



International Journal of Multidisciplinary Research and Growth Evaluation



International Journal of Multidisciplinary Research and Growth Evaluation

ISSN: 2582-7138

Received: 01-06-2021; Accepted: 16-06-2021

www.allmultidisciplinaryjournal.com

Volume 2; Issue 4; July-August 2021; Page No. 308-310

The role of database systems in sustainable development goals in Indonesia

Nazla Aminy¹, Sanni Rolina Sipayung², Iskandar Muda³

¹⁻³ University of North Sumatera, Medan, Indonesia

Corresponding Author: Nazla Aminy

Abstract

In meeting the 17 main goals of development goals that can be achieved, the use of databases can encourage the achievement of these sustainable development goals. The development of digital technology has an influence of 89% on the performance of a country in meeting sustainable

development targets (SDGs). Indonesia is strongly committed to implementing the SDGs because national development goals and global development goals are mutually reinforcing. The database is an integral part of the SDGS data update.

Keywords: Database Management System (DMS), Sustainable Development Goals (SDGs)

1. Introduction

Databases have an important role in managing company data more effectively and efficiently. In its management, the database uses a program or database management system called the Database Management System (DMS). DMS supports the presentation of development data in an international format standardized by the United Nations. The data presentation format can be seen through the SDGS menu. SDGS is a world development agenda aimed at global human welfare. The agenda is sustainable development in which there are 17 goals with 169 measurable targets and agreed upon by 193 countries including Indonesia.

2. Literature Review

According to Central BPS, Sustainable Development Indicators 2013 is one of the annual publications published by BPS since 2002. This publication presents data related to social, economic, environmental, and institutional indicators sourced from BPS and other institutions. These indicators are an illustration of the development goals so far in order to achieve sustainable development.

3. Method

Database Management Essentials provides the foundation needed for a career in database development, data warehousing, or business intelligence, as well as for the entire Data Warehousing for Business Intelligence specialization. It includes creating relational databases, writing SQL statements to extract information to satisfy business reporting requests, creating entity relationship diagrams (ERDs) for designing databases, and analyzing table designs for redundancy. Sustainable Development Goals (TPB) or Sustainable Development Goals (SDGs) are maintaining the improvement of the quality of the community's economy on a regular basis, maintaining the quality of the environment and ensuring and implementing good governance that is able to maintain the quality of life. from one generation to the next. At the stage of preparing the SDGs index, there are several stages that occur: First, the initial stage is the data normalization stage. This normalization is used so that the data is normally distributed and the data on all indicators can be compared, selects variables that are above or below the limit, determine this limit using five decision steps. Then, each variable is changed from 0 to 100 using the formula:

$$x' = \frac{X - \min(x)}{\max(x) - \min(x)}$$

Based on the above formula x is the raw data value, $\max$ and $\min$ indicate the limits for the best and worst performance, and x' is the normalized result or value after resizing, the calculation results are easy to compare across all indicators. After setting value limits and normalizing the data, the next step is to collect an index starting from each SDG indicator, and calculate the SDG index, estimating each goal using arithmetic and averaging across the 17 SDGs. Lastly, there were sensitivity tests performed and Monte Carlo simulations at the index and objective levels.

This is to ensure that the resulting score is carefully ascertained even if it is only a small index difference. SDGs formulation is High-Level Panel of Eminent Persons (HLPEP), Open Working Group (OWG) and Sustainable Development Solutions Network (SDSN).

4. Result and Discussion

Optimal use of information and communication technology (ICT) can help countries accelerate the fulfillment of the Sustainable Development Goals (SDGs). On the other hand, countries that do not yet have adequate mastery of digital technology will find it difficult to achieve the points in the SDGs. The report states that technology can accelerate the fulfillment of the SDGs in several ways. First, with optimal access to information and technology services. The development and utilization of technological infrastructure such as satellites, mobile phones, and others will improve the standard of living of all levels of society. The development and utilization of digital technology supporting infrastructure will also have an impact on connectivity between individuals and organizations. Communication that can be done instantly will increase productivity and innovation in all areas of development. "This enables accelerated development in vital sectors in a country," the report said.

Good mastery of digital technology will also increase productivity and effectiveness of resources. Thanks to technological advances, a country can increase the output of resources, reduce the side effects of using commodities, and provide the infrastructure to collect and analyze large amounts of data. The report also states that big data analysis made possible by mastering digital technology will help a country uncover the hidden potential in data. This will later be able to support the development and achievement of the SDGs more efficiently and quickly.

SDGS from High Level Panel for Eminent Persons (HLPEP)

To conduct a special discussion on the sustainable development agenda, the Secretary General United Nations establishes High-Level Panel of Eminent Persons on Post-2015 Development Agenda (HLPEP). HLPEP was formed as a form of initiating efforts to prepare the post-2015 development agenda and on 24-27 March 2013 held a High Level Meeting in Bali to prepare a report to be submitted to the Secretary General of the United Nations at the end of May 2013. This panel is co-chaired by the President of the Republic of Indonesia, Susilo Bambang Yudhoyono, the British Prime Minister, David Cameron and the President of Liberia, Ellen Johnson-Sirleaf. The panel includes 26 prominent figures from government, private sector, academia, civil society and youth, and is based on geographic and gender balance. The purpose of this HLPEP is to provide advice and recommendations to the Secretary General of the United Nations regarding the vision of overcoming global development challenges. In addition, HLPEP is also tasked with compiling a report to the Secretary General of the United Nations which contains recommendations regarding the vision and form of the post-2015 development agenda that are firm and clear but easy to achieve.

In his report entitled A New Global Partnership: Eradicate Poverty and Transform Economies Through Sustainable Development, HLPEP proposes 12 goals with 54 post-2015 development targets. However, HLPEP has not yet determined the indicators of these goals and targets. The

proposed goals and targets are as follows:

- End poverty
- Empowerment of women and girls and gender equality
- Provide quality education and lifelong learning
- Ensure a healthy life
- Ensure food security and good nutrition
- Achieve universal access to water and sanitation
- Ensure sustainable energy.
- Ensure sustainable energy.
- Manage natural resource assets in a sustainable manner
- Ensure good governance and effective institutions
- Ensure a stable and peaceful society
- Create a global environment and a catalyst for long-term financing.

SDGs from the Open Working Group (OWG)

One of the main outcomes of the Rio+20 Conference, held in Rio de Janeiro in June 2012 was an agreement by member states to start the process for develop a set of sustainable development goals (SDGs). The results of the Rio+20 conference mandated the 30 members of the Open Working Group (OWG) of the UN General Assembly to prepare proposals for the SDGs. The OWG itself was established on January 22, 2013. During its journey, the OWG member countries submitted a series of proposals related to the SDGs. At its thirteenth and final meeting in New York on July 19, 2014, the OWG proposed 17 goals covering sustainable development issues, including ending poverty and hunger, improving health and education, making cities more sustainable, fighting climate change, and protecting Forest.

The 17 proposed objectives are as follows:

1. End all forms of poverty
2. End hunger, achieve food security and improved nutrition, and promote sustainable agriculture
3. Ensure a healthy life and improve the welfare of the population at all ages
4. Ensure equitable and inclusive quality education and promote lifelong learning opportunities for all
5. Achieve gender equality and empower women and girls
6. Ensure the availability and sustainable management of water and sanitation
7. Ensure access to affordable, reliable, sustainable and modern energy
8. Promote equitable and sustainable economic growth, full and productive employment and decent work for all
9. Build resilient infrastructure, promote inclusive and sustainable industrialization and encourage innovation
10. Reducing inequality within and between countries
11. Creating cities and human settlements that are just, equitable, safe, resilient and sustainable
12. Ensure sustainable production and consumption patterns
13. Take urgent action to combat climate change and its impacts
14. Conserving oceans, seas and marine resources in a sustainable manner for sustainable development
15. Protect, restore and promote sustainable use of terrestrial ecosystems, manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

SDGs of Sustainable Development Network Solutions (SDSN)

In the framework of formulating the SDGs, the Secretary General of the United Nations has also established Sustainable Development Solutions Network (SDSN). SDSN is an independent network consisting of various stakeholders, academics, private sector, non-governmental organizations assigned to find practical solutions for development goals under the leadership of Jeffrey Sach. In its development, SDSN proposed 10 goals with 30 targets and 100 indicators. The proposed objectives are as follows:

1. End extreme poverty including hunger
2. Promote economic growth and decent work
3. Ensure effective learning for all children and youth for their lives and environment
4. Achieve gender equality, social inclusion and human rights for all
5. Achieve health and well-being at all ages
6. Improve agricultural systems and achieve rural prosperity
7. Empower inclusive, productive and resilient cities
8. Reducing climate change and ensuring sustainable energy
9. Maintain biodiversity and ensure proper management of water, oceans, forests and natural resources
10. Transforming governance and technology for sustainable development

In the implementation of the SDGs, data availability has been improved, but still needs improvement. To overcome this, HLPEP suggests carrying out a data revolution. The essence of the data revolution includes two things, namely the integration of statistics in both the public and private sectors and building trust between the public and the government through transparency and accountability. Following up on the proposed sustainable development goals with various monitoring indicators, it is hoped that this publication can be an initial study to map the indicators, targets and objectives of the SDGs that have been proposed and identify their objectives. Availability of these indicators in Indonesia. In addition, this publication is also expected to provide information on the indicators of the approach used to monitor sustainable development goals.

5. Conclusion

Community participation is needed to integrate data owned by the community and the government scientifically and using technology, so that conflicts at the bottom (society) do not become an obstacle in growing the economy and absorbing many jobs for the surrounding community. However, what happens is that there is still a lot of overlapping data from this one map policy. Differences in data owned by the community and local stakeholders will make the data less accurate. This will hinder future sustainable development strategies. In the future, the government's burden in realizing the 8th SDGs will be even heavier. Utilization of technology and geospatial information is expected to assist the government in overcoming existing problems by taking appropriate and accurate actions. The geospatial information industry can be used as an effort other than providing a stimulus to encourage economic growth in Indonesia. The geospatial industry in several countries shows a positive trend in the economy.

In addition, geospatial data can also be used to increase the

rate of investment in order to reduce unemployment due to the impact of the layoff pandemic in Indonesia. The geospatial data in question is a one map policy and certification of HR and the geospatial information industry. Utilization of geospatial data is important during the pandemic to support data statistics. Geospatial data will be evidence that many problems occur in the field. The fluctuating policies put pressure on the economic sector above the interests of health. This decision making has an impact on different data and the lack of synergy between the central government and local governments. The one map policy that is being formed by the government through the Coordinating Ministry for Economic Affairs and the Geospatial Information Agency should be used to support economic growth and employment during this pandemic.

The role of the database in development has a great contribution to the actions to be taken. Especially in supporting the SDGs and industry 4.0 that utilizes technology and data analytics (Schwab, 2017). The One Map Policy is expected to be able to solve geospatial data problems in Indonesia. This policy is based on Presidential Regulation Number 9 of 2016 where the government will accelerate maps with an accuracy scale of 1:50,000. The One Map Policy summarizes about 85 thematic maps from 19 ministries or agencies and 34 provinces with the main objectives:

- Spatial planning
- National Resource Management,
- sustainable development,
- Disaster Risk Reduction Management,
- Policy and Decision Making.

6. References

1. Central Bureau of Statistics. Sustainable Development Indicators. Jakarta: Central Bureau of Statistics, 2013.
2. Niakaniji A, Jafarian JH. Web MTD: Defeating Crosssite Scripting Attacks Using Moving Target Defense. Security and Communication Networks, 2019.
3. Tata S. Management information System. Jakarta: ANDI OFFSET, 2003.
4. Progress Report on the Achievement of Indonesia's Millennium Development Goals 2011. Jakarta: Kemenpan/Bappenas, 2011.
5. Ginandjar Kartasasmita. Development for the People, Jakarta: PT. Cidesindo, 1996.
6. Kemenpan/Bappenas. Progress Report on the Achievement of Indonesia's Millennium Development Goals 2007. Jakarta: Kemenpan/Bappenas, 2007.
7. Republic of Indonesia. Regulation of the President of the Republic of Indonesia No. 8 of 2008 concerning the National Disaster Management Agency. State Secretariat: Jakarta, 2008.
8. SDSN. Indicator and a Monitoring Framework for Sustainable Development Goals, Launching a Data Revolution for the SDGs. New York: SDSN, 2014.