

The Opportunities For Sustainable Consumption And Production In Central Sulawesi

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Abstract

This article discusses about the opportunities for sustainable consumption and production in Central Sulawesi. Where Sustainable Consumption and Production (SCP) or sustainable consumption and production as part of the Sustainable Development Goals (SDG's), is basically an effort to realize environmentally friendly and sustainable consumption and production activities by all stakeholders globally, with integrated and systematic changes from the previous pattern which is not environmentally friendly and unsustainable. The method of this article is descriptive analysis. The results of the analysis show that Central Sulawesi Province has four sectors that have the opportunity to increase the economy, namely the forestry sector, agriculture and plantations, fisheries and industry. However, the main concern is the impact of consumption and production activities in each sector on a sustainable basis. To realize the achievement of SDG's 12 goals, the authors argue that all parties must be actively involved, especially the government as a policy maker to synergize with the community so that economic and ecological sustainability can be realized through responsible consumption and production patterns .

Keywords: Opportunities, challenges, SDS's, sustainable consumption and production.

INTRODUCTION

Sustainable Consumption and Production (SCP) is basically an effort to realize environmentally friendly and sustainable consumption and production activities by all stakeholders globally, with an integrated and systematic change from the previous pattern that is not environmentally friendly and unsustainable. Currently, the issue of climate change is very crucial for the sustainability of life globally. If it is associated with

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IJBQR, Volume 01 Issue 01, 2023



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sustainable development goals, then environmentally friendly lifestyles and sustainable consumption and production patterns play an important role in overcoming climate change.

However, the economic crisis as a result of the Covid 19 that has been going on for the past two years has had an economic impact on the entire world, including Indonesia. In general, the economic impact that occurs in Indonesia is in the form of changes in the volume of international trade, changes in tourism activities, high unemployment rates and changes in labor productivity (Alin Halimatussadiah et al). This is a challenge and a dilemma in itself. On the one hand, the government must try to meet the needs of the community and improve the economy through production activities, on the other hand, the consumption pattern of the community must begin to consider the impact on the sustainability of the next generation. Development can be increased through the empowerment of natural resources. However, environmental sustainability should not be excluded due to the profit orientation to be achieved. Changing consumption and production patterns of both food and other natural resources can reduce the ecological footprint which is an integral part of achieving the goals of the 2030 Agenda for Sustainable Development.

Based on the foregoing, this paper focuses on opportunities to realize responsible consumption and production in the Central Sulawesi region. This paper begins with a brief history of sustainable consumption and production, then development and ecological problems faced in implementing the 12th pillar of sustainable development goals. Next, the author describes sectors that become opportunities and challenges for sustainable consumption and production by looking at other regional examples that can be applied in Sulawesi. Middle.

A Brief History of Sustainable Consumption and Production (SCP).

Sustainable Consumption and Production (SCP) or sustainable consumption and production is one of the sub-themes of action towards the realization of *Sustainable Development* that has been proclaimed since the Rio Declaration in 1992. In the 8th principle of the Rio Declaration for the Environment and Development in 1992 stated that "... in order to achieve sustainable development and a better quality of life for all, countries should reduce and eliminate unsustainable consumption and production patterns and promote appropriate demographic policies". The Johannesburg Plan of Implementation (JPOI) in 2002 and the United Nations Conference on Sustainable Development (Rio+20 Conference) in Rio de Janeiro, Brazil in June 2012 strengthened the commitment to implementing SCP. At the Rio+20 conference, the document "The Future We Want" was agreed which contains an agreement on the implementation of the 10 Year

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Framework of Program on SCP (10Y FP SCP) at international and national levels. As a follow-up to the Rio+20 Conference, the United Nations General Assembly has adopted Resolution No. 66/288 dated 27 July 2012 which adopted the document “The future we want”, including paragraph 226 concerning “*the 10-year framework of programs on sustainable consumption and production patterns*” (10Y-FP SCP) as an international work agenda. The UNEP Governing Council in February 2013 has made the decision that UNEP is officially carrying out the role of 2 10Y FP SCP Secretariats internationally. UNEP coordinates with the National Focal Point SCP in each country to work together to develop and facilitate the implementation of the 10Y FP SCP at the international and national levels. In September 2015 at the United Nations General Assembly, countries agreed to set 17 global agendas to replace the Millennium Development Goals which ended in 2015. The 17 2030 Global Agendas are called *Sustainable Development Goals*. Goal 12 of the Sustainable Development Goals is Responsible Consumption and Production¹. The application of SCP at the national level is important to pay attention to stakeholders universally with consideration of the economic system and social system. Whereas the implementation of sustainable development lies in the main engine of the economic system, namely production and consumption activities as well as the social system, namely the interaction of all stakeholders and community members in meeting the needs of daily life.

Development and Ecological Issues

As a country that has great natural resources (SDA) potential, Indonesia is one of the attractive investment target countries for investors.



Figure 1. Contribution of Gross Regional Domestic Product in Indonesia in 2016-2017 in Indonesia

Figure 1 above shows that the distribution of the regional economy has shifted slightly towards the eastern part of Indonesia. Data from the Indonesian Central Statistics Agency for the Central Sulawesi region shows the Growth Rate of Quarterly Gross Regional Domestic Product (GRDP) 2010 constant prices for 2015-2019 in general experienced growth. There are things that are very prominent from the data, especially those from the Mining and Quarrying sector, especially in 2019 experiencing growth from year to year. Natural resources that contribute to GRDP come from Metal Ore Mining/Iron Ore Mining with growth data in 2015 of 4,003, in 2016 of 5,075, in 2017 of 6,406, in 2018 of 7,398 and in 2019 of 8,865 (in units of billion rupiah). In terms of exports, the largest contribution to exports came from iron and steel worth US\$ 1,034.28 million or 86.91 percent of the total export value. During January-October 2021, the total export value was recorded at US\$9,721.13 million, through Central Sulawesi at US\$9,651.29 million and other provinces at US\$69.84 million. (Central Sulawesi Prov BPS, 2020)



Figure 2. Development of Export and Import of Central Sulawesi October 2021

This situation becomes a dilemma between the economic and ecological aspects. The increasing economic development collided with environmental conditions which began to show a negative impact on environmental sustainability. For example, sand mining in the Donggala area, Central Sulawesi, has a negative impact on the environment in the form of a reduction in the discharge of water wells and has an impact on public health which causes disease. In addition to upper respiratory tract infections or ARI, another disease that many people suffer from is itching (BBC News Indonesia, 2015). The results of research by Prasetyanto and Sari (2021) show that economic growth and energy consumption have a positive and significant effect on environmental degradation (Prasetyanto and Farmila, 2021). This can happen because there is no harmony between efforts to improve community welfare and environmental sustainability. This is a difficult task for the government as a policy maker in the utilization of natural resources so that it is carried out in such a way, especially at the regional level that is in direct contact with natural resources. Environmental pollution may be difficult to eliminate, but it must be controlled as efficiently as possible for the welfare of the people without ignoring the ecological impact in the future.

Opportunities and Challenges of Utilizing Natural Resources for Sustainable Production and Consumption in Central Sulawesi

Agricultural products from various agricultural and plantation sectors are another opportunity for economic growth in Indonesia. Central Sulawesi Province, the capital city of Palu has an area of 61,841.29 Km and a population of 2,985,734 (in 2020). Central Sulawesi with 12 districts, of which have a lot of natural resources that can compete in the world export market share. Such as Sigi, Poso, Donggala and Banggai Laut Regencies. Forest products, agriculture and plantations, marine products and industrial products are the four components that contribute to economic growth.

The following are some of the main components that contribute to the economy in Central Sulawesi. First, is the forest product that is widely exported to various worlds is wood. Second, the main agricultural and plantation products of Central Sulawesi are rice, corn, peanuts, green beans and sweet potatoes. Plantations include cocoa, coconut, cloves, tobacco and rubber. Meanwhile, for food crops, the products produced are rice, cassava, corn and soybeans. Cocoa bean products have also been able to penetrate the export market to the continents of Europe, Asia and the United States. Parigi Moutong is the largest producer of cocoa. Not to forget palm oil products managed by large companies located in Buol Regency, Morowali Regency, Donggala Regency and Banggai and Moutong Regency. Third, the results of marine aquaculture production. For fishery production, the leading products in the marine sector are shrimp, tuna, skipjack, tuna, sea

cucumbers, singletons and seaweed. The potential development of the marine sector in Central Sulawesi is spread across the districts of Donggala, Parigi Moutong, Tolitoli, Banggai and Banggai Islands. Finally, production from the industrial sector comes from the results of mineral and mineral resources in the form of industrial metal minerals, building materials and fossil fuels such as oil and coal(Prahu-Hub,2020).

Even though Indonesia has been affected by the COVID-19 pandemic for the past two years, the economy of Central Sulawesi for the second quarter of 2021 has grown by 15.39% compared to the first quarter of 2021 of 6.25%. The agricultural sector experienced an increase in food crop production and an increase in the price of plantation commodities such as CPO, corn and coconut. However, what dominates the economic growth in Central Sulawesi is the improvement in nickel downstream performance and the acceleration of industrial estate development (JPIK,2019).

Opportunities in the forestry sector in the form of exportable timber also need to pay attention to sustainable production and consumption patterns. Steps that can be taken are reforestation and rejuvenation efforts for forest products. However, it will become an obstacle when the community does not understand the importance of using wood or other forest products legally and responsibly. This is important because the illegal use of forest products can have a negative impact on the ecosystem in the form of natural disasters such as flash floods and landslides which in turn have an impact on economic resilience. Lack of public understanding about illegal logging and its impacts requires continuous education. In addition, disaster mitigation education for the local community will raise awareness of the impact of illegal actions on the environment. Therefore, the role of the government in all relevant sectors needs to collaborate with the community in preventing and supervising violations of rules committed by certain individuals.

In the field of agriculture and plantations, the Governor of Central Sulawesi stated that to support improvements in the agricultural sector it is necessary to optimize production facilities through the construction of infrastructure networks to facilitate the distribution of agricultural products to production pockets in the market(Bilal Ramadhan,2021). As a region with relatively good agricultural and plantation outputs, residents of Central Sulawesi can also try to improve the economy by utilizing technology. The role of technology in digitizing trade can improve the economy effectively and efficiently. It can also support growth in the tourism sector. Steps that can be taken in agriculture and plantations are through the use of land and agricultural and plantation products as tourism objects both locally, nationally and even at the international level. Currently, the millennial generation can be a pioneer of digital trade through the use of technology and social media to offer travel innovations by taking care of plants and

gardening by applying sustainable concepts. For example, introducing the concept of "green house" or "urban farming" tourism which adopts plantations with narrow land through the assistance of environmentally friendly agricultural technologies such as the use of organic materials from processed organic waste, minimizing the use of single-use water for waters such as aquaculture, and even utilizing farm organic waste that is processed for agriculture. Furthermore, in the production process, the agricultural and plantation sectors can introduce environmentally friendly product packaging, as well as processing waste products in addition to selling the main product. For example, coconut products with various by-products such as handicrafts and alternative fuels from coconut shells. Several tours in Palu City, Central Sulawesi have seen this opportunity. This can be seen from tourist locations such as the Agrotourism Park in the Pandede area, Marawola District, Sigi Regency, Central Sulawesi, Duyu Palu Bangkit Vineyard, OVA Flower Garden in Pantoloan, Palu City and many other places that can be opportunities for economic growth. As has been done in the Bantul Regency, DIY as an Edu-ecotourism tourist destination that focuses on education about environmental sustainability as an example of a *green economy*. There needs to be participation from the community to become a tourist destination (Dini Yuniarti et al. 2022). This can be a positive thing when the government through related agencies jointly supports the actors in this field, especially in terms of policy making.

Next in the industrial sector. Indicator 12.4.2 (a) regarding the Amount of Hazardous and Toxic Waste (B3) that is Managed and the Proportion of B3 Waste that is Managed in accordance with Legislation (Industrial Sector) is important in seeing opportunities in the industrial sector, especially the mining sector. This is because this field has unresolved problems related to Hazardous and Toxic (B3) waste. The proportion of B3 waste treatment in Indonesia is dominated by the Mining, Energy and Oil and Gas (PEM) sector. Likewise with the conditions that occur in the province of Central Sulawesi in the mining industry. For example, sand mining in the Donggala area of Central Sulawesi has had a negative impact on the environment in the form of a reduction in the discharge of water wells and has an impact on public health which causes disease. In addition to upper respiratory tract infections or ARI, another disease that many people suffer from is itching (BBC News Indonesia). In addition, sand mining also has an impact on the existence of seaweed cultivation locations and the livelihoods of fishermen in the Donggala coastal area. The welfare of the local community has not been said to have improved (Mutia Allawiyah, 2019). One solution to overcome this problem is the issue of the provincial government's policy on supervision from licensing to accountability for the implementation of industrial activities. Weak control in the mining industry can threaten the ecological sustainability of the surrounding community and

future economic growth. Glavic in his research states that reducing emissions, pollution and specific energy, water, and use of raw materials (especially critical raw materials), as well as the role of digitalization, will be important in the future (Peter Glavič, 2021). Therefore, the role of society in current economic growth cannot be ignored along with the importance of ecological sustainability. The results of Anna's research on the coastal indigenous peoples of the West Papua Region which are considered a barrier to large-scale development are actually able to demonstrate the ability in the form of knowledge and traditional wisdom of the community to increase food security and the economic value of the products produced (Zuzy Anna, 2019). In addition, the results of Suryani et al's (2020) research show that the importance of a balance between economic actors, namely production, distribution and consumption (Suryani et al, 2019)

Solid Waste Problem in Central Sulawesi

The achievement of the target of pillar 12 towards sustainable consumption patterns in 2030 can be done, among others, by managing natural resources efficiently, managing toxic waste and pollutants, as well as encouraging industry, business and consumers to recycle and reduce waste. The consumption pattern of the world's population that cannot be said to be feasible comes from traders and consumers. So that it becomes the main task for every resident to maintain food and economic security through efficient use of resources. Indonesia produces less waste than other countries. However, Indonesia has not been able to manage waste wisely compared to other countries. This is related to indicator 12.8.1 concerning the Number of Public Facilities that Implement Minimum Standards and Services (MSS) and are registered ("Metadata-Pilar-Lingkungan-Edisi-II).

Waste management is still a serious problem in the capital city of Central Sulawesi Province. During 2020 alone, the Palu City Environmental Service (DLH) recorded that the waste generated was approximately 228 tons or 228 cubic meters. When compared from year to year, the volume of waste always increases. Where in 2019 only produced 117 tons of waste per day. This figure is obtained from the total waste transported by 38 fleets in a day. Garbage is a major problem, most of which comes from household waste (Adi Pranata, 2021). Not to mention the addition of the pandemic period which has increasingly increased the amount of household waste due to community consumptive patterns, as well as policies in the health sector for the use of masks and sanitation. This adds to the waste problem when the level of public awareness to sort waste is still very low. So it needs consistent education to increase public awareness about the bad impact of waste on a sustainable environment.



Figure 3. Distribution of Household Indicator Scorecard Values with Waste Sorting Behavior (%)

A small example that the government can do , one of which is a policy for all business actors as producers of clothing and food such as MSME actors to innovate *zero waste* by reducing plastic waste in product packaging . In other words, synchronization between the role of the Government and various related parties to reduce household waste must exist. Another thing that requires attention is the government's attention to the fulfillment of the availability of human resources, facilities and infrastructure for waste processing. To realize this *zero waste lifestyle* , the government needs to actively conduct socialization. The era of technology that is heavily influenced by social media is also an opportunity to transmit new habits in educating the public which can be done by utilizing community leaders and influencers on social media, for example @Suarasampah, @Waste4Change who provide education through their daily patterns and lifestyles. In the end is expected to influence the community indirectly about the importance of a *zero waste lifestyle* (Sust4in4ble, “Managing Waste: Technology & Lifestyle,” Inspirational Home, August 2021). This is also evident in the current trend, where attention is being paid to changes or “transitions” of socio-technical systems. Thus the current policy debate is more focused on the need to change consumption and

production patterns and address various ecological consequences to the environment such as decarbonization, absolute reductions in material output, or the creation of a plastic-free society (Yasuhiko Hotta, 2021).

CONCLUSION

Central Sulawesi Province has 4 main sectors that have the opportunity to increase the economy, namely forestry, agriculture and plantations, fisheries and industry. The magnitude of the opportunity is often accompanied by challenges. Several problems, such as the Covid-19 pandemic, have changed consumer behavior and production, causing problems of its own, especially the problem of meeting needs. For this reason, the government, especially the Province of Central Sulawesi and all stakeholders who are none other than the people of Central Sulawesi as a whole must work together to see the opportunities and challenges that exist without forgetting the local indigenous people. In addition, in the context of the National Economic Recovery (PEN) and information technology, especially in creating fair and competitive production activities in the business sector in various productive sectors. All stakeholders must pay attention to, monitor and comply with existing policies and regulations by making efforts to implement changes in responsible consumption and production patterns. So that not only meet socio-economic needs but ecology can be maintained in a sustainable manner.

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Appendix 1.

Table 1. Pillar 12 Achievement Targets "Sustainable Consumption and Production Patterns"

Pillar 12 Achievement Targets "Sustainable Consumption and Production Patterns"
12.1 Implement the 10-Year Framework of Programs on Sustainable Consumption and Production Patterns, with all countries taking action, led by developed countries, taking into account the development and capacities of developing countries.
12.2 By 2030, achieve sustainable management and efficient use of natural resources
12.3 By 2030, halve global per capita food waste at retail and consumer levels and reduce food losses along production and supply chains including post-harvest losses
12.4 By 2020 achieve environmentally sound management of chemicals and all types of waste, throughout their life cycle, in accordance with agreed international frameworks and significantly reduce the pollution of these chemicals and wastes to air, water and soil to minimize adverse health impacts human and environment

Pillar 12 Achievement Targets “Sustainable Consumption and Production Patterns”
12.5 By 2030, substantially reduce waste production through prevention, reduction, recycling and reuse
12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and integrate sustainability information into their reporting cycles.
12.7 Promote sustainable public procurement practices, in accordance with national policies and priorities
12.8 By 2030, ensure that people everywhere have relevant information and awareness of sustainable development and lifestyles in harmony with nature.
12.a Support developing countries to strengthen their scientific and technological capacities to move towards more sustainable patterns of consumption and production.
12 .b Develop and implement tools to monitor the impact of sustainable development on sustainable tourism that creates jobs and promotes local culture and products.
12.c Rationalize inefficient fossil fuel subsidies that encourage wasted consumption by eliminating market distortions, in accordance with national circumstances, including by restructuring taxes and phasing out if there are harmful subsidies, reflected by their environmental impact, taking full account of special needs and conditions developing countries and minimize the negative impacts that could have on their development in a way that protects the poor and affected communities