

UDC 332

FARMERS PARTICIPATION IN ACHIEVING SUSTAINABLE AGRICULTURAL DEVELOPMENT

Ekadina I Wayan*, Yuliarmi Ni Nyoman

Faculty of Economics and Business, Universitas Udayana (Unud), Bali, Indonesia

*E-mail: wye kadina@gmail.com

ABSTRACT

Agricultural development is an integral part of national development which aims to improve the welfare of farmers. The purpose of this study is to analyze the importance of farmer participation, stages of participation and empowerment, as well as efforts to encourage and increase farmer participation in sustainable agricultural development efforts. This research method uses literature studies and references from previous research in formulating the discussion. The result of this research is that three aspects of sustainability, namely social, economic, and environmental must be integrated. The participation of farmers in supporting sustainable agricultural development is defined as the active involvement of farmers. Development will be considered successful if the development brings a change in the welfare of the farming community.

KEY WORDS

Farmer participation, sustainable development, farming activities, public service.

Agricultural development is directed at increasing the income of farmers' living standards, expanding job opportunities, business opportunities, and filling and expanding markets, both domestic and foreign markets. Through advanced and resilient agriculture so as to be able to improve the quality and degree of production processing in supporting regional development which is an internal part of national development that aims to improve the welfare of farmers. The agricultural sector is one of the most desirable bases in supporting economic growth both at present and in the future. For this reason, development in the agricultural sector needs serious attention from various parties, considering that almost the majority of Indonesian people live and make a living as farmers (Fitriyana et. al, 2016). The agricultural sector has an important role in the Indonesian economy. This can be measured from the share of the agricultural sector in the formation of gross domestic product (GDP), providing employment, sources of income for most Indonesians, poverty alleviation, foreign exchange earnings through non-oil and gas exports, the creation of national food security, suppliers of raw materials, markets that are potential and the creation of conducive conditions for the development of other sectors (Budiman, 2013).

Farmers are business actors in the agricultural sector who use agricultural land to earn income which is packaged in various subsystems ranging from pre-production, production, harvest and post-harvest subsystems, and distribution and marketing. An agricultural business system can be said to be environmentally sound if in its management it applies environmentally friendly technology or does not have a negative impact on the environment, both the biophysical environment and the socio-economic environment at the micro and macro levels (Asdak, 2012). Sustainable development is a development process that has the principle of meeting the needs of the present without compromising the fulfillment of the needs of future generations. Sustainable Development Goals (SDGs) are development that maintains sustainable improvement in the economic welfare of the community, development that maintains the sustainability of community social life, development that maintains the quality of the environment and development that ensures justice and the implementation of good governance. improving the quality of life from one generation to the next. Agriculture is listed in the second goal of the SDGs, namely eliminating hunger, achieving food security and good nutrition, and promoting sustainable agriculture. Hunger is defined as a condition resulting from chronic lack of food consumption. In the long term, chronic hunger has a

negative impact on public health and causes high public spending on health (Bappenas, 2020).

Sustainable development began to be formulated in the late 1980s as a response to previous development strategies that were more focused on the main goal of high economic growth, and which were proven to have resulted in the degradation of production capacity and environmental quality as a result of overexploitation of resources. Initially this concept was formulated in the Bruntland Report as a result of the congress of the United Nations World Commission on Environment and Development in 1987. In simple terms it is stated that sustainable development is development that meets the needs to live today without compromising the ability of future generations to fulfill their needs. The implementation of socially just economic development is carried out without compromising the environment, so that current developments must also consider the needs of the next generation (Bappenas, 2020).

The implementation of conventional agriculture that was carried out in the past was indeed able to significantly increase productivity and agricultural production, especially food, but then production efficiency decreased due to the feedback effect of various adverse side effects mentioned above. 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 reduce the quality of agricultural production. In this regard, Untung (2016) identified 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) increase in 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 (Rudi and Iwan, 2011).

Aspects of pollution and damage in the agricultural environment can be caused by the disproportionate use of agrochemicals (fertilizers and pesticides). 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 have an impact on the life and presence of natural enemies of pests and diseases, and also have an impact on the life of soil biota. This causes an explosion of pests and diseases and degradation of soil biota. The use of chemical fertilizers in high concentrations and in high doses for a long period of time causes a decline in soil fertility due to nutrient imbalances or other nutrient deficiencies, and a further decline in soil organic matter content. Planting superior rice varieties in mono-culture without crop rotation will accelerate the occurrence of high levels of similar nutrient depletion in a short period of time. This, if allowed to continue, does not rule out the possibility of deficiencies or deficiencies of certain nutrients in the soil. Another example is the existence of food crop varieties that are resistant to pests where the presence of pests encourages the use of pesticides on a large scale even the active substances contained in pesticides are quite harmful to the environment. This is certainly not in line with the concept of sustainable agriculture, namely development that maintains the quality of the environment and development that ensures justice and the implementation of governance that is able to maintain the improvement of the quality of life from one generation to the next.

Farmers' participation is needed to be able to maintain environmental sustainability through farmer empowerment activities. This is part of the government's role. One tangible form of farmer empowerment is through agricultural extension activities. Counseling is carried out, for example by providing information about new technologies and ways to grow crops in a better way and pay attention to environmental aspects. The counseling is intended

to improve the ability and skills of farmers in running their farming businesses in order to get more, better and diverse results while still paying attention to environmental aspects.

The government plays an important role in fostering agriculture in Indonesia, in addition to other inherent roles, both the regulatory role, the facilitator role and the supervisory role. Coaching related to facilitators is making policies or efforts to avoid price fluctuations and distributions that are more profitable for farmers. As Suasih (2016) states that one of these coaching is carried out through efforts to develop farmer institutions to realize farmer welfare.

The social and cultural elements in the development of the agricultural sector are one of the factors that determine the success of a country's economic development. In the culture of the Indonesian people, gotong royong is a heritage of noble values that is very valuable, while in the concept of Balinese culture, *ngayah* culture and the development of various traditional institutions are a form of social interaction as social capital that plays a role in realizing mutual progress. -helping, reminding each other between individuals in village community entities reflecting the spirit of giving (reciprocity), mutual trust, and the existence of social networks. This builds cohesiveness in the village community to get together in starting farming, avoiding pests, forming farmer groups, solving problems, and finding solutions in order to improve the farmer's economy (Inayah, 2012). The existence of social capital is one of the most important assets and becomes an adhesive tool in the implementation of agricultural activities. Social capital is essentially a set of values and norms that are a tangible manifestation of a dynamic institution. The tangible form of social capital of farmer groups is manifested in the form of trust, social networks, responsibility and cooperation between farmers (Wuysang, 2014). Empowerment of the existence of farmers through *subak* is one of the pillars to develop the agricultural sector where the existence of *subak* is a social network between fellow farmers. Empowerment of farmers is something that is very important, in addition to aiming to improve the performance of farmers' businesses, it is also a mandate in the law. So far, farmers have made a real contribution to agricultural development and rural economic development. Farmers as actors of agricultural development need to be given protection and empowerment to support the fulfillment of food needs which are the basic rights of everyone in order to realize food sovereignty, food independence, and food security in a sustainable manner (Law No.19, 2013). One tangible form of farmer empowerment is through agricultural extension activities. Counseling is done, for example, by providing information about the concept of sustainable agricultural development. Farmers are certainly willing to move from conventional farming systems to the concept of sustainable agriculture without the use of chemical elements. The counseling is aimed at improving the ability and skills of farmers in running a farming business in order to get more and more diverse results. The better results can support the performance and welfare of farmers.

METHODS OF RESEARCH

This research is descriptive research. The object of this research is the factors that affect the welfare of farmers. This study uses an empirical approach from the results of previous studies in conducting the discussion.

RESULTS AND DISCUSSION

Farmers' Participation in Sustainable Agricultural Development Efforts

One of the factors that can facilitate agricultural development is the existence of individual awareness. With this individual awareness, farmers join into a forum, namely farmer groups. The purpose of group dynamics is the achievement of group goals which are determined by the actions or participation carried out by members. With the activities carried out by the group, the group is able to provide opportunities for each group member to cooperate and participate in every activity held by the group. In every activity held by farmer groups, each member will integrate, cooperate, and strive to achieve common goals. It is through the cooperation and participation of members that the program's objectives in

development, particularly sustainable agricultural development, can be successful and run well. Farmer participation according to Puspitaningsih, et al. (2016) is the willingness of farmers to take part in activities that will be carried out together to support the success of a development program without compromising the interests of farmers. Farmer groups can run optimally if their members can participate actively. In an activity, member participation can occur due to social interactions carried out with the community. According to Purwanto (2007), farmer group dynamics are all activities of internal and external forces interactively from all group members. While the group is said to be dynamic if all the elements in the group interact and play a role according to their function. Furthermore, to measure the dynamics in a group, it can be seen in terms of: (1) group meetings, (2) increased farm production, (3) a work plan, (4) active management, (5) group norms that are adhered to, (6) the existence of savings, and (7) income and welfare.

Farmers' participation affects the welfare of farmers. This is reinforced by the results of research by Sheikh, et.al (2016) who conducted research in Pakistan. The participation of farmers in water management activities in Pakistan's Sindh Province shows good results. Initially the water flow for agricultural land in Sindh did not go well, but with the encouragement of the farmer associations, the farmers were moved to participate in repairing the obstacles that occurred and finally the water flow could flow smoothly. The level of farmer participation can bring better agricultural benefits to the farming community so as to improve the welfare of farmers. In an effort to increase the production of agricultural products, the government has rolled out various types of programs. This program will be successful if the macro objectives (production increase) are in line with the farmers' goals in farming, namely increasing their income and welfare. In other words, macro goals must be in line with farmers' expectations in farming. In this case, the compatibility of the implementation steps (policy, mobilization, guidance, service, and control) that allows both objectives to be achieved simultaneously is required for farmer participation.

There is a very significant difference in participation between male and female farmers in planning and implementation, where male farmers are in the high category while female farmers are in the low category. At the evaluation stage there are differences between male and female farmers where male farmers are in the medium category and female farmers are in the low category. Factors that influence farmer participation in gender perspective for men and women are farmer personality traits, intensity of empowerment, availability of agricultural information, and support for the physical and socio-economic environment (Lacy, 2011). The participation of farmers is very much needed to manage the environment properly. The results of research by Sara & Davis (2012) in Kenya concluded that the environmental benefits resulting from sustainable agricultural development vary depending on the type of agriculture. However, the participation of farmers to protect water from pollution and reduce greenhouse gas emissions is recognized to provide the most significant environmental benefits. According to Agboola et al. (2015) there is a significant effect between the socio-economic characteristics of vegetable farmers (age, land area, income level, gender, religion, and marital status) on the participation of vegetable farmers in the traditional way where a strong relationship is found in the variables of religion and gender. Syahyuti (2018) stated that participation is needed to ensure sustainable development, because sustainable development is very dependent on social processes. Three aspects of sustainability, namely social, economic, and environmental, must be integrated where individual farmers and farmer institutions play a role in order to change the agricultural system towards sustainable agricultural development.

Stages of Participation and Agricultural Development in the Efforts of Sustainable Agricultural Development

Participation is participation in an activity. In sustainable tourism development activities, community participation or participation is certainly very important. The participation of the local community allows the community to know all aspects in order to realize the success of their regional development which ultimately leads to high appreciation from the local community for the results they have achieved. According to Rahadiani, et al (2014), farmer

participation in supporting sustainable agricultural development is defined as the active involvement of farmers, either individually or in groups in the joint decision-making process, planning and implementing programs and agricultural development, on the basis of a sense of awareness and responsibility. Participation can basically be expressed in the form of thoughts, skills / expertise, energy, property or funding. According to Khairuddin (2000), when viewed from the form and stages of farmer participation, the stages of participation can be divided into several stages, among others. Initiation Participation, is participation that invites initiatives from village leaders, both formal and informal, or from farmers regarding a project, which later on the project is a necessity for farmers. Legitimation Participation, is participation at the level of discussion or decision making about the project. Execution Participation, is participation at the implementation level.

Of the three stages of participation above, initiation participation has a higher level than legitimacy and execution participation. Here, farmers are not only the object of development, but are already able to determine and propose all plans that will be implemented. Meanwhile, if farmers only participate in the discussion stage, even though the project to be built has a clear form, then farmers only participate at the level of legitimacy. Meanwhile, Execution Participation is the lowest of all the above participation levels. Farmers only participate in project implementation, without participating in determining and discussing the project. The participation of farmers in sustainable agricultural development according to Salikin (2003) are: (1) increasing economic development; (2) prioritize food sufficiency; (3) improve the development of human resources; (4) increase self-esteem; (5) empower and liberate farmers; (6) maintain environmental stability (safe, clean, balanced, updated); and (7) focusing on productivity goals for the long term. So that it can improve welfare by paying attention to economic, environmental and social aspects which are aspects of sustainable agriculture. Farmer participation also affects sustainable agricultural land. Research by Rebecca et.al (2020) conducted in Kenya concluded that the adoption of sustainable land management is considered as a possible solution to address dry land degradation. Farmer participation has a positive and significant effect on the adoption of sustainable land management.

Efforts to Encourage and Increase Farmers' Participation in Sustainable Agricultural Development

Basically, farmers are very ready to accept sustainable farming systems because the inputs used are already available in the surrounding natural environment. With their traditional knowledge, farmers need to be empowered so that they have increased knowledge about sustainable agriculture, and understand market opportunities and demands that require quality and environmentally friendly products. Thus, farmers can produce agricultural products with high economic value while preserving environmental functions (Safaruddin, 2011). Sustainable agriculture is carried out to maximize the social impact of the use of biological resources by maintaining the productivity and efficiency of the production of agricultural commodities produced, sustainable agriculture also pays attention to the importance of maintaining the quality of the environment, and maintaining the productivity of available resources to meet current and future needs. Agricultural development will be successful if it is supported by the participation of farmers. The government plays a very important role in efforts to increase farmer participation in sustainable agricultural development as the results of research by Li-Ding et al (2009) who conducted research on farmers in rural areas in China. Agricultural production cannot be sustained without the support of farmers. In rural China, farmers are starting to realize the importance of the environment, but lack a sense of participation and responsibility towards the environment. To increase farmer participation in sustainable agricultural development, it is necessary to increase farmers' income. The Chinese government has made policies that support the improvement of the skills of environmentally friendly farmers to support increasing farmers' incomes.

The success of agricultural development cannot be separated from the participation of the farming community. The development carried out by the government certainly aims to

achieve a prosperous society. So that the position of the community is an important position in the process of implementing development carried out by the government. Development will be considered successful if the development brings a change in the welfare of the farming community. Therefore, in the implementation of development, community participation is something that greatly affects the success of the agricultural development process itself (Murtiyanto, 2011). However, this is not in line with Farshid's (2011) research conducted on farmers spread across nine villages in Iran's Fars Province. This study concludes that farmers' participation in planning, decision-making and evaluation is not left to farmers but that it is the local provincial government that makes agricultural policies and does everything. According to Beyene (2000) households with high participation are rich households because farmers from rich households can attend previous training which costs money. The results of the research by Tewodros (2015) concluded that the participation of rich farmer households is high because rich farmers can adopt the previous program and also rich farmers can survive if there are weather and price shocks.

CONCLUSION AND SUGGESTIONS

Based on the background and discussion, the following conclusions can be drawn, namely three aspects of sustainability, namely social, economic, and environmental which must be integrated in which individual farmers and farmer institutions play a role in order to change the agricultural system towards sustainable agricultural development. The participation of farmers in supporting sustainable agricultural development is defined as the active involvement of farmers, either individually or in groups in the joint decision-making process, planning and implementation of agricultural programs and development, on the basis of a sense of awareness and responsibility. Participation of farmers can improve welfare by paying attention to economic, environmental and social aspects which are aspects of sustainable agriculture. Development will be considered successful if the development brings a change in the welfare of the farming community. Therefore, in the implementation of development, community participation is something that greatly affects the success of the agricultural development process itself. Based on the discussion and conclusions, suggestions can be made, namely the implementation of sustainable agricultural development that is socially justified by involving the participation of farmers without sacrificing the environment, so that agricultural development currently carried out must at least have thought about the needs of the next generation. In order for farmer participation to continue in sustainable agricultural development programs, a farm must be economically profitable. Sustainable agriculture can increase economic viability in many ways that can improve farmers' welfare. Farmer participation in sustainable agricultural development should be interpreted as a willingness to help the success of any agricultural program according to the ability of farmers without sacrificing the interests of the farmers themselves.

REFERENCES

1. Agboola AF, Adekunle IA, Ogunjimi SI. 2015. Assessment of Youth Participation in Indigenous Farm Practices of Vegetable Production in Oyo State, Nigeria. *Agriculture Sci*, 7(3): pp.73-79.
2. Anantayu, Sapja. 2011. Kelembagaan Petani: Peran and Strategi Pengembangan Kapasitasnya. *Jurnal SEPA*. Vol. 7 No. 2, hal.25-34.
3. Arham, I., Sjaf, S., and Darusman, D. 2019. Strategi Pembangunan Pertanian Berkelanjutan di Pedesaan Berbasis Citra Drone (Studi Kasus Desa Sukadamai Kabupaten Bogor). *Jurnal Ilmu Lingkungan*, 17(2), 245-255.
4. Asdak, Chay. 2012. *Kajian Lingkungan Hidup Strategis: Jalan Menuju Pembangunan Berkelanjutan*. Yogyakarta, Gadjah Mada University Press.
5. Badan Perencanaan Pembangunan Nasional. 2020. *Pembangunan Berkelanjutan*. Jakarta, Bappenas.

6. Beyene T, Assefa A. 2000. Croppenstendent the Impact of Agricultural Etension on Farm Productivity. *Journal AgricEcon.* 4(1). Pp. 126-135.
7. Budiman, M.A. 2013. Sektor Pertanian Dalam Konsep Pendapatan Nasional. 2013. Makalah. Jatinangor: Universitas Pajajaran.
8. Creswell W. Mardikanto, Totok and Poerwoko Soebiato. (2013) Pemberdayaan Masyarakat Dalam Presektif Kebijakan Publik. Bandung, Alfabeta.
9. Diener, E., & Tov, W. 2013. Subjective Well-being. *Research Collection School of Social Sciences*, (4)2.p.1-8.
10. Farshid Aref. 2011. Farmers' participation in agricultural development: The case of Fars province, Iran. *Indian Journal of Science and Technology* Vol. 4 No. 2, pp. 155-158.
11. Fitriyana. Gusti, Sri Rahayu, Apriyani. 2016. Distribusi Pendapatan and Tingkat kesejahteraan Petani Cabi Merah Keriting di Desa Tanjungsari, Kecamatan Talang Kelapa, Kabupaten Banyuasin. *Jurnal Tridinanti* Vol.2 No.2, hal.31-36.
12. Garkovich, Lorraine E. 1989. *Local Organizations and Leadership in Community Development*. Iowa: Iowa State University Press.
13. Gray, B. and Stites, J. 2013. Sustainability through Partnerships. *Capitalizing on Collaboration, Network for Business Sustainability*.
14. Inayah. 2012. Peranan Modal Sosial dalam Pembangunan. *Ragam Jurnal Pengembangan Humaniora*. Vol. 12 No. 1, April 2012.
15. Ismail, M., Santoso, D.B., Yustika, A.E. 2015. *Sistem Ekonomi Indonesia, Tafsiran Pancasila and UUD 1945*. Jakarta: Erlangga.
16. Iwan. 2010. Analisis Hubungan Karakteristik Petani dengan Partisipasi Petani terhadap Program Pengembangan Agribisnis Jagung Hibrida pada Kabupaten Karanganyar. <http://iwansas.wordpress.com>. Diakses 13 April 2015.
17. Khairuddin, 2000. *Pembangunan Masyarakat, Tinjauan Aspek: Sosiologi, Ekonomi and Perencanaan*. Yogyakarta: Liberty.
18. Kumba Digdowniseiso. 2019. *Teori Pembangunan*. Jakarta: LPU-UNAS.
19. Lacy, John. 2011. Farmer Benchmarking Participatory Model to Improve P roductivity. *Journal of Agricultural Systems*, Vol.104 (7), pp.562-571.
20. , Zhao Li-Ding Xinfeng and Yihe Lu..2009. What motivates farmers to participate in sustainable agriculture? Evidence and policy implications. *International Journal of Sustainable Development & World Ecology* Vol. 16, No. 6, pp. 374–380.
21. Lifa Indri Astuti, Hermawan, Mochammad Rozikin. 2018. Pemberdayaan Masyarakat Dalam Pembangunan Pertanian Berkelanjutan. *Jurnal Administrasi Publik (JAP)*, Vol. 3, No. 11, Hal. 1886-1892.
22. Lipset, Seymour Martin. 1963. *Political Man: The Social Bases of Politics*, Newyork, Anchor.
23. Mangowal, J., 2013. Pemberdayaan Masyarakat Petani dalam meningkatkan Pengembangan Ekonomi Pedesaan di Desa Tumani Kecamatan Maesaaan Kabupaten Minahasa Selatan. *Governance. Jurnal Ilmiah Jurusan Ilmu Pemerintahan FISIP Unsrat*. Vo. 5 No.1, hal.56-71.
24. Mulya. IGN Eddy. 2020. Analisis Kearifan Lokal Dalam Mewujudkan Kesejahteraan Pelaku UMKM Di Kota Denpasar. *Disertasi*. Denpasar. Universitas Udayana Bali
25. Murtiyanto, Nawa. 2011. Partisipasi Masyarakat. [http://bagasaskara.wordpress.com /](http://bagasaskara.wordpress.com/) 2011/10/12/ partisipasi-masyarakatteori-ringkas/
26. Mutmainah, R., and Sumardjo, 2014. Peran Pemimpin Kelompok Tani and Efektivitas Pemberdayaan Petani. *Sodality: Jurnal Sosiologi Pedesaan*. Vol.3 No.1, Hal.36-49.
27. OECD (Organisation for Economic Co-operation and Development).2013. *Guidelines on Measuring SubjectiveWell-being*, OECD Publishing.
28. Puspitaningsih, Oneng Sunaringtyas, Bakti Wahyu Utami, Arip Wijianto. 2016. Partisipasi Kelompok Tani Dalam Mendukung Program-Program Pertanian Berkelanjutan. *Journal of Sustainable Agriculture*, Vol. 31 No. 2, Hal. 79-85.
29. Rahadiani, A.A.S.D, 2014. Partisipasi Masyarakat Sekitar Danau Beratan dalam Konservasi Sumber Daya Air. *Jurnal Pertanian*. Vol.2, No.2, hal.49-61.

30. Rebecca N. Karaya, Christopher A. Onyango and George M. Ogendi. 2020. The Effect of Participation in Farmer Groups on Household Adoption of Sustainable Land Management Practices in Kenyan Drylands. *Asian Journal of Agricultural Extension, Economics & Sociology*, 38(11): pp.66-80
31. Rostow, Walt Whitman. 1960. *The Stages of Economic Growth a Non-Comunist Manifesto*. London. Cambridge University Press
32. Rudy S. Rivai and Iwan S. Anugrah. 2011. Concept and Implementation of Sustainable Agricultural Development in Indonesia. *Forum Agro Ecomomics*. Vol. 29 No. 1, pp. 13 - 25
33. Salikin, Karwan A. 2003. *Sistem Pertanian Berkelanjutan*. Yogyakarta, Kanisius.
34. Sara J. Marks and Davis, Jennifer. 2012. Does User Participation Lead to Sense of Ownership for Rural Water Systems? Evidence from Kenya. *Journal of World Development*, Vol. 40, No. 8, pp. 1569–1576
35. Sean Fitria Rohmawati Laily, Heru Ribawanto, Farida Nurani. 2018. Pemberdayaan Petani Dalam Meningkatkan Ketahanan Pangan. *Jurnal Administrasi Publik (JAP)*, Vol. 2, No. 1, Hal. 147-153
36. Sheikh, M. J. Marof Redzuan. A. A. Samah, H. Magsi and M. A. Shahwani. 2016. Analysis of Farmer Participation For Water Management in Sind Province Pakistan. *Journal Agri Vet Science.*, 32 (1),pp. 75-84
37. Sigala, M. 2008. A Supply Chain Management Approach for Investigating the Role of Tour Operators on Sustainable Tourism. *Journal Of Cleaner Production* · October 2008
38. Soetomo, 2014. *Kesejahteraan Upaya Mewujudkannya dalam Perspektif Masyarakat Lokal*. Penerbit Pustaka Pelajar. Yogyakarta
39. Suasih, Ni Nyoman Reni 2016. *Analisis Determinan Kesejahteraan Petani (Studi Kasus di Subak Pulagan, Desa Tampaksiring, Kabupaten Gianyar*. Disertasi. Program Doktor Ilmu Ekonomi Program Pascasarjana Universitas Udayana Denpasar
40. Sufian, Hamim. 2013. *Sistem Perencanaan Strategis Dalam Pembangunan*. Pekanbaru: UIR Press
41. Suradisastra, K., W.K. Sejati, Y. Supriatna, and D. Hidayat. 2002. Institutional Description of the Balinese Subak. *Jurnal Penelitian and Pengembangan Pertanian*, 1(21), pp.61-79
42. Suryana, A. 2005. *Pembangunan Pertanian Berkelanjutan Andalan Pembangunan Nasional*. Makalah dibawakan pada Seminar Sistem Pertanian Berkelanjutan untuk Mendukung Pembangunan Nasional tanggal 15 Pebruari 2005 di Universitas Sebelas Maret Solo.
43. Syahyuti, 2006. *30 Konsep Penting dalam Pembangunan Pedesaan and Pertanian*. Jakarta: PT Bina Rena Pariwara.
44. Syahyuti. 2006. *30 Konsep Penting dalam Pembangunan Pedesaan and Pertanian*. Penjelasan tentang Konsep, Istilah, Teori and Indikator serta Variabel. Jakarta:Bina Rena Pariwara.
45. Tewodros T. 2015. Extension programme participation and smallholder's livelihood: Evidencer from Awassa Zuria District. *Journal ANNPR* 7(1): 150-155.
46. Tikson, Deddy T. 2005. *Teori Pembangunan di Indonesia, Malaysia and Thailand*. Makassar: Innawa.
47. Todaro, M.P. 2000. *Economic Development*. Seventh Edition. New York, Addition Wesley Longman, Inc.
48. Toisuta, W. 1977. Menggalang Partisipasi Guru and Masyarakat dalam Rangka Mensukseskan Usaha-usaha Pembaharuan Pendidikan. *Cakrawala Majalah Penelitian Sosial*, LPIS Satya Wacana, No. 1 Tahun X: 5-15.
49. Undang-Undang Republik Indonesia No. 19 Tahun 2013 Tentang Perlindungan and Pemberdayaan Petani. 2013. Jakarta. Kementerian Hukum and Hak Azazi Manusia.
50. Windia, Wayan and Alit Artha Wiguna, Wayan 2013. *Subak World Cultural Heritage*. Udayana University Press: Denpasar.
51. Windia, Wayan. 2010. Sustainability of Subak Irrigation System in Bali (Experience of Bali Island). - Seminar on the History of Irrigation in Eastern Asia, Jogjakarta.
52. Wuysang, Rendy. 2014. Modal Sosial Kelompok Tani Dalam. *Journal Acta Diurna* Volume III. No.3. hal.14-26.