

Deagrarianization and Local Food Security Strategy for Peasant Communities in Rural Central Java

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Abstract

Food security is one of the important issues in the study of deagrarianization. In macro level, deagrarianization can weaken food security which is indicated by the ability of food production which continues to decline due to the structural transformation of the economy from agriculture to non-agriculture. The purpose of this study is to determine food security at the community level when the symptoms of macro deagrarianization have occurred. This research is conducted by qualitative methods. An ethnosociological approach is used by combining community case study methods and ethnographic methods. The results show that food security at the community level is still well-maintained. Deagrarianization has not diminished the ability of the community to meet their food needs. Communities have internal mechanisms that secure their food sufficiency through food strategies and non-food strategies. The food strategy is carried out through saving yields for grain stores (family food barns) and reduce the amount of consumption. Meanwhile the non-food strategy is carried out through diversification of livelihoods by relying on available extractive landscapes. Swamps (balongan) are used as a food source that provides various types of local fish, crabs and snails as a source of protein for family consumption and also for sale to local collectors.

Keywords

food security; food strategy; landscape; sedulur sikep community

INTRODUCTION

Food is the most basic need that must be fulfilled at all times. Kim (2013) states that food is the basis to maintain and reproduce everyday life. Meanwhile the concept of food security itself is related to consumption terminology, namely access to adequate nutrition and culturally appropriate (Megan, 2012). Food security is paradoxically faced by a situation of food insecurity that can occur at the level of individuals, households

and communities (Allen, 2013).

Food security is an important issue that cannot be separated from the problem of deagrarianization. Deagrarianization is the terminology used to explain the process of shifting social structures from agrarian societies to non-agrarian societies (Bryce-

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son, 1996; Rigg, 2006). Tomlinson (2013) emphasizes that the issue of the food crisis is increasingly becoming a concern with regard to the projections of world food needs which will be doubled by 2050. The needs for food increase along human's growth (Ermanovida, 2016). In this situation, agricultural activities are expected to continue to grow. Therefore, the food crisis should not only stop at the debate about the challenges of climate change, population growth, and increasing food demand, but must addressing the challenges on stagnation of productive agricultural activities demonstrated through deagrarianization.

Deagrarianization does not merely indicate the process of disappearance of food producers in rural areas which causes a decrease in the ability to meet food needs and the increasing risk of outsourcing agricultural production in rural areas (Lobban, 2010; Vanhaute, 2010; Rehder et al, 2011; Murua & Astorkiza, 2013). Deagrarianization reduces the ability to meet food needs. When agricultural lands no longer managed productively and the agrarian community had begun to rely on food sources from outside their villages, the agrarian community had lost their main capacity as food producers. This can be observed in one of the contexts in Japan where deagrarianization has made the situation of food security vulnerable (Hisano et al, 2018). Japanese food imports experienced a drastic increase. This happens because of the large number of agricultural lands that are unproductive and the tendency on the average of aging peasants.

This study specifically aims to determine food security at the community level in the context of deagrarianization. The study of deagrarianization that has been conducted not specifically given attention to food security at the community level. A study by Steward (2007) in rural Brazil for example, only focuses on the issue of diversification of income to improve the security of livelihoods, but does not explain the ability of communities to meet food needs. The same issue was shown in a study conducted by Yaro (2006) in rural areas of Ghana, Africa. Yaro said that deagrarianization is more

as form of adaptation to livelihoods where income from outside the agricultural sector is needed to cover the shortages of the agricultural sector, prevent hunger and poverty during the dry season. Another study on deagrarianization also emphasizes income variables compared to food sufficiency, among others, which are conducted by: Mtero (2012) in South Africa; Quintanal & de la Fuente (2013) in Mexico and Pritchard et al. (2017) in North India.

By referring to the concepts of Bryceson (1996) and Lobban (2010), this study places the issue of local food security in the debate on deagrarianization by departing with the question: How does deagrarianization affect local food security (food security at the community level)? What is the community's strategy to meet food needs during a food crisis? Studies conducted by Fadhilah (2013) and Cuevas et al. (2015) show that communities which still maintain their traditional way of life have a unique ability to meet their food needs. With this ability they survive and even create strategies to survive in the time of food crisis. The *Molamahu Pulubala* community in Gorontalo recognizes *taliwola to hulipo* (a tradition of storing some yields) as a strategy to overcome food shortages (Fadhilah, 2013). Meanwhile the *Tagbanua* Community in Palawan-Philippines uses the strategy of maintaining subsistence agriculture to manage food independence (Cuevas et al. 2015).

METHOD

This study uses an ethnosociological approach. Referring to Wieder (1977), ethnosociology is defined as 'the general substantive study of storytelling by humans.' In this regard can be said that ethnosociology has attempted to understand the substance of the utterances conveyed by the community regarding their daily stories. Hepburn & Herrp (1993) refer to ethnosociology as a model of interpretive approaches originating from ethnomethodology, existential sociology, and anthropology. Meanwhile Yacine (2004), states that ethnosociology is generally related to the study of social dyna-

mics which includes the products and cultural meanings. Some of the basic principles of ethnosociology that have been adapted in this study are that in ethnosociology research, a researcher uses ethnographic methods in understanding reality. The nature of reality in ethnosociology is understood as something socially constructed through interaction. In reality there are cultural meanings that must be understood using 'local theory'.

The concept of 'ethno' or a group with special characteristics in this research is by deepening it with the *Sedulur Sikep* Community or the *Samin* Community in Batu-rejo Village, a rice village located in Sukolilo District, Central Java. The *Sedulur Sikep* community is chosen as a community that studied to obtain a complete profile relating to the local food security strategy. The field research carried out from 2017 to early 2019. Researchers stayed for 2.5 months in the field in July to early September 2017, make a re-visiting in early 2018 and conduct several remote interviews with informants at the end of 2018 and the beginning of the year

2019. Data collection techniques are carried out through: participatory observation, focused interviews, life history, and document studies.

RESULT AND DISCUSSION

Deagrarianization in Indonesia and Pati Regency?: Understanding the Macro and Messo Context

One characteristic of the occurrence of macro deagrarianization can be seen from the decline of national Gross Domestic Product (GDP) originating from agricultural business fields (Bryceson, 1996). When referring to the Indonesian Statistics Data in 2018, it can be seen that the structure of the national economy has shifted from the Agriculture, Forestry and Fisheries business field to other business fields. This can be seen from the largest contribution of the national Gross Domestic Product (GDP) which originates from the processing industry business sector as 20.16% and not from the agricultural business sector as can be seen in **Table 1**.

Table 1. Gross Domestic Product at Current Market Price by Industrial Origin Year 2012-2017

Industrial Origin	Percentage					
	2012	2013	2014	2015	2016	2017
Agriculture, Forestry, and Fishery	13,37	13,36	13,34	13,49	13,47	13,14
Mining & Quarrying	11,61	11,01	9,83	7,65	7,18	7,57
Manufacturing Industry	21,45	21,03	21,08	20,99	20,51	20,16
Electricity & Gas Supply	1,11	1,03	1,09	1,13	1,15	1,19
Water Supply	0,08	0,08	0,07	0,07	0,07	0,07
Construction	9,35	9,49	9,86	10,21	10,38	10,37
Wholesale & Retail Trade	13,21	13,21	13,43	13,30	13,18	13,01
Transportation	3,63	3,93	4,42	5,02	5,20	5,41
Accomodation Service	2,93	3,03	3,04	2,96	2,93	2,85
Information & Communication	3,61	3,57	3,52	3,52	3,62	3,8
Finance & Insurance Service	3,86	3,88	3,86	4,03	4,19	4,2
Real estate	2,76	2,77	2,79	2,84	2,82	2,79
Private Service	1,48	1,51	1,57	1,65	1,71	1,75
Government Administration, Social Insurance & Defence	3,95	3,90	3,83	3,90	3,87	3,7
Educational Service	3,14	3,22	3,23	3,36	3,37	3,29
Health Service	1,00	1,01	1,00	1,07	1,07	1,07
Other Service	1,42	1,47	1,55	1,65	1,70	1,76

Source: Central Statistic Board Year 2017 & Year 2018.

Agriculture, Forestry and Fisheries business field is in second place contributing to the national GDP as 13.14%. In addition, from a comparison in the last 6 years, the percentage of GDP from the agricultural business sector also continuously tends to decline.

This situation is not much different from the Agricultural Census Data of 2013 which shows that from time to time the contribution of the agricultural sector continues to decline. If in 2003 the share of this sector was 15.2%, then in 2013 it dropped to 14.4 percent. On the other hand, the contribution of the services sector continued to increase. This illustrates the economic transformation of Indonesia where the contributions of the primary sectors declined and replaced by an increase in the secondary and tertiary sectors.

The situation at the national level is also reflected in the meso level. Pati Regen-

cy, which is known as one of the food storage area in Central Java, shows a definite decline in its agricultural sector. The decline in the role of agricultural business fields indicates that Pati Regency has begun to experience a structural transformation of the economy. This symptom can be seen from Pati Gross Regency Domestic Product (GRDP) in **Figure 2**. Pati Regency GRDP in 2012-2017 shows that the business field structure of Pati Regency is no longer dominated by Agriculture, Forestry and Fisheries but has been shifted by the processing industry. The GRDP of the processing industry is 26.94% greater than the GRDP of the agriculture, forestry and fisheries business fields which amount to 25.98%.

In addition to decreasing GRDP in the agricultural, forestry and fisheries business fields, deagrarianization can

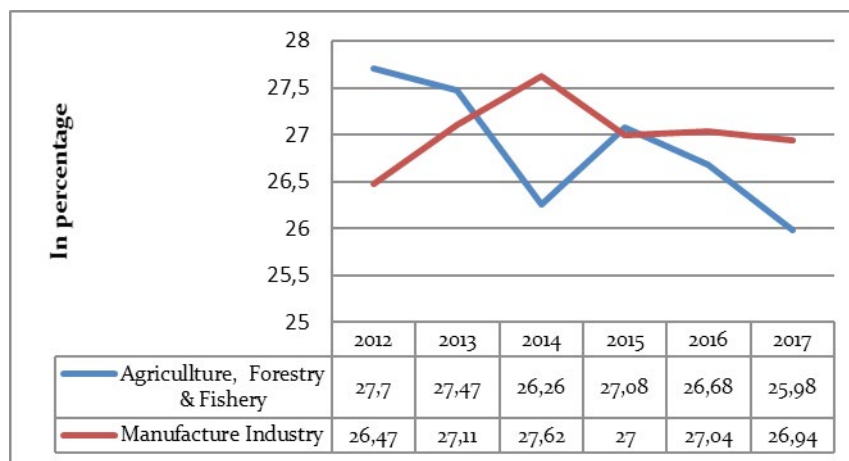


Figure 2. GRDP at Current Market Price by Industrial Origin in Pati Regency
 Source: BPS Regency of Pati Year 2017 and Year 2018

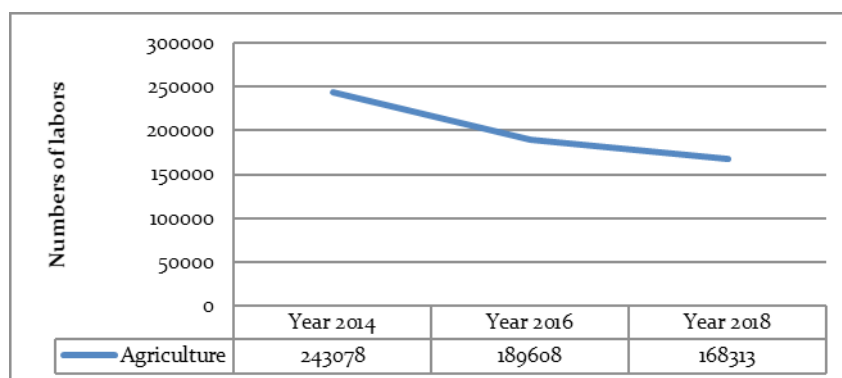


Figure 3. State of Labors in Pati Regency by Industrial Origin
 Source: Strategic Data of Pati Year 2014, Year 2016, & Year 2018, BPS Regency of Pati

also be seen from the decline in agricultural labor. Pati Regency Strategic Data from 2014-2018 shows that the decline in employment in the agricultural sector has occurred in Pati Regency as can be seen in **Figure 3**. In 2014 the workforce in the agricultural sector totaling 243,078 fell to 189,608 in 2016, and fell again to 168,313 in 2018.

The decreasing on role of agriculture and the amount of agricultural labor are two important indicators which show that in the Pati Regency area there has been a shift in the structure of the primary to secondary economy. The role of agriculture in food storage in Central Java is apparently not better than the industrial sector. Departing from macro and mесо situations regarding the symptoms of deagrarianization that have actually occurred, it is important to look at the effect of deagrarianization on local communities in the rurals.

Landscape Use(Agrarian Landscape) and Time of *Kejulak* (Crisis)Inside Community

The main livelihood for the *Sedulur Sikep* Community is farming. The types of plants cultivated include: rice and corn. The planted rice is a type of rice that can be harvested twice a year, namely in the first

harvest season (MT1) which usually falls in February and the second harvest season (MT2) which usually falls in July. In cultivating rice fields, the *Sedulur Sikep* community uses a pumping system. The *Jratunseluna* irrigation water can not flow into the fields of the *Sedulur Sikep* community due to excavation of irrigation canals that are too low.

As explained by Hebbinck et al. (2018), deagrarianization is related to changes in rural landscapes, namely changes in land use from productive purposes to consumptive and extractive purposes. In the context of the *Sedulur Sikep* Community, landscape changes only occur in land use for houses for the *Sedulur Sikep*new family community. Productive landscapes, consumptive landscapes, and extractive landscapes are portraits of landscapes that exist in the *Sedulur Sikep* Community. This landscape is still well maintained. The productive landscape can be seen from the stretch of rice fields. Consumptive landscapes can be seen from lands that have turned into settlements. Meanwhile extractive landscapes are rivers and *balongan*(swamp) which are the oldest landscapes (initial landscapes) left over from lands that do not turn into rice fields or settlements.

The *Sedulur Sikep* community affirms their main activity with term “mligi tani” or “just farming”. The land use orientation that as the benchmark of the *Sedulur Sikep* Community is farming or “gauta ning garapan”. Farmfield is not only a place to work,

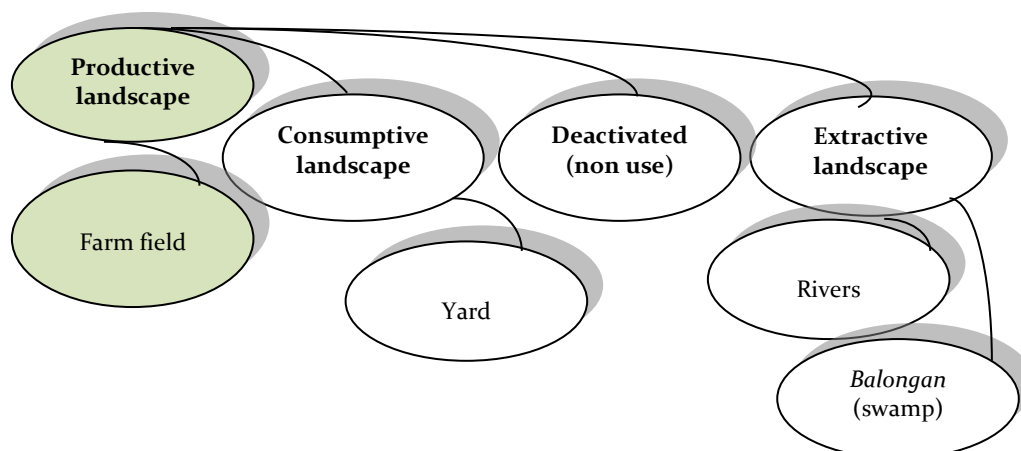


Figure 4. Farming Land use
 Source: Processed from primary data, 2017

but also a source of life for this community. In addition to farm field, they also use rivers and swamp areas for extractive activities, collect golden snails, various types of fish, crabs and eels as additional income. There is no land that not used. New houses were built in the yard (around the main house).

In the dynamic use of their agrarian landscape, the *Sedulur Sikep* community always faces a very high risk of crop failure. When the rainy season, too much water can soak and damage rice. Inundated prone seasons usually occur in December and January. While pests such as planthopper (*Nilaparvata lugens*), rice-moth (*Corcyra chepalonica*) and rodents can appear during rice planted until near harvest both in the first planting season in October and the second planting season in April. When there are no floods, rodents appeared by making nests on the banks of swamps which could sometimes enter farmfield and eat the planted rice. Not only rice, rodents also destroy corn crops.

Efforts to overcome the risk of crop failure have been made. Among them is installing zinc sheets that surround the farm field and installing traps (*phidet*) to prevent rodents from entering.

Even so, the efforts that have been made are often less-effective. The number of rodent does not decrease. Oftenly peasants have to stay overnight in the fields to keep

away rodents from disturbing plants. Usually rodents start entering the fields when the plants have started to bear fruit or grain.

Strategy for Local Food Security

Committing fully to agriculture by maintaining productive landscapes is not a riskless choice. The agrarian landscape managed by the *Sedulur Sikep* Community does not always produce the expected results. There are times when scarcity is a challenge that must be faced. As an agrarian community that is consistent with its farming activities, the *Sedulur Sikep* Community has a strategy for local food security to face time of crisis (*kejulak*).

“Saving the Yields” Strategy

In managing crop yields, the *Sedulur Sikep* Community create the mechanisms: some part of yields are saved for food supplies, some yields are saved to be seeds for replanting, and the rest for sale. Every time they harvest, they will not sell the entire yields. There are always yields stored or made as reserves. As the principle of trading, the *Sedulur Sikep* community also makes the food reserves as savings. Community will be rely on these savings when the crisis occurs, so they donot have to buy rice. The strategy of storing these yields is similar to the strategy practiced by the *Molamahu Pulubala* community in Gorontalo (Fadhilah, 2013).



(a)



(b)

Figure 5. (a) Corn destroyed by rodents due to unguarded farm field; b) Zinc fence and *phidet* (trap) installed to chase away rodents entering the corn fields

Source: Personal documentation, 2017

In the *Sedulur Sikep* Community, it is known that the harvested rice had to be brought to the house. “*Nek unduh-unduh carane Sedulur Sikep mriki nggih dibeto mantuk, disinggahake, nggeh nek betah disade sekedik. Ngge nyukupi sak rinane, kersane wareg, kewarasan.*” (In harvesting, the way *Sedulur Sikep* practises here is brought it home, stored at home, later if there are needs rise, it sold a little to fulfill daily needs, to ensure full-stomach and healthy” (JS, peasant, 55 years old). Rice will be harvested in the fields with the *ngedos* team (collective harvesting) then brought to the house, dried and stored. *Sedulur Sikep* Community recognizes the term “*tandon*” (barn) for savings dried grain in their homes. This dried grain will be taken to the mill when the consumed rice is running out. The stored rice, if it has been stored for a long time, can also be exchanged for the newer rice in the mill.

The *Sedulur Sikep* community recognizes risk calculation, which is an estimation on the amount of grain that must be saved to meet the needs until the next harvest period comes. Risk calculations for the *Sedulur Sikep* Community are carried out due to unpredictable harvest conditions. Nevertheless, the calculation is not taken as an absolute reference. Calculations that have been made sometimes also not accurate.

Niku sakjane pun etung-etungan. Iki aku ngengehke semene sak. Mengko nek entek, panenan meneh. Ning ora ngerti sik ditandur kui dadi po ora. Contone kulo dewe, pun kulo lakoni. Gek biyen niku kulo ijolke duit, mergo ndelok kebutuhane wau, mergo modale kan perlu diwujudke malih, balik modal balik, dijolke duit. Ngengehke nggih pas, iki ijih sitik, wis panenan. Ternyata gagal panenan sik keru, nyebar keterak banjir, ambles. Kan termasuk wis gagal salangkah. Terus nyebar maneh, nyebar bibite dikeroyok wereng, niku wektune wis mundur meneh. 17 dino-18 dino iso ditandur, iso tekan 21 dino lagi ditandur. Lagi ditandur wis keterak omo meneh, iki mundur meneh, iso adoh meneh. Wis gagal. Sik mesti ngono kui nek tanduran pari. Lagi dicebloke 100 dino, kadang nek normal, ora nganti 100 dino wis iso panen. Nek iki sampai 100 dino luwih lagi tua, tu-

ane wae olehe wis ora sepiro, mergo wis keno penyakit.

(It actually has been calculated, I saved this much. Later when it is finished, it has been harvest time again. But I do not know whether succeed or not. For example myself, I have experienced it. Once I sold the yields because there was a need for replanting. So I saved some, just a little we could expect from the harvest, apparently the harvest failed due to flooding, the crops destroyed. It is a one-step failure, then spread the seeds again after, instead attacked by planthopper, so it turned-back again. After 17-18 days it can be planted, even 21 days can only be planted again. Not long after planted, hit by pests, so turned-back again, even further. Totally Failed. That is what certain happen if planting rice, only 100 days planted. Sometimes if it is going normal, it can be harvested less than 100 days. By this (first case) situation where it take more than 100 days later, the yield can not be much because it has been infected. (Ic, peasant, 48 years old)

The uncertainty of the yields due to the unpredictable pests is indeed the main reason, peasant's calculations are sometimes not accurate. This ‘abnormal condition’ is the main reason that causes peasants have to accept the fact that their harvest failed. Therefore, the precautionary principle is always be a reminder in order to ensure that food needs are still can be fulfilled.

Reducing Consumption Strategy

For the *Sedulur Sikep* Community's belief, the crisis will not lead them to poverty. Crisis is understood as a ‘law of balance.’ A crisis is a form of reminder to the *Sedulur Sikep* Community so that it does not become ‘greedy’ and ‘gloat’. The continuous success of abundant harvests often makes someone forget about customs and their roles. The crisis is the ‘firmness test’ which is deliberately given to *Sikep*'s offsprings to prove that they indeed deserved to take role in their life as *Sedulur Sikep*. A crisis is a spiritual and physical exercise that supposed to be passed well by those who call themselves the *Sedu-*

lur Sikep Community

Tiyang mriki nek sabine metu terus, terus lali adate, lali lakone, mulane wis reti dewe, wong ceritane jaman biyen, dicoba. Mulane sak iki dicoba sandang pangan kui kuat po ora, kari sik nglakoni. Iki lakoro dicoba sandang pangan, wong nandur sembarang ora kuat, dadi lakone ijih manteng, sejaraha wong tuwo po ora kari ngono. Nek aku ki disejarah mbahku, mulane putuku tak coba ngene iki, kuat opo ora. Nek kuat, nek manteng kui putuku. Wong nggon dewe nek panen terus mbak, yo ra amot, duit dideke ngendi, wong nek panen ki ono sik entuk 50 juta, parine nek didol ono sik 30 juta, 20 juta, 10 juta, setahun kan panen pindo. Lha nek panen terus, terus didek e opo. Mulane wong kene yo wis ngene iki. Nek panen terus lak mengko malah nggo tuku opo, tuku opo, malah sik ra ngenah. Nek wong sugih lak ngono kae mbak, omong sik ngomongi karepe dewe dikentel rembug, kui akeh-akeh e wong sugih. Nek wong sederhana koyo aku ngene iki kan coro rembugan diati-ati. Mulane wong sugih kui nggak duwe eman karo wong miskin, kui nek wong mampu akeh-akeh e ngono. Diomongi sik ra penak sitik, ngentel ndas, pokoke bolo sik ra kepenak, wong kelangan de e modal duit nggo nganu wong kui wis iso. Mulane wong nek iso ojo ngono kui. Nek wong kene yo iso, wong wis dilakoni ket gek cilik nganti sak tuane.

People here when the rice fields continue to succeed, then forgetting the customs, forget their roles, so know for yourself that in the past we have been tested. Tested with lack of food and clothing, whether they tough or not, it depends on themselves. This is the way we are being tested, tested with lack of food and clothing, people plant anything but finally failed, but their role is still firm, the history is from elders. I got stories from my grandfather, so my grandson will try the same, whether he is tough or not. If he is strong, firmly, he is really my grandson. If we continuously harvesting, where the money is going to be put? For instance, if from the harvest can get 50 millions, some will be sold for 30 millions, 20 millions, 10 millions. In a year there will be two time harvest, if the harvest continues, where should you put

the rice. So people here are just like this, the continuous succeed harvest will drive them to be consumptive, buy anything for nothing. That is the rich behave, if they talk, they don't want to lose, most of them are. For simple people like me, I talk carefully. So the rich often does not emphatic to the feelings of the poor. If being noticed with a little unpleasant, they immediately upset, the point is they do not want something uncomfortable, money can buy. So if possible, don't be like that. People here can bear that because they have lived that way from their childhood to old age (An, peasant, 28 years old)

The crisis will not make them lack of food. The crisis is also not something to be worried about because those who claim to be *Sedulur Sikep* Community are used to living in simplicity.

Nek Sedulur Sikep, nek ora panen terus kekurangan, opo nek panen terus mberah yo ora. Butuhe cukup, sik kekurangan pangan kui ora. Soale mbah-mbah e wis ngomong, ora bakalan ngeleh, ora bakalan kurang, mesti bakal cukup.

In *Sedulur Sikep*, no harvest does not mean that there is lack of food, neither if there is a harvest then will come abundant of wealth. The important thing is to feel "sufficient", no lack of food. Because elders had said that they would not starve, there would be no shortages, it would be sufficient (Yd, peasant, 30 years old).

Simplicity has become a long periods habit, built from childhood to old age. In this simplicity the *Sedulur Sikep* Community recognizes fasting practice which calls *Tindak* or "Depart" as a discipline strategy related to the simplicity as a life principle of the *Sedulur Sikep* Community. Through 'Depart', the *Sedulur Sikep* Community reduces excessive eating and drinking which is believed to be an effort or strategy to obtain blessing for the whole family.

Simplicity is an important part of the scarcity strategy implemented by the *Sedulur Sikep* Community. The ideology of 'limiting needs' has been commonly practiced by subsistence peasants in Java is also still found in this community.

Box.1. 'Tindak' or 'Depart' – Strategy by Sedulur Sikep in facing Crisis

The sun began to set, the clock shows 6:00 p.m. The sound of the Maghrib call to prayer previously heard from the mosques in the next village, began to fade away. Lights in the houses of the *Sedulur Sikep* Community in Bombong Hamlet seemed to be switched on. Yati, a 34-years-old *Sikep* woman, appeared to be kneel down in the front yard of her house, facing the sunset. Several times her palms were rubbed onto the ground beside her and then rubbed back into her forehead. A small ritual to start the 'Depart', discipline practice by the *Sedulur Sikep* Community which is intended to obtain blessing for all family members. This practice is conducted in the midst of a rice-moth attack that made yellow rice fields which was ready for harvest in a coming few weeks turned to blackish brown. The harvest season should be quite lively with the number of circumcision and thanksgiving events, but not in this harvest season. Starting tonight Yati will not eat with salt for seven consecutive days. Besides eating without salt, Yati can only eat fruits such as guava or oranges. On the seventh or final day, Yati will close her ritual by keep awake all night. On this seventh day there will conducted 'brokohan' by serving red and white porridge to be eaten by all house member and also distributed to neighboring houses on the right and left. At this 'brokohan' time will be delivered a salvation prayer: 'I wish safety for the whole family, for the guardian spirit in this house, to always be healthy in coming days. Good all for a family'. There is no definite provision when 'depart' is carried out. Everything depends on the choice of each person. In one year, this practice can be conducted up to 5 times. Everything depends on the needs of each of the *Sedulur Sikep* family.

Source: Field note, Thursday September 14th 2017

Extractive Landscape Use Strategy

Apart from grain savings, the *Sedulur Sikep* Community strongly believes that nature will provide the necessary clothing and food. This is understood as the concept of extractive landscapes. They will take what has been provided by nature, such as animals or plants as a source of food.

Mergo wong Sedulur Sikep duwe prinsip sejarah biyen, wong genepe loro sandang pangan, angger ono wonge mesti ono sandang pangane. Omek keong, mbek o racun, nek dadi pangan, semusim iso entuk 25 juta. Kangkung wae keneng gawe pangan saben dino turah-turah. Kangkung liar diuntingi, malah payu, bedo kalih kangkung sik dirumat, organik. Gek pangan ora akeh yo ngaten niku, jupuki genjer, kalih kangkung. Kembang turi, terate, temun.

The *Sedulur Sikep* community have principle by history, if there are people there must be food and clothing. Snails, even though poisonous, it become a food source, annually can get 25 million from it. Wild swamp morning glory can also be eaten every day abundantly. Wild swamp morning glory (*Ipomoea aquatica*), af-

ter being tied up can be sold, unlike the cultivated ones, the wild ones are actually organic. If the food is difficult, take the yellow burhead (*Limnocharis flava*) with swamp-morning glory (*Ipomoea aquatica*), Agati flower (*Sesbania grandiflora*), lotus (*Nelumbo nucifera*) and cucumber (Rs, peasant, 41 years old)

Daily food needs can be fulfilled by selling vegetables that are intentionally planted or growing wild on agricultural land. Vegetables like swamp morning glory and yellow burhead, or agati flowers that are easily found in rice fields or around the yard are the reliable sources of food.

If the rice harvest is not good, then they will rely on the activities of 'keropo kiyong' or look for freshwater snails (*Pila ampullacea*) which are also resulting quite large amount. The activity of looking for freshwater snails is usually done individually or sometimes in groups. The 'keropo kiyong' activity is carried out in the villages around the residence of the *Sedulur Sikep* Community, even to areas outside Pati Regency.

Nek munduti keong dugi Bulung kabupaten Kudus, Mlesan, Mlesan niku Margorejo, Karangrowo, Jongso, kalioso, Cemplon.

Mangkat jam 5 manthuk jam 10. Ngaten niku nek sedulur mriki ngarani keropo. Iwak wonten tapi sekitar wong 10, sak balong (rowo). Iwake sik dipadosi, iwak welut, kuthuk, sili, bethik, mujair, nila, lundhu. Nek musim udan pertama, iwak lundu mberah.

We look for snails to Bulung, Kudus Regency, Mlesan, Margorejo, Karangrowo, Jongso, Kalioso, Cemplon. Depart at 5 o'clock and back at 10 o'clock. People here call it 'keropo'. Fish is available, about 10 person in one swamp. The targeted fish are eel, snakehead, spinny-eel, climbing-perch, mozambique-tilapia, Nile-tilapia, and twospot-catfish. In the first rainy season, there must be a lot of twospot-catfish (Rs, peasant, 41 years old)

The activity of looking for snails seemed to be only a 'monopoly' of the *Sedulur Sikep* because no one apart of the *Sedulur Sikepare* looking for snails as an additional income. This snail can be sold to collectors at a price of Rp.5000-Rp.8000 per kilogram by boiling it first and then selling the meat after being separated from the shell.

Nek Sedulur Sedulur Sikep meh roto golek kiyong kabeh. Keong ki nek nuju ora ono panen, malah akeh keong. Sik goleki sedulur kene. Metu terus. Nek nuju ora ono pangan, kiyong ki metu terus. Kiyong ki ngrusak tanduran, nek dipangan keong, ra iso modot. Nek aku nek ora kiyong (pas rendengan)...yo ngunduh jagung pas ketigo. Timbange ngelong duit ning omah, nek iso luru, yo luru liyane .

Almost all *Sedulur Sikep* looks for snails. When the harvest fails, the snail is even a lot, they keep appears. Snails damages the plants actually, if eaten by snails, plants cannot grow tall. For myself, if I don't look for snails during the rainy season ... then harvest corn during the dry sea-

son. Instead of reducing savings at home, if you can find something else, look for it. (Yd, peasant, 30 years old)

The season for looking for snails is usually fall in March, May, July and August because in these months it is easy to find golden-snails in swamps. Meanwhile fishing activities are carried out when the rainy season comes which usually falls in December and January.

The selling price of river fish is quite high. For types of spinny-eel is Rp. 40,000/kg while for the type of snakehead can be sold at Rp. 25,000-Rp. 30,000/kg.

Tahu ono kejulak, ning luru pangan yo luru iwak, mocok, ge nempur, ge mangan. Jaman kabluk, jaman tikus nyerang pisanan, wong akeh sik kejulak. Ora mentolo wong ki, pirang-pirang dino. Nek kene ki ora ono wong miskin, mergo ngati-ati, nek duwe pangan yo diawet-awet. Yo nek ono lakon ngono kui, nek mangan trimo saksake. Ngati-ati, kanggo ngurip-nguripi wong, nguri-nguri, wong jatahe luru pangan. Sik penting angger ojo ngakali wong, ojo ngapusi wong.

There was once a crisis, we hunt fish, to be laborers, to buy rice, to feed ourselves. In *Kabluk* period, when rodents attacked, many were hit by crisis. People have trouble for days. But there are no poor people here because they are always careful, when they have food they keep it well. If there is an incident like that, then eat wisely. Be careful, to support people, to take care, indeed people have an obligation to find food. The important thing is, do not cheat people, lie to people. (Ty, peasant, 54 years old)

The local food security strategy shown by the *Sedulur Sikep* Community can be seen briefly in **Figure 6**. The *Sedulur Sikep* community shows that deagrarianization does

Table 2. Seasonal calendar of *Sedulur Sikep* Community

Month/Event	1	2	3	4	5	6	7	8	9	10	11	12
Rice harvest period												
Snails hunting season												
Fish hunting season												

Source: Primary data, 2017

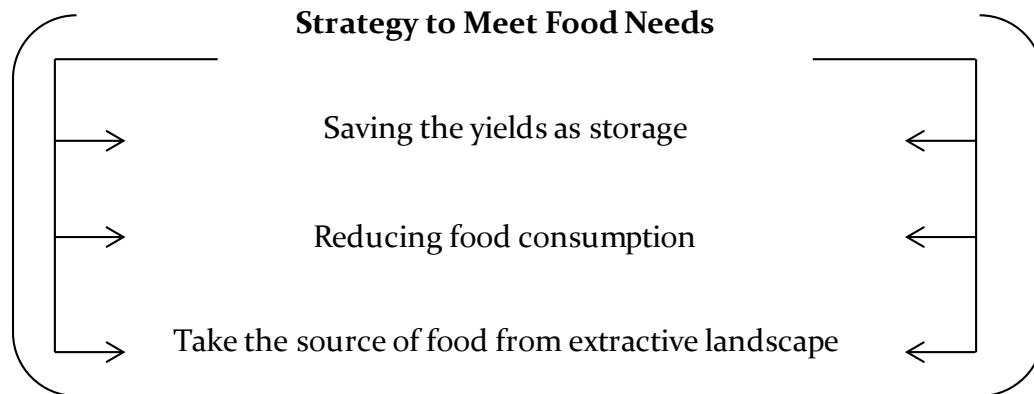


Figure 6. Local Food Security Strategy

not necessarily weaken the community's self-reliance especially with regard to meet food needs.

Food needs are fulfilled within the community without relying on outside food assistance interventions. Similar as the results of researches conducted by Fadhilah (2013) and Cuevas et al. (2015), this study also shows that traditional communities have advantages in their local food security strategy because they still maintain their subsistence strategy. Subsistence strategies do not make them vulnerable on food, in contrary provide reinforcement in their communities.

CONCLUSION

Deagrarianization does not affect food security at the community level. This is possible because the community still adheres to the strategic way of life. The internal self-mechanism binds the community with its ability to adapt to food crisis situations. Cultural values that are still held firmly and continued by the younger generation sustain the community in to situations of food sufficient.

The strategy of ensuring food sufficiency is carried out through food strategies and non-food strategies. The food strategy is related to efforts to anticipate the conditions of food scarcity that occur. The food strategy consists of strategies to save yields and reduce consumption. Meanwhile the non-food strategy is carried out by utilizing extractive landscapes that are still available.

In addition to managing yields, the local food security strategy carried out by the *Sedulur Sikep* community turned out to maintain the Javanese peasant's classic strategy with its *limited needs* ideology. This shows that in the midst of the various social changes that occurred in rural Java, especially related to the threat of deagrarianization, the ideology of *limited needs* did not disappear but instead strengthened to become an ongoing Javanese peasants adaptation strategy

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