Access of Land Resources and Alternative Sources of Income Non Paddy Farming for Poor Farmers in Tidal Swampland Type A
(Case in Banjar regency, South Kalimantan Province)

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Abstract: Household of poor farmers increased sharply in the period 1993-2013 or during three periods of Indonesian agricultural census. The enhancement number of poor farmers are generally paddy farmers on certain land typology as well as tidal land type A. This article aims to analyse the access to land resources and non-farm paddy income sources for poor farmers in tidal swamp land type A. Research located in Type A tidal area in Banjar regency of South Kalimantan. The results showed that the productivity of land and endowment factor (the ratio of land per farmer) determines the productivity of rice farming. The average household or smallholder poor farmers are only able to access about of 0.3 ha and is only able to produce 1.4 tons of paddy rice or 700 kg of rice equivalent. Alternative sources of income for the household non paddy farming is a livestock of duck Alabio; non-agricultural businesses and fishery businesses. Non-farming work activities including non-farm activities in addition to contribute revenue, is also capable of maintaining the sustainability source of household income of poor farmers themselves.

Key Words: Land Resources; Non-farm paddy income; and tidal swampland type A

INTRODUCTION:

World food agency FAO in 2008 revealed the data's information about Hunger Map that was shocking; namely: (1) more than 800 million people sleep in hunger; (2) every 5 seconds a child dies from hunger; (3) people die of starvation due to poor nutrition due to disease more than AIDS, Tuberculosis and Malaria; (4) a lot of people sick due to malnutrition (World Food Programme, 2009). In fact, according Hanani (2012); In 2010 the number of people who suffer from hunger has increased to 925 million people. food security and poverty are the two phenomena are interrelated, even considered to have a causal relationship (Sen, 1998; Maxwell and Frankenberger, 2002).

Food security is quite urgent when it comes to the poor farmer households is increasing every time it turns. Data show based on the 2003 Census of Agriculture, the number of households smallholders farmers (RTPG) who have land between 0.1 to 0.25 ha increased quite sharply, from approximately 9.4 million to 13.3 million RTPG in the period 1993-2003. This shows that a growing number of farmers who depend on the narrow land then being poor and experiencing the food insecurity. Agricultural census in 2013 showed the number of farm household (RTP) equal to 26.126 million RTP; decreased by 16.18% compared to the agricultural census data in 2003. The results of the Census of Agriculture (ST 2013) also mentions that the farmer households (RTP) crops in Indonesia is dominated by households that manage rice plants. The number of RT is to farm rice in Indonesia in 2013 as many as 14,147,942 households, when compared with ST 2003 decreased by 58 413 households (-0.41 percent). That is, the number of farmers continues to decrease especially food farmers and most of that is there are now poor farmers who cultivate rice plants with a land area of only about 0.25 ha. This article aims to analyse the access to land resources and sources of income of poor farmers of non-rice farming in tidal swamp land type A.

METHOD:

The research was conducted in the area of tidal swamp land type A in Banjar regency, South Kalimantan. Banjar regency selected intentionally (purposive) based on that this regency is one of the largest regency area of the ebb and flow; including tidal land type A. According to Noor (2004); based procedures and scope drainage then the tidal zone in South Kalimantan is divided into four (4) types of overflow are named type A, B, C and D. Type A

is a tidal area that always gets flood of the tide, both during tide large and doubles pairs and experiencing the daily drainage.

Research using primary and secondary data. Secondary data is primarily used to look at the macro control of the condition of land resources by small farmers as a representation of poor farmers. Primary data is used to determine: (1) access to land resources; and (2) determine paddy alternative sources of income other than rice farming for the poor farmers. The number of samples is required in this study is 80 samples. Analysis of data to determine access to land resources including land productivity descriptively. To specify an alternative source of income other than rice farming for the poor farmers in tidal land use type A calculation approach farm income from non-rice and approach to off-farm employment income (non-farm activiteis)

RESULT AND DISCUSSION:

Access Land Resources
Agricultural households tidal land users can be classified into two major groups, namely smallholder households and non-smallholders households. At the macro level; ST 2013 in Banjar Regency results showed that 98.24 percent of households of farming land users, calculated to 32.30 percent (22 924 households) is a smallholder households, while non-smallholders households at 65.94 percent (46 805 households).

Agricultural land is one of the capital in the business in the field of agriculture. Various research or empirical findings of small-scale farmers or smallholders especially rice plant farmers always one of the factors associated with land resources. BPS Kalsel study results in 2015 on the basis of data Agricultural Census 2013 states that the area of land cultivated by farm household, the chances of achieving high productivity 1.7 times greater than the farmers who cultivate less than 0.25 ha of land (smallholders).

The same thing happened in the tidal area of type A. The dependence of the agricultural sector to the availability of land can not be avoided, because the land is the main capital that must be available for the farm household. Munir (2002) revealed that from land, farmers can sustain life with their family, through the principal activities of farming and animal husbandry. For the wetland, based on data ST 2013; an increase in cultivated land area although not mentioned whether this increase is also related to smallholder. Explanation is summarized in Table 1 below:

Table 1.   The average of Land That owned by the Household According to the District and Land
(detailed rice field and not rice field), based on ST2003 and ST2013 in the District Banjar

No	Sub-district	Agriculture Land			
		rice field		not rice field	
		ST2003	ST2013	ST2003	ST2013
1	**Aluh-Aluh ****	7.052,99	9.658,23	197,13	1.116,77
2	**Beruntung Baru ***	9.840,07	11.106,77	291,13	96,84
3	Gambut	5.774,29	10.789,00	148,36	325,57
4	Kertak Hanyar	2.883,37	10.569,89	81,50	960,52
5	Tatah Makmur	7.734,66	8.409,03	133,46	377,75
6	Sungai Tabuk	4.155,47	6.045,36	434,09	965,02
7	Martapura	324,05	2.254,15	181,30	2.677,67
8	Martapura Timur	1.309,75	3.658,97	82,34	282,03
9	Martapura Barat	4.863,38	6.395,84	271,28	1.174,62

10	Astambul	2.758,86	3.482,88	996,53	1.500,32
11	Karang Intan	1.861,65	1.635,12	4.700,10	11.271,13
12	Aranio	430,95	0,00	10.260,66	14.454,72
13	Sungai Pinang	1.728,23	540,06	12.275,66	29.117,49
14	Paramasan	574,95	8,46	11.698,57	29.324,71
15	Penggarong	1.757,28	1.353,70	8.327,12	20.871,69
16	Sambung Makmur	1.228,23	1.379,29	14.318,06	17.414,20
17	Mataraman	1.883,83	2.189,78	4.496,38	11.382,94
18	Simpangan Empat	3.200,95	2.189,11	6.927,76	13.451,41
19	Telaga Bauntung	3.747,64	1.230,30	9.412,44	23.275,96
	Banjar regency	2.973,22	4.828,56	2.463,51	7.442,56

Source : BPS Banjar regency : ST2013 result

** Sub-District with the largest tidalswampland area type A
* Sub-district with the small tidalswampland area type A

Improved wetland area as shown in Table 1 are just the overall area. But in terms of mastery of each household, the number of expansion actually getting smaller. Land area narrowed over time may threaten the process of increasing rice production. It is not depend of the economic structure that is characterized by the growing share of non-agricultural sector and the impact of environmental degradation. Although the tidal area of type A is not too much that is converted to non-agricultural (property) but the presence of sea water intrusion and land divisions also resulted in the reduction of the area of land at the same time also increasingly narrow poor households to access land resources. Table 2 shows although the percentage of small farmers in Banjar regency decreased by -22.5% but the number of small farmers is still quite large. This decrease can also be caused that most of the small farmers have no land anymore so now only be a farm laborer.

Table 2. The number of farming household land user and small households in South Kalimantan Province on Year 2003-2013

Regency/City	Household Business smallholder farming			
	2003	2013	The Growth	
			Absolute	%
Tanah Laut	15.930	10.661	-5.269	-33,08
Kota Baru	9.435	4.757	-4.678	-49,58
Banjar	29.579	22.924	-6.655	-22,50
Barito Kuala	11.321	11.089	-232	-2,05
Tapin	11.122	7.065	-4.057	-36,48
Hulu Sungai Selatan	22.368	16.321	-6.047	-27,03
Hulu Sungai Tengah	30.217	21.413	-8.804	-29,14
Hulu Sungai Utara	22.079	16.893	-5.186	-23,49
Tabalong	13.799	8.237	-5.562	-40,31
Tanah Bumbu	8.525	5.344	-3.181	-37,31
Balangan	4.811	3.741	-1.070	-22,24
Banjarmasin	8.615	2.546	-6.069	-70,45
Banjar Baru	5.972	2.862	-3.110	-52,08
South kalimantan	193.773	133.853	-59.920	-30,92

Land productivity and factor endowment (the ratio of land per farmer) is crucial in the effort to obtain productivity of rice farming. In rice farming in the tidal area of type A Banjar regency, especially in Sub-district Aluh Aluh then determine the productivity of the land a little more than a factor endowment. Productivity tidal

area of type A with a local rice varieties ranged only from 3.5 to 5.25 tonnes per hectare of dry milled grain (GKG). The average productivity of local rice varieties only around 4.2 tons per hectare. Based on the average productivity is the tidal land rice productivity type A in South Kalimantan is still lagging behind compared to the average national rice although when compared to the average productivity of all land in the province not differ much. For small farmers or poor farmers who only have land less than or equal to 0.3 ha (12 borong); means that every year only able to produce 1.4 tons of paddy rice. When converted into rice only capable to produce rice maximum into 700 kg of rice, equal to Rp 6,300,000 or an average of Rp 525,000 per month. If the average family of four people, the income per capita of small farmers tidal area in the Banjar regency of type A is sourced from rice farming is only Rp 4,400 per capita per day or less than 0.5 US dollars per day.

ALTERNATIVE SOURCES OF INCOME NON RICE:

Sources of household income of rice farmers in tidal swamp land type A Banjar regency of non-rice farming mainly comes from fisheries activities, livestock business of Alabio duck, chicken livestock business and non-farm businesses, namely motorcycles taxis and trade. Rice farming activities that only comes once a year provides an opportunity also to farmers to carry out various activities on non-rice farming and non-farming businesses. Non-rice farming business that can be done is fisheries, whether river fisheries and also marine fisheries; livestock business of Alabio duck especially for laying; chicken and cattle business. Non-farm activities that undertaken by rice farmers in the tidal area of type A include motorcycle taxis, trade, artisan and sell sago palm stems to feed the ducks made a mixture called "paya". Details of the income of non-rice farming is shown in Table 3.

Table 3. Non-rice farming income

No.	Sources	Charge (Rp)	acceptance (Rp)	Net Income* (Rp)	Percentage (%)
1.	Fisheries	576.000	2.211.000	1.635.000	28,51
2.	Livingstock business of alabio duck	663.000	2.520.000	1.857.000	32,38
3.	Cattle Livingstock	187.000	610.000	423.000	7,38
4.	Non-farm activities	1.030.000	2.850.000	1.820.000	31,73
Total		2.456.000	8.191.000	5.735.000	

Notes :

* Net Income = Gross Income – Cost

Based on Table 3 are known the total income that can be derived from non-rice farming 5.735 million rupiahs. Percentage largest source of income of non-rice farming activities from its Alabio duck livestock business (32.38%); non-agricultural business (31.73%) and fishery activities (28.51%). Non-farming work activities including non-farm activities in addition to contribute revenue, is also capable of maintaining the sustainability source of household income itself. Studies conducted by Barret et al (2001) for example, shows that activity beyond agriculture could be contribute 40-45% of total household income. In addition, the study also found that working outside the agricultural sector turns positive correlated to income and household wealth (*Makki, et al*, 2013). Other studies, among others, performed by Hung and Wen (2010); Chikezie et al (2011); Adewunmi et al, (2011); Bereket Zerai, and Zenebe Gebreegziabher, (2011); Pam Zahonogo, (2011); Cornejo, et al (2007); Phimister and D. Roberts, (2006); Kada, (1986) and Summer (2005); also showed similar results where non-farm activities turns contribute significantly to the income of poor farmers households in tidal land type A.

If the income of non-rice farming (5.735 million rupiahs) summed with income from rice farming (6.3 million rupiahs) generated a total household income of small farmers on tidal land type A for the year equal to 12.035 million rupiahs, or equal with 1,000.000 per month. If the average number of household members is four people,

each member of the household only get an income of 250,000 rupiahs per month, or an average of about 8,500 rupiahs per capita per day. The average level of income per capita per day as an approach to spending less than one dollar per day at the exchange rate of 13,000 rupiahs / dollars. Income per capita per day is important as a measure of the income side, whether rice farmers in tidal swamp land is classified as poor or has been able to come out of the poverty zone.

CONCLUSION:

1. At the macro level; 98.24 percent of households farming land users, calculate to 32.30% (22 924 households) is a smallholder households, while the others remaining 65.94% (46 805 households) belong non-smallholder households.
2. Productivity of land and endowment factor (the ratio of land per farmer) determines the productivity of rice farming. Productivity tidal area of type A with a local rice varieties ranged only from 3.5 to 5.25 tonnes per hectare of dry milled grain (GKG).
3. Average household of poor farmers are only able to access an area of 0.3 ha. The land can only produce 1.4 tons of paddy rice or 700 kg of rice equivalent.
4. Percentage largest source of income of non-rice farming activities come from its livestock business Alabio duck; non-agricultural and fishery businesses. Non-farming work activities including non-farm activities in addition to contribute for the income, is also capable of maintaining the sustainability source of household income of poor farmers themselves.

ACKNOWLEDGEMENTS:

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