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Content

Annex

ICSAFS

**International Conference on
Sustainable Agriculture and Food Security:
*Challenges and Opportunities***

Bandung-Indonesia, 27-28 September 2011

Proceeding

(Oral Papers)

Editors:

Anne Nurbaity (Indonesia)
Edy Subroto (Indonesia)
Endang Yuni Setyowati (Indonesia)
Florin Stanica (Romania)
Ichsan Nurul Bari (Indonesia)
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Paul S. Teng (Singapore)
Shantosa Yudha Siswanto (Indonesia)
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Universitas Padjadjaran

Indonesia

2012

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FOREWORD

Agriculture as one of leading economic sectors in some countries, is currently facing many problems. This situation could be overcome by policy and institutional environment which is conducive to increase agricultural productivity while maintaining a sustainable agriculture development and food security. According to this, it is required to develop strategies, a new paradigm, and holistic approach to support the agricultural growth continuum.

In order to make a significant contribution to the better understanding of sustainable agriculture for meeting food security needs and addressing climate change challenges, an International Conference on Sustainable Agriculture and Food Security was held in Bandung Indonesia on 27-28 September 2011. This conference was organized by collaboration of four faculties in Universitas Padjadjaran: Faculty of Agriculture, Faculty of Animal Husbandry, Faculty of Fishery and Marine Science, and Faculty of Agricultural Industrial Technology. Ministry of Agriculture of Republic Indonesia and internationally well-known experts from USA, Finlandia, Singapore, Germany, Malaysia, Romania, Republic of Serbia, China as well as Indonesia were invited as resource speakers.

More than 250 participants from 15 countries attended the conference. The conference shared experiences and views regarding agricultural production in a changing environment towards sustainable agriculture development to maintain food security, and stimulated cooperative research among participating institutions.

About 180 papers are presented and the committee hopes that these papers will be a lasting record of the contributions to this conference and a useful reference for all practitioners in the fields of agriculture in general. Some of the topics presented include critical issues dealing with sustainable agriculture and food security, agrosocio-economy, agritechnology, plant sciences, animal production, and food technology. The committee would like to thank the many reviewers of the papers for their contribution to these proceedings.

The conference and proceeding would have not been accomplished without the support of many individuals, groups and academic units. We owe our gratitude to those who commit and dedicate their self to this conference.

Benny Joy
Chair of ICSAFS

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The Potentials and Pitfalls of Ecotourism Development on Natural Resources Conservation Area in Indonesia

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Abstract

Any expert on ecotourism will always objectively say that Indonesia has more than abundant resources for ecotourism, not only in number and variety but also in distribution and demand. However, after more than 20 years the ecotourism paradigm has been adopted in Indonesia –as well as more than 30 years nature conservation area also was developed in Indonesia – unfortunately the development processes are not giving a significant result. A good understanding on the characteristics of resources and demand is a keyword to grab the potentials, meanwhile being honest to the dynamic of management is demanded to solve the pitfalls. Knowing well about ecotourism-resources characteristics is very important for finding and promoting the uniqueness of ecotourism objects and activities. Having detail in demand characteristics is very useful to mobilize and distribute the number of visit and the number of visitor as well. Further, frankly assessment in manpower is needed to bridge the obstacles.

Keywords: *ecotourism, nature conservation area, Indonesia*

Introduction

For many years since the early of 70s, Indonesia has been putting tourism sectors as a primary sector (after gas and oil) to support the national income, but up to now the result is still hard to be classified as advantageous. Even in the early year, Bali, Bunaken, Borobudur, Toba Lake and Tana Toraja have been appointed by the government to become major destination at national level, but to date only Bali which has its fruitful-ways to gain the tourism benefit at a certain level and aspect. For many decades Bali has played important role contributing the number of international tourist to Indonesia which is for the year of 2010 totally Indonesia only grab 7 millions foreign tourists (that speechless comparing to 24.58 millions foreign tourist in Malaysia, 9.16 millions foreign tourist in Singapore, 15.84 millions foreign tourists in Thailand, and 55.67 millions foreign tourist in China on the same year).

The same story of “unclear” development dynamics is also facing the ecotourism development in Indonesia. At least 10 years before ecotourism-paradigm boosted by scholars and practitioners world-widely on early 90s, actually since 1980 Indonesia already has started to develop its conservation area nationally with “high-speed” motivation on conservation and outdoor recreation programs. Nowadays, Indonesia might be the single country which has a such big number of conservation area in the world; not only about the wide of area but also about the categories. Nationally, to date due to the national official-data there are 50 National Parks (12.298.216 Ha in total), 248 Restricted Nature Areas (4.586.665 Ha in total), 75 Wild-life Restricted Areas (5.099.849 Ha in total), 14 Game Reserves (224.816 Ha in total), 22 Provincial Parks (344.174 Ha in total) and 105 Nature

Recreation Parks (257.348 Ha in total) located at almost any province in Indonesia. In number and area, it may call enormous, unfortunately but not yet for the number of visitors that only 670.084 visitor of National Parks and 1.160.296 visitors of Nature Recreation Parks in the average of the last five years.

Any tourism expert who pay attention on Indonesia, objectively, will always say that Indonesia has spectacular potential of tourism, both in term of resources and demands. However, up to now no body who are willing to tell all the truth of weaknesses bringing the “unsatisfied-condition” of tourism development in Indonesia. After more than 40 years Indonesia did all the best to develop and gain benefit from tourism sectors, probably it is a time to find the answers why the results are still far away from hope. Therefore, this paper will try to share a twenty-years experiences in ecotourism fields which describes the dynamics of ecotourism sectors in Indonesia; especially focused on the potentials and pitfalls of ecotourism development on nature conservation programs as a significant element of the whole ecotourism sectors.

Material And Methods

This paper was written based on professional experiences (as an academician and practitioner) of more than 20 years experiences involved on many ecotourism studies and projects in Indonesia. The primary data for this paper was based on travelling-log-books; in which personally the author always wrote down all observation result during any project. To write this paper, the travelling-log-books have been re-read to extract and figure-out the potentials and pitfalls of ecotourism development on nature conservation programs in Indonesia. Further, to date secondary data have been used to articulate and to complete and up-date the recent situation and information of any related object cited for the primary data.

The evaluation method of Avenzora (2003 and 2008) has been applied to approach and evaluate any information from travelling-log-books. The uniqueness, beautifulness, rareness, accessibilities, seasonality, social-functions and sensitivities of each destination area in the log-books are becoming major criteria to evaluate the potentials of resources. Further, education system, human resources, bureaucratic-system, and ecotourism networking are turning into the main of external ecotourism-element to appraise and describe the pitfalls. Further, the Likert-scale has been enlarged to become 1 to 7 (instead of score 1 to 5; where score 1 is for very bad gradually up to score 7 is for a very good) and used to score the condition of any potential and pitfall. Further more, any criteria of potentials and pitfalls has been broken-down into 7 indicators in order to build a systematic scoring system. Finally, an expertise-judgment of 3 experts on ecotourism has been applied to point out final score of any criteria.

Results And Discussions

Almost all provinces in Indonesia has one national park, which are only West Papua Province, West Sulawesi Province, South Kalimantan Province, Bangka Belitung Province and Riau Islands Province those are having no national park in the area. While, Jambi Province, Papua Province, East Kalimantan Province, Central Kalimantan Province and West Java Province have two national park in their area. Further, West Kalimantan Province, East Nusa Tenggara Province, and East Java Province are having 3 and 4 national parks in their area. The detail number of nature conservation areas was shown at Table 1 and the

distribution of nature Conservation Area at any province in Indonesia can be seen on Table 2.

Table 1. The Number of Nature Conservation Area in Indonesia

No.	Nature Conservation Area	Amount	Area (Ha)
1.	Strict Nature Conservation Area		
	a. Terrestrial	243	4.333.630
	b. Ocean	5	152.610
2.	Wildlife Conservation Area		
	a. Terrestrial	73	5.052.973
	b. Ocean	2	5.220
	National Park		
3.	a. Terrestrial	43	12.284.031
	b. Ocean	7	4.043.541
4.	Recreational Nature Area		
	a. Terrestrial	104	258.469
	b. Ocean	17	491.284
5.	Provincial Park	21	344.174
6.	Game & Hunting Park	14	225.103
	Total Amount of Area		
	a. Terrestrial	452	22.498.383
	b. Ocean	39	4.692.655

Source: calculated from www.dephut.go.id

Due to the distribution pattern of conservation area in Indonesia, can be concluded that those conservation areas are actually located in golden-distance from the central of population. While, the Table 3 shows that the ecotourism resources elements at the national parks are averagely scored by the experts as 6 for the uniqueness, 6.5 for the beautifulness, 6 for the rareness, 6 for seasonality, 5.5 for sensitivity, 3.5 for accessibility and 5.5 for the social-functions. Furthermore, the total number of visitor of main categories of nature conservation area in each province is shown on Table 4; wherein indicates that the ratio of the total number of visitor to the conservation area and the total number of population at the province is not yet showing a better rate of the number of visit.

Regarding the result of scoring, it may conclude that the deficient of actual demand at any conservation area in each province is not attributable to the quality of on-site ecotourism experience (as the internal ecotourism elements) at the focal-point of each ecotourism destination on nature conservation area, but it is strongly predicted that the lack of actual demand mostly down to the external ecotourism-elements and experiences at the surrounding area of the main focal point. Many literatures (e.g. Clawson, 1966) stated that the quality of total ecotourism experiences is divided into 5 phases of ecotourism experiences, i.e.: planning phase, departure phase, on-site experience phase, on the way back phase and recollection phase. While, Avenzora (1997) found that the quality of the in-situ ecotourism experiences in Gede-Pangrango National Park amongst the respondent was only support 19.3% of the total quality of their ecotourism experiences in BOPUNJUR (Bogor-Puncak-Cianjur) Destination Area.

Table 2. The distribution of nature conservation area in Indonesia

No	Province	Recreational Nature	National Parks	Provincial Parks
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		Parks					
		Amount	Area	Amount	Area	Amount	Area
1.	NAD	2	231,400	1	1,094,692	1	6,300
2.	North Sumatra	5	3,071	1	108,000	1	51,600
3.	West Sumatra	4	40,509	1	190,500	1	12,100
4.	Riau	2	6,778	1	144,223	1	6,172
5.	Kep. Riau	NA	NA	NA	NA	NA	NA
6.	Jambi	1	425	4	1,651,286	1	15,830
7.	Bengkulu	3	15,877	NA	NA	1	1,122
8.	South Sumatra	1	50	1	202,896	NA	NA
9.	Bangka Belitung	NA	NA	NA	NA	NA	NA
10.	Lampung	NA	NA	2	490,621	1	22,245
11.	DKI Jakarta	1	99	1	107,489	NA	NA
12.	Banten	NA	NA	1	123,156	NA	NA
13.	West Jawa	18	4,971	3	143,553	3	632
14.	Central Jawa	5	270	3	123,760	1	231
15.	DI. Yogyakarta	2	4	NA	NA	1	617
16.	East Jawa	3	20	4	176,696	1	27,828
17.	Bali	3	15,566	1	9,003	1	1,392
18.	West Nusa Tenggara	9	13,428	1	41,330	1	3,155
19.	East Nusa Tenggara	8	102,647	4	314,054	1	1,900
20.	West Kalimantan	2	835	4	1,203,090	NA	NA
21.	Central Kalimantan	3	2,064	2	983,740	NA	NA
22.	South Kalimantan	2	2,135	NA	NA	1	112,000
23.	East Kalimantan	2	61,930	2	1,559,129	1	61,850
24.	North Sulawesi	3	3,196	2	367,720	NA	NA
25.	Gorontalo	NA	NA	NA	NA	NA	NA
26.	Central Sulawesi	5	92,738	2	580,596	1	7,128
27.	South Sulawesi	11	152,870	2	574,515	1	3,475
28.	Southeast Sulawesi	4	163,500	2	1,495,194	1	7,877
29.	West Sulawesi	NA	NA	NA	NA	NA	NA
30.	Maluku	5	5,085	2	356,300	NA	NA
31.	Papua	7	197,323	3	4,317,310	NA	NA
Total		111	1,016,936	50	16,215,444	21	343,454

Source: Calculated from The Ministry of Forestry 2010.

Table 3. score of the ecotourism potential at nature conservation area in Indonesia

No	Nature Conservation Area	Evaluation Criteria						
		A	B	C	D	E	F	G
1.	Strict Nature Conservation Area	4	4	4.5	4.5	4	6	4
2.	Wildlife Conservation Area	4	4	5	4	4	6	4
3.	National Park	6.5	6	6	6	5.5	5.5	3.5
4.	Recreational Forest Park	5.5	5.5	4	6	4.5	4.5	6
5.	Provincial Forest Park	5.5	5.5	4.5	6.5	4.5	5	6.5
6.	Game and Hunting Area	5	4.5	4.5	4.5	5	6	4

Note: A. Beautifulnes; B. Uniqueness; C. Rareness; D. Seasonality; E. Social Function; F. Sensitivity; G. Accessibility

Table 4. The Number of Ecotourism Visitor at Nature Conservation Area on 2010 in Indonesia

No	Province	Number of visitor	Number of Population	Ratio (%)
1.	NangroeAceh Darussalam	923	4,494,410	0.021
2.	North Sumatera	477	12,982,204	0.004
3.	West Sumatera	8	4,846,909	0.001
4.	Riau	136	5,538,367	0.003
5.	Riau Island	NA	3,092,265	NA
6.	Jambi	4799	7,450,394	0.064
7.	South Sumatera	113391	1,715,518	6.609
8.	Bangka Belitung	NA	7,608,405	NA
9.	Bengkulu	699	1,223,296	0.057
10.	Lampung	37725	1,679,163	2.247
11.	Banten	4356	9,607,787	0.045
12.	DKI Jakarta	981	43,053,732	0.003
13.	West Java	1059453	32,382,657	3.272
14.	Central Java	73452	3,457,491	2.124
15.	Yogyakarta	64490	37,476,757	0.172
16.	East Jawa	162476	10,632,166	1.528
17.	Bali	35729	3,890,757	0.918
18.	NTB	12023	4,500,212	0.267
19.	NTT	44982	4,683,827	0.960
20.	West Kalimantan	432	4,395,983	0.009
21.	Central Kalimantan	10194	2,212,089	0.461
22.	South Kalimantan	1384	3,626,616	0.038
23.	East Kalimantan	574	3,553,143	0.016
24.	North Sulawesi	10288	2,270,596	0.453
25.	Gorontalo	NA	2,635,009	NA
26.	Central Sulawesi	4524	8,034,776	0.056
27.	West Sulawesi	NA	2,232,586	NA
28.	South Sulawesi	714485	1,040,164	68.689
29.	Southeast Sulawesi	1761	1,158,651	0.152
30.	Maluku	226	1,533,506	0.015
31.	North Maluku	NA	1,038,087	0
32.	West Papua	77	760,422	0.010
33.	Papua	6961	2,833,381	0.247

Note: 1. The number of visitor is an aggregate number of domestic and foreign tourist.

2. Calculated from The Ministry of Forestry 2010.

More, the insufficient actual demand is not only an important indicator for saying that the national park and other conservation areas are not yet becoming a popular site to be visited by the inhabitants in each province, but also describing there are many lacks of prerequisite to drive the potential demand into an actual demand. Ideally, in easy speaking the potential demand of conservation areas in each province should be equal to the total population in the province; that might be equal to at least a single visit by any inhabitant to any chosen area in the province per year.

There are two reciprocal conditions which are robustly envisaged be the occasion of low actual demand at any nature conservation area (as a recreation or ecotourism destination) in each province, i.e.: the population annual income and the condition of infrastructure.

Almost all provinces in Indonesia (except Jakarta) still in a condition of low average income of population; which is leading to a low expenditure to consume. In the last 10 years, the average of population per capita income in Indonesia is only around 1350 USD (650 USD in 2000 and 2900 USD in 2010; Biro Pusat Statistik, 2011). Avenzora (2004) reported that by this income, the population can not put a recreation activity as a primary need; which is even for the last 10 years there were more population in the city area already put the recreation activity as the secondary need (move from tertiary need on the 90s) but most of them still decided to use their income for a culinary related recreation activities in the city they live.

Further, recreation activities actually already increase and take better position on their living-need, but their recreation pattern is not yet belonging to ecotourism-travelling-statistic (as their activities do not yet meet the tourism-statistic criteria). Further, the condition of low income also create a domino effect to the conservation area management; as the conservation area institution hard to put a ticket price (for any service of recreation and ecotourism activities) on an ideal rate. In 1998 the ticket price for a visitor to national park was only IDR 1500, and this price remain stable (if can not said as “has no chance to be increased”) until the year of 2010 where the ticket price offered at IDR 2500. The result was the income for conservation area institution also became low, therefore it is understandable that the conservation area institution become incapable to set their “investment” schemes on an ideal schedule and being infertile to manage their area in better way. These condition bring many loops of reciprocal negative impacts; both on resources-management aspects and on demand-behavior.

Telling the condition of infrastructures, Avenzora (1997) found that 78 % of respondent put the regular transportation schedule to a natural conservation area becoming a major obstacle for the population going to the destination. Actually the accessibility to destination already provided by a better route of national-road up to regency-road, but the transportation modes are not yet fulfill better console for the recreation-taker during their travelling to the nature conservation area as a destination of their recreation or ecotourism activities. Further, Avenzora (2004) found that 81% of respondents asked for a direct shuttle-bus (instead of connecting transport) to travel them from their city to the recreation focal point at the nature conservation area; which was not only to decrease the cost for transportation but also in order to make sure that they will have more time to do recreation activities in the destination (with 4-5 hours on travelling) without any worry to missed “the last train” to back home.

Beside all those dynamics of ecotourism resources on nature conservation area in Indonesia (as described above), at least there are two important issues that have to be portrayed for discovering the “unclear-phenomena” of ecotourism development on nature conservation area in Indonesia, i.e : the human resources capacity and the bureaucratic-system. Outspokenly, the capacity of human resources in the system of ecotourism development on nature conservation area in Indonesia is still in a very serious problems; not only in term of final professionalism appearances but also in terms of education back-ground, experiences and working-motives that all needed to build a better professionalism appearances.

The root of problem in human capacity on the ecotourism development on nature conservation area in Indonesia is the education back-ground. Even there is no official data that can be cited to describe the condition, but one may claim that more than 95 % human resources in the system of the ecotourism development on nature conservation area in

Indonesia are not having sufficient knowledge on ecotourism-field. Other people may say that the claim is just a very subjective and unfair, but probably they will change their comment if they try to trace the root of problems starting from the tourism-education history in Indonesia. Since 1956 (the year of NHI in Bandung was found) most of the tourism education in Indonesia until now is still only focused on hotel management, travel management and tourism economic; in which until the decade of 80s the curricula of study is still only at of a 3-years Diploma Level. Even on the decade 80s there were some university/high education institution started to offer Sarjana Degree (a 4-years Diploma) but most of them just concern and offer the perspective of tourism economic; meanwhile actually there are at least 18 fields of knowledge and sciences should be involved in a study of ecotourism/tourism (e.g. please see Cooper *et al*, 1999).

The result of those situations are many of tourism “expert” and practitioners in Indonesia are very ready for any tourism-skill-activities, but sorry to say that most of them are still incompetent to deliberate a comprehensive and genuine development concepts. At the end, as one can see in Indonesia nowadays there are more and more of a “copying success story” ecotourism development projects competing negatively from one place to another. Further, experiences and working motives among ecotourism practitioners in Indonesia become a serious issue since most of the ecotourism project in Indonesia – that lead by NGOs-institution in the early or the middle of 90s – had to face a limited budget and discontinued-funding. This condition trapped many ecotourism practitioners to incomplete process for gaining better experiences. Even most of them eager to write a long paper of CV on ecotourism experience, but if they want to be honest, however, the reality will tell us that actually most of them are having deficient experiences; as most of their projects were only fit in to an initial-phase of ecotourism development programs.

Tour on duty, structural-functional officer-system and discontinued budget are becoming important dynamics to be discussed on talking about bureaucracy on ecotourism development on nature conservation area. For many years until now, most of decision making position on a ecotourism institution of a nature conservation area are belong to group of structural officer; who will in average be having tour on duty for every 2-3 years from one working-station to another. This situation is not only creating a short supply of command (while most of ecotourism projects belong to a mid up to a long development program), but also generate an unproductive transition periods of command. This situation become worth since most of the sub-ordinate officers on any nature conservation area are also not having enough knowledge on ecotourism field. Regarding their formal education back-ground and their yearly activities, it is strongly predicted that less than 0.1 percent of them who ever had formal study on ecotourism (even for partial subject only) or ever had comprehensive extension/training on ecotourism.

Even since the middle of 2000 the Ministry of Forestry provided such kind of regular extension programs (such as SECEM-Program; a collaboration program between the Ministry of Forestry of Republic Indonesia and KOIKA of management course on ecotourism and conservation field), however the extension program can not yet supply enough place for thousands officer. More, on the one hand, mostly extension or training program on ecotourism will be “clutched” by the upper position first – as a part of modus operandi of seniority – while on another hand the senior officer will be transferred soon to other working station due to the tour on duty system.

The scoring result on human resources capacity of nature conservation destination showed on Table 5. Even from the table one can see that many bad scores for most of the criteria,

but not for the criteria of management spirit. The high value of management-spirit was mostly supported by the field officers at each ecotourism destination on nature conservation area. After many years of working period, many of them still loyal to be a volunteer or to be a yearly contract base worker just due to their interest on nature conservation and ecotourism activities. Actually it is really a good point of human resources and should not be longer annoyed by the upper system.

Table 5. The Score of Human Resources Capacity on Ecotourism Field in Nature Conservation Area

Criteria of Human Resources Capacity	Score of Criteria
1. Formal Education	3
2. Formal Extension	3
3. Cognitive Ability	3
4. Skill Ability	4
5. Formal Experience	3.5
6. Working Capacity	4
7. Working Spirit	5.5

The situation of ecotourism management in nature conservation area also become worth since the limited budget also followed by complicated budgeting system and the administration system of governmental-finance for ecotourism development on nature conservation area. The system is also not giving a better atmosphere for running an ideal “business” of ecotourism; for example the basic rule of to pay-out a budget is really a time consuming and long procedure of administration-prerequisite. Data at the Ministry of Forestry (www.dephut.go.id) showed that the total budget on 2010 for ecotourism and environmental services for all national parks in Indonesia was only around 90 millions USD; it means only around 170-grand USD for each national park. This number of budget of course merely far from enough to fulfill and run a good development and management of ecotourism program. Further more, after many decades of “complicated” bureaucratic budgeting system applied in Indonesia, the system of multi-years project of budgeting system was just applied since few years ago in the middle of 2000s. However, this new system does not yet answer the problem and also does not running well since the political-election period is not fit to development phase.

Conclusion

Regarding all situation described above probably now one may sure to conclude that it is true Indonesia has more than abundant potential on ecotourism, not only in supply but also in demand. The most crucial problem on the development of ecotourism on nature conservation area in Indonesia is the human resources capacity; which also unsupported by a better bureaucracy system. A low capacity of human resources brings domino effect of unsatisfactory planning and its reciprocal impacts, while a complicated bureaucracy system brings trickle down impact on an awful management system.

To increase the benefit of ecotourism development on nature conservation area in Indonesia, some important starting-effort to do is not only to solve the pitfall on the human resources capacity and management system, but also to really practice the multi-discipline nature of ecotourism. It is very important to be realized that an ecotourism development is

not a kind of development on a focal point at any destination only, but actually it has to be a total development collaboration of every living-element in the region.

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