

Analysis of Self-Capacity and Education Level of Fishermen at Pasirbaru and Cidadap Villages, Sukabumi Regency

Rinda Noviyanti*, Sugeng Hari Wisudo, Eko Sri Wiyono, Mulyono S. Baskoro, Budi Hascaryo
Departement of Modelling System of Fisheries, Post Graduate School, Bogor Agricultural University.P.O. BOX.
16680, Darmaga, Bogor, West Java, Indonesia

Abstract

This research was conducted to know the characteristics of self-capacity and education level of fishermen on Pasirbaru and Cidadap villages. The qualitative approach was done with the interview through questionnaires on the fishermen in two villages taken in purposive sampling. The characteristics of self-capacity of fisherman in both villages are a bit different. Cidadap fishermen have a very good category grade in aspects of knowledge, skills, competencies, and individual ethics of mental, confident, and commitment, with scores of 83,87% ; 77,42% ; 45,16% ; 45,16% ; 25,81% ; and 51,61% respectively. Those aspects were higher than Pasirbaru. On the other hand, Pasirbaru fishermen have higher grade than Cidadap fishermen from aspects of education level, education needs, presence of education deposits, and the amount of education savings. The graduation rate of Cidadap fishermen from elementary school, junior high school, and senior high school are 53,6% ; 10,7% ; and 3,6% respectively. 100% of Pasirbaru fisherman stated that education needs are important and very important. 67,9% of Pasirbaru correspondents stated that they have education savings, while only 32,3% of Cidadap correspondents who have education savings. Fishermen from both Cidadap and Pasirbaru village are uncertain about how much money they save per month. The uncertain value acquired from Pasirbaru and Cidadap respondents are 68,5% and 70% respectively. Need to increase the level of self-capacity and education of traditional fishermen in the region of Palabuhanratu Bay, Sukabumi

Keywords : characteristics, self-capacity, education, fishermen

Introduction

1.1 Background

Pasirbaru and Cidadap Villages, based on its geographical position, exploits Palabuhanratu fishing port as center sales activity of fish catches. The majority of the population in both villages are fishermen. Fishermen are one of an important part in fishing activities. Most of them spend most of their time at sea in order to support their family. The condition that fishermen have to face at sea with all of its risks turns them into having a hard and firm character. In physical terms, Mandar fishermen for example, have sturdy body shape and dark brown skin (Alimuddin, 2005). This is understandable due to their heavy workload as fishermen. As a community, fishermen have some characteristics that are different from other communities, namely: (1) the fishermen community live and stay and do activities at sea and in the coast as the culture and the survival of their individual and the community, (2) the fishermen community are generally traditional and operating simple fishing gear either with or without a motor (Indiarti and Wardana, 2013).

Development of capacity is a long process, in which the individual's ability and skill in solving problems are increasing based on the development of their experience, so that the performance capacity of organizations and institutions will become stronger in order to achieve the industrialization of fisheries. Capacity development is defined as an increase of individual competence, public sector institutions, private sector, civil society organizations and local communities that are involved in activities sustainably which positively affect toward the development such as poverty alleviation, improvement of the quality of governance and meet the Millennium Development Goals (MDGs) (Hope, 2009).

Fishermen as human beings have a natural potential to learn (Rogers, 1983). Referring to that opinion, people must try to increase its capacity by working (experience) and study in order to be success. Working and learning processes occur due to human interaction with the environment. Real lessons take place when farmers feel that what they learned is relevant to the purpose of their farming business (Good and Brophy, 1990). The learning process can make fishermen grow and develop to be mature and independent.

The understanding of characteristics and capacity of the fishermen themselves will determine the level of potential and independence of fishermen in accepting the technology that was introduced to them, knowing the potential and independence of fishermen in receiving fishing technology and then it can be customized to the potential and capacity of the fishermen themselves. With this approach, the farmer / fisherman will apply the new technology on an ongoing basis (Tjitropranoto, 2005).

Palabuhanratu bay is the area in the southern waters of the island of Java, which has the potential of fisheries that is important for Sukabumi, West Java. A variety of policy packages has been implemented in this area including motorization program, fishermen empowerment, training and extension of fishery (Wahyudin, et.al., 2005). There are also plans to increase Palabuhanratu Nusantara Fishery Port status (Category B) into the

ocean fishing port (Category A) in accordance with the Regulation of the Minister of Marine and Fisheries number 8 in 2012. Looking at the existing potential, challenges and opportunities, then this research was conducted.

1.2 Objective

The purposes of this study are

To describe fishermen's self-capacity at Cidadap and Pasirbaru Villages, Palabuhanratu, Sukabumi.

To describe the educational culture at Cidadap and Pasirbaru Villages, Palabuhanratu, Sukabumi.

Research Methods

1.3 Time and Research Location

Data collection was conducted in December 2013 - January 2014. The research was conducted in two different villages namely; Pasirbaru village on Cisolok Sub-district and Cidadap village on Simpenan Sub-district, Sukabumi Regency West Java.

1.4 Research Instrument

Instrument is a tool which is used to collect data in a research. In this study, the instrument used was a questionnaire that had been developed in such a way, so that the respondents did not experience difficulties to fill out the questionnaire and answer the questions during the interview.

1.5 Data Collection Methods

The data collected in this study consists of primary data and secondary data. Primary data obtained by conducting interviews and surveys to respondents by using the questionnaires that had been prepared. Secondary data were obtained from the Department of Marine Fisheries of Palabuhanratu and village offices of Pasirbaru and Cidadap.

The study was conducted using survey method to get the facts from existing phenomena and seek for factual information. Interviews were conducted after the fishermen finish their fishing activities. They were visited one by one at their respective houses. Selection of respondents was done by using purposive sampling, namely the selection of speakers who are key informant by using criteria that aim to obtain reliable respondents in accordance with the purpose of research. The numbers of respondent who successfully recorded were 28 fishermen in Pasirbaru village, and 31 fishermen in Cidadap village.

1.6 Data Analysis

The study was a descriptive study with the aim to explore the social and cultural life of traditional fishing communities in the Palabuhanratu Bay, Sukabumi focusing on aspects of self capacity (knowledge, skills, competencies, mental, confidence, and commitment) and aspects of education. These aspects were expected to provide an overview of the readiness of traditional fishermen towards the industrialization of marine and fisheries sustainable fishing in accordance with the Regulation of the Minister of Marine and Fisheries of the Republic of Indonesia Number 27 of 2012.

Results and Discussion

Sukabumi is geographically located at 06°57' - 07°25' South latitude (S) and 106°49' - 107°00' East Longitude (E), with the boundaries of administrative region in the north bordering the district of Bogor, south to the Indian Ocean, east to Cianjur, and west by the Indian Ocean and Lebak regency. Sukabumi has nine districts including the District of Cisolok and Simpenan. Both of these districts are bordering the bay of Palabuhanratu, there is a Nusantara Fishing Port of Palabuhanratu on the tip of the bay which is a center of fishing activity where almost all the fishery, including fishermen, do the transactions there. Pasirbaru village is located in the District of Cisolok, while Cidadap village is located in the Simpenan District.

1.7 Characteristics of Fishermen's Self-Capacity

Characteristics of fishermen's self-capacity of 28 fishermen in Pasirbaru village, and 31 fishermen in Cidadap village can be seen in Table 1.

Table 1. Fishermen's Self-Capacity in Pasirbaru and Cidadap Village

Fishermen's Self-Capacity	Pasirbaru Village				Cidadap Village			
	Very Good (%)	Good (%)	Fairly Good (%)	Less Good (%)	Very Good (%)	Good (%)	Fairly Good (%)	Less Good (%)
1 Knowledge Aspect	32,15	64,28	3,57	0	83,87	16,13	0	0
2 Skill Aspect	17,86	78,57	0	3,57	77,42	22,58	0	0
3 Competence Aspect	17,86	78,57	3,57	0	45,16	38,71	12,90	3,23
4 Ethical Aspect of Individuals								
- Mental	17,86	64,28	17,86	0	45,16	38,71	16,13	0
- Self-Confident	3,57	85,72	10,71	0	25,81	54,84	19,35	0
- Commitment	21,43	71,43	7,14	0	51,61	5,48	9,68	3,23

Description: Very Good (3,26 - 4,00); Good (2,51 - 3,25); Fairly Good (1,76 - 2,50); Less Good (1,00 - 1,75)

Fishermen's self-capacity in Pasirbaru village on aspects of knowledge has the highest value (64.28%) for the good category, while for the category of very good, fairly good and less good are respectively 32.15%, 3.57%, and 0%. This shows that the understanding of knowledge about fishing activities including water conditions / territorial, fishing gear, the presence of fish, and fishing operation time has been controlled well by the respondents there.

The highest value for the aspect of skill in fishing activities, which is assessed from the operation of ships, fishing tools, and maintaining the quality of the catch, are in good categories with a value of 78.57%. Very good value has 17.86%, fairly good 0%, and less good 3.57%. This data indicates that aspect of skills in fishing activities in Pasirbaru village has been mastered well, although there are 3.57% of respondents who feel not good enough.

Fishermen's self-esteem in Cidadap village is slightly different to the fishermen in Pasirbaru village. They only have two categories for the aspects of knowledge and skills, namely; very good and good. Aspects of knowledge got value of 83, 87% (very good) and 16.13% (good), while the skills aspects got value of 77.42% (very good) and 22.58% (good). This indicates that aspects of the knowledge and skills of fishermen in the Cidadap village have been mastered very well.

Aspect of competence is as an indicator to see the fishing business opportunities in search for profitable business opportunities and to optimize existing resources. Respondents in Pasirbaru village have given a "good" answer as the answer with the highest score of 78.57%, the same score applies to the value skills aspect. Very good response have a value of 17.86%, and the response of fairly good have a value of 3.57% while the response of less good is zero (0%). Based on these data, the level of competence of the fishermen in Pasirbaru village in doing profitable business and the optimization of existing resources is already good.

Base on the analysis result of competence aspect, very good category has the highest value (45.16%), followed by good value (38.71%), fairly good (12.90%) and less good (3.23%). This shows that the fishermen in Cidadap Village have good capability of doing profitable business and the optimization of existing resources relatively better than the fishermen in Pasirbaru village.

As for the ethical aspects of the individual that were assessed on three components, namely; mental attitude, confidence, and commitment. Mental attitude to see how the fishermen asses, accept, or reject new technologies. The results showed that in Pasirbaru village good category got the highest score of 64.28%. Both very good and fairly good category got the value of 17.86% and no fishermen have less good mental. Aspects of confidence that measures the level of confidence and reliance in conducting fishing activities, respondents gave the highest grades in good categories (85.72%), while very good category only amounted to 3.57% less than fairly good category 10.71%. Whereas the aspects of commitment which measure the level of fishermen ability to socialized with another person resulted that a very good category got a value of 21.43%, lower than the good category by 71.43%, while quite good category got 7.14% and less good got 0% (zero). Based on a whole data from individual ethical aspects, it can be illustrated that the fishermen in Pasirbaru village have good mental attitude, confidence, and commitment in doing the fishing business.

When compared with the knowledge and skills aspects of the fishermen from Pasirbaru village, then the fishermen in Cidadap village are better. This situation is influenced by the location of Cidadap village which is closer to the center of fisheries activity (Palabuhanratu Nusantara Fishing Port and local government center of the Regency). People who have better information access (health, education, economy) are able to provide added value in the development of self-apacity such as knowledge and skills.

The ethical aspects of fishermen individuals which consists of mental, self-confidence, and commitment of the fishermen in the Cidadap village have better relative value than than the fishermen in Pasirbaru village. For these three aspects, the value of very good category of Cidadap Village is relatively higher than Pasirbaru village namely 45.16%, 25.81% and 51.61%. For the aspects of commitment, 3.32% were categorized as less good.

Along with Suryawan (2014) who stated that the ethical aspects or mental growth in fishermen communities is a way of reasoning and thinking to take consideration and decisions related to physical action, then it can be concluded that Cidadap fishermen are smarter than Pasirbaru in term of fishing. While the commitment is a form of readiness and ability to fulfill the promise of fishing-related and have high bargaining power with other people, groups, and stakeholders. Aspects of the commitment of fishermen to the third party that has grown and become part of the social life of fishermen at the site is a pattern of patron-client relations which puts fishermen's bargaining position low (Wahyudin, 2011). Legg (1983) illustrates that the patron-client relationship basically related to: (a) the relationship between the actors or the actors who control different resources, (b) the relationship of a special nature (particularistic), personal relationships and more or less contains of affection (affectivity), (c) the relationship that is based on the principle of mutual benefit and mutual giving and receiving. Meanwhile, according to Scott (1993) that the resources are exchanged in patron-client relationships reflect the needs arising from each party as well as typical coastal community (Satria, 2002).

The overall self-capacity of fishermen in Cidadap village is relatively better than Pasirbaru village. One of contributing factor is the location of Cidadap village that is closer to the Port as a center of fisheries activity that they have more experience at sea that makes them more skilled. It can be influenced by the geographical location of the village of Cidadap that is closer to the center of fishing activity that is PPN (National Fisheries Port) Palabuhanratu and local government center of the Regency. Additionally, Palabuhanratu designated as the central region of minapolitan economic development based on the Ministry of Maritime Affairs and Fisheries of the Republic of Indonesia number 32 in 2010. The closer to the city center will further facilitate access to a variety of city suburbs. People who have better access to information (health, education, economy) able to provide added value in the development of self-capacity such as knowledge and skills. According to Rondinelli and Ruddle (1978), the role of the city is determined by the characteristics of its functions, such as accessibility it has toward its suburbs. Centralization of urban infrastructure in growth centers such as Palabuhanratu with its minapolitan can support the main objective of economic and social objectives (Parr, 1973).

Other causes are heredity. Fishermen in Cidadap village are 90% migrants from Makassar with liftnet fishing background. They are experienced in fishing operation using various fishing gear. Belief (culture), knowledge, and skills in fishermen communities are generally a process that is carried from generation to generation (Townsend, 1998). Another factor that makes the capacity of the fishermen of Pasirbaru village lower than Cidadap is the condition of their village territory. Pasirbaru village is located on the beach which has a tourist beaches managed by the Government of Sukabumi and maricultured by fishermen and the office of marine and fisheries, Sukabumi Regency. The existence of this tourist beaches and mariculture created alternative jobs for fishermen, so they are not 100% dependent on fish catches.

1.8 Education

Education is one of the things that are important to human life. The results of data processed related to education level of fishermen in the village of Pasirbaru and Cidadap can be seen in Table 2.

Table2. Level of education of fishermen in the village of Pasirbaru and Cidadap.

No	VILLAGE	Level of education (%)					
		Did not finish Elementary School	Elementary School Graduate	Did not finish Junior High School	Junior High School Graduate	Did not finish Senior High School	Senior High School Graduate
1	Pasirbaru	32,1	53,6	-	10,7	-	3,6
2	Cidadap	29,0	48,4	12,9	3,2	6,5	-

The level of formal education of fishermen in the village of Pasirbaru has a higher value than the village Cidadap in both of graduated from elementary school, junior high, or high school. No respondents in Cidadap village graduated from high school. This is in line with the statement Pollnac (1998) which outlines that to be a fisherman generally does not need the formal education but instead strong body to do heavy work. Formal education can improve competence if the curriculum and the learning process are in accordance with the job of

the individual concerned (Anwas, 2009). Education for fishermen in Indonesia is not based on the demands of their work all this time. Prijono and Pranarka (1996) also says that education serves to develop skills, improve the quality of life and human dignity of both individual and social.

Decline in graduate education at a higher level (junior and senior high school) occurs among respondents in both villages. Wahyudin (2011) stated that formal education level in the region of Palabuhanratu Bay is dominated by the elementary school level. The low level of education in fishermen communities is due to cultural factors or habits that they prefer to be a fisherman from an early age or join with their parent to help searching for their own income. This is in line with Firdaus (2005) who stated that the causes of low interest of parents in rural areas to continue their children education to junior high school are socio-cultural factors and lack of education cost factors. Muflikhati, et.al. (2010) stated that fishermen have lower education levels than non fisherman. Low levels of education will hinder the transfer of fishing technology, as well as creating work patterns that are not disciplined and less accountable (Hendratmoko and Marsudi, 2010). Parent's level of awareness on the importance of education for their children can be seen in Table 3.

Table 3. Parents level of awareness about the importance of education in Pasirbaru and Cidadap village

No	VILLAGE	Level of Importance Education (%)			
		Very Important	Important	Not Important	Very Not Important
1	Pasirbaru	71,4	28,6	-	-
2	Cidadap	77,4	19,4	3,2	-

Based on the analysis of the level of education needs aspect, both fishermen of Pasirbaru and Cidadap expressed it to be very important and important. There are only 3.2% of Cidadap respondents who stated that education is not important. Most of the respondents realize that getting formal education for them or for the children and their descendants is very important. Dahuri (2012) stated that in order to improve the quality of human resources to be competitive then they should be given to the education, training and extension of fishing techniques, financial management, environmental management, and work ethic, including achievement and motivation on an ongoing basis.

Generally, they have expectations that their child and descendants does not follow in the footsteps of parents as fishermen and expect them to have higher education and work as an employee in administration or office. Parents have realized that education gives certain values in thinking and behavior, and therefore education level will affect the mindset and behavior (Anwas, 2013). Kusumastanto and Wahyudin (2012) states that the development of fishermen through counseling is the most important in national fisheries development through the strengthening and development of coastal communities to improve the knowledge and skills associated with fishing effort that they will have a high bargaining power.

After knowing the level of awareness concerning about education, then the following question is to know about whether there is education savings or not. The results showed that more than half of respondents (57.9%) in Pasirbaru village already have education savings, while only 32.3% of respondents in Cidadap village who set aside their earning for education saving. The lack of awareness of the fishermen on the importance of education savings is caused by local environmental culture that is still not realize the importance of education savings. Fishermen still expect free education that has been touted by the government. Detailed data analysis of the education level and savings is shown in Table 4.

Table 4. Education Saving of respondents in Pasir Baru and Cidadap.

No	VILLAGE	Education Saving (%)		Education Saving/ month (%)			
		yes	no	≥ Rp 75.000,-	Rp 25.000,- - Rp 75.000,-	≤ Rp 25.000,-	Uncertain
1	Pasirbaru	67,9	32,1	10,5	10,5	10,5	68,5
2	Cidadap	32,3	67,7	20,0	10,0	-	70,0

The results showed that 68.5% of fishermen from Pasirbaru village are uncertain about how much money they save for education per month, as for respondents from Cidadap village got the value of 70%. Most of them

answered that income as a fisherman differs with other job. This is due to the catch that is very depending on the weather, the presence of fish resources, and the luck factor (Wahyudin, 2003). At the time of harvest, the catch is abundant but the sale value of fish is low, so income they gained is not too much. While on bad season, despite the price of fish is relatively high but the catch is not much that income gained is not too big. Furthermore, marginal communities such as fishermen are lacking at financial management because of low education and perception. They generally have a tendency to buy consumer goods when they earn substantial income, not saving it in the form of deposit (Wahyudin, 2011).

Level of education and awareness of the fishermen in the village of Pasirbaru is relatively better than the fishermen in Cidadap village. This is caused by the presence of community leader in Pasirbaru village who is concern about education. They established the foundations of education starting from an early age (early childhood education) to high school.

Conclusions

Characteristics of fishermen's self-capacity in Cidadap village based on aspects of knowledge, skills, competencies, and ethics of individuals are better than the fishermen in Pasirbaru village. This is due to the easier access to the center of fisheries activities (Palabuhanratu Nusantara Fishing Port). Characteristics of fishermen's self-capacity in Cidadap village are more independent in accepting and applying technology, which is formed from the competition and experience as a fisherman in a location close to the center of fishing activity. As for fishermen in Pasirbaru, they have tourist beaches and mariculture so they are not 100% dependent on fish catches.

Level of education including graduation rates, parents awareness, presence or absence of deposits, and the amount of savings for education shows that fishermen in Pasirbaru village is relatively better than Cidadap village. Location and environment of Pasirbaru village which is farther from the center of fisheries activities (Palabuhanratu Nusantara Fishing Harbour) have formed a more moderate stance and more oriented to office work not solely to be fishermen. Community leaders who care about education have motivated Pasirbaru fishermen to have a high level of education.

Facing the industrialization of marine and sustainable capture fisheries and the era of liberalization of the ASEAN Economic Community in 2016, so the self-capacity and the level of formal and non-formal education of the traditional fishermen in the region of Palabuhanratu Bay, Sukabumi needs to be improved.

References

- Alimuddin, M.R, 2005. Mandar people sea person: Maritime Culture of Mandar Wading a wave of Period Change, (Jakarta: Gramedia Popular Library in cooperation with Adhikarya Foundation IKAPI).
- Anwas, O. M. 2009. Utilization of Media in the Development of Agricultural Extension Workers Competence. Dissertation: Development Extension Studies Program, Department of Communication Science and Community Development, Postgraduate IPB Bogor.
- Anwas, O. M. 2013. Community Empowerment in the Global Era. Alfabeta Bandung.
- Dahuri, R. 2012. Build Catch Fisheries Fair and Sustainable. <http://rokhmindahuri.info/2012/01/26/membangun-perikanan-tangkap-yang-efisien-berdaya-saing-berkeadilan-dan-berkelanjutan/> (accessed: 11/6/2015)
- Faisal, S. 1992. Social Research Formats: The Basics and Applications. Jakarta: Rajawali Press.
- Firdaus. 2005. "Factors Contributing to Low Interest in Continuing Education of Parents for Children to Junior High School (Case Study at Public Elementary School of Lubuk Sengkuang, Banyuasin III District, Banyuasin Regency)" unpublished undergraduate thesis. Palembang: Sriwijaya University.
- Good, T.L and J.E. Brophy. 1990. *Educational Psychology: A Realistic Approach*. New York: Longman.
- Hendratmoko C. and Marsudi H. 2010. Analysis of Fisherman's Socio-Economic Empowerment in Cilacap. *Journal of Socio-Economic Dynamics*. 6(1): 17 p.
- Hope, K.R., 2009. Capacity development for good governance in developing countries: some lessons from the field. *International journal of public administration*, 32 (8).
- Indiarti, I. and D.S. Wardana. 2013. Coastal Community Empowerment Methods Through Institutional Strengthening of Semarang Coastal Area. *Journal of Management and Business BENEFIT*. Volume 17. Number 1. Juni 2013. Page 75-88.
- Kusumastanto, T. dan Y. Wahyudin. 2012. Fishermen coaching As Spearhead of National Fisheries Development. Manuscripts on Scientific Magazine WAWASAN TRIDHARMA. Augustus 2012.
- Legg, K. R. 1983. *Masters, Servants, and Politicians*. Jakarta: Sinar Harapan.
- Muflikhati, I; Hartoyo; U. Sumarwan; A. Fahrudin, and H. Puspitawati. 2010. Socio-economic conditions and the level of Family Welfare: The Case of the West Coast Region. *Journal of Family and Consumer Sciences*. January, 2010 Vol 3 No.1. pp1-10.

- Pollnac, R. B. 1988. Social and Cultural Characteristics in the Development of Small-Scale Fisheries. Prioritize in Human Development, on Michael. M. Carnea (ed). Jakarta: UI-Press.
- Regulation of the Minister of Marine and Fisheries of the Republic of Indonesia Number 27 of 2012 about Industrialization of Marine and Fisheries.
- Rogers, E.M. 1983. *Diffusion of Innovation* (3rd edition) New York: The Free Press A Division Of Macmillan Publishing Co. Inc.
- Rodinelli, D. A and K Ruddle. 1978. Urbanization and Rural Development: A Spatial Policy for Equitable Growth. New York: Praeger Publisher.
- Satria A. 2002. Introduction to Sociology Coastal Communities. Jakarta: Cidesindo
- Scott, J. C. 1981. The Moral Economic Of The Peasant Rebellion and Subsistence in Southeast Asia. First Edition Translated by Hasan Basari. Jakarta: LP3ES.
- Suryawan, I. N. 2014. Mental Revolution and Strategy (Management) Culture. Perspectives from Papua. Book of Mental Revolution as Cultural Strategy. Collection of National Culture Seminar 2014. pp109 – 136.
- Tjitropranoto, P. 2005. The Supply and Dissemination of Agricultural Technology Innovation for Farmers Income Improvement in Marginal Land: Quality Improvement Participation. National seminar paper of Marginal Land Resource Development. Mataram: 30-31 August 2005.
- Townsley, P. 1998. Social Issues in Fisheries: a Framework for Analysis for Developing Countries. FAOFisheries Technical Paper No.375. Rome, Italy. 1998
- Wahyudin, Y. 2003. Socio-economic and cultural systems of Coastal Communities. PKSL-IPB. <https://komitmenku.files.wordpress.com/2008/06/20031205-sistem-sosial-ekonomi-dan-budaya-masyarakat-pesisir.pdf> (accessed 12/12/2015)
- Wahyudin, Y., T. Kusumastanto, and M.O. Sobari. 2005. Optimum Resource Allocation in waters of Palabuhanratu Bay: Demersal Fish Resources. PKSL-IPB.
- Wahyudin, Y. 2011. Characteristics of coastal and marine resources of Palabuhanratu Bay, Sukabumi Regency, West Java. Bonorowo Wetland Journal 1. 19-32, July 2011.

Acknowledgement

The authors would like to thank Mr. Arik Permana, an officer of Marine Station of Bogor Agricultural University at Palabuhanratu Bay, and his family for their cooperation during research and data collection. We also wish to thank Mr. Wahyu who introduced us to the key figures of fishermen in the village of Cidadap and Pasirbaru.

Rinda Noviyanti, Ir., MS.i. She was born in Jakarta, Indonesia, November 3rd, 1966. She lives in South Tangerang, Banten, Indonesia. The author's educational backgrounds are Bachelor degree from Faculty of Fisheries, IPB Bogor (1991) in the major of Marine Science and Technology (Ir.). Master degree from Faculty of Fisheries, Bogor Agricultural University (2006) in the major of Science in the field of Marine Technology (MSi). Currently the author is a student at the Post Graduate School in Department of Modeling Systems of Fisheries, Bogor Agricultural University. She is also a lecture of Open University of Educational Ministry of Republic of Indonesia.