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## **Community Economic Empowerment through Cultivation Of *Enceng Gondok* Program using Community Engagement Program Approach in West Aceh Regency Post Conflict and Natural Disaster Earthquake and Tsunami 2004**

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### **ABSTRACT**

According to Indonesia's National Bureau of Statistics (BPS) (Guci, 2017) Aceh Barat is one of the poorest districts in Aceh Province. This is in part due to conflict and natural disasters, including the tsunami in 2004. This paper describes the Innovative KPM-UMD Program implemented by the UIN Ar Raniry Community Engagement Unit. The Innovative KPM-UMD is part of the University Develops the Village (UMD) initiative, supported by KOMPAK (an Australia Indonesia partnership working to reduce poverty and inequality in Indonesia). The Innovative KPM-UMD supported economic empowerment for women who create handicrafts with the water *enceng gondok* (hyacinth water) plant in Aceh Barat. This paper use a mixed method approach and includes interview and direct observation data to describe and document program implementation and its impacts. The program conducted by lecturers and students from LP2M UIN Ar Raniry and participants from three Villages in Arongan Lambalek sub district in Aceh Barat. The program was implemented in three phases: institutional preparation, craft and human resource training, and marketing. The timeframe for the program was six months from October 2016 to March 2017. The program succeeded in creating five productive business groups producing handicrafts made from *enceng gondok*. In general, communities were supportive of the program because of its benefits to the welfare of participants and the village. Program constraints and the role that government can play in the supporting and expanding the program benefits are discussed.

**Keywords:** Hyacinth Water; Economic Empowerment; Community Engagement Program

### **ABSTRAK**

Menurut data Biro Pusat Statistik (Guci, 2017) disebutkan bahwa Aceh Barat adalah satu kabupaten termiskin di wilayah Provinsi Aceh. Salah satu penyebabnya adalah konflik yang pernah terjadi dan bencana alam gempa bumi dan tsunami 2004. Tulisan ini bertujuan untuk menjelaskan Program Kuliah Pengabdian Masyarakat (KPM) Inovatif Universitas Membangun Desa (UMD) pemberdayaan tanaman *enceng gondok* di wilayah Aceh Barat dengan segala keunggulan, keterbatasan, dan keunikan pada setiap langkahnya dengan menggunakan wawancara dan observasi langsung sebagai alat pengambilan data. Program KPM Inovatif UMD adalah sebuah program yang dilaksanakan oleh Lembaga Pengabdian Masyarakat UIN Ar Raniry yang bekerja sama dengan KOMPAK Indonesia. Program ini dilaksanakan oleh dosen sebagai supervisor, mahasiswa sebagai peserta, dan LP2M UIN Ar Raniry sebagai panitia pelaksana di tiga desa di Kecamatan Arongan Lambalek, Kabupaten Aceh Barat. KPM Inovatif UMD dilakukan selama enam bulan, yaitu Oktober 2016 hingga Maret 2017 dengan tiga tahapan: tahap penyiapan lembaga, tahap penyiapan sumber daya manusia pengrajin *enceng gondok*, dan tahap penyiadaan pasar bagi kerajinan *enceng gondok*. Kegiatan ini telah melahirkan lima kelompok usaha produktif dengan menghasilkan produk kerajinan berbahan dasar *enceng gondok*. Kesimpulan kegiatan ini adalah masyarakat sangat antusias dalam mengembangkan produk kerajinan berbahan dasar *enceng gondok* untuk dapat menyejahterakan kehidupan keluarga, namun masih terkendala dengan kualitas produk yang dihasilkan dan tempat pemasaran yang potensial di kemudian hari. Oleh karena itu, diperlukan peran pemerintah dalam melanjutkan program pemberdayaan masyarakat ini.

**Kata kunci:** Tanaman *Enceng Gondok*; Pemberdayaan Ekonomi; Program Pengabdian Mahasiswa Kepada Masyarakat

## 1. INTRODUCTION

Laws No. 20 of 2003 on National Education System article 20 paragraph 2 states that: “Universities are obliged to provide education, research, and community services”. In addition, article 24 paragraph 2 states that: “Universities have the autonomy to manage their own institutions as centers of higher education, scientific research, and services to the community”. While thousands of universities in Indonesia conduct community engagement programs, many fail to maximize their potential impact on students and society because they are viewed as a formality, simply requirements for the university and graduation. UIN Ar Raniry in partnership with KOMPAK, seeks to alter this long-standing view by providing innovative and rewarding community service opportunities that can provide students with practical and meaningful real world experiences that directly contribute to community development activities.

Community Engagement Program (KPM) is one of the compulsory course subjects offered to the students at UIN Ar Raniry who plan to obtain a strata one education level. This KPM activity requires students to provide community service and live and reside for at least 40 days in a village chosen by the Community Research and Services Institution (see UIN Ar Raniry KPM guidelines). The UIN Ar Raniry program recognizes that community development is not strictly government’s work. Lecturers and students can contribute through various mechanisms. The Innovative KPM-UMD team acted as a “facilitator” in the target villages, promoting bottom-up development and community participation as opposed to the classical top-down approach.

This paper presents findings from a qualitative study undertaken by UIN Ar Raniry and results from a larger quantitative study of KOMPAK’s UMD program overall. Taken together, these results suggest that the Innovative KPM-UMD program was highly successful, benefitting the local communities as well as the students who were engaged in the program.

### 1.1 The Aceh context

Based on the Indonesian Disaster Data and Information (DIBI) (in Octari et al., 2016) Indonesia has witnessed many disasters and forced displacements. It is estimated that between 1990 to 2016 there were approximately 9.7 million Indonesian were displaced due to natural disasters including earthquakes, tsunamies, floods, communicable diseases and social conflicts. DIBI also reported that Aceh is particularly vulnerable. Not only is it prone to earthquakes and tsunamies, but also suffers from frequent floods and landslides, which occur almost every year.

Statistics Central Bureau of Aceh Barat (Saifuddin, 2015) indicate that floods that frequently occur in Aceh Barat are caused by a variety of phenomena including: high intensity rainfalls, lowland community settlements (approximately 4–8 above sea level), tidal waves, settlements along the watershed rivers, and the conversion of forest land into oil palm and rubber plantations. Moreover, the problem of flooding can be exacerbated by the disposal of garbage in ditches, sewers and canals which can cause waterways to be clogged and overflow.

Kabupaten Aceh Barat has numerous disaster and displacement threats; natural disasters due to geologically hydrometereology, climatology, as well as non-natural social disasters due to human forces. There are nine potential disasters that have been identified based on the historical incidents, namely: floods, tsunamies, forest fires, earthquakes, abrasions/erosions, landslides, droughts, thypoons and epidemics. Aceh Barat is the most heavily tsunami affected area and the area most frequently hit by floods and it is considered one of the poorest areas in Indonesia (Saifuddin, 2015).

The Innovative KPM-UMD seeks to provide alternative solutions to Aceh Barat community, by focusing on economic empowerment and leveraging *enceng gondok* plants which live and thrive in several streams in the region.

## **2. PROBLEMS AND GOALS**

The three villages targeted by the Innovative KPM-UMD were the areas most frequently hit by floods. In addition to heavy rainfalls, floods often occur because the surface of the rivers are covered by hyacinth water. The Innovative KPM-UMD aimed to educate the community on how to cultivate *enceng gondok* plants into a handicraft in order to cleanse the river and prevent flooding. Community-engaged education has become much more mainstream since Ernest Boyer and others spurred discussion and debate about the relationships between the academy and the communities they serve (Malm, 2015). This program aims to help the community to understand their flooding problem and how prevent it. Besides, the program also emphasized the opportunities to improve the community economic welfare, particular for women, by selling the handicrafts. The new paradigm of KPM-UMD is how to give one solution of human's problem.

## **3. METHODS**

The Research and Community Service's qualitative study used the paradigm and approach of Community Based Research and Participatory Action Research (PAR), conducting interviews and observations with program participants and beneficiaries. The women's economic and handicraft group and the community leaders were key data sources. Hadimulyo and Maryono (1989 in Srimulyani, 2016) stated that PAR has been recognized as a leading method for action research since the 1970's. In Indonesia, this approach began to be adopted by NGOs in mid 80's. Key PAR principles and guidelines include:

- a. Knowledge production by the community about their own life agenda.
- b. Community participation, during data collection, data analysis, strategy formulation, reflection and evaluation. All these stages require community participation.
- c. Community control on the utilization of research results. Due to the community's active involvement, the community will also have the opportunity to discuss and review the results of this study.

In addition to observation and interviews, the researchers also use government data, especially from Arongan Lambalek Sub-district as a data source.

### **3.1 Implementation stages of Innovative KPM-UMD 2016**

Innovative KPM-UMD is a program of community services carried out by the students and lectures of UIN Ar Raniry and is supported by KOMPAK, and the Government of Kabupaten Aceh Barat. The activities lasted for six months and were divided into three phases.

#### **Phase I**

Phase I was the process of establishing the productive business groups in each of assisted villages. In this phase, students and lecturers helped the community see the benefits of working cooperatively to establish a productive business entity. They were instructed on the articles of association and household budgets of this type of productive business group and the importance of establishing the legality of the productive business groups so that it could become one of the alternative options for the village-owned enterprises. According to Article 1 number 6 of Law No. 6/2014 on Villages, the existence of village owned enterprise (Putra, 2015) states that "A Village-Owned Enterprise is a business entity where the whole or most of the capital owned by the Village through direct participation which derived from village assets and is split up to manage the assets, services and other businesses for the utmost welfare of Village community."

Output of this phase I was the creation of productive business groups which have legal validity and are capable of creating a unified community.

### **Phase II**

In fase II, the Innovative KPM-UMD directs the productive business groups to be able to deliver a basic training of cultivating *enceng gondok* plants and transform them into interesting goods to be marketed such as bags, sandals, and tissue storage boxes to children's toys. This training involves both local and national trainers. The goal of the training was to encourage them, and enable them to produce high quality products, with high selling values and able to compete with other similar products in the market.

### **Phase III**

In phase III of the Innovative KPM-UMD activities focused on marketing the products. The topics covered included: product branding; processing production permits; promotion and advertisement; preparing for a joint sales center; and regulation advocacy on sustainability and cultivation program of *enceng gondok*. Phase III also included supporting the groups to prepare products for and register to sell in several national exhibition events such as Scientific, Sports and Art Week of the Islamic Universities throughout (PIONIR 2017) and the National Week of Farmers and Fishermen 2017.

Examples of products that have been produced as seen on Figure 1 have been launched into the market in some national events conducted in Banda Aceh. Although the sales during events were not too promising but the productive business groups were very excited for the opportunity they had and how the community in general began to recognize the handicraft products made from *enceng gondok* originated from Aceh Barat.



Figure 1 Handicraft Produced by the Productive Business Groups

## **4. RESULTS AND DISCUSSIONS**

The Innovative KPM-UMD 2016 conducted three groups of participants during its six months of activity, this program has succeeded in establishing five institutions or productive business groups that have the capacity to cultivate *enceng gondok* plants into several model of handicrafts. Three villages targeted for the activities have unique characteristics, strengths and weaknesses. Descriptive analysis of each village context is presented in Table 1.

Table 1 SWOT Analysis to the Condition of Three Targeted Villages of the Innovative KPM-UMD 2016

Village	Strength	Weakness	Opportunity	Threats
Cot Jurumudi	<ul style="list-style-type: none"> <li>Raw Materials available</li> <li>A motivated community</li> <li>Already possessed a production center</li> <li>The gampong aparatus do have commitment</li> <li>Budget availability to support this activity</li> </ul>	<ul style="list-style-type: none"> <li>Do not have good Indonesian language skills</li> <li>Do not know where to market the product</li> <li>No knowledge on <i>enceng gondok</i> handicrafts</li> <li>Pessimistic, hence do not have the courage to be creative at all</li> </ul>	<ul style="list-style-type: none"> <li>Bupati's willingness to issue a policy on marketing <i>enceng gondok</i></li> <li>Students and lecturers of UIN Ar Raniry</li> <li>Support from BPM Provinsi, Kabupaten, Disnaker and Bappeda</li> <li>Support from KOMPAK</li> <li>Status as the poorest kecamatan will become a priority</li> </ul>	<ul style="list-style-type: none"> <li>Floods disaster</li> <li>Disturbance from outside of the gampong</li> </ul>
Kubu	<ul style="list-style-type: none"> <li>Source of raw material is available</li> <li>Sufficient manpower</li> <li>Production site is available</li> <li>Have a good motivation</li> <li>Budget commitment for 2017 is available</li> </ul>	<ul style="list-style-type: none"> <li>No one has the skills yet</li> <li>Insufficient of production tools/equipments</li> <li>Social jealousy in the community</li> <li>Lack of good management group</li> <li>Not knowing the quality of <i>enceng gondok</i></li> </ul>	<ul style="list-style-type: none"> <li>Students and lecturers of UIN Ar Raniry</li> <li>Not many producer yet</li> <li>There are groups of craftsmen who are willing to provide training</li> <li>Broad market share</li> <li>Government support</li> </ul>	<ul style="list-style-type: none"> <li>No market to accommodate yet</li> <li>Have no ability to standardize the quality product</li> <li>The river is surrounded by rattan</li> <li>Items from outside is less expensive</li> </ul>
Peulanteu Lb	<ul style="list-style-type: none"> <li>Source of raw material is available</li> <li>Sufficient manpower</li> <li>Production site is available</li> <li>Have a good motivation</li> <li>Plenty women of productive age</li> <li>Many similar crafts have been created</li> <li>Have the shell processing tool which can be used</li> </ul>	<ul style="list-style-type: none"> <li>Difficult to have raw materials</li> <li>Lack of skills</li> <li>Hard to gather people due to the area of the gampong</li> <li>Not all gampong aparatus understand this activity</li> </ul>	<ul style="list-style-type: none"> <li>For the sustainability, this program could be incorporated into the RPJM Desa</li> <li>Trainers are available close by to the area</li> </ul>	<ul style="list-style-type: none"> <li>No market to accommodate yet</li> <li>Have no ability to standardize the quality product</li> <li>The river is surrounded by rattan</li> <li>Items from outside is less expensive</li> </ul>

While the Innovative KPM-UMD Program had been successfully conducted; analysis of the implementation suggest that more involvement by government partners (Ministry of

Social Affairs, Manpower and Community Empowerment Agency in Kabupaten Aceh Barat) would improve the government's ability to continue the program with the community.

*"There have been NGOs who provided assistance similar to this, however when they have finished with the program then the activities also completed, and the community is not able to sustain the activity."*

*B70-73/Sustain-KUP01*

This suggests that the government, through the related agencies, could provide further mentoring to the Innovative KPM-UMD so the program would be sustainable and eventually it will become a center of professional handicraft production in Kabupaten Aceh Barat. Sustainability efforts should focus not only on the production aspect, but also on the marketing aspect. For the community, they are very enthusiastic in producing the handicrafts but were less confident when it comes to discussing the marketing aspect.

*"The government and UMD organizing committee should have been able to find market and train the community to improve the quality of the produced goods."*

*B20-21/Mar-KUP02*

The sustainability of the Innovative KPM-UMD 2016 Program can be done through various policies, one of them is by strengthening KUP institution to become an official business institutions in the community, creating and connecting production center of *enceng gondok* with potential markets both in Aceh, Indonesia, or overseas country. The Women's Group feels that this program is theirs because they themselves determine the program's activities and design. So many ideas and ideas initiatives emerge from them related to the selection of business forms, training implementation, selection of trainers, comparative study sites, and so on. Hence the success of the Innovative KPM-UMD 2016 Program should not stop only up to a certain time, but could be continued so as to help the community to reach the stage of economic prosperity.

#### **4.1 Findings from the KOMPAK evaluation**

In additional to the PAR conducted by UIN Ar Raniry, KOMPAK conducted an evaluation that included all four programs participating in the UMD initiative. Data was collected from university, students, village government and community members.

Across all respondents, the findings suggest that the Innovative KPM-UMD was effective. University reported high satisfaction with the program. Strong linkages were created with local governments which will lead to program sustainability, and funds from village budgets have been allocated to continue the program. The Rector of the University has designated the three villages as UIN Ar Raniry-assisted villages, suggesting that the university is committed to continuing to support the villages.

The students (N= 56) also reported strong satisfaction with their experiences in the Innovative KPM-UMD program. In general, on many of the indicators the students at UIN Ar Raniry compared to students at the other universities tended to rate their experience significantly more favorably. It was also the case that students from UIN Ar Raniry were 32.3 percent more likely than other students to report that they wanted to go into development work because of their participation in the Innovative KMP-UMD Program. See Table 2 below for student ratings of their experiences in the program.

Table 2 Student Report of UMD Program Experiences

Program Experiences	Rating
	10-point scale 1 = (Very Unsatisfaed) to 10 = 10 (Very Satisfaed)
Overall satisfaction	8.1
Likely to recommend the program to others	8.7
Your UMD work had a positive impact	9.1
Your work was valued by the village members	9.0
This experience will affect your choice of career or field of study	8.2
	Percent Agree
Interested in continuing the work done during UMD; either in the same village or other location	98.2

Village government also provided positive feedback about the Innovative KPM-UMD Program. The economic benefits of the program were highlighted by village leaders in all three of the villages. One of the village heads reported that *“This strategy is effective for the economic development issues of small and poor communities.”* Another village leader noted that the program could *“Solve one of the problems of unemployment on a small scale and skills can be enjoyed by the community, especially women.”* And while the village leaders also acknowledged that the business groups weren’t yet seeing a profit, they believed there was great benefit to improving the skills of the community and fostering relationships between citizens. One village head noted, *“This activity is one way to build the creativity of the community by involving universities and also students.”*

The value of the partnership between the village and UIN Ar Raniry was mentioned by several village leaders. For example, one village head reported, *“This method can be an alternative to direct aid in the form of material to the community. This activity is a community skills development activity involving universities.”* While another village leader said, *“The amount of attention UIN in fostering this group to be a factor driving the success of the program.”*

The village leaders also reported on the potential of sustaining the program. In one of the villages, the government has agreed to provide funds to continue the program, as reported by the village head, *“The village government already has a support plan by allocating village funds for empowerment.”* It was also noted that support from district and sub-district governments would also increase the likelihood of program sustainability. While were some positive progress toward sustainability, but concerns remain, *“Without further assistance I doubt the community can be independent. This is because the ability of our community resources is very less.”*

## 5. CONCLUSION

UIN Ar Raniry through the Innovative KPM-UMD Program, and with support from KOMPAK, has implemented community assistance program as an active efforts to alleviate poverty within the community. This is in line with the recommendation of the Royal Town Planning Institute (2016) which suggests the role of universities towards community empowerment programs and poverty reduction which is manifested in the form of research and community services. And, if a regular KPM is declared as success when the program is completed, then it will be different with the Innovative KPM-UMD. The success of this

program is not only measured by the implementation of all activities as planned on the framework accordingly, but more than that, the success of the Innovative KPM-UMD Program is also measured to the extent where this program can continue as an effort to expelling the community from poor conditions. Therefore in this case, the government of Kabupaten Aceh Barat through the Community Empowerment Agency, the Social Affairs Office and Manpower must be able to provide further assistance to the business groups that have been established.

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