

Status Quo Report The City of Yogyakarta



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Table of Content

Abbreviation	3
Introduction	5
Chapter 1. Yogyakarta City at Glance	6
Chapter 2. Climate Change in Yogyakarta City	8
2.1. Climate disaster faced by Yogyakarta City	8
2.2. Greenhouse Gas Emissions produced by Yogyakarta City	8
Chapter 3. Response of Yogyakarta City towards climate change	11
3.1. Governance and Services	11
3.2. Climate Change Policies and Action Plan	12
3.2.1. National Policy Framework	12
3.2.2. City’s commitments, Strategies and Priorities	12
3.3. Gender consideration	14
3.3.1. Relevant Policy Framework.....	14
3.3.2. Possible Gender Dimension of Climate Change in Yogyakarta City	14
Chapter 4. Gaps and Preliminary Conclusion	16
4.1. Preliminary Conclusion.....	16
Reference	17
Table . Work force according to Activities, Main Activities and Sex in 2013.....	6
Chart . Organizational Structure of the Government of Yogyakarta City	11

Abbreviation

AFOLU	Agriculture, Forestry and Other Land Use
API	Adaptasi Perubahan Iklim
APBD	Anggaran Pendapatan Belanja Daerah
APS	Angka Partisipasi Sekolah
BLH	Badan Pengelolaan Lingkungan Hidup
BPBD	Badan Penanggulangan Bencana Daerah
BPS	Badan Pusat Statistik
BMKG	Badan Meteorologi, Klimatologi dan Geofisika
BUMN	Badan Usaha Milik Negara
CO ₂	Carbon Dioksida
CH ₄	Gas Metana
CCTV	<i>Closed Circuit Television</i>
DAS	Daerah Aliran Sungai
DIY	Daerah Istimewa Yogyakarta
DPU	Dinas Pekerjaan Umum
FPRB	Forum untuk Pengurangan Resiko Bencana
INDC	Intended Nationally Determined Contribution
IPCC	Intergovernmental Panel on Climate Change
IPM	Indeks Pembangunan Manusia
KK	Kepala Keluarga
KLHK	Kementerian Lingkungan Hidup dan Kehutanan
LaKIP	Laporan Kinerja Instansi Pemerintah
M3K	Madhep, Mundur, Munggah Kali
N ₂ O	Nitrogen Oksida
POKJA	Kelompok Kerja
PDAM	Perusahaan Daerah Air Minum
PKK	Pembinaan Kesejahteraan Keluarga

PKL	Pedagang Kaki Lima
POLRI	Polisi Republik Indonesia
RTH	Ruang Terbuka Hijau
RAN-GRK	Rencana Aksi Nasional Pengurangan Gas Rumah Kaca
RAN-API	Rencana Aksi Nasional Adaptasi Perubahan Iklim
RAD-GRK	Rencana Aksi Daerah - Gas Rumah Kaca
RPJMD	Rencana Pembangunan Jangka Menengah Daerah
RPJM	Rencana Pembangunan Jangka Menengah
RPJPD	Rencana Pembangunan Jangka Panjang Daerah
RPPLH	Perencanaan, Perlindungan, Pengelolaan Lingkungan Hidup
RT/RW	Rukun Tangga/Rukun Warga
SKPD	Satuan Kerja Perangkat Daerah
SDM	Sumber Daya Manusia
SPAL	Saluran Pembuangan Air Limbah
TNI	Tentara Nasional Indonesia
TPA	Tempat Pembuangan Akhir
3R	<i>Reuse, Reduce, Recycle</i>

Introduction

Indonesian Government responded to various UNFCCC agreements by issuing domestic policies both at national and regional levels. At national level produced policies included climate change mitigation and adaptation by (a) Forestry ministry Regulation No.P.68/ Menhut-II / 2008 on Implementation of Demonstration Activities Reduce Emissions from Deforestation and Forest Degradation, (b) Forestry Ministry Regulation No. P.30 / Menhut-II / 2009 on Procedures for Reducing Emissions from Deforestation and Forest Degradation, (c) Presidential Regulation No. 61 of 2011 on National Action Plan to Reduce Greenhouse Gasses (RAN-GRK), (d) Presidential Regulation No. 71 of 2011 on Implementation of National GHG Inventory, (e) National Action Plan for Adaptation to Indonesian Climate Change, (f) Indonesia Climate Change Sectoral Road Map, (g) RAN - API , (h) Minister of National Developing Planning Decree No. SK. 38 / M.PPN / HK / 03/2012 on the establishment of a Climate Change Coordination Team, (h) Intended Nationally Determined Contribution (INDC) for adaptation and mitigation, where the Indonesian government committed to reduce 29% GHG emissions on its own efforts and 41% with international support until 2030.

National policies are elaborated into actions (policies or programs) both for mitigation and adaptation. However, not all regions in Indonesia have elaborated national policies in regional actions, one of which is the City of Yogyakarta. Yogyakarta does not specifically respond to climate change in form of regional policies or regional programs, although various data have shown havoc impact of climate change to the City. Various programs in Yogyakarta, which are actually climate relevant, were not developed in responding to climate change but more regarding environmental sustainability, hygiene, disaster management program such as waste banks, green villages, climate villages, clean rivers, urban farming, Green Open Space, also Inventory and Preparation of Yogyakarta Greenhouse Gas Emissions and Gases Profile that are routinely (every year) carried out by Yogyakarta Environment Agency.

Those policies and actions unfortunately do not considered gender aspects, although the national government has issued national and regional policies on gender mainstreaming. National policies on gender mainstreaming are following: (a) Presidential Instruction No. 9/ year 2000 on gender mainstreaming into the development, (b) 2014 National Action Plan for Adaptation to Climate Change (RAN API), (c) Policy Paper on Gender Mainstreaming into Climate Change by the Ministry of Planning and National Development (PPN) / BAPPENAS, (d) Regulation of the Head of the National Disaster Management Agency No 13 of 2014 on Gender Mainstreaming in the Field of Disaster Management, and (e) Regulation of the Minister of LHK No. 19/2012 on Proklam (Climate Village Program), which specifically includes gender consideration.

Gender mainstreaming policy in Yogyakarta City is covered by Yogyakarta Mayor Regulation No. 53 of 2018. This regulation has not been a major consideration in developing existing City's activities and programs, as mentioned above, including in developing climate change actions.

Yogyakarta, May 2019
the writer team

Chapter 1. Yogyakarta City at Glance

Yogyakarta City is the capital of Yogyakarta Special Province, which owns a status of a municipality. The City is well-known as a city of education, of tourism, of culture and of struggle against the Dutch colonialism. In addition, in Yogyakarta City there are the Kraton of Ngayogyakarta Sultanate and Paku Alam Kadipaten.

Three rivers cross Yogyakarta City, namely Gajah Wong River, Code River and Winongo River. Code River is very vulnerable to flood during rainy season. Hence, the City plans to move out communities, who are particularly the poor, from areas along the river.

Population of Yogyakarta City according to the statistic¹, in 2018 totally was 422,732 people, composed of 206,421 men and 216,311 women. Meanwhile, according to the Report of the Poverty Reduction Coordination Team², in 2015 the City had as many as 60,195 poor people or 18,730 poor households. The highest number of poor people is found in Mergangsan Subdistrict, which was 6,850 people, that locates partly on the banks of Code River. However, to date, there have been no report that described in detail how many poor women or poor female heads of the households.

In 2013, Yogyakarta City Central Statistics Agency stated that the unemployment rate in the city of Yogyakarta reached 13,702 people³.

Table
Population of 15 years old and above according to main activities and sex (year 2013)

Main activities	Male	Female	Numbers
Workforce	111,427	97,011	208,438
Working	103,333	91,403	194,736
Unemployment	8,094	5,608	13,702
Non workforce	44,612	72,272	116,884
School participation	23,256	19,908	43,164
Take care of households	11,399	45,112	56,511
Others	9,957	7,252	17,209
Total	156,039	169,283	352,322

Source: Situs Badan Pusat Statistik Kota Yogyakarta, 2013 at <https://jogjakota.bps.go.id/>

¹Kota Yogyakarta dalam Angka 2018, hal 70-71 tersedia pada <https://jogjakota.bps.go.id.pdf>.

² Laporan Tim Koordinasi Penanggulangan Kemiskinan tahun 2016, hal 8, terseida pada <https://bappeda.jogjakota.go.id.pdf>.

³ Badan Pusat Statistik Kota Yogyakarta <https://jogjakota.bps.go.id/dynamictable/2015/12/01/6/penduduk-berumur-15-tahun-ke-atas-menurut-jenis-kegiatan-utama-dan-jenis-kelamin-2013.html>

The School Participation Rate (APS) for the City of Yogyakarta in 2017 according to BPS⁴ is as follows; the 7-12 year age group was 99.22%, the age group 13-15 years was 98.65%, the age group 16-18 years 92.82%, the age group 19-24 years was 63.21%. Overall, the literacy rate also does not have a significant difference, where 99 men and 97.95% women are literate⁵. In the Yogyakarta City People's Welfare Statistics 2018 issued by BPS⁶ stated that the percentage of households according to the main characteristics and water sources for cooking, washing, bathing and other is 18.26% from plumbing, 47.17% from well bombs / pumps, 34.57% of wells / springs are protected.

⁴ Statistik Daerah Kota Yogyakarta 2018, hal 13 at: <https://jogjakota.bps.go.id.pdf>

⁵ ibid

⁶ Statistik Kesejahteraan Kota Yogyakarta tahun 2018, hal 46 at: <https://jogjakota.bps.go.id.pdf>

Chapter 2 Climate Change in Yogyakarta City

2.1. Climate disasters

Yogyakarta Government Agency BPBD Performance Report (LaKIP) in 2017 stated that there were three types of disasters in Yogyakarta City, namely; 1) floods, 2) earthquakes, and 3) extreme weather⁷. While the Yogyakarta City Disaster Risk study document 2017-2021 describes potential for disasters that can occur in the City of Yogyakarta are generally 1) earthquakes, 2) drought, 3) extreme weather, 4) floods, 5) volcanic eruptions⁸.

There were 23 disasters during 2017, namely 3 times flood, 1 time earthquake, and 19 extreme weather events with 3 deaths⁹. Very high rainfall caused unstable land and triggered mainly landslides in the City and also several sub-districts of Yogyakarta Province.

Based on the records of the Tropical Cyclone Early Warning Center (11/27/2017)¹⁰, tropical cyclones dubbed as Cempaka Cyclones, came from southern coastal waters of Java and triggered strong winds and high waves in some waters. Cempaka Cyclone resulted in total paralysis of community activities, especially in the Wonogiri area, parts of Yogyakarta and Pacitan¹¹. There were even 19 fatalities. In Yogyakarta City itself, due to Cempaka cyclone 3 people died. For Yogyakarta City, based on the BPBD report¹², this cyclone not only caused flooding and landslides, a number of trees in stormy spots also fell. There were 131 fallen tree spots, landslides occurred in 114 spots and floods were at 110 spots in various areas of Yogyakarta. Then, floods, landslides and fallen trees in Yogyakarta caused damages to 65 by floods, 18 houses were crushed by fallen trees and 12 houses were damaged by landslides; public infrastructure such as roads, bridges, electricity networks, health facilities, educational facilities and telephone networks were damaged by this storm.

Yogyakarta City also potentially threatened by Dahlia hurricane in 2017. BMKG said that one of the first tropical cyclones detected appeared in Southwest Bengkulu¹³. Dahlia hurricane moved eastward with maximum wind speeds reaching 65 km/hour, and a moving speed of 20 km/hour. The movement of Dahlia hurricane to the East, according to BMKG observations made the region of Central Java and Yogyakarta must be alerted to extreme weather. This tropical cyclone potentially caused heavy rain accompanied by strong winds with lightning and thunder.

2.2. Greenhouse Gas Emissions

Based on the Presidential Regulation No. 61 of year 2011 on RAN GRK and No. 71 of year 2011 on GHG Inventory, Yogyakarta Province government has issued a Governor Regulation No. 51 of 2012 on Regional Action Plans for Reducing Greenhouse Gas Emissions, as a basis for conducting GHG inventories. However, at the Yogyakarta City level there is no policy related to reducing greenhouse gas emissions. Hence, the following description on GHGs is about the activities of the provincial government that also covers the City of Yogyakarta.

⁷ Laporan Kinerja Instansi Pemerintah BPBD Kota Yogyakarta tahun 2017 halaman 1-4

⁸ ibid

⁹ Laporan Kinerja Instansi Pemerintah BPBD Kota Yogyakarta tahun 2017 hal 1-5

¹⁰ at: <https://tirto.id/dampak-siklon-cempaka-yogyakarta-dan-asal-usul-nama-badai-cAVz>

¹¹ ibid

¹² ibid

¹³ ibid

Agency for Management of Greenhouse Gas Emissions (GHG)

In accordance with the Presidential Regulation No. 71 of year 2011, the Environmental Agency (BLH) was appointed as the agency responsible for coordinating the implementation of GHG inventories at the provincial level. BLH DI Yogyakarta Province institutionalized the GHG inventory as part of the main task and function of the Pollution Control Sector. This field then plays a role as an operator and a coordinator in the planning, data collection, analysis and reporting of GHG inventories.

As a coordinator, BLH defines an important role in the GHG inventory through two approaches. *Horizontally*, BLH coordinates, submits and receives data and information about sources of emissions, absorbers and carbon stocks from other provincial working units (SKPD). This effort involves government's working units and representatives of national government in the province as well as state owned enterprises and private sector related to GHG emissions. *Vertically*, BLH of Yogyakarta Province coordinates, delivers, and receives data and information from districts/ cities through BLH in each region. BLH is obliged to provide advice and input and consolidate in the provincial level GHG inventory section to be reported to the Ministry of Environment (KLH).

Yogyakarta Greenhouse Gas Emission Inventory

Yogyakarta City GHG Emissions include 4 key categories, namely energy use, production process, AFOLU (agriculture, forestry and land use) and waste management.

The results Yogyakarta City GHG inventory for CO₂ emissions amounted to 1,053,890.65 tons/year, CH₄ was 4,763.40 tons/year and N₂O was 35.40 tons/year. The biggest contributor to CO₂ emissions is a key category of energy use (98%), whereas, for CH₄ 97% comes from the waste sector and N₂O also comes from energy use with a contribution of 59%¹⁴

Based on the IPCC GHG key categories, there are 4 groups with each potential emission source¹⁵ in Yogyakarta City as follows:

1. The energy use category consists of electricity consumption, road transportation, domestic and industrial fuels. The energy use sector includes fuel use activities and electricity consumption. CO₂ emissions generated from fuel use activities were 463,028 tons/year, CH₄ was 119 tons/year, and N₂O was only 21 tons/year in the base year 2016. For the use of electricity consumption, Yogyakarta City produced CO₂ emissions greater than fuel use, which was equal to 574,757 tons/year.

The GHGs produced from mobile and stationary sources: CO₂, CH₄ and N₂O emissions from mobile sources produced by road, bus and railroad transportation; while CO₂ emissions from stationary sources were produced by industrial activities, domestic (domestic), restaurants, street vendors, hotels, hospitals, traditional markets, government offices, and modern shopping malls. The main CH₄ emissions were generated by street vendor activities, N₂O produced by industries (large and small). GHG emissions from electricity consumption activities in Yogyakarta City produced CO₂, were contributed from activities of business and hotels, households, social, government buildings, industry, and street lighting.

2. A very significant industrial process category is the use of lubricants, but for Yogyakarta City produced insignificant emissions. The reason was because of the availability of activity data that only came from the use of lubricants for industrial equipment. Emissions produced were only from the CO₂ variable. The value of the emission load using lubricants was 16,075.08 tons CO₂ / year, which is dominated by the use of automotive lubricants.

¹⁴ Pustral UGM, Inventarisasi dan Penyusunan Profil Emisi Gas Rumah Kaca Kota Yogyakarta, Laporan Akhir 2017, (Yogyakarta: Pustral UGM, 2017).

¹⁵ ibid

3. The AFOLU category consists of the use of urea fertilizer, livestock, and biomass burning. AFOLU's activities (agriculture, forestry and land use) are very small in Yogyakarta City since it is an urban area. The main contributor to CO₂ emissions was the use of urea fertilizer for growing food crops (30.80 tons/year). The main contributor to CH₄ emissions was the livestock sector (17.64 tons/year), through enteric emissions and followed by rice field processing. The main contributor for N₂O is emission from land processing (1.36 tons/year).
4. Management of waste includes, waste burning, domestic sanitation, and final waste dump. The dominant variable of waste management for Yogyakarta City was CH₄ emissions. CH₄ emission load was 4,619.44 tons/year, which is greater than the N₂O emissions load of 12.63 tons/ year. The high CH₄ emission burden was contributed mainly by a combination of domestic waste (2,403.30 tons / year) and final waste dump (2,216.14 tons / year). Both were activities that strongly correlated with population growth. Whereas CO₂ does not exist because of the absence of burning of garbage by the community.

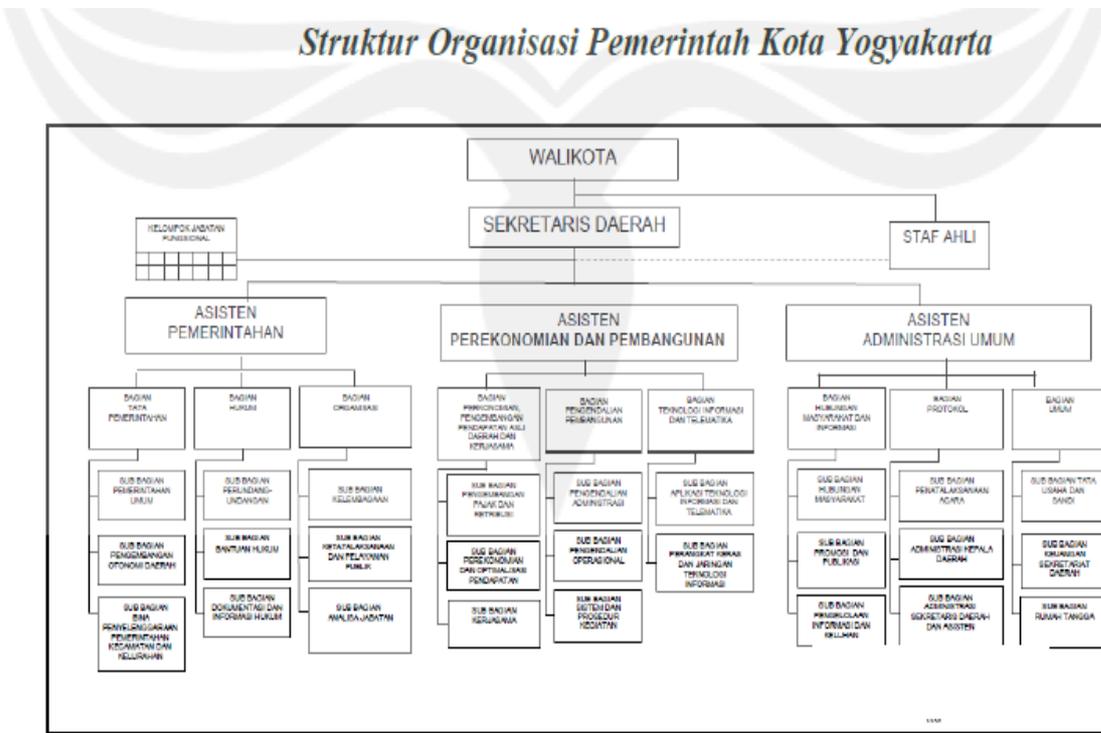
Chapter 3.

Yogyakarta City's Response to Climate Change

3.1. Governance and Services

Yogyakarta City is headed by a Mayor. 2 are sections under the direct coordination of the Mayor: (1) Regional Secretary and (2) Expert Staff. The City's government has 21 agencies headed by a head of the agency respectively. See the governance structure of Yogyakarta City in the next page.

An organizational structure of the government of Yogyakarta City



Sumber: <http://www.jogjakota.go.id/>

Response to climate change in Yogyakarta City is managed and supervised by 2 agencies, as follows:

1. Yogyakarta City Environmental Agency was formed based on (a) Yogyakarta Mayor Regulation No. 72 of year 2016 on Organizational Structure, Position, Tasks, Functions and Work Procedures of the Office of Environment and (b) Regional Regulations of Yogyakarta City No. 5 of year 2016 on the Formation and Composition of Regional Devices of the City of Yogyakarta. There are 4 fields under the Environmental Agency: (a) Environmental Impact Management and Control, (b) Environmental Capacity Development, (c) Public Green Open Space, and (d) Waste Management. The Office of Environment has a function for the implementation of coordination of the affairs in the field of environment, and provides guidance and implementation of tasks. Planning for environmental protection and management is carried out by RPPLH and taking into account several issues, including climate change¹⁶. Climate change was included as

¹⁶ Regional Regulation No.1/year 2012 on Environmental Management

one of the sustainable development goals in Yogyakarta Regional Action Plan for Sustainable Development Goals in 2018¹⁷.

2. **BPBD (Regional Disaster Management Agency)** is an institution in charged for the implementation of regional disaster management. It consists of (1) Head of BPBD, ex-officio held by the Regional Secretary (2) Steering Element consists of a Chairperson and members (3) Implementing Element, consists of (i) Chief Executive, (ii) Secretariat of Implementing Elements, (iii) Prevention and Preparedness Section, (iv) Emergency and Logistics Section, (v) Rehabilitation and Reconstruction Section, and (4) Functional Position Group

In an effort to integrate disaster risk reduction, BPBD also established a FPRB (Forum for Disaster Risk Reduction) consisting of regional governments, the military and police, the education networks, mass media, civil society organizations, and the business world¹⁸.

3.2. Climate policies and actions

3.2.1. National Policy Framework

The Indonesian Government's policy frameworks for responding to climate change and various UNFCCC agreements are (a) the Forestry Minister Regulation No.P.68 / Menhut-II / 2008 on Implementation of Demonstration Activities for Reducing Emissions from Deforestation and Forest Degradation, (b) Forestry Regulation No. P.30 / Menhut-II / 2009 concerning Procedures for Reducing Emissions from Deforestation and Forest Degradation, (c) Presidential Regulation No. 61 on RAN-GRK, (d) Perpres No. 71 of 2011 on the Implementation of National GHG Inventory, (e) National Action Plan for Adaptation to Indonesian Climate Change, (f) Indonesia Climate Change Sectoral Road Map, (g) RAN - API , (h) Minister of PPN Decree No. SK. 38 / M.PPN / HK / 03/2012 on the establishment of a Climate Change Coordination Team, (h) Intended Nationally Determined Contribution (INDC) for adaptation and mitigation, where the Indonesian government is committed to reducing emissions by 29% without conditions and on its own efforts, and 41% with international support with conditions until 2030, both compared to the Business as Usual (BAU) scenario, means no effort is done.

3.2.2. City Commitments, strategies and priorities

Yogyakarta City government has not specify the RAN-API and RAD API into City's Action Plan for Adaptation to Climate Change, but adopted policies and programs developed by the Yogyakarta Provincial government, and implemented some climate actions derived from those policies and programs. Hence, the following description is more at the Yogyakarta Provincial level that also covers the City.

The commitment, strategy and priorities of Yogyakarta Province in managing climate change were as follows:

- In the mitigation plan, Yogyakarta Provincial government elaborated RAN-GRK into provincial policies through Governor Regulation No. 51 of year 2012 on RAD-GRK that covers (a) agriculture, (b) forestry and peatlands; (c). energy and transport; (d) industry; (e) waste management; and (f) other supporting activities.

¹⁷ Yogyakarta Governor Regulation No 34/year 2018 on Sustainable Development Goals for the year 2018 - 2022

¹⁸ Peraturan Daerah Kota Yogyakarta Nomor 1 Tahun 2013 tentang Pembentukan, Organisasi dan Tatakerja Badan Penanggulangan bencana Daerah Kota Yogyakarta

- Yogyakarta Provincial government has integrated climate change in a number of regional regulations on climate change mitigation and adaptation such as (a) Yogyakarta Governor Regulation Number 34 of year 2018 on Regional Action Plans for Sustainable Development Goals in 2018 Action; (b) Yogyakarta Regional Medium-Term Rehabilitation and Development (RPJMD) 2017-2022, (c) Yogyakarta City Regional Regulation Number 2 of 2010 concerning Yogyakarta City Spatial Planning for 2010-2029, (d) Regional Regulation of Yogyakarta Special Region Number 8 of 2010 concerning Disaster Management (Regional Gazette of the Special Province of Yogyakarta Number 8, (e) Regional Regulation of Yogyakarta City No.3 of 2011 concerning Regional Disaster Management, (f) Regional Regulation Number 3 of 2015 concerning Environmental Protection and Management, and (g) Yogyakarta Mayor Regulation Number 6 of 2010 concerning Provision of Green Open Space.

Implementation

Climate change is not specify yet as a stand alone program in Yogyakarta City, both in the context of mitigation and adaptation, but considered still as an important issue in the preparation of RPPLH (Environmental Protection and Management Plan) though. Based on the 2017 Yogyakarta City Environmental Management Performance Information Document¹⁹, the government's commitments regarding environmental issues are to improve (1) waste management, (2) management of Green Open Space, (3) water pollution control, (4) air pollution control, and (5) climate change control.

The City has two categories of problems, which are river environment ecosystem and urban environment ecosystem with most crucial strategic issues include water pollution, solid waste, green open space, water quality, ground water, air, and disaster risk²⁰. The environmental rehabilitation program²¹ was an effort to restore, maintain and improve the function of environmental quality so that carrying capacity, productivity and its role in supporting the life system are maintained. The rehabilitation activities carried out are land rehabilitation using the Yogyakarta City Budget in 2017, covering following activities:

(a) Waste management

Activities that have been carried out by Yogyakarta City Environment Agency were community empowerment through 3R (Reuse, Reduce, Recycle) waste management activities. Other activities that have been carried out are (i) trainings of 180 waste management facilitators, (ii) production of hydroponic media using used goods; (iii) composting trainings for schools, 'ecobrick' campaign and campaign to manage waste banks.

(b) Expansion of Green Open Space

Greening program in the City of Yogyakarta in 2016 covered an area of 11.99 ha with a number of trees reaching 18,882 trees. In 2017 Yogyakarta City had targeted greening of 1,944 hectares spread across the city with a total of 1,593 trees planted. In Yogyakarta City there is no reforestation activity because there is no forest. The expansion of public green space is done by releasing land owned by the community into public green space. Open green space is based on Mayor Regulation No. 5 of 2016, where one of the objectives is to create micro-climate and reduce pollutants in urban areas.

¹⁹ Peraturan Daerah Kota Yogyakarta Nomor 1 Tahun 2012 tentang Pengelolaan Lingkungan Hidup

²⁰ Dokumen Rencana Pembangunan Jangka Menengah Daerah Daerah Istimewa Yogyakarta

²¹ Dinas Lingkungan Hidup, Laporan Utama Dokumen Informasi Kinerja Pengelolaan Lingkungan Hidup Tahun 2017 Kota Yogyakarta, hal 136 -160

(c) Rainwater absorbing wells

Absorbing wells are one of the techniques of water conservation techniques in the form of a construction made in such a way that they resemble the shape of a dug well with a certain depth. The well serves as a place to hold rainwater that falls on the roof of a house or a waterproof area and absorb it into the ground. In 2017 the Environmental Agency has constructed 100 units absorbing wells in several sub-districts.

(d) Climate Village Program (Proklam). This program was derived from the KLHK national program. This program has been developed since 2012 and implemented in three villages, such as Gambiran, Pandeyan and Umbulharjo. Green village activities focused on water sanitation processing, waste management and river maintenance, including maintaining watersheds. In addition, there is also the Munggah, Mundur, Mandep Kali (M3K) program that is part of the Climate Kampung Program which is a form of regional commitment to safeguard river border rights, and is included in the community-based climate change mitigation process.

Climate Change Management activities at Yogyakarta City were derived from the program of national Ministry of Environment and covered: (1) control of floods, landslides or droughts; (2) improvement in food security; (3) handling sea level rise; (4) disease control related to climate; (5) management and utilization of waste; (6) use of new energy, renewable and energy conservation; (7) agricultural cultivation low in GHG emissions; (8) increase in vegetation cover (reforestation); and (9) prevention and control of forest and land fires.

3.3. Gender consideration

3.3. 1. Relevant Policy Framework

- Yogyakarta City Government issued the Yogyakarta Mayor Regulation No. 53 of year 2018 on the Implementation of Gender Mainstreaming;
- Gender policy in Yogyakarta's RPJMD document covers issues of violence against women, economic independence, decreasing prevalence in women and children, and increasing women in decision making in the public sphere;
- In the Regional Action Plan on Sustainable Development, gender equality has become one of the aspects of consideration in the preparation of program activities because women still face issues of underdevelopment in the economic sector, double burden, and violence;
- Until now, there is no climate policy at provincial level that integrates gender perspectives.

3.3.2. Possibility of an integration of gender dimension into climate change policy and action

Strategic issues of climate change in Yogyakarta City are closely related to women's basic needs such as the availability of clean water, private and public green open spaces, and a healthy and comfortable environment. Urban poor women experience difficult situations when facing disasters related to floods, cyclones, water availability, and so on. The ground water resources has decreased significantly, both due to climate change and the construction of hotels and shopping centers in Yogyakarta City. Hence, women must use paid water, both at home and in the public through priced public toilets/bathrooms. Women also need long time to be able to draw water from the wells, because the wells are getting deeper. This situation triggered greater economic challenges for poor families, especially women. Women must increase their income in order to be able to access clean water. Women still experience double burdens, economic problems, domestic violence, as well as

lack of involvement in decision making in the public sphere. Likewise in situations of floods, whereas women experience multiple burdens in caring for and ensuring the availability of family food when a flood occurs. On the other hand, women's involvement is seen more at the level of climate change activities such as waste bank, urban farming, green villages, not at the level of policy making and program planning and accounting.

Therefore, first, the gender dimension is very important to be integrated into various policies and programs, so that it is not only a focus of one sector, namely the Empowerment Service for Women and Children. Second, clearer Gender Mainstreaming regulations are needed in all sectors, especially related to climate change, disaster, and the environment. Third, it is important for the government to conduct studies on the impact of climate change for women. This study is important to clearly see the involvement and impact for women in various actions or activities in disaster, environmental management, or relevant climate actions. Fourth, it is necessary to study the impact of development in urban areas for women based on access, control, participation, and benefits and impacts.

Chapter 4.

Knowledge gaps and challenges

The management of information, policy and program documents by the government through online media, is enough to help the process of preparing the status quo report, especially related to general data, such as demographics, monographs, and disasters. However, documents relating to climate change policies or programs are not widely available, because climate change issues have not been responded to in specific policies and programs. In addition, several official websites have also not been updated, including the Yogyakarta City Government website (<https://jogjakota.bps.go.id/>), the data provided is still in 2013.

The absence of Regional Action Plans for Adaptation to Climate Change issued by Provincial and Municipal Governments. This situation requires a more detailed examination of documents, so that there are found slices of policies or programs related to climate change, both in the context of mitigation or climate adaptation.

Preliminary conclusions

The city of Yogyakarta is disaster-prone city and currently included in one of the cities affected by climate change. However, this situation has not been responded to by the City government in the form of climate change policy. Climate change has only become one of the strategic issues and has not become a major issue. On the other hand, Yogyakarta City's communities proactively initiated activities or actions related to climate change, both in the context of mitigation or adaptation. Hence, it is important for the government to strengthen community actions within the framework of climate change, both in the form of climate change policies or programs.

In regard to gender, the City government needs to encourage all existing agencies to make gender perspective an inseparable part of climate change policy or programs / actions. So that women's involvement is not in the context of object or formality or merely the legitimacy of the implementors' activity. In a broader sense, it is important to emphasize the representation and involvement of women in the framework of opening women's access, control and participation, so that the impact and benefits can be enjoyed by women in accordance with women's needs.

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