Capacity building for citizens in creating green and clean villages based on empowerment and social intervention

Herdis Herdiansyah 1, Andrean Eka Lucianto 1, Donna Asteria2, Dwini Handayani3

1 School of Environmental Science, Universitas Indonesia. UI Salemba Campus, Central Jakarta, 10430. Indonesia.
2 Departement of Communication, Faculty of Social and Political Science, Universitas Indonesia. UI Depok Campus, Depok, 16424. Indonesia.
3 Departement of Economic, Faculty of Economic and Business, Universitas Indonesia. UI Depok Campus, Depok, 16424. Indonesia.

Email: herdis@ui.ac.id

Abstract. The subdistrict of Koja, North Jakarta is one of the settlement areas which is densely populated. The high-density level leads to poor environmental quality, especially in terms of cleanliness and sanitation that finally disturb residents’ health, such as suffering dengue fever in early 2019. The method of writing used in this study was based on a community empowerment program that focuses on social interventions, in the form of increasing the capacity of citizens in maintaining environmental hygiene and sanitation. The aim of this program was to form an independent community that is aware of the importance of maintaining cleanliness and environmental sanitation. Social interventions are actions that carried out by a person or group of intervening people with efforts to cause change. The stages that have to be done in the empowerment process are the Stage of Awareness and Formation of Behaviour, the Stage of Transformation and the Stage of Intellectual Ability Upgrading. The results of those stages can slowly provide a forum for the implementation of some materials in the previous workshop, so that they can directly apply it to create a Clean and Green environment in urban areas.

1. Introduction
The population density of Koja is 10,504 people/ km2 [2], where the drainage of household wastewater in this urban village is not flowing or stagnant and inundated (Figure 1). On the other side, the phenomenon of tidal flooding in the area leads to no drinking water that sourcing from wells / pumps. Around 76.93% of households in Koja consume bottled water / PAM and 23.07% consume tapered tap water as source of drinking water to support daily needs. The types of houses in Koja consist of permanent, semi-permanent and temporary houses. 57.66% of the houses are permanent buildings, 40.32% are semi-permanent buildings, and 2.02% are temporary buildings.
The location of RW 09 Koja is on the edge of the river and very close to estuary, so it directly borders the sea. It is quite often that when the tide is high, the area of RW 09 will encounter tidal flooding. The existence of the phenomenon of tidal flooding in this area has led to some negative effects on the environment, such as: (1) flower plants in the residents' gardens cannot grow properly, (2) the soil conditions has become infertile due to high level of salt, (3) material losses due to houses and furniture that submerged during the tidal flooding, (4) damaging the building like ceramics, walls and frames, because the seawater contains high level of salt that accelerated the damage to the building itself, (5) spreading some seeds of diseases like diarrhoea, ARI and dengue fever, (6) causing dirty environment due to muddy puddles, (7) disturbing the traffic which is caused by water that stagnates on the road, and it can also damage vehicle engine, (8) clean water mixes with sea water, because tidal flooding not only inundates the houses of residents but also inundates the source of residents’ clean water, and (8) residents’ septic tanks also have the potential to overflow when it is inundated by the tidal flooding , so that feces can mix with residents’ clean water. The condition of the river near RW 09, Koja can be seen in Figure 2.

In terms of the economy of the people in this area, people's livelihoods are divided into several professions, such as civil servants, private employees of port, field employees of port, army, police, entrepreneurs and fishermen. Based on the result of observation, it is found that there are also elderlies and children in the area of RW 09 of Koja who need a comfortable, green and clean environment.

2. Method

Based on the results of observation and literature review in knowing the field conditions, it was found that there were problems that related with densely populated settlement and tidal flooding which resulting a poor quality of community environment in the area. Hence, the solution to the problems required community empowerment and social intervention efforts, so that it can increase the capacity of the community in creating and maintaining a clean and green village environment. In undertaking the process of community empowerment, there are three main efforts that have to be done based on Noor (2011), they are (1) creating a process which has an atmosphere that enables the potential of the community to be developed (enabling), (2) creating a process as an effort to strengthen the potential within the community itself (empowering), and (3) creating a process to protect, to defend and to give attention to the interests of middle-low class community [6].
Figure 2. A simple description of the intervention to someone who experiences bad social-function, to be restored to his social functioning [3].

Social interventions are some actions that carried out by a person or group of intervening people with efforts to cause change. Intervention efforts in a social context can be divided into several categories (Figure 3), namely; (1) giving assistance to restore the social functioning of citizens, groups, communities and families, (2) comprises activities to overcome or prevent problems, (3) reaching the goals of social improvement, and (4) to encourage or to help clients to progress to any desired direction [3].

The social empowerment process refers to actions taken in stages, both knowledge, attitude, and practice (KAP). The stages that have to be done in the empowerment process include the stage of awareness and formation of behaviour, the stage of transformation and the stage of enhancement of intellectual abilities [7], [9]. The Stage of Awareness and Formation of Behaviour is expected to lead the community to a good awareness and concern, so that they feel that they need to increase their existing capacity. The stage of transformation of ability is expected to give insight, knowledge and skill to the community, so that they will be skillful in taking part to the changes. The stage of intellectual enhancement is expected that the community will have initiatives and innovative capabilities, so that it can lead them to an independence.

The program that will be implemented in organizing community service is based on the concept of community empowerment and social intervention, namely; (1) household waste sorting pattern, (2) making the mother and child-based conservationist cadres through conducting educational games with children to introduce ways to wash hands [5], (3) sort waste [4], and maintain environmental cleanliness, (4) workshop on the implementation of clean & green villages, and (5) enhancement of the social community association, by carrying out hygiene work together with youth and fathers to foster social ties between communities. The activity is also expected to provide implementation of several previous workshop materials so that they can directly apply them to create a clean and green village environment in Koja.

By the implementation of the programs mentioned above, the output targets that are expected from the people of Koja, especially RW 09 are as follows; (1) fathers, and mothers can increase their capability in sorting household waste and knowing the potential for recycling the waste in order to obtain added value, so that it can be sold or reused [4], [10], (2) children can increase their insight and capabilities about sanitation, especially about how to do good hand washing, how to brush teeth properly and how to choose good and clean snacks, (3) mothers can increase their capabilities about
sanitation for families, like keeping the cleanliness of the house, and eating utensils, in addition, the mother will also be taught of how to cultivate red ginger until how to do harvest and marketing [8], [9],[10] so that it can provide economic improvement for the residents, (4) the environment of Koja especially RW 09 can be a green village which reflecting the value of cleanliness, neatness and beautifulness, (5) the existence of parks that are well maintained and loved by residents, and (6) the existence of red ginger cultivation that is continued sustainably by residents which can give an impact to the economic improvement.

The Implementation of sanitation by modelling how to wash hands properly is one of the efforts to keep good sanitation by cleaning hands and fingers using water and soap. This is because human hands are one of the germ-carrying agents or pathogens that move from nature to humans through direct or indirect contact [5]. If the numbers of people who practicing hand washing using soap are high, it will for sure reduce the case of diarrhoea diseases in Indonesia. According to the WHO in 2007, it was proven that the case of diarrhoea can be decreased around 32% by increasing people's access to basic sanitation, 45% by washing hands using soap, and 39 % by applying clean and hygienic drinking water management behaviour. Diseases that can be prevented by washing hands with soap are diarrhoea and bronchi infection.

3. Result and Discussion

3.1 Workshop on the Sorting and Processing of Household Waste into Economical Value Items

There were 50 participants attended the workshop which consisted of fathers, mothers and youth of RW 09 Koja, North Jakarta (Figure 5). The location of workshop was in RPTRA Sidang, Koja. The materials that have been delivered were about how to sort household waste, how to process household waste into goods that has added value and selling value, how to market recycled goods, and how to do online selling transaction. The result of this workshop was that the community became aware that managing household waste can bring them additional income so that their life will be better, cleaner and more prosperous than before.

3.2 Coaching of Mother and Child-based Conservationist Cadres

The participants were 30 children and 25 mothers from RW 09 Koja, North Jakarta. The location of the activities was in RPTRA Sidang, Koja. The materials that have been given were divided into two types, they are material for children and material for mother. Materials for children ware about how to wash hands properly, how to brush teeth properly, how to sort out garbage at home and how to choose healthy, clean and nutritious snacks. While the materials for mothers were about how to choose healthy, nutritious and clean food stuffs in traditional markets, and how to determine balance nutrition for family. The results of those activities were that the community, especially children will be able to apply ways to maintain good and correct sanitation, and mothers will be able to apply ways to provide good food with balance nutrition and hygienic for families.

3.3 Workshop on the Implementation of Clean & Green Villages and the Enhancement of the Social Community Association

The participants consisted of 150 people from RW 09 Koja, North Jakarta. The location of workshop was in Perum Perumnas Flats, along the bank and alleys in densely populated residential area in RW 09 Koja, North Jakarta. Activity that has been carried out was the implementation of the material that
has been given previously, so that it can be implemented in this event. The results of this activity were that the community can implement the material given during the workshop, so that they can practice it directly, and they are also expected to grow social ties between residents of RW 09 Koja, North Jakarta.

This capacity building program has gained a clean and green environment in Koja, North Jakarta. All participants practiced the workshop materials in their respective life. The participants collaborated to build a park and children’s playground near Perum Perumnas Flats and made a green belt in an alley called ‘Green Alley / Gang Hijau’ (Figure 4). The finding of this study showed that the capacity building program will be succeed and be sustainable if it is strongly related with the needs of the community and implement it in stages and in sufficient time [1].

![Figure 3. Plants planted by residents after participating in workshops](image)

4. Conclusion
The capacity building program of citizens in creating green and clean villages based on empowerment and social intervention that has been implemented in RW 09, Koja can be a booster for the community to actively protect the environment by keeping it clean and green. Besides, the community has increased their capabilities in creating healthy families by consuming clean, healthy and nutritious food, as well as improving the economy of the community by making handicrafts from household waste and cooperatively managed by all citizens.

Acknowledgements
This research is funded by Community Service Program Science and Technology Program Scheme for Society (IBM) in 2019 - University of Indonesia (Program Pengabdian Masyarakat Skema Program Ipteks Bagi Masyarakat (IBM) Tahun 2019 - Universitas Indonesia) [contract number: NKB-1443/UN2.R3.1/HKP.05.00/2019]. Special thanks are delivered to RPTRA Sidang, Koja, Head of fostering family welfare (PKK) Koja, Head of the neighborhood (RW) of Koja and family for all the assistance during the research.

References
[1] Bhinekawati, Rika 2018 A model of a large company’s CSR and transformational community
engagement for SME development ASEAN Journal of Community Engagement 2, No. 2, 200-220. https://doi.org/10.7454/ajce.v2i2.130

[2] Central Bureau of Statistics (BPS) 2018 Kecamatan Koja dalam Angka BPS: 11102001.3175040

[3] Hardjomarsono, Boediman 2014 Teori dan Metode Intervensi Sosial. In: Pengertian, Ruang Lingkup, dan Studi Intervensi Sosial 1-65, ISBN 9790111509

[4] The Ministry of Environment and Forestry 2008 Panduan Praktis Pemilahan Sampah. Deputi Bidang Pengendalian Pencemaran Lingkungan Hidup Jakarta, Indonesia

[5] Mustikawati, Intan Silviana 2017 Perilaku Cuci Tangan Pakai Sabun Studi Kualitatif pada Ibu Ibu di Kampung Nelayan Perilaku Cuci Tangan Pakai Sabun Studi Kualitatif pada Ibu-Ibu di Kampung Nelayan Muara Angke Jakarta Utara. Qualitative Study

[6] Noor, Munawar 2011 Pemberdayaan Masyarakat Jurnal Ilmiah CIVIS 1, No. 2

[7] Oleh, Helen Florensi 2014 Implementation of the Fund Allocation Policy (ADD) to Empowering Rural Communities in Cerme Village, Grogol, Kediri. Journal of Public Policy and Management / Jurnal Kebijakan dan Managemen Publik Vol. 2 No. 1

[8] Pasir, Suprianto; Hakim, Muh. Supwatul 2014 Penyuluhan Penanaman Sayuran dengan Media Polybag. Jurnal Seri Pengabdian Masyarakat 2014, 3, 159 – 163. ISSN : 2089-3086

[9] Rahmi, Ombun; Susanto, Hendro Susanto; Siswanto, Ari 2015 Pengelolaan Lahan Basah Terpadu di Desa Mulia Sari Kecamatan Tanjung Lagi, Kabupaten Buanin. Journal of Indonesian Agricultural Sciences/ Jurnal Ilmu Pertanian Indonesia (JIPI) 20 (3), 201 – 207

[10] North Jakarta Administrative City Development Planning Agency 2018 Informasi Pembangunan Kelurahan Koja – Kota Administrasi Jakarta Utara tahun 2018 Jakarta Musrenbang Proposal 2018, 1-4