

*Among remaining tropical rainforest of Java, coffee from Sokokembang forest grown under native trees which inhabited by javan endemic wildlife, such as **Javan gibbon**. These coffees grown in the wild and processed traditionally by villagers at Sokokembang, Pekalongan, Central Java. Coffee production techniques in Sokokembang that preserve natural trees as shade tree, have important consequence for conservation of Javan gibbon habitat and other endemic species.*

A progress report

Submitted by:

Arif setiawan¹; Meiardhy Mujiyanto¹, Agnes Hapsari Budi Saputri¹, Nirmala Ayu Aryanti¹

1. Yogyakarta Primate Study Club. Address: Wildlife Lab, Faculty of Forestry, Gadjah Mada University, Yogyakarta, Indonesia. Email for correspondence address :wawan5361@yahoo.com

Background

Our previous reports, shows that javan gibbon habitat remained in 13 forest fragments, not included in the conservation system (Setiawan et al, 2012). Habitat degradation and fragmentation are major threats, as well as poach for pet trade occurred that causes population decline and remaining habitat disappear slowly. Lack of capacities and conservation awareness are also influence conservation of the gibbons and their habitats. However, its complicated circumstances where people lived remaining in poor condition. Through this project we have selected Sokokembang village, in Dieng Mountain as our priority sites for long-term conservation activities. Our initiate study shows that coffee growing system in Sokokembang has important consequence on javan gibbon survival and other javan primate's species as well. People grown coffee under the shade of natural trees where all javan primates lived there. Our conservation project activities will involve villagers in Sokokembang with biodiversity and primates study on this coffee growing system.

Project aim and Objectives

The aim of this project is to conserve the Javan gibbon's population and it's habitat in Central Java, in contribution to the national action plan for Javan gibbon 2012-2021. Our specific aims are:

1. Improving law enforcement on habitat protection and species conservation;
2. Raising conservation awareness and to provide scientific information on endangered primates and habitats.
3. Reducing habitat degradation and fragmentation in Western part of Dieng Mountains.

Project Result to Date

1. Improving law enforcement on habitat protection and species conservation.

The distribution of endangered primates in Central Java mainly found in the outside of conservation areas. We will support and join forestry patrol unit at central java authority as law enforcement intervention for endangered primate species and habitat protection.

Activities:

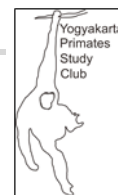
- a. Initiate meeting with Central Java forestry stakeholder and concerned communities was conducted through joint the meeting organized by BKSDA (Indonesian Nature resource Conservation agency) of Central Java at May 2, 2003, participant of this meeting, Perhutani, Local NGO, Universities in Central Java province and Yogyakarta, researchers, agriculture and forestry agency of Pekalongan Regency, Tourism agency of Pekalongan regency. We gave a talk in this meeting, about our results from previous and latest study in Central Java on javan gibbon.
- b. Series of meeting during (March –May 2013) with local government in Pekalongan Regency was conducted to introduce our program in Sokokembang village, and arrange cooperation program related to primates conservation especially in Pekalongan regency, i.e. with Perhutani and Agriculture and Forestry Agency.

Output:

- a. In process to arrange recommendation activities for Javan gibbon conservation program, according to National Action plan for Javan gibbon 2012-2021, in Central Java together with BKSDA, we will adjust the program according to the recent condition in Central Java.
- b. We will provide and support information related to the conservation of javan gibbon and other javan primates in Pekalongan regency along together with the program of Perhutani and Agriculture and Forestry Agency

Future planned activities:

1. Collaboration on forest patrol/forest patrol partnership in Central Java with BKSDA and Perhutani - Pekalongan regency.
2. Supporting the program of Perhutani and Agriculture and Forestry Agency related to Javan primates species, for example to give a talk or presentation on javan gibbon in Pekalongan regency.



2. Raising conservation awareness and to provide scientific information on endangered primates and habitats.

Availability of scientific information will be significant for conservation policy, however lack of capacity is the main problem. We will have series of training towards local stakeholders (university students, forestry staff, NGO staff- who concern on primates and nature conservation) on primate's survey method and fundraising proposal. We will use photo voice method for community development and to promote forest and primate conservation of Sokokembang forest. The photo voice is a process that blends a grassroots approach to community development with photography, photographic technique & social action (<http://www.photovoice.org/>) **Activities:**

- a. Updating javan gibbon distribution in Central Java. We have survey in the western most remaining forest in Central Java.,

Output:

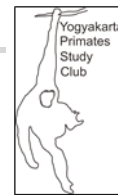
1. A map of recent study on Javan gibbon survey, see here <https://maps.google.com/maps/ms?msid=200667948801399224291.0004d5178bd328909bd1c&msa=0&ll=-7.027298,109.610596&spn=0.824594,1.352692>

Future planned activities:

1. Training on primate's survey method for BKDA and Perhutani staff, young researchers, and selected NGO staff in Central Java, will be held in Sokokembang forest at, 10-12 June 2013. We invite 15 participants on this training for local professional development and to establish a network for primate's conservation in Central Java Province.
2. A study on coffee growing system in Sokokembang, and its connection to primate's abundance and coffee production profitability.
3. Result from photo voice activities will be used as promotional material related to conservation activities in Sokokembang forest.

3. Reducing habitat degradation and fragmentation in Western part of Dieng Mountains.

A conservation activity among poor people is complicated situation. Under shaded trees, coffee have been planted in the forest around the village of Sokokembang, However we lack of knowledge and marketing strategy to sell our product fairly to farmer. Thus, we have focused on the increasing product quality. We also already have intensive activities and good



communication since 2007 in Sokokembang village. We will continue our activities to support and strengthen local community organization to improve income of the farmer nearby the forest.

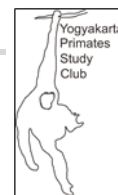
Forest fragmentation and habitat degradation is one of the main threats for Javan gibbon in Central Java, it's related to the exploitation of forest resources to fulfill the economic needs of people surrounding the forest. In case of Sokokembang forest, we choose that coffee is the most connected variable that influences relationship between people and the forest, and it has high economic potential value. People in Sokokembang village have already practicing shade grown coffee system on Robusta coffee for many years. It's mean that the agricultural practice in Sokokembang has potential significant impact on sustainable forest, where they still use natural forest trees as shading trees for their coffee plants, and based on our study all javan primates are live in this forest too. However economic values coffees from this forest are priceless, villager receive the price at lowest level depend on the trader outside from the village. Based on this our initial information, it should be added more additional value toward coffee product from Sokokembang, coffee should not be sold as raw material as green beans but have to be processed become finishing product for more additional economic value. Recently we found that shade grown coffee in some places have shown important value on biodiversity and more ecological friendly (Moguel and Toledo, 1999).

Thus we consider raising this issue to enhance economic value Sokokembang coffee, started from the ground where to coffee growth, till the final product that will contribute to their economic income. Last not least it will contribute to reduce natural forest resources exploitation or reducing forest degradation and fragmentation. Then we choose farmer groups and women group that have very close related to the activities of coffee production in Sokokembang village.

Activities:

Strengthen local community organization and Establishing productive business unit based on local resources.

We have assisted villagers in Sokokembang to establish a farmer group organization, the aims are: to facilitate establishing farmer organization who able to solve problems, opportunity and challenges on sustainable farming, to enhance technical capacity and farming business management, and to promote sustainable organic farming.



Through series of group discussion among selected villagers, during March 2013, finally at 29 March 2013, a farmer organization in Sokokembang village was founded officially, named in Javanese language “Wiji mertwi mulyo”, that meant “to care future for prosperity”. Through this organization, we hope that villagers able to learn practically on their organization for; 1. A media to train their trust and responsibility, among members of farmer organization. 2. As a space to learn together to plan rational agriculture business, applied farming techniques that are economical and profitable, analyze and solve the problems. 3. as a place to evolve collective capital venture. 4. as a media to promote the existence of farmer group.

Output

A. Farmer group

Several programs have been initiated on the area of 1500 m² belong to the farmer group organization, i.e.:

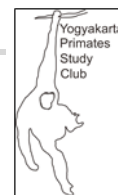
1. Developing demonstration plot for practicing organic farming method and management, the organization have used 500m² land to plants common beans (*Phaseolus vulgari*).
2. Creating bio-fertilizer

Cow and goat are most common livestock in Sokokembang, their dung (solid and liquid) are not used at all, whereas these are base for bio fertilizers and usefully. Thus, we facilitate the farmer to process this dung for fertilizers using based on organic process. Up to now, farmers are able to manage solid dung for their fertilizers. We hope through this program that technical ability to make organic fertilizer also will increase awareness organic farming implementation for economical and sustainable farming product in Sokokembang.

3. Coffee harvesting innovation system

Coffee under shaded forest trees is one of the main commodities for people of Sokokembang village. Coffee plants that's grown wild, usually located in remote area and very low accessibility, it has causes the high cost of harvesting and could be estimated 40%-50% of the total coffee selling. Usually they hire some workers to harvest coffee beans. Thus, to reduce this inefficient harvesting cost, member of farmer group are agree to employ other member to harvest coffee in the forest. As a worker for coffee, they will receive normal daily salary, then 20% from their salary will be collected for farmer organization for capital venture purposes.

4. Cardamom nursery establishment



Cardamom (*Amomum compactum*) is one of the favorite economical commodities among people in Central Java. However, not all the people in Sokokembang having them on their land. Until now, there is no effort seriously to know propagation technique of these plants in the village. Through the farmer group organization, we learn together how to propagate the cardamom, for farmer utilization at least, more over for commercial purposes.

We have tried to propagate the cardamom based on vegetative methods, pull out the seedling of cardamom from the parent plants, than we planting on the container filled with soil and bio-fertilizer. During a month in the containers, new roots come out already from these seedlings.

B. Women group

. We try to encourage group of villagers to increase additional economic value based on local product, to reduce the pressure towards natural resources around them. We have selected, women villagers as priority group for this activities, the reason are:

- a. Women have more time than men (in the village)
- b. Women are much better manager than men
- c. Women group have less chance to gain knowledge and skill

Through series of discussion, a group of women in Sokokembang village, was found a business unit, named “Nyi Parijotho”, with 6 members, and they were selected coffee production for the first priority to be managed. At simple words, we learn together how to process the coffee beans, try to arrange business plan for coffee at higher prices and try to test the market on our first coffee product. At the moment we have made our first product labeled “Kopi Lumpang”, and try to promote this coffee through local market.

We have several experiment for product diversification from local resource in Sokokembang village, i.e:

1. Final product of coffee labeled with “Kopi Lumpang”
2. A snack made from coffee leaf.
3. Chayote (*Shesium edule*) candy

Future planned activities:

1. Creating liquid bio-fertilizer
2. Training on coffee processing

3. Promoting coffee product in local market.

Overall progress towards conservation of Javan gibbon in Central Java.

The overall progress achieved during period of reporting is that we have focused our conservation activities in a place, and try to involve local people seriously. And we also get newest information in the field on javan gibbon distribution in Central Java, especially new location in Pembarisan Mountains, Gunung Kamulyan and Gunung Walet. And we have selected Sokokembang village as our long-term conservation program for Javan gibbon, in Central Java. We have initiated to study and try to promote coffee product that come from under natural forest where unique primates live there. Shade grown coffee system is the way where people around the forest can be involved directly. We have set a foundation for this future program.

Literature cited:

Arif Setiawan, Tejo Suryo Nugroho, Yohannes Wibisono, Vera Ikawati, Jito Sugarjito, 2012, Population density and distribution of Javan gibbon (*Hylobates moloch*) in Central Java, Indonesia, *Biodiversitas (1) no.1, p. 23-27*

Moquel, P., and V.M. Toledo. 1999. Biodiversity conservation in traditional coffee systems of Mexico. *Conservation Biology* 13: 11-21

Field work photos

These photos were taken during our Javan gibbon distribution survey, new location in western most of Central Java, Mt.Pembarisan :

<https://picasaweb.google.com/115197038441087276268/ExpedisiOwajawa2013?authuser=0&authkey=Gv1sRgCMzc2Ir0reyrHA&feat=directlink>

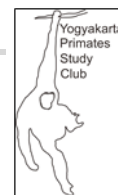
and here the survey in G.Kamulan, in Dieng Mountain.

<https://picasaweb.google.com/115197038441087276268/JavanGibbonSurvey2013GKamulyan?authuser=0&authkey=Gv1sRgCLPY3azhm6XXMA&feat=directlink>

Community development activities in Sokokembang village, (farmer group)

https://picasaweb.google.com/115197038441087276268/CommunityDevelopmentAtSokokembangVillage?authuser=0&authkey=Gv1sRgCNXUy_y-6qC7_gE&feat=directlink



Community development activities in Sokokembang village, women group (coffee production)

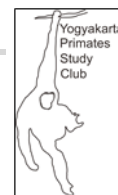


https://picasaweb.google.com/115197038441087276268/CommunityDevelopmentAtSokokembangVillageWomenGroup?authuser=0&authkey=Gv1sRgCMORv_qXkv2LjwE&featuring=directlink


The Team


We are proudly present here, our personnel:

<p>Mei Ardhy Mujianto</p> 	<p>Community Development Coordinator</p> <p><u>Working experience:</u></p> <ol style="list-style-type: none"> 1. Jogjakarta Environmental Network Period : 2004 – 2005; Position : Secretary 2. Working at Relung Foundation, Jogjakarta Period : 2002 – 2010 Position : Last Position as Program Manager on Relung Foundation 3. Working at URDI Foundation, Jakarta on Aceh Sustainable Environment Project (URDI-Danish Embassy) Period : 2007-2008 Position : Mangrove and Urban Forest Expert 4. Working at Kutilang Indonesia Foundation Period : 2008 – 2010 Position: Project Manager on Avian Influenza Surveillance on Wild Birds (YKI-IdoU-Namru) 								
<p>Agnes Hapsari Budisaputri</p> 	<p>conservation awareness and primate monitoring coordinator</p> <p><u>Working experience</u></p> <table border="0"> <tr> <td>2008</td> <td>: Member of Research Team in “Estimation of <i>Trachypithecus auratus</i> population in Baluran National Park”</td> </tr> <tr> <td>2008</td> <td>: Member of Research Team in “Estimation of <i>Hylobates moloch</i> Population with Call Count Method in Petungkriyono Protected Forest”</td> </tr> <tr> <td>2009</td> <td>: Committee of Primatology Seminar “Conservation of <i>Nasalis larvatus</i> in Balikpapan Bay, East Kalimantan”</td> </tr> <tr> <td>2009</td> <td>: Member of Research Team in “Determination of Long Tail Monkey (<i>Macaca fascicularis</i>) Quota based on Demographic Parameters in Paliyan Protected</td> </tr> </table>	2008	: Member of Research Team in “Estimation of <i>Trachypithecus auratus</i> population in Baluran National Park”	2008	: Member of Research Team in “Estimation of <i>Hylobates moloch</i> Population with Call Count Method in Petungkriyono Protected Forest”	2009	: Committee of Primatology Seminar “Conservation of <i>Nasalis larvatus</i> in Balikpapan Bay, East Kalimantan”	2009	: Member of Research Team in “Determination of Long Tail Monkey (<i>Macaca fascicularis</i>) Quota based on Demographic Parameters in Paliyan Protected
2008	: Member of Research Team in “Estimation of <i>Trachypithecus auratus</i> population in Baluran National Park”								
2008	: Member of Research Team in “Estimation of <i>Hylobates moloch</i> Population with Call Count Method in Petungkriyono Protected Forest”								
2009	: Committee of Primatology Seminar “Conservation of <i>Nasalis larvatus</i> in Balikpapan Bay, East Kalimantan”								
2009	: Member of Research Team in “Determination of Long Tail Monkey (<i>Macaca fascicularis</i>) Quota based on Demographic Parameters in Paliyan Protected								



	<p>Area”</p> <p>2010 – present : Member of Wildlife Conservation Forum Discussion Group in Yogyakarta</p> <p>2011 : Member of Research Team in “Estimation of <i>Macaca fascicularis</i> Population Pasca Eruption in Mt. Merapi National Park”</p> <p>2011 : Member of Research Team in “Annual Survey of <i>Hylobates moloch</i> in Petungkriyono Protected Forest”</p> <p>2012 : Researching “Daily Behavior of <i>Presbytis comata</i> in Petungkriyono Protected Forest”</p> <p>2012 : Participant in Pre Congress Training Program IPS Congress 2012</p>
--	--

<p>Nirmala Ayu Aryanti</p> 	<p>financial and administration coordinator</p> <p><u>Working experience :</u></p> <p>Experiences :</p> <p>2007-2009, volunteer, Green Map Indonesia</p> <p>2009-2010, leader, KP3 (Kelompok Peneliti, Pengamat dan Pemerhati) Primata</p> <p>2009-2011, staff of general division, WCF (Wildlife Conservation Forum)</p> <p>2010-2011, volunteer, Profauna Indonesia</p> <p>2010-2011, co-assistant, Laboratory of Watershed Management UGM</p> <p>2009, co-assistant, Laboratory of Protection and Forest Health UGM</p>
---	---

<p>Arif Setiawan</p> 	<p>Project leader</p> <p><u>Working experience :</u></p> <p>2010 - 2012, Fauna & Flora International Indonesia Program, field coordinator for Mentawai Islands Gibbon Conservation Program.</p> <p>2011 (May), study on “Correlates of behavior, facial and <i>paracallosal</i> coloration on male <i>Hammadryas baboon</i> at Singapore zoo”, collaboration research with Asian primatologist, supported by San Diego Zoo Global.</p> <p><u>Publications :</u></p> <p>Arif Setiawan, Tejo Suryo Nugroho, Yohannes Wibisono, Vera Ikawati, Jito Sugarjito, 2012,</p>
--	--

	<p>Population density and distribution of Javan gibbon (<i>Hylobates moloch</i>) in Central Java, Indonesia, <i>Biodiversitas</i> (1) no. 1, p. 23-27</p> <p>Arif Setiawan, Yohannes Wibisono, Tejo Suryo Nugroho, Ika Yuni Agustin, Mohamad Ali Imron, Satyawan Pudyatmoko, Djuwantoko, 2010, <i>Javan Surili : A Survey Population and Distribution in Mt. Slamet Central Java, Indonesia, Jurnal Primatologi Indonesia, Vol. 7 No. 2, p. 51-54.</i></p> <p>Setiawan.A,T.S. Nugroho, Djuwantoko, S.Pudyatmoko, 2009, A Survey of Miller's Grizzled Surili, <i>Presbytis hosei canicrus</i>, in East Kalimantan, Indonesia, <i>Primate Conservation</i> (24)</p> <p>Setiawan.A, Djuwantoko, A.W.Bintari, Y.W.C, Kusuma, S.Pudyatmoko, M.A. Imron, 2007, Population and Distribution of Rekrek (<i>Presbytis fredericae</i>) in the Southern slope of Mt.Slamet, <i>Biodiversitas vol 8: no 4, p.305-308</i></p> <p>I Made WA Putra, S. Iskandar, A. Setiawan, Y.Wibisono, T.S. Nugroho, D. Prasetyo, H. Oktavinalis, C.N. Simanjuntak.,2008, Preliminary study on updating Javan gibbon population and distribution in West and Central Java, <i>Breeding book, the Indonesian Gibbon Conservation and Management Workshop, 20-22 February 2008</i></p>
--	---

Acknowledgement:

We would like to thanks to everyone, findings, our partners, and colleagues who involve directly or not in this project, without whom nothing would be possible.

2013 fundings:



Our previous project fundings for conservation activities in Central Java:



Conservation International-
Primate Action fund

