

ICTAR

**International Conference on
Transdisciplinary Approach Research**

Organized by Universitas Negeri Gorontalo Indonesia and Ehime University Japan

August 19, 2017

Conference Book



EHIME UNIVERSITY

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Preface

ICTAR 2017

We are happy to host this year's ICTAR 2017 (International Conference on Transdisciplinary Approach Research) in Universitas Negeri Gorontalo. I would like to welcome all of you to the historic and beautiful city of Gorontalo. This part of the world is where the scientific revolution about understanding nature started. Instead of explaining natural phenomena by recourse to traditional religion or myth, the cultural climate was such that men began to form hypotheses about the natural world based on ideas gained from both personal experience and deep reflection. In the words of the founder of our university, to whom we are deeply grateful for creating this institution; our world is today going through a new era that is commonly referred to as the "age of information". Globalization is eliminating frontiers as well as drawing markets together while raising competition from a regional to a global level. In an age such as this where the content and scope of information has reached such great dimensions, there are two fundamental principles that enable institutions and states to survive and be successful: To acquire Knowledge and to use and share it efficiently. Universitas Negeri Gorontalo strives to achieve this by stressing creativity, inquisitiveness, a multi-faceted learning environment and academic excellence.

As the Chairperson of the Organizing Committee, I take the privilege to welcome you to this epoch-making conference on ICTAR 2017 (International Conference on Transdisciplinary Approach Research), taking place for the first time in Gorontalo, Indonesia. We hope by this opportunity Universitas Negeri Gorontalo and the beautiful city of Gorontalo will be known better.

We would like to thank our Rector, Prof. Dr. Syamsu Qamar Badu, M.Pd and Board of the trustees of Universitas Negeri Gorontalo for their vast support for hosting ICTAR 2017 International Conference on Transdisciplinary Approach Research. We thank Conference Chair, Prof. Masayuki Sakakibara and Conference Secretariat for this collaborative conference. Finally we thank all plenary speakers and all contributors for attending this year's ICTAR 2017 and visiting us in Universitas Negeri Gorontalo, Gorontalo. We hope that you will enjoy your stay here and look forward to welcoming you in the following year's conference.

August 19, 2017

On behalf of the local Organization Committee

Ramli Utina

Chairs

**INTERNATIONAL CONFERENCE ON TRANSDISCIPLINARY APPROACH
(ICTAR – 2017)**

Conference Theme :

ELEVATING INNOVATION THROUGH TRANSDISCIPLINARY RESEARCH

The International Conference on Transdisciplinary Approach (ICTAR – 2017) will take place on August, 20, 2017 at Hotel Damhil Universitas Negeri Gorontalo, Indonesia. ICTAR 2017 is the premier forum in Asia for the presentation of new trends, innovations, advances and research results in Transdisciplinary research. The aims of the conference is to bring together leading academics, scientists and researchers from around the world to a common forum to exchange and share their experiences and research results on all aspects of Transdisciplinary Approach in Research. It also provides a premier interdisciplinary platform for researchers, practitioners and educators to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered and solutions adopted in the fields of Transdisciplinary Research.

Conference Topics

- Arts , Science and digital technology
- Agricultural, Forestry, Fishery
- Animal Science and Veterinary
- Biological Science and Biotechnology
- Business, Economics, Marketing, Accounting, Banking & E-Commerce
- Climate Change, Renewable Energy & Environment
- Communication, journalism and service science
- Culture, Religion & Philosophy
- Education, Teaching & Technology
- English Language Teaching & Applied Linguistics
- Engineering sciences, Technology & Applications, Information Technology (IT)
- Geography and Geology
- Global Studies, Regional studies & International Relations
- Health and Medicine, Pharmacy
- History , Archaeology and Spiritual studies
- Law & Justice & Legal studies
- Mathematics, Statistics, Artificial Intelligence
- Physical and Life sciences
- Public Health, Nursing & Care Services
- Social Sciences , Humanities and Life sciences
- Sport Science and Psychology
- Transdisciplinary Studies
- Travel, Tourism & Hospitality & Leisure Industry

Keynote and Invited Speakers

- Drs. H. Rusli Habibie, MAP (Gubernur Gorontalo).
- Prof. Dr. Syamsu Qamar Badu, M.Pd (Rector of UNG)
- Prof. Katsushi Nishimura (*President, Faculty of Collaborative Regional Innovation, Japan*)
- Kenji Okazaki (*National Research and Development Agency, Japan*)

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Universitas Negeri Gorontalo, Indonesia in cooperation with Ehime University, Japan

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Sustainability of programs of KKN Kebangsaan in Pinomontiga Village of Bulawa district of Bone Bolango regency, Indonesia

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Pinomontiga village is one designated village as host of KKN Kebangsaan 2017, seven students from three Universities and UNG accompanied by Lecturers are empowering the villagers toward better conditions. During one month, students started a survey, dialog with stakeholders to find out the problems and solving the problems.

The Potential of Gorontalo province as world Geopark

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The extraordinary of geodiversity together with the ecological resources and profound cultural heritages provide a valuable basic of geotourism and geopark development. The purpose of this paper is to show the possibilities of geological interpretation, geotourism, and cultural heritages in the area of Gorontalo province that would become valuable basic to promote geopark. The collected data were carried out by field observation and literature review. The results of this study indicate that the Gorontalo has the potential of world geopark and would lead as tourist destination in Sulawesi by applying the concept of geotourism which accentuate natural side, by optimizing the management of destination attractions, facilities and services, and accessibilities

Sustainability of Programs of KKN Kebangsaan in Pinomontiga Village of Bulawa district of Bone-bolango regency

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Abstract

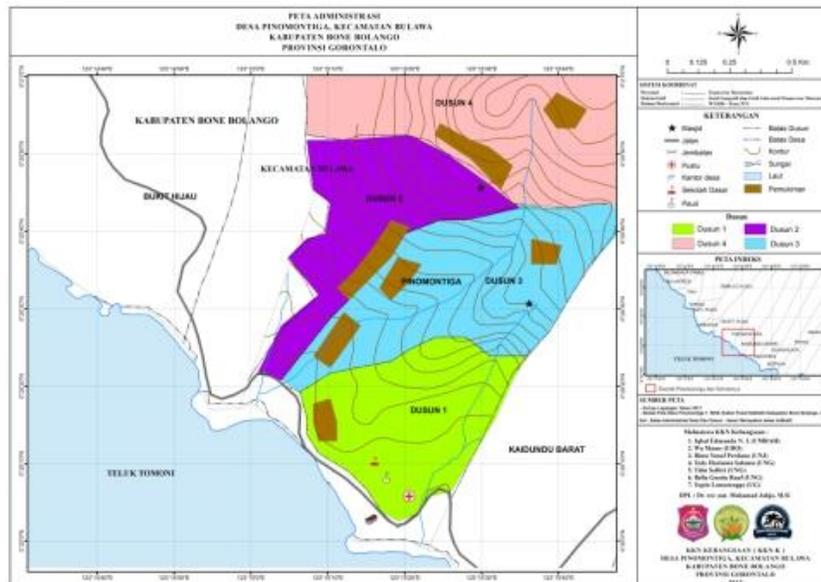
Pinomontiga village is one designated village as host of KKN Kebangsaan 2017, seven students from three Universities and UNG accompanied by Lecturers are empowering the villagers toward better conditions. During one month, students started a survey, dialog with stakeholders to find out the problems and solving the problems.

Keywords: Sustainability, KKN, Pinomontiga

1. Introduction

1.1 Geographical situation

Pinomontiga village is located in Bulawa sub-district, with the western boundary being the green hill village and the eastern boundary is the western Kaidundu village (as shown in Figure 1a). The area is 13.5 km² or 17% of the Bulawa sub-district area [1]. Settlements are scattered in hamlets 2, 3 and 4, leaving a beautiful white sand beach area located in hamlet 1 as intended for tourism sites. The main potential of Pinomontiga village is a beautiful white sand beach that stretches about 200 m from the northwest (BL) - southeast (TG), with a maximum width of about 10 meters. The atmosphere of the beach in the morning can be enjoyed because the sun is blocked by the hills and while in the afternoon you can enjoy the view of the sunset (sunset), as shown in Figure 1b left for the morning and right for the afternoon (sunset). In addition, the sloping white sand beach topography (approximately 20m) and limited by deep troughs, makes it an ideal location for bathing on the beach. So that this beach area has been equipped with six small huts and an open stands, as shown in Figure 1c.



(a)



(b)



(c)



(d)

Figure 1 Map of Pinomontiga Village (a), White sand beach during the day (left) and evening (right) (b), tourist sites with facilities (cottage 2 and stands) (c) and villagers find turtles (d).

The village head's office and the Pinomontiga Hall are located on the beach, so facilities can support tourism activities. Although the beach seems to be separated in two by a narrowing of the beach (see Figure 1b left, the narrowing location is marked by mangrove trees) which is located between the Village Office and the Pinomontiga Hall and the tourist area which is already equipped with huts and stands. Local people finds turtles there (1c), so this beach is the location for turtles to lay their eggs.

1.2 Economy, tourism and environment

The population of the Pinomotiga village in 2017 was 5384 people, 2754 men and 2630 women [1]. Common economic activities for the people of Pinomontiga village are fishermen and farmers, there are several leading commodities in this village such as tobacco. Some people (old people) smoke lalaha (traditional cigarettes). Tobacco is produced by some residents in hamlet 4. Bananas are also an important commodity even though the selling price is very low, so it needs processes such as fried bananas, etc. Skipjack, Tuna and squid are fisherman's leading commodities, although the catch is very dependent on the weather because fishing equipment is very simple (small boat) (See Figure 1b right).



Figure 2 Pinomontiga Beach with huts which is a local tourism asset, looks dirty and is often empty (a); a KKNK student bathing on the lonely Pinomontiga beach (b).

1.3 Budaya, Pendidikan dan Agama

The wealth of the Pinomontiga village is not limited to nature that is still beautiful, but is enriched by some local wisdom such as balobe culture, betel eating and lalaha smoking (Figure 3). Local wisdom can be used for efforts to conserve nature, the community's economy and food self-sufficiency.



Figure 3 Pinomotiga community activities looking for clams at night, eating betel and smoking lalaha.

1.4 Description of Programs of KKN Kebangsaan

In line with the problems found in nature conservation in Pinomontiga village, Bulawa sub-district, Bonebolango District, Gorontalo Province, the expected outcomes of this activity are: 1. Creation of a conservation area which is a pilot in the village of Pinomontiga. 2. Availability of maps of areas or locations that need to be conserved 3. Availability of information about this conservation effort 4. The formation of community organizations that care about environmental conservation The main target of the National Work Program (KKN) - Nationality with the theme "endoring Pinomontiga Village, Bulawa District, Bonebolango District, Gorontalo Province towards Conservation Village in 2024" is the creation of an initial community-based effort in Pinomontiga Village which is oriented towards environmental conservation.

1.4.1 Preparation and Briefing

a. The mechanism of implementation of National Community Service activities The mechanism of implementation of National Community Service activities of the Gorontalo State University include:

1. Preparation
2. Field observations
3. Choosing the location of the National Community Service
4. Registration of National Community Service Participants
5. Provisioning for students and lecturers in the field (DPL)
6. Delivery of students to the National Community Service location
7. Monitoring evaluation
8. Withdrawing students from the National Community Service location

b. Preparation and briefing material Preparation and briefing material for students participating in the National Community Service activities of Gorontalo State University include (LPM Gorontalo State University, 2013):

1. Role of Gorontalo State University in improving the quality of resources human beings through the implementation of Real Work Lectures (KKN) in the Province Gorontalo
2. Actualization of academic policies in the implementation of State University KKN Gorontalo
3. Philosophy (meaning, goals, objectives and benefits of KKN)
4. Program planning and KKN organization
5. The role of PSCs in improving HDI and SDGs
6. Social ethics, socializing and student service learning approaches stimulate society participation
7. The role of communication in the implementation of programs in KKN locations
8. Exercises to prepare program plans and organize KKN
9. Job description, procedure, reporting, and assessment of KKN student participants

1.4.2 Implementation

Community Service Program (KKN) - Nationality is carried out by prioritizing the principle of empowering local communities. The work program in the Community Service Program (KKN) - Nationality is carried out with training and community assistance in activities to carry out conservation. It is hoped that through this community facilitation the main objective of this program is that community independence can be achieved.

The volume of work in a Real Work Lecture (KKN) - Nationality is expressed in terms of effective student working hours (JKEM). Each student must work as much as 144 JKEM per month for 1 month of National Community Service activities. The number of students participating in the Community Service Program (KKN) - This service is 7 people. The total volume of effective working hours of students (JKEM) is 7 students x 144 JKEM = 1008 effective working hours of students (JKEM). Referring to the problems encountered in the field, the work program / activities in the Real Work Lecture (KKN) - Nationality are carried out with the following methods:

Tabel . The type of activity is based on the problem

No	Problems	Activity	Volume	JKEM	Note
1	There is no area conservation pilot village	- Socialization meeting - meeting formation forum - Training and accompaniment conservation forum - training making area conservation together Public	490	7 students x 20 days x 3,5 hours/day = 700 JKEM	
2	Map of area that needs to be conserved is not available yet	- training map determination conservation area - Accompaniment map determination conservation area	210	7 students x 10 days x 3 hours/day = 300 JKEM	
3	Information about efforts village conservation is not available yet	- Socialization meeting - meeting team formation volunteer conservation - Training and accompaniment volunteer team conservation	154	7 students x 5 days x 4,4 hours/day = 220 JKEM	
4	organization that society care about conservation environment is not available yet	- Socialization meeting - meeting formation forum -Training and accompaniment conservation forum	154	7 students x 5 days x 4,4 Hours/day = 220 JKEM	
Total			1008	Total volume of activities (in JKEM) 1440	

Based on the problems encountered in the field, the Community Service Program (KKN) - Nationality with 'Mentoring Pinomontiga Village, Bulawa Subdistrict, Bonebolango District, Gorontalo Province towards the Conservation Village 2024' gets students from various study programs, namely: 1. Management Study Program 2. Islamic Education 3. Geology Engineering Study Program 4. Agronomy Study Program (agricultural cultivation), Forestry 5. Social studies, etc.

1.4.3 Program Sustainability Plan

With the principle of community empowerment as expected after the National Community Service Program activity ends, the program can still continue.

2. Research methodology

2.1 measuring the sustainability

Sustainability of a program can be measured using indicators values as given by [2], but we restricted to the following indicators:

Table 2. Indicators to evaluate the program

No	Indicators	Min value
1	Number of local people/household (HH) attendance/involved in the program	0.1 % HH
2	Funding allocated to the program	0.1 % of Dana Desa
3	Number of information related to the program	1 / 500 m
4	Monitoring	Once a month
5	Social media involvement for millenials	1 % of millennial in the village

3 Results and Discussion

3.1 Conservation

One of the outcomes targeted in the 2017 KKNK program in Pinomontiga village is the election of a village conservation area, the profile of a conservation area, and the promotion of tourism through social media by launching Facebook (Figure 4a) and Instagram.



Figure 4 Pinomontiga Beach Facebook Printsreen (currently has more than 40 people / friend accounts)

3.2 Community Empowerment

Food security program is launched by student and local people to produce preserved food such as cakalang or tuna meatballs (Figure 5). There is also program on making of fried banana stick.



Figure 5 Photos of cakalang fish meatballs, becoming one of the leading food security programs in Pinomontiga village community.

Utilization of used goods or garbage to produced such as tissue boxes/dispenser and brooches, it can be sell to tourists.



Figure 6. Brooches from used cloth and shells and Tissue boxes from used boxes, shells and sand are excellent products for the people of Pinomontiga.

Sustainability Index (SI) of each program are measured using the given indicators can be found in table 3. In order to be sustainable, the SI values of each program should reach at least 3, therefore all of program in the village will be unsustainable. The follow-up of these programs is needed, local government should increase the community participation to each program[3]. Social dimension of each program also need to be involved in the SI values, such as building mosque or other place of worship almost purely social [4].

Table 3. Indicator's values of each program and their SI value.

No	Program	Indicator's values					SI
		1	2	3	4	5	
1	Conservation program	-	-	-	-	+	1
2	Food Security	+	-	-	-	+	2
3	Community empowerment	+	-	-	-	+	2

4. Conclusion

The National Community Service Program has been implemented with targets that can be met such as in the field of nature conservation and community capacity building, but there are still many efforts that must be implemented that need to be comprehensive and sustainable. At present the interest of some teenagers towards work programs that have been started is still strong, interaction through social media recently reported the discovery of sea turtles that will lay eggs at the Pinomontiga beach by the community, but these turtles are subsequently consumed by the community. Efforts to strengthen community capacity can continue to be pursued through KKN activities in the future. In addition, the community continues to ask for marketing support for some of their products such as banana cuttings and skipjack fish balls.

More concrete efforts are expected from UNG and the Bonebolango Regional Government to realize community economic activities in the village of Pinomontiga. It is likely that all people who have felt the 2017 National Community Service programs are waiting for the helping hand of LPPM UNG and the Bonebolango Regional Government in realizing / following up on these programs.

5. References

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Certificate



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This is to certify that

Mohamad Jahja

has participated as **Presenter** in

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organized by *Universitas Negeri Gorontalo Indonesia* and *Ehime University Japan*

Theme: “Elevating Innovation through Transdisciplinary Research”

held on August 19, 2017 at Ballroom DAMHIL Universitas Negeri Gorontalo, Gorontalo Indonesia



Prof. Dr. H. Syamsu Qamar Badu, M.Pd
Rector of Universitas Negeri Gorontalo

Prof. Masayuki Sakakibara, Ph.D
Conference Chair/Ehime University Japan

