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The role of stakeholders in the sustainability of the Simantri program in Tabanan

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ABSTRACT

The current development of the agricultural sector requires the involvement of stakeholders from various circles. The role of stakeholders is adjusted to the duties and responsibilities they have so that the results achieved can run optimally. This study aims to identify the typology of actors based on the strengths and relationships between actors and the attitudes of actors towards the sustainability goals of the Simantri program. Data collection methods in this study were interviews, questionnaires, and Focus Group Discussions (FGD). Data analysis used the Mactor method (Matrix of Alliances and Conflicts Tactics, Objectives, and Recommendations). The results showed that the Bali Provincial Agriculture Office and Tabanan Regency Agriculture Office were the dominant actors. Agricultural Extension Agency (BPP), Farmer's Cooperatives, Financial Institutions, PKK, and fertilizer collectors are relay actors, and Hotels/Restaurants are dominated, actors. Most of the stakeholders converge in supporting the strategic goals to be achieved. This finding becomes the basis for developing a pattern of collaboration between all stakeholders that is needed for the sustainability of the Simantri program.

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Introduction

The agricultural sector is still very important for the national economy. That is because the potential of the agricultural sector in Indonesia is supported by the availability of natural resources, as well as good climate conditions for farming. So that the agricultural sector is worthy to develop continuously for the survival of a nation. initiatives to develop the agricultural sector, particularly in Bali, including the development and dissemination of the integrated agricultural system (Simantri). The Integrated Agricultural System (Simantri) is a model for regional agricultural development in Bali Province. Simantri is a long-term local effort towards self-sufficiency in food, feed, organic fertilizer, energy (biogas), and farmer welfare based on the integration of food crops (rice, secondary crops, and horticulture), animal husbandry, plantations, aquaculture, and forestry. (Department of Agriculture and Forestry of Bali Province, 2018). The Simantri program has been initiated and fully supported by Regional Leaders through the strategic vision and mission as outlined in the regional strategic development program planning policy "Nangun Sat KerthiLoka Bali" through the Planned Universal Development Pattern. (Budiasa, 2014). Despite getting support from the government, the sustainable development of Simantri requires support from all stakeholders.

Stakeholders are groups or individuals who can influence and or be influenced by the achievement of certain goals. In its application, stakeholders can have an impact or be affected by a plan. The role of regional leaders in making Simantri a program to integrate the development of the agricultural sector has been proven by giving considerable attention to Simantri's linkages with other sectors in Bali Province. Simantri's products such as organic fertilizers, rice, organic fruits, and vegetables are coordinated with the need for fertilizer fulfillment, rice consumption in the local market to restaurant supplies. Some hotels and restaurants are required to buy agricultural products produced by the Simantri Farmers Association. Financial institutions, both banks, and non-banks were asked to participate in providing funding for Simantri's business in the form of livestock loans and infrastructure.

The implementation of the Simantri program institutionally involves the relevant SKPD at the Regency/City level in the process of mentoring, and facilitation of supporting infrastructure to motivators carried out from upstream to downstream. The bureaucratic approach applied by the governor as Simantri's policymaker looks so dominant in every stage of activity. The Simantri program integrates agricultural sector activities with its supporting sectors both vertically and horizontally according to the potential of each region by optimizing the utilization of existing local resources. The integration activities carried out are oriented towards zero-waste agriculture and produce 4 F (food, feed, fertilizer, and fuel).

An integrated farming system is an integrated farming system that combines crops with livestock. Agricultural waste such as straw and other forage produced in the fields will be used as feed for livestock.Agricultural waste consists of agricultural crops on the ground or shoots; the remaining stems after harvesting or removing the primary results are utilized as alternative animal feeds (Yani in Theo Mahiseta et al, 2021). Meanwhile, the fertilizer produced by livestock will be used to fertilize crops. Thus, a zero-waste farm will be created, which can reduce production costs, is environmentally friendly, and is sustainable. Simantri's activities are oriented towards waste-free agriculture that can produce 4F (food, feed, fertilizer, and fuel). Simantri's main activity is to integrate plant cultivation with livestock in colony cages, where agricultural waste from plants will be processed into animal feed while livestock waste will be processed into organic fertilizer (solid fertilizer and liquid fertilizer (biourine)), biogas, and biopesticides. Simantri also encourages the strengthening of farmer institutions and the development of agribusiness/productive economic enterprises in rural areas.

The main Simantri package is financed from the Provincial APBD Social Assistance (Bansos) fund. Supporting activities, including the development of rural infrastructure, are financed from the activities of the relevant Regional Work Units (SKPD) in the Province of Bali and the Regency/City Government, by the availability of funds and program activities of each SKPD. In the long term, the private sector is also expected to participate in the form of Corporate Social Responsibility (CSR). Technical guidance support and sharing of financing are also carried out by the Bali Province Agricultural Technology Assessment Center (BPTP).The Simantri program which has been launched in 2009 based on the Decree of the Governor of Bali Number 29 of 2010 concerning the Sustainability of Farming Business, to increase the effectiveness of the program, especially in terms of supporting the sustainability of farming and increasing the productivity of farmers' income while being able to maintain the sustainability of agricultural resources, the welfare of the community can be improved. achieved and the Bali Organic Program.

Simantri is supported by the Bali Provincial Government and 9 regencies/cities. The integration that has been built at the farm level, government institutions as well as stakeholders and policymakers, has the potential to support harmonization to build commitment in the implementation of regional strategic programs. The bureaucratic approach taken by the governors and regents/mayors as decision-makers, then implemented by the ranks of the bureaucracy as the executor of activities, become a force for the sustainable development of the Simantri program. With the support of technological innovation from technical institutions and AIAT in Bali Province as well as the social and cultural culture of the Balinese people in agricultural and livestock-raising activities, it is the potential for the integration of livestock crops to be the focus of activities in the Simantri program in Bali Province.

The number of SimantriGapoktans for the 2009-2020 period has reached 750 Gapoktans in nine regencies/cities in Bali Province. Based on data from the Department of Agriculture and Food Crops in 2020, Tabanan Regency occupies the second position as the Regency with the highest number of Simantri in Bali Province, with a total of 115 Gapoktan or 15.29 percent of the total Gapoktan in Bali Province.

Gapoktan in Tabanan Regency has adopted agricultural technology, especially fertilizer processing using machines assisted by the Bali Provincial Government. Several Gapoktans have started implementing integration and partnership patterns by producing organic fertilizers and marketing the results of farmer groups and subaks. However, the process of processing fertilizer from livestock manure is not optimal because it is

faced with obstacles in transportation for distributing fertilizer. (Suardika, 2022). Gapoktan in Tabanan Regency is still constrained in the distribution of fertilizer distribution so the effectiveness of the Simantri program has not been achieved. In conditions like this, the role of the government is needed (Darmayasa, 2011).

According to earlier research carried out by Anak Agung et al. (2016), the qualities of farmers and the functions played by their companions have an impact on the level of success achieved by the Integrated Agricultural System Program (Simantri). This research will look at the role of stakeholders; therefore, the objective of this study is to find out the role that stakeholders play in the sustainability of the simantri program in Tabanan.Based on this background, this research is designed to 1) identify stakeholder actors in the sustainability of the Simantri program; 2) describe the pattern of connectedness between actors and the objectives of the Simantri program sustainability. The results of the research will be very useful for determining the appropriate institutional model related to the pattern of coordination and involvement of stakeholders in the sustainability of the Simantri program.

Method

This research was conducted in Tabanan Regency by making direct observations in the field, literature studies were also carried out to obtain research results that were in accordance with the problem. Data collection techniques were carried out by distributing Questionnaires and Focus Group Discussions (FGD) to strengthen the analysis of the discussion.

In-depth interviews were conducted with key informants who were determined purposively based on the involvement and understanding of the informants about the Simantri program. The questionnaire was distributed purposively with a total of 134 respondents. The purpose of distributing questionnaires is to obtain accurate and structured data from respondents. The questionnaire is the initial stage of data collection before a Focus Group Discussion (FGD) is conducted to identify problems related to sustainability issues. Questionnaire distribution is very important to identify the actors involved and the objectives to be achieved in the sustainability of the Simantri program.

Focus Group Discussion (FGD) aims to determine stakeholder actors and strategic goals that can be achieved in the sustainability of the Simantri program. Guided by the Moderator, the FGD was conducted using the word café technique to encourage involvement and enrichment of information for all participants. The FGD participants consisted of nineteen respondents consisting of one local community (general), two representatives of the Simantri Farmer Group, two representatives of the Traditional Village Prajuru, one representative from the Bali Provincial Agriculture Office, two representatives from the Tabanan Regency Agriculture Office, one person from the District Government (BPP), one person represents the Village/Kelurahan Government, two people represent Financial Institutions (LPD and Cooperatives), one representative from Farmers' Cooperatives, two PKK representatives, two people from Hotels/Restaurants (users), one Collector's representative, and one Fertilizer Supplier.

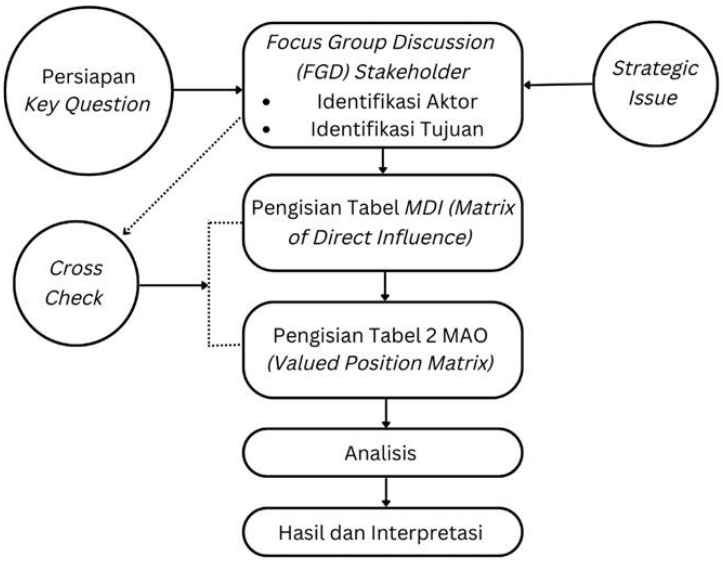

Figure 1. Stages of Mactor Analysis

The research data obtained were analyzed using Mactor software (Matrix of Alliances and Conflicts Tactics, Objectives, and Recommendations). Mactor is a software developed by Michel Godet in 1999. The way Mactor works is based on the influence between actors (inter-actor influence) which is distinguished as a direct influence, indirect influence, and potential influence.

The stages of Mactor analysis are 1. Identifying the actors involved and the objectives to be achieved; 2. Filling in the MDI (Matrix of Direct Influence) Table which is measured on a scale of 0 (no influence) to 4 (affects the existence of actors); 3. Fill in the Actor-Objective Table or 2MAO which is measured on a scale of 0 (the goal has a bad outcome (bleak outcome) to 4 (the goal is to interfere with the existence of the actor / cannot be ignored for the existence of the actor).

Results and Discussions

The results of the interview found that the Simantri program needed its sustainability. Farmers get the capital and motivation to develop livestock. The assistance provided by the government is very beneficial for farmer groups, but there are several obstacles that farmers face. According to BPP, most of the farmers complained about the accessibility and means of transporting cow dung to be processed into compost (biogas). Some farmers also find it difficult to breed cattle, to process the fertilizer for marketing. Simantri must get attention from the Provincial Agriculture Office because this program is under the auspices of the Provincial Government. Attention must also be given to farmers regarding Mouth and Nail Diseases (FMD) livestock failures are mostly caused by a lack of education and attention to companions. SimantriPenebel who has received assistance since 2014 stated that the facilitators only monitored in the first year, the rest were not accompanied. This is certainly an obstacle to the sustainability of the Simantri program. The Focus Group Discussion (FGD) conducted has identified stakeholder actors, roles of actors, and strategic objectives that may be realized in the sustainability of the Simantri program (Table 1).

Table 1. Actors, Roles of Actors, and Strategic Goals on the Sustainability of the Simantri Program in Tabanan Regency

No	Actor	Role	Strategic Goals
1	Provincial Government (Department of Agriculture and Food Security of Bali Province)	Facilitating agriculture, food, animal husbandry, and animal health	Increase in Regional Original Income (PAD)
2	District Government (Department of Agriculture and Food Security of Tabanan Regency)	Organizing the authority and assistance tasks in the regional agriculture sector through counseling, policy formulation, and distribution of agricultural support tools and machines.	Employment expansion
3	District Government (Agricultural Training Center/BPP)	Develop and implement extension programs at the sub-district level in line with the District/City extension programs	Farmer skill improvement
4	Farmers' Cooperative	Assist in the capitalization and distribution of agricultural products.	Business development
5	Financial Institutions (LPD and Cooperatives)	Providing micro-enterprise capital for rural communities	Adding a network (Market Authority)
6	Fertilizer Collector	Buying manure	Environmental sustainability
7	PKK	Empowerment of housewives in processing agricultural products	Creativity development
8	Hotel/Restaurant	Accommodating and utilizing agricultural products	Empowerment of agricultural products
9	Farmers	A learning platform for its members to increase knowledge, skills, and self-reliance in agricultural processing	Increased agricultural production

Source: Processed Data (2022)

Table 1, it can be seen the complexity of the actors involved in the sustainability of the Simantri program involving the government, the private sector, and the community. Judging from the role of these actors can be

grouped into Primary stakeholders consisting of the Department of Agriculture and Resilience of the Province of Bali and the Department of Agriculture and Food Security of Tabanan Regency. These institutions are likely to play a major role in the sustainability of the Simantri program. While the Agricultural Training Center (BPP), Farmer's Cooperatives, Financial Institutions, Fertilizer Collectors, PKK, Hotels/Restaurants, and Farmers' Groups are secondary stakeholders who act as supporters and implementers of decisions made by primary stakeholders.

Table 2. Direct Influence Between Actor (MDI)

	din-Prov	din-Regency	BPP	copy-Tan	Glue-Keu	Pen-PUK	PKK	Ho-rest	Lom-Tan
Department of Agriculture and Food Security of Bali Province	0	3	3	2	4	3	2	3	3
Department of Agriculture and Food Security of Tabanan Regency	2	0	4	2	3	3	4	3	3
Agricultural Training Center/BPP	2	4	0	2	3	3	4	3	3
Farmers' Cooperative	3	3	3	0	3	3	2	2	3
Financial institutions	2	3	3	2	0	2	3	2	3
Fertilizer Collector	2	2	3	2	2	0	3	2	3
PKK	2	2	3	2	2	2	0	3	3
Hotel/Restaurant	1	1	2	1	2	2	3	0	2
Farmers	2	2	3	2	2	2	2	2	0

Source: Processed Data (2022)

Mactor software then processes the data in Tables 2 and 3 into various features which are graphic representations that help interpret the relationship between actors, actor competitiveness, and actor relationships with goals (Fauzi, 2019).

Table 3. Actor's Attitude to Goal (2MAO)

	PAD	Wipe Ker	Skills	Peng Ush	auto pass	Les Ling	Crea tv	Pem Power	Producer Pert
Department of Agriculture and Food Security of Bali Province	0	1	0	3	3	1	0	0	0
Department of Agriculture and Food Security of Tabanan Regency	4	4	3	4	2	2	4	4	4
Agricultural Training Center/BPP	4	4	4	4	2	2	3	4	2
Farmers' Cooperative	1	2	1	3	2	4	1	3	1
Financial institutions	0	3	0	3	1	1	3	3	1
Fertilizer Collector	2	3	2	4	2	2	2	4	4
PKK	3	4	4	4	3	3	2	3	4
Hotel/Restaurant	1	4	3	4	2	2	2	4	4
Farmers	3	3	3	4	3	3	3	3	3

Source: Processed Data (2022)

Focus Group Discussion (FGD) resulted in the initial matrix of the Mactor analysis in the form of the Direct Influence (MDI) Matrix in Table 2 and the Valued of Position (2MAO) Matrix in Table 3. These two matrices are inputs for the Mactor analysis. Table 3 (MDI) describes a description of the level of influence of an actor on other actors. Stakeholders in the first column are assessed for their level of influence on the actors in the first row. The level of influence of actors on each other is measured by a value of 0 (no influence), 1 (affects operational procedures), 2 (affects work), 3 (affects actor's mission), and 4 (affects actor's existence).

Table 3 (2MAO) describes the position of the actor towards the objectives achieved in the sustainability of the Simantri program. The position of the actor towards this goal is reflected by the attitude and assessment of the actor whether he supports or rejects the goal. This matrix is filled with a value of 0 (objectives have a dismal outcome/ bleak outcome), 1 (aim to interfere with the actor's procedures vital to the actor's operational procedures), 2 (aim to interfere with the actor's work success/vital to job success), 3 (aim to interfere with the achievement of the mission). actor / cannot be ignored for the actor's mission), and 4 (the purpose of disturbing the existence of the actor / cannot be ignored for the existence of the actor).

Mactor Analysis Results

The result of the first Mactor analysis is a map of the influence and dependence of the actor. Actor influence describes an actor's ability to influence other actors, planning design, and program development. The sources of the power of the actor's influence are determined by the ownership of material resources, social position, and knowledge of the actors towards the future of a system (Tronvoll, 2017). The map of the influence and dependence of actors on the sustainability of the Simantri program is shown in Figure 2.

Based on Figure 2, it is known that the Department of Agriculture and Food Security of the Province of Bali and the Department of Agriculture and Food Security of Tabanan Regency are the dominant actors, namely the most influential actors because the power to influence other actors is high while the dependence is low. This position is influenced by the role of the two actors who are very important in the sustainability of the Simantri program as shown in the table. The dominant position of the two actors also shows their ability as leaders in determining policies for the sustainability of the Simantri program.

Agricultural Extension Agency (BPP), Financial Institutions (LPD and Cooperatives), PKK, Farmer's Cooperatives, Fertilizer Collectors, and Farmers' Groups are relay actors because their influence is high but their dependence is also high. Relay actors are actors who are expected to play a role in the execution of various policies in the field. The relay actor will be the spearhead and determinant of the success of the operationalization of the Simantri program development in Tabanan Regency by their respective capacities and roles.

Hotels and restaurants are the dominant actors, namely actors who are highly influenced and dependent on other actors. Hotels and restaurants are expected to be able to accommodate and process agricultural products produced by the Simantri farmer group. Hotels and restaurants can maximize the distribution of agricultural and livestock products from Simantri farmer groups. Hotels and restaurants need to obtain regulations for processing agricultural products from the Simantri farmer group.

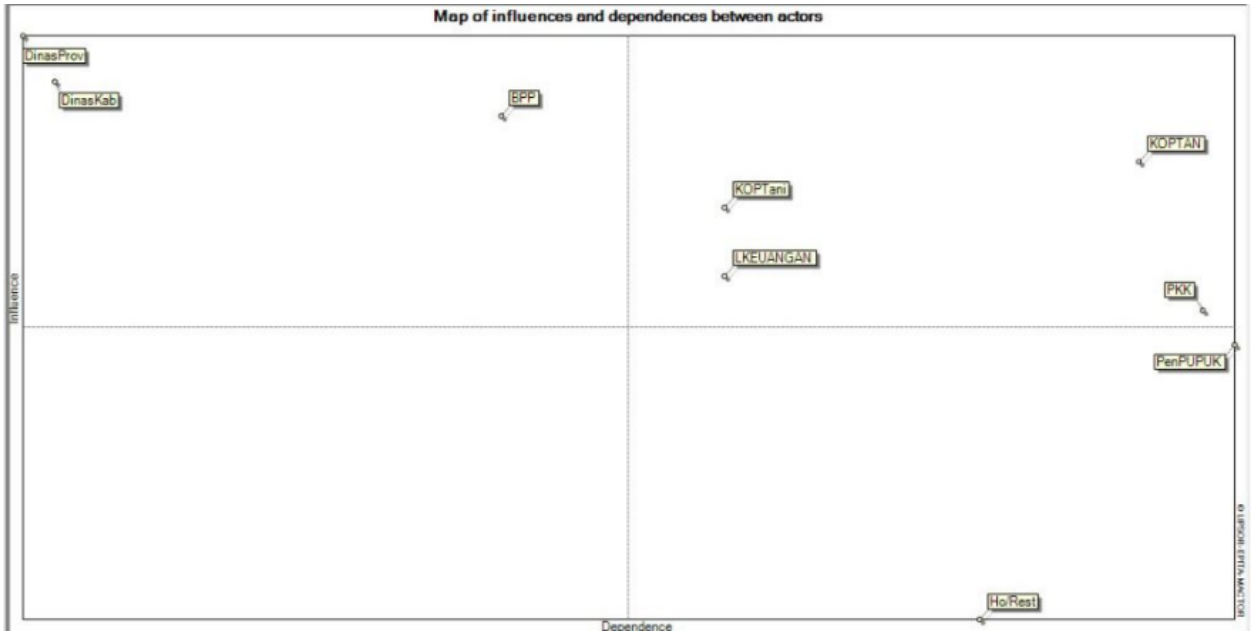

Figure 2. Actor Influence and Dependence Map

The result of Mactor's second analysis is the actor's competitiveness map. The competitiveness of the actor describes the intensity of the strength of the actor's influence on other actors which is determined by direct influence, direct dependence, indirect influence, and indirect dependence. The competitiveness map also shows the willingness of actors to use their strengths to control other actors (Elmsalmi&Hachicha, 2014).

Based on Figure 3, it is known that the Bali Provincial Agriculture Office and the Tabanan Regency Agriculture Office have high competitiveness. This mapping is very precise because the Bali Provincial Agriculture Office is the most authorized and responsible agency for policies and regulations in the Simantri Program. Meanwhile, the position of the Tabanan Regency Agriculture Service is related to the administration of authority and assistance in counseling, policy formulation, and distribution of aid to farmers. With such great competitiveness, these two actors have essential positions in the planning and development of the Simantri program sustainability. In addition, hotels/restaurants are relay actors who have the lowest competitiveness. While other actors are in a moderate position.

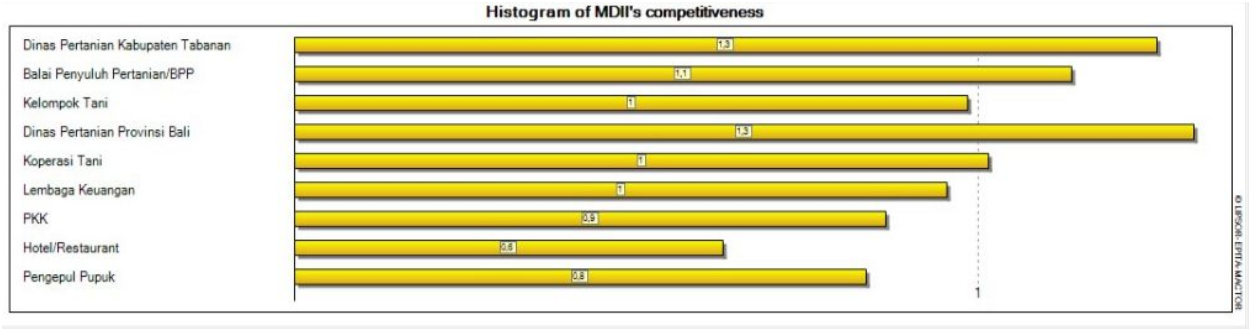

Figure 3. Actor Competitiveness

The next analysis relates to the development objective map. One of the factors that determine the support or rejection of stakeholders in a development is how appropriate the objectives of the development are to the actor's mission (Durán, 2013). To find out the map of the actor's support for the sustainability objectives of the Simantri program, a group of goals to be achieved is mapped on the level of importance. The more important a goal describes the stronger the actor's support for that goal. Figure 4 presents a map of the objectives of the Simantri sustainability program in Tabanan Regency.

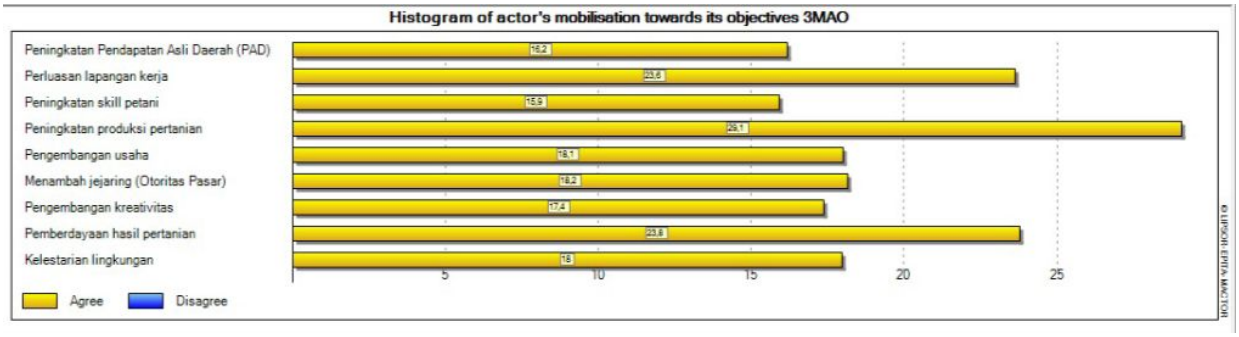

Figure 4 shows that all actors support or are not resistant to all of the sustainability goals of the Simantri program, it can be seen that there is no blue color on the goal graph bar. The highest intensity of support is on increasing agricultural production. This goal is considered appropriate because the Simantri program is expected to increase agricultural production. Cattle seed assistance, fertilizer processing, and secondary crops are aimed at increasing agricultural production. The next goal that is strongly supported by the actor is the empowerment of agricultural products. This is related to the concept of zero waste in the Simantri program. The assistance provided in a package with cows and a fertilizer processing machine is intended to enable farmers to use fertilizer from cow dung into biogas. This is more profitable for farmers because processed fertilizers can be sold more expensively than just selling cow dung. The goal with the least support is to increase Regional Original Revenue (PAD), this goal tends to be limited to being the goal of local governments. Given the limited resources, the achievement of goals can be made on a priority scale from the highest level of support to the lowest.

The results of the next analysis focus on the actor's convergence map. The convergence of actors describes the similarity of actors' attitudes towards goals. Actors who have the same attitude will converge while those who have different attitudes will diverge. Convergence analysis is intended to determine the possible points of a potential alliance of actors. Convergence maps can be used to determine which actors can work together to avoid possible conflicts. A description of the possible alliance/cooperation of actors in the sustainability of the Simantri program can be seen in Figure 5.

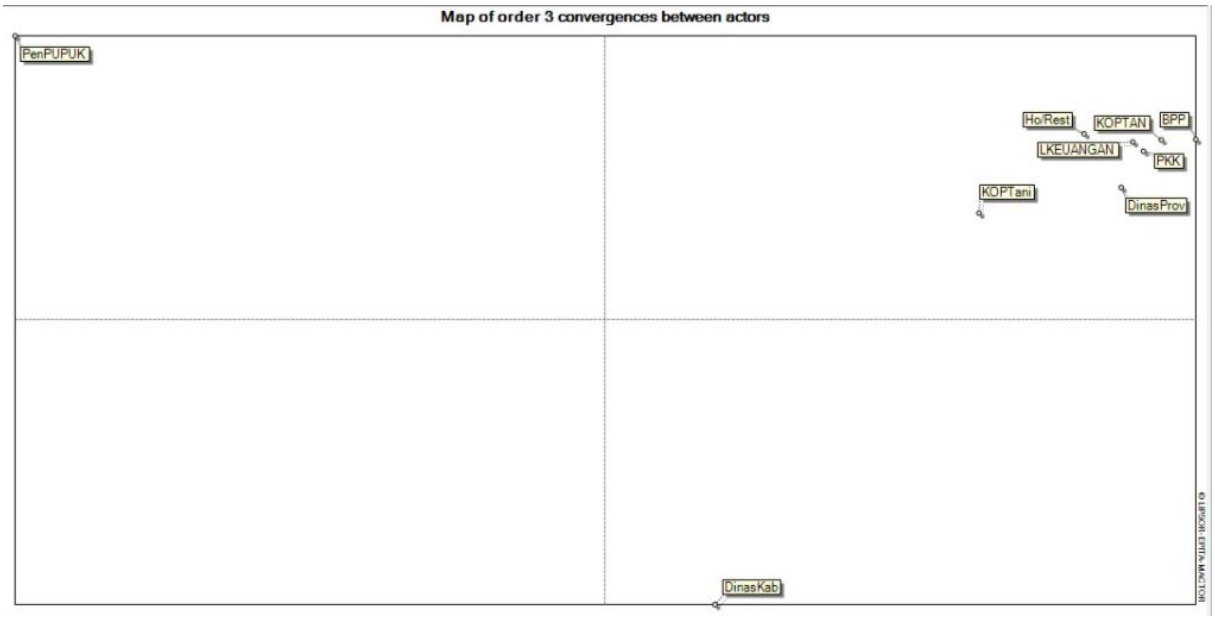

Figure 5. Actor Convergence Map

Figure 5 shows the potential alliances that can be built between the Bali Provincial Agriculture Office, Agricultural Extension Agency (BPP), PKK, Farmers Cooperatives, Financial Institutions (LPD and Cooperatives), Farmers Groups, and Hotels/Restaurants because these actors are close to each other in one area. the same quadrant. Meanwhile, the Tabanan Regency Agriculture Service and Fertilizer Collectors are divergent actors who tend to separate themselves from other actors. The divergence of the Tabanan Regency Agriculture Office towards other actors is related to its specific main tasks, namely to carry out the authority and assistance tasks in the regional agriculture sector through counseling, policy formulation, to the distribution of agricultural support tools and machinery. Meanwhile, the divergence of fertilizer collectors is caused by different orientations related to the sustainability of the Simantri program by its business vision.

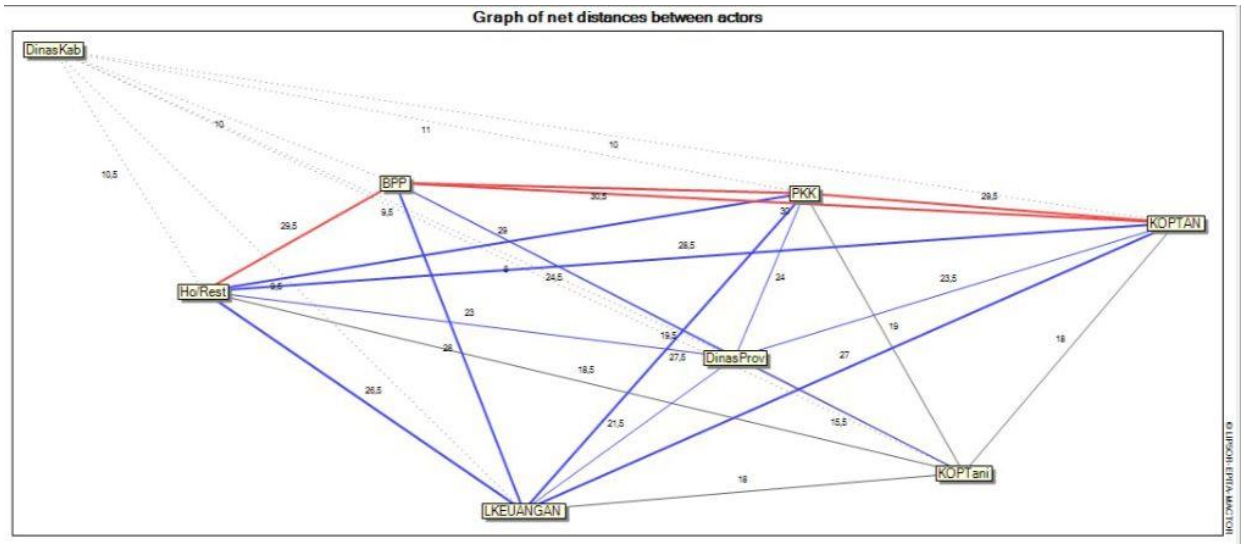

Figure 6. The intensity of Convergence Between Actors

A description of possible actor alliances is also shown in Figure 6 regarding the intensity of actor convergence (the red line shows the strongest relationship). From Figure 7, it is known that the Farmer's Group, PKK, BPP, and Hotel/Restaurant are a group of actors who can form a strong alliance for the success of the Simantri program in Tabanan Regency.In next studies, it is anticipated that the number of research variables that will be used to determine the role of stakeholders in the sustainability of the simantri program will increase.

Conclusions

This study concludes that several actors are involved in the sustainability of the Simantri program in Tabanan Regency the government, the private sector, and the community. This research has also identified several favorite goals that are strongly supported by all actors so that they can be the basis for getting support to be realized. Other results show that most of the actors converge. The results of the analysis of the influence and dependence between actors have placed the actors in a strategic context where actors are expected to respect each other's competitive advantages. The findings of this study indicate a very large possibility for the sustainability of the Simantri program by involving all stakeholders. This result is the answer to the problem of the role of stakeholders in the sustainability of the Simantri program.

References

Agile, G. P., & Trihadiningrum, Y. (2016). Study management waste congested farm cow Simantri based 2R reduceandrecycle) in Subdistrict seririt, Buleleng Regency . Journal Technique ITS , 5 (2), D86-D91.

Aryana, A. A. N. B., Budhi, M. K. S., & Yuliarmi, N. N. (2016). Pengaruh karakteristik petani dan peran pendamping terhadap keberhasilan simantri di Kabupaten Badung. E-Jurnal Ekonomi dan Bisnis, 5(4), 689-720.

Aryana, AANB, Budhi, MKS, & Yuliarmi, NN (2016). Characteristic influence farmer and the role of companion to the success of simantri in Badung Regency. E-Journal Economy and Business, 5 (4), 689-720.

Battiste,M.(1984).Micmac literacy and cognitive assimilation.

Budiasa, IW (2010). Subak's dual role for sustainable agriculture in Bali Province. Journal AGRISEP , 9 (2),153–165.

DA Wiwik Dharma, S.IP., MA,DA Wiwik Dharmiasih (2016) Sustainable Tourism Strategy Cultural Landscape of Bali Province the Subak System US a Manifestation of the Tri Black Karana Philosophy. 1 ed. UNESCO Jakarta Office.ISBN n/a

Darmayasa,D.N.(2011).Level Success System Agriculture Integrated In Regency Tabanan.

Dewi, KACJ (2018). The role of cattle insurance in the SIMANTRI implementing group in Regency Buleleng. Dwijen AGRO, 8 (1), 27-34.

Dewi, NLPR, Utama, MS, &Yuliarmi, NN (2017). Influencing factors productivity of farming and the success of the Simantri program in Klungkung Regency. E-Journal Economy and BusinessUdayana University,6 (2), 701-728.

Dwijen AGRO,4 (2).

Education Geography Undiksha,5 (2).https://doi.org/10.23887/JJPG.V5I2.20664

Fauzi,A.(2019).Technique analysis sustainability. Grammar References Main.

Hayati, L N, Suratha, I K, & Sriartha, IP (2017). Program Implementation Analysis System Agriculture Integrated (Simantri) To Existence Agriculture In Districts Gerkgak Districts Buleleng. E-Journal EP Unud, 7 ,708–734.

Janssen, M., Luthra, S., Mangla, S., Rana, NP, & Dwivedi, YK (2019). Challenges for adopting and implementing Io Tinsmartcities: Anintegrated MICMAC-IS Mapproaches. Internet Research.

JPNN.COM. (2022). Simantri in Bali is still OK, but there are some notes, sir My bowl .JPNN.ComBali.https://bali.jpnn.com/bali-terkini/13342/simantri-di-bali-ternyata-still-okay-but-there-some-notes-nih-sir-bowl

Juliantari, N. K. T., Sutrisna, I. K., & Si, M. (2018). Analisis faktor-faktor yang mempengaruhi produktivitas dan pendapatan petani pada pelaksanaan simantri 1 di Kabupaten Badung. E-jurnal ekonomi pembangunan universitas udayana, 7(4), 708-734.

lol,N.,Goddess,P.R.,Main,M.S.,&Yuliarmi,N.N.(2017). Factors Which Affecting Farming Business Productivity And Program Success Simantry In Districts Klungkung.E-Journal EP Unud,6 , 701–728.

Parvata,D.M.D.,perfect,I.P.,Sukada,I.M.,& Augustine,K.K.(2019). Clustering management processing wastecow Bali on symantri in districts Badung. Bulletin Veterinary Udayana, 11 (1), 51-57

Suarsana, K., Darmawan, DP, Windia, W., & Wijaya, IMAS (2016). Optimization Strategy of Utilization of Information and Communication Technology (ICT) in the Development of Integrated Agriculture Systems (Simantri Program) in Bali . 12 , 129–136.

Supardi, S., Hariyadi, S., & Fahrudin, A. (2017). Analysis of the Sustainability of Edge City Development Beach (Case study: City Baubau Province Sulawesi Southeast). Journal Region and environment ,5 (3), 188-204.

Syahniar, T. M., Nusantoro, S., Andriani, M., & Kustiawan, E. (2021, November). Edukasi Bahan Pakan Alternatif Dengan Prinsip Zero Waste Sebagai Upaya Kemandirian Pakan Pada Peternakan Sapi Perah

Di Desa Kemuning Lor-Jember. In Prosiding Seminar Nasional Terapan Riset Inovatif (SENTRINOV) (Vol. 7, No. 3, pp. 393-400).

Yang, Y., Shafi, M., Song, X., & Yang, R. (2018). Preservation of cultural heritage embodied intraditional crafts in the developing countries. A case study of Pakistani handicraft industry. Sustainability (Switzerland), 10 (5). https://doi.org/10.3390/su10051336