

ISBN : 978-602- 61299-9- 4



# PROCEEDINGS

## INTERNATIONAL CONFERENCE 2<sup>nd</sup> SHIELD 2017

52<sup>nd</sup> Dies Natalis Unila

Bandar Lampung - 18-20 September 2017 - 4 International Speakers

**Organized by:**



Postgraduate Program  
and Institute for Research  
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## LEMBAR PENGESAHAN

Judul : **LIVELIHOODS ASSETS CHANGES OF COMMUNITY FOREST FARMERS ON PROTECTION FOREST**

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Instansi : Fakultas Pertanian, Universitas Lampung

Publikasi : Proceedings International Conference 2nd Shield 2017 Hal 456-465  
ISBN: 978-602-61299-9-4

Impact Factor : -

Penerbit : Postgraduate Program University Of Lampung And Research And Community Service Of University Of Lampung


URL/ web : <http://repository.lppm.unila.ac.id/5054/>

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Universitas Lampung

Bandar Lampung, 01 Maret 2021

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DOKUMENTASI LEMBAGA PENELITIAN DAN PENGABDIAN KEPADA MASYARAKAT UNIVERSITAS LAMPUNG	
TGL	14/04/2021
NO. INVEN	71/P/B/1/FP/2021
JENIS	Presiding
PARAF	l

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**Proceeding of International Conference 2nd SHIELD 2017  
Bandar Lampung, September 18-20<sup>th</sup> 2017**

**Editor:**

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**Publisher:**

Postgraduate Program University of Lampung

and

Research and Community Service of University of Lampung

2017

## Foreword

In this globalization era, advancement in science and technology has led to remarkable gains in life. However, despite the remarkable gains, many countries particularly Asian countries face inequalities and uneven progress. Even worse, these countries are facing many problems such as poverty, terrorism, drug abuse, and other social issues. These problems are complex and multidimensional. We should give a real contribution to solving these problems. Because the problems are multidimensional, we need people from cross-disciplinary interests to work hand in hand with strong commitment, not only to face, but also to change these problems into opportunities.

Therefore, the Postgraduate Program in collaboration with Institute of Research and Community Service of University of Lampung provides a place for academicians, practitioners, policy makers, researchers and professionals from multi-disciplines related to Social Sciences and Humanities, Economics, Education, Law, and Sustainable Development (SHIELD) to meet and interact with members inside and outside their own particular disciplines. All participants are challenged to give their real contribution to helping solve the real-world problems.

The authors of Proceeding of 2nd SHIELD International Conference come from academicians, practitioners, policy makers, researchers and professionals from multi-disciplines related to Social Sciences and Humanities, Economics, Education, Law, and Sustainable Development.

This conference aims to share information and discuss recent developments and innovations arising from research in a wide range of disciplines. Through this conference, it is expected that the research articles can be documented and communicated throughout the countries.

Head of Committee

Prof. Dr. Muhammad Akib, S.H., M.Hum.

**Welcome Address**  
**Report by the Organizing Committee**



*Dear distinguished guests and participants,*

In this globalization era, advancement in science and technology has led to remarkable gains. However, despite the remarkable gains, many countries particularly Asian countries face inequalities and uneven progresses. Even worse, these countries are facing many problems such as poverty, terrorism, drug abuse, and other social issues. These problems are complex and multidimensional. We should give a real contribution to solving these problems. Because the problems are multidimensional, we need people from cross-disciplinary interests to work hand in hand with strong commitment, not only to face but also to change these problems into opportunities.

Therefore, the Postgraduate Program in collaboration with Institute of Research and Community Service of University of Lampung holds The 2<sup>nd</sup> SHIELD Conference as a place for academicians, practitioners, policy makers, researchers and professionals from multi-disciplines relating to Social Science and Humanities, Economic, Education, Law, and Sustainable Development to meet and interact with members inside and outside their own particular disciplines. All participants are challenged to give their real contribution to helping solve the real-world problems.

At this second international conference, four keynote speakers from different disciplines and different countries were invited. Seventy-five authors initially submitted their abstracts before submitting their full papers, but finally only 49 full papers were accepted for publications. The authors are academicians, practitioners, policy makers, researchers and professionals. This conference aims to share information and discuss recent developments and innovations arising from research in a wide range of disciplines. Through this conference, we hope that the research articles can be documented and communicated throughout the countries.

I would like to thank you for your participation and look forward to having productive discussion among participants.

Sincerely yours,

Professor Muhammad Akib



## Remarks by the Rector of the University of Lampung



*The Honorable keynote speakers, committees, participants, ladies and gentlemen,*

It gives me a great pleasure to welcome all of you and chair the Opening Ceremony this morning to the Second SHIELD International Conference, jointly organized by Postgraduate Program and Institute for Research and Public Services, the University of Lampung. We'd like to say how grateful we are to all the keynote speakers who have accepted our invitation. Also, we are delighted to have all of participants here to participate and share in the Second SHIELD International Conference.

Along with an increase in the activity of national development and dynamic development of the international world due to globalization, then it always be followed by the emergence of complex social, humanity, economics, education, law and sustainable development issues. Therefore, the University of Lampung, which has a vision to be the best 10 among public universities nationwide, a mission to be a world class research university, and as the third largest state university (outside Java Island) feels compelled to draw up concepts and provide solutions to the various issues.

In relation to these issues, practically the University of Lampung through its Postgraduate Program in collaboration with its Institute Research and Public Services organizes the Second International

Conference with such disciplines as social sciences, humanities, economics, education, law and sustainable development. This international conference presents several keynote speakers who come from leading universities in the world. These activities are held in Lampung, which is one area that has a nationally important role, because it is the gateway of Sumatera Island and is strategically located for the development progress.

As the arena for discussion, communication, and enrichment of the knowledge of participants, this conference is expected to provide a significant contribution to capturing opportunities for the development of science today. This conference is intended to function as a forum among the participants from various walks of



life for dissemination of research results in the fields of social sciences, humanities, economics, education, law and sustainable development. The participants include practitioners, researchers, academics, students, industrialists and science observers from various organizations such as industries, state-owned enterprises, research institutions, government agencies, and public and private universities.

To expand the horizons of thinking for the participants and to share the experiences of international researches from world experts, this conference invites four keynote speakers from four countries who will present their main papers. These speakers are:

1. Prof. Dr. Arief Hidayat, S.H., M.S., Chairman of the Constitutional Court, Republic of Indonesia
2. Prof. Ryohei Kada from Shijyonawate Gakuen University, Japan.
3. Dr. Fonny Dameaty H. from University of Malaya, Malaysia.
4. Dr. Jenny H. Panchal from James Cook University, Singapore.

We are honored to have you all the speakers here in this conference, and thank you for being our keynote speakers in this conference.

Finally, I do hope that this seminar can run well and all participants can participate actively.

Sincerely yours,  
Rector,

Prof. Dr. Hasriadi Mat Akin



## TABLE OF CONTENT

Tittle and Writer	Page
<b>COMMODIFICATION OF PAPUAN POVERTY IN TOURISM MAGAZINE</b> Amadea Dwi Pradhipta, Udi Rusadi	1-14
<b><i>PAKSI BENAWANG</i> AT TANGGAMUS :MARRIED RITE, MARGINALIZED AND LOCAL WISDOM</b> Bartoven Vivit Nurdin, and Damayanti	16-24
<b>A STUDY OF STUDENTS' READING MOTIVATION FACTORS IN SECOND LANGUAGE ACQUISITION AT THE THIRD GRADE OF A SENIOR HIGH SCHOOL IN PANGKALPINANG</b> Erni Yulianti	25-31
<b>THE EFFECT OF THE UNITED STATE PRESIDENTIAL ELECTION ON JAKARTA ISLAMIC INDEX: EVIDENCE FROM INDONESIA STOCK EXCHANGE</b> Hiro Sejati, Erna Listyaningsih and Nur Baiti	32-39
<b>PRINCIPILED MATERIALS DEVELOPMENT FOR KINDERGARTEN STUDENTS</b> Iin Inawati	40-53
<b>PRINCIPILED MATERIALS DEVELOPMENT FOR KINDERGARTEN STUDENTS</b> Jeni Wulandari, Sam'un Jaja Raharja, Heru Nurasa, Herwan Abdul Muhyi	54-62
<b>THE IMPLEMENTATION OF DIVERSION IN CHILD CRIMINAL JUSTICE SYSTEM IN INDONESIA</b> Nikmah Rosidah, Chaidir Ali	63-71
<b>MODELS &amp; PATTERNS OF CLIENTELISM IN LAMPUNG LOCAL ELECTION</b> Robi Cahyadi Kurniawan, Utang Suwaryo, Muradi R.Widya Setiabudi S	72-83
<b>POSITIVE PROTECTION: PROTECTING GENETIC RESOURCES RELATED TO TRADITIONAL KNOWLEDGE IN INDONESIA</b> Rohaini, Nenny Dwi Ariani	84-91

<b>THE MODEL OF SMES EMPOWERMENT THROUGH VILLAGE RULES AS EFFORTS TO IMPROVE THE QUALITY OF PRIMARY PRODUCT VILLAGE</b>	92-101
Yusnani Hasyimzum, Utia Meylina	
<b>THE IMPORTANCE OF DEVELOPMENT PLANNING IN LAND ACQUISITION FOR PUBLIC INTEREST BASED ON LAND SAVING MODEL REGULATION</b>	102-111
Ade Arif Firmansyah, Yos Johan Utama and HS. Tisnanta	
<b>REPRESENTATION OF SUBJECT’S IDENTITY IN MIXED MARRIAGE THROUGH CYBERMEDIA (SEMIOTIC ANALYSIS OF “NASIB SAYA KAWIN CAMPUR” AND “NIKAH SAMA LOKAL” VIDEOS ON SACHA STEVENSON’S YOUTUBE ACCOUNT)</b>	112-120
Alifia Oktrina Fayardi and Eduard Lukman	
<b>LEGAL PROTECTION ON CHILDREN’S RIGHTS FROM BLOOD RELATIONS MARRIAGE (INCEST) IN THE PERSPECTIVE OF CONSTITUTIONAL LAW</b>	121-126
Amnawaty Hamid, Dina Juliana Anwari, Siti Nurhasanah	
<b>REPRESENTATION OF SPEECH POLITENESS CULTURE THROUGH SOCIAL MEDIA (SEMIOTIC ANALYSIS OF HATE SPEECH INDONESIA NETIZEN TOWARD PRESIDENT JOKOWI IN CYBERSPACE)</b>	127-136
Annisa Nur Muslimah Koswara , Eduard Lukman	
<b>THE POSITION OF ONLINE DISPUTE RESOLUTION IN THE POSITIVE LAW OF INDONESIA</b>	137-143
Bayu Sujadmiko, Dheka Ermelia Putri and Bismo Jiwo Agung	
<b>ENVIRONMENTAL PROTECTION IN ARMED CONFLICT ACCORDING TO INTERNATIONAL HUMANITARIAN LAW</b>	144-152
Desy Churul Aini, Desia Rakhma Banjarani	
<b>THE PREFERENCE OF MULTIPLE REPRESENTATION ON BIOLOGICAL CONCEPT : IDENTIFICATION AND QUALITY CONSTRUCTED REPRESENTATION</b>	153-160
Dewi Lengkana, Fransisca Tapilow, Ana Ratnawulan	
<b>THE CAPACITY DEVELOPMENT POLICY FOR APPARATUS THROUGH NEW GOVERNMENT PARTNERSHIP COOPERATION IN LAMPUNG TO OBTAIN OPTIMUM PUBLIC SERVICE</b>	161-167
Dian Kagungan, Devi Yulianti	

<b>THE EFFECTS OF THE PERFORMANCE MEASUREMENT SYSTEM ON THE MANAGERIAL PERFORMANCE (AN EMPIRICAL STUDY ON BPR IN BANYUMAS REGENCY, INDONESIA)</b>	168-178
Dona Primasari, Abdul Rohman, Fuad	
<b>EFFECT OF SERVICE QUALITY ON CUSTOMER SATISFACTION AND LOYALTY SULTAN ISKANDAR MUDA INTERNATIONAL AIRPORT ACEH INDONESIA AS THE WORLD'S BEST AIRPORT FOR HALAL TRAVELLERS</b>	179-189
Dorothy Rouly Haratua Pandjaitan	
<b>THE CRIMINAL LAW ENFORCEMENT AGAINST CRIMINAL ACTS <i>BEGAL</i> BY CHILD OFFENDERS</b>	190-201
Eddy Rifai, Heni Siswanto, M. Farid, Anisa Cahaya Pratiwi	
<b>CHEMICAL CASTRATED SANCTION ON SEXUAL CRIME IN CHILDREN REVIEWED FROM LAW AND HEALTH ASPECT</b>	202-207
Erna Dewi, Rozi Kodarusman Warganegara	
<b>CHAOS OF FOREST RESOURCE ACCESS REGULATION: STUDY ON MORO-MORO FARMERS AT REGISTER 45 LAMPUNG</b>	208-215
FX. Sumarja	
<b>THE IMPLEMENTATION OF FOCUS ON FORM AND FOCUS ON MEANING INSTRUCTIONS IN ENGLISH LANGUAGE TEACHING AT THE UNIVERSITY OF LAMPUNG</b>	216-222
Gede Eka Putrawan, Rafista Deviyanti, Riyan Hidayatullah	
<b>STRENGTHENING MODEL CRIMINAL LAW ENFORCEMENT CRIME SPOILIATION BY THE APPLICATION OF INTEGRAL AND SCIENTIFIC APPROACHES</b>	223-229
Heni Siswanto, Maroni, Fathoni	
<b>LEGAL ASPECT OF THE COOPERATION ON TRIPLE HELIX MODELS IN MITIGATION ANAK KRAKATAU MOUNTAIN</b>	230-243
Heryandi	
<b>WASTE BANK: THE STRATEGY AND COMMUNITY-BASED ENVIRONMENTAL GOVERNANCE</b>	244-249
Intan Fitri Meutia	
<b>THE INFLUENCE OF INFORMATION SYSTEM ON MANAGERIAL PERFORMANCE : TASK UNCERTAINTY UNCERTAINTY TASK AS MODERATING VARIABLE</b>	250-258
Lego Waspodu, Rini Widianingsih, Dona Primasari	
<b>CULTURAL HYBRIDIZATION OF KOREAN BEAUTY TREND WITH HALAL-CERTIFIED LOCAL COSMETICS (ANALYSIS OF "KOREAN MAKEUP LOOKS" TUTORIAL VIDEOS ON YOUTUBE)</b>	259-266
Lidya Agustina, Eduard Lukman	

<b>THE USE OF IMPORTED INPUT AND MANUFACTURING INDUSTRY PRODUCTIVITY</b>	267-276
Lies Maria Hamzah, Dian Fajarini	
<b>THE LEGAL POLITICS OF RECALL RIGHT OF POLITICAL PARTIES RELEVANCE WITH THE SYSTEM OF POPULAR SOVEREIGNTY IN DYNAMICS OF THE CONSTITUTION OF INDONESIA</b>	277-287
Malicia Evendia, Armen Yasir, and Yulia Neta	
<b>STRENGTHENING THE INTEGRITY OF LOCAL LEADERSHIP AND ITS RELEVANCE TO THE EFFORT TO RUN A DEMOCRATIC GOVERNMENT</b>	288-295
Maulana Mukhlis, Idil Akbar	
<b>NONPENAL EFFORT IN ADDRESSING ILLEGAL FISHING IN THE LAMPUNG PROVINCE</b>	296-304
Maya Shafira	
<b>REGULATION OF THE COOPERATION LAW INTER-REGIONAL IN ENVIRONMENTAL MANAGEMENT IN LAMPUNG PROVINCE</b>	305-311
Muhammad Akib, FX. Sumarja, Slamet Budi Yuwono, Hieronymus Soerjatisnanta	
<b>HOW FAR IS THE PRECAUTIONARY PRINCIPLE CONSIDERED IN THE BENEFITS OF GENETICALLY MODIFIED ORGANISMS WORLD WIDE?</b>	312-322
Orima Melati Davey, Ahmad Syofyan, Melly Aida	
<b>RESPONSIBILITY TO PROTECT: POSSIBILITY OF IMPLEMENTATION INTERNATIONAL COMMUNITY TO PROTECT CIVILIAN</b>	323 -331
Parulian Yusuf S, Rehulina	
<b>THE IMPLEMENTATION OF COORDINATION OF FINANCIAL SERVICES AUTHORITY AND DEPOSIT INSURANCE AGENCY (LPS) AND BANK INDONESIA TO THE TROUBLED BANK</b>	332-338
Ratna Syamsiar	
<b>TRANSGENDER AS A SOCIAL PROBLEM: A FILM ANALYSIS OF <i>LOVELY MAN</i> BY TEDDY SOERIAATMADJA</b>	339-347
Ria Hasna Shofiyya, Udi Rusadi	
<b>TAX DEBT IN THE BANKRUPTCY DISPUTE: INDUSTRIES BADJA GARUDA INC. V.S. TAX OFFICE OF MEDAN BELAWAN</b>	348-359
Rilda Murniati <sup>a</sup> , Richmond Cosmas Tobias	

- SPREADING OF POOR HOUSEHOLD AROUND WAN ABDUL RACHMAN FOREST PARK AND MANGROVE FOREST IN SIDODADI VILLAGE (STUDY IN SIDODADI VILLAGE SUB DISTRICT OF TELUK PANDAN DISTRICT OF PESAWARAN)** 360-366  
Rizki Bahagia Utama, Rommy Qurniati, Arief Darmawan
- THE PROTECTION OF INDIGENOUS PEOPLE'S CONSTITUTIONAL RIGHTS: CASE OF KASEPUHAN CIPTAGELAR** 367-373  
Rudi Wijaya, Rudy
- CLIMATE CHANGE ADAPTATION THROUGH A SHIFT IN CROPPING AREA ONTO THE UPPER STREAM REGION: MEASURING COFFEE BEANS RESPONSE IN PHYSICAL QUALITY** 374-383  
Samsul Bakri, Agus Setiawan, Ida Nurhaida
- MARINE POLLUTION: INTERNATIONAL LAW PERSPECTIVE AND SETTLEMENT DISPUTES** 384-392  
Siti Azizah, Safira Salsabila Annisa Musthofa
- LAW PROBLEM ON THE COASTAL VILLAGE** 393-397  
Siti Khoiriah, Rudi Wijaya
- EFFECT OF SELF EFFICIENCY AND TRAINING TO CAREER DEVELOPMENT IN TEACHER STUDENTS IN THE SUBJECT OF BEKASI CITY** 398-402  
Suherman, Dede Hamdani, Romlie Ardie
- THE ROLE OF CREATING SHARED VALUE (CSV) TO ENFORCE SOCIAL WELFARE FOR STAKEHOLDER** 403-411  
Sunaryo; I Ketut Dharma, Putra Yoga
- DRAMATURGY STUDY ON COMMUNICATIONS BY GAY IN BANDAR LAMPUNG** 412-418  
Toni Wijaya
- THE ETHNIC IMMIGRANT LIVING IN SIDOWALUYO VILLAGE, SIDOMULYO SUBDISTRICT, SOUTH LAMPUNG DISTRICT** 419-426  
Trisnarningsih, Buchori Asyik, Sudjarwo
- THE ANALYSIS OF FINANCIAL SERVICES AUTHORITY (FSA) FUNCTION IN THE SUPERVISION OF THE GOOD CORPORATE GOVERNANCE (GCG) IMPLEMENTATION FOR BANKING INSTITUTIONS IN INDONESIA** 427-435  
Yulia Hesti, Nenny Dwi Ariani
- THE INFLUENCE OF SEGMENTING STRATEGY AND BRAND POSITIONING STRATEGY ON CONSUMER PURCHASING DECISION (STUDY AT SMARTPHONE SAMSUNG IN INDONESIA)** 436-448  
Annisa Nurawalia, Faila Shofa

- RESOLUTION MODEL ON HORIZONTAL VIOLENCE CONFLICTS  
IN LOCAL MULTICULTURAL COMMUNITIES IN LAMPUNG  
PROVINCE, INDONESIA** 449-455  
Hartoyo, Abdul Syani
- LIVELIHOODS ASSETS CHANGES OF COMMUNITY FOREST  
FARMERS ON PROTECTION FOREST** 456-465  
Hari Kaskoyo, Slamet Budi Yuwono, Christine Wulandari, Rommy Qurniati,  
Irwan Sukri Banuwa
- MAPPING THE INDIGENOUS CONFLICT OF INDONESIA: 1945-2017** 466-474  
Budiyono, Meylina U.



## **Livelihood Assets Changes Of Community Forest Farmers On Protection Forest**

**Hari Kaskoyo<sup>1)</sup>, Slamet Budi Yuwono<sup>1)</sup>, Christine Wulandari<sup>1)</sup>,  
Rommy Qurniati<sup>1)</sup> and Irwan Sukri Banuwa<sup>1)</sup>**

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### **Abstract**

Community forest program on protection forest has been launched by Indonesian governance since 1998. The program accomodate local community living around to acces the state forest. They get many benefit from the state forest and use it to improve their livelihoods. Case studies was used to evaluate livelihood assets in the process of community forest management on state forest. Objective of this research are to understand the changes of livelihoods assets of community forest farmers during the community forest program. Livelihoods assets should be better to reach sustainable livelihoods.

Keywords: livelihoods assets, sustainable livelihoods, protection forest, community forest, Indonesian's state forest.

### **1. Background**

The management of state forest in Indonesia changes many times. In Soeharto era, centralized of state forest management was running. In this era, management of state forest of Indonesia, consentrated to forest companies. Indonesian governance were not included the poor people living in and around forest. This resulted recurrent conflict and worsened local poverty, whereas the state forest land itself continued to be degraded (Suyanto, et.al., 2007). After the reformation, the government empowered the community in the management of state forests.

Community Forestry Program (HKm) is a community forest empowerment program in state forest management. The Government of Indonesia started the HKm program in 1999 and is now the most widely implemented Social Forestry program in Lampung Province. A total of 149 PAK permits (Appointment of Working Areas) have been issued by the Minister of Forestry until August 2014. These permits cover a total area of 96,072.61 hectares, covering 8 districts, 149 PAK permits and 470 HKm groups with 49,620 members running in Lampung.

Research on the Impact of HKm Program on the welfare of local communities and the achievement of forest sustainability has not been done. Therefore, this research is generally intended to know the implementation and results of the Community Forestry program (HKm) in protection forests in Indonesia for local communities, local government and the preservation of protection forests. The specific objectives of this research are to know the dependence of local communities on protection forests, to know the progress of the HKm program implementation in the Protection forest in Lampung Province and the constraints in implementing the HKm program, and to analyze the impact of Community Forestry programs on the livelihoods of local people using Sustainable Livelihood Approach / SLA Sustainable Lifestyle approach) that has been adjusted.

## 2. Method

### 2.1. Study site and research time

This study was conducted in two HKm farmer group area, i.e. Beringin Jaya farmer group and Sidodadi farmer group areas. Their areas were located on Kota Agung Utara Forest Management Unit in Tanggamus District, Lampung Province. Both of farmer groups were selected for the award 1st winner of the national of forest sustainable management for HKm farmer group from the Ministry of Environment and Forestry in 2016 and 2017. The research sites are listed in Figure 1. Research was done on June–October 2017.

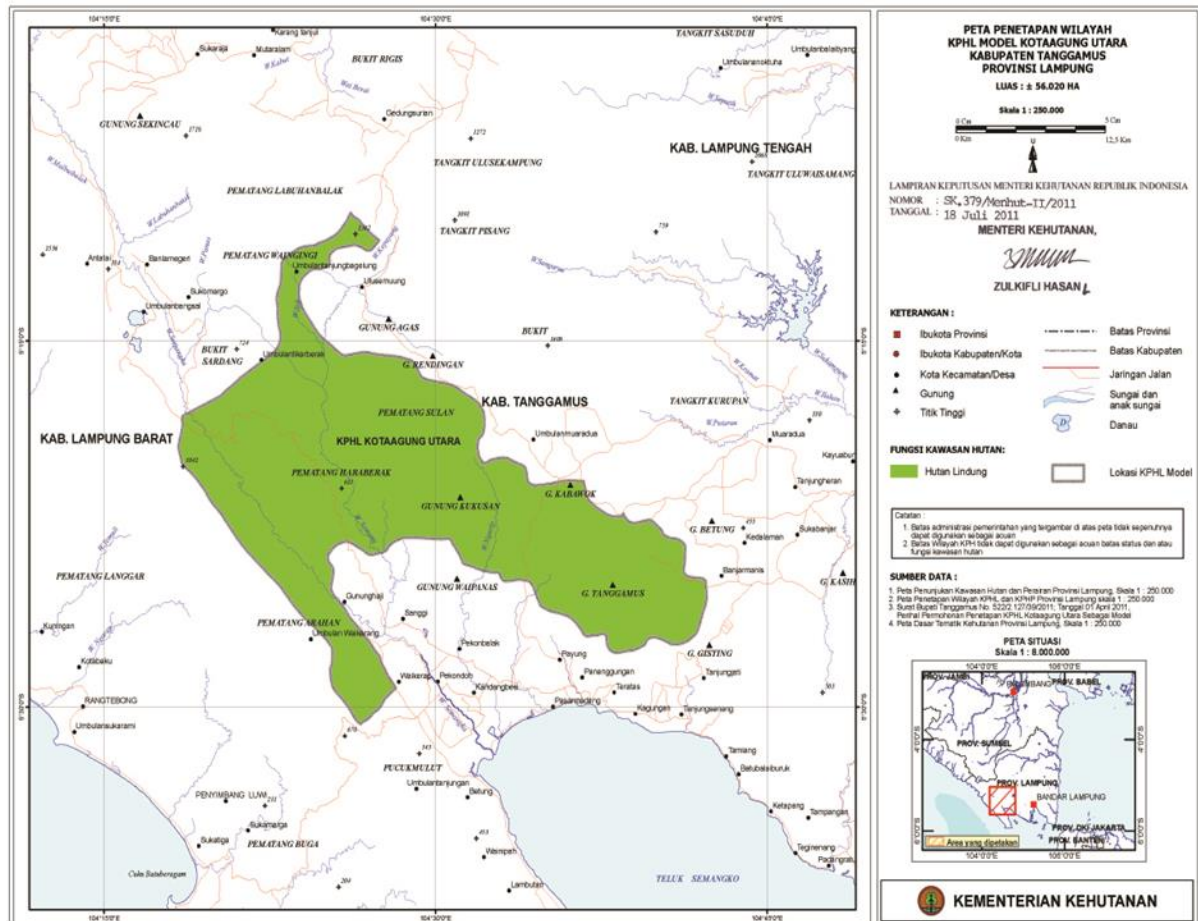


Fig 1. Location of study site (Source: Ministry of Environmental and Forestry, 2017).

### 2.2. Data, data collection and analysis

Data was collected using interview by open ended and semi structured questionnaire, direct observation, documents and archival reviews. The discussion was conducted with individual officers at their office

The study used and analyzed primary and secondary data. Primary data was collected through observation, questionnaires and direct interviews of selected respondents and key informants, related to community forest management in Tanggamus District. Secondary data is collected from several agencies such as Forestry Service, Regional Development Planning Agency (Bappeda), Central Bureau of Statistics (BPS), and other related institutions. The data obtained were processed and analyzed both quantitatively and qualitatively descriptively.

Respondents were taken as samples by purposive sampling method. According to Patton (1990), Cochran (1991) and Iskandar (2008), purposive sampling is a deliberate sampling

technique based on subjective assessment of researchers on the basis of certain characteristics considered to be related to previously known population characteristics. Total respondents are 150 HKm farmers (75 members of each Beringin Jaya and Sidodadi forest farmer group) in Tanggamus District, 10 employees of relevant agencies in Tanggamus District and 20 employees in Lampung Province.

The Sustainable Livelihood Framework approach is used to identify the expected levels of life in groups by looking at the activities undertaken by each community using capacity capability and asset ownership. Livelihood is understood as the assets, activities and access to the assets, which are mediated by institutional and social relations that together determine the living gained by individual or household (Ellis, 2000). A livelihood is the set of capabilities, assets and activities, that furnish the means for people to meet their basic needs and support their well-being (Chambers and Conway, 1992).

The SLA has been developed by DFID and was used to know the change of condition before and after existence of community empowerment program through HKm. This analysis involves the analysis of assets owned by local communities around protection forests in the form of human assets, physical assets, natural assets, financial assets and social assets. In addition the SLA approach will also analyze changes in the structure and processes related to government and private sector covering legal, cultural and political aspects.

In analyzing the management of state forests through community forestry schemes, the SLAs shall be adjusted in accordance with existing conditions in protection forests in Indonesia. It is intended that the analysis carried out in accordance with the actual conditions and the resulting conclusions can be appropriate. An adjusted SLA chart used in this study is showed in Figure 2.

### **3. Results**

#### **3.1. HKm farmer activities on protection forest**

The dependence of respondents on protection forests can be seen from the activities undertaken by the respondents (Table 1). All the respondents (100%) own the land and work as HKm farmers by cultivating on HKm land. The respondent owns arable land acquired by compensation to others. The number of respondents who own land between Gapoktan Beringin Jaya and Sidodadi almost the same amount. Less than 5 percent of respondents do activities such as hunting pigs and bird hunting. This is because the community realizes the importance of preserving wildlife in nature. Those who engage in pig hunting activities are caused by disruptions by wild boars to cultivated plants, especially young plants. People hunting birds aim to earn money from the sale of hunted birds and to be kept at home. Bird hunting activities are not done routinely but usually done at least 2 months. This bird hunting activity is an interlude activity for entertainment.

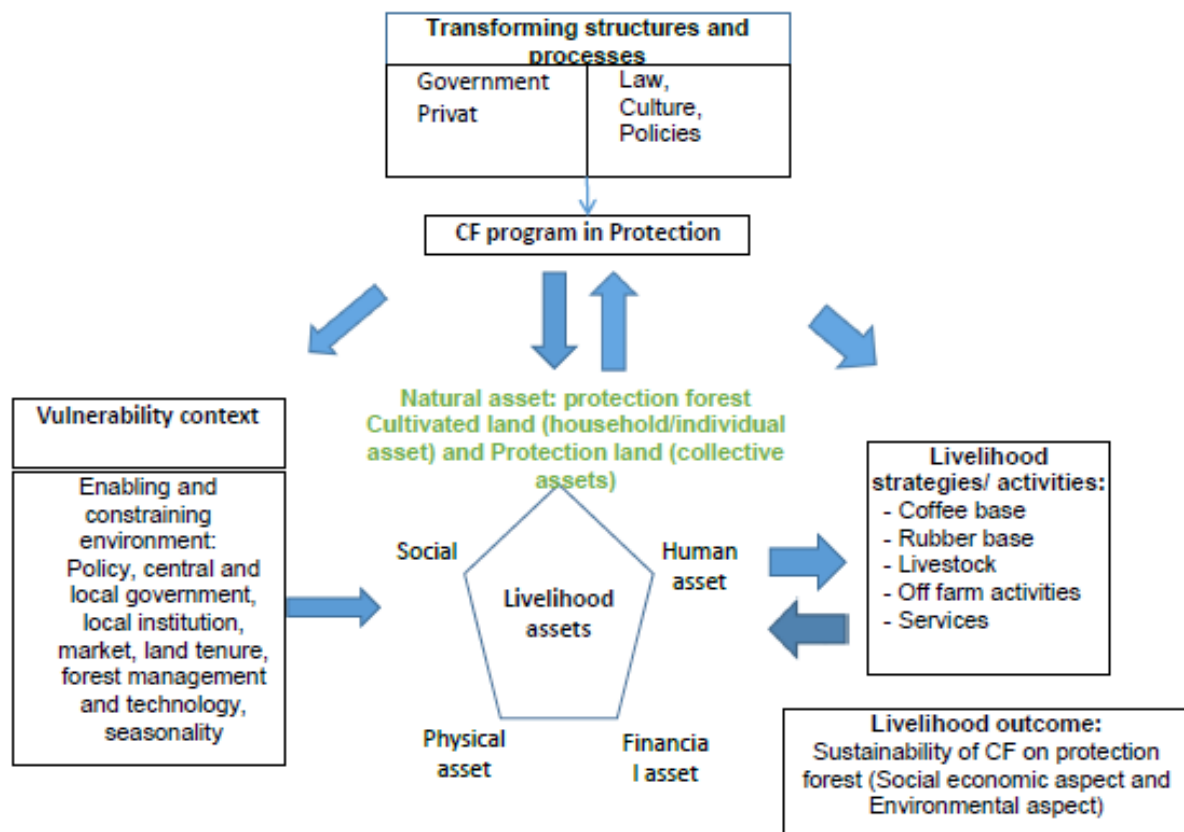


Figure 2. Sustainable Livelihoods Framework for HKM in Protection Forest

Another activity is to look for firewood and fruits. People who are looking for firewood are those who have not used gas stoves and those who claim that cooking with firewood is more tasty than gas cookers. Respondents harvested the fruits of the Multi Purpose Tree Species (MPTs) such as coffee, cacao, jackfruit, kingfruits, etc..

Table 1. Activities or livelihood of respondents

No	Aktivitas	Respondents (person)	Percentage (%)
1.	Budidaya di lahan garapan	150	100
2.	Berburu babi di hutan	2	1,33
3.	Mencari burung di hutan	3	2
4.	Mencari kayu bakar di hutan	15	10
5.	Mencari buah-buahan di hutan	120	80
6.	Bekerja sebagai pedagang	11	7,33
7.	Bekerja sebagai pegawai	4	2,67

### 3.2. HKM program implementation and its obstacles in Tanggamus District

Implementation of HKM program in Lampung Province has been running well. This is because the HKM program has been socialized since 1998 and has many HKM groups established and licensed HKM in Lampung Province. Tanggamus Regency is one of the districts in Lampung

Province which already has 5 HKm groups that have been licensed to manage HKm in 2008 (Kagungan, 2012). The successful implementation of HKm in Tanggamus District is due to the support from the government (central, provincial and district), companions (NGOs and universities) and the community / group.

Although the implementation of HKm program in Tanggamus Regency has been running well but there are still some obstacles in the implementation of HKm program, among others: the lack of escort personnel especially after the HKm management permit is given (especially related to the making of management plans, reporting activities, processing of crops and payment retribusi of HKm crops). Implementation problems HKm program appears also due to the many changes that occur in HKm policy. Dwiprabowo dkk (2013) and Kaskoyo et al (2014) stated that there has been 9 times changes in HKm policy in the period 1998 to 2011. In 2014 there is another regulation change related HKm. In 2016 Community Forest (HKm) is incorporated in or as part of the Social Forestry program.

### 3.3. Livelihoods Assets and Its Changes

Livelihood capitals are the resources on which people draw in order to carry out their livelihood strategies (Farrington, Ramasut and Walker, 2002). Capitals are not just a thing that go into a production process but also a basis for power to act and ultimately to bring about change in society (Morse and McNamara, 2013). These asset types are human, natural, financial, physical, and social capital. Human capital is, for instance, the amount and quality of labor available, whereas natural capital comprises the natural resources from which a livelihood can be derived. Physical capital refers to the basic infrastructures and means of production, and financial capital encompasses the financial resources needed to support a livelihood. Social capital assets indicate the involvement of the household in social activities and networks for both political and economic purposes. The capital types available to individual households reflect their ability to gain access to systems, including the resource base, financial system, and agencies through which these capital types are produced.

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The number of children enrolled in school increased significantly due to the increased attention of respondents in education. Respondents assume that the higher the education level of their children will make the better life of their children later. The cost of education is derived from the proceeds from the sale of crops obtained from cultivated crops in the forest in protection forest. The proceeds of the sale are also used to finance the daily needs of the respondents

Tabel 2. Changes in human assets

No	Human Assets	Mean of human assets	
		Before	After
1	Number of family members	3,1	3,2
2	Education of household, primary school (%)	48	37
3	Education of household, secondary school (%)	44	51
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3	Caretaker of sub group	0	12
4	Caretaker of group level	0	4
5	Trust between villager/farmer (in scale 1, 2, 3)	2,1*	2,6*
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Table 4. Changes in Natural Assets

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2	Private landholding outside protection forest (ha).	0,8*	1,6*
3	Amount of coffee trees (no.)	X	5395
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Physical assets consist of: house size, number of bamboo-walled houses, number of wood-walled houses, number of wood-walled houses and walls, number of walled houses, number of wooden houses, number of asbestos roofing houses, number of roofed houses, number of cars, number of motorcycles, number of bikes, number of HP and home appliances owned (Table 5). Almost all physical assets experienced significant changes after the respondents followed the HKm program. Home size, the number of wood-walled houses and the wall rose significantly. Similarly, the number of roofed homes, the number of cars, the number of motorcycles and HP increased significantly. The number of bamboo-walled houses, the number of wood-roofed and asbestos-roofed houses has decreased significantly. Currently mobile phone or HP can be said to be the primary goods so required by respondents for communication purposes. Physical assets owned by respondents are getting better. Respondents stated that with the HKm program they can try to be more earnest so as to obtain a lot of results which are then used to increase their physical assets.



Table 5. Changes in physical assets

No	Physical Assets	Mean of Physical assets	
		Before	After
1	House size (m <sup>2</sup> )	36*	45*
2	Amount of bamboo walled house (%)	40*	30*
3	Amount of wood walled house (%)	60	55
4	Amount of wood and brick walled house (%)	30*	42*
5	Amount of brick walled house (%)	20	23
6	Amount of wood roof house (%)	38*	20*
7	Amount of asbestos roof house (%)	35*	20*
8	Amount of tin roof house (%)	25	36
9	Amount of brick roof house (%)	52*	74*
10	Amount of car (%)	2*	10*
11	Amount of motorcycle (%)	70*	95*
12	Amount of bicycle (%)	20	15
13	Amount of mobile phone (%)	60*	95*
14	House appliances owned (%)	100	100

Note: \* Significant difference between before and after ( $p < 0,05$ )

Financial assets include: the number of cows, the number of goats, the number of savings respondents, the number of respondents who have loans, the frequency of borrowing, the average income and the adequacy of food (Table 5.7). Some financial assets changed significantly after the respondents joined the HKm programsuch are the number of cattle, the number of goats, the number of savings respondents, the number of food sufficiency respondents and the number of food-deficient respondents. The number of livestock can increase significantly due to the existence of livestock support to HKm groups channeled by the central government through local and regional government through KPH Kota Agung Utara which is an extension of Tanggamus district government. The increase in the number of livestock is also influenced by the availability of adequate livestock feed that can be obtained from respondents' land.

Respondents who are short of food and sufficient food significantly changes. The HKm program implemented by the government provides the legality of managing the protection forest to the respondents. This causes the respondents to try farmers more calm so as to do better planting, maintenance and harvesting (Kaskoyo *et al.*, 2014). Overall, the change in financial assets in Beringin Jaya and Sidodadi gapoktan significantly more than the changes that occur in HKm gapoktan in Lampung Barat and Way Kanan (Kaskoyo *et al.*, 2017).

Table 6. Changes in Financial Assets

No	Financial Assets	Mean of financial assets	
		Before	After
1	Amount of cow (no.)	1*	6*
2	Amount of goat (no.)	50*	61*

No	Financial Assets	Mean of financial assets	
		Before	After
3	Household with saving (%)	63*	73*
4	Household with loans (%)	52	54
5	Number of loans per year (%)	3	5
6	Mean annual income (Rp)	X	56.725
7	Food surplus (%)	51	54
8	Food sufficient (%)	64*	72*
9	Food shortage (%)	35*	24*

Note: \* Significant difference between before and after ( $p < 0,05$ )

#### 4. Conclusion

The results showed that:

- The community's dependence on protection forests is very high, where all (100%) of respondents have HKm cultivated land in the working area of KPH Kota Agung Utara.
- The implementation of HKm program in Lampung Province especially in Tanggamus Regency, including the most advanced in Indonesia.
- There are still many encountered by the community constraints in the implementation of HKm program. In addition to licensing, constraints are also faced by respondents post licensing, which is related to institutional continuity, processing results, making HKm management plans, land resource development, marketing results, standardization of quality results and cooperation with other parties in order to develop HKm results.
- The HKm program has a positive impact on the respondents and regional development. Many livelihood assets are undergoing significant changes that can improve the standard of living of HKm participants.

#### 5. Recommendations

Further research is needed related to the marketing and processing of crops produced by the participants of HKm. In addition, it is necessary to conduct research related to the potential of forest resources that can be developed by HKm community such is environmental services

#### References

- Chambers, R., & Conway, G. 1992. *Sustainable rural livelihoods: practical concepts for the 21st century*. Institute of Development Studies (UK).
- Cochran, W. G., & Radiansyah. 1991. *Teknik penarikan sampel*. University Indonesia Press.
- Dwiprabowo, H., Mulyaningrum, M., & Suwarno, E. 2013. Organisasi Belajar dan Implementasi Kebijakan Hutan Kemasyarakatan (HKm). *Jurnal Penelitian Sosial dan Ekonomi Kehutanan*, 10(2), 85-98.
- Ellis, F. 2000. *Rural livelihoods and diversity in developing countries*. Oxford university press. Farrington, Ramasut and Walker 2002
- Iskandar. 2008. *Metodologi Penelitian Pendidikan dan Sosial (Kuantitatif dan Kualitatif)*. Jakarta: GP Press.

- Kagungan, D. 2012. *Kebijakan Hutan Kemasyarakatan (HKM) Di Kabupaten Tanggamus Provinsi Lampung*. *PUBLICA*, 2(1).
- Kaskoyo, H., Mohammed, A. J., & Inoue, M. 2014. Present State of Community Forestry (Hutan Kemasyarakatan/HKm) Program in Forest and Its Challenges: Case Study in Lampung Province, Indonesia. *Journal of Forest Science*, 30(1), 15-29.
- Kaskoyo, H., Mohammed, A., & Inoue, M. 2017. Impact of community forest program in protection forest on livelihood outcomes: A case study of Lampung Province, Indonesia..*Journal of Sustainable Forestry*, 36(3), 250-263.
- Morse, S., & McNamara, N. 2013. *Sustainable livelihood approach: A critique of theory and practice*. Springer Science & Business Media.
- Patton, M. Q. 1990. *Qualitative evaluation and research methods*. SAGE Publications, inc.
- Suyanto, S., Khususiyah, N., & Leimona, B. 2007. Poverty and environmental services: case study in Way Besai watershed, Lampung Province, Indonesia. *Ecology and Society*,12(2).

# Livelihood Assets Changes Of Community Forest Farmers On Protection Forest

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## Livelihood Assets Changes Of Community Forest Farmers On Protection Forest

Hari Kaskoyo<sup>1)</sup>, Slamet Budi Yuwono<sup>1)</sup>, Christine Wulandari<sup>1)</sup>,  
Rommy Qurniati<sup>1)</sup> and Irwan Sukri Banuwa<sup>1)</sup>

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### Abstract

Community forest program on protection forest has been launched by Indonesian governance since 1998. The program accommodate local community living around to access the state forest. They get many benefits from the state forest and use it to improve their livelihoods. Case studies were used to evaluate livelihood assets in the process of community forest management on state forest. Objective of this research is to understand the changes of livelihood assets of community forest farmers during the community forest program. Livelihood assets should be better to reach sustainable livelihoods.

Keywords: livelihoods assets, sustainable livelihoods, protection forest, community forest, Indonesian's state forest.

### 1. Background

The management of state forest in Indonesia changes many times. In Soeharto era, centralized of state forest management was running. In this era, management of state forest of Indonesia, concentrated to forest companies. Indonesian governance were not included the poor people living in and around forest. This resulted recurrent conflict and worsened local poverty, whereas the state forest land itself continued to be degraded (Suyanto, et.al., 2007). After the reformation, the government empowered the community in the management of state forests.

Community Forestry Program (HKm) is a community forest empowerment program in state forest management. The Government of Indonesia started the HKm program in 1999 and is now the most widely implemented Social Forestry program in Lampung Province. A total of 149 PAK permits (Appointment of Working Areas) have been issued by the Minister of Forestry until August 2014. These permits cover a total area of 96,072.61 hectares, covering 8 districts, 149 PAK permits and 470 HKm groups with 49,620 members running in Lampung.

Research on the Impact of HKm Program on the welfare of local communities and the achievement of forest sustainability has not been done. Therefore, this research is generally intended to know the implementation and results of the Community Forestry program (HKm) in protection forests in Indonesia for local communities, local government and the preservation of protection forests. The specific objectives of this research are to know the dependence of local communities on protection forests, to know the progress of the HKm program implementation in the Protection forest in Lampung Province and the constraints in implementing the HKm program, and to analyze the impact of Community Forestry programs on the livelihoods of local people using Sustainable Livelihood Approach / SLA Sustainable Lifestyle approach) that has been adjusted.

## 2. Method

### 2.1. Study site and research time

This study was conducted in two HKm farmer group area, i.e. Beringin Jaya farmer group and Sidodadi farmer group areas. Their areas were located on Kota Agung Utara Forest Management Unit in Tanggamus District, Lampung Province. Both of farmer groups were selected for the award 1st winner of the national of forest sustainable management for HKm farmer group from the Ministry of Environment and Forestry in 2016 and 2017. The research sites are listed in Figure 1. Research was done on June-October 2017.

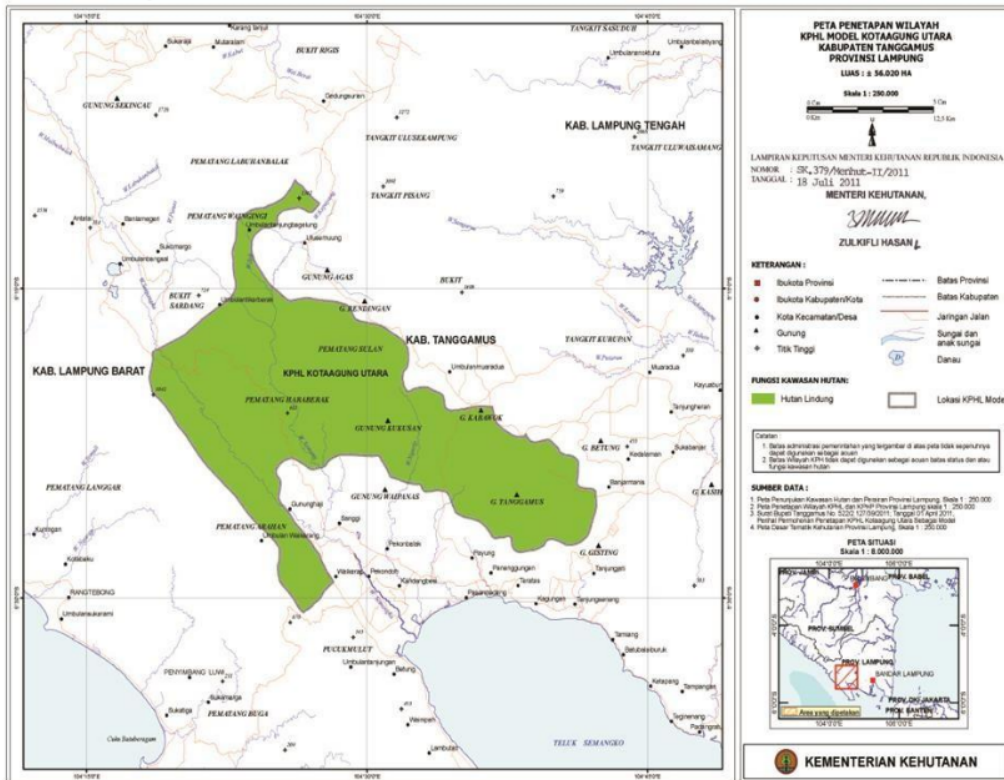


Fig 1. Location of study site (Source: Ministry of Environmental and Forestry, 2017).

### 2.2. Data, data collection and analysis

Data was collected using interview by open ended and semi structured questionnaire, direct observation, documents and archival reviews. The discussion was conducted with individual officers at their office

The study used and analyzed primary and secondary data. Primary data was collected through observation, questionnaires and direct interviews of selected respondents and key informants, related to community forest management in Tanggamus District. Secondary data is collected from several agencies such as Forestry Service, Regional Development Planning Agency (Bappeda), Central Bureau of Statistics (BPS), and other related institutions. The data obtained were processed and analyzed both quantitatively and qualitatively descriptively.

Respondents were taken as samples by purposive sampling method. According to Patton (1990), Cochran (1991) and Iskandar (2008), purposive sampling is a deliberate sampling

technique based on subjective assessment of researchers on the basis of certain characteristics considered to be related to previously known population characteristics. Total respondents are 150 HKm farmers (75 members of each Beringin Jaya and Sidodadi forest farmer group) in Tanggamus District, 10 employees of relevant agencies in Tanggamus District and 20 employees in Lampung Province.

The Sustainable Livelihood Framework approach is used to identify the expected levels of life in groups by looking at the activities undertaken by each community using capacity capability and asset ownership. Livelihood is understood as the assets, activities and access to the assets, which are mediated by institutional and social relations that together determine the living gained by individual or household (Ellis, 2000). A livelihood is the set of capabilities, assets and activities, that furnish the means for people to meet their basic needs and support their well-being (Chambers and Conway, 1992).

The SLA has been developed by DFID and was used to know the change of condition before and after existence of community empowerment program through HKm. This analysis involves the analysis of assets owned by local communities around protection forests in the form of human assets, physical assets, natural assets, financial assets and social assets. In addition the SLA approach will also analyze changes in the structure and processes related to government and private sector covering legal, cultural and political aspects.

In analyzing the management of state forests through community forestry schemes, the SLAs shall be adjusted in accordance with existing conditions in protection forests in Indonesia. It is intended that the analysis carried out in accordance with the actual conditions and the resulting conclusions can be appropriate. An adjusted SLA chart used in this study is showed in Figure 2.

### 3. Results

#### 3.1. HKm farmer activities on protection forest

The dependence of respondents on protection forests can be seen from the activities undertaken by the respondents (Table 1). All the respondents (100%) own the land and work as HKm farmers by cultivating on HKm land. The respondent owns arable land acquired by compensation to others. The number of respondents who own land between Gapoktan Beringin Jaya and Sidodadi almost the same amount. Less than 5 percent of respondents do activities such as hunting pigs and bird hunting. This is because the community realizes the importance of preserving wildlife in nature. Those who engage in pig hunting activities are caused by disruptions by wild boars to cultivated plants, especially young plants. People hunting birds aim to earn money from the sale of hunted birds and to be kept at home. Bird hunting activities are not done routinely but usually done at least 2 months. This bird hunting activity is an interlude activity for entertainment.



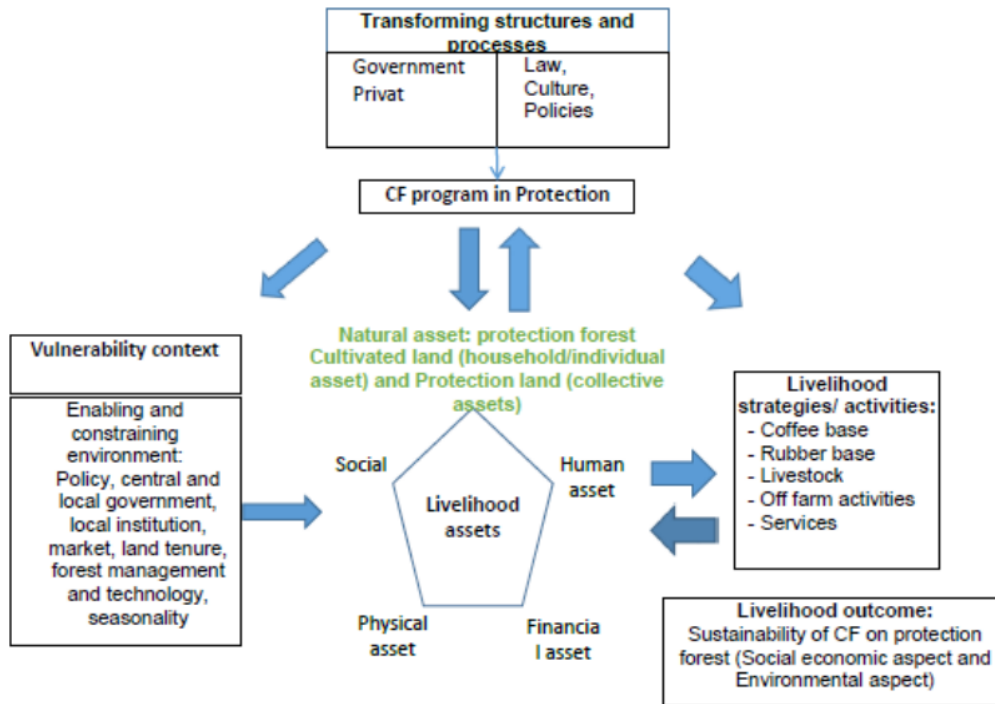


Figure 2. Sustainable Livelihoods Framework for HKm in Protection Forest

Another activity is to look for firewood and fruits. People who are looking for firewood are those who have not used gas stoves and those who claim that cooking with firewood is more tasty than gas cookers. Respondents harvested the fruits of the Multi Purpose Tree Species (MPTs) such as coffee, cacao, jackfruit, kingfruits, etc..

Table 1. Activities or livelihood of respondents

No	Aktivitas	Respondents (person)	Percentage (%)
1.	Budidaya di lahan garapan	150	100
2.	Berburu babi di hutan	2	1,33
3.	Mencari burung di hutan	3	2
4.	Mencari kayu bakar di hutan	15	10
5.	Mencari buah-buahan di hutan	120	80
6.	Bekerja sebagai pedagang	11	7,33
7.	Bekerja sebagai pegawai	4	2,67

### 3.2. HKm program implementation and its obstacles in Tanggamus District

Implementation of HKm program in Lampung Province has been running well. This is because the HKm program has been socialized since 1998 and has many HKm groups established and licensed HKM in Lampung Province. Tanggamus Regency is one of the districts in Lampung

Province which already has 5 HKm groups that have been licensed to manage HKm in 2008 (Kagungan, 2012). The successful implementation of HKm in Tanggamus District is due to the support from the government (central, provincial and district), companions (NGOs and universities) and the community / group.

Although the implementation of HKm program in Tanggamus Regency has been running well but there are still some obstacles in the implementation of HKm program, among others: the lack of escort personnel especially after the HKm management permit is given (especially related to the making of management plans, reporting activities, processing of crops and payment restribusi of HKm crops). Implementation problems HKm program appears also due to the many changes that occur in HKm policy. Dwiprabowo dkk (2013) and Kaskoyo et al (2014) stated that there has been 9 times changes in HKm policy in the period 1998 to 2011. In 2014 there is another regulation change related HKm. In 2016 Community Forest (HKm) is incorporated in or as part of the Social Forestry program.

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14	House appliances owned (%)	100	100

Note: \* Significant difference between before and after (p < 0,05)

Financial assets include: the number of cows, the number of goats, the number of savings respondents, the number of respondents who have loans, the frequency of borrowing, the average income and the adequacy of food (Table 5.7). Some financial assets changed significantly after the respondents joined the HKm programs such as the number of cattle, the number of goats, the number of savings respondents, the number of food sufficiency respondents and the number of food-deficient respondents. The number of livestock can increase significantly due to the existence of livestock support to HKm groups channeled by the central government through local and regional government through KPH Kota Agung Utara which is an extension of Tanggamus district government. The increase in the number of livestock is also influenced by the availability of adequate livestock feed that can be obtained from respondents' land.

Respondents who are short of food and sufficient food significantly changes. The HKm program implemented by the government provides the legality of managing the protection forest to the respondents. This causes the respondents to try farmers more calm so as to do better planting, maintenance and harvesting (Kaskoyo *et al.*, 2014). Overall, the change in financial assets in Beringin Jaya and Sidodadi gapoktan significantly more than the changes that occur in HKm gapoktan in Lampung Barat and Way Kanan (Kaskoyo *et al.*, 2017).

Table 6. Changes in Financial Assets

No	Financial Assets	Mean of financial assets	
		Before	After
1	Amount of cow (no.)	1*	6*
2	Amount of goat (no.)	50*	61*



No	Financial Assets	Mean of financial assets	
		Before	After
3	Household with saving (%)	63*	73*
4	Household with loans (%)	52	54
5	Number of loans per year (%)	3	5
6	Mean annual income (Rp)	X	56.725
7	Food surplus (%)	51	54
8	Food sufficient (%)	64*	72*
9	Food shortage (%)	35*	24*

Note: \* Significant difference between before and after ( $p < 0,05$ )

#### 4. Conclusion

The results showed that:

- The community's dependence on protection forests is very high, where all (100%) of respondents have HKm cultivated land in the working area of KPH Kota Agung Utara.
- The implementation of HKm program in Lampung Province especially in Tanggamus Regency, including the most advanced in Indonesia.
- There are still many encountered by the community constraints in the implementation of HKm program. In addition to licensing, constraints are also faced by respondents post licensing, which is related to institutional continuity, processing results, making HKm management plans, land resource development, marketing results, standardization of quality results and cooperation with other parties in order to develop HKm results.
- The HKm program has a positive impact on the respondents and regional development. Many livelihood assets are undergoing significant changes that can improve the standard of living of HKm participants.

#### 5. Recommendations

Further research is needed related to the marketing and processing of crops produced by the participants of HKm. In addition, it is necessary to conduct research related to the potential of forest resources that can be developed by HKm community such is environmental services

# Livelihood Assets Changes Of Community Forest Farmers On Protection Forest

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