

MODEL OF VILLAGERS FOOD SECURITY BASED ON LOCAL WISDOM

Bambang Kuncoro, Fatmah Siti Djawahir, Endang Dwi Sulistyoningsih, Bambang Suswanto, Ahmad Sabiq, Adhi Iman Sulaiman

Faculty of Social and Political Sciences, Universitas Jenderal Soedirman

Email: risununsoed@yahoo.com

This research was intended to formulate a model of villagers food security based on local wisdom. It took place in the village of Serang, Karangreja District, Purbalingga Regency which in 2014 became the winner of the best yard usage at the national level. The method used was PLA (Participatory Learning and Action). Data were collected through questionnaire, observation, interviews, and discussions with community workers and analyzed using an interactive model. The findings of the study were (1) Villagers of Serang have a hereditary tradition as horticulture farmers who not only make use of field but also yard as their local food security strategy. (2) Villagers of Serang have a very strong local wisdom—unity or cohesiveness-- in joint decision-making process for planning the planting, and maintenance, up to post-harvest stages, namely marketing of the crop. There were no conflict and competition among communities in the entire process (3) Villagers of Serang were able to survive in case of crop failures, because there were still other commodities in their yards sufficient to meet their daily needs. (4) Villagers of Serang require development touch in the form of training, mentoring and partnership program in terms of creating promotion strategy, opening wider access of marketing network and developing crop storage technology.

Keywords: local wisdom, food security, villagers

INTRODUCTION

According to Ashari et al. (2012) food security will remain our fundamental problem because of the greater population growth, increasing purchasing power and global climate dynamics. These problems become important note in the preamble of Law Number 41/2009 on the Protection of Sustainable Agricultural Land regarding the increasing population growth and economic and industrial development, which lead to the degradation, conversion and fragmentation of food

agricultural land and threatens the carrying capacity of the region nationally in maintaining independence, resilience, and food sovereignty. In the state of population that is still growing, threats to food production has raised concerns over the state of food insecurity in the future.

The problem was analyzed in depth by the State Ministry for Research and Technology in the White Book of Research, Development and Application of Science and Technology of Food Security in 2006 that divided that problem in more detail as follows: (a) the need for food to the people is higher than domestic production capacity; (b) The reduction of productive agricultural land area due to the conversion of its use for non-agricultural benefit; (c) The pattern of consumption that is still heavily dominated by rice; food diversification efforts are still hampered by a lack of knowledge and affordability; (d) The supply of food to the household level is often hampered as a result of the limitations of the transport network; (e) Some food products are not available throughout the year due to the natural production cycle of food commodities, agro-climatic factors, and undeveloped agro-industries for the processing / preservation; (f) There are many food products that do not meet health standards of food and / or in accordance with halal requirements; (g) Not all households are economically able to meet the needs of staple food; (h) The profit margin of food crops is very small, so it inhibits the motivation of farmers to increase production.

Therefore, food security assurance is an important thing that must be fought by the state. As a country with a large population and on the other hand has a natural resources and diverse food sources, Indonesia should be able to meet the food needs sovereignly and independently. Moreover, Law Number 18/ 2012 on Food has mandated that food is a basic human need that is most important and its fulfillment is a part of the human rights guaranteed in the Constitution of the Republic of Indonesia of 1945 as a basic component for realizing qualified human resources.

Efforts to improve food security and family nutrition can be done through the utilization of the resources available and which can be provided in its environment. Such efforts can be conducted through the use of yard area managed by the household (Saliem 2011). Unfortunately, according to Ashari et al. (2012) there were problems in land utilization program, which are as follows: yard has not cultivated intensively, it is still a part-time job and not market oriented, less available technologies that are specific to the cultivation of the yard and the assistance of officers who have not been adequate.

Based on this, it is very important and strategic to conduct studies and research on food security, especially at the local level such as the

village, which is closest to the reality of people's lives. The focus is on the utilization of the yard as empowerment programs so that it becomes more beneficial to the health of the environment, feed the family and could even bring in additional income.

Utilization of yard area to create food security will be a success if implemented based on local wisdom that comes from culture, human resources, natural resources and economical resources of rural communities. Among the local wisdom is the social relations where in the village are believed to be more stable, closed and cooperative, so that community development efforts or activities are more likely to succeed as compared to their urban counterparts (Beard 2007)

Study site was chosen from a village that has managed to do empowerment through yard usage as food security, so it can be studied and used as a model or prototype for other villages. The village that became the winner of the best yard usage in 2014 at the national level was the village of Serang in Karangreja District, Purbalingga Regency. So the goal of this research is to create a model of villagers food security based on local wisdom.

Literature Review On Yard Usage As Food Security

There are some results of studies on food security through the utilization of yards. Saliem (2011) stated that one of the efforts to improve household food security and nutrition is the utilization of available resources provided in their environment. Such efforts can be done through the use of yard area. In the same tone, Ashari et al. (2012) also stated that efforts to build a family food security can be done by utilizing the available resources including the use of yard. Utilization of yard area has potential in the provision of family food materials, reducing household expenditures for the purchase of food and increasing the income of households.

Then Saliem (2011) elaborated some of key factors for the success of developing food self-sufficiency and food security program. In particular, he highlighted the program of Ministry of Agriculture through Indonesian Agency for Agricultural Research and Development namely the Sustainable Food Houses Region (KRPL). To make KRPL successful, then some of the following prerequisites must be met : (i) active involvement of field officers and groups in the planning, implementation and evaluation of activities; (ii) availability of seeds, post-harvest handling and processing, as well as the markets for the products (iii) need to have diversification that can meet the needs of the food groups (grains, various tubers, animal food, oils and fats, fruit / oily seeds, nuts, sugar, vegetables and fruits, and others) for the family. (iv)

commitment, support and facilitation of the main policy makers, local government to encourage the implementation of technological innovation model.

Cepriadi and Yulida (2012) connected yard usage with the empowerment of housewives since it could be a medium for growing commodities to meet the daily needs of the community and could help increase household income as well. In addition, utilization of yard program was very well perceived by the farmers because of its relative advantages in terms of consumption and economical value. Moreover, it was quite suitable for cultivation because the products were good enough, not complicated and the farmers had experience before joining the program.

However, those studies related to the utilization of yard program have not reviewed the aspects of local wisdom where in the village level is very important in the process of community development. As stated by Kongprasertamorn (2007), local wisdom was also used in the formation of community development projects. Through local wisdom, it is expected that these projects will lead to sustainable resource management. In the same vein, Mungmachon (2012) confirmed that local wisdom support communities well and offer feasible solutions for development.

Furthermore, Kongprasertamorn (2007) explained the characteristics of local wisdom as follows: (1) local wisdom must incorporate knowledge of virtue that teaches people about ethics and moral values; (2) local wisdom must teach people to love nature, not to destroy it; and (3) local wisdom must come from the older members of the community. They also explain that local wisdom is presented in many forms, through people's thoughts, occupations, ways of living, and social values. The problem is that local wisdom usually is not officially published and promoted. As a consequence, it is difficult for the public to learn about and use this kind of knowledge.

Research Framework

The research process began with a literature review of the case in the media, the research findings from scientific journals and books to identify issues of local food security. Furthermore, discussions were held between research team, colleagues and practitioners to analyze the identification and formulation of the problem found, as well as designing stage to the opening of access to the site of research that have been determined. Then the research team conducted access opening for activities of observation, approaching and asking for partnership in

research activities, and interviews with key informants such as village head and village secretary. Then discussions on literature review and the results of field studies were conducted by the research team to design a research on model of community empowerment through yard usage as community food security. This can be illustrated by the following figure:

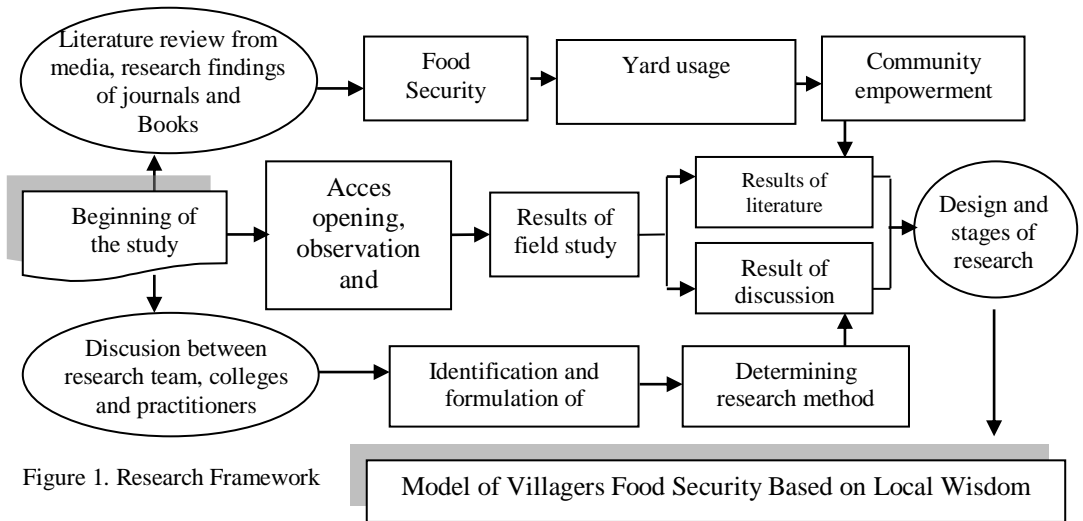


Figure 1. Research Framework

Research Methode

The study used Participatory Learning and Action (PLA) as a form of qualitative research method to identify problems and potentials of the community and to gain a thorough understanding of community situation. Then villagers as a community worker analyzed and made decisions on the problems faced. It is an assessment, learning processes, optimizing the aspirations and participation of the conditions or problems encountered from, with and for the community (Adi 2013) whose main principles are: (1) Giving priority to the less fortunate to know the reality of the real problem; (2) Emphasizing the assessment process as a process of empowerment (learning and reinforcement) for communities and community workers; (3) The principle of learning and respect for diversity. (4) The process of re-checking or triangulation (check and re-check) on the data obtained both from the observation, documentation and interview and FGD. (5) The implementation is informal, results optimization, sustainable, practical orientation and open.

The collection of data is derived from (1) secondary data: the analysis of documents about the project reports, records programs, research results, and the rule of law and the media. (2) primary data : the results of direct observation and semi-structured interviews as well as through (a) brainstorming to accommodate the aspirations, ideas, and

suggestions. (b) Focus Group Discussion (FGD) to discuss a problem in focus; (c) Participatory Decision Making (PDM) to make decisions.

Informants were determined by purposive sampling of 25 people from a group of horticulture farmers, as a community worker. Locations were selected from the villages potentially and actually managed to do empowerment through yard usage, as a strategy of food security that can be studied and used as a model and prototype for other villages, namely the Village of Serang, District of Karangreja Purbalingga regency as the winner of the best yard usage in 2014 at the national level.

Data was analyzed by using an interactive model. According to Miles and Huberman (1994) interactive model of analysis comprises 'three concurrent flows of activity: data reduction, data display, and conclusion drawing. Their 'interactive' model showed the cyclical nature of qualitative work : (1) Data reduction; the process of selecting, focusing, simplifying, abstracting, and transforming the 'raw' data that appear in written-up field notes. (2) Data display; it is an organized assembly of information that permits conclusion drawing and action taking. (3) Conclusion drawing; from the beginning of data collection, the qualitative analyst is beginning to decide what things mean, note regularities, patterns, explanations, possible configurations, causal flows, and propositions.

RESULTS AND DISCUSSION

Profile of Serang Village

Serang village has a long tradition of local food security. Because it is supported by location, which is on a plateau with an altitude of about 650-1600 m above sea level, as well as areas of high rainfall of about 6.240 mm with an average temperature of 20 ° C. Serang village has a fertile zone of land with an area of 2,878.390 hectares. These conditions make every household in the village of Serang has a yard area which is relatively large, so it can be used for planting various types of horticulture crops.

There are horticulture commodities seeded with mass production which can be marketed commercially and is seasonal. However, vegetable commodities remain available throughout the season and are produced in house yards. The vegetable commodities, which are widely cultivated in the village of Serang are red peppers, cabbage, tomatoes, potatoes, and strawberries, as well as other commodities, as presented in the following table.

Table 1. Types of Commodities, Land Area and Results in 2013/2014

Types of Commodities	Land Area (Ha)	Results (Ton/Ha)
Corn	16.75	1.5
Paddy	16	0.8
Cassava	20	17
Sweet Potato	8	3.1
Chili	3	6
Tomato	4	12.7
Mustard green	23	4.8
Potato	12.6	13.1
Cabbage	22	20
Cucumber	1	7
Bean	5	4
Carrot	30	10
Strawberries	50	3.5

Source: Monograph of Serang Village 2013/2014

Serang village has become agro-tourism area and tourist destination for both domestic and foreign visitors, government agencies, military institution, police, organizations and schools for camp activities, training, research, and comparative studies.

Villagers Local Wisdom on Food Security

Serang village's communities have long experience and are hereditary of horticulture agriculture including the utilization of the yard around the house. This was an example of local wisdom that is important to consider in making food security policy. The local wisdom of Serang's villagers on food security can be seen from the situation of *guyub* (unity or cohesiveness) in running horticulture agriculture, from planning of planting the main commodities such as strawberry to the sale of the crop. They were all in a compact coordination, communication, and mutual agreement as one community. All decisions are determined through *rembug* (consultation), so there was no conflict and competition between groups or individuals of horticulture farmers in terms of products, marketing and price as well. Including in times of crop failure due to falling of prices, the impact was experienced by villagers together so that no party was more advantaged or disadvantaged.

In fact, they had several times experienced a production failure caused not only by pests but also by an abundant harvest whose market price was down. It means that the production cost was greater than the sales revenue. In case of failure and loss on main agricultural commodities sold to the market like that, villagers of Serang were still be able to survive to fulfill daily needs since they still had other commodities in their yard as local food security.

The utilization of yard area has become the culture and customs of the community, which in practice was more managed by women, especially housewives assisted by their children while the male had a greater role to manage main commodities such as cabbage and strawberries. Although the use of yard area was still a sideline and not market-oriented but were quite beneficial for the villagers of Serang. In addition, it made the home environment healthy and look aesthetic. It had also benefit in terms of meeting daily food needs so that people can save their money. If there was excess production, they could even sell it for extra income.

This custom was entrenched and became a shared conscience of the villagers so that when there was a competition of yard usage, people just polished a bit what they typically have done. In fact, they could become the winner. Utilization of the yard that starts from the community at the grassroots level will create self-sufficiency and food sovereignty so that people have the ability and independence in economic, ecological and social matters.

Furthermore, villagers of Serang have managed to regenerate farmers. If many villages have problems regarding young people's disinterest to agriculture so that not so many young people want to be a farmer, the younger generation of Serang was much involved to continue agricultural activities as a horticulture tradition. They were taught early by their parents to help manage yard farming and even given responsibility to take care of a piece of land. Therefore, although most of them graduated from school at secondary level, they did not feel embarrassed to engage in agricultural activities.

Nevertheless, Serang village had agricultural problems still encountered in the form of high cost of fertilizers and seeds, which were also difficult to obtain. Moreover, they also cannot make organic fertilizer in a large scale that can assist in meeting the needs of fertilizer. Capital and marketing were also still an issue. In general, many farmers were still dependent on middlemen. Commodities marketed are usually purchased directly by them. They determined the price of agricultural production. People did not have the power to sell their produce directly to the market for a bargain price. On one side, it minimized the risk of farmers due to any damage to the product at the time of distribution. On the other hand, it weakened the bargaining power of villagers in determining the price. It happened because of the absence of alternatives other buyers, the lack of courage to market the product themselves and they do not yet have storage technology to keep their crops not rotten or damaged. Villagers have not used the farmers groups and cooperatives to increase their bargaining power.

The villagers have not been able to maximize the processing of crops into food or beverage products processed and packaged attractively such as using softcase in order to have a greater advantage. In addition, they did not have a warehouse to store their products that can keep them from being easily damaged or decayed.

Villagers of Serang have not been able to exploit its full potentials in terms of management and promotion of agro-tourism. Farmer groups were not reinforced by cooperative institutions that can carry out the opening of access to the production network including network to market directly and having the ease in acquiring fertilizer and seeds,. The local government itself lacked in conducting counseling, training, and mentoring as an empowerment program in institutional strengthening, increasing horticulture productivity, and setting up marketing and partnerships.

Therefore, villagers of Serang still need empowerment program especially to improve skills and institutional strengthening to maximize local potential, both in human and natural resources based on local wisdom as described by the model in the following figure.

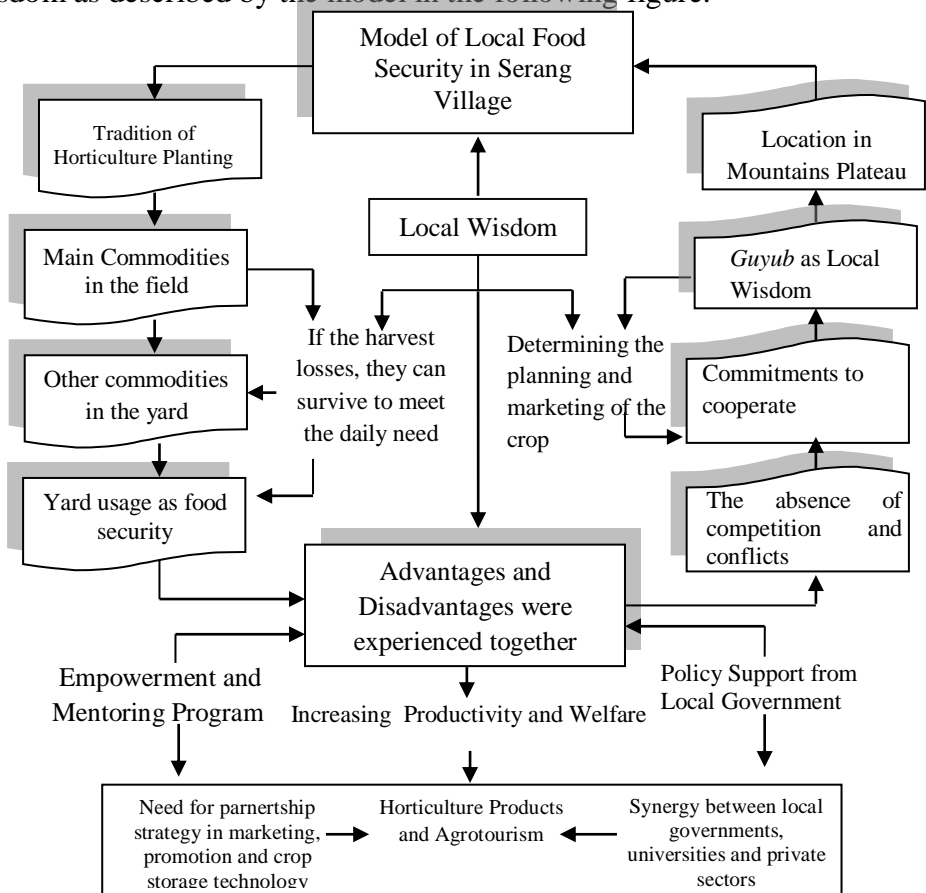


Figure 3. Model of Villagers Food Security Based on Local Wisdom

CONCLUSION

Serang village for generations has a good tradition of horticulture cultivation. It was surrounded by fertile upland areas that were suitable for horticulture farming and agro tourism. Its villagers has a very strong local wisdom—unity or cohesiveness— in joint decision-making process for planning the planting of main commodities and maintenance, up to post-harvest stages, which is marketing of the crop. There is no competition and conflict among people in the entire process. If there were losses and gains, all were experienced by villagers of Serang collectively. In case of crop failure on main commodities, villagers were still able to survive, because they still have other commodities in their yard area sufficient to meet the daily needs.

Although villagers of Serang have a tradition for generations in the utilization of land for food security, they still require development in the form of training, mentoring and partnership programs in terms of creating promotion strategy, opening wider access of marketing network and developing crop storage technology. In this case, policy support from local government and synergy with universities and private sectors was needed.

REFERENCES

- Adi, IR. (2013) *Intervensi Komunitas dan Pengembangan Masyarakat : sebagai Upaya Pemberdayaan Masyarakat*. Jakarta : Rajawali Pers.
- Ashari., Saptana., Purwantini, T.B. (2012) Potensi dan Prospek Pemanfaatan Lahan Pekarangan untuk Mendukung Ketahanan Pangan. *Forum Penelitian Agro Ekonomi*. 30(1), pp. 13-30
- Beard VA. (2007) *Household Contributions to Community Development in Indonesia*. World Development. 35,(4), pp. 607–625.
- Cepriadi & Yulida, R. (2012) Persepsi Petani terhadap Usaha Tani Lahan Pekarangan :Studi Kasus Usaha Tani Lahan Pekarangan di Kecamatan Kerinci Kabupaten Pelalawan. *Indonesian Journal of Agricultural Economics (IJAE)*. 3(2), pp. 177-194.
- Kemenristek RI. (2006) *Buku Putih Penelitian, Pengembangan dan Penerapan Ilmu Pengetahuan dan Teknologi Bidang Ketahanan Pangan Tahun 2006*. [White Book of Research, Development and Application of Science and Technology of Food Security in 2006]
- Kongprasertamorn K. (2007) Local Wisdom, Environmental Protection and Community Development. *MANUSYA: Journal of Humanities*. 10(1), pp. 1-10.
- Law Number 4. (2009) *the Protection of Sustainable Agricultural Land*.
- Law Number 18. (201) *Food*.

- Miles, M. B. & Huberman, A. M. (1994) *Qualitative Data Analysis: A Sourcebook of New Methods*. California; SAGE publications Inc.
- Mungmachon R. (2012) Knowledge and Local Wisdom: Community Treasure. *International Journal of Humanities and Social Science*. 2(13), pp. 174-181.
- Pemerintah Desa Serang. (2014) *Monografi Desa Serang 2013/2014* [Monograph of Serang Village 2013/2014].
- Saliem, H.P. (2011) Kawasan Rumah Lestari (KRPL) : Sebagai Solusi Pemantapan Katahanan Pangan. In: *Kongres Ilmu Pengetahuan Nasional (KIPNAS)*. Jakarta, 8-10 November.