The Concepts and Implementation of Sustainable Agricultural Development in Indonesia

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ABSTRACT: Sustainable development, including sustainable agricultural development, is a commitment of world countries that must be obeyed and implemented. Its role in capital formation demonstrates this strategic role, providing food, industrial raw materials, feed and bioenergy, absorbing labour, sources of foreign exchange, sources of income, and environmental preservation through environmentally friendly farming practices. Implementing development in the past, which only emphasized economic progress, has resulted in ecological damage and social problems. The sustainable development approach is essentially a development activity that combines economic, social, and environmental aspects. However, in its implementation, this concept has not been implemented by all countries according to the agreement. This is reflected in the fact that there are still many problems related to environmental damage and the degradation of natural resources. There are still many problems in implementing sustainable agricultural development, especially in developing countries, including Indonesia. In Indonesia, one of the prominent causes is the existence of sectoral egos, which causes the implementation to be blocked. The concept of sustainable development is multidimensional, so that in its performance, it must be an integrated cross-sectoral and multi-disciplinary program at the central and regional levels. The approach to sustainable development, including sustainable agriculture in Agenda 21, has become an agreement of world leaders at the Earth Summit in Rio de Janeiro, 1992, to be used as a reference for development in all countries. However, not all countries have been able to implement it according to the agreement, so there are still much environmental damage and degradation of natural resources that interfere with agricultural production processes and human livelihoods. Implementing sustainable agricultural development for developing countries (including Indonesia), which still faces many economic problems, is not easy. One of the reasons the sustainable development approach has not been fully implemented is applying the sectoral approach (sectoral ego), which is still an obstacle to implementation or implementation in the field. Sustainable development must be an integrated cross-sectoral and multi-disciplinary program that must be strongly coordinated, starting at the central level to the regional level and the broader community as economic development actors.

KEYWORDS: Agricultural Development, Sustainable Devlopment, Synergism.

I. INTRODUCTION

Agricultural development plays a strategic role in the national economy. This strategic role is shown by its position in capital formation, providing food, industrial raw materials, feed, and bioenergy, absorbing labour, source of foreign exchange, and source of income and environmental preservation through environmentally friendly farming practices. Agricultural development in Indonesia is directed towards sustainable agricultural development as part of the implementation of sustainable development. Sustainable agricultural development (including rural development) is a strategically important issue and discussion in all countries today. Sustainable agricultural development is a goal and a paradigm for agrarian development patterns (Hannah, 1946). The concept of sustainable development began to be formulated in the late 1980s as a response to the previous development strategy, which was more focused on the primary goal of high economic growth, and which was proven to have resulted in the degradation of production capacity and environmental quality as a result of overexploitation of resources.

Initially, that concept was formulated in the Bruntland Report due to the congress of the United Nations World Commission on Environment and Development (World Commission on Environment and Development) in 1987. In simple terms, it is stated that sustainable development is the development that realizes (meets) the needs of life today without compromising the ability of future generations to fulfil their needs. The implementation of social justice economic development is carried out without compromising the environment so that the current development must also consider the needs of the next generation.

Given the importance of sustainable development in all aspects of human life, in 1992, all world leaders met at a world conference in Rio de Janeiro, Brazil, to discuss the concept of sustainable development for all aspects of social, economic, cultural, and environmental life known as Agenda 21. One of the 21 agendas directly related to the agricultural sector is the Sustainable Agriculture and Rural Development (SARD) program.

This moral message to create a better environmental condition for all generations is universally accepted by world leaders so that sustainable agriculture becomes the basic principle of agricultural development throughout the world, including in Indonesia. Conventional agrarian approaches and practices implemented in most developed and developing countries, including Indonesia, are farming rules that do not follow the principles of sustainable development. Traditional agriculture is based on an industrial approach with the orientation of large-scale agribusiness agriculture, capital intensive, technological innovation-intensive, planting seeds / superior plant varieties uniformly spatially and temporally, as well as dependence on production inputs, including the use of various types of agrochemicals (fertilizers and pesticides), and agricultural machinery. The application of conventional agriculture is considered an appropriate alternative technology to solve the problem of food and nutrition shortages and food security faced by the world's population (Taylor, Woiwod, & Taylor, 1988). However, it has recently been realized that conventional farming practices in some areas harm the environment, as reported by various research institutions, non-governmental organizations, and economic and environmental experts.

The exploitation of natural resources by plantation and mining development activities has exceeded the carrying capacity of the ecological (carrying capacity), resulting in excessive exploitation of natural resources. Various environmental, economic, social, cultural, and public health impacts are increasingly doubting the world community about the sustainability of agricultural ecosystems in supporting human life in the future. Economic globalization has impacted the necessity that the future agricultural development approach is directed to the "Paradigm of Sustainable Agricultural Development," which is in human development. This agrarian development paradigm rests on the nation's ability to realize the community's welfare with its capabilities, considering the potential for environmental sustainability. This paper discusses the concept, commitment, and implementation of sustainable agricultural development in Indonesia.

II. THE GENERAL CONCEPT OF SUISTAINABLE AGRICULTURAL DEVELOPMENT

The efforts of the international community to tackle the deterioration of environmental conditions in the context of economic development and social development began in Stockholm, Sweden, in 1972. Then the United Nations Environment Program (UNEP) in 1982 held a special session to commemorate the 10th anniversary of the world environmental movement (1972-1982). In Nairobi, Kenya, as a reaction to dissatisfaction with the current ecological management which tends to no longer or ignore the preservation of nature. Who agreed to establish a World Commission on Environment and Development (WCED) at the meeting. In 1992, a sustainable development session was held in Rio de Janeiro, Brazil, and finally, in 2002, in Johannesburg, South Africa. The term sustainable development, which in English is called "sustainable development," was introduced in the World Conservation Strategy (World Conservation Strategy) published by the United Nations Environment Program (UNEP) in 1980. The United Nations Conference on Environment and Development – UNCED) which was held in Rio de Janeiro in 1992, has established the basic principles and a program of action for realizing sustainable development. Then the Johannesburg Summit, apart from reaffirming the political commitment of all levels of the international community, has also laid the foundations that should be used as a reference in implementing sustainable development at all levels and sectors or aspects of development.

Since the early 1980s coinciding with the issuance of the World Conservation Strategy Document by the IUCN (International Union for the Conservation of Nature), various definitions of sustainable development have been raised by experts and scientific organizations. However, the definition generally accepted by the international community is the definition prepared by the Bruntland Commission. Sustainable development is developed to meet the needs of the present without reducing or destroying the ability of future generations to meet their needs (Higgs, 1978). Unlike most of the definitions of sustainable development compiled by most of the conservationist partner groups (deep ecologists),

the above definition does not prohibit economic development activities but recommends it on the condition that the rate (level) of development activities does not exceed the carrying capacity of the natural environment (Higgs, 1978).

Thus, it is sufficient for future generations to have the same natural resource assets and environmental services, or if possible better than the current generation. A development activity (including agriculture and agribusiness) is declared sustainable if the action is economically, ecologically and socially sustainable. Economically sustainability means that a development activity must produce economic growth, capital maintenance and efficient use of resources and investment. Ecologically sustainable means that these activities must maintain ecosystem integrity, environmental carrying capacity and conserve natural resources, including biodiversity. Meanwhile, socially sustainability requires that a development activity create an equitable distribution of development outcomes, social mobility, social cohesion and institutional development. Although there are many variations on the definition of sustainable development, including sustainable agriculture, the widely accepted one is based on three pillars: economic, social, and ecological. In other words, the concept of sustainable agriculture is oriented to three dimensions of sustainability, namely: sustainability of financial business (profit), sustainability of human social life (people), and sustainability of natural ecology (planet). The economic dimension is related to maximizing the income stream that can be obtained by at least maintaining the productive assets that are the basis for obtaining the income.

The leading indicators of this economic dimension are efficiency and competitiveness, the amount and growth of added value and financial stability. The economic size emphasizes the aspect of fulfilling human economic needs for both present and future generations. The social dimension, which is popular orientation, relates to the need for social welfare, which is reflected by a harmonious social life (including the prevention of social conflict), the preservation of cultural diversity and socio-cultural capital, including the protection of ethnic minorities. For this reason, poverty alleviation, equal distribution of business opportunities and

income, socio-political participation and socio-cultural stability are essential indicators that need to be considered in the implementation of development. Dimensions of the natural environment emphasize the need for natural ecosystems' resilience that includes biological living systems and raw materials. This provides the maintenance of biological diversity and biological carrying capacity, soil, water and agro-climate resources, and environmental health and comfort. Emphasis is placed on preserving the flexibility and dynamics of ecosystems to adapt to change, not on the conservation of a static ideal that is impossible to achieve (Csirszki, 2021). These three dimensions influence each other, so they must be considered in a balanced way. A stable and healthy social system, as well as natural resources and the environment, are the basis for economic activity. In contrast, economic prosperity is a prerequisite for maintaining socio-cultural stability and preserving natural resources and the environment. An unstable or sick social system will tend to cause actions that damage the sustainability of natural resources and damage environmental health, while threats to the preservation of natural resources and the environment can encourage social chaos and disease.

Two things are implicit in the Brundtland concept (Sewenet & Schwarcz, 2021). First, it concerns the importance of paying attention to the constraints of natural resources and the environment on the pattern of development and consumption. Second, it affects the concern for the well-being of future generations. The assumption of sustainability rests on at least three fundamental axioms; (1) current and future treatments that place a positive value in the long term; (2) realizing that environmental assets contribute to economic wellbeing; (3) knowing the constraints due to the implications that arise on environmental assets.

This concept is felt to be very normative, so that the operational aspects of this sustainability concept also experience many obstacles. We can elaborate this sustainability concept by proposing five alternative definitions, namely: (1) a condition is said to be sustainable (sustainable) if the utility obtained by the community does not decrease over time and consumption does not decrease over time (non-declining consumption), (2) sustainability is a condition in which natural resources are managed in such a way as to

maintain future production opportunities, (3) sustainability is a condition where natural resources (natural capital stock) are not reduced over time (non-declining), (4) sustainability is a condition where natural resources are managed to maintain the production of natural resource services, and (5) sustainability is the condition of balance and ecosystem resilience being met.

In line with the above understanding, there are several aspects regarding the operational definition of sustainable development (Plieninger, Bens, & Hüttl, 2006), including: (1) for renewable natural resources: the rate of harvesting must be equal to the rate of regeneration (sustainable production); (2) for environmental issues: the rate of waste disposal must be equal to the assimilation capacity of the environment; (3) non-renewable energy sources must be exploited quasi-sustainably, namely reducing the rate of depletion by creating energy substitution.

In addition to the operational definition above (Plieninger et al., 2006), sees that who can break down the concept of sustainability into three aspects of understanding. *First*, economic sustainability is defined as development that can produce goods and services continue to maintain government sustainability and avoid sectoral imbalances that can damage agricultural production and industry. *Second*, environmental sustainability: An environmentally sustainable system must maintain stable resources, prevent exploitation of natural resources and the function of environmental absorption. This concept also concerns the maintenance of biological diversity, stability of air space, and other ecosystem functions that are not included in the category of economic resources. *Third*, social sustainability is defined as a system capable of achieving equality, providing social services including health, education, gender, and political accountability.

III. SUSTAINABLE AGRICULTURAL DEVELOPMENT COMMITMENT

1. Agenda 21, Rio de Janeiro

Agenda 21 is an agenda for various sustainable development action programs agreed upon by world leaders at the 1992 Rio de Janeiro Earth

Summit. Promoting Sustainable Agriculture and Rural Development (SARD) details different concepts and programs of action for Sustainable Agriculture that need to be implemented by all countries. Agenda 21 includes aspects related to agriculture, such as those directly related to Sustainable Land Management, Safer Use of Toxic Chemicals and Strengthening Farmer Participation. Agenda 21 is also a multidimensional concept of sustainability that considers achieving ecological, social, and economic objectives. These three dimensions have a very close relationship and dependence. Agenda 21 also stated that strengthening feasibility and improving economic life in rural areas is the basis for maintaining their social and environmental functions. Maintaining ecological quality is also a prerequisite or necessary precondition for developing long-term economic potential in rural areas. The increasing food needs of the population need to be addressed through increased productivity and collaboration involving rural communities, the central government, the private sector and the international community.

Reducing losses due to pests and diseases, maintaining the degradation of land and water sources in the development of ecosystems is very important. Socialization and training in modern conservation and local wisdom, including minimal/no-tillage, integrated pest control, crop rotation, plant nutrition, agroforestry, terracing and intercropping, as well as dissemination of information and better use of genetics for crops and cattle (Brown, 2020). Furthermore, regarding Sustainable Land Management, it is stated about the need to strengthen laws and regulations on sustainable land use and prevent the use of productive land for other purposes/uses. Landscape planning based on ecosystems and watersheds and encouraging the creation of sustainable community livelihoods using conservation-minded land-use techniques, including "indigenous technology". They promoted the active participation of marginalized community groups in making decisions, such as women, youth, indigenous people. So that related institutions in land and natural resource management integrate environmental, social and economic issues in their planning.

Likewise, regarding the safety of the Use of Toxic Chemicals. Control the use of toxic chemicals through pollution prevention, emissions inventory,

product labelling, limited use. Make policies that encourage producers to reduce risk by using more materials that are not chemical or employing biological control. Socialization to people who often use these chemicals about the dangers they can cause with language and images easy for them to understand (Grossman, 2011). Including the policy of exporting and importing hazardous chemicals so that they can be appropriately limited and controlled. Agenda 21 on Strengthening the Role of Farmers, it is stated that to develop sustainable agriculture strategies, the government hopes to collaborate with international research centres and non-governmental organizations in developing agricultural technologies that can increase crop yields that are environmentally sound by maintaining land quality, recycling nutrients, saving use, water and energy, pest and weed control. Help share expertise with farmers in conserving land, water and forest resources, efficient use of chemicals, reducing or utilizing agricultural waste, and encouraging the use of technology that saves input/input and saves energy, including developing indigenous technologies. Encourage research on agricultural equipment that can optimize the use of human labour and animal power. Provide better incentives to men and women for land use rights, access to credit, technology, farming needs/inputs and training.

Requires researchers who can develop environmentally-friendly agricultural techniques and Academy (Universities) to provide ecological aspects in the agricultural training. Sustainability of development is the continuous improvement of the quality and welfare of the people/populations where they live and live, including the availability of various types of sufficient and quality food. Food security must be seen from improving the quality of life of the population and the environment in rural areas. (Richli, 2021) stated that Sustainable development has a broader meaning and purpose than sustainable economic growth. Economic, social and economic goals can, to some extent, synergize. However, under certain conditions in the field, all three can compete and are less supportive of each other. When this happens, the concept of sustainability leads to the need for the right balance between these three dimensions (Plieninger et al., 2006). Policy options need to be carefully defined, taking into account each of the

interrelated dimensions. Johannesburg-10 Earth Summit In 2002, ten years after the Rio de Janeiro Earth Summit again, world leaders attended the 10 Earth Summit in Johannesburg, South Africa, to evaluate the implementation of Agenda 21. The results of FAO's evaluation of the performance of Agenda 21 on SARD show many countries (including Indonesia) that have not implemented various SARD policies and programs agreed and signed in Rio in 1992.

In conclusion, the Earth-10 Summit still agrees that Agenda 21 remains valid and relevant to be implemented as a world agenda for sustainable development in this millennium era. The Johannesburg Summit produced the Johannesburg Declaration and Implementation Plan, which strengthened the previous declarations' strategic programs (Agenda 21). The Summit recognized the linkage of Sustainable Development with poverty, health, education, global trade, information technology and others through the Millennium Development Goals (MDGs). In Chapter II on "Changing unsustainable consumption and production patterns", several paragraphs of the Johannesburg Declaration are directly related to sustainable agriculture. Several vital issues from this Summit related to agriculture (Grossman, 2011), namely: (a) the issue of the use of toxic chemicals, (b) the issue of land resource degradation, (c) the issue of food security, and (d) the issue of biodiversity-related to the issue of land use. Toxic chemicals stated about: renewing commitments, as stated in Agenda 21, good management of chemicals throughout their life cycle and good governance of hazardous wastes for sustainable development and for the protection of human health and the environment aimed at achieving By 2020, chemicals are used and produced in a manner that leads to the minimization of significant adverse impacts on human health and the environment.

Furthermore, regarding the issue of land resource degradation, it is stated: to reverse the trend of natural resource degradation immediately, it is necessary to implement various strategies that must include targets set at the national level, and if necessary, at the regional level, to protect ecosystems and realize land resource management. , water and biological resources in an integrated manner while strengthening regional, national

and local capacities (Grossman, 2011). In paragraph 40 on food security, it is stated: increasing the role of women at all levels, and in all aspects of rural development, agriculture, nutrition, and food security is a must. Increase food production and strengthen food security and security in a sustainable and environmentally sound manner. And on the issue of biodiversity, it is stated: the importance of biodiversity in the overall implementation of sustainable development and the elimination of poverty is an essential element of our planet, human well-being and livelihoods, and people's cultural integrity.

2. National Conference on Sustainable Development

As a follow-up to the World Summit on Sustainable Development (WSSD) in Johannesburg, South Africa, Indonesia has held the National Conference on Sustainable Development-KNPB or the Indonesian Summit on Sustainable Development (ISSD) on January 21, 2004 in Yogjakarta. The purpose of implementing KNPB is to build commitment and joint responsibility of stakeholders (government and community) in implementing sustainable development. One of the results of the KNPB is the 12 points of the Sustainable Development Action Plan which were agreed to be used as guidelines by all parties in implementing sustainable development.

In the eighth point concerning sustainable agriculture, it is agreed that there are six points in the action plan for sustainable development in the agricultural sector, namely: (a) increasing the income and welfare of agricultural actors; (b) providing access to agricultural resources for the community by structuring a system of control and ownership; (c) increasing land productivity and environmental media as well as rehabilitating damaged lands to increase food production in the context of food security while still taking sides with farmers; (d) build and rehabilitate basic rural infrastructure, develop business diversification and improve transportation facilities and agricultural technology and ensure access to market information and capital; (e) developing appropriate science and technology that is environmentally friendly at least 5 percent per year; and (f)

implementing the transfer of knowledge and skills in sustainable agriculture for small and medium scale farmers and fishermen by involving stakeholders. Sustainable agriculture prioritizes the management of agricultural ecosystems that have high diversity or biodiversity.

According to FAO Agricultural Biodiversity includes the variety and variability of plants, animals and microorganisms needed to support key functions of agricultural ecosystems, their structures and processes to strengthen and provide support for food production and food security.Ecosystems with high diversity, are more stable and resistant to shocks, reduce the risk of financial losses, can reduce the impact of drought and flood disasters, protect crops from pests and diseases and other natural constraints. Diversification can also reduce economic stress due to increased prices for fertilizers, pesticides and other production inputs(Cardwell, 2011). Therefore Food Security is one of the main goals of Sustainable Agriculture. In line with sustainable agriculture is the concept of "green agiculture" which can be defined as: advanced agricultural businesses with controlled application of technology in accordance with the provisions of established protocols, in order to obtain optimal productivity, high product quality, maintained environmental quality and income. optimal farming economy. Green agriculture produces green food after the post-harvest handling process and its processing conforms to the provisions of the green food protocol (Sewenet & Schwarcz, 2021). The green agriculture movement is a positive response from producer actors to criticism of environmental issues and sustainability and consumption safety without having to deny advanced technology.

IV. IMPLEMENTATION OF SUSTAINABLE AGRICULTURAL DEVELOPMENT IN INDONESIA

In national development, since the beginning of the old order and mainly since the new order and until now in the reform era, development in Indonesia has always focused on economic development to accelerate economic growth and people's welfare. With the conventional approach, the logical consequence that occurs is that the success of economic

development has harmed the environment (Korai, Samad, Ghaffar, Ahmed, & Memon, 2021). Awareness of the environmental impact of the effect exists. This is reflected in ministries dealing with the environment, such as the State Ministry of the Environment in the New Order era. Concern for environmental impacts is stated in the obligation of environmental impact analysis (Amdal) on various development project implementation permits, including physical development in the agricultural sector. Although in practice, ecological problems often occur due to the construction of multiple projects that are not in accordance with the carrying capacity of nature. Indonesia's concern for environmental issues is also reflected in Indonesia's commitment to participate in implementing several international meetings and agendas related to saving the environment, such as Agenda 21, Rio de Janeiro and Earth Summit 10, Johannesburg.

However, the various environmental damage to natural resources is a reflection of the inconsistency of the Indonesian government and people towards the commitments of Agenda 21 on SARD (Rio de Janeiro Summit, 1992) and the agreement at the 10th Earth Summit meeting in Johannesburg, 2002 as well as the National Conference on Sustainable Development- KNPB, 2004. There are three sub-points concerning sustainable agriculture resulting from KNPB that have not been implemented optimally in relation to environmental damage, namely: a) increasing the income and welfare of agricultural actors; b) providing access to agricultural resources for the community by structuring a system of control and ownership; c) increasing land productivity and environmental media as well as rehabilitating damaged soils to increase food production in the context of food security while still taking sides with farmers. The implementation of conventional agriculture that was carried out in the past could increase productivity and agricultural production, especially food, significantly. However, production efficiency decreased due to the feedback effect of various adverse side effects mentioned above (Huang, Yuan, & Peng, 2012).

Conventional agricultural practices have continuously increased the use of chemicals that are not environmentally friendly and have a direct impact on

land and environmental degradation, and reduced the quality of agricultural production (McFarlane, Hopkins, & Nield, 2020). In this regard, the impacts of conventional agricultural development practices, namely: (a) increased surface erosion, flooding and landslides; (b) decreasing soil fertility; (c) loss of soil organic matter; (d) groundwater salinization and irrigation and soil sedimentation; (e) increasing water and soil pollution due to chemical fertilizers, pesticides, domestic waste; (f) eutrophication of water bodies; (g) pesticide residues and other hazardous materials in the environment and food that threaten public health and market rejection; (h) degradation of agricultural biodiversity, loss of traditional wisdom and local plant culture; (i) contribution to the global warming process; (j) increase in unemployment; (k) decrease in employment, increase in social inequality and the number of smallholders in rural areas; (l) increasing poverty and malnutrition in rural areas; (m) farmers' dependence on the government and agrochemical companies/industry.

The negative impacts of the use of agrochemicals include pollution of water, soil and agricultural products, health problems for farmers, and decreased biodiversity. Excessive use of pesticides in the long term will impact the life and presence of natural enemies of pests and diseases and affect the life of soil biota. This causes an explosion of pests and diseases and degradation of soil biota (Brawley, 2006). The use of chemical fertilizers in high concentrations and with high doses for an extended period causes a decline in soil fertility due to nutrient imbalances or other nutrient deficiencies and a further reduction in soil organic matter content. Planting superior rice varieties in monoculture without crop rotation will accelerate high levels of nutrient depletion in a short time. This, if allowed to continue, does not rule out the possibility of deficiencies or deficiencies of certain nutrients in the soil (Zombory, 2021).

The problems faced concerning future agricultural development are complex problems, including seeking to achieve the Millennium Development Goals (MDG's), which include poverty, unemployment, and food insecurity, creating proportional pricing policies for unique agricultural products, strengthening the ability to compete in the global market and overcome the weakening of economic growth due to the

worldwide crisis, improve the image of farmers and agriculture so that they are again attractive to the next generation, strengthen the institutions of productive economic enterprises in rural areas, create an effective agricultural extension system, and meet food needs, and develop superior commodities horticulture, animal husbandry and plantations. To achieve this, agricultural development is faced with various problems as formulated in the Strategic Plan of the Ministry of Agriculture 2010-2014, namely: (a) environmental damage and climate change, (b) infrastructure, (c) infrastructure, (d) land and water; (e) land ownership; (f) national seed and nursery systems; (d) farmers' access to capital, (e) farmer institutions and extension workers; (f) food and energy security; (g) Farmer's Exchange Rate (NTP); (h) inter-sectoral integration. By paying attention to various resource and agricultural, environmental problems that occur as well as pressures and demands from multiple parties, the government is increasingly aware of sustainable agricultural development. For this reason, in the strategic plan of the Ministry of Agriculture (Rienstra Kemtan) for 2010 – 2014, this aspect has received attention.

This is reflected in the component items in Rienstra Kemtan 2010–2014, which accommodates items from the agenda of Rio de Janeiro 21, 1992, and the National Congress for Sustainable Development 2004, as set out in Table 1. In the Strategic Plan of the Ministry of Agriculture 2010-1014 there are at least 10 components that in line with the commitments made in Agenda 21 Rio de Janeiro, 1992 and the 2004 National Congress for Sustainable Development, which are related to: (1) increasing farmers' income and welfare; (2) creating a balance of agricultural ecosystems that supports sustainable production increases; (3) achieving self-sufficiency and sustainable self-sufficiency; (4) making farmers creative, innovative and able to utilize science and technology and local resources; (5) structuring agricultural land regulations, area development and optimizing the use of abandoned land; (6) increasing protection and utilization of national germplasm; (7) improvement of agricultural human resources and agricultural institutions, including UK transfer of knowledge and skills in sustainable agriculture; (8) strengthening farmers' access to markets and low-interest capital; (9) improvement and development of agricultural

infrastructure (irrigation, reservoirs, village roads, and farm roads); (10) increasing food diversification.

As stated earlier, sustainable development relies not only on environmental aspects but also on economic and social development, which are interrelated. In this regard, the implementation of sustainable agricultural development is not only the task of the Ministry of Agriculture or the Ministry of the Environment but is also related to broad institutions. Unfortunately, it is precisely the coordination and cooperation between agencies and between sectors that is the weak point of our development implementation so far. There must be a solid political commitment so that both economic and social development can fully integrate environmental aspects. One of the causes of failure in implementing sustainable development is the sectoral and partial implementation approach (Lyson & Welsh, 2005). This ego-sectoral approach has resulted in many of Indonesia's commitments to many international conventions and agreements not being fully implemented on the ground. This ego-sectoral approach also causes in the current era of global competition; Indonesia is always behind and has not shown a high commitment to various international agreements. Sustainable Agricultural Development requires an integrated, cross-sectoral, and interdisciplinary application at the central and regional levels (Nie, 2018).

Regional autonomy at the district/city government or the provincial level, with all its powers, also seems to be very effective in supporting the implementation of sustainable agricultural development based on concepts, programs and strategies for achieving these programs at the regional level. Because after all, regional autonomy can be used as an umbrella of strength to synergize cross-sectoral programs, considering that the implementation of sustainable agricultural development activities still requires the support of linkages from various related sectors within the framework of a more holistic Regional Development Planning policy. At the national level, the synergy of concepts, programs and strategies for achieving sustainable development as well as sustainable agricultural development is jointly made into an integrated program between various development sectors, in this case through coordination of various existing ministry institutions and at

the same time related to national development programs. So that sustainable development programs and sustainable agricultural development can be implemented.

V. CONCLUSION

The approach to sustainable development, including sustainable agriculture in Agenda 21, has become an agreement of world leaders at the Earth Summit in Rio de Janeiro, 1992, to be used as a reference for development in all countries. However, not all countries can implement it according to the agreement, so there are still much environmental damage and degradation of natural resources that interfere with agricultural production processes and human livelihoods. Implementing sustainable agricultural development for developing countries (including Indonesia) facing many economic problems is not easy to implement. One of the reasons the sustainable development approach has not been fully implemented is applying the sectoral approach (sectoral ego), which is still an obstacle to implementation or implementation in the field. Sustainable development must be an integrated cross-sectoral and multi-disciplinary program that must be firmly coordinated starting at the central level to the regional level and the broader community as economic development actors.

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