Palm Journal

paspi
Palm oil Agribusiness Strategic Policy Institute

Analysis of Palm Oil Strategic Issues **Vol. II, No. 01/01/2021**

MULTIFUNCTIONAL OIL PALM PLANTATION AND SUSTAINABLE DEVELOPMENT GOALS (SDGS)

By
Research Team PASPI

RESUME

The agricultural sector is the oldest economic activity on earth, even also have been part of the evolution of ancient human culture and civilization since thousands of years ago. Besides producing agricultural products to fulfill human food needs, the agricultural sector also has another function known as multifunctional agriculture, which has produced multibenefits and has been felt across generations since the beginning of human civilization on earth. This concept began to be discussed at the global level at the Rio Earth Summit in 1992, which showed that the agricultural sector has multiple important functions, namely an economic function (white function), socio-cultural function (yellow function/services), and two ecological functions consisting of water conservation (blue services), and preservation of natural resources (green function).

In concept of multifunction of agriculture, oil palm plantations as a part of agricultural sector also four main function, namely economy fuction (white function), socio-cultural function (yellow function/services), the function of water conservation (blue services), and the function of preserving natural resources (green function). This multifunctional oil palm plantation was enjoyed by people across generations, both Indonesian and even the global community, either who are directly or indirectly involved.

On the other hand, Sustainable Development Goals (SDGs) are a global development platform was launched by the United Nations (UN) in 2015 and has been adopted by countries in the world, actually is considered a "middle way" of two polarized paradigms/perspectives related of managing and utilizing of natural resources, such as developmentalists and environmentalists. This new paradigm shows that economic growth and environmental preservation can be managed optimally, so that can produce economic, social, and environmental of development goals in harmony that can be enjoyed in the long-term. Therefore, from 17 goals SDGs can be classified into three main aspects, namely economy (profit), social (people), and environment (planet).

If we examined, the SDGs has the same with the aspects in multifunctional agriculture concepts, namely 3-P terms or which can be translated into economic, social and environmental aspects. This shows that the multifunctional agriculture is the root of SDGs, so that the agricultural sector has implicitly fulfilled the SDGs principles and is a sustainable sector. Thus, it can be concluded that multifunctional oil palm plantations are also part of sustainable development and have proven to be sustainable. Therefore, the issue of sustainability (sustainability vs unsustainability) in oil palm plantations is unquestionable.

INTRODUCTION

Before the 1980s, there were two perspectives related to natural resource management, but these perpectives contradictory, namely the developmentalist and environmentalist. The concept of developmentalism was first initiated by Harry S Truman, President of the United States for the 1945-1953 period, where this concept aims to overcome poverty and other economic problems. Developmentalist have the perspective that natural resources and the environment must be utilized for development to improve the welfare of society from generation to generation.

However, this conventional development concept has been criticized because it only relies on indicators of economic growth without considering other aspects such as environmental and social aspects. Because of this criticism, an environmentalist was born which has the perspective that natural resources and the environment must be maintained/protected so that the source of life can be sustainable from generation to generation. They also considering the economic development will only damage/reduce the quality of the environment.

The convergence between developmentalists and environmentalists began in 1987, when the World Commission on Environment and Development (WCED) published an annual report known as Our Common Future or the Brundtland report. The report began to introduce sustainable development, this term is interpreted as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Furthermore, the concept of sustainable development was also adopted in one of the principles at the Rio Declaration in 1992.

Furhermore, the sustainable development paradigm then officially became an global development platform or known as the Sustainable Development Goals (SDGs) which was launched by the United Nations (UN) in 2015. SDGs are also considered a roadmap with achievement targets during the 2016-2030 period and have been agreed jointly by 193 UN member states. The aims of the SDGs platform is to end world poverty, improve living standards and welfare for all people around the world, and protect the sustainability of the planet earth.

As a global development platform, the SDGs have 17 goals or principles that can be grouped into three main aspects i.e economy, social, and environment. These aspects in the SDGs also reflects the concept of "Multifunctional Agriculture". This concept has long been introduced and becomes a topic in discussions at international meetings such as the Rio Earth Summit in 1992, but this concept is not as widely known as the SDGs concept. Even if these concepts are analyzed, there are similarities and linkages.

Therefore, this paper aims to discuss the similarities and linkages between the concept of Multifunctional Agriculture and SDGs. So from this paper, it can be shown that agricultural commodities (including palm oil) which have Multifunctional Agriculture, also contribute to the achievement of the SDGs.

MULTIFUNCTIONAL AGRICULTURE IN OIL PALM PLANTATION

The agricultural sector is the oldest economic activity on earth. Farming activities also have been part of the evolution of ancient human culture and civilization since thousands of years ago. Historical records also state that agricultural activities in the fields were the beginning of the formation of settlements/cities, because before that ancient human always moved from place to others place (nomadic) and carried out hunting.

Besides producing agricultural products to fulfill human food needs, the agricultural sector also has another function known as multifunctional agriculture. The concept of multifunctional in the agricultural sector has been going on for a long time and the multibenefits that generated have also been felt across generations since the beginning of human civilization on earth, however, the issue began to be discussed at the global level at the Rio Earth Summit in 1992. Declaration of the Committee of the Minister of Agriculture from various countries, The

Organization of Economic Cooperation Development (OECD, 2001) defines the multifunctional agriculture as follows: "Beyond its primary function of producing food and fiber, an agricultural activity can also shape the landscape provide environmental benefits such as land conservation, the sustainable management of renewable natural resources. and the preservation of biodiversity, and contribute to the socio-economic viability of many rural areas. Agriculture is multifunctional when it has one or several functions in addition to its primary role of producing food and fiber". In addition to its main function, namely an economic function (producing food and fiber), agriculture also has a social and ecological function. This declaration shows that the multifunctional concept built-in agricultural sectors and commodities (including plantations) has been recognized and accepted globally.

In a broader definition, multifunctional agriculture includes four functions, namely green function, blue services/function, yellow services/function, and white function (Aldington, 1998; Dobbs and Petty, 2001; Moyer and Josling, 2002; Harwood, 2003; Jongeneel and Slangen. , 2004, Huylenbroeck, et. Al., 2007). The **green functions** consist, amongst others, of landscape management and the upkeep of landscape amenities, wildlife management, the creation of wildlife habitat and animal welfare, the maintenance of biodiversity, improvement of nutrient recycling and limitation of carbon sinks. Other public benefist that can be created by agriculture are the **blue function**, which is contain water management, improvement of water quality, flood control, water harvesting and creation of (wind) energy. A third kind are called **yellow function**, is related to the role of farming for rural cohesion and vitality, ambience and development, exploiting cultural and historical heritages, creating a regional identity and offering hunting, agro-tourism and agro-entertainment. Finally, many authors acknowledge the **white function** produced by agriculture, such as food security and safety.

In brief, the multifunctions built-in the agricultural sector are the white function which describes the economic function, the yellow service describes the socio-cultural services, the blue services describes the water management conservation service, and the green function describes the function of preserving natural resources. Of this concept, only white function which can produce tangible and marketable products (agricultural products), while the other three functions/services, namely green functions, blue functions, and yellow functions are intangible and cannot yet take into account in the market system (economic calculation), whereas the environmental and cultural services can be enjoyed by everyone without exception (non-excludable and non-rivalry). The implication of this causes many people to underestimate the agricultural sector and considered losing than other sectors such as the industrial sector or the tourism sector.

However currently, the multifunctional agriculture (in a broad sense) has been adopted in developed countries, especially the European Union, the United States, Japan, and others (Aldington, 1998; Dobbs and Petty, 2001; OECD, 2001; Moyer and Josling, 2002; Huylenbroeck, et. Al, 2007; Moon, 2012). In addition, this concept also has been used as a basis argument for public policy (large-scale subsidies of agriculture) and international trade policy (protectionism). These public policies provided by various countries aim to "pay" for positive externalities such as ecological and social services/functions has been produced by the agricultural sector, which these functions havent economic value and the functions doesnt incluse the price paid by consumers.

Indonesia, which is also an agricultural country, which is this sector become one of the backbones of the economy with millions of people whose livelihoods as farmers/ranchers/planters, also recognize the concept of multifunctional agriculture. One of recognition about multifunctional plantation, which is contained in Law No. 39 of 2014. This law states that plantations have three functions, namely: (1) economic function (increasing the prosperity and welfare of the people, also strengthening regional and national economic structures); (2) ecological function (enhancing soil and water conservation, carbon sequestration, oxygen producer, and buffer for protected areas); and (3) socio-cultural function (as the bonding and unifying of the nation).

Thus, oil palm plantations (including its downstream industry) as one of the leading sectors of the plantation sub-sector (part of agricultural sector) also have multifunctional agriculture that are not only harvested/enjoyed by the current generation but also enjoyed by future generations throughout the world as long as the cultivation process continues. The following explains the empirical evidence that shows that oil palm plantation have multifunctional agricultue as described above.

Empirically, the economic function which also reflected the white function of oil palm plantations has been proven by many experts, including increasing farmer's income, absorb labour and reducing unemployment, regional economic development, creating economic growth centre in remote area and also become a source of foreign exchange and state income (Tomic and Mawardi, 1995; Sato, 1997; Susila, 2004; Sumarto and Suryahadi, 2004; Joni, 2012; Rofiq, 2013; World Growth, 2009, 2011; PASPI, 2014). Even the economic benefits of palm oil are also enjoyed by global community, such as European Union. Imports of CPO that are carried out provide great benefits both to GDP, government revenues, and increasing employment opportunities (Europe Economics, 2014).

Likewise, the socio-cultural function, or yellow function/services, of oil palm plantations has also been proven empirically, including its role in rural development, improving the quality of life, and reducing poverty both at the regional and national levels (Sumarto & Suryahadi, 2004; Susila, 2004; Gunadi, 2008. ; World Growth, 2009, 2011; Joni, 2012; Rofiq, 2013; PASPI, 2014). In addition, the human resources involved in oil palm plantations in each region are an alliance of ethnic diversity in Indonesia. Multiethnic involvement in economic activities also means that oil palm plantations has a role for preserving the diversity of social interactions between ethnic/cultures. The institutional cooperation of the Nucleus Estate Smallholders (NES) is a combination of local cultural values and modern management designed (institution engineering) so that smallholder farmers can participating in plantations. It's reflected as part of the social function of oil palm plantation.

Various studies also prove that the ecological functions that reflected the green functions of oil palm plantations include the preservation of carbon dioxide and oxygen cycles (photosynthesis process), restoration of degraded land due to logging and mining, soil conservation, and increasing biomass and land carbon stock (Henson, 1999; Harahap et al. , 2005; Fairhurst & Hardter, 2004; Chan, 2002), even contributing to reducing greenhouse gas emissions by restoring peatlands (Murayama and Baker, 1996; Melling et, al. 2005, 2007; Sabiham, 2013). Palm oil biodiesel development carried out both in Indonesia and developed countries such as EU and USA also has contributed to reducing global carbon emissions as an effort to prevent and minimize the impact of global warming and climate change.

Meanwhile, the ecological function that is specifically related to the function of water management (blue services) in oil palm plantations can be shown by the research of Makonnen & Hoekstra (2010) regarding the water consumption needed by oil palm, which mostly comes from green water or rainwater, and it's water footprint lower than cereals (such as wheat, rice, maize) and soybean. The need for water in oil palm trees is also relatively lower than in forest plants (Coaster, 1938; Pasaribu et al., 2012). This shows the existence of oil palm plantations dont threaten water sources and cause drought.

17 GOALS AND PRINCIPLES OF SDGs

The concept of sustainable development is considered a "middle way" of two polarized paradigms/perspectives, such as developmentalists and environmentalists. This new paradigm shows that economic growth and environmental preservation can be managed optimally, so that can produce economic, social, and environmental of development goals in harmony that can be enjoyed in the long-term. The SDGs platform consists of 17 goals and is expected to be achieved by 2030 (Figure 1).

Figure 1. The Goals of the Sustainable Development Goals (SDGs)

The seventeen SDGs can be classified into three aspects as follows. **First**, the objectives in the Economic Aspect (8 SDGs), namely: (a) No Poverty/SDG-1; (b) Zero Hunger/SDG-2; (c) Afordable and Clean Energy/SDG-7; (d) Decent Work and Economic Growth /SDG-8; (e) Industry, Innovation and Infrastructure /SDG-9; (f) Reducing Inequality/SDG-10; (g) Responsible Consumption and Production/SDG-12; and (h) Partnership for the Goals/SDG-17.

Second, the objectives in social aspects (6 SDGs), namely: (a) Good Health and Well-being/SDG-3; (b) Quality Education/SDG-4; (c) Gender Equality/SDG-5; (d) Clean Water and Sanitation/SDG-6; (e) Sustainable Cities and Communities/SDG-11; and (f) Peace, Justice and Strong Institution/SDG-16.

Third, Goals in Environmental Aspects (3 SDGs), namely: (a) Climate Action /SDG-13; (b) Life Below Water/SDG-14; and (c) Life on Land/SDG-15.

In order to achieve the sustainable development, it requires management such as government policies, so that the principles in this concept are not only 3-P (Profit, Planet, People) but 4-P (Profit, Planet, People, Policy) (Feher and Beke, 2013; Moon, 2012). The achievement of SDGs in each country will vary, because it is determined by each of the government policies in that country. In addition, the new emphasis of the SDGs is also inclusiveness (no one left behind) of every aspect or principle/criteria. Inclusive in economic aspect is not only measured at the company level such as profit gaining (exclusive), but also the impact of the company's activities, which is expected to provide economic, social, and environmental benefits for the local/regional, national, and global levels. This is also confirmed by the concept of the World Bank (2012) proposing a simple concept, namely Growth, Green, Inclusive. Economic growth (growth) must still pay attention to environmental sustainability (green) and its benefits are widely felt by all peoples (inclusive).

Based on the explanation above, it is shown that there are similarities between the multifunctional agriculture and SDGs. The seventeen goals on SDGs can be grouped into three aspects, namely economic, social, and environmental aspects which can reflect the 3-P (profit, people, planet). Similar to this, the concept of multifunctional agriculture also can be grouped into these three aspects and also can reflect 3-P, namely profit (white function), people (yellow function), and planet (green function and blue function). The similarity between these two concepts indicates a correlation.

The concept of multifunctional agriculture which was introduced in 1992 can be considered as the root of the goals and principles contained in the SDGs. Moreover, these two concepts have also been recognized and accepted on global level and have been adopted by various countries, including Indonesia. So it can be concluded that the agricultural sector has implicitly fulfilled the SDGs principle, which means that the agricultural sector is a sustainable sector and agricultural commodities are sustainable commodities.

Oil palm plantations (including the downstream industry) are one of the strategic sectors in Indonesia that have been proven to have multifunctional agriculture that has succeeded in producing multibenefits that can be felt by all people in these villages/regions, in Indonesia or all over the world, who are involved either directly or indirectly. This also shows that the oil palm plantation (including the

downstream industry) are a sustainable sector and capable proactively by positioning themselves as part of the solution that contributes to the achievement of the SDGs goals at local/regional, national, and global levels. This fact is evidence and provide answers to allegations of anti-palm oil parties who are cornering the palm oil industry considered unsustainable.

CONCLUSION

The concept of multifunctional agriculture, which has been introduced since 1992, which showed that the agricultural sector has multiple important functions, namely an economic function (white function), socio-cultural function (yellow function/services), and two ecological functions consisting of water conservation (blue services), and preservation of natural resources (green function). Oil palm plantations as part of the agricultural sector also have economic, social, and environmental functions that can be enjoyed by people across generations, both Indonesians and even the global community, either who are directly or indirectly involved. This shows that oil palm plantations also have multifunctional agriculture.

On the other hand, Sustainable Development Goals (SDGs) are a global development platform was launched by the United Nations (UN) in 2015 and has been adopted by countries in the world. This development platform describe three main dimensions/pillars, namely economy (profit), social (people), and environment (planet). If we examined, the SDGs has the same with the multifunctional agriculture. This shows that the multifunctional agriculture is the root of SDGs, so that the agricultural sector has implicitly fulfilled the SDGs principles and is a sustainable sector. Thus, it can be concluded that multifunctional oil palm plantations are also part of sustainable development and have proven to be sustainable. Therefore, the issue of sustainability (sustainability vs unsustainability) in oil palm plantations is unquestionable.

DAFTAR PUSTAKA

Aldington TJ. 1998. *Multifunctional Agriculture: A Brief Review from Developed and Developing Country Perspectives*", unknown status. FAO Agriculture Department, Internal Document.2

Chan KW. 2002. *Oil Palm Carbon Sequestration and Carbon Accounting: Our Global Strength.* MPOA.

Dobbs TL, Pretty JN. 2001. *The United Kingdom's Experience with Agri-Environmental Stewardship Schemes: Lessons and Issues for the United States and Europe*. Tersedia pada: http://agecon.lib.umn.edu/cgi-bin/detailview.pl?paperid=2436

Europe Economics. 2014. *The Economic Impact Of Palm Oil Imports In The EU.* London: Europe economics

Fairhurst T, R Hardter. 2004. *Oil Palm: Management for Large and Sustainable Yields.* Oxford Graphic Printers, Pte Ltd.

Feher I, J Beke. 2013. The Rational Of Sustainable Agriculture*. Iustum Aequum Salutare.* 9(3): 73-87.

Goenadi. 2008. *Prospective on Indonesian Palm Oil Production.* Paper Presented on The International Food and Agriculture Policy Council. Spring 2008 Meeting. Bogor

Harahap IY, Y Pangaribuan, HH Siregar, E Listia. 2005. *Lingkungan Fisik Perkebunan Kelapa Sawit*. Medan:PPKS

Henson I. 1999. *Comparative Ecophysiology of Palm Oil and Tropical Rainforest*. Oil Palm and Environment A Malaysian Perspective. Malaysian Oil Palm Brower Council. Kuala Lumpur.

Huylenbroeck GV, V Vandermulen, EM Penningen, A Verspecht. 2007. Multifunctionality of Agriculture: A Review Defini-tion, Evidence and Instruments*. Living Review in Landscape Research.* 1(3)

Joni R. 2012. *Dampak Pengembangan Biodiesel dari Kelapa Sawit Terhadap Kemiskinan, Pengangguran dan Pertumbuhan Ekonomi Indonesia*. Disertasi. Bogor:IPB

Melling L, Goh KJ, R Hatanto. 2007. *Comparison Study Between GHG Fluxes from Forest and Oil Palm Plantation on Tropical Peat Land of Serawah Malaysia.*

International on Oil Palm and Environment. Bali. Indonesia.

Melling L. Hatanto R. Goh KJ. 2005. *Soil CO_2 Flux from Ecosystem in Tropical Peat Land of Serawak*. Malaysia. Tell us. 57: 1-11.

Melling L, Goh KJ, Beavies, R. Hatanto. 2007.*Carbon Flow and Budget in A Young Mature Oil Palm Agroekosistem on Deep Tropical Peat*. Proceding of The International Symposium on Tropical Peat Land. Jakarta.

Moon W. 2012. *Conceptualizing Multifunctional Agriculture from a Global Perpective.* Departement Agribusiness Economics Southern Illinois University. Carbondale IL 62901.

Moyer W, Josling T. 2002. *Agricultural Policy Reform: Politics and Process in the EU and US in the 1990s*.;Burlington: Global Environmental Governance, Aldershot

OECD. 2001. *Multifunctionality Towards An Analytical Framework. OECD. Paris.*

Panayotou T. 1993. *Green Martkets: The Economic of Sustainable Development*. ICS *Press*. San Franssisco.

PASPI. 2014. *Industri Minyak Sawit Indonesia Berkelanjutan*. Peranan Industri Minyak Kelapa Sawit Dalam Pertumbuhan Ekonomi, Pembanguunan Pedesaan, Pengurangan Kemiskinan dan Pelestarian Ling-kungan. *Palm Oil Agribusiness Strategic Policy Institute*. Bogor.

PASPI. 2019. ISPO dengan Pendekatan Ekosistem: Sawit Menjadi Lebih Sustainable?. *Jurnal Monitor.* 5(46): 1722-1728

Rofiq HN. 2013. *Economies Analysis of Palm Oil Plantation and Oil Palm Productivity in Effect on Percapita Income in Indonesia. International Institute of Social Studies.* Belanda: The Huge.

Sabiham S. 2013. *Sawit dan Lahan Gambut dalam Pembangunan Kebun Kelapa Sawit di Indonesia*. Himpunan Gambut Indonesia.

Sato Y. 1997. *The Palm Oil Industry in Indonesia: Its Structural Changes and Competitiveness*. In Waves of Change in Indonesia's Manufacturing Industry (ed: M.E Pangestu and Y. Sato). Tokyo: Institute of Developing Economics

Sumarto S. A Suryahadi. 2004: *Trade, Growth and Poverty in Indonesia. National Conference Of The University Outreach Network.* Bogor.

Susila WR. 2004. Contribution of Palm Oil Industry to Economic Growth and Poverty Allevation in Indonesia*. Jurnal LITBANG Pertanian.* 23(3).

Tomich TP, Mawardi MS. 1995. Evolution of Palm Oil Trade Policy in Indonesia 1978-1991. *Elaeis.* 7 (1): 87-102.

World Bank. 2012. *Inclusive Green Growth*: *The Pathway to Sustainable Development*. The World Bank Washington DC.

World Growth. 2009. *Conversion The Immutable Link Between Forestry and Development*, Arlington VA.

World Growth. 2011. *The Economic Benefit of Palm Oil to Indonesia.* World Growth.