

CENTRAL ASIAN JOURNAL OF THEORETICAL AND APPLIED SCIENCES

Volume: 02 Issue: 12 | Dec 2021 ISSN: 2660-5317

Strategy for Achieving the Target of Sustainable Development Goals (SDGs) in Payakumbuh City Towards a Sanitation-worthy City

Betha El Sherra, Lisa Anisa, Rico Irvanda, Abdul Razak, Eri Barlian, Indang Dewata, Linda Handayuni

Master Program of Environmental Sciences, Universitas Negeri Padang (UNP) – Indonesia

Received 25th Oct 2021, Accepted 27th Nov 2021, Online 16th Dec 2021

Annotation: Indonesia has integrated the SDGs targets into the 2015-2019 RPJMN targets. The targets consist of 100% access to drinking water, 0% of urban slum area, and 100% access to sanitation (100-0-100). Payakumbuh is the only city in Indonesia that has the opportunity to reach 100-0-100 in 2024. Until 2020, Payakumbuh City has achieved access to the drinking water of 98.24%, the area of urban slums is only 0.32% and access to sanitation is 95.98%. the target of SDGs in Payakumbuh City is towards a proper sanitation city, namely the achievement of the 100-0-100 program. This study uses the SWOT analysis method by mapping the potential and obstacles of Payakumbuh City in achieving the SDGs targets. Thus, it is hoped that strategies and policies can be drawn up to achieve the SDGs targets towards Payakumbuh City with proper sanitation.

Keywords: SDG's targets, proper sanitation, potentials and barriers, strategies and policies.

INTRODUCTION

The agenda for the SDGs was agreed upon by world leaders at the United Nations Headquarters on 25 September 2015, including Indonesia. This agenda is a global action plan containing 17 Goals and 169 Targets to be achieved by 2030 to end poverty, reduce inequality, and protect the environment. In line with this, Indonesia has integrated the SDGs targets into the 2015-2019 RPJMN targets. The targets consist of 100% access to drinking water, 0% of urban slum area, and 100% access to sanitation (100-0-100). Unlike the Millennium Development Goals (MDGs), the SDGs are designed in a participatory manner by involving all development actors, including the government, Civil Society Organizations (CSOs), the private sector, academia, and so on. The SDGs have the main principle of "Leave No One Behind" so that they are expected to be able to answer procedural justice and substantial justice. Where, groups that have been left behind are expected to be fully involved in the development process and it can be assessed to what extent development policies and programs can answer all the problems of citizens, especially disadvantaged groups (BAPPENAS, 2017).

The realization of the achievement of the SDGs target has not been achieved by the end of the 2015-2019 RPJMN, so it continues to be the target of the 2019-2024 RPJMN. In accordance with the goals of the 6 SDGs, namely ensuring the availability and management of clean water and sustainable sanitation for all (access to sanitation and safe drinking water), various strategies for developing drinking water and

sanitation in various regions in Indonesia have been prepared. Payakumbuh City is the only city in Indonesia that has the opportunity to reach 100-0-100 in 2024. Until 2020, Payakumbuh City has achieved access to the drinking water of 98.24%, the area of urban slums is only 0.32. % and access to sanitation is 95.98%. This study has the main objective of developing a strategy for achieving the SDGs target in Payakumbuh City towards a proper sanitation city so that it is hoped that by 2024 Payakumbuh City will be able to achieve the 100-0-100 target without having to waste time until 2030. The specific objectives of this research are: 1) Identify and analyze the potential and obstacles of Payakumbuh City to achieve the SDGs target in 2024; and 2) Recommend strategies for achieving the SDGs targets in Payakumbuh City by 2024.

METHODS

The study location is in Payakumbuh City. This study uses the Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis methods by mapping the potential and obstacles of Payakumbuh City in achieving the SDGs targets.

FINDINGS

Basic sanitation is minimum sanitation to meet the availability of a healthy environment according to health requirements and focuses on monitoring environmental factors that affect human health status (Suryani, 2020). Facilities that include basic sanitation include healthy latrines, garbage disposal sites, waste disposal, and the availability of clean water.

According to the BPS, proper sanitation is a sanitation facility that meets health requirements, including toilets with a gooseneck or with a lid, a place for final disposal of feces using a septic tank, or a wastewater management system (SPAL), both used alone or together with households other (communal). According to BPS, the 5 indicators related to proper sanitation in the SDGs are:

1. Percentage of households that have handwashing facilities with soap and water.
2. Percentage of households that have access to proper sanitation.
3. Percentage of households that still practice open defecation (BABS).
4. Percentage of households that have access to a centralized domestic wastewater management system (SPALD-T).
5. Percentage of households that are served by the sewerage management system.

The SDGs are global action plans that have been agreed by world leaders including Indonesia to end poverty, reduce inequality and protect the environment, which contains 17 goals with 169 targets. This SDGs target can be applied universally and globally. The implementation of the SDGs in Indonesia, of course, takes into account national realities, different levels of development and respects national and regional priority policies.

The 6th SDGs agenda aims to ensure the availability and sustainable management of clean water and sanitation for all, the 6th SDGs Goals have 6, as follows:

1. Achieve universal and equitable access to safe and affordable drinking water for all
2. Achieve access to adequate and equitable sanitation and hygiene for all, and stop the practice of open defecation, paying special attention to the needs of women, as well as vulnerable groups of people.
3. Improve water quality by reducing pollution, eliminating dumping and minimizing the release of hazardous materials and chemicals, halving the proportion of untreated wastewater, and increasing the recycling and safe reuse of recycled goods globally.

4. Improve water use efficiency in all sectors, and ensure sustainable use and supply of freshwater to address water scarcity, and significantly reduce the number of people suffering from water scarcity.
5. Implement integrated water resources management at all levels, including through appropriate cross-border cooperation.
6. Protect and restore ecosystems related to water resources, including mountains, forests, wetlands, rivers, groundwater, and lakes (Widiastuti, 2020).

RESULTS AND DISCUSSIONS

Payakumbuh City is a small city located in West Sumatra Province with an area of $\pm 80.43 \text{ km}^2$. Overall, the administrative area of Payakumbuh is surrounded by Limapuluh Kota Regency. Payakumbuh City consists of 5 sub-districts with 47 villages, namely East Payakumbuh sub-district consisting of 9 villages, West Payakumbuh sub-district consisting of 17 villages, North Payakumbuh sub-district consisting of 9 villages, South Payakumbuh sub-district consisting of 6 villages, and Lamposi Tigo Nagori sub-district consisting of 6 Villages [BPS, 2019].

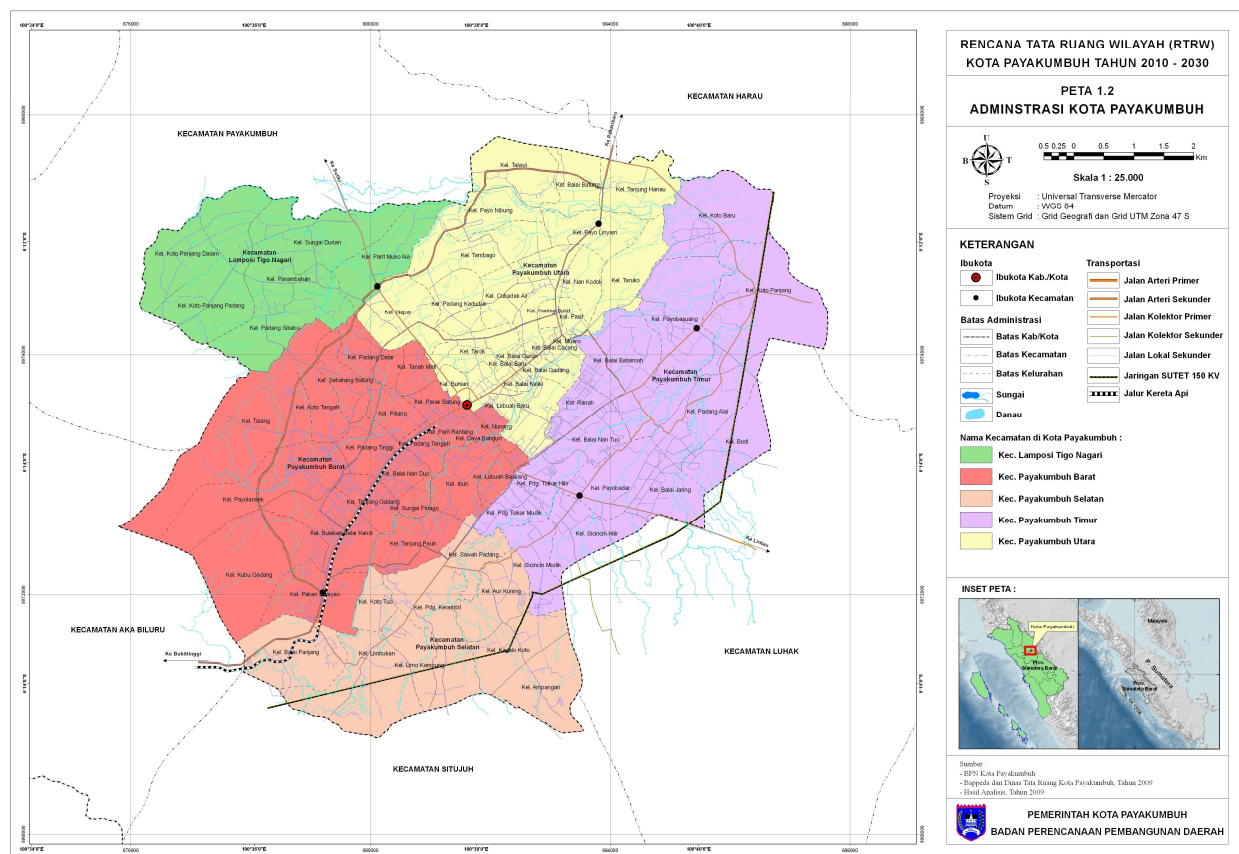


Fig 1. Map of Payakumbuh City administration.

Based on the Payakumbuh City Book in 2021 figures, data on population density in Payakumbuh City can be seen in Table 1 below.

Table 1. Total population density of Payakumbuh City in 2020 (In Indonesia)

No	Kecamatan	Luas (Km ²)	Jumlah Penduduk (Jiwa)	Kepadatan Penduduk (Jiwa per Km ²)
1.	Payakumbuh Barat	19,06	54,26	2.861
2.	Payaumbuh Timur	22,73	29,31	1.291
3.	Payakumbuh Utara	14,53	33,16	2.219
4.	Payakumbuh Selatan	14,68	11,96	817
5.	Lamposi Tigo Nagori	9,43	11,52	1.218
Jumlah		80,43	140,20	1.735

Source: BPS Payakumbuh City, 2021 (BPS, 2021)

Based on Table 1 above, it can be seen that from 5 sub-districts in Payakumbuh City, West Payakumbuh sub-district has the highest population density, where the character of the area owned is an urban area with a trade and service business sector. Access to Clean Water in 2019 can be seen in Fig 2 below.

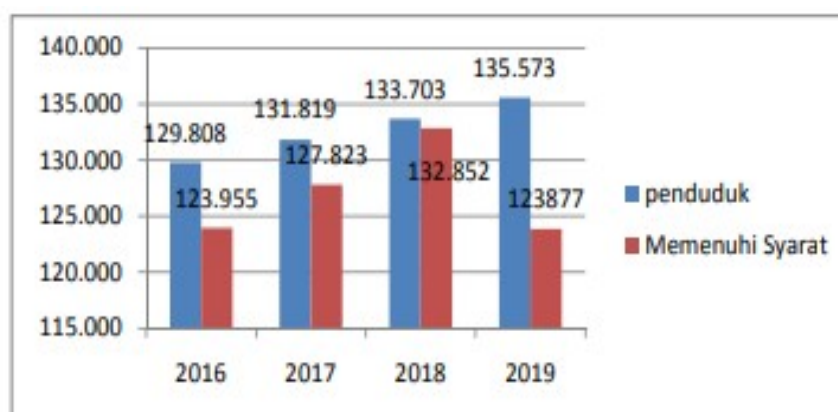


Fig 2. Access to drinking water in Payakumbuh 2016-2019

According to the source, access to drinking water in Payakumbuh can be distinguished, among others: PDAM as many as 108,450, piping as many as 12,635, the number of dug wells as many as 1,796, drilled wells as 847, protected springs as many as 75, SPT as many as 10 and drinking water depots 160, meet the health requirements as many as 123,877 pieces (91.3 %). The number of people with access to proper drinking water is 135,573 people (DK, 2020).

Judging from the percentage of household heads who use latrines in 2019, there are 100% who access healthy latrines or as many as 33,649 households. Thus, it can be seen that there is an increase in changes in the behavior of clean and healthy living in the Payakumbuh community (DKPS, 2020).

From 47 kelurahan, all kelurahan have stopped open defecation (Stop defecation). To increase the achievement of Stop Open defecation, namely CLTS activities through triggering the community, and through assistance for the construction of individual septic tanks (DAK) for sanitation activities in collaboration with the Payakumbuh Public Housing and Settlement Areas Office.

It can be concluded that access to proper sanitation in Payakumbuh is very good, but not all access is by existing standards of feasibility and safety. This is because there are still many community latrines that do not have an impermeable septic tank and there are not enough places for domestic waste management at household and communal/integrated scales.

Based on data from DIPLHD Payakumbuh City in 2021 along with data on waste generation in Payakumbuh City in 2020.

Table 2. Estimated amount of Payakumbuh city waste generation in 2020 (In Indonesia)

No	Kecamatan	Jumlah Penduduk (Jiwa)	Timbulan Sampah (M ³ /hari)
1.	Payakumbuh Barat	54,26	37,98
2.	Payakumbuh Timur	29,31	20,51
3.	Payakumbuh Utara	33,16	23,21
4.	Payakumbuh Selatan	11,96	8,37
5.	Lamposi Tigo Nagori	11,52	8,06
Jumlah		140,20	98,13

Source: Payakumbuh City Environmental Service, 2020

From Table 2 above, it can be concluded that West Payakumbuh sub-district is the largest contributor to waste generation in Payakumbuh City, which is 37.98 m³/day. Followed by North Payakumbuh sub-district of 21.21 m³/day, East Payakumbuh sub-district of 20.51 m³/day, South Payakumbuh sub-district of 8.37 m³/day, and Lamposi Tigo Nagori sub-district of 8.06 m³/day (DLH, 2021).

Waste management in Payakumbuh City is carried out through sorting, collection, transportation, processing and final processing. However, for the implementation of sorting has not been carried out by all households, it is only limited to hand houses that have received socialization from the Payakumbuh City Environmental Service. The existence of the Waste Bank and TPST also helps in sorting and reducing the amount of waste that reaches the Final Disposal Site (TPA). The percentage of waste reduction and handling in 2019-2020 is as follows: waste handling that has been carried out is 78.62% of waste generation and waste reduction is 16.23% of waste generation.

RESULT ANALYSIS

To determine strategies and policies that can be carried out to achieve the SDGs target towards Payakumbuh City with proper sanitation, it can be done through the SWOT Analysis method (Strengths, Weaknesses, Opportunities, Threats). The results of the SWOT analysis of sanitation conditions in Payakumbuh City are as follows:

Internal Factor

➤ Strengths:

1. The topography of Payakumbuh still allows for the development of communal SPALD facilities.
2. Stool Management Installation (IPLT).
3. Institutional and driving community-based total sanitation program (STBM).
4. Payakumbuh City already has several Regional Regulations that support the realization of a proper sanitation city.
5. Access to adequate sanitation.

➤ Weaknesses:

1. Lack of financial capacity of the Payakumbuh City Government.
2. Lack of coordination between agencies in setting policies to increase community participation.

3. It is necessary to increase the provision of sanitation facilities and infrastructure.
4. Lack of socialization in the community.

External Factor

➤ **Threats:**

1. Increase in population from birth and migration.
2. The quality of groundwater is decreasing.
3. The emergence of disease outbreaks due to lack of public awareness in the application of good sanitation.

➤ **Opportunities:**

1. Development of IPLT as a source of PAD Payakumbuh.
2. Utilization of social media as an acceleration of proper sanitation information.
3. Technological developments can help the community in managing domestic waste.

Strategy and Policy:

Based on the internal and external factors above, strategies and policies that can be made to achieve the SDGs target towards Payakumbuh City are suitable for sanitation can be formulated as follows:

➤ **SO (Strengths-Opportunity) Strategy:**

1. Development of communal SPALD facilities by utilizing technological developments in domestic waste management to support access to adequate sanitation.
2. Increased Target Retribution from the use of IPLT Payakumbuh City
3. Socialization of the implementation of the STBM program and the implementation of Regional Regulations to the community can be carried out through social media to accelerate the delivery of information.
4. Increasing the participation of BUMN and BUMD in providing access to proper sanitation for the community.

➤ **ST (Strength-Threat) Strategy:**

1. Implementation of Regional Regulations that have been drafted for the realization of a sanitation-worthy city by mobilizing the community through the STBM Program.
2. To manage domestic waste through the construction of SPALD and communal septic tanks to prevent the degradation of groundwater quality.
3. Implementation of the STBM Program and increasing access to sanitation to prevent the development of disease.

➤ **WO (Weakness-Opportunity) Strategy:**

1. Increase regional income through IPLT to assist APBD in providing sanitation facilities and infrastructure.
2. Increase the use of social media in the implementation of socialization in the community.
3. Improvement of sanitation facilities and infrastructure by utilizing technological developments.

4. Increase the participation of BUMN and BUMD in the provision of sanitation facilities and infrastructure.

➤ **WT (Weakness-Threat) Strategy:**

1. Increase financial capacity so that they can carry out the Family Planning socialization program to the community to prevent population growth.
2. Improve coordination between agencies and socialization in implementing policies to increase community participation to prevent disease outbreaks.
3. Improve sanitation facilities and infrastructure, both septic tanks and communal SPALDs to prevent groundwater quality degradation.

CONCLUSIONS

The potential of Payakumbuh City in achieving the SDGs target in 2024 is that the topography of Payakumbuh City still allows for the development of septic tank facilities and communal SPALD, Fecal Waste Management Installation (IPLT), institutions, and STBM Program movers. The City of Payakumbuh already has several local regulations that support the realization of a proper sanitation city, adequate access to sanitation, while the obstacles faced, are the lack of financial capacity of the Payakumbuh City Government, the lack of coordination between agencies in establishing policies to increase community participation, The need for increasing the provision of sanitation facilities and infrastructure, lack of socialization to the community. Payakumbuh City's strategy for achieving the SDGs targets in 2024 are:

1. Development of communal SPLAD facilities by utilizing technological developments for domestic waste management to support access to adequate sanitation.
2. Increased Target Levy from the use of IPLT Payakumbuh.
3. Socialization of the implementation of the STBM program and the implementation of local regulations to the community can be done through social media to accelerate the delivery of information.
4. Increase the participation of BUMN and BUMD in providing access to proper sanitation for the community.
5. Implementation of the Regional Regulations that have been prepared for the realization of a sanitation-worthy city by mobilizing the community through the STBM Program.
6. Carry out domestic waste management through construction of SPLD and communal septic tanks to prevent degradation of groundwater quality.
7. Implementation of the STBM Program and increasing access to sanitation to prevent the development of disease.
8. Increase regional income through IPLT to assist APBD in providing sanitation facilities and infrastructure.
9. Increase the use of social media in the implementation of socialization in the community.
10. Improvement of sanitation facilities and infrastructure by utilizing technological developments.
11. Increase the participation of BUMN and BUMD in the provision of sanitation facilities and infrastructure.
12. Increase financial capacity to be able to carry out Family Planning socialization programs to the

community to prevent population growth.

13. Improve coordination between agencies and socialization in implementing policies to increase community participation to prevent disease outbreaks.
14. Improve sanitation facilities and infrastructure, both septic tanks and communal SPALDs to prevent a decrease in groundwater quality.

REFERENCES

1. BAPPENAS, 2017, Ringkasan Metadata Indikator Pembangunan Berkelanjutan (TPB) Sustainable Development Goals (SDGs) Indonesia, Bappenas.
2. Badan Pusat Statistik [BPS] 2019, Indikator Tujuan Pembangunan Berkelanjutan (TPB) Indonesia 2019, BPS RI.
3. Badan Pusat Statistik [BPS] Kota Payakumbuh, 2021, Payakumbuh Dalam Angka, BPS Kota Payakumbuh.
4. Dinas Lingkungan Hidup [DLH], 2021, Dokumen Informasi Kinerja Pengelolaan Lingkungan Hidup Daerah Tahun 2021.
5. Dinas Kependudukan dan Pencatatan Sipil [DKPS], 2019, Buku Profil Perkembangan Penduduk Tahun 2019
6. Suryani, A. S. 2020. Pembangunan Air Bersih dan Sanitasi saat Pandemi Covid-19. *Aspirasi: Jurnal Masalah-masalah Sosial*, 11(2), 199-214.
7. Widiastuti, A. 2019. Pengelolaan Sanitasi Lingkungan dalam Pembangunan Daerah di Kota Serang. *Jurnal Ekonomi-Qu*, 9(2).
8. Dinas Kesehatan [DK] Kota Payakumbuh, 2020, Profil Kesehatan, Dinas Kesehatan Kota Payakumbuh Tahun 2020.