



## The Phenomenon of Migrant Communities, Food Security and Their Participation

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### Abstract

*The study aimed to analyze and describe a strategy of food security achievement through land use at an area of migrant community. It was located in Wonogiri regency (an area with high migration), Central Java, Indonesia. It employed a mixed-method: quantitative and qualitative approach. The two approaches were used in the survey. The data collections used focus group discussions, in-depth interviews with key informants and participant observations. The results of the study formulated two strategies: land use strength and farmer institutional empowerment. The strategy of land use strength was divided into two scenarios. Scenario 1 referred to a maximal land use through essential food plant and agricultural extension (PPL). Scenario 2 referred to a non-maximal land use through diversification of food plant with a jajar legowo technique. The strategy of farmer institutional empowerment consisted of two scenarios. Scenario 1 referred to a high farmer institutional empowerment through accompaniment. Scenario 2 referred to a low farmer institutional empowerment through accompaniment with standardization and development.*

**Key words :** food, security, land use, migration, agricultural, development

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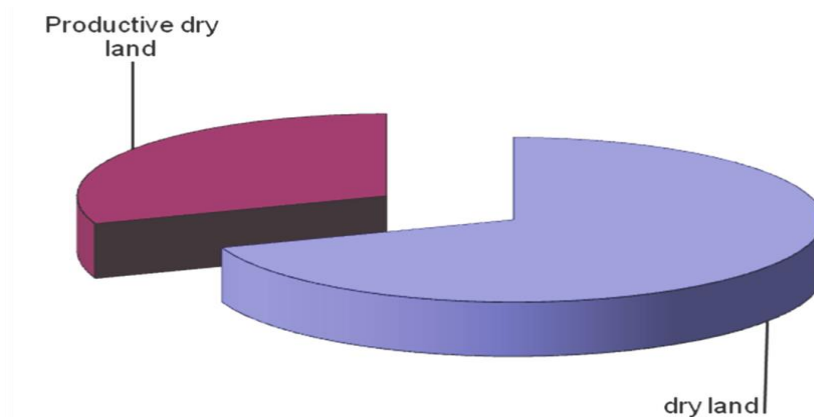
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## INTRODUCTION

Agricultural development aims to stabilize food security and develop and grow agricultural fields that can encourage rural economy activities and establish agricultural management system for farmers (Iqbal, 2007)<sup>1</sup>. It may not be running well without a community support, particularly farmers. The problem is the phenomena of the community where the farmers tend to migrate; they take a low encouragement to develop and grow agricultural fields in their village. It is the low encouragement that causes an agricultural field not to run maximally, particularly in an area of central migrants. A central migrant is an area where a majority of the people migrates so that agricultural land uses and farmer institutional empowerment can be said to be low. The condition of agricultural land in an area of the migrant community can't be exploited maximally because most of its people migrate and they think that an agricultural field can't result in sufficient incomes ('dirty job') (Gartaula, 2012)<sup>2</sup>, (Nimoh, et al, 2014). On the other side, however, it is assumed that migrating will take a positive effect on remittance for hometown and it is regarded as an important strategy for increasing food security of households (Durand et al. 1996; Adger, 2002)<sup>3,4</sup>. It is the arguments to examine food security achievement through agricultural land uses and farmer institutional empowerment. The results of the research by Mulyani et al. (2011)<sup>5</sup> stated that the main problems with the actualization of food security and national strategy may be described as follows: 1) the degradation of land resources and water source scarcity, 2) fertile land conversion and restriction, 3) climate change, and 4) limited potential/fertile land resources. National strategy is

employed to prevent some competition from food provision for food security by prioritizing use of non-food bio-energy commodity for bio-energy and to avoid some competition from land use for food through sub-optimal land use for non-food commodity. Widening an area of food plant at dry land is an alternative solution to a problem of national food. Currently, the dry land has only produced cassavas, peanuts, and corns. Nainggolan (2008)<sup>6</sup> stated that national food security is a pillar for developing human resources and qualified generation to establish a nation in globalization era. Stabilizing food security needs an effective cooperation between non-government organization, community organization and individual community. Oluwasola (2010)<sup>7</sup> suggested that agricultural development to cope with food scarcity in post-crops is making a policy in emphasizing females on the accessibility to a foreign technology.

The difference in the results of the researches is associated with food security. Mulyani et al. prioritized bio-energy commodity use and suboptimal land use with an alternative strategy of land widening while the other research empowered all of the organizations: government, non-government, community and individual community. The two strategies need to be analyzed in an area of central migrant. Empirically, most of the people in some Indonesian have migrated so that the land uses can't maximally be exploited. It can take a negative impact on food scarcity. The condition happens in Wonogiri regency as an area of central migrant. Minimal land uses in the regency can be described in Fig.1. Fig. 1 describes the productive dry land availability and migration community in an area of central migrant. Most of the dry lands are not exploited. It indicates a low productive land use. It is greatly caused by the amount of the people who has migrated to other areas so that the productions of agricultural sector are low.

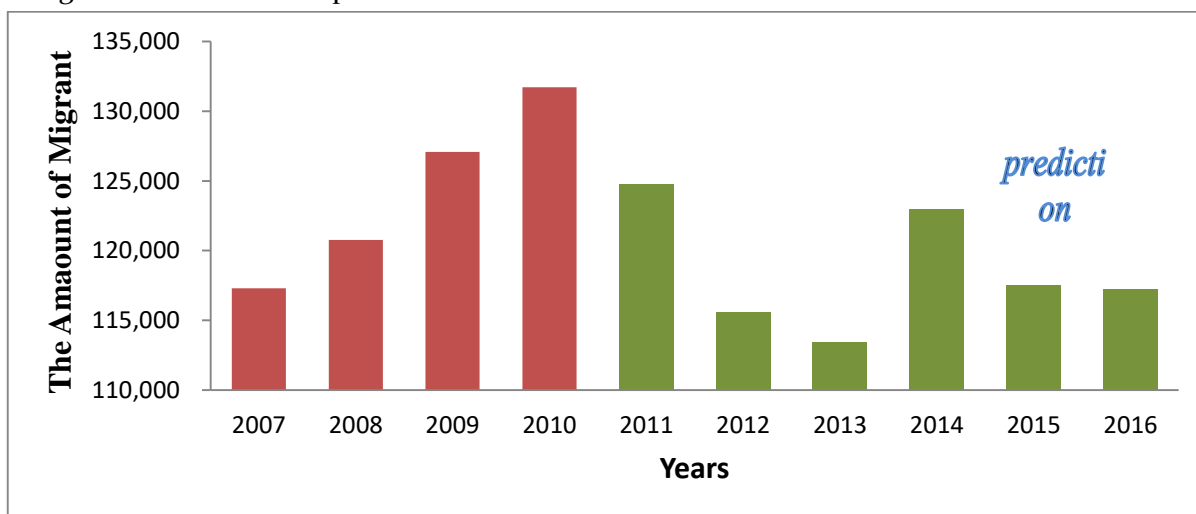


Source: WDA, 2012

**Figure 1.** Productive Dry Land Availability and Migration Community (Area of Central Migrant)

An agricultural sector is a dynamic-economic sector that can cause interesting issues, for example food security. There has been a optimistic change in food availability and problem of social environment with intensive agricultural method (Nijkamp, 2002). Many theses debate methods of solution to food security increase. Judith (2009) suggested the following methods: 1) fertilization, 2) mechanization, 3) irrigation, 4) cistern, 5) agricultural dry land development, 6) increased varieties of seeds, 7) agricultural extension, 8) diversification of plants, 9) sloping land for permanent plants, 10) traditional experience and knowledge, 11) organic agriculture, and 12) post-harvest loss, among others. The serious problem is related

to the amount of more people who have migrated to other areas (urban areas) to make a higher living for their families' economic well-being. It greatly occurs in Indonesia, particularly in an area of central migrant, for example, Wonogiri regency. Wonogiri regency is one of the territories in Central Java - Indonesia where a majority of the population become a migrant in other areas. Migrants from Wonogiri regency are classified as a temporary migrant. The labors from Wonogiri regency will live in hometown if it provides jobs or lands for making an earning (Purnomo, 2009)<sup>5</sup>. As reported by the Agency for Regional Development (BAPEDA), increased migration in Wonogiri regency continuously rises.



### Figure 2. Increasing Amount of Migration Population in Central Migrant, in process

Fig.2 describes the increasing amount of population in central migrant. If the condition rises annually, it will decrease the amount of productive labors in area of central migrant. This will cause the decreasing amount of productive labors who will take an impact on decreasing the productivity of agricultural sector in an area of central migrant.

The problem is associated with how agricultural lands in an area of central migrant community can maximally be used and exploited so that food security can be actualized. The presentations of the paper aims are 1) making a maximal effort of agricultural land exploitation in an area of central migrant community, 2) taking an action of institutional empowerment strength, and 3) formulating a strategy of food security.

## RESEARCH METHODS

Autonomous food security achievement is one of the agricultural development targets (Agricultural Department, 2004, 2011). It is not enough just to rely on macro conditions (Widayaningsih and Barokatuminalloh, 2016). The modern food system, therefore, was from the outset divided between strategies which treated food as just another market and policies which subordinated food markets to considerations of national food security and cultural priorities regarding food production and consumption practices (Wilkinson, 2015).

The term *food security achievement* can be seen as the condition of where all people (households) can get a physical and socio-economic accessibility to sufficient foods to meet daily needs for living well anytime" (FAO 1999, 2000, 2001; Staatz 2009). There are four aspects of food security, including (1) sufficient food availability

greatly sourcing from its own production, (2) annual food availability stability, (3) physically and economically influenced accessibility to food, and (4) quality of food consumption and safety (Pingali, 2005; FAO, 2006; Ariani, 2007). Well-exploited potential lands and farmer institutional empowerment can accelerate food security achievement in an area of which people migrate to other areas (Gartaula, et al., 2012). Farming households with its agricultural activities were instrumental to the realization of food security (Silvestri, et al, 2015).

Food security achievement must be supported and accompanied by resources of productive and sufficient agricultural lands (Strategic Planning of Agricultural Department 2010-2014). Agricultural availability and exploitation, therefore, can be important part of actualizing food security (Ashari et al. 2012; Mulyani, 2011; Abdurachman, 2008). Dry land is one of the greatly potential agro-ecosystems for agricultural fields of food plant, horticultural (beverages and fruits) annual plant and animal farm. Not all dry lands, however, are suitable for agricultural fields. It is due to restricted lands such as very deep slope (Abdurachman, 2008). An alternative solution to the problem of national food security is an area of food plants at dry lands (Mulyani et al. 2011). The dry lands produce most of the cassavas, peanuts, and corns. For the increase of the dry land production take an 11.75 million-hectare area. Until 2050, the land has been useful for meeting commodity needs such as rice, corn, soybean, *mung* bean, peanuts, cassava, and sugar cane. The size of the land will decrease if each commodity rises (Central Bureau of Statistics/BPS, 2008).

Nicholson (2002) suggested that production is an economic activity which uses some inputs to produce outcomes. It means that a production process is closely related to

correlation of some production factors to product. It is assumed that subsistent commodity production gives greatly-relative contribution to household income, so the product will be allocated to household consumption and the rest will be sold at a market for maximizing utility or welfare of household members. A classical theory stated that at product level, the higher price the product is, the higher amount of the product will be sold. At subsistent commodity product, the set of product price is not only one of the farmers' decisions to determine the amount of goods sold at a market but also that of price of other goods that are not produced by the farmers' household (Darwanto, 2005).

The most dominant character of central migrant area is the high amount of the population that leaves hometown for migration. Many migration populations cause the decreased amount of production so that it makes food insecure. An effort to increase production can be empowered by individual or institutional community. Output allocation model of subsistent farmers, then, is developed through the increase of agricultural production. This is intended to food security achievement by maximizing production of some essential food plants. In a socio-economic aspect, the problem of dry land exploitation is different from one area to another area. With an appropriate strategy and technology, however, some problems can be solved. In the case, agricultural sector faces a problem with the efficiency increase and optimum of land resource exploitation. The exploitation can be done with the increase of planting efficiency through planting system and the efficiency of seed's age at seedbed land. With the proper system and seed's age and essential variety of rice, the plant will grow effectively and efficiently and it will

produce optimally. Currently, a new planting system, called *jajar legowo*, has been developed. The system is a distant-technological transition of planting rice developed from 'conventional' planting system. The planting system of *jajar legowo* is more useful than conventional system. It uses more sunray for photosynthesis process; it is easy to fertilize and prevent organism from damaging the plants. Additionally, it can increase plant population (Anggraini, 2013; Saadah, 2011).

Natural resources and community empowerment through autonomous farmers and farmer institution play a great role in agricultural development (Iqbal, 2007). Syahyuti (2010) stated farmer empowerment through organization or formal institution is said to be essential in Indonesia, but it is very limited. The government asks farmers to be formally organized while a market tendentiously want them (individually and in group) to work effectively and efficiently. In a new institutional approach, it can understand why and how they organize themselves. The approach has succeeded in coping with some weaknesses of previous one. With the new approach, they are seen as taking a conscious and rational action in a socio-politic context. Suradisastra (2008) suggested that an analysis of farmer institutional empowerment in farmer community life, the role and function of farmer institution is part of social regulation to facilitate social interaction in a community life.

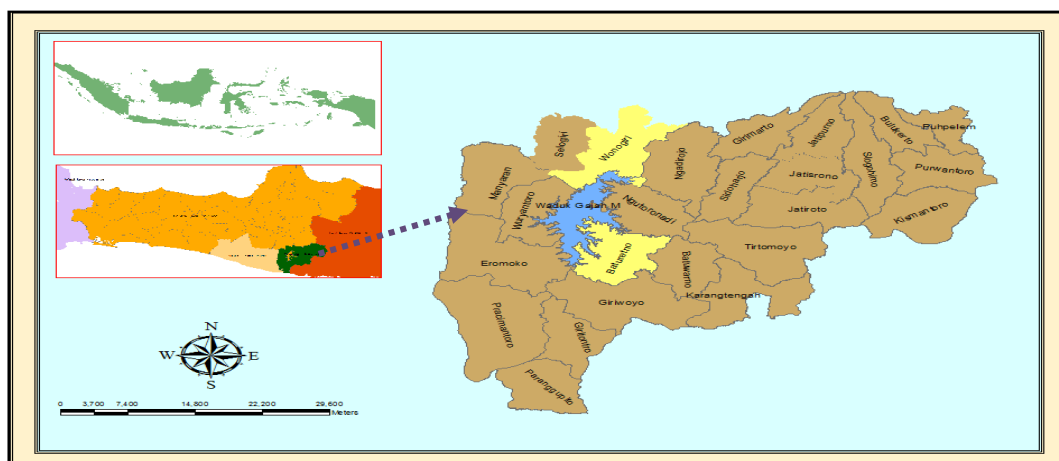
An effort of farmer institution needs the understanding reorientation and action of facilitators as a change agent for running agricultural development program. The development facilitators with communication skill are one of the keys to successful process of dissemination and transfer of agricultural technology. Technological dissemination process will work well if it is accompanied with

the understanding and use of institutional potential elements and farmer status in a process of technological transfer or dissemination. The elements include 1) understanding and institutional potential empowerment, 2) institutional empowerment, 3) leadership, norm and tradition, and 5) social tolerance. In a community-based approach, the elements rooted on a community's culture will be an entry-point to empowerment if they can be well-used for giving a positive contribution to empowerment and revitalization of farmer institution. Technically, the community-based approach is very dependent on social dynamics and change and institutions of all stakeholders and governmental structural hierarchy and related organizations. Suradisastra (2008). The farmer institutions that plays an active role in the research include the Central Food of Village Community (LPMD) under the development of the Food Security Agency and Community Food Distribution Group (LDPM)" under the development of the Agricultural Agency. Both are under the supervision of the Agricultural Ministry.

The research describes how a food security achievement is reached with land use and farmer institution in an area of central migrant community. The multi-stage

sampling was employed to select the farmers as respondents. The focus group discussion (FGD) and/or in-depth interview with the stakeholders of academicians (A), business (B), government (G) and community (C) serve to formulate the strategy in the study. The stakeholders are the actors of parties to formulate a strategy of land use strength and farmer institutional empowerment for food security achievement (Iqbal, 2007).

The research used a mixed-method: qualitative and quantitative (Creswell, 2011) with statistics-descriptive, Rapid Rural Appraisal (RRA) analysis, and in-depth interview. The RRA is a participative research to gather data or information and general assessment in the survey in a relative period of time (Syahza, 2011). The approach could include a wider area of survey in a short term of time to gather generally wide information. With the RRA, the information collection is limited to the aim of the research, but it can gather in-depth information sources of. There were four subdistricts as a sample based on local food security (Fig.3 [Research Map]). The stages of the research are as follows: 1) analyzing potential land use at central migrant. The unexploited land can be utilized maximally, 2) analyzing farmer institutional empowerment at central migrant, and 3) formulating a strategy of food security achievement at central migrant.



**Figure 3.** Map of the Research Location

## RESULTS AND DISCUSSION

Using the qualitative approach with observation, interview, and FGD, the results of the study show that the essential food plants include rice, corn, cassava, soybean, and *mung* bean while with the local statistics data (WDA) and LQ, the essential food plants include rice, corn, cassava, soybean, and *mung* bean. Using the qualitative approach with interview and FGD, the results of the study show that the land use of central migrant has not been maximum for fallow time (from August to November) or dry season. Most of the lands at central migrant are very infertile for agriculture; furthermore, the agricultural facilities are also very insufficient. The FGD suggested that the land ownerships referred to rent, *sakap* (land exploitation by profit sharing), and *gadai* (land exploitation by giving funds and goods as a security).

With a quantitative-based approach, there are two subdistricts of low (non-maximum) land uses: Baturetno and Wonogiri. The lands with low crops of Baturetno subdistrict accounts for 30.99% of the total size of the lands while those of Wonogiri subdistrict accounts for 5.91%. It means the size of agricultural lands, unexploited lands, at Baturetno subdistrict reaches by 11% of the total lands while that of Wonogiri subdistrict reaches by 6% of the total lands.

Using the qualitative approach with the characteristic analysis of farmer institutional empowerment at central migrant the average people were 46 years old, the oldest 58 of age, and the youngest 30 of age. The lowest education graduated from Junior High School and the highest one was a graduate of university. They were a farmer, entrepreneur, administrative staff, and businessman. A

migration encouragement was due to restricted natural resources and capital. The migrants work as a farmer, building blue-collar, broker, and businessman. The migration intention to other areas was economically gathering a capital. After having the capital, they went hometown and did not live at other areas.

The characters of migrants' families can provide a chance of institutional empowerment for potential land use. With the qualitative approach with interview and FGD, the kinds of institutions include the LPMD, LDPM, *Gapoktan*, Village Government, Agricultural Agency and Food Security Agency. The Agricultural Agency empowers farmer community through *gapoktan* by introducing the most productive agricultural technique, known as *jajar legowo*. The LPMD is empowered to solve a farmers' problem at pre- and post-harvest. It is done with the facilitation of agricultural production process. The farmers get the facilitation with the payment of harvest crops. An institutional empowerment is realized by electing community figures to mobilize the community in a farmer institution. They serve as a farmer institutional committee so that they can motivate the farmers to use land maximally, communicate an innovative agricultural technique, diversify food plants, give training to them for land preparation with semi-organic fertilizer, and hold a discussion of agricultural institution routinely.

The assessment of the central migrant's characteristics for powerful community through institutions is quantitatively socialized by using questionnaires with a conventional scale for understanding a powerful farmer institution at Wonogiri and Selogiri subdistricts where these are categorized as a low level while Jatisrono and Baturetno subdistricts as a high level. The stakeholder with the highest farmer institution is a community. The other stakeholders with the

high farmer institution are a government, entrepreneur, and academician. With the descriptive and qualitative approach, the results of analysis show the food security of central migrant on the aspect of availability, accessibility, and consumption quality in Wonogiri regency are said to be secure.

Central migrant districts with unexploited lands take place at two subdistricts of the 4 research samples: 11% and 6% agricultural land sizes of Baturetno and Wonogiri. The strategy of the research consisted of 2 scenarios. Scenario 1 refers to the strength of maximum land, taking place at Selogiri dan Jatisrono. It is carried out by the following:

Choosing proper essential food plants in consideration properties of lands at a local subdistrict. Empowering an agricultural extension staff's performance. It is relevant to the research by Saadah (2011)<sup>6</sup> and (Jafri et al, 2015) stating the staff's role in increasing the farmers' incomes.

A conventional pattern implemented by the government through agricultural agency is appointing some agricultural extension staff for one subdistrict. The research used *cross pattern*, i.e., appointing agricultural extension *cross-staff* among subdistricts, minimal once in each season. Scenario 2 refers to low (non-maximum) land strength through diversification of lands with *jajar legowo* technique (see Fig.4). It takes at Baturetno and Wonogiri subdistricts. The improvement of planting system will increase produce more crops for each grain of rice plant.

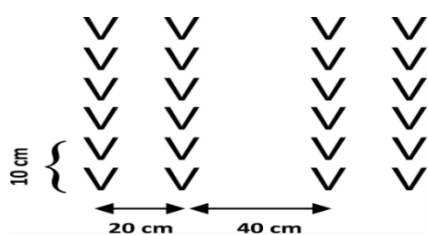


Figure 4. *Jajar Legowo* Technique

The empirical results of central migrant show the *jajar legowo* technique has produced more crops. The following is one of the farmer's statements. "After I have taken an agricultural extension, more rice crops are produced. When I plant rice with a conventional *ngeblak* technique, I need more seeds. I think that the narrower the planting distance is, the more rice is produced. By taking an agricultural extension, however, my crops reach by 30%. Previously, for the size of a 1000 m<sup>3</sup> land, it produced 13 *kresek* (*plastic thin bag*), but after using a *jejer legowo* technique, it can produce 19 *kresek*."

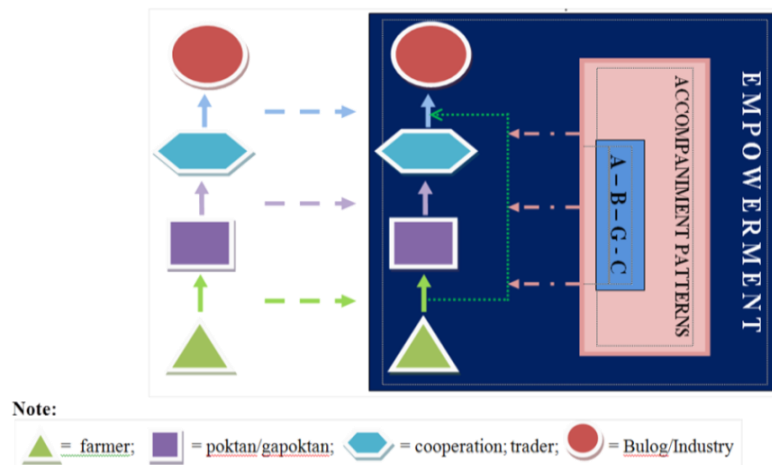
### Farmer Institutional Empowerment

The results of interview and FGD stated that an empowerment process is influenced by community figures in an institution for the motivation of farmers. (Iqbal, 2007)<sup>7</sup> stated that community figures, academics, and industries (Muscio, 2012)<sup>8</sup> play a role in better change in empowerment process, particularly related to agricultural development. On the basis of the description above, the research suggested the strength of farmer institutional empowerment, including 2 scenarios, referring to institutional component and indicator (Syahyuti, 2006).

The development of farmer institutional strength is an institutional pattern with accompaniment (Fig.5). Institutional pattern with accompaniment works when a farmer group takes a problem with crop production. Therefore, accompaniment pattern with stakeholders (academics, food security agency on behalf of government, and Logistics Agency, farmer group) mediates any difficulty of the distribution of agricultural crop production. The pattern can legally help supply agricultural production of the Logistics Agency.

Farmer institutional strength suggested is an institutional pattern with standardization and development (Fig.6).



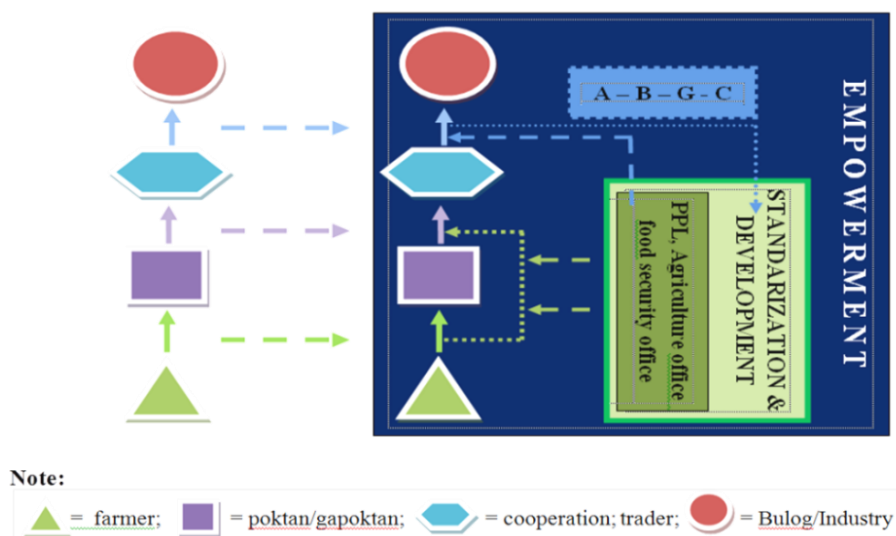


**Figure 5.** Institutional Pattern with Accompaniment

The institutional pattern with standardization and development is realized by giving training and development of skill in planting pattern to farmers as standardization such as land exploitation before planting time with organic fertilizer. The farmers and institutional committees are motivated and trained by food security agency and stakeholders (academics and private) for land preparation with semi-organic fertilizer (i.e., microbe) and they discuss agricultural fields routinely. The institutional pattern results in the increased

quality of agricultural production that can meet the standardization of the Logistics Agency (*Bulog*).

Community empowerment level at central migrant of two subdistricts indicates a low power in which it is assessed with powerful institutional indicators consisting of access to information, capital, and marketing; farmer institutional existence, community figures and farmers' participation. The two subdistricts with low category include Wonogiri and Selogiri, but the other subdistricts with high category cover Baturetno and Jatisrono.



**Figure 6.** Institutional Pattern with Standardization and Development**Table.1** Powerful Institution at Central Migrant

No	Subdistricts	Indicator	Level of Empowerment
1	Wonogiri	Access to information, Capital, & Marketing Farmer Institutional Existence Community Figures and Stakeholders Training & accompaniment Farmer's participation	Low
2	Baturetno	Access to Information, Capital, & Marketing Farmer Institutional Existence Community Figures and Stakeholders Training & accompaniment Farmer's participation	High
3	Jatisrono	Access to Information, Capital, & Marketing Farmer Institutional Existence Community Figures and Stakeholders Training & accompaniment Farmer's participation	High
4	Selogiri	Access to Information, Capital, & Marketing Farmer Institutional Existence Community Figures and Stakeholders Training & accompaniment Farmer's participation	Low

Source: analysis result.

The strategy formulation is made with the collection the instruments of potential essential food plant, land use, community institutional empowerment and power at central migrant. The formulation process develops an ecological, socio-economic, institutional and environmental aspect.

### Ecological Aspect

Ecological aspect consists of five steps: 1) describing a real condition of the amount of lands, potential land use, dry land and infertile land; 2) gathering all of the information and data; 3) reducing research data for identifying the characters of the

migrants' families and analyzing the data of migrants; 4) identifying the stakeholders in relation to the real condition of the ecological aspect, including the *Gapoktan*, LPMD, LDPM, food security agency, and agricultural agency; and 5) developing a short- and long-term strategy. The activities of the short-term strategy include formulating a food achievement strategy, working with data and information of TPU and institutions, and identifying and emphasizing research problems. Those of the long-term strategy include restructuring the condition of central migrant and mapping a central migrant area, TPU, and land.

### **Economic Aspect**

Economic aspect comprises the following five steps: 1) describing a real condition of low (non-maximum) agricultural production, farmers' low incomes, minimum (low) production marketing network, and no diversification of agricultural crops; 2) identifying essential food plant and land use for powerful institution and stakeholders' participation to increase agricultural crop and farmers' profit; 3) making a cooperation with agricultural institutions, sharing information of agricultural field and widening a network of marketing and distribution; identifying stakeholders in relation to the real condition of economic aspect (*Gapoktan*, LPMD, LDPM, Food Security Agency, and Agricultural Agency); and 5) formulating a short- and long-term strategy. The activities of the short-term strategy is identifying central migrants' characters and analyzing the food security of the migrants' families. Those of the long-term strategy include working with a mapping strategy of the migrants' characters, essential food plant, land use through institutional empowerment, and making cooperation for agricultural production distribution.

### **Social Aspect**

Social aspect consists of five aspects: 1) describing the real condition of high migration level, limited human resources and low empowerment of farmers' skill; 2) extending agriculture and accompaniment formally and informally facilitated by agricultural agency and food security agency through the activities of agricultural extension staff and farmer discussion and community figures' participation; 3) realizing the activities of agricultural extension staff, meeting among the farmers

for agricultural institutional discussion and accompanying the farmers (the farmer institution holds a routine activity and shares in the activities of farmer institution); 4) identifying stakeholders in relation to the real condition of social aspect (*Gapoktan*, LPMD, LDPM, Food Security Agency, and Agricultural Agency); and 5) formulating a short- and long-term strategy. The activities of the short term strategy are increasing agricultural productions for food security achievement, preparing farmer institutional committees, providing accompaniment staff, and developing committees' capacity. Those of the long-term strategy include increasing agricultural production for food security achievement, preparing farmer institutional committees, providing accompaniment staff, and developing committees' capacity.

### **Institutional Aspect**

Institutional aspect comprises of three levels: describing a real condition of farmer institution not working well, operating institution dependent on the government's participation, farmer institution taking a problem with activities for the inactive members, committees' low knowledge of institution, and committees with very restricted network; 2) working institutional empowerment; 3) realizing the activities for reviving institutional empowerment, helping independent committees for operating institution, encouraging the members of farmer group for playing an active role in institutional activities through meeting farmers, developing committees' knowledge of operating farmer institution, and widening a cooperation network of farmer institutional committees; 4) identifying stakeholders in relation to the real condition of the economic aspect (*Gapoktan*, LPMD, LDPM, Food Security Agency, and Agricultural Agency); and 5) formulating a

short- and long-term strategy. The activities of the short-term strategy include regulating the farmer institutions' performance effectively, developing a cooperation and leadership at communication level, and communicating with the local stakeholders: A, B, C, G. Those of the long-term strategy include realizing a cooperation among institutions, preparing working teams of operating strategy, making a collaboration with the local stakeholders: A, B, C, G, and socializing operating system.

### **Environmental Aspect**

Environmental aspect includes five steps: 1) describing a real condition of mountain range area, agricultural crop insufficient for needs, climate change, limited facilities and infrastructures; 2) improving infrastructures with agricultural facilities and reducing agricultural lands for maximum land use; 3) detecting potential land use with essential food plant and developing human resources for maximum land uses; 4) identifying stakeholders in relation to the real condition of environmental aspect (*Gapoktan*, LPMD, LDPM, Food Security Agency, and Agricultural Agency); and formulating a short- and long term-strategy. The activity of the short-term strategy includes anticipating climate change with proper essential food plant. The activities of the long-term strategy are preventing environmental risks and developing agricultural technology for any solution to environmental risks.

### **CONCLUSION**

The paper formulates a strategy of food security achievement at central migrant through maximum land use with the mobility of community institutions at central migrant. This formulation begins

with the identification of potential food plant and land use so that in a formulation strategy, the supporting materials can greatly be implemented. The potential essential food plants that can be identified at central migrant include field rice, corn, cassava, soybean, and mung bean. The crops of agricultural sector are said to be low for low land use, or unexploited lands, and productive labors taking a migration to other areas. The result of essential food plant and use land becomes an instrument for food security achievement formulation strategy. The strategy needs a social *machine* (aspect) so that it can be implemented. The next instrument of strategy formulation uses a community institutional empowerment.

An institution's participation in strengthening agricultural sector is empowering farmer institution so that it will actualize food security at central migrant. Although taking a problem of the farmers' *conventional* perception to be empowered through farmer institution, the stakeholders' active participation will change it and, therefore, must be better in the future. The characteristics of the central migrant are a high population taking a migration to other areas and restricted productive human resources. Then, the limited human resources is developed in farmer institutions. The characters are part of determining farmer institutional empowerment. The motivation informed to the community is a food security achievement. It is consistent with the condition of the households' food security at central migrant where it is in the anxiety of food scarcity at households for low (non-maximum) land use.

The suggestion of community institution empowerment is empowering the migrants taking a migration to other areas. Taking a migration has passed on from generation to generation and it may any longer be prevented.

For this, it needs to develop their potency through high remittance for the strength of agricultural activities and farmer institution at hometown. If well-managed, taking a migration will be a strategy of food

security strength at central migrant. An action taking needs community figures' participation in the motivation of the migrants for developing their hometown.

Finally, in relation to the food security at central migrant, it needs a change in the migrants' motivation. They have migrated because of personal welfare only; but, they must be oriented to a development or area in the future. A potential agricultural sector at migrants' hometown must directly and indirectly be developed through contribution from remittance and active participation of the migrants' families in farmer institution. The migrants can also invest by buying a rice field. It is the community empowerment through farmer institutional participation to be able realized and the empowerment process can increase agricultural production so that the food security achievement at central migrant can be actualized.

## REFERENCES

- Abdurachman, et al. (2008). Strategi dan teknologi pengelolaan lahan kering mendukung pengadaan pangan nasional. *Jurnal Litbang Pertanian*, 27(2).
- Adger, W. N., Kelly, P. M., Winkels, A., Huy, L. Q., & Locke, C. (2002). Migration, remittances, livelihood trajectories, and social resilience. *AMBIO: A Journal of the Human Environment*, 31(4), 358-366.
- Agricultural Department. (2004). *Strategi dan kebijakan pembangunan pertanian*. Jakarta: Departemen Pertanian.
- Agricultural Department. (2011). *Peraturan menteri pertanian nomor: 15/Permentan/RC.110/I/2010 tentang rencana strategis kementerian pertanian tahun 2010-2014*.
- Anggraini, et al. (2013). Cropping system and seedling age on paddy (*Oryza Sativa* L.) Inpary 13 Variety. *Jurnal Produksi Tanaman* Vol. 1 No. 2.
- Ariani, Mewa. (2007). *Penguatan ketahanan pangan daerah untuk mendukung ketahanan pangan nasional*. Monograph Series No. 26. Pusat Analisis Sosial Ekonomi dan Kebijakan Pertanian, Badan Litbang Pertanian.
- Ashari, et al. (2012). Potential use of backyard land for food security. *Forum Penelitian Agroekonomi*, Vol.30 No.1, Juli.
- BPS (Badan Pusat Statistik). (2008). Land utilization by provinces in Indonesia. Jakarta: BPS. [www.bps.go.id](http://www.bps.go.id) [1 Februari 2008].
- Creswell, John W. (2011). *Research Design. Qualitative, Quantitative, and Mix Methods Approaches*. SAGE Publication Inc.
- Darwanto, Dwidjono H. (2005). Ketahanan pangan berbasis produksi dan kesejahteraan petani. Yogyakarta: *Ilmu Pertanian* Vol. 12 No.2, Fakultas Pertanian UGM dan MMA-UGM.
- Durand, J., Kandel, W., Parrado, E. A., & Massey, D. S. (1996). International migration and development in Mexican communities. *Demography*, 33(2), 249-264.
- FAO. (1999). The State of food insecurity in the World 1999. FAO, Rome.
- FAO. (2000). The State of food insecurity in the World 2000, FAO, Rome.
- FAO (2001). The State of food insecurity in the World 2001, FAO, Rome.
- FAO. (2006). *Food security*. Policy Brief. Issue 2, June.
- Gartaula, et al. (2012). Shifting perceptions of food security and land in the context of labour out-migration in rural Nepal. *Food Security*, 4, 181-194
- Iqbal, Muhammad. (2007). Analisis peran pemangku kepentingan dan implementasinya dalam pembangunan pertanian. *Jurnal Litbang Pertanian*, 26(3).
- Jafri, J, Febriamansyah, R, Syahni, R, Asmawi. Interaksi Partisipatif Antara Penyuluh Pertanian dan Kelompok Tani Menuju Kemandirian Petani. *Jurnal Agro Ekonomi* Vol.33 No.02 2015.
- Judith, Kiss. (2009). How to increase food security in North Korea? *Gazdalkodas* Vol. 52. *Special Edition* No. 22. 2009.
- Mulyani, et al. (2011). Potensi dan ketersediaan sumber daya lahan untuk Mendukung Ketahanan Pangan. *Jurnal Litbang Pertanian*, 30(2).
- Muscio, A. and G. Nardone. (2012). The determinants of university-industry collaboration in food science in Italy. *Food Policy* 37, 710-718.
- Nainggolan, Kaman. (2008). Ketahanan dan stabilitas pasokan, permintaan, dan harga komoditas pangan. *Analisis Kebijakan Pertanian*, Vol. 6 No. 2, Juni, 114-139.
- Nicholson, Walter. (2002). *Teori Mikroekonomi Intermediate, Terjemahan*. Jakarta: PT. Raja Grafindo Persada.

- Nijkamp, Peter., and Gabriella Vindigni.(2002). Food security and agricultural sustainability: an overview of critical success factors. *Journal: Environmental Management and Health, Vol. 13 No. 5*, 495-511.
- Nimoh, F, Yankyera, K. O, Poku K, Konradsen F, Abaido R. C. Farmers' perception on excreta reuse for peri-urban agriculture in southern Ghana. *Journal of Development Agricultural and Economics. Vol.6(10)*, pp. 421-428, 2014.
- Oluwasola, Oluwemimo. (2010). Stimulating rural employment and income for cassava (*Manihot sp.*) processing farming households in Oyo State, Nigeria through policy initiatives. *Journal of Development and Agricultural Economics Vol. 2(2), February*, 018-025.
- Pingali, P., Alinovi, L. & Sutton, J. (2005). Food security in complex emergencies: enhancing food system resilience. *Disasters, Volume 29*, June.
- Purnomo, D.(2009). *Fenomena migrasi tenaga kerja dan perannya bagi pembangunan daerah asal: studi empiris di kabupaten Wonogiri. Jurnal Ekonomi Pembangunan, Vol. 10, No.1, Juni 2009, hal. 84 - 102.*
- Saadah, et al.(2011).The role of agricultural extension on farmer's income using legowo planting system. *Jurnal Agrisistem, Desember 2011, Vol. 7 No. 2.*
- Silvestri, Silvia, et al (2015). Households and food security: lessons from food secure households in East Africa. *Agriculture & Food Security 2015 4:23.*
- Staatz, et al.(2009). Food security in developing countries. *Staff Paper 2009-03, April 2009.*
- Suradisastra, Kedi. (2008). Strategi pemberdayaan kelembagaan petani (farmer's institutional empowerment strategy). *Forum Penelitian Agro Ekonomi, Volume 26 No. 2, Desember.*
- Suradisastra.(2008). Farmer's institutional empowerment strategy. *Forum Penelitian Agroekonomi, Vol.26 No.2, Desember 2008.*
- Syahyuti.(2006). *30 konsep penting pembangunan pedesaan dan pertanian.*Jakarta: PT Bina Rena Pariwara.
- Syahyuti.(2010). Farmer's institution and organization in market and state influence. *Forum Penelitian Agroekonomi, Vol.28 No.1, Juli.*
- Syahza, Almasdi (2011). Percepatan Ekonomi Pedesaan melalui Pembangunan Perkebunan Kelapa Sawit. *Jurnal Ekonomi Pembangunan (JEP), Vol. 12, No. 2, 2011, hlm.297-310.*
- Wonogiri Dalam Angka (WDA).(2012).*
- Widayaningsih, Neni and Barokatuminalloh (2016). *Strategy of Increasing Food Security Based on Macro and Micro Aspects. Journal of Economics and Policy (JEJAK), Vol.9 No.1 2016.*
- Wilkinson, John (2015). Food security and the global agrifood system: Ethical issues in historical and sociological perspective. *Global Food Security, Volume 7, December 2015, Pages 9-14.*