICSS section)	Location	Global
	Beneficiaries	UNHCR teams, beneficiaries & partners		
	Content	Implementation of a new global GIS server for UNHCR HQ & missions, standardization of data model, creation of a webmap, creation of a Map center, development & piloting of procedure for camp mapping in the field.		

CartONG continued this year its long-term collaboration with the **Field Information Coordination and Support Section (FICSS)** of **UNHCR**. The objective was to give technical advice and support to operations in data management, in order to implement a GIS strategy streamlining the products and database maintenance, and to allow UNHCR and their partners to optimize the mapping response in the future.

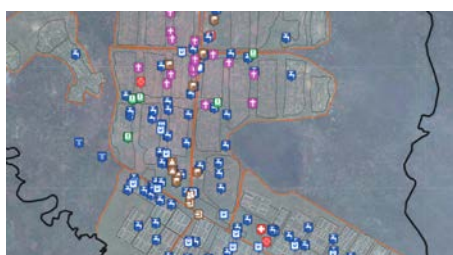


The general GIS strategy was reviewed to take into consideration licensing aspects. End of 2015, CartONG tested some tools of the ESRI suite to help FICSS decide which tools they want to pursue in the future and what are their limitations. CartONG also benchmarked various webmapping tools in 2015 to remain up to date with the various solutions currently available.

The platform for sharing static maps (Map Portal) was launched. A migration from Geonetwork to a MySQL backend was also performed toward the end of the year since the Geonetwork was unstable on the server.



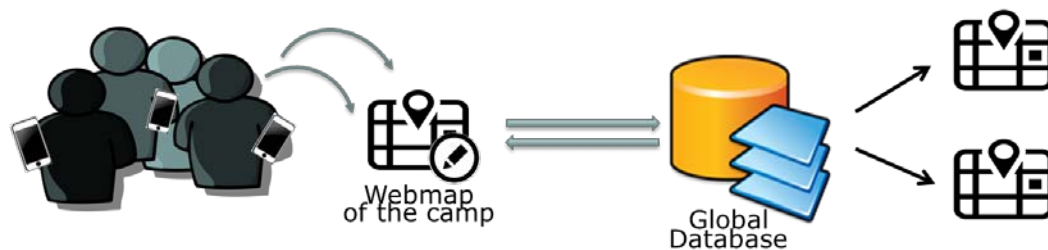
Technical support was given on ArcGIS rollout through a mission to Kiev, Ukraine, in February. CartONG also contributed to a training for UNHCR GIS officers in Nairobi in October for a broader public (GIS officers, but also IM officers and other profiles) on GIS tools.



On camp mapping, the CartONG team with FICSS advices and support devised a first strategy using ESRI's ArcCollector for data collection and update of existing data and completed two roll outs in 2015: one with MSF in Nyagurusu camp in Tanzania and one with UNHCR-PHS WASH in Rwanda focusing on Wash Sector data. Both roll-outs are using the UNHCR GIS database to centralize the collected data.

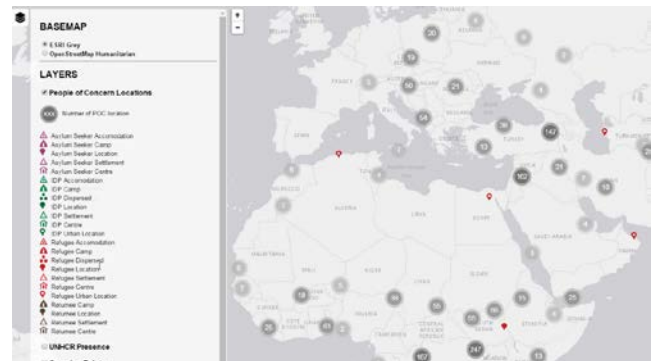
<sup>1</sup> Note: This is the total budget for FICSS section, which also contain some elements on mobile data collection, described with the [activities for PHS section](#).

Two Webmaps linked to the GIS database have been created. They are integrated to the SIP tool (activity continuing in 2016), a shelter knowledge management tool.



The activity of merging of different databases containing location or location related information such as the data portal database and PSR to ensure better integrity between the different HCR database systems has been worked on.

On mobile data collection, the project continued to test various ODK based solutions and has updated documentation available. CartONG also carried out a training on XLS form coding in Geneva. Field implementation of MDC has taken place in Cameroon and Remote support in Somalia.



### 3. Support on GIS databases & visualisation tools for ICRC

OVERVIEW	Staff involved	6 staff (Manager, Technical Supervisor, GIS officer, 2 Dashboard/Webmapping specialists, IT)	Budget	60,000 €
	Contractor	ICRC	Location	Global
	Beneficiaries	ICRC teams		
	Content	4 projects: Cleaning of admin boundaries, remote mapping and analysis for field operation, development of dashboards for two different sections and working on data tools.		

The **International Committee of the Red Cross'** GIS team has set up a state-of-the-art internal geographic database as well as related GIS services and platforms. ICRC however required external support this year to enhance the production, access and visibility of ICRC data. This included test and implementation of new protocols for collecting data with mobile devices, further development on Mapbox, simplifying the GIS geometry and implementing multi languages on OSM Script as well as a Data Portal Dashboard and its Web form.



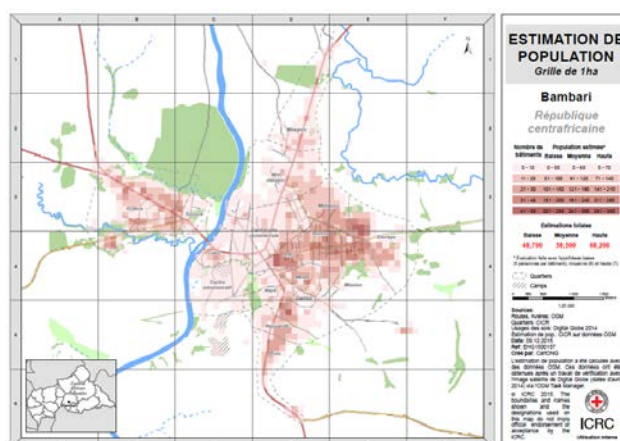
ICRC

More dashboards were implemented and refined for the WatHab unit as well as a Dashboard visualizing all Delegations.

The ICRC Protection team was interested in having developed a lightweight **Events collection and analysis tool**, which included a dashboard to visualize the data. Through this tool, teams on the field are able to report simultaneously events affecting

civilians. The tool is based on open source JavaScript libraries like D3.js (d3js.org) and consumes ICRC GIS REST services.

For the first time, CartONG was asked to **directly support an ICRC field operation remotely** (Bambari, CAR) in harvesting, cleaning and adjusting data and produce base maps as well as analysis maps for them. This included activating the HOT community to assist with mapping out the region. Analysis contained mapping population density and water networks.



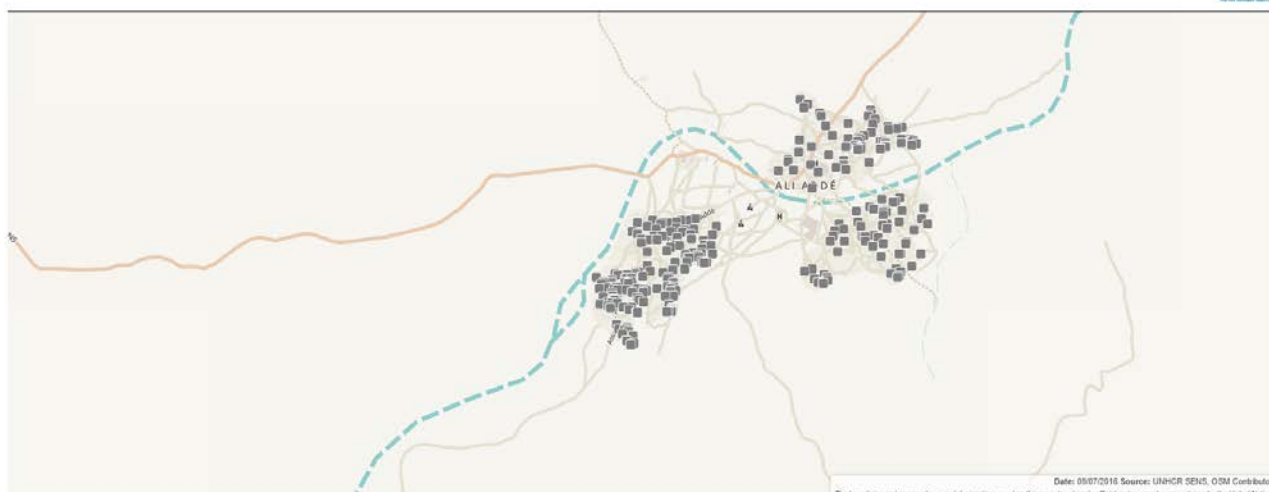
#### 4. SENS Mapping

OVERVIEW	Staff involved	5 staff (Manager, Technical Supervisor, GIS officer, 2 Dashboard/Webmapping specialists)	Budget	89,900 € <sup>2</sup>
	Contractor	UNHCR	Location	Global
	Beneficiaries	UNHCR Nutritionists		
	Content	Development of a lightweight mapping tools of SENS nutrition surveys to analyze indicators spatially.		

The idea for this project was conceived during an in-country support of a SENS survey where CartONG also mapped out the results, after having conducted some basic infrastructure as well as camp boundary mapping in the field. The results were found useful and CartONG started working on a **standalone tool**, which only needed internet connection (to read in OSM background tiles) but else just worked after unzipping it based on **JQuery and Leaflet**. The tool maps out children which were anaemic, suffered from stunting or were malnourished. In 2016, the tool will be further enhanced to also contain other indicators of other SENS modules.

<sup>2</sup> This is the full budget for UNHCR PHS Section and includes MDC support, in-country and remote as well as trainings and other IM related activities

## SENS in Ali Addeh



## 5. Missing Maps project & volunteer mapping

OVERVIEW	Staff involved	C. 10 volunteers	Budget	0€ (volunteer contribution not evaluated)
	Partners	Missing Maps consortium	Location	Global (remotely)
	Beneficiaries	Humanitarian NGOs delivering aid in vulnerable areas, and their beneficiaries		
	Content	Pre-emptively mapping the most vulnerable areas of the Earth to improve humanitarian response and disaster risk reduction.		

CartONG was officially accepted as member of the **Missing Maps project** in August. This initiative, started by the American Red Cross, British Red Cross, MSF-UK and the Humanitarian OSM Team, aims at putting the most vulnerable populations of the world on the map. The project supports mapping on OpenStreetMap both remotely and in the field, to produce data that can be used by NGOs, governments or local communities.



We have organized this year 4 mapathons in France (Chambéry x2, Paris, and Lyon, with already almost 100 participants) and plan to scale it up next year with more mapathons and additional activities.

We have partly shifted the focus of our **volunteer emergency mapping activities** to data creation since the demand for disaster maps from small NGOs remain relatively low. We therefore chose to adopt a more flexible approach and answer requests on an on-demand basis rather than following a pre-defined procedure.





This is also why we joined the **Digital Humanitarian Network**, and have undertaken our first activation following the earthquake in Nepal (the objective was to geolocate banks, in order to support the cash distributions programmes by NGOs).

## 6. Volunteer webmapping projects

OVERVIEW	Members involved	6 volunteers	Budget	6200 € (volunteer contribution not estimated)
	Partners	Comité National de Lutte contre le SIDA	Location	Madagascar
	Beneficiaries	CNLS & local NGOs supported, and their beneficiaries		
	Content	Creating an interactive platform to localize projects: 1) of NGOs fighting AIDS and 2) more generally of all grassroots NGOs and community organizations in Madagascar		

Our webmapping volunteer projects have expanded this year: we have received, via UNAIDS, a request from the **National Committee for the Fight against AIDS** (Comité National de Lutte contre le SIDA, CNLS), the national agency in charge of coordination against the outbreak. Since CNLS already has a dataset of projects implemented by all the local NGOs it supports, we have estimated it would be simpler to finalize the technical platform with them, and then replicate it on the Atlas. The goal is similar: map initiatives to **increase their visibility and foster coordination**.

Our volunteers have therefore worked this year on developing the platform (using Django for the back-end and Leaflet from the front-end), it will be published early 2016 and replicated to other projects.

In the meantime, we haven't been idle in developing the **Atlas Solidarité Madagascar**. Thanks to two small grants from **Veolia** and the **Crédit Coopératif Foundation**<sup>3</sup>, we have been able to deploy two volunteers in Madagascar for a **one-month exploratory mission**. They have met many stakeholders, including public officers, cooperation experts, national & international NGOs, but also a sample of the grassroots community organizations we aim to map. This has allowed us to discuss and refine the concept with its future users & contributors and identify future partners.

In parallel, we have been discussing with the **Conseil Départemental d'Ille-et-Vilaine**, a French local authority, to duplicate the platform for their own database of local projects in the region of **Mopti** (Mali) with whom they collaborate.



<sup>3</sup> The project won the innovation in social economy prize from the Fondation Crédit Coopératif Savoie.

## CAPACITY BUILDING<sup>4</sup>

*Capacity building remains one of CartONG's key fields of interests, to help the geographical information community in the humanitarian field be as independent as possible in their projects.*

### 1. MDC and Geodatabase training for IPIS

OVERVIEW	Staff involved	2 (Project manager, GIS Trainer)	Budget	3000 €
	Partners	IPIS	Location	Antwerp, Belgium
	Beneficiaries	IPIS HQ Staff		
	Content	Mobile Data Collection and geodatabase management		

We also worked with IPIS, who wanted their HQ staff to attend a **general training on mobile data collection and geodatabase management** in order to improve their internal data management.

We presented to 4 HQ staff the **fundamentals of Mobile Data Collection** and their use in the humanitarian sector, followed by an in-depth training on ArcGIS **Geodatabases**.



### 2. GIS & mobile data collection courses for Bioforce's students

OVERVIEW	Staff involved	1 (MDC and GIS)	Budget	1500 €
	Partners	Institut Bioforce	Location	Lyon, France
	Beneficiaries	Future NGO workers: logisticians, WASH and project coordinators		
	Content	GIS and mobile data collection training in humanitarian context.		

CartONG has been teaching GIS regularly to the trainees of **Institut Bioforce** over the past few years. This year, we intervened in different trainings (one or two days at a time): RPEHA (WASH project managers), CPSI L2 (project coordinators), LSI Tech (Logisticians-equipment management), and LSI Appro (Supply logisticians) to help them improve the impact of their projects thanks to new and efficient tools and processes.

We introduced them over a day to the use of Kobo Toolbox and OpenDataKit (and how to conceive a survey) as well as OSM Tracker for mobile data collection, with a second



<sup>4</sup> All the training sessions that also include an information management component are covered in that section rather than this one for the convenience of readers.

day for some of the trainees on basic mapping with Google Earth and using GPSs for data collection.

This type of training is important not only because the future humanitarian workers are more aware of the possibilities of mobile data collection and GIS, but also because it heightens their awareness on the usefulness of geographic information and data collection and sharing. We will renew it in 2016 and hope to expand it in the future.

### 3. Support to the OpenStreetMap Madagascar community

OVERVIEW	Members involved	1 volunteer	Budget	2500 € (volunteer contribution not estimated)
	Partners	Agence Universitaire de la Francophonie	Location	Madagascar
	Beneficiaries	Local OSM volunteers trained		
	Content	Training of local volunteers on OpenStreetMap tools and philosophy to encourage the inception of a local community and projects.		

We now have several projects in Madagascar and a growing network there. This has lead us to start a new project to **support the creation of an OpenStreetMap community in Madagascar**. After contributing to several actions remotely (Facebook page presenting the basis of contribution, [mailing list](#)), a CartONG volunteer/OSM contributor organized in July an advanced training in Antananarivo to try to gather a first group of contributors with the support of the [Agence Universitaire de la Francophonie](#) who hosted it.

The training included basics of contributing and functioning of OSM: license, georeferencing, field papers, JOSM, using GPS, Tasking manager, applications and uses, quality insurance, Wiki, organizing mapping parties... Other ideas are currently being worked on, including testing mini-servers not using Internet, developing a map rendering specific for Madagascar, how to manage collective contribution, etc. with the support of the [OSM Lyon community](#).



#### 4. Research project on UAVs for humanitarian response

OVERVIEW	Staff involved	3 staff (Project manager, UAV pilot)	Budget	8,000 € <sup>5</sup>
	Contractor	FSD, DG ECHO	Location	Global
	Beneficiaries	The humanitarian & development community		
	Content	Consolidating knowledge on the use of drones for humanitarian action via research & field tests		

We started this year a research project on the use of UAV for humanitarian purposes. The project is funded by the DG ECHO of the European Union and led by the Swiss Foundation for Mine Action (FSD).

CartONG is in charge of the technical side of this project, mainly testing several type of devices in different contexts, and assessing their outputs, in comparison with other existing sources of data (satellite imagery in particular). We will compile several case studies on projects conducted by other organizations, and conduct a few field tests to dig further on some use cases. The outputs of the project will be published on <http://drones.fsd.ch/>



## INFORMATION MANAGEMENT

*Information Management (IM) aims at improving the quality of data used by humanitarian actors over time and its rapid dissemination for decision-making. We contribute through mobile data collection and general IM support for our partners.*

#### 1. Mobile Data Collection and Data Analysis for UNICEF

OVERVIEW	Staff involved	4 staff (Information Manager, MDC/Data Analysis specialists, MDC specialist in the field)	Budget	22,000 €
	Contractor	UNICEF	Location	Nigeria
	Beneficiaries	UNICEF, UNOCHA as well as other partners in this multi-sector data collection		
	Content	Information management, data collection and conception of survey, as well as data cleaning, quantitative analysis on collected data and production of graphs		

<sup>5</sup> 2015 only.



Number facilities carrying vaccination campaigns for following diseases, per LGA

LGA	OPV/IPV	Measles	Other
GOMBI	5	4	3
HONG	3	3	4
MADAGALI	5	1	0
MAIHA	1	0	0
MICHIKA	3	0	2
MUBI NORTH	4	3	3
MUBI SOUTH	3	3	3
Total	24	14	15

As part of the Long Standing Agreement to support UNICEF on IM related issues, CartONG was deployed to Nigeria to support a multi-partner, multi-cluster data collection and analysis exercise. Whilst only one staff member travelled to the field, an additional 3 IM specialists assisted with conception of the survey as well as cleaning and analyzing of the resulting data set according to the analysis plan which had been created by UNOCHA.



Those results were combined with the findings of the focus group discussions and turned into a report by UNICEF.

## 2. Mobile data collection for UNHCR Public Health Section

OVERVIEW	Staff involved	12 staff (MDC specialists, developers, Comms specialist, Web mapping specialists)		Budget	90,000 € <sup>6</sup>
	Contractor	UNHCR – PHS Section	Location	Remote: Kenya, Djibouti, Cameroon, Namibia, Egypt, Malaysia, Liberia, Sudan, Eritrea. In-country: Mozambique, South Sudan Global	
	Beneficiaries	UNHCR teams at headquarters and in the field, as well as nutritionists from partners			
	Content	To improve the way nutrition and health data is collected in the field through the use of mobile technology. Also includes collection forms and analysis modules in Excel for desktop use as well as visualization of survey results as graphs or maps.			

We continued our long-term work with the **PHS** (Public Health Section) of **UNHCR**, through different projects.

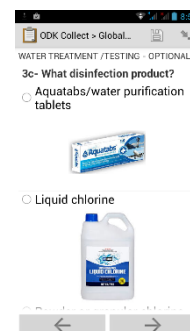
The main activity was to support the **SENS nutrition surveys with mobile data collection**, conducted since 2011 with Android phones. This included **in-country support** in South Sudan and Mozambique, as well as **remote support in Djibouti, Cameroon, Namibia, Liberia, Sudan and a very light remote support for Kenya, Eritrea and Chad**, since the teams there already had advanced skills and in some cases even coded the forms themselves. New in 2015: support for the HAUS (Health Access and Utilization Surveys) in **Malaysia** and **Egypt**; those focus on understanding how households use health services. For the HAUS as well as one



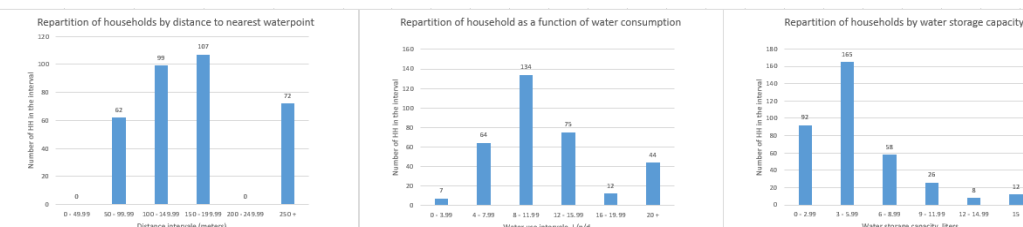
<sup>6</sup> Budget is PHS only, however some of the MDC activities described here were included in the FICSS budget.

SENS survey, Kobo online was used for the first time, since it made more sense to aggregate all data in a cloud platform. CartONG also organized a **1-day coding training for UNHCR in Geneva**, for both beginners and advanced profiles and gave MDC training at the SENS regional training being held in Senegal in 2015.

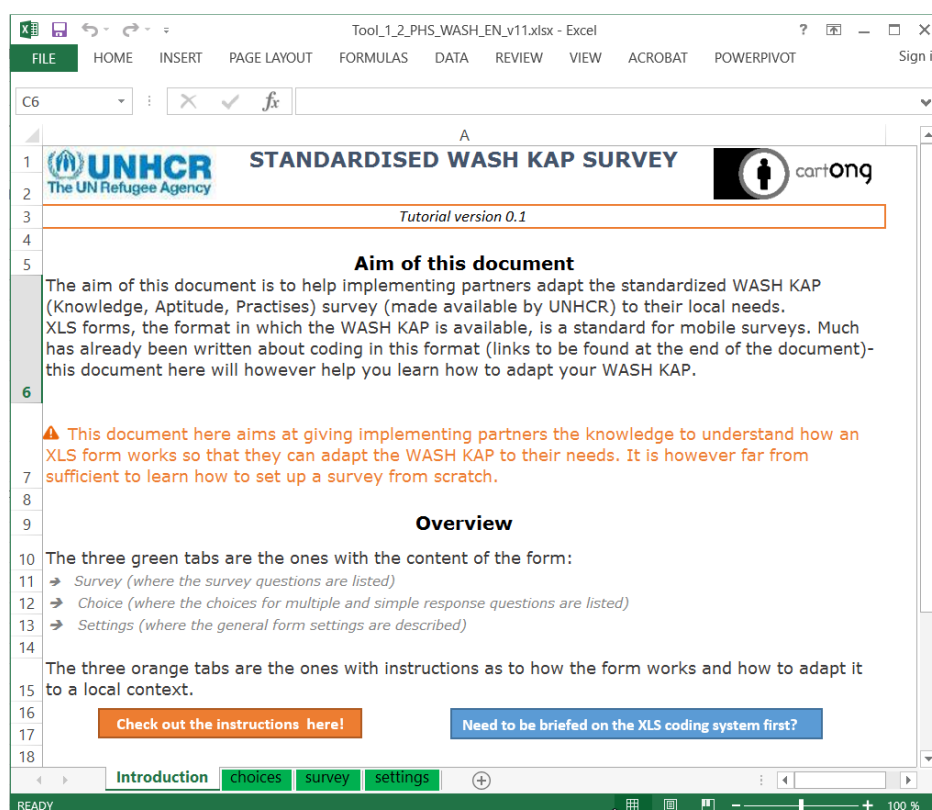
A new WASH KAP (Knowledge, Aptitudes, Practices) module was developed in 2015 which should entirely replace the SENS WASH module over the coming years. This very advanced module includes innovative encoding techniques as well as an easy-to-deploy toolbox.



Main indicators for the surveyed population									
	1 - Average liters per person per day collected at HH level (averaged on person surveyed)	2 - % of household with at least 10 L/p potable water storage capacity	3 - Average distance to waterpoint for the 2% with longest distances	4 - % HHs collecting drinking water from protected/treated sources	5 - % HHs with family or shared-family latrine/toilet	6 - % HHs where open defecation is observed/reported	7 - % HH with access to soap and specific device for handwashing	8 - % HHs with access to solid waste disposal facility	Extra - Number of HH using home tap water or watersellers
Emergency Standards	15	≥ 70%	≤ 500m	≥ 70%	-	0%	≥ 70%	≥ 70%	
Post-Emergency	20	≥ 90%	≤ 200m	100%	≥ 90%	0%	≥ 90%	≥ 90%	
Population surveyed	10.7	13.15%	630	100%	0.00%	23%	72%	81%	0%



This toolbox's aim is to help UNHCR partners implement the KAP survey in as standardized a way as possible, whilst at the same time ensuring that it answers their operational needs. The survey therefore covers a core mandatory module and numerous optional modules that can be removed by the partner. An Excel analysis tool is set up in such a way that it can both cover operational needs and also produce UNHCR standardized indicators in a very easy fashion.



The XLS form contains an introduction sheet and tabs explaining the coding and how to change it to adapt it to the local settings. This aims at WASH partners with MDC experiences just needing an overview and some pointers on how they can adapt the form for their operation.

A follow-up mission was conducted 6 months after the implementation of MDC for the monitoring system of **supplemental nutrition programme (CNS)**. The objective of the mission were to receive a feedback on the system, to fix potential issues encountered, to determine its strengths and weaknesses and to define potential improvements for the future of the system. The mission was conducted in Goz Amir camp in June.

In addition, after 6 months of data gathering, the possible avenues for relevant data analysis (from the Nutrition program management in N'Djamena's perspective) were explored. The format of the data gathered was also adjusted to best fit the analysis tools used by the staff in place (ENA smart).



The **FACT** is a project lead by UNHCR to foster **greater coordination in the planning and management of food ration in refugee camps**, in cooperation with WFP. The project aims at gathering data at site-level through an Excel form. The design for this form is an adaptation of a similar form developed for Urban HIS and Wash Report Card (for Health Information system).

The data are to be gathered at site level, regarding the various distribution schemes deployed. This can include general food distribution (in-kind, cash or vouchers), complementary food distribution for selected beneficiaries (such as pregnant woman or children, again in-kind, cash or vouchers) as well as information about M & E conducted in relation to those distributions. It details the content of those distribution (or value if cash or vouchers).

CartONG embarked on various **benchmarking exercises** in 2015, some of it fully financed, some of it co-financed through PHS. In order for PHS to gain an overview of what **SMS based solutions** are out there, a review of tools including testing was conducted. Only tools with a full SMS component were considered.

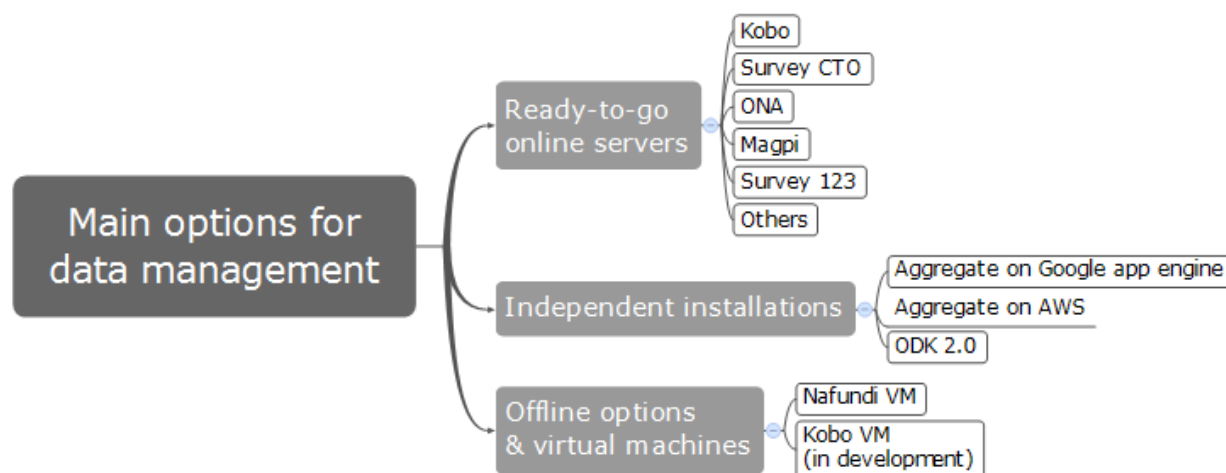
To distinguish these platforms from other products that also have SMS capability (i.e. sending data via sms), and to ensure that these products meet the key requirements of UNHCR, the services reviewed needed to meet all of the following criteria

- ➔ Must support one-to-many messaging as well as one-to-one messaging
- ➔ Must support two-way-communication

- Must be able to send text messages in more than one alphabet
- Must be able to send text messages to at least 40 countries
- The platform must be a self-managed solution, i.e. program staff can send and receive messages and surveys themselves, without having to go through a service provider
- No software development skills or similarly advanced IT skills are necessary to use/install the platform.

The report has been published and can be found [here](#).

The MDC Tools Benchmarking was an exercise CartONG conducted internally, co-financed by FICSS as well as CartONG internal funds. A total of 10 solutions were assessed by looking at their strengths and weaknesses as well as testing against 41 different features. The solutions were categorized into three main options.



*Main options for data management in MDC*

CartONG also conducted an **Android Phone Benchmarking** based on the phones which were supported and used in the field. The document included 4 phones for 2015, with 2 of them being branded as ruggedized and field compatible.

CartONG also supported the **Joint IDP Profiling Service (JIPS)**, under the FICSS agreement, remotely for a **survey in Somalia on internally displaced populations**. CartONG assisted in translating the Word questionnaire into an electronic form and conducted consistency checks for every new version. The procedure involved using barcodes which had been distributed during a household verification exercise. More than 12,000 households were interviewed.

Through the Emergency IM Coordinator, a request for **MDC support for the Cameroon IDP operation in Maroua** has been submitted. A total of 85 enumerators and supervisors have been trained on how to use the mobile phone to conduct IDP Profiling exercise. This exercise was predominantly based on Key Informant Interviews (KII) with a separate questionnaire on general questions pertaining to a community as well as questionnaires for the sector health and education. Since the region to be profiled is spread out, the enumerators cannot be supervised directly and hence send their records upon finalization and network connection to the server.



### 3. Mobile data collection for Terre des Hommes-CH

OVERVIEW	Staff involved	2 staff (Information Management, GIS, MDC)	Budget	25,000 €
	Contractor	Terre des Hommes-Lausanne	Location	Burkina Faso, Lausanne, Guinea
	Beneficiaries	TDH's teams and beneficiaries		
	Content	Supporting mobile data collection surveys and capacity building.		

CartONG helped **Terre des Hommes-Lausanne** in 2015 through several trainings on mobile data collection, for their operations in Burkina Faso and Guinea but also at headquarters.



**Two trainings were conducted in Burkina Faso** for TdH's local team, both to train their health workers in the Tougan area on the use of mobile data collection to follow the health of children, and also to train their Monitoring and Evaluation staff to know how to set up a survey from scratch, manage it and analyse its data. **Two missions to Guinea were also conducted**, the first to help set up two mobile data collection tools (one being a WASH Knowledge, Aptitudes and Practices survey, the second being a tool to follow the work of social workers with Ebola orphans), the second mission being to train all West African TdH Monitoring and Evaluation staff for two full weeks on Mobile Data Collection and mapping. As follow up, CartONG was charged with **helping define the capacity building strategy of these staff and helping set up a user community** around MDC and GIS (using the Slack tool) with shared training material, support in survey coding and deployments, with associated remote support to facilitate the transition towards MDC in various country operations. Another training at **headquarters was also led**, to give the head office staff the capacity to encode their own surveys with XLS forms.

### 4. Mobile Data Collection and Information management for Solidarités International

OVERVIEW	Staff involved	3	Budget	7000 €
	Contractor	Solidarités International	Location	Central African Republic
	Beneficiaries	Solidarités International's teams and beneficiaries		
	Content	Supporting information management + training		

**Solidarités International** is one of our oldest partners, and we had again in 2015 the opportunity to collaborate with them on two projects.



We were first of all requested to implement a **complex beneficiaries database for a multi-thematic** (Food security, WASH, housing, protection) and **multi-partners** (with ACF and DRC) **project** lead by Solidarités in Central African

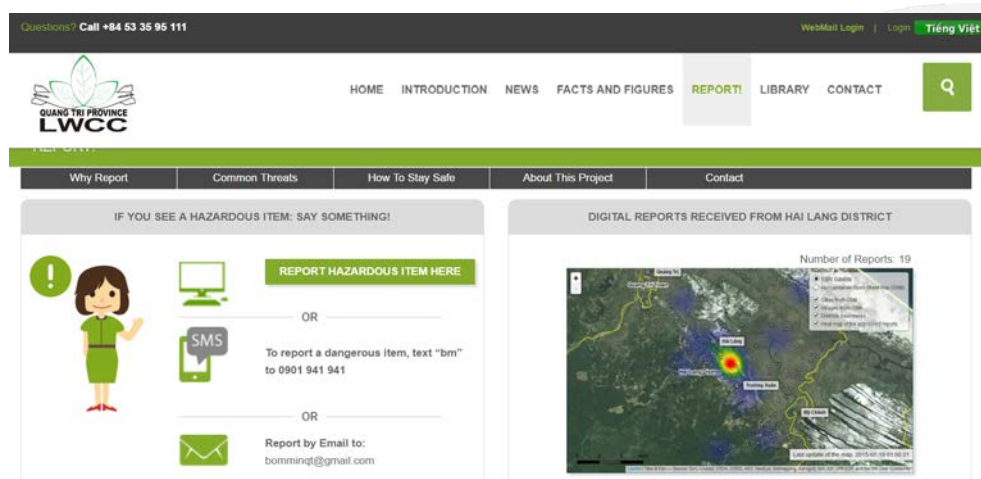
Republic – for this we did a first mission where we improved the mobile data collection process and created workflows to detect semi-automatically double records amongst the 45,000 recorded households. We also created automated dashboards to streamline data analysis, and ultimately decision making. A follow up mission that was supposed to happen after the summer was postponed because of the security situation in the field.

The second project was a **hotline**, for all field staff with questions on mobile data collection, to help them on their MDC processes in their country operations, be it on the choice of tools or help on their survey encoding for advanced functionalities.

## 5. SMS Based Communication Platform: for DDG Ukraine and Vietnam

OVERVIEW	Staff involved	5 staff (1 Information Manager, 1 IT, 2 Web mapping specialist, 1 Server manager)	Budget	22,000 €
	Contractor	Danish Demining Group	Location	Ukraine and Vietnam (project supported from remote)
	Beneficiaries	DDG, local partners		
	Content	Information management, set up of SMS based platform for reporting (Frontline SMS and Ushahidi), creation of public heat map, design of web site/web integration, development of a reporting wrapper and additional functionalities for Ushahidi backend.		

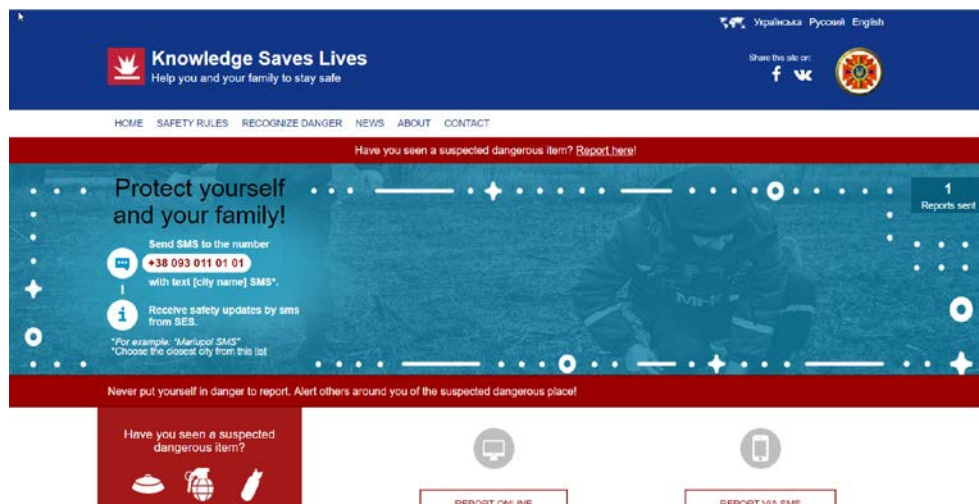
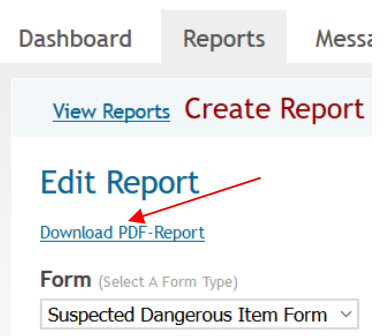
The main objective of this project is linking Communities to Mine Action and strengthening Community Liaison through Digital Platforms. To achieve this objective, a digital platform on which users can report with their preferred media of choice was set up (Ushahidi) and connected to a SMS based communication platform to enable two-way communication (Frontline SMS) as sending and receiving SMS was found to be an important mean of communication.



Application and platform access embedded in existing web site, Vietnam

Since Mine Action is a sensitive topic, the Ushahidi instance was not made public, instead a heatmap based on reports was created which gives an indication on the location of the reports but does not allow to read out any exact locations. In its original state, Ushahidi is meant to be either a fully public or a fully private application, for this project however, a mix of the two was required: building a wrapper, a form allowing any user to report without login but the backend to be only accessible with full log in credentials.

CartONG assisted with setting up and development of additional functionalities, the wrapper, the heat map as well as technical trouble shooting. Early 2015, in close collaboration with SimLab we also supported the analysis and the drafted the report of the baseline survey together conducted in Ukraine late 2014, also with our assistance.



*Newly designed web site with platform access, Ukraine*







Please fill out below report form to report a suspected dangerous item to SES. SES will contact you to follow up on your report.

### Submit a New Report

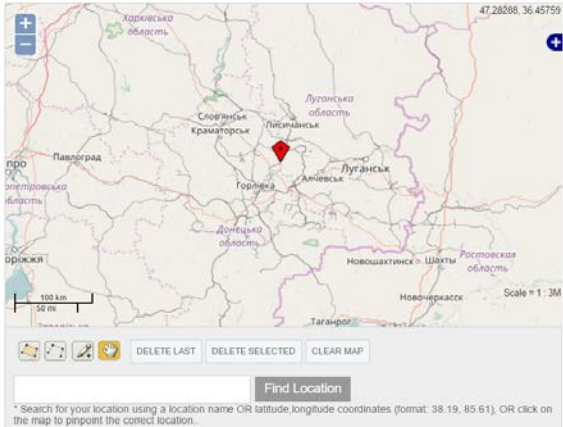
**Full name \***  
Your name and contact details will not be disclosed, we will call you to verify the report.

**Mobile phone \***

**Info about the object found**  
Which of the following objects resembles the potentially explosive object found?

**Find a location near you**  
Select a City



\* Search for your location using a location name OR latitude/longitude coordinates (format: 38.19, 85.61). OR click on the map to pinpoint the correct location.

*Example of the Ukraine wrapper, blank form*

## FINANCIAL REPORT

### 1. 2015 accounts

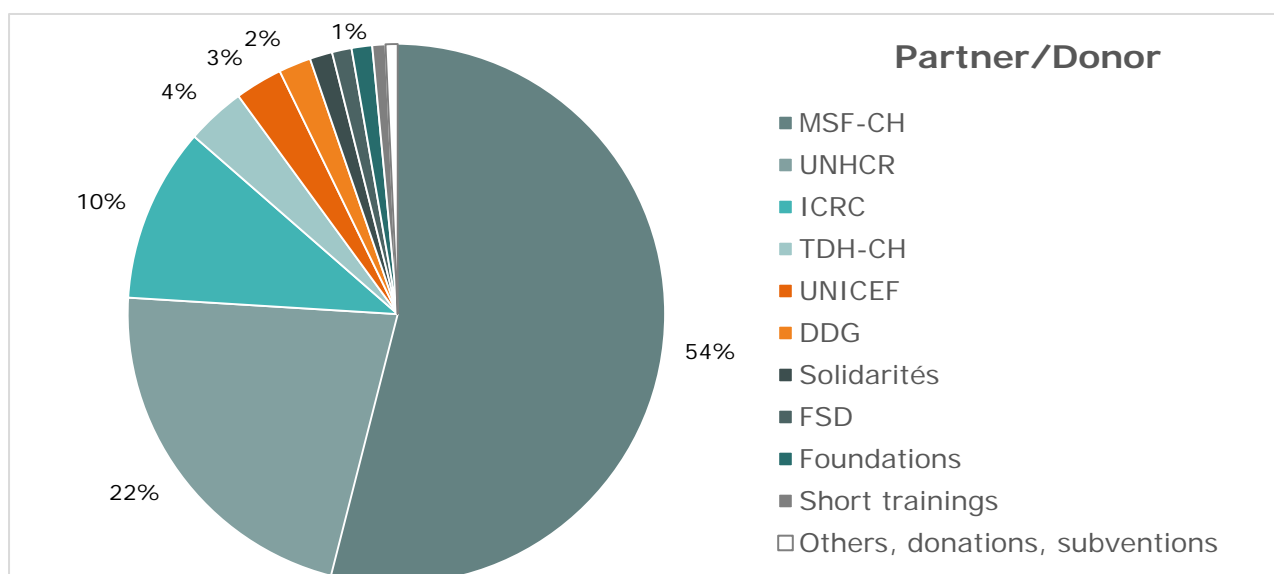
After an exceptional year in 2014 for the surge of the Ebola response, CartONG has come back this year to a more “normal” situation, with a positive balance of **35,700€<sup>7</sup>**. This is still a rather high value provided we target equilibrium rather than generating a surplus, however in a context of growth of the NGO it leaves us with a margin to face future uncertainties and evolutions.

Following the investment plan decided beginning of the year with the surplus from 2014, we have decided again to assign the 2015 surplus to specific investments in 2016 (cf. [Budget and investment plan](#)), to shape the future of our NGO.

This year’s budget amounted to a total of **708,400€**, an increase of 35% from last year. We have thus managed to not only digest the important growth of last year but also continue expanding our activities.

Our budget is still **funded mostly by our humanitarian partners** (98.3%), but we also have received 2 small donations from foundations for volunteer projects (1.2%), the rest coming from individual donations and membership fees (0.2%), subventions (0.1%) and miscellanea (0.2%).

The objective of diversifying the funding of the NGO hasn’t really advanced this year, with the two main partners accounting for more than the three quarters of our incomes. Nevertheless we managed to get funding from private foundations in a significant amount for the first time this year.



Our **expenses** amounted to **673,500€**. They were split between salaries & social charges (86.9%), equipment expenses (2.2%), office costs (1.3%), transport & missions fees (4.6%), insurance, bank & various fees (2.4%), training (0.8%), taxes (0.5%) and amortization (1.3%). We changed the breakdown of this synthesis compared to last year to better highlight operation costs vs. HQ costs, but the overall proportion is quite similar: 86.9% for staffing (79.4% in 2014), 6.8% for equipment and missions (11.8%), 6.3% for office and other costs (8.8%).

<sup>7</sup> Plus 8800€ of 2014 income back-accounted since received too late for the 2014 report.



This growth and the investment plan (cf. [below](#)) has allowed to continue stabilizing the permanent team, always with the objective of improving the quality of our work. We have secured one **new project manager** permanent position and opened a **new cartographer** position at the end of the year. We now count 8 stable employees (including 5 permanent contracts) in addition to our interns (~2/year) and regular consultants (2).

Growing is not an objective in itself but to answer the various requests of our partners, face an increasing diversity of tools and technologies but also be available for emergency deployments and field trainings, we estimate it is necessary to **expand our team's skillset and efficiency**. It also allow to offer **better working conditions** to our technical staff, and therefore allow them to be 100% dedicated to help our partners, without admin or practical constraints to manage.

**Pooling GIS and information management resources and skills** for the humanitarian sector was a key idea of the founders of CartONG and we are proud to be able to expand the portfolio of services & technologies we can **offer to all our partners, big or small**.



Our complete financial report compiled by our accountant is available for partners & donors, contact us to receive a copy.

## 2. Report on the investment plan from 2014

CartONG's board decided in 2014 to establish an investment plan over the period 2015-2019 to make prudent use of the exceptional 2014 result.

Based on the main priorities identified, we have therefore invested in the following aspects:

- **Stabilization of CartONG's core staff** through the transformation of 5 positions into permanent contracts ("CDI"), which implied increasing our permanent savings to be able to cover 3 months of salaries in case of financial problems.
- Creation of one **new position** in charge of developing new projects.
- Invested in several **research projects** useful for all our partners (research on webmapping & MDC tools) and investing in software licenses.
- Preparing a **new website** that will be launched in 2016
- Joining Coordination Sud (will be effective in 2016).
- Continue investigating **UAV technology**, to complete the research project started this year with FSD (in particular by certifying a staff as UAV pilot).
- Invested in time & tools to improve project management, time tracking and admin processes, necessary for **improving our reporting** to partners but also to keep increasing our efficiency.
- Preparing a new **NOMAD workshop** (planned for January 2016) and updating the projects' website, a platform useful for all NGOs.
- Organizing a **training** for field GIS officers that has been useful both to CartONG members but also to partners interested in our expertise.
- A **volunteer** camp mapping project that has not proved to be possible to do and will be mostly substituted by investing in the Missing Maps project.

As of December 2015, 38.4% of investments (excluding security savings) have been spent, the rest being delayed because of both internal (lack of availability of staff for the new website) and external (delay in finding a venue for NOMAD workshop, waiting partners' feedback on field volunteer project, etc.) constraints.

These delays in starting some activities explain that the 2015 balance is still positive, while it should have been negative (around -20,000€) if the full investments had been spent by the end of the year. Depending on the progress of spending the 2016 balance will therefore be either close to null or negative following the last expenses.



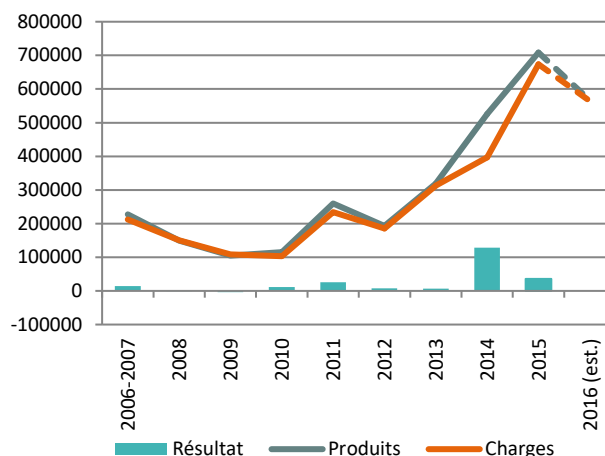
This investment plan and a provisional spending report as of December 2015 is also available for donors, please contact us to receive a copy (in French).

## PERSPECTIVES FOR 2016

### 1. Budget and investments

We have established a **provisional budget for 2016 of 566,500€**. As usual, we are doing a conservative planning based on confirmed funding, but the budget will likely be higher depending on the emergency deployments.

The expected distribution of expenses will be the following: 454,350€ for staffing (including consultants), 40,000€ for transport and mission fees, 17,000€ for equipment, 8900€ for office costs, 36,050€ for insurance, bank & various fees, 3000€ for taxes and 5000€ for amortization. The ratio staffing (80%) / missions & equipment (10%) / office and other costs (10%) will remain stable, with a slight increase of other costs linked to our growing IT infrastructure (that also benefits our partners).



We will finish spending the investment plan from the 2014 surplus in 2016 (around 55,000€, cf. above) and will also spend the surplus for 2015, which the board has decided to affect in the following manner:

- Following the policy decided last year, 33% for security savings (12,100€), which allows us to keep the prudency ratio decided on savings/salaries (with a total of 114,000€ permanent security savings).
- 10% for volunteer projects (4550€), including a 4000€ line that will be granted to projects following an internal call to support innovative ideas.
- 57% for general investments (28,850€) including:
  - ⇒ Transferring to a new office with associated renovation and new furniture costs;
  - ⇒ Visibility: finalizing the new website, conferences and trips to visit partners;
  - ⇒ Get-togethers of the association;
  - ⇒ Budget for the celebrations of the 10<sup>th</sup> anniversary of the organization;
  - ⇒ Open line for contingencies/opportunities.

## 2. Staff projects

We are expecting to pass the threshold of 10 employees in 2016 (9 full-time equivalent), plus 2 interns and a varying number of field staffs/consultants. This will allow us to strengthen the team on two fields increasingly requested by our partners: responding to urgent map requests, and producing dashboards/webmaps and other interactive platforms.

Several key partners have already renewed their support for 2016, allowing us to foresee the following projects:

- We will continue to support **MSF-CH's** GIS Unit. Following the success of the capacity building strategy defined with them, MSF will start deploying directly field staff but we will continue supporting them with remote mapping, training, and of course development of their Map Centre and other geographic analysis tools.
- We will continue to support the **UNHCR Public Health Section** on the nutrition surveys and other mobile data collection and mapping projects (WASH KAP).
- We will follow-up with the **FICSS section of UNHCR** on implementing their GIS strategy and development of new tools (Map portal, mobile camp mapping).
- The agreement signed with **UNICEF** again plans two activations this year, in locations we don't know of yet.
- We will continue providing support to **Terre des Hommes-Lausanne** and **Solidarités International** on their mobile data collection and information management activities.
- We will continue supporting **ICRC** on the technical developments of their information management tools.
- We will continue developing tools for the **Danish Demining Groups** as part of the MAPPs project started this year.
- Trainings for **Bioforce** students (WASH and log) and other partners.
- We are already well advanced on the planning of the **NOMAD workshop** that will be organized in January in Amman (Jordan) with IMMAP, Solidarités International and UNHCR.
- And we hope to meet new partners in 2016!

## 3. Volunteers' projects

The GeOnG 2016 will of course undertake much of our efforts next year, but we are also planning to advance on several other projects:

- Participate more actively in the **Missing Maps project**: the recruitment of a part-time staff coordinator will allow to organize more mapathons in several cities in France
- Continue supporting the **Madagascar OpenStreetMap community** we trained this year, and maybe support other communities if opportunities arise.
- Finalize the first version of the webmapping platform for the National Committee for the Fight against AIDS in Madagascar that will then be replicated to our other 2 twin project: **Atlas Solidarité Madagascar** & Ille-et-Vilaine/Mopti (Mali).
- Start implementing the **free datasources repertoire**.
- Activations for disaster mapping and for the Digital Humanitarian Network.
- Last but not least, organize the **GeOnG 2016** in Chambéry, a very special fifth edition of our forum for the 10<sup>th</sup> anniversary of CartONG!



## Mapping remote & in the field



## Mobile data collection



## Capacity building



	A	B	C	D
1	type	name	label-English	label-Français
2	deviceid	DeviceID		
3	start	TimeStartRecorded		
4	end	TimeEndRecorded		
5	note	KCHILD	THIS QUESTIONNAIRE IS TO BE ADMINISTERED TO ALL CARETAKERS OF A CHILD THAT LIVES WITH THEM AND IS BETWEEN 0 AND 59 MONTHS OF AGE. CE QUESTIONNAIRE DOIT ÊTRE ADMINISTRÉ À LA MÈRE OU À LA PERSONNE PRINCIPALEMENT EN CHARGE DE NOURRIR L'ENFANT ET L'ÂGE DE L'ENFANT DOIT SE SITUER ENTRE 0 ET 59 MOIS.	
6	select_one camp	CAMP_c	Tick the camp in which you conduct this survey.	Cochez le camp dans lequel vous effectuez cette enquête.
7	integer	SECTION	Section number	Code section / numéro
8	integer	ZONE	Zone number	Code zone / numéro
9	integer	BLOCK	Block number	Code bloc
10	date	SURVDATE_c	Date of interview	Date d'entretien
11	integer	CLUSTER_c	Cluster number	Numéro de grappe
12	integer	TEAM	Team number	Numéro d'équipe
13	integer	HHN	Household number	Numéro du ménage
14	begin_repeat	C	Child questionnaire	Questionnaire enfants
15	calculate	CAMP		
16	calculate	SURVDATE		
17	calculate	CLUSTER		
18	calculate	TEAM		
19	calculate	ID	Child ID	ID de l'enfant
20	text	NAME	Name of the child	Nom de l'enfant
21	calculate	HH		
22	select_one yesnoabs	CHCONSENT	Consent given for conducting all measurements?	Le ménage a-t-il donné son consentement à la prise de mesures sur l'enfant?
23	select_one sex	SEX	Sex of the child?	Sexe de l'enfant?
24	select_one yesno	XDOBK	Do you know \$NAME's birthdate?	Connaissez-vous la date de naissance de \$NAME?

## Information Management