
TERMS OF REFERENCE
GIS consultant/firm
Mapping exercise and GIS support
Port au Prince, Haiti
January - May, 2012 (5 months)

1. Background

Following the January 12th 2010 earthquake, Haiti has experienced tremendous difficulties in its recovery, especially in urban and densely populated neighborhoods known as slums. In order to allow the affected population to return to safe homes, it is necessary to address their diverse needs more effectively and efficiently, through an integrated approach encompassing shelter, water and sanitation, health, disaster risk reduction and livelihoods issues.

The American Red Cross (ARC) is developing a program that will focus on the reconstruction and upgrading of Baillergeau and Campeche neighborhoods of Carrefour Feuilles, a Port-au-Prince district characterized by a high destruction rate, multiple risks due to steep slopes and ravines, limited or non-existent basic urban services and a low-income population.

A first phase of this program ("Phase 1") has been planned to gather information, build partnerships and mobilize communities, over a period of two months. Working together with the national and local government, international organizations, community organizations and residents is a key to success. Phase 1 is designed to acquire a deeper knowledge of the physical, environmental, economic, social and legal context in the area through joint assessments led by ARC program staff and consultants.

During Phase 1, ARC will conduct the following assessments in the targeted area and use the resulting geographic data to produce maps and spatial analysis:

1. Integrated Participatory Community Assessment (vulnerability, capacity and social dynamics assessments)
2. Participatory Enumeration (implemented by IOM)
3. Assessment of Household and Market Economies
4. Development Plan for Campeche (already exists for Baillergeau, conducted by the consulting group ACT/LGL SA¹)

¹ ACT-LGL SA group which includes the French bureau of studies ([ACT Consultants](#)) and a Haitian study bureau (LGL SA), that won the tender to develop the urban planning study of Martissant and Baillergeau. Since June 2011, the ACT-LGL group has been at work in the neighbourhoods to produce this study which should last 8 months. A preliminary report has been finalized. The final ZAC (the development zone) management plan will be available in February 2012

The following is a list of expected tasks for Phase 1 (some done, some underway, some to be done):

TASK	DESCRIPTION	RESPONSIBILITY
Task 1	Engage communities	Ongoing (lead by ARC community mobilizer)
Task 2	Work in close partnership with communities	Ongoing (lead by ARC community mobilizer)
Task 3	Relationships with players of national and international aid organizations	Ongoing and lead by ARC delegates
Task 4	Participatory Enumeration(primary data at a plot and household level)	Ongoing or done by IOM
Task 5	Development Plan for Baillergeau and Campeche(Participatory analysis of the urban setting of each neighborhood, and hierarchy of urban projects being identified as a priority need by the community and the urban specialists)	Done for Baillergeau by ACT/LGL SA, Will be commissioned by ARC to the same consulting group for Campeche
Task 6	Participatory Assessment: (Identify the vulnerabilities and capacities of the population and , regarding exposure to risk, social mapping, health behavior and knowledge and community based risk mapping, covering the gaps that are not covered under the Development plan)	To be implemented in parallel to this consultancy by ARC.
Task 7	Assessment of Household and Market economies	To be implemented in parallel to this consultancy by ARC.
Task 8	GIS and mapping: Retrieving and consolidating information gathered by the participatory assessment, enumeration, household and market economies and the existing developing plan for Baillergeau.	Objective of this consultancy

2. Purpose of consultancy

The main purpose of this consultancy is to organize assessment data within a Geographical Information System (GIS) and illustrate pertinent spatial relationships through map and spatial analysis. These products should help ARC program staff to plan reconstruction activities and engage the community productive dialogue about desired outputs.

In addition to the mapping exercise, the consultant will be expect to support the ARC Haiti Delegation's decision to build internal GIS capacity by recruiting and mentoring one local staff member with appropriate experience using and maintaining a GIS. This staff member will remain with the ARC Haiti team delegation during the implementation of the reconstruction program.

3. Scope of work

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ARC seeks a consultant/firm to map the targeted neighborhoods of Baillergeau and Campeche in Port au Prince, using data collected from the Phase 1 assessments (Participatory Community assessment; participatory enumeration; household and market economies assessment) and from other secondary source data.

The mapping exercise will be supported by the ARC GIS team in Washington DC, and will need to be coordinated with the CNIGS², Government of Haiti (GOH), other agencies working in the area and the other Phase 1 assessments, to ensure that data are collected in a way that allows for the production of maps and spatial analysis .

In addition to doing the mapping exercise of the targeted areas, the consultant will be expected to support the ARC's efforts building internal GIS capacity at the field level, by recruiting and mentoring one GIS local staff member responsible for delegation GIS needs. This staff member will remain at the delegation during the implementation of the program.

3.1. Relationship with Participatory Community Assessment

The Participatory Community assessment (for which consultants are currently being recruited) will be implemented concurrently with this GIS consultancy. The scope of work of the Participatory Community assessment includes contextualizing participatory tools, designing training curriculum on participatory assessments, conducting learning by carrying out training and facilitating the development of community actions plan in Baillergeau and Campeche.

The aim of this GIS consultancy is to work closely together with the team that leads the Participatory Community assessment. Data from the Participatory Community assessment will be shared with the consultant on a regular basis. The consultant is expected to provide input to the assessments teams to ensure that collected data is spatial in nature. In particular, relevant participatory input from the community will need to be converted into geographic data readable by major GIS software packages.

3.2. Other data sources

The consultant will consolidate diverse spatial data collected by the other Phase 1 assessments and from other secondary sources into visual products and spatial analysis useful to program staff and community members alike. Other likely secondary sources for data are partner organizations, the Haitian government and the CIAT (Comité Interministériel d'Aménagement du Territoire), which is conducting a study in relation to urban planning in the Carrefour Feuilles area.

3.3. Maps, models and profile

Collected data will be used by the consultant to create custom maps and spatial analysis at the request of program staff. Of particular note, 3D models of physical risk factors and community infrastructure are highly desirable. The steep, hilly nature of Baillergeau and Campeche makes such visual representations of slopes, drainage patterns and accessibility to open spaces extremely informative.

The maps need to be delivered in layers to facilitate approval by the Government of Haiti, as the data needs to be approved by different ministries (e.g. MTPTC, environment, Dinepa, Planning, Social Affairs.) Additionally, several reference maps will be needed for internal ARC usage and as materials for engaging

² CNIGS: Centre National d'Information Geo- Spatiale

targeted communities. The consultant and the ARC GIS local staff to be hired will be expected to work closely with the ARC GIS team at NHQ to gather this secondary data, create maps and perform requested spatial analysis.

The sum of these products should be a profile of the neighborhoods of Baillergeau and Campeche adequate for planning and community outreach. See below for a breakdown of the expected elements of this profile:

1. Geographic data
 - a. Demarcation of the neighborhood with communities;
 - b. Mapping of district boundaries;
 - c. Classifying the accessibility of each of the dwellings to understand the access patterns, circulation and evacuation. (data at plot level, is collected by the enumeration conducted by IOM)
2. Socio-economic data
 - a. Short history of the neighborhood detailing its recent evolution; reflecting the growth of the neighborhood in the last years
 - b. General demographic Information (to be retrieved from IOM enumeration, and secondary sources such as census)
 - c. Identification and location of the displaced on the basis of data from IOM camps known to be associated with the targeted neighborhoods;
 - d. Public and community facilities and infrastructure and their capacity to serve x number of people (access to water, electricity, trash collection points, drainage channels or natural water evacuation ways, public transportation that may serve the area, religious, leisure and social places); (data to be retrieved from both the participatory enumeration, the household and market economies assessment and secondary sources)
 - e. Economic activities and income-generating; (data to be retrieved from the household and market economies assessment)
 - f. Important social spaces and community gathering points that should be maintained and fostered. (data to be retrieved from the participatory assessment)
3. Data on land tenure
 - a. Mapping of tenure agreements and security of tenure at a household level and validated by the community. This should identify the beneficiaries of the program and link them to physical plots (information needs to be retrieved from IOM enumeration and from the community through the participatory assessment);
 - b. Identification of public land (data to be retrieved both through the enumeration and participatory assessment).
4. Diagnosis of the impact of the earthquake
 - a. Damage assessment on the basis of assessments done by the MTPTC and PADF.
 - b. Map the houses as tagged by MTPTC and mapped by IOM (information from enumeration data and MTPTC safety assessment which are on separate databases at this point needs to be linked at the plot level)

5. Risk mapping
 - a. Consolidate participatory mapping of risk (this risk mapping is part of the output from the Participatory assessment);
 - b. Integrating risk information in seismic hazard mapping (from secondary sources).
 - c. Integrate risk data generated by ARC NHQ
6. Institutional data
 - a. To identify community-based organizations; (information to be gathered from the participatory assessment and secondary sources)
 - b. List of partners working in the area and map which activities are being supported (ongoing and planned).

4. Deliverables

1. Work plan and establishment of coordination platform with the other assessments
2. GIS local staff hired for ARC Haiti delegation
3. Draft maps / spatial analysis with secondary data and draft narrative report
4. Draft maps / spatial analysis with community findings
5. Final results, maps and narrative report
6. GIS local staff trained to provide ongoing GIS support to the program

5. Reporting relationship

The consultant will report to the Shelter Policy and Planning delegate

6. Main audience and dissemination plan

Who are the users?	How to use of the assessment report?	How to disseminate?	Remarks
Targeted communities (Baillergeau and Campeche)	<ul style="list-style-type: none"> - To illustrate the current and future situation of their neighborhood. - To ensure residents that the reconstruction of the neighborhood is developed with their input through the participatory assessment. 	<ul style="list-style-type: none"> - Community meetings - Provide printed copies of maps 	<ul style="list-style-type: none"> - To be facilitated by ARC and HRC
ARC-Haiti Delegation	<ul style="list-style-type: none"> - Findings and data should inform program proposal(s) (log frame, action plan and budgeting) - Monitoring and evaluation of the 	<ul style="list-style-type: none"> - Submit the report to taskforce, management and program sectors - Organize half-day workshop to 	<ul style="list-style-type: none"> - To be coordinated by ARC

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	<p>program</p> <ul style="list-style-type: none"> - Development of Neighborhood upgrading program. 	<p>share consolidated findings as a result of the assessments and the mapping exercise</p>	
HRC	<ul style="list-style-type: none"> - Programming and monitoring - To use an advocacy coordination tool with governmental and non-governmental agencies 	<ul style="list-style-type: none"> - Circulate soft and hard copies of the report to the HRC - Provide briefing to the HRC management and technical team 	<ul style="list-style-type: none"> -
ARC-NHQ	<ul style="list-style-type: none"> - A basis for technical review of the proposal document - Document the entire process for the knowledge management and replication of good practices - Monitoring and evaluation of the program 	<ul style="list-style-type: none"> - Haiti delegation submit the report to (HAP and technical departments) - Produce a process summary capturing the key learning of the entire process - Upload report to ARC's server and webpage 	<ul style="list-style-type: none"> - By Deputy Country Representative along with a briefing note - NHQ (HAP) to ensure proper recording /documentation and dissemination at NHQ.
IFRC and Participating National Societies	<ul style="list-style-type: none"> - Knowledge management and replication of good practices 	<ul style="list-style-type: none"> - Circulate soft copies of the report to the IFRC and PNS - Provide briefing to the IFRC, PNS (Haitian RC) management and technical team - Provide updates to Red Cross Movement Coordination and operational meetings 	<ul style="list-style-type: none"> - By Deputy Country Representative - By sector heads
Governmental agencies (municipality , Departments, DPC and other relevant line ministry)	<ul style="list-style-type: none"> - To use as a basis for community development (linking with development plan) 	<ul style="list-style-type: none"> - Involve the governmental agencies, community organization, schools etc. in the participatory assessment process - Provide printed copies of the maps (French version) along with briefing notes 	<ul style="list-style-type: none"> - Respective community but to be facilitated by ARC and HRC

Other agencies (donor communities, UN agencies, INGOS)	<ul style="list-style-type: none"> - Knowledge management and replication of good practices - To use as an advocacy, coordination and development tool - To use as the basis for their reconstruction program 	<ul style="list-style-type: none"> - Circulate soft copies of created maps along with a summary of the narrative report - Prepare generated data to be shared with partner organizations and Haitian government agencies 	<ul style="list-style-type: none"> - By Deputy Country Representative - By sector heads
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7. Timeline

Note: this timeline runs concurrently with the timeline for the Participatory Community assessment.

Key activities	Timeline (indicative)
7.1. Arrival of consultant(s) in Haiti	January 2012
7.2. Participate in briefing meetings with ARC, IFRC, HRC and other relevant persons	January
7.3. Design work plan	January
7.4. Recruit ARC GIS local staff	January – February
7.5. Gather secondary source data (in coordination with Phase 1 assessment teams)	January – February
7.6. Draft maps, spatial analysis and narrative report	January – February
7.7. Finalize maps, spatial analysis and narrative report.	February – March
7.8. Mentor ARC GIS Local Staff	February – May
Total expected duration of consultancy	5 months

8. Qualifications

Required

1. Minimum five years of professional experience in GIS (2D and 3D)
2. Experience with mobile geographic data collection systems, fieldwork, and ground-truthing of existing datasets
3. Experience using remote sensing software to perform imagery analysis
4. Ability to translate local knowledge into operationally useful spatial data (e.g. flood patterns on a micro level)
5. Experience performing geospatial analysis using limited datasets
6. High degree of comfort performing analysis and producing maps within tight deadlines
7. Familiarity explaining geographic concepts to and implementing the cartographic visions of non-GIS professionals
8. Ability to train non-GIS professionals to perform high-quality mobile data collection

9. Ability to work independently as the geospatial coordinator for a project
10. Fluency in English

Preferred

11. Familiarity with relational spatial database models and general spatial data management best practices
12. Experience in the development/NGO sector in developing countries
13. Professional work experience in Haiti
14. Fluency in French or Haitian Creole preferred

PLEASE NOTE:

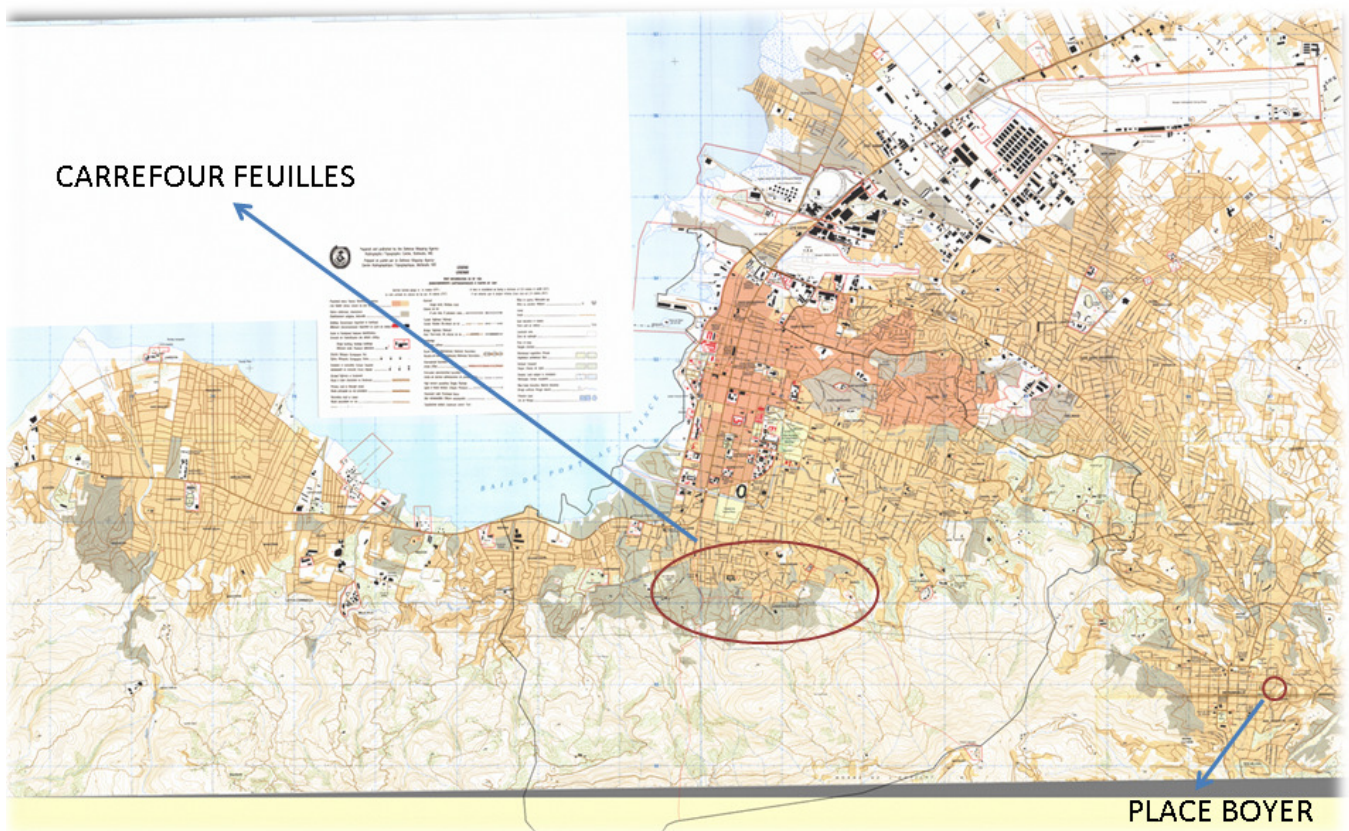
The ARC is currently recruiting consultant/s or firm for the Participatory Community assessment (TOR posted separately). Consultants/firms with the requisite skills are encouraged to apply to both this consultancy and to the Participatory Community assessment consultancy.

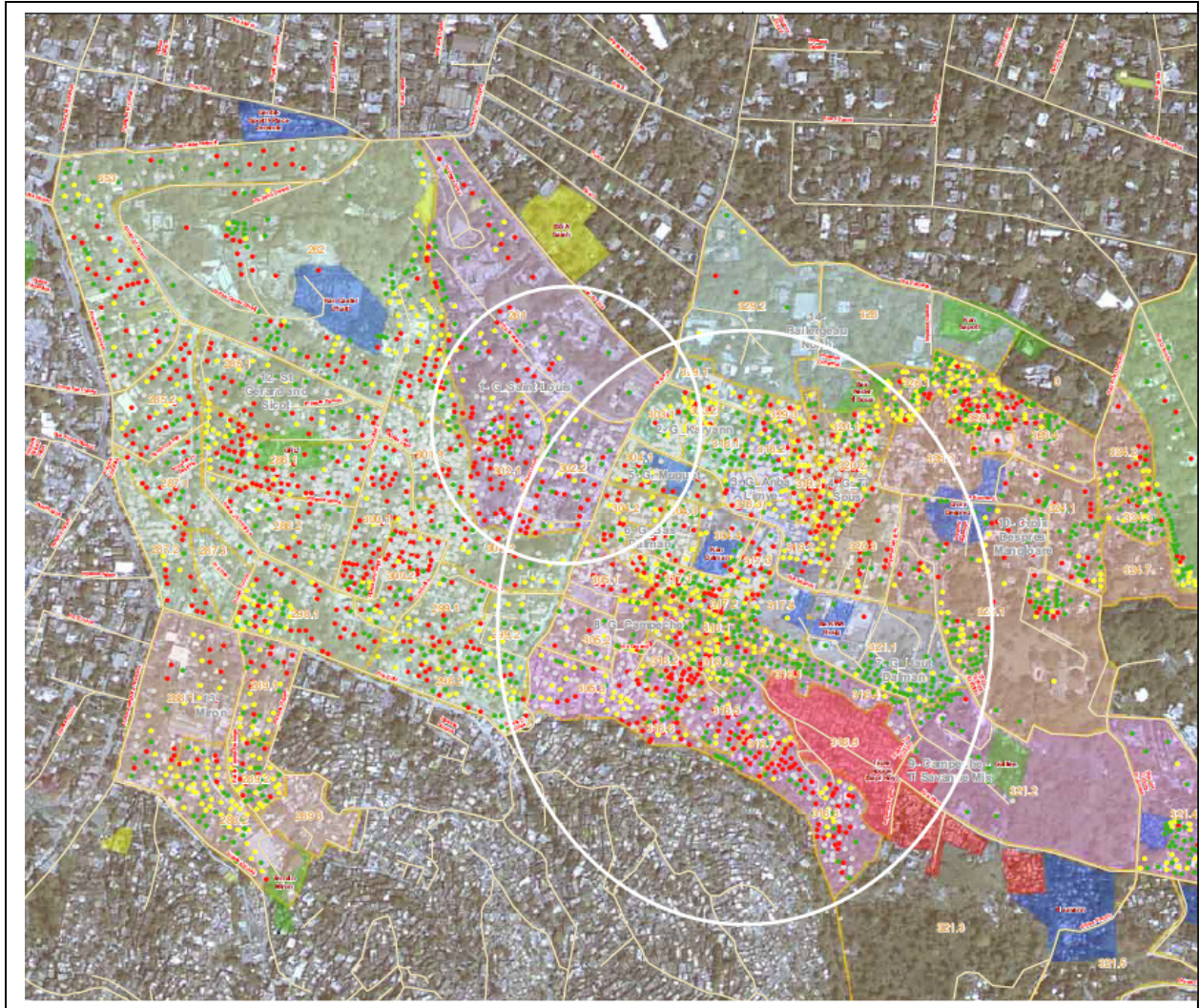
Maps of Selected Areas

Integrated Neighborhood Recovery and Reconstruction Program in Haiti



PORT AU PRINCE





Selected Areas Baillergeau and Campeche

How to Apply:

1. The agency/person must submit the documents in English.
2. Documents must be sent to: Ranjan Mohnot (Delegate Quality & Learning) at MohnotR@usa.redcross.org. Please use the following in the subject line of your email: **Consultant, GIS Consultant/Firm.**
3. The Following documents must be included with the applications:

Detailed CVs of the professional(s) who will work on the consultancy. If more than one consultant is proposed, please attach a table describing the level of effort (in number of days) of each team member in each of the consultancy activities.

Daily Rate: Please mention the expected daily rate in USD.