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ABSTRACT

INTERNATIONAL CONFERENCE ON BIODIVERSITY

SOCIETY FOR INDONESIAN BIODIVERSITY

Bali, 8-10 December 2017

Beach Pool at Jimbaran, Bali , Indonesia; photo by Ayana Resort and Spa

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ABSTRACT

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SOCIETY FOR INDONESIAN BIODIVERSITY

Bali, 8-10 December 2017

THEME:

Roles of Biodiversity and Conservation Research under Global Climate Change

SECRETARIAT ADDRESS

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TIME SCHEDULE

International Conference on Biodiversity

Society for Indonesian Biodiversity (SIB)

Bali, Indonesia, 8-10 December 2017

TIME	ACTIVITIES	PERSON IN CHARGE	SITE
December 8, 2017			
14.00-21.00	Shuttle from airport to hotel	Committee	-
December 9, 2017			
08.00-08.30	Registration	Committee	Lobby
08.30-08.40	Indonesia Raya National Anthem	Committee	R1
08.40-08.50	Opening speech [I]	Chairman of the committee	R1
08.50-09.00	Opening speech [II]	Chairman of the SIB	R1
09.00-09.15	Photo Session and Coffee Break	Committee	R1, Lobby
09.15-11.30	Plenary **Prof. Dr. Sutarno** **Dr. Eddie van Etten** **Dr. Diane Butle**	Moderator	R1
11.30-13.00	Rest, pray, lunch	Committee	Lobby
13.00-14.00	Parallel presentation I		
	Group 1: **AO-01 to AO-06**	Moderator	R1
	Group 2: **AO-07 to AO-12**	Moderator	R2
	Group 3: **AO-13 to BO-03**	Moderator	R3
	Group 4: **BO-04 to BO-09**	Moderator	R4
	Group 5: **BO-10 to BO-15**	Moderator	R5
	Group 6: **BO-16 to BO-21**	Moderator	R6
14.00-14.15	Coffee break, pray	Committee	Lobby
14.15-15.15	Parallel presentation II		
	Group 7: **BO-22 to BO-27**	Moderator	R1
	Group 8: **BO-28 to BO-33**	Moderator	R2
	Group 9: **BO-34 to BO-39**	Moderator	R3
	Group 10: **BO-40 to BO-45**	Moderator	R4
	Group 11: **BO-46 to CO-04**	Moderator	R5
	Group 12: **CO-05 to CO-10**	Moderator	R6

15.15-16.15	Parallel presentation III		
	Group 13: **CO-11 to DO-01**	Moderator	R1
	Group 14: **DO-02 to DO-07**	Moderator	R2
	Group 15: **DO-08 to EO-03**	Moderator	R3
	Group 16: **EO-04 to EO-09**	Moderator	R4
	Group 17: **EO-10 to EO-16**	Moderator	R5
	Group 18: **EO-17 to EO-23**	Moderator	R6
16.15-17.00	Announcement of the Best Presenters	Chairman of the Board of Assessors	R1
	Closing speech and other explanations	Chairman of the committee	R1

December 10, 2017

07.00-07.30	Registration for excursion	Committee	Lobby
07.30-13.00	Field trips to turtle conservation, mangrove conservation, Garuda Wisnu Kencana, traditional Balinese dances, and souvenir markets	Committee	Lobby
13.00-15.00	Depart to Airport	Committee	-

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International Conference on Biodiversity

Society for Indonesian Biodiversity (SIB)

Bali, Indonesia, 8-10 December 2017

Diversity of Species

Ethnobiology and Socioeconomics

Bioscience

Keynote speech

Note: A. Genetic Diversity, B. Diversity of Species, C. Diversity of Ecosystem, D. Ethnobiology and Socioeconomics, E. Bioscience (Life Science and Technology); O. Oral, P. Poster; AA. Keynote speech

CO-02

The similarity of higher plants species between Pangandaran Nature Reserve-Wildlife Sanctuary's Forest and Green Canyon's Riverside Forest in Pangandaran District, West Java, Indonesia

Muhammad Feisal Jatnika[1,♥], Muhammad Nasrulah Akbar[1], Joko Kusmoro[1], Pampang Parikesit[1,2], Susanti Withaningsih[1,2]

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The research in Pangandaran District, West Java, Indonesia was conducted in September 2017. Survey method was used for collecting data. The Pangandaran Nature Reserve and Wildlife Sanctuary's (NR-WS) forest was located in 17.9 km to the east from Pangandaran which has elevation 0-165 m asl. and the Green Canyon (GC) was located in 5.59 km to the southwest from Pangandaran which has elevation 13-83 m asl. The identification was conducted in Laboratory of Plant Taxonomy, Department of Biology, Padjadjaran University, Sumedang, West Java, Indonesia and the data was analyzed with Simpson's Similarity Index to understand about similarity of plant community in two sites. The result of this research is that NR-WS's forest has 116 species and GC's forest has 117 species. It was concluded that the plant community in NR-WS Pangandaran and GC forest was not similar with Iss result was 20%. It was that of the community of NR-WS's forest is more various than GC's forest although they have same elevation, humidity is different, and GC areas are more productive for agriculture.

Pangandaran, similarity, Sorensen Similarity Index

CO-03

An eco-friendly fishing model in North Gorontalo District of Gorontalo Province, Indonesia

Lis Melissa Yapanto♥, Syamsuddin

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This research was conducted in North Gorontalo District, Gorontalo Province, Indonesia. Approach to arrange prospect of capture fisheries using survey method that is research instrument of data collection in the form of questionnaire and observes sheet. This research also applies directly applied method in field by taking sample from two sub-districts by choosing catcher fishing groups that are more representative of existing components. The representation of the fishermen's area will be made a mentoring of the selected fisheries management. This research uses data collection techniques as follows: Instrument questionnaire is a list of questions in a structured instrument in exploring data and information from respondents; In deep question is directional and in-depth interviews conducted on key person about aspects of the problem under investigation; Focus group discussion is the technique of data collection through focus group discussions on the problem being faced; Observation is to observe directly in the field to the subjects that are part of the research problem; and Conducting direct assistance to fishermen groups who become pilots. Criteria for environmentally-friendly and sustainable fishing gear is high selectivity, does not damage habitat, does not endanger operator, produce high-quality fish, the resulting product does not endanger the consumer, by-catch low, no adverse impact on biodiversity, protected fish, socially acceptable, percentage of the size of captured fish, and use of fuel oil.

Fishing models, sustainable

CO-04

Habitat structure of the endemic Bali Starling (*Leucopsar rothschildi* Stresemann) in Bali Barat National Park, Indonesia

Sutomo[1,2,♥], Eddie Van Etten[2]

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Tropical savannas and dry forests in Indonesia are important types of ecosystems which provide habitat to support various endemic wildlife including the Bali Starling (*Leucopsar rothschildi* Stresemann, 1912) which is mostly now restricted to Bali Barat National Park, Bali, Indonesia. Given the high extinction risk facing such species, conservation programmes are likely to require multidisciplinary approaches that address both the biological attributes of the species itself, as well as their habitat requirements. Regrettably, for many species, their habitat ecology remains inadequately understood. The objectives of this presentation are to (i) characterize the habitat of the Bali starling in terms of vegetation structure and floristic composition; and (ii) document evidence of vegetation cover changes in Bali Barat National Park. Analysis of remote sensing imagery as well as field sampling of vegetation attributes was conducted to address these objectives. Normalized Difference Vegetation Index (NDVI) was calculated from Landsat imagery using red and near-infrared bands. Tree cover percentage data was obtained from Vegetation Continuous Fields (VCF) product from the University of Maryland. Results showed that forest and savanna are the dominant land cover types in Bali Barat National Park but their distribution is somewhat dynamic with changes in vegetation cover and greenness found across the years in which increasing cover

An-Eco Friendly Fishing Models in Gorontalo District In NORTHERN GORONTALO DISTRICT

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ABSTRACT

Fisheries and marine development focused on improving people's welfare and economic growth for the management of natural resources and at the same time maintaining its carrying capacity. To optimize the potential of marine natural resources need to dominate in various fields. In the field of fisheries needs adequate fleet both in terms of quantity, the type or types of equipment in accordance with the provisions of fishing in the area of ??each fisherman (Phasha, R. 2000). The method used is survey method by using questionnaire data collection and observation sheets, (Singarimbun and Effendi, 1995). Fisheries Technology Development forcing fishermen to fish further away from the shoreline, to anticipate this is a way of fishing effort adoption of alternative technologies that are simple, inexpensive and can increase the production of fishermen, one of them by using Fish Aggregating Device (Journal, 2003). According Subani (1986), FADs (Fish Aggregating Device) required Improved technology for more efficient utilization in an attempt to increase production and increase the income of fishermen. Utilization of fisheries resources is one way to determine the potential of fisheries resources, the information will be very helpful for policy makers to make efforts potential utilization and Management of Fisheries Resources

Keywords : Eco-Friendly, Fishing Model, Capture Fishery, FADs

PRELIMINARY

North Gorontalo District is one district that borders the waters of the Sulawesi sea are believed to have the potential of marine fishery resources and large. North Gorontalo district has a coastline along the ± 320 100 km2, and the most exclusive marine economic zone (EEZ) covering an area of 40,000 km2, has 52 islands of the which there are two (2) inhabited islands namely Ponelo and Dudepo. The District directly adjacent to the sea of Sulawesi is the District Atinggola, Tolinggula, Sumalata, Kwandang and District Anggrek. The coast line provides an indication that the capture fisheries subsector development opportunities in the district of North Gorontalo potential.

Marine and fisheries sector development are emphasized to improve the welfare and social economic growth with sustainable management of natural resources and at the same time maintaining its carrying capacity. The main targets to be achieved is the improvement of the welfare of coastal communities by improving intelligence and health through increased consumption of fish in development, in order to implement these objectives, we need a system that is based on capture fisheries by technological advances that can facilitate in exploring and utilizing fishery products. The in connection with the foregoing, the Social Culture capture fishery development program of community-based and environmentally sound is a necessity so that not only the optimization of catches can be achieved but fisheries production it self will remain sustainable.

OBJECTIVE AND TARGETS

A. OBJECTIVE

Research activities on "Prospective Of Fisheries In The Northern Gorontalo District has a goal are:

1. Conducting surveys and identification of Social and Culture fishing groups in the District of fisheries Kwandang

2. Conducting an analysis based on problems and constraints of a group of fishermen caught in the improvement of the standard of living of the fishermen catch.

B. TARGET

1. The formulation of Social Culture Of model implementable types of fishing effort in the form of concept implementation mechanism.

C. METHODS AND MATERIALS

This research was conducted in the District Kwandang North Gorontalo District particular on FADs fishing groups and outreach to groups of fishermen to catch. This study took place In February samapai May 2010.

Approach to the preparation of the prospects of fisheries using a survey method that is research by means of data collection instrument in the form of questionnaires and observation sheets, (Singarimbun and Effendi, 2008). Data collection techniques by using questionnaires instrument, in deep quetions (directed interviews), focus group discussion (in a focused group discussion) about the problems encountered, observations and direct assistance to groups of fishermen who became pilot.

RESULTS AND DISCUSSION

Production data capture fisheries and fishing effort expressed in graphics and images above show for 5 years there is a tendency fluctuation pattern that is not too sharp. Actual trend catches have decreased from year to year but the trend fishing effort has increased, with optimal production 14020.78 tons. While the actual effort has increased trend from year to year, with optimal effort 16700.75 trip.

Results of regression analysis in the determination of parameters, with a correlation coefficient of 0.9979 indicates a close relationship between the variables is relatively strong. This suggests a contribution of 99.79% means that the model variations that occur from 99.79% CPUE changes are caused by variations in fishing effort and catches, the rest of 0,21% can not be explained by the model, as a result of factors outside the model. Therefore it is necessary technical efficiency improvements, among others: (1) improving the design of fishing gear; (2) improved ship design; (3) the use of more productive tools (FADs, the lights in the water, combination lamps with FADs

especially for fisheries mini purse Saine); (4) the use of detection equipment where fish (echosounder, sonar, remote sensing) mainly pole and line. Results of the analysis of the potential of fisheries resources in Table 1 shows the conditions in the field is still in the optimal level. This shows that the current state is still efficient in economic terms, so that the pressure has not happened exploitation that goes beyond the tolerance threshold of the *Maximum Sustainable Yield* (MSY). Value optimal effort achieved when the number of trips amounted to 2269 units a year.

Increased CPUE can be done through several alternatives, among others: increased frequency of operation of the fishing gear of one to two to three times in one trip. Improved operation of the device will increase the catch several times. If there are constraints on the operation of the night at FADs *(Fish Aggregating Device)* , used tools lights around FADs. At night, the operation of the fishing gear nets around the lamp and the morning before the new FADs. Najamuddin research results (1998), using the lights on Purse Saine, catches before midnight more than after midnight. Sudirman (2003) that the fish had to adapt fully to light the lamp before midnight, so we need a net withdrawal at that time.

Another alternative to using fish presence detector (echosounder, remote sensing) so as to easily identify whether or not there are fish around the tools. This method will also result not diperlukannnya fishermen to FADs *(Fish Aggregating Device)* to investigate the presence of fish, so that the workforce can be rationalized. In the open access conditions there is no limit for individuals to exit or enter the industry, meaning that every individual is free to exploit the resources. In the economic exploitation of resources on open access conditions are not favorable because of the comparative advantage of resources will be divided out. The nature of open access resources that lead to the fishermen tend to develop a fleet of arrest or arrest intensity to get the catch as much as possible so that there will be competition among fishermen. At the time of the catch has declined, fishermen trying to make modifications to fishing gear in various ways, among others: increase adds to the size of the tool, reduce the size of the mesh, or with other efforts seek new fishing grounds.

B. The use of FADs (Fish Aggregating Device) as One Alternative to Increased Total Catch

Technological Development of Fisheries forcing fishermen to fish further away from the shoreline, to anticipate that there should be the response to that is by giving to fishermen fishing effort alternative to the technology that is simple, inexpensive and can increase the production, one of which is by using FADs (Jamal, 2003). According Subani (1986) increase in sea FADs in the technology needed to make more efficient utilization in efforts to increase production and increased income arrest.

Development of the use of fads also apply in the district of North Gorontalo. This will Affect the amount of catches is produced by fishermen. According to Jamal (2004) as a function of fads in fishing tools are as follows:

1. As a gathering place for fish

2. As a fishing areas

3. For certain types of fish shelter from predatory fish attack

While the benefits are as follows:

1. Make it easy for fishermen find a place to operate their fishing gear.

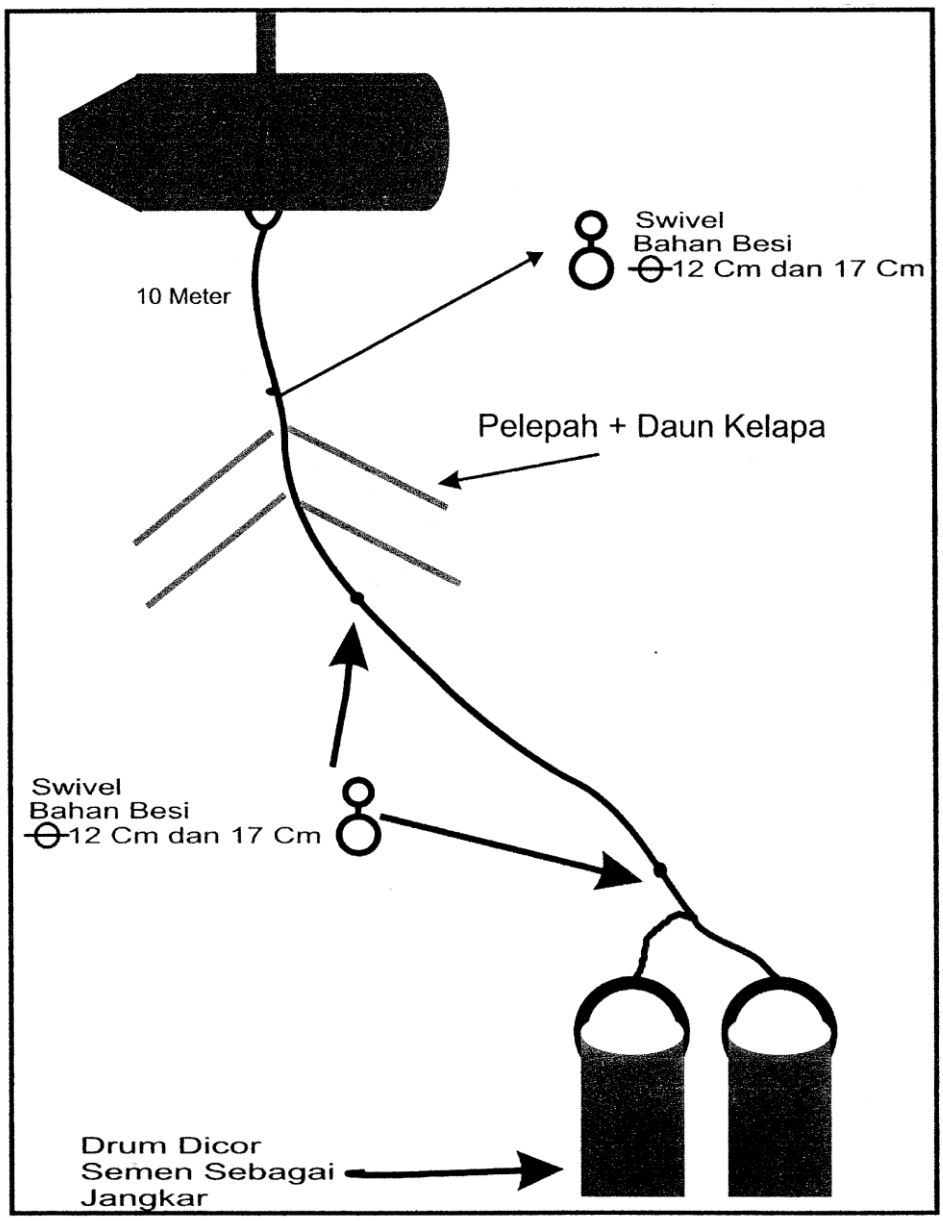
2. Prevent the occurrence of destructive fishing, due to the use of explosives and

3. chemical / toxic

4. Increasing the production and productivity of fishermen.

Based on the paradigm of development held above, the need for the use of fads in the sea in Northern Gorontalo District in an effort to increase of the effectiveness of fishing.

Traditional details of FAD construction can be seen in Figure 4.10



below:

CONCLUSION

1. In general, the public profile of fisheries resource user has a low level of education, level of knowledge management efforts low with three groups of fishermen which groups of fishermen who use the boat, a group of fishermen who use speedboats, and a group of fishermen who use boats without motors;

2. Problems fishing communities utilizing specific fisheries resources can be grouped into six dimensions: human resources, sustainability resource utilization rate and fisheries, capital and technology, institutional, legal and cultural, facilities and infrastructure, marketing.

3. Improved technology deep sea FADs necessary for more efficient utilization in efforts to increase production and increase the income of fishermen catching.

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