cartONG

*Mapping and information management
for humanitarian organizations*

cartONG
10 ans
2006 ~ 2016

ANNUAL REPORT

2016

Association CartONG
✉ 180 rue du Genevois, 73000 Chambéry, France
@ info@cartong.org | www.cartong.org | @assocCartONG

CONTENTS

Introduction

2016 marked the 10th anniversary of our NGO, and with it, we continued to follow our strategy for the development of the association. We had a great opportunity to celebrate it with our founders, partners and friends during GeOnG 2016 in Chambéry. We also used this chance to prepare a video on this journey, which will allow you to better know CartONG: https://www.youtube.com/watch?v=V-xB-jlLeWw

Our team moved into a new and bigger office in Chambéry, and reached 10 permanent staff and a growing number of volunteers. We also published a completely new version of our website, including a streamlined presentation of the tools and services we offer to our partners: http://cartong.org/what-we-do

GeOnG was also an opportunity to publish the first CartONG portfolio as well as a training offer that will give you a better overview of how we could help you.

As you can see, another busy year for CartONG. It was a pleasure to spend these first 10 years with you, colleagues, partners, friends & sympathizers, and we hope you will carry on with us for another decade!

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 2016

And the volunteer team of course!

Where CartONG works

In 2016, CartONG employees, consultants and volunteers, whose headquarters are in Chambéry, have been deployed in more than 12 countries. Check our website for more information: http://cartong.org/where-we-work

2016 HIGHLIGHTS

January 18th-22nd GIS training for **Handicap International's** teams in **Beirut (Lebanon)**

January 27th-28th NOMAD Workshop in Amman (Jordan), the conference on MDC for humanitarians

February 23rd First participation to **Conférence Nationale Humanitaire** in Paris

February 25th Trimodex international exercise, with Entente Valabre, testing UAV in real-time disaster response situation

March 7th Geneva, organization of workshop on drones for mapping with FSD as part of ECHO project

March Mbera refugee camp **(Mauritania)**, rolling out the new mobile camp mapping system implemented for UNHCR

March Participation to **MapFugees project**, mapping informal refugees' camps in northern France with HOT

March 23rd Release of **CartONG's new website**, completely reviewed for better understanding of our activities

April 15th-16th Get-together and General Assembly of CartONG in Ouroux (France)

April 222nd-May 2nd Mission in **South Sudan for ACF-US**, setting up of a monitoring platform for water points

May Support to **SENS nutrition surveys in Niger** for UNHCR, 7 camps covered

May 20th Educ4OSM session with several actors on awareness raising OSM to kids

before **State of the Map France in Avignon**

June 27th Inauguration of CartONG's **new HQ office in Chambéry**

June 30th Training for CNLS in Madagascar, ran by our volunteers

July UAV for disaster risk reduction mission in **Tajikistan** with FSD

July Support mission on IM to **UNICEF** and local partner **Central African Red Cros** in CAR

July 28th Release of **new NOMAD website** with improved documentation on MDC solutions

September 22nd-25th SOTM world and HOT summit conference, **Brussels (Belgium)**

September 26th Drones for camp mapping simulation with UNHCR in Switzerland

October 17th-19th GeOnG 2016 in Chambéry (France), leading independent event on humanitarian mapping & IM

November 4th-5th Git training in Chambéry to ensure quality development procedures within our team

November 11th Mapathon in Ivry-sur-Seine (France) with migrants committee for local development

December Remote mapping of the Bidibidi camp (Uganda), followed by field use by MSF

⚠ All budget figures are rounded for better readability.

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	10 staff (Manager, GIS officers, web developer IT, Designer)	Budget	278,600 €
	Contractor	Doctors Without Borders – Switzerland	Location	Global + Geneva, Haiti, Rep. Dem of Congo, Uganda,
	Beneficiaries	MSF Movement teams at headquarters and in the field		
	Content	Implementation of GIS strategy 2016-2019, 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.		

The partnership with **Médecins Sans Frontières-Suisse** remains one of our most important ones. CartONG continues to implement part of MSF's GIS Unit activities, which is growing following the increasing needs of the whole MSF movement.

End of 2015, the GIS Unit has received the mandate to offer its services to the whole movement. We have started the implementation of the 2016-2019 strategy that has been developed last year. 15 guiding principles are defined to structure the GIS over the 2016-2019 period. And the main action plan has driven our growth in 2016.

As part of the global strategy defined with them, from this year onward MSF has built an internal GIS focal points network in charge of the GIS promotion and development, and is also managing directly field deployments of GIS specialists (as well as a growing network of national GIS officers).

While we continue to support them globally in their GIS activities and tech watch and our main tasks is still the creation of maps in regular and rush mode (around 150), we did consolidate and keep adapting our capacity to properly deliver a wider portfolio of services.
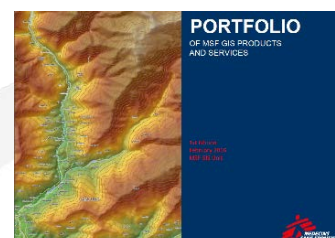
In 2016 we have given a remote support to the crisis where MSF were deployed: particularly in **Tanzania** with the massive influx of Refugees. We did start camp mapping activities using Collector for ArcGIS during the whole presence of GIS Officers in the field. In total we have supported **17 field missions** covered by **8 GIS Specialists** for a total of **135 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; we did pilot some innovative projects for MSF such as Collector for ArcGIS, Kobo or OSMAND. We have supported the growth of the internal MSF roster.

With the scaling up of the reference databases, we are expanding the scope of the GIS platform by developing and implementing new tools: activities monitoring dashboards, outbreak monitoring webmaps, or MDC projects.

Our training offer is also increasing, we organized 3 one-week trainings for GIS basic skills, GIS specialists and GIS focal points.

We have started to develop a new version of the MSF Map Centre including an embedded portal to monitor map requests, which has also strengthened our IT infrastructure.

The other key development has been the Briefing tool, integrated in the MSF Map Centre. This webapp has been developed for the whole movement and aim for better contextualization of daily briefings. The main idea behind the request was to have access to an interface, where the user could both generate data or draw information as it is possible on Google Earth. Either beforehand or live, the briefings could therefore be contextualized as the cartographic interface would contain the MSF baseline data. CartONG chose to develop an application with OpenLayers3 in order to ensure it would be touch-sensitive.

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.

2. Improvement of the ArcGIS Server platform for UNHCR

OVERVIEW	Staff involved	12 staff (Manager, GIS officers, IT)	Budget	71,700 €[1]

[1] 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, plus the mapping activities directly covered by the UNHCR Mauritania operation.

Contractor	UNHCR (FICSS section and Mauritania operation)	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.

We can highlight the creation of web mapping tools and setting up interactive sector maps. A public webmap has been created for displaying the Borehole Database. CartONG supported the design of this sector borehole sector database. A first webmap for Camp Management has been produced, it uses kobo API instead of a Google Spreadsheet for querying the data.

Last but not the least, camp mapping activities are growing, in 2016 we work on the server side, to improve automated tasks and empowered the application using scripts.

In 2016, the UNHCR's Map Portal has been stabilized and re designed to fit with the new UNHCR graphic Chart. New functions had been designed and planned to be developed in 2017 such as users management or resource center section.

We did support the creation of a training material such as tutorials, guidelines and map for real-time exercise.
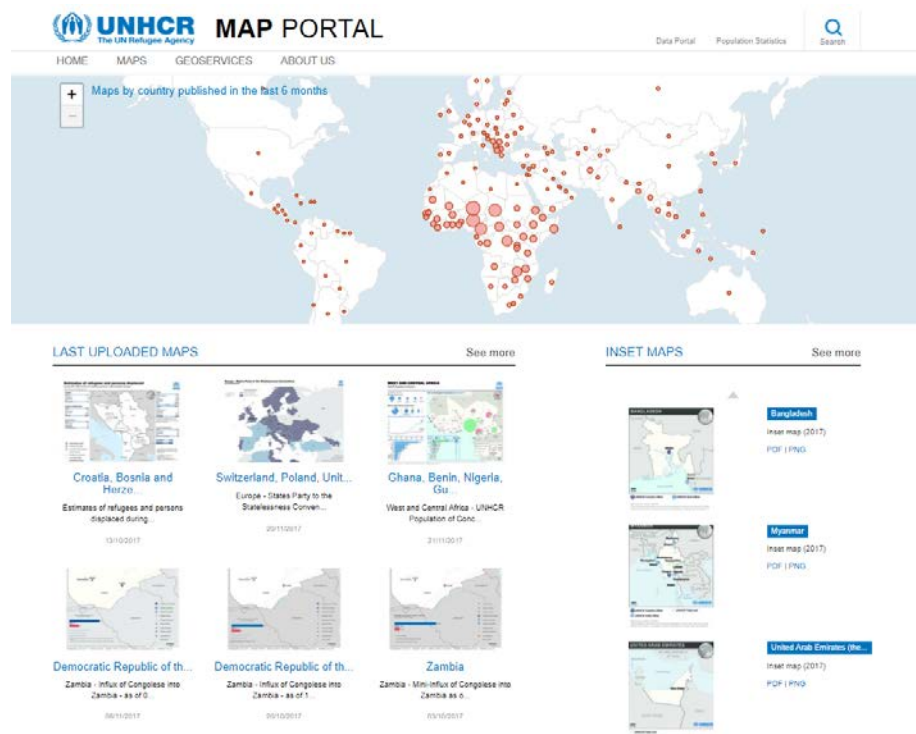
On mobile data collection, the project continued to test various Mobile Data collection with a GIS component based solutions and has updated documentation available.

3. Support on GIS databases & visualization tools for ICRC, as well as tutorials

OVERVIEW	Staff involved	6 staff (Manager, Technical Supervisor, 2 Dashboard/Webmapping specialists, IT)	Budget	32,000 €
	Contractor	ICRC	Location	Global
	Beneficiaries	ICRC teams		
	Content	3 projects: Creation of tutorials for the new Water and Habitat Project Assistant, Maintenance and Trouble Shooting for existing dashboard of the GIS unit, development of new features for EMOT (Event Monitoring Tool), migration of new features to production server.		

We also continued supporting **ICRC** in the development, maintenance and troubleshooting of web based applications (dashboards) built on top of their ArcGIS server: Event Monitoring Tool and Health Care in Danger Recommendations monitoring tool. The tools are based on open source JavaScript libraries like D3.js (d3js.org) and consumes ICRC GIS REST services and were set up with forms allowing to edit the data.
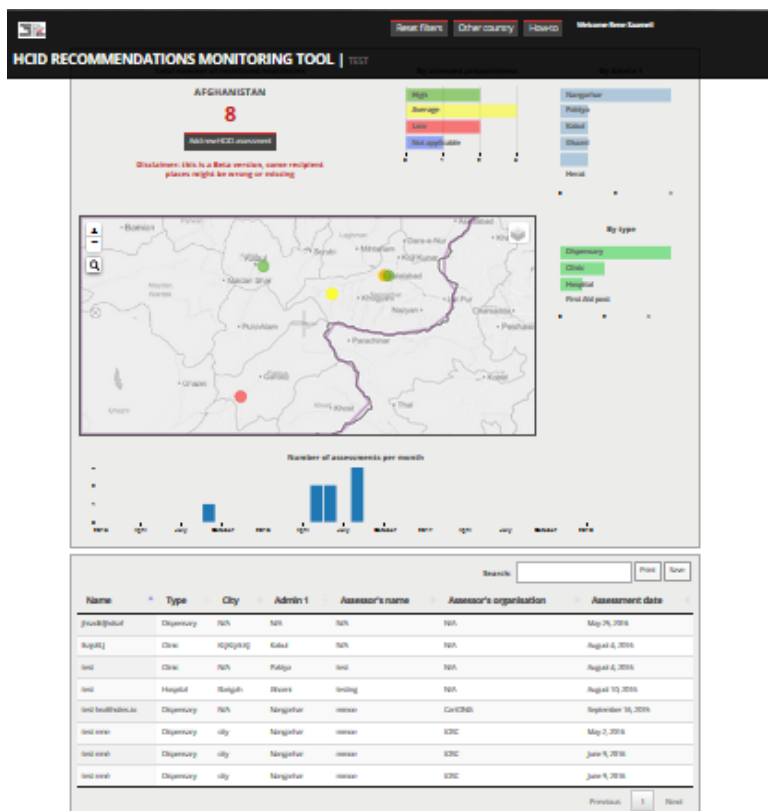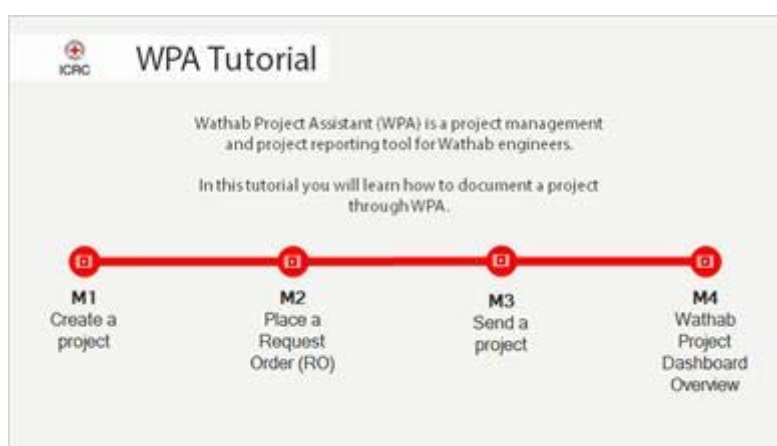
The **International Committee of the Red Cross**' GIS team has set up a state-of-the-art internal geographic database as well as related GIS services and platforms. ICRC however required external support this year to enhance the production, access and visibility of ICRC data. This included further tests on Mapbox, simplifying the GIS geometry and the creation of additional layers like Healthsites.io as well as maintenance on the Recipient Place Manager tool and others.

Additionally a video tutorial series was developed for Water and Habitat delegates for the Water and Habitat Project Assistant.

The ICRC Protection team was interested in having the development

Health Care in Danger Monitoring Tool

of a lightweight **Events monitoring and analysis tool** enhanced, the tool, built already in 2015 evolved further in 2016. The tool is based on open source JavaScript libraries like D3.js (d3js.org) and consumes ICRC GIS REST services. The development included harmonizing the structure for all applications, enhancement of the data model, automatic validation of fields and other similar aspects.

Intro of the Water and Habitat Project Assistant Video Tutorial

4. SENS and WASH KAP Mapping

OVERVIEW	**Staff involved**	5 staff (Manager, Technical Supervisor, GIS Officer, 2 Dashboard/Webmapping specialists)	**Budget**	70,700 €[2]
	Contractor	UNHCR	**Location**	Global
	Beneficiaries	UNHCR Nutritionists and WASH team		
	Content	Development of lightweight mapping tools for nutrition and WASH surveys to analyze indicators spatially.		

CartONG continued improving the SENS mapper standalone tool that maps out SENS survey results, by adding indicators for the Mosquito Net and WASH modules. A WASH KAP Mapper based on the same principles was also developed for the WASH KAP surveys.

5. Missing Maps project & volunteer mapping

OVERVIEW	**Staff involved**	2 staff (Coordinator + project manager); volunteer team	**Budget**	18,600€ (CartONG's savings + subvention)
	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.		

2016 was the take-off year for the **Missing Maps project** in France: we organized or supported 30 mapathons all around France (and in Austria & Spain!) with more than 800 participants,

---

[2] 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

including a 100-participants mapathon in Paris as part of the Open Government Partnership summit in December.

We also worked on strengthening the connection between mapathon volunteers and field staff (with regular feedback), improving data validation, and develop new advanced


activities (digitization of paper maps, data integration, often in partnership with the MSF team). Our effort next year will focus on regular mapathon in Paris (with MSF) and Geneva, develop local development projects and partner up with universities.

Missing Maps was one of the 9 shortlisted teams in the "Journey to scale" grant launched by the HIF this year. We eventually didn't win the final stage, however it was great experience to work on our vision for the project with the partners: we established for instance a clear Theory of Change and worked our business models.

We also started two projects in cooperation with French municipalities to map their twin cities with people from the two countries: one with **Ivry-sur-Seine and Dianguirdé (Mali)**, and the other with our hometown **Chambéry and Ouahigouya** (Burkina Faso). The map can then be used by local developers for many purposes (water & sanitation projects for instance). This is a very nice format that allows citizens' participation in development project and we will try to replicate it next year!

As part of the project **MapFugees** lead by HOT, one of our volunteers has participated to 2 mapping missions in the refugees camps in Northern France. The first mission in April was in the Grande-Synthe camp built by MSF (cf. Facebook & Twitter). During two weeks, residents of the camps were trained and mapped the overall camp on OpenStreetMap using Field Papers, in combination with basic GPS and JOSM use. Another proof of the power of OSM technology despite its simplicity!

Following this mission and with the support of BSF and OSM France, two maps were printed, displayed and distributed in the camp. They are still there three months after despite the difficult weather! (cf. photo)
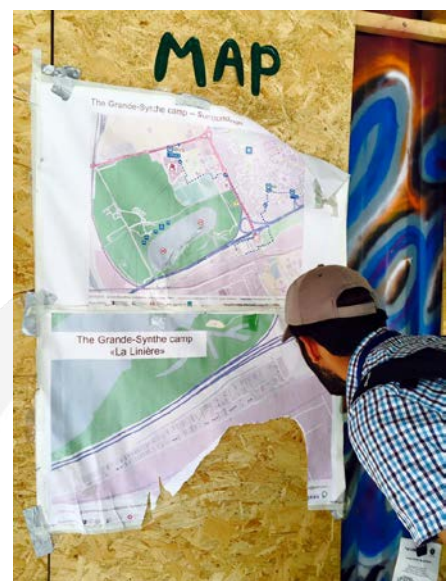
6. Volunteer webmapping for CNLS

<table>
<tr>
<td rowspan="4">OVERVIEW</td>
<td>Members involved</td>
<td>6 volunteers</td>
<td>Budget</td>
<td>0 € (volunteer contribution not estimated)</td>
</tr>
<tr>
<td>Partners</td>
<td>Comité National de Lutte contre le SIDA</td>
<td>Location</td>
<td>Madagascar</td>
</tr>
<tr>
<td>Beneficiaries</td>
<td colspan="3">CNLS and their local partners and beneficiaries</td>
</tr>
<tr>
<td>Content</td>
<td colspan="3">Creating an interactive platform to localize projects of NGOs fighting AIDS</td>
</tr>
</table>

UNAIDS in Madagascar wanted to assist the Executive Secretariat of the **National Committee for the Fight against AIDS** (Comité National de Lutte contre le SIDA, CNLS) in creating an interactive cartographic tool that showed the interventions made by the civil society to tackle this issue in the island since 2013, answering the question: "Who does what, where, when and with whom?" This tool aims also identify the gaps in order to improve the strategies for the fight against AIDS implemented in the future by the CNLS.

After a first stage of the project conducted by UN volunteers, a team from CartONG has taken it over and created a webmapping application, which articulates various open source solutions adapted to the needs of the CNLS. The development of the Django back-end is now completed and the initial dataset furnished by CNLS integrated, and accessible at https://cnlsmadagascar.cartong.org/

The objective for next year will be to organize a volunteer training mission in Madagascar next year, in order to lead the CNLS' staff into using autonomously the tool.

Simultaneously, our volunteers are still working on the replication of the platform for the Atlas Solidarité Madagascar, while at the same time brainstorming on the future of this project.
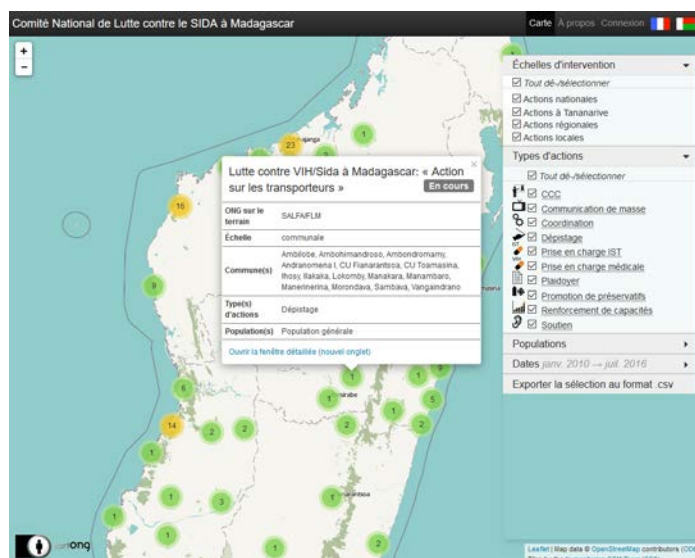
CAPACITY BUILDING[3]

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. GeOnG 2016 conference

<table>
<tr><td rowspan="4">OVERVIEW</td><td>Staff involved</td><td>The whole team, and in particular 1 GeOnG intern and 1 project manager</td><td>Budget</td><td>17,600 €</td></tr>
<tr><td>Partners</td><td>Participants & sponsors</td><td>Location</td><td>Chambéry, France</td></tr>
<tr><td>Beneficiaries</td><td colspan="3">The humanitarian ecosystem in general and professionals of GIS, mapping and information management in particular</td></tr>
<tr><td>Content</td><td colspan="3">Three days of conference on mapping & information management for relief & development projects</td></tr>
</table>

CartONG was hosting this year the **fifth edition of our conference GeOnG in Chambéry**, on October 17th to 19th. In the frame of CartONG's 10th anniversary, we chose the topic "**lessons from the past, shaping the future**". The aim was to tackle the role of new technologies (GIS, GPS, mobiles solutions, remote sensing, drones…) in today's and tomorrow's humanitarian intervention.

We had the pleasure to welcome around **150 participants** from many NGOs, UN agencies as well as from the private and research sector, who were extremely satisfied with the contents and organization of the conference (96.5% according to our survey!).

The event was organized for the first time over the span of 3 days, allowing for one full day of hands-in workshops on both innovative tools (Data analysis on R, drone for camp planning, PowerBI, Gephi, etc.) as well as all-time classics (OSM import/export, OpenLayers, QGIS, D3.js, etc.). The following two days allowed to cover a large variety of topics around humanitarian information management, from drones to big data, case

[3] 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.

management tools, crowdsourcing, technical local communities, Digital Data Scramble, data protection, etc. And let's not forget the now expected "speed geeking", a Missing Maps mapathon and the lightning talks to generate interactions between participants and allow many participants to present their activities.

This GeOnG was also an opportunity to celebrate **CartONG's 10th anniversary**, with a special party with our latest innovative mapping product: a globe in cupcakes! We also prepared a photo exposition looking back at those 10 years.

If you missed the event, the **presentations and videos are published on our website** and you can also check the Storify to re-live the GeOnG!

We're now looking forward for the **next edition in 2018** and are cordially inviting our partners and other organizations to get in touch if they want to be involved in the preparation to help us make it even better!

Thanks to our partners, in particular our long-term main supporter **ESRI**, our core sponsors **Responsible Result**, **Geodesk**, and **Chambéry**, as well as Mapbox, MAIF, Camptocamp, SMAP consulting, Airbus & RSM.

2. NOMAD project

OVERVIEW	Staff involved	3 (project coordinator, MDC specialists)	Budget	3900 €[4]
	Partners	iMMAP, UNHCR, Solidarités Int.	Location	Amman, Jordan
	Beneficiaries	Information management and Mobile Data Collection specialists, and more generally the humanitarian sector		
	Content	Two-days workshop on MDC for specialists and non-specialists		

CartONG implements the **NOMAD project** with our partner iMMAP for 5 years, and we had the chance to organize a new NOMAD workshop this year, on January 27-28th in Amman, Jordan, with support from Solidarités International and UNHCR.

![NOMAD logo]

---

[4] CartONG only, total budget for the event was 22,500€ with various contributions (either staff time, covering the venue or equipment).

With 106 participants from 40 organizations and 11 providers presenting (inc. 3 remotely) it was our largest workshop so far. We gathered the dynamic community of MDC experts from the MENA region as well as prominent expert on various topics connected with Information Management. With 76% of participants very or completely satisfied participants expressed their interest for the events, while pointing out some possible improvements we'll focus on for future events. You can find the presentations from the workshop online. 80% of participants also encouraged us to organize this event yearly, which we'll try to do if we manage to secure enough resources.

This was also an opportunity for us to relaunch the project with a new website, a major update of the online assistant to compare solutions, and to launch an online Slack community to facilitate communication between MDC practitioners. We then supported providers in updating the information on their solutions; however, as often we lack time to follow up with providers. NOMAD is a project built only on the time of CartONG's and iMMAP's team and support from partners, so any help is always most welcome!

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

OVERVIEW	**Staff involved**	2 (MDC and GIS specialists)	**Budget**	3400 €
	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.		

We continued our training cycles at the **Bioforce** humanitarian school in Lyon for different courses: RPEHA (WASH project managers), CPSI L2 (project coordinators), LSI Tech (Logisticians-equipment management), and LSI Appro (Supply logisticians). These trainings cover one day on Mobile Data Collection (with Kobo Toolbox and OpenDataKit) and a second 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. There are thoughts to extend this training also to the Dakar branch in 2017.

4. Research project on UAVs for humanitarian response

OVERVIEW	Staff involved	7 staff (Project manager, UAV pilot, GIS and dissemination specialists)	Budget	52,900 €
	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 have concluded the research in partnership with **Fondation Suisse de Déminage**, the UAViator network and Zoi Environment to consolidate knowledge on the use of drones in the humanitarian context, funded by DG ECHO of the European Union. Over the last year and a half, this research project has included the following components:

→ 14 case studies on a comprehensive panel of projects implemented by various organizations that gave us an in-depth perspective of the current use of drones, from flood mapping to census, and from rapid assessments to payload delivery.

→ We participated in the European simulation Trimodex 2 in Southern France, hosted by the French firemen training center Entente Valabre to test the use of drones for Search & Rescue operations. We also participated to a training/simulation with UNHCR in Switzerland on the use of drones for camp planning.

→ We supported a double mission in Tajikistan to test the use of drones to produce imagery and mapping of watershed, where mudslides hit last year.

→ We co-organized several consultations, including a survey shared to the ECHO network, a consultation workshop in Geneva in March on the use of drones for humanitarian mapping, and a final consultation with key stakeholders at GeOnG in October.
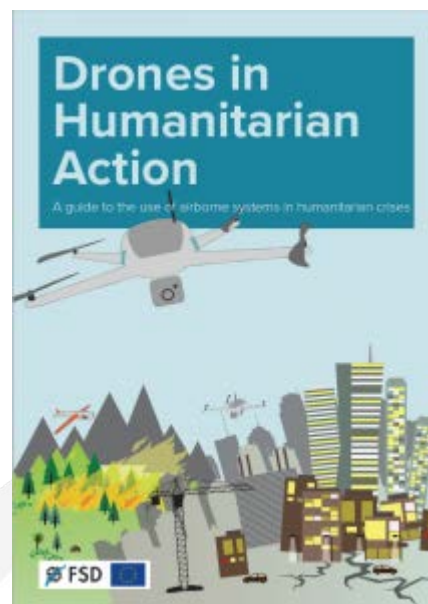
All these have fed a 60-pages final report published in December that provides the first comprehensive & independent research on the use of drones for humanitarian purposes. FSD also developed with UAViators as part of the project a Global Drones Regulations Database that will be maintained sustainably in the future.

Thanks to FSD and ECHO for offering us the opportunity to participate to this fundamental work that will undoubtedly shape the future use of drones by humanitarians. We are now looking for opportunities to implement the good practices and experience acquired during the project in the field, with our current partners or new ones!

5. GIS training for Handicap International

Staff involved	2 staff (Project manager, GIS specialist)	**Budget**	3200 €
Contractor	Handicap International	**Location**	Lebanon
Beneficiaries	Handicap international staff & beneficiaries		
Content	Five day training on GIS for HI Lebanon project managers and database managers.		

(OVERVIEW)

We organized a GIS training for **Handicap International**'s team in Lebanon and are looking into additional GIS support with them next year.

6. ArcGIS Server Training for IPIS

OVERVIEW	**Staff involved**	2 staff (Project manager, GIS specialist)	**Budget**	3400 €
	Contractor	IPIS	**Location**	Belgium
	Beneficiaries	IPIS staff & beneficiaries		
	Content	Training on setting up and using ESRI technologies - ArcGIS server		

Following previous training activities in the past year, we have conducted a one-week training with our partner IPIS to strengthen their capacity in ArcGIS server management, helping them set up the system.

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**	2 staff (Project manager, MDC specialist in the field)	**Budget**	16,500 €
	Contractor	UNICEF	**Location**	CAR
	Beneficiaries	UNICEF and Central African Red Cross		
	Content	Information management, data collection and conception of surveys		

As part of the Long Standing Agreement to support UNICEF on IM related issues, CartONG was deployed to Central African Republic to support monitoring of 60 projects in the country. We set up the relevant mobile data collection tools and trained their implementing partner the Central African Red Cross on these tools.

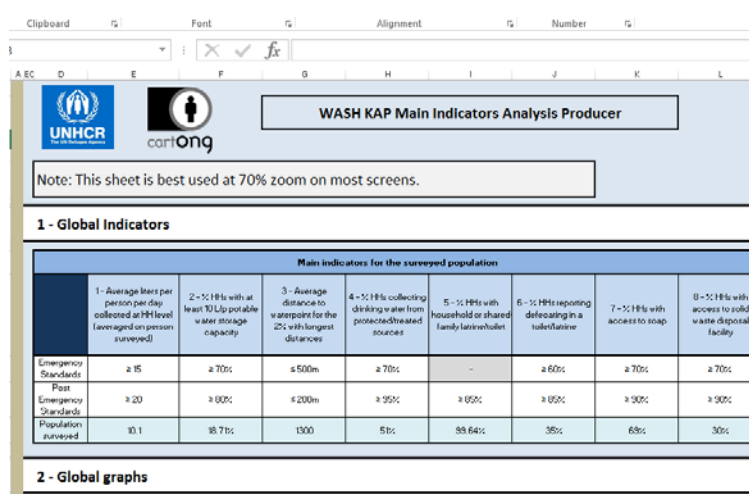## 2. Mobile data collection for UNHCR Public Health Section

<table>
<tr><td rowspan="5">OVERVIEW</td><td>Staff involved</td><td colspan="2">12 staff (MDC specialists, developers, Web mapping specialists)</td><td>Budget</td><td>70,700 €[5]</td></tr>
<tr><td>Contractor</td><td>UNHCR – PHS Section</td><td>Location</td><td colspan="2">Remote: Cameroon, Egypt, Israel, Iraq, Lebanon, Algeria, Djibouti , Chad, Tanzania, Niger
In-country: Niger, Malawi, Jordan</td></tr>
<tr><td>Beneficiaries</td><td colspan="4">UNHCR teams at headquarters and in the field, as well as nutritionists and WASH specialists from partners</td></tr>
<tr><td>Content</td><td colspan="4">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.</td></tr>
</table>

The main activity for the Public Health Section of HCR was to continue supporting the **SENS nutrition, the WASH KAP (**Knowledge Attitudes and Practices), **the FACT (**a tool to foster **greater coordination in the planning and management of food ration in refugee camps) and the Health Access and Utilization Surveys with mobile data collection**. This included **in-country support** in Niger, Malawi, Jordan, as well as **remote support in Cameroon, Egypt, Israel, Iraq, Lebanon, Algeria, Djibouti , Chad, Tanzania, Niger,** since the teams there already had advanced skills and in some cases even coded the forms themselves.

For the WASH KAP module in particular the focus was on improving the data collection and analysis tools as well as document them in detail to make field implementation by UNHCR partners as easy as possible.

CartONG also compiled a guideline on using **GPS coordinates in the SENS surveys** and assisted in piloting a demography form, structured to feed in seamlessly into the ENA/SMART the analysis tool of choice for the nutritionists. All documentation was reviewed and augmented in French as well as English and can be accessed on the UNHCR SENS webpage.

New areas for work with PHS concerned the **revision and restructuration of the Balance Score Card electronic forms**, based on a Formal Review of the Process and paper questionnaire used for assessing

Figure 1: WASH KAP Analysis Sheet

Health Facilities, and also to support the **revision of the Medical Referral Database**, a standalone Access product, used by Health Practitioners to monitor medical referrals of beneficiaries. Whilst the old database is still in use, the Health Practitioners wished for additional features to enhance reporting and extraction of graphs to ease their workflow. Both activities could not be completed in 2016 and will be carried over to 2017, including the testing and roll-out of the new products.

CartONG completed another **Benchmarking** product, this time **pocket routers** and their usefulness in the local collection of SENS data with ODK tools. The report was published in October 2016 http://blog.cartong.org/2016/10/20/pocket-routers-mdc/

3. Mobile data collection for Terre des Hommes-CH

OVERVIEW	Staff involved	2 staff (Information Management, GIS, MDC)	Budget	41,500 €
	Contractor	Terre des Hommes-Lausanne	Location	Everywhere
	Beneficiaries	TDH's teams and beneficiaries		
	Content	Supporting mobile data collection surveys and capacity building		

The partnership with **Terre des Hommes-Lausanne** increased significantly in 2016 with - on top of the Mobile Data Collection hotline, helping them define

their HR strategy and creating internal outreach products - the support on the development of the WASH in Health Facility Evaluation Tool (composed of both the mobile component and a Power BI dashboard to visualize results) and a study on case management tools for Child Protection. This last project comprised the evaluation of needs (with numerous NGOs of the sector interviewed and the definition of field needs using the Agile methodology), the benchmarking of potential tools and beyond technical aspects helping Tdh work out amongst the different scenarios that emerged which were the most relevant to their needs and constraints.

A series of awareness raising sessions on MDC were also conducted in HQ to help the field support staff and thematic experts better understand the potential uses of MDC.

4. Water monitoring platform for ACF-US

<table>
<tr>
<td rowspan="5">OVERVIEW</td>
<td>Staff involved</td>
<td>2 (Project manager and MDC specialist)</td>
<td>Budget</td>
<td>20,100 €</td>
</tr>
<tr>
<td>Contractor</td>
<td>Action Contre la Faim USA</td>
<td>Location</td>
<td>South Sudan</td>
</tr>
<tr>
<td>Beneficiaries</td>
<td colspan="3">ACF's teams and beneficiaries</td>
</tr>
<tr>
<td>Content</td>
<td colspan="3">Supporting by-synchronization mobile data collection surveys</td>
</tr>
</table>

We conducted a support mission for **Action Against Hunger-US** in South Sudan. The objective was to implement a platform to monitor water points in the Northern Bahr el Ghazal Region. After testing different tools, we selected the AKVO Flow platform, set it up for ACF and helped them and their governmental partners master it. We also produced maps to allow them to better analyze the results.
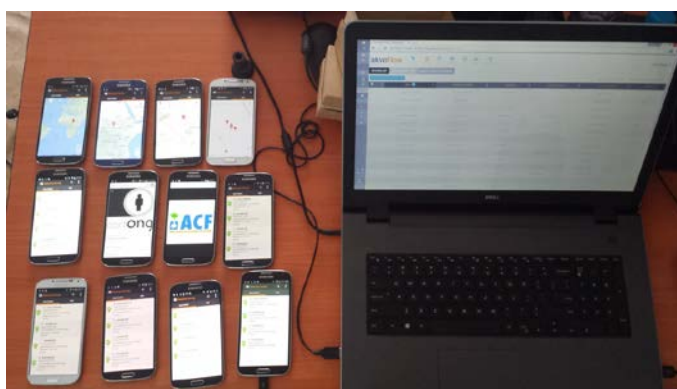
5. Mobile Data Collection and Information management for Solidarités International

<table>
<tr>
<td rowspan="5">OVERVIEW</td>
<td>Staff involved</td>
<td>1 (MDC specialist)</td>
<td>Budget</td>
<td>6800 €</td>
</tr>
<tr>
<td>Contractor</td>
<td>Solidarités International</td>
<td>Location</td>
<td>Central African Republic</td>
</tr>
<tr>
<td>Beneficiaries</td>
<td colspan="3">Solidarités International's teams and beneficiaries</td>
</tr>
<tr>
<td>Content</td>
<td colspan="3">Supporting information management + training</td>
</tr>
</table>

After a first mission in 2015, CartONG did a follow-up for **Solidarités International** in Central African Republic. Having already helped set up a complex multi-thematic and partner beneficiaries database (concerning 45,000 recorded households), the follow up mission was to help train the local and international staff further and improve the methodologies and tools in place.

6. SMS Based Communication Platform: for DDG Ukraine and Vietnam

OVERVIEW	Staff involved	5 staff (1 Information Manager, 1 IT, 1 Designer, 1 Server manager)	Budget	12,800 €
	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.		

We finalized the Ushahidi platform and a heatmap for **Danish Demining Group** in Vietnam to inform on mine risks, including SMS reporting. For DDG's Ukraine project, we supported the development of a web platform for Mine Risk Education, consisting of web page, Ushahidi platform and SMS reporting.

Both platforms were handed over to DDG's local partner. 2016 saw a continuation of the work already kickstarted in 2015, having a public facing platform (Webpage, heat map) and a private backend (Ushahidi, detailed information and full GPS coordinates as well as Frontline SMS and phone providers in country) to manage communication with and to the public. New in 2016 were dedicated stress testing on the applications as well as the web page to see how many hits per minute the products could handle before reaching a server time-out. Additionally CartONG assisted to the continuation and documentation of the user stories focusing on the technical aspects.

The code created for the heat map which uses the Ushahidi API can be viewed on Github.

FINANCIAL REPORT

1. 2016 accounts

After two year of largely positive balance due to a fast growth, CartONG has this year stabilized its activities. We had a positive balance of **6200€**, half of it being actually incomes from last year received late. This allows us to increase slightly our security savings again.

Our overall budget has slightly decreased to **669,600€** (-1.4%), reflecting the choices made by some partners to internalize activities they were ready to manage by themselves.

This reflects the **success of our capacity building strategy with our core partners**, and is not preoccupying since we managed simultaneously to develop new activities. We have indeed continued to progress in the diversification of our funding, with our two main partners now under the two-thirds of our budget, and our main partner well under half of it.

Our budget is this year sill **funded mostly by our humanitarian partners** (95.2%) the rest coming from the proceedings of GeOnG conference (2.6%) public subventions (1.1%[6]), short trainings (0.7%), individual donations and membership fees (0.2%), and miscellanea (0.2%).
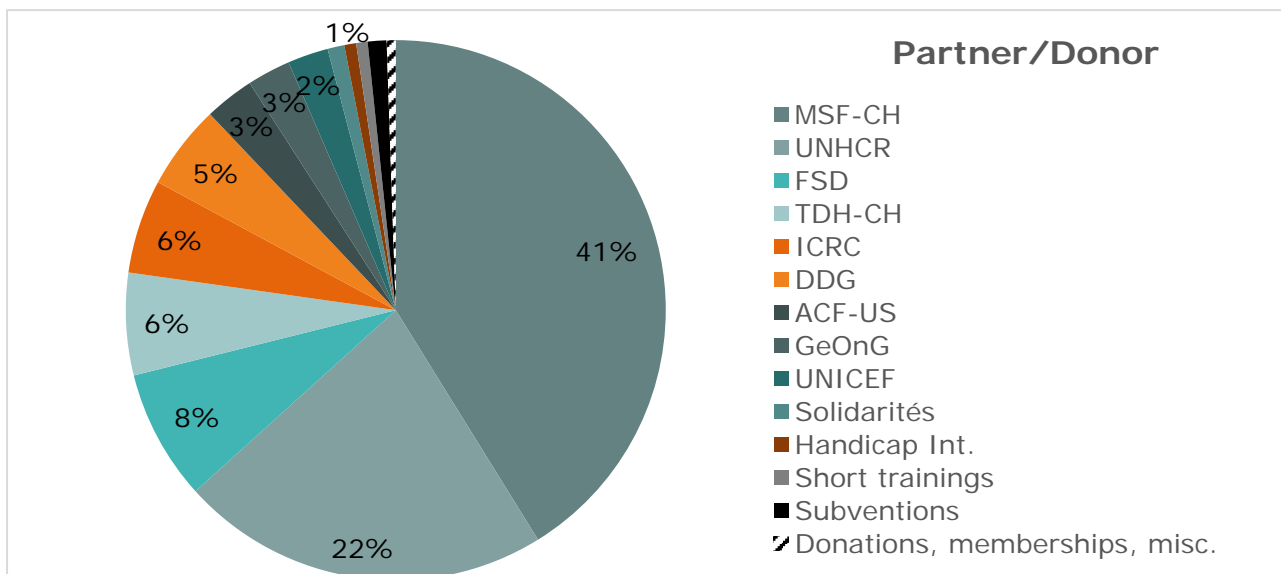
Our **expenses** amounted to **677,300€**. They were split between salaries & social charges (82.5% vs. 86.9% in 2015), equipment expenses (1.6% vs. 2.2%), office costs (1.4%, stable), transport & missions fees (6.8% vs. 4.6%), insurance, bank & various fees (2.3%, stable), training (0.4% vs. 0.8%), taxes (1.2% vs. 0.5%) and amortization (1.3%, stable), plus this year the GeOnG event direct costs (2.5%).

The repartition of the expenses is therefore quite stable. CartONG nonetheless continues **increasing its permanent team**, with a proportional reduction of the consultancies and increase of the employee workforce. This includes hiring an additional cartographer, a GIS developer, and a Missing Maps coordinator. We now count 11 stable

---

[6] Support from the French government to all small business and associations with employees ("Aide embauche PME").

employees (including 5 permanent contracts) in addition to our interns (~2/year) and regular consultants (3).

With the **always growing diversity of projects and tools implemented**, stabilizing the core team is essential to retain our best talents, provide consistent quality across activities as well as ensuring permanent training and evolutions of our staff.

Part of these expenses covering the finalization of the large investment plan from 2014's surplus (cf. below), as well as spending the **surplus from 2015**.

As defined on our multi-year objectives, CartONG decided to invest 33% in security savings, 10% on volunteers' projects and 57% on general investments:

➔ The **budget assigned to volunteers** was split between a small open line for day-to-day expenses, and an internal call for project ideas. It will be eventually spent next year, the project retained (CNLS) planning a mission 2017.
➔ The **general investments** have included transferring to a new, larger office to be able to welcome the newly recruited staffs, finalizing our new website with additional features, participating to conferences and running our internal gatherings, an "extra" budget for CartONG's 10th year anniversary, and organizing again our "IM seminar" for francophone NGOs.

The planned expenses have been executed at 95.7%, the remainder being saved for future volunteers' activities since it mostly comes from this budget line.

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

2. Final report on the investment plan from 2015

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.

As of January 31st 2017 (end of fiscal year), 83% of the planned investments (excluding security savings) have been spent. The main expenses engaged in 2016 have been:

➔ Our **new website** launched in 2016;
➔ Joining Coordination Sud, which was effective early 2016;
➔ Holding a new **NOMAD workshop** in January 2016 (cf. above) and launching the projects' website;
➔ Developing the **Missing Maps project** in France (cf. above).

The leftover is made of both small remainder from various lines, as well as 3 elements which were eventually not relevant to engage (labor health included in general costs, developments on ODK Aggregate non necessary, and staffing for development eventually included in projects with partners). These unspent lines have finally been affected to CartONG's security savings.

💡 This investment plan and a final spending report is also available for donors, please contact us to receive a copy (in French).

As expected, the 2016 balance is therefore almost null due to the progresses made in spending this investment plan.

PERSPECTIVES FOR 2017

1. Budget and investments

We have established a **provisional budget for 2017 of 762,800€**. We have this year more visibility on budgets for next year's project, which allows to do a less conservative planning.

The expected distribution of expenses will be the following: 655,700€ for staffing (including consultants), 30,000€ for transport and mission fees, 27,000€ for equipment, 14,100€ for office costs, 22,600€ for insurance, bank & various fees, 2800€ for training, 5600€ for taxes and 5000€ for amortization. The ratio staffing (85%) / missions & equipment (9%) / office and other costs (6%) will remain stable, with a slight proportional decrease of office & other costs since we will increase the staff without having to invest much in new equipment.
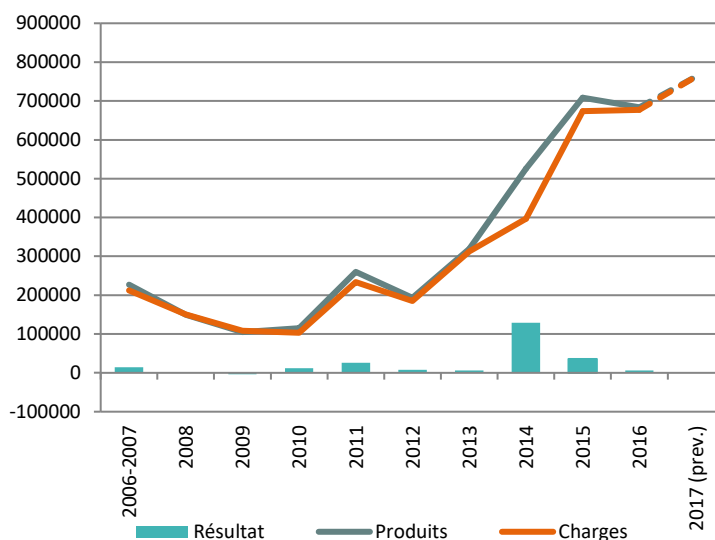
Having almost fully spent the remainders of the 2014 and 2015 surplus in 2016 already, we are expecting a lower level of investment this year with only 2016's 6200€ surplus:

→ 620€ (10%) to invest on volunteers' projects (completed from the leftover not used this year, cf. above);
→ 5580€ (90%) to security savings: given the lack of foreseen exceptional investment this year and the growth of our salary mass, we decided to save the as much as we could.

2. Staff projects

We have passed the threshold of 10 employees in 2016, plus 2 interns and a varying number of field staffs/consultants. Following 2 years of strengthening our mapping & GIS team, our partners are now more and more asking us webGIS and webdevelopment, which will require us to improve our IT skills.

Several key partners have already renewed their support for 2017, allowing us to foresee the following projects:

→ We will continue to support **MSF-CH**'s GIS Unit. We will continue supporting them with remote mapping, training, and of course development of their Map Centre and other geographic analysis tools. More web developments are to be expected in 2017 for the MSF project.

➜ We will continue to support the **UNHCR Public Health Section** on the nutrition surveys and other mobile data collection and mapping projects (WASH KAP) including online trainings (webinars).

➜ We will follow-up with the **FICSS section of UNHCR** on implementing their GIS strategy and development of existing tools as well as new tools (Map portal, mobile camp mapping, CCCM webmaps).

➜ The agreement signed with **UNICEF** could lead to two activations per year in Western and Central Africa.

➜ 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 develop the **Missing Maps project**: on top of the existing team of 2 staff, we are planning to host a "service civique" volunteer starting from next year, to allow us to organize even more mapathons and develop new formats to raise awareness on mapping in France in particular.

➜ We will continue delivering trainings for **Bioforce** students (WASH and log) and other partners.

➜ We hope to organize another NOMAD workshop, potentially in West Africa, if we manage to find the partners for it.

➜ And we hope to meet new partners in 2016!

3. Volunteers' projects

We are planning to advance on several projects:

➜ Continue contributing to **OpenStreetMap** via the Missing Maps project but also support to the local OSM communities around the world.

➜ Organize a training mission for the National Committee for the Fight against AIDS in Madagascar to hand over the platform developed for them and discuss potential follow-ups.

➜ And other ideas that our existing or new volunteers will bring!

Mapping remote & in the field
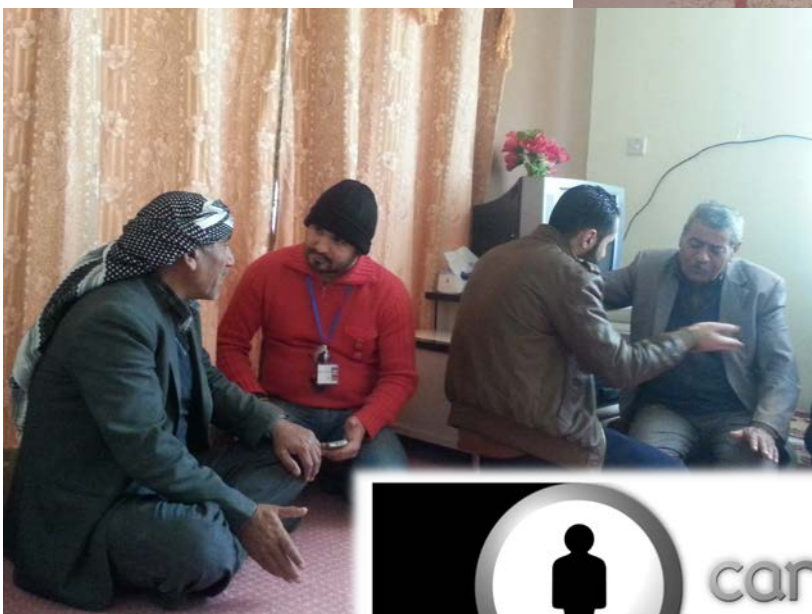
Mobile data collection

Capacity building

Information Management