Open Mapping Hub ASIA-PACIFIC

Humanitarian OpenStreetMap Team

Project Proposal[1]

Reporting details:	
Project title	**Eco-mapping Series:** Revamping Recycling Activity in the city.
Name of Champion/s	Anna Pamela R. Cargo Jambay Dema Klarisa Mae Natividad
Project Start date	January 2023
Project End date (6-month project)	June 2023
Target Budget (up to $5000)	232,194 (PHP) or 342,659.74 (BNT)
Location (Region, Country, City/Municipality)	Gerona, Tarlac, Central Luzon, Philippines Quezon City, Metro Manila, Philippines Thimphu, Bhutan
Contacts (website, facebook links)	cargo.apr@pnu.edu.ph

Outline

[1] Template is customized from HOT ESA Grants Qualitative Report Template and Tools4Dev ConceptNote Template

1. Background

Describe the nature of the social problem and data problem your project addressed; include who was/is being affected. Support with data when possible

Solid waste disposal remains a serious issue, especially in most developing countries. The wastes came as a result of continuous extraction of resources and production of goods in pursuit of advancing the industries that contribute to economic growth. However, this poses a greater threat to the environment as degradation, disruption of hydrological systems, and extinction of species relatively occur.

Accordingly, plastic consumption has also increased over the last decades, resulting in a significant increase in municipal solid waste streams in major cities. Recently, it was reported that 8 million tons of pandemic-associated plastic waste have been generated globally and more than 25,000 tons entered the global ocean (Peng et al., 2021). Climate change then will come into play and the problem alone is not just on the country level, but also globally (Castillo & Otoma, 2013). While all of these are happening, the world population will continue to grow in the next coming years. This means that the market of goods and services will also grow and before that, waste disposal shall be addressed resolutely.

To contribute to the existing implementations on addressing the concerns mentioned, this project aims to further expand environmental-related geospatial information by establishing a community of eco-mappers that will collectively map out drop-off points for recyclable wastes using OpenStreetMap. The data that will be gathered and published are expected to enhance and strengthen the regulations on disposing of municipal solid wastes and thereby, promote more informed and sustainable practices for the general populace.

2. Target Results (Objectives)

- **Impact Area(s)**
  Long-term, the project aims to contribute to
  - Solid Waste Management,
  - Responsible consumption and production,
  - Sustainable cities and communities, and
  - Environmental education

- **Project Target Outcomes**
  By the end of the project, the project will be able to achieve the following:
  - Design an intensive workshop to train and equip aspiring (eco)mappers within the community to participate in environmental mapping initiatives
  - Mobilize a group of (eco)mappers within the community to help in mapping drop-off points for recyclable wastes.
  - Expand the OpenStreetMap database by mapping drop-off points for recyclable wastes within the community.

- Publish a reference map presenting the number of drop-off points for recyclable wastes within the community

- **Project Target Outputs**
  By the end of the project, the project will deliver the following:
  - An eco-mapping workshop module that will be used for training aspiring youth mappers within the community to participate in environmental mapping initiatives
  - A group of twenty (20) eco-mappers has been trained to participate in mapping drop-off points for recyclable wastes within the community
  - At least fifty to one hundred (50-100) drop-off points for recyclable wastes were mapped out and validated within the community.
  - A reference map presenting the number of drop-off points for recyclable wastes within the community.

3. Solution

Describe how the project contributes to solving the social problem/data problem. If possible, include the number of people expected to benefit from the project.

This project will be fulfilled mainly within urban areas that have persisting issues with solid waste management. With the growing population in the cities and more environmental issues arising due to it, waste management is often difficult to handle and is being overlooked. Therefore, mapping the drop-off points for recyclable wastes can greatly help in contributing reliable information for the citizenry to manage their disposal. Currently, this data is not yet substantially identified and wasn't largely visible in the OpenStreetMap and other Geoweb platforms. Thus, it would be better to expand this possibility. The sectors or groups that are expected to benefit from this are: (1) the local government, (2) the private sector and non-government organizations, (3) the academe and researchers particularly OSM users, and of course (4) the wider population.

4. Data Use

Describe how the data you generate is intended to be used. How will the data you collect change/influence the data user's work?

The data generated will be made available to all stakeholders for their own reference and convenience:

- **For the local Government** - It can be used to assess existing implementations and formulate better policies for sustainable operations of solid waste management. This can also help to make changes in the management of recyclable wastes in the area by creating awareness campaigns of the DOPs near the residents' homes or offices.
- **For the private sectors and NGOs -** This will improve the formulation and execution of their projects and initiatives that will reinforce the existing policies implemented by the local government.
- **For the academe and researchers** - This will help them craft and commence more research studies that will look into improving existing operations to address the concerns being mentioned.
- **For general citizens** - The map will act as a reference for nearby strategic locations where they can drop off their recyclable wastes. This will ensure collaborative and direct efforts to collect and manage solid wastes within their own capacities.

5. **Activities**

Activity Title	**Activity Type**	**Time Frame:**	**Target Participants (if relevant)**
Project Planning: Organizers' training for the following: ● Environmental Education and Solid Waste Management ● OpenStreetMap Sessions ● GIS 101 (ArcGIS) and Remote Sensing	Training (Preparation)	3 weeks	Project organizers/implementers
Designing modules for the Eco-Mappers Workshop	Material Development	2 weeks	Project organizers/implementers, and possible partners
Eco-Mappers Recruitment	Recruitment	2 weeks	Project organizers/implementers
Eco-Mappers Workshop ● Opening Ceremony ● Environmental Education ● OpenStreetMap 101 ● GIS Training ● Project Development ● Induction	Training/Workshop/ Webinar	1 month	Twenty to thirty (20-30) youth mappers aged 18-24 who are willing to take part in the initiative. ● Preferably coming from different districts or areas within the city/municipality Partner Organizations
Eco-Mapping Initiative ● Plotting of POIs; Identifying drop-off points for recyclable wastes using OpenStreetMap	Mapping	1 month	Project organizers/implementers; participants (eco-mappers), and possible partners

• Data validation			
Making and developing the reference map, publishing results	Material Development; Generating Results	1 month	Project organizers/implementers; participants (eco-mappers)
Presentation of the results	Presentation	3 weeks	Project organizers/implementers; participants (eco-mappers), and partners
Closing Ceremony	Closing	1 week	Project organizers/implementers; participants (eco-mappers), and partners
Evaluation of the Project	Evaluation	1 week	Project organizers/implementers; participants (eco-mappers), and partners

***Activity Type:** Training, Mapping, Material Development, Others*

6. People & Partners

List partners, their roles, and contact details.

Partner - Government

- **Climate Change and Environmental Sustainability Department (CCESD)**
  6th Floor, Civic Center D (BRO bldg.), Quezon City Hall Compound
  8988-4242 locals 8348 / 8349 / 8359 / 8360 |
  ClimateChange@quezoncity.gov.ph
  - ➔ Develops, updates and implements policies, programs, projects, systems and strategies on climate change mitigation and adaptation as well as environmental sustainability

- **Department of Sanitation Cleanup Works of Quezon City**
  6th Floor, Civic Center D (BRO bldg.), Quezon City Hall Compound
  8988-4242 loc. 8362 | TFSolidWaste@quezoncity.gov.ph
  - ➔ Provides relevant information related to the city's solid waste management operations;
  - ➔ Assists in the research and development of the project

- **Thimphu Thromde**
  FJ9Q+GQM, Gongdzin Lam, Thimphu
  - ➔ Responsible for waste management in Thimphu and provides related information and services related to waste management in the city

- **Municipal Environment and Natural Resources Office (MENRO)**
  Geronal Municipal Hall, Gerona, Tarlac
  Mr. Adolfo F. Nool
  - ➔ Ensures environment friendly measures for the Municipality of Gerona through maintenance of cleanliness and sanitation, regulation of natural wealth, and material recovery of waste materials, and
  - ➔ Develops plans and strategies for the environmental programs and projects of the municipality

Partner - OSM Community

- **Humanitarian OpenStreetMap Team: Open Mapping Hub - Asia Pacific**
  openmappinghub.ap@hotosm.org
  - ➔ Provides financial and technical support, as well as trainings for large scale local edits in OpenStreetMap

Partner - Public and Private Schools

- List of community public and private schools to scout for aspiring eco-mappers

7. Sustainability

Briefly describe how the project benefits will be sustained after HOT support ends. How will the lessons learned be shared in the community? How will the benefits be expanded?

The project is expected to benefit people in the communities for a long period of time through the looking at following measures:

- Ensuring that information collected and published will be accessible to all stakeholders of the community. This may be accomplished through distributing print outs, copies, pamphlets, and by continuous content creation through social media and official website.
- Sustaining the activities, training, and mobilization of eco-mappers by (1) ongoing mapping series of environmental related points of interests in OpenStreetMap, (2) developing a continuous curriculum plan on environmental mapping/environmental education, and (3) expanding eco-mappers criteria by including local barangay officials and other community stakeholders in the eco-mapping series.
- Building up partnerships with NGOs, corporate sectors, researchers, and experts for the sustenance and continuous improvement of the project.

8. Relevance

Relevance in relation to the three points listed in 'The Purpose' section

In lieu of the essence of participatory and collective mapping, this project is expected to contribute to the expansion of the OpenStreetMap database — particularly to the enlargement of environmental-related points of interest or information — to reinforce existing procedures as part of the city's sustainable development initiatives. This can be done by providing opportunities for the local community to be directly involved in solid waste management operations, and work on developing data-driven solutions to address the pressing concerns. The reference map that will be produced is expected to commence more studies and action projects in the future. Similarly, the intensive workshop that will be conducted is to ensure that the participants, or the so-called eco-mappers, will be well-grounded to partake in the continuous efforts, and will eventually institute their own attempts towards sustainability.

Annex 1: Project Timeline (Gantt Chart)

Please click this link for the project timeline: Eco-mapping Series Project Timeline

Annex 2: Budget

Item	What do you plan to spend the money on?	Unit being purchased (how many?)	Quantity Description	Rate	Rate Description	Total cost for budget item (USD)	Why is it needed? (please give as much detail as possible)
1	**Program and Activity Costs**						
	Uniform Set (reflective vests, caps, dri-fit shirt)	20	pieces/set	1,200/ 1,773	PHP/BTN	24,000/ 35,460	Protective gear and attire for the eco-mappers while traveling around the community during fieldwork
	Stipend	20	pieces	1,000/ 2,955	PHP/BTN	40,000/ 29,547	Allowance to cover for the eco-mappers expenses on various activities that will be conducted in line with the project goals
	Training Kit	20	pieces/set	500/739	PHP/BTN	10,000/ 14,774	Materials and on-site training supplies (notebook, pen, eco-bag, covid-19 essentials, etc.) for each participant
	Training Supplies	1	piece/set	5,000/ 2,955	PHP/BTN	5,000/ 7387	School and office supplies necessary for the workshop (e.g. pens, sticky notes, printouts, etc.), COVID-19 essentials,
	Training Meals/ Refreshments	2	weeks	5,000/ 4,432	PHP/BTN	10,000/ 14,774	Two training sessions worth of meals inclusive of snacks and lunch for the workshop
	Training Venue Rentals	2	pieces	1,500/ 2,216	PHP/BTN	3,000/ 4,432	Two training sessions worth of rental fees for the training venue
	Travel Expenses	4	pieces	2,000/ 2955	PHP/BTN	8,000/ 11,819	Four (4) Saturday/Sundays worth of travel expenses or vehicle rental fees for the fieldwork
	Fieldwork Meals/Snacks	4	weeks	5,000/7,387	PHP/BTN	20,000/ 29,547	Four (4) Saturday/Sundays worth of meals inclusive of snacks and lunch for the participants during the fieldwork

2	**Equipment, Online and Digital Costs**						
	GPS units (Garmin eTrex 20x)	5	piece	13,000/ 19,206	PHP/BTN	65,000/ 96,028	GPS units to collect GPS coordinates during community mapping and verification of the exact location
	Social Media Promotions and Advertisement	6	months	1,000/1,477	PHP/BTN	6,000/ 8,864	Monthly budget for promotion and advertisement of the project's social media content
3	Prizes and Swag, Tokens for Speakers						
	Speakers/Trainers Honorarium	4	pieces	3,500	PHP/BTN	14,000/ 20,682	Speakers/Trainers compensation for rendering their service during the workshop as part of the activity of the project
	Speakers/Trainers Token	4	pieces	500/739	PHP/BTN	2,000/ 2955	A token of appreciation for the speakers/trainers' contribution to the success of the project
	Eco-mappers/ Participants' Giveaways	20	pieces	500/739	PHP/BTN	10,000/ 14,774	A token of appreciation for the participants' contribution to the success of the project
4	**Administrative & Overhead Costs**						
	Internet connection (Wifi Load)	6	months	1,599/ 2,362	PHP/BTN	9,594/ 14,174	Internet connection in giving trainings, project plannings, mappings and uploading materials
	Website Maintenance	6	months	900/1,330	PHP/BTN	5,600/ 79,800	Monthly fees for the maintenance and operation of the website for the project's content publication