

**COMMUNITY SERVICES: OPTIMILIZATION INDIGENOUS  
COMMUNITY OF CIREUNDEU IN ADAPTING FOOD RESILIENCE TO  
SUPPORTING SDGs DESA AGENDA**

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**ABSTRACT**

*The world has faced the threat of climate change, included Indonesia. Climate change has a negative impact on human life being, especially in the agricultural sector which provides basic human needs. Southeast Asia region including Indonesian, culturally make the rice as a staple main commodity of their lives. However, the difficulty with rice as a staple amidst climate change circumstances is required the high amount of water, while the earth's temperature is getting hotter by the day, making it more likely that droughts will lead to crop failure. Therefore, food diversification is needed to replace the main commodities such as cassava and corn. Indigenous community of Cireundeudeu has diversified its food from rice to cassava as the main commodity. However, they have diversified, it does not mean the impact of climate change has stopped. This community services program in indigenous community of Cireundeudeu is expected to be able to provide solutions to these problems by according to Sustainable Development Goals Desa Agenda. Team of community services would be carried out using various methods, one of which involves participation from partners.*

*Keywords: Cireundeudeu Indigenous Community, Food Resilience, SDGs*

## **A. Introduction**

Climate change is a challenge that must be faced by all countries around the world, including Indonesia. Climate change caused by greenhouse gas emissions trapped the atmosphere and it is a threats for several aspects including; agriculture, biodiversity, environment and socio-economy (Dewi 2009). The greenhouse gas emission has continued to increased since the 1900s due to massive industrial development around the world. This has an impact on increasing the temperature to 2° celsius degrees (IPCC 2021).

Southeast Asia is the region which located on the equator with a tropical climate. The main food commodity for all of the countries in this region is rice. Indonesia is one of the countries in Southeast Asia that depends on rice as the main food commodity. Thus, climate change would affect the sufficiency of rice commodity to fulfill the needs of people in Indonesia due to crop failure. The occurrence of crop failure will lead to further threats such as scarcity, rising of commodity values, poverty and hunger. Therefore, the impacts caused by climate change

covers the environmental, socio-economic, and even socio-political sectors (Abbass et al. 2022).

Government offers solutions to prevent the impact of climate change by food diversify. In other words, government try to look the alternatives the staple commodities – rice - that have the same values such as cassava, sago or corn. This is related to the concern of government that basic commodities commonly consumed by society could not be fulfilled. Furthermore, agriculture sector has role to drive of the country's food resilience, with most of Indonesia's agricultural sector located in rural areas. Thus, the government's priority strategy to achieve sustainable food resilience is to implementing the Sustainable Development Goals (SDGs) Desa to achieve Indonesia food resilience (18 Goals (KEMENDES) – Sustainable Development Goals Center – Universitas Brawijaya n.d.).

The Team Community Partnership Services (PKM) of FISIP Pasundan University visited Indigenous Cireundeu Village as a locus partner to support the SDGs Desa. This village is located in the Cimahi city area, more

precisely located in Cireundeu, Leuwigajah, South Cimahi district, West Java. 14.5 km from center of Bandung.

Indigenous Cireundeu Village is one of the indigenous village in Indonesia that has replaced rice as the main commodity to cassava for basic consumption since 1918, pioneered by Mrs. Omah Asmanah, son of Mr. Haji Ali (Jabbaril 2021). The transition caused by the colonialization during the Dutch colonial period, which coincided with the food crisis. In addition, the Cireundeu indigenous peoples have a unique philosophical values by upholding ancestral (karuhun) proverb (Jabbaril 2021).

*“Teu nanaon teu boga huma ge asal boga pare, teu nanaon teu boga pare ge asal boga beas, teu nanaon teu boga beas ge bisa ngejo, teu nanaon teu bisa ngejo ge asal bisa nyatu, teu nanaon teu bisa nyatu ge asal bisa hirup”*

Those philosophical values has impact to this day for indigenous peoples to depends on cassava as a main commodities. However, this does not mean without problem. It is true that cassava is a commodity that does

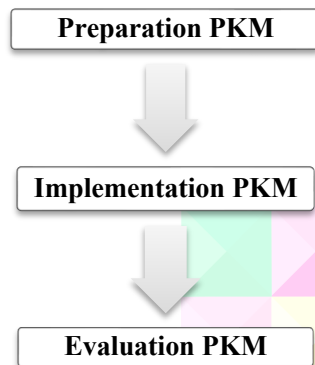
not required high amount of water but still need a sufficient of water. Drought and erratic rainfall due to climate change are new problems that must be addressed by the Cieundeu village.

Several disasters caused by climate change that impact to Cireundeu village such as landslide of Leuwigajah landfill (TPA) in 2005 and forest fires occurred in 2019. This was said by Kang Yana, indigenous community representative who was willing to be a resource person for the PKM Fisip team of Pasundan University.

The team tried to find solution for partner covering 4 aspect; aspect of developing insights into climate change for indigenous Cireundeu peoples, aspect of improving food capacity management mechanisms in climate change circumstances, aspect of increasing awareness of threats that occur in the agricultural sector in climate change circumstances, last in the aspect of mentoring and training on SDGs Desa parameters at point 12, 13 and 15. These 4 aspects were formulated into 2 target solution output plans.

**Table 1 Partner Output Target**

	food product cassava-based 2. Partner able to promote food products to the market through social media as an effort to fulfill SDGs Desa points related to “Economic Village Growth Evenly” on agenda number 12, 13, and 15
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Plans	Indicator Partner Achievement
1. Aspects of development of indigenous Cireundeu peoples	1. Partner are able to applying adaptive strategies in accordance with the SDGs Desa 2. Partner are able to respond climate change circumstances 3. Partner are able to promote and sell food product cassava-based on ecommerce
2. Aspect of technological capacity building	1. Partner actively operate and manage ecommerce to sell

### B. Method of Implementation

The method of implementation carried out by the Community Partnership Services (PKM) team of Fisip Pasundan University is divided by three stages, namely the preparation, implementation and evaluation.

The preparation stages, the PKM team identifies the problems that occur in partner. In this case the problems that occur in the indigenous people of Cireundeu village due to climate change on food resilience. The team would conduct a coordination meeting

**Figure 1 PKM Activity Plan**

to design the optimization of infrastructure and other supporting

resources needed by partner according to priority issues.

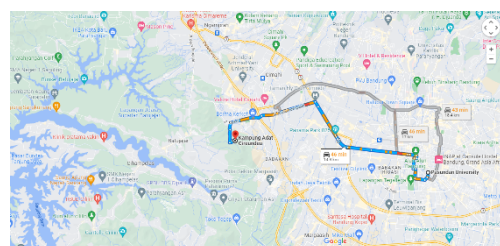
The second step is implementation, includes training methods, technical guidance and operational assistance methods, also facility and media approaches methods. The training method is aimed at transferring knowledge and adaptive strategies in overcoming problems. Technical guidance and operational assistance method is to intended partner are able to implement solutions to the problems that identified in the previous stages. This stage aims to assisting partner in solving priority problems.

The last stage, it is an assessment activity carried out by the PKM team from preparation to post training program, technical and operational guidance, facilitation and media. The evaluation is carried out by means of discussions with partner, based on the result of these discussion, it could be seen that partner responses about the development of the indigenous Cireundeu community.

### **C. Result and Discussion**

Administratively, indigenous Cireundeu is located the South Cimahi

District, Cimahi City. The distance from Pasundan University to indigenous Cireundeu village is 14.5 km which could be reached in about 45 minutes by using a vehicle.



**Figure 2 Map Location**

Like other indigenous village in general, indigenous Cireundeu village also has dependences on nature. The spotlight on indigenous Cireundeu is because of the food diversification from rice to cassava since 1918. Food diversification carried out by the Cireundeu indigenous peoples has proven successful in maintaining and improving their food resilience. The cassava has planted and cultivated by the indigenous people of Cireundeu, not only fulfill their needs but also could become an item has economic values.

This is interesting, considered that cassava commodities have a big enemy, water. And with today's, the global circumstances facing climate change that occurs in erratic rainfall. Because of that, team PKM wanted to

know how indigenous Cireundeu village adapted with the current environment circumstances. Included the climate change that occurs and had an impact on the economy of indigenous Cireundeu village in accordance with SDGs Desa.



*Figure 3 Gate of Indigenous Cireundeu Village*

The team conducted a direct interview with Kang Yana as a representative of the local indigenous peoples. According to Kang Yana, indigenous Cireundeu village has at least 200 family cards with a geographical area around 100 hectares of which 6 hectares are used for settlements, 30 hectares are used for agricultural and 40 hectares are forestry. The tradition of consuming cassava has been carried out by indigenous people since 1918 and amid the threat of climate change with erratic rainfall, according to Kang Yana, it is because of the forest is still maintained, water absorption could be controlled.

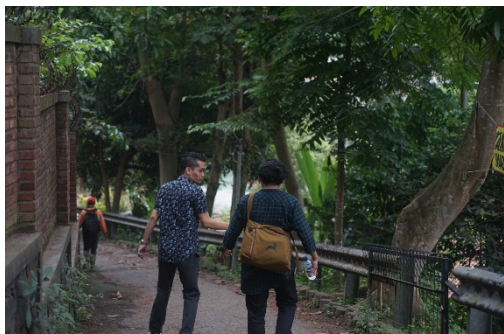
Therefore, the productivity of cassava commodities not disturbed.

According to Kang Yana, the cassava as commodities for consumption is never be constrained, but it was constrained economically. This was occurred in 2005, there was a landslide at the Leuwigajah landfill which extremely impacted on the productivity of cassava. 50% of cassava was crop failure. Despite the crop failure, according to Kang Yana, the indigenous people were not suffered by undersupply or hunger, but their economy suffered a decreased. Besides that, the impact caused by landfill in 2005 eliminated the settlement of indigenous Cireundeu peoples including the traditional house of Cireundeu village.

The impact caused by landfill landslide in 2005 eliminated the settlement of the indigenous Cireundeu peoples including their traditional house. Indigenous Cireundeu village takes 200 years to rehabilitated. During these 20 years, peoples in their efforts to rehabilitated also adapt to the times. According to Kang Yana, the rehabilitation of the area carried out by



replanting trees to absorb more water before reaches the agriculture area.



*Figure 4 The Road to Indigenous Cireundeu Village*

Besides Leuwigajah landfill landslide in 2005, in 2019 also suffered by forest fire. According to Kang Yana, the forest fire occurred due to the long drought season. The forest, which filled with bamboo trees, is certainly a fuel that easily to burned. Kang Yana also added that the forest fire incident had been anticipated by the indigenous people so that the evacuation routes and task force unit consisting of indigenous peoples had been prepared. However, the forest which is a water absorption area is a memory that does not wanted to be repeated for the Cireundeu village.



*Figure 5 Forest Fire at Indigenous Cireundeu Village in 2019*

Challenges is not only limited by nature but also from the times. According to Kang Yana, the indigenous Cireundeu peoples also take advantage of modernization to promote and trade cultivated cassava products through ecommerce such as Tokopedia, Shopee and Lazada. By utilizing technology as a medium in promoting and trading the original merchandise of the indigenous Cireundeu village which extremely adds to the economic growth.

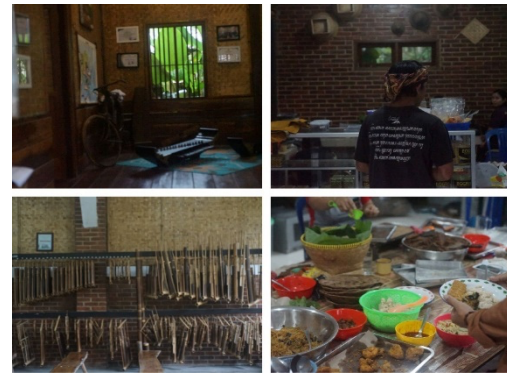
According to Kaya Yana, indigenous Cireundeu tried to be an educational tour for wider society. This innovation requires synergy across generations in indigenous peoples, so that provision of the next generation needs to be considered. Therefore, the youth in the indigenous Cireundeu village are always given briefings by elders and previous generations so that regeneration in indigenous village are

maintained. However, youth generation who have knowledge of technological sophistication is also challenges that must be overcome because it can affect the behavior and mindset of indigenous youth. On the other hand, the presence of indigenous youth can provide fresh innovation and creativity to indigenous Cireundeu village.



**Figure 6 Youth of Indigenous Cireundeu**

In order to create educational tourism, partner also provided facilities for tourists who want to visit to get the impression of being a native of indigenous Cireundeu village such as angklung as a Sundanese musical instrument, a traditional hall which is also intended as a place to stay for tourists, and also a place to eat with various kinds of processed cassava.



**Figure 7 Facility of Indigenous Cireundeu Village**

Based on field studies obtained from Kang Yana as an informant as well as a representative of the indigenous peoples, it is explained that the Cireundeu village has and always adapts to the environment. Climate change also encourages indigenous peoples to continue to be adaptive in various ways, such as planting and maintaining forest as water absorption and also preparing evacuation routes when forest fires occur due to long drought.

This is in line with the SDGs Desa point 13 (Village Response to Climate Change) and point 15 (Village Care for the Land Environment). Then in the economic context, indigenous peoples of Cireundeu also are fairly independent because they can produce and trade processed cassava products widely, which is also in line with SDGs Desa point 8 (Equitable Village



Economic Growth) and point 12 (Environmentally Conscious Village Consumption and Production).

The activity was held on Friday, 16 June 2023. The coaching included how to adapt to climate change and an independent village economy. Among them:

1. How to adapt in climate change circumstances?
2. Knowing cassava commodities as a commodity has a trade value by utilizing technology
3. How to empower the local youth as the next generation of Cireundeu village?



**Figure 8 Processed Discussion and Mentoring**

Community services is concerned on efforts to provided insight also assistance in awareness and adaptive to climate change and an independent village economy, accordance the goals of the SDGs Desa. The result of activities by team PKM in the

community services program that have been achieved include:

1. Provided partner with an understanding of the urgency of climate change, so partners are able to develop more adaptive efforts
2. Partners get insights related to the SDGs Desa especially on point 12, 13 and 15 which could be used as a reference in developing innovations and optimizing cassava production
3. Build partner awareness regarding the regeneration of the leadership of indigenous peoples of Cireundeu in preserving existing customs

Climate change is a threat for indigenous Cireundeu village that depends on nature. Hopefully with this activity can provide new insights and initial steps for partner in adapting to climate change and continue to be a indigenous village with an independent economy across generations.

#### **D. Conclusion**

The community services activities that have been carried out, the indigenous peoples of Cireundeu quite adaptive to climate change that occurs and could be said to be economically

independent. However, there is still a need for guidance on adaptation related to climate change so that indigenous peoples can be skilled in dealing with climate change. In addition, the breakthrough made by partner with educational tourism needs assistance in order to prevent unwanted and detrimental things for the indigenous Cireundeu village. Therefore, the SDGs Desa are important for indigenous peoples to know in an effort to prevent negative impacts on the village and on the other hand to developing the potential of the village by unforgetting the customs that have been preserved.

#### **E. Suggestion**

After the implementation of community services for indigenous village of Cireundeu, there needs a role among groups such as the role of Central Government including The Ministry of Tourism and Creative Economy (Kemenparekraf), The Meteorology Climatology and Geophysics Agency (BMKG), The National Disaster Management Agency (BNPB), The Ministry of Agriculture (Kementan), and The Food Security Affairs Agency (BUKP), Local Government, Academics, Researcher, and The Community.

This is based on the problems experience by partner such as landfill landslide in 2005, forest fire in 2019, and garbage that does not come from indigenous Cireundeu village. This indicated that the Cireundeu village could not overcome it on its own by limited of information and capabilities. Otherwise to optimization the potential possessed by the indigenous Cireundeu village, there needs to be roles among groups.

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