

## Socialization Of Land Utilization For Communities For Sustainable River Waters Area Ecosystems In Nagari Sungai Sariak, Sungai Sariak Vii Koto District, Padang Pariaman Regency

Nefilinda<sup>1\*</sup>, Rozana Eka Putri<sup>2</sup>, Rika Despica<sup>3</sup>, Meli Agusti<sup>4</sup>, Yulius Rahmanto<sup>5</sup>  
PGRI University Sumatera Barat

**Corresponding Author:** Nefilinda [nefilinda@yahoo.com](mailto:nefilinda@yahoo.com)

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### ABSTRACT

The purpose of this community service is to socialize land use for the community for a sustainable watershed ecosystem in Nagari Sungai Sariak, Sungai Sariak VII Koto District, Padang Pariaman Regency. This service is carried out in order to increase public understanding regarding: 1). land use, 2). Maintenance of watershed ecosystems. The results of the service that has been carried out are: 1). Increased public understanding regarding wiser land use, 2). Increased public understanding regarding the importance of sustainable watershed ecosystems. So that the availability of river water for people's lives continues to exist and can support the livelihoods of the people in Nagari Sungai Sariak, Sungai Sariak VII Koto District, Padang Pariaman Regency.

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## **INTRODUCTION**

Land use consists of a collection of several activities carried out by the community to utilize the land, in an area in accordance with the behavior of the community which has different meanings and values. Land use pattern is a spatial pattern of space use which includes the distribution of settlements, agriculture and urban and rural land use patterns (Racmatullah, 2016). According to Sulistiawati (2014) land use is the physical form of objects that cover land and are related to human activities on a land. Mean while, according to Vink in Ariastita (2010), land is different from land, soil is one aspect of land related to aspects of climate, relief, hydrology, and vegetation. Opinion Arsyad (2010) classified land use into agricultural and non-agricultural land use. Use of agricultural land such as: rice fields, fields, plantations, and others. Non-agricultural land uses include: residential, industrial, office, and others. The point is the understanding of land use varies. However, it can be concluded that land use is closely related to human activities on a particular land such as settlements and agriculture. Land use as land use with the natural environment with the function of fulfilling human needs in the management of their lives. This means that land use is based on individual behavioral motives and land conditions.

Land has many capabilities that can be used to fulfill several community goals. In its application, the ability of land for various purposes is not limited to its use for a particular purpose. Land use changes in line with the development of community needs and culture. Changes in land use patterns will cause a phenomenon, meaning that one land use is sacrificed for another. For example, land use that was originally used as agricultural land turned into residential land and so on. Many agricultural lands were replaced for other uses such as settlements (Meyer, 1994). If not limited to the use or utilization of land can disrupt the balance of the environment, especially the ecosystem of the river basin.

Land use with human intervention, either permanently or cyclically in a group of natural resources and artificial resources, this is what is called land, with the aim of fulfilling their needs either materially or spiritually and even both (Malingreau, 1977). According to Luthfi Rayes (2007: 162), land use is a general classification of land use such as: rain-fed agriculture, irrigated agriculture, pasture, forestry or recreational areas. Changes in land use from agricultural and developed land to urban areas, which require active planning. According to Rosnila (2004), changes in land use cannot be avoided in a process of implementing regional development. Changes occur because of the need to meet the increasing needs of society in the use of land.

A watershed (DAS) is an area bounded by natural boundaries, such as ridges or mountains, as well as rock boundaries, such as roads or embankments, rainwater falling in the area contributes to flow to the outlet (Suripin, 2002). According to Kodoatie and Sugiyanto (2002), a watershed is a unitary area/region/area of water management that occurs naturally, water is caught from rainfall, and flows from that area/region/area towards a river or tributary. Watershed is a complex megasystem, consisting of physical systems, biological systems, and human systems. Every system and sub-system that is in it interact

with each other. The role of each component and the relationship between components greatly determines the quality of the watershed ecosystem. The occurrence of a problem in one component of the ecosystem is greatly felt by other components which have a chain effect. The balance of the ecosystem will be good if the reciprocal conditions between several components run well and optimally (Kartodihardjo, 2008 in Setyowati and Suharini, 2011).

There are different levels of river water discharge in the rainy and dry seasons. This is a sign of a watershed that is not functioning properly. The characteristics of watershed damage can be seen from changes in hydrological behavior, namely the high frequency of flood events (peak flow) and increased erosion and sedimentation processes and decreased water quality (Mawardi, 2010). According to Sucipto (2008) states that watershed management efforts can be carried out optimally by utilizing natural resources in a sustainable manner so as to produce a good watershed ecosystem as well. Based on the background stated above, the purpose of this service is to socialize land use for the community.

## **IMPLEMENTATION AND METHODS**

The Community Partnership Program is carried out by a team of lecturers and two students who are in accordance with the previous research field, namely disaster and use experts in conducting discussions to produce quality services so that people can understand wise land use in their daily lives. Because they live in the watershed. So that every day both in the use of the land they own is closely related to the watershed, both in the use of river water for irrigating rice fields, fields, ponds, even for bathing and washing, people use the river. The service proposing team will evaluate the activities in the form of process evaluation, final evaluation and follow-up evaluation. Indicators of achieving goals and benchmarks used to justify the level of success of activities can be seen in the framework below.

1. Problems
  - a. Low knowledge and understanding of the community regarding land use
  - b. Low knowledge and understanding of the community regarding the watershed ecosystem
2. Alternative problems
  - a. Public education is still low
  - b. The community only uses the existing land
  - c. Communities lack information regarding wise land use
  - d. The community is less concerned about the watershed ecosystem
  - e. Most of the people have not received education and training related to wise land use and maintenance of watershed ecosystems.
3. Alternative Problem Solving
  - a. Conduct socialization of land use wisely
  - b. Conduct socialization on the maintenance of the watershed ecosystem

Community service is carried out by the proposer which is an obligation in carrying out the Tri Darma of Higher Education. The proposing team consisted of a team of PGRI University West Sumatra lecturers and two PGRI University West Sumatra students. This service is in collaboration with the local government, namely the Wali Nagari and the Head of the Nagari Youth. So that in community service activities it can increase knowledge and understanding regarding the use of community cultivated land for sustainable watershed ecosystems in Nagari Sungai Sariaik, Sungai Sariaik VII Koto District, Padang Pariaman Regency.

### **Service Implementation**

a. Service Location

The service was carried out in Nagari Sungai Sariaik, Sungai Sariaik VII Koto District, Padang Pariaman Regency.

b. Service Time

The service will be held from June 16, 2022 to July 16, 2022 (1 month).

Background of the Participants and Many Participants in the Service

c. Participants in community service consisted of the people of Nagari Sungai Sariaik, Sungai Sariaik VII Koto District, Padang Pariaman Regency. These participants were not all the people in the Nagari, but only the representatives. That is as many as 20 residents consisting of heads of families, housewives and so on. All of them are residents of Nagari Sungai Sariaik, Sungai Sariaik VII Koto District, Padang Pariaman Regency.

### **Service Activity Method**

- a. Provide guidance to the community in Nagari Sungai Sariaik, Sungai Sariaik VII District, Padang Pariaman Regency, so that land use does not damage the watershed ecosystem, so that the watershed can support the lives of present and future communities in a sustainable manner.
- b. Lecture, conducting lectures to the community in Nagari Sungai Sariaik, Sungai Sariaik VII Koto District, Padang Pariaman Regency, regarding land use that supports the function of the river for ecology, economy and social.
- c. Discussion, holding discussions with the community in Nagari Sungai Sariaik, Sungai Sariaik VII Koto District, Padang Pariaman Regency, so that there are no mistakes in land use and can support their lives.

With this activity it is hoped that the people who use the land and do activities around the flow river area can maintain the watershed ecosystem in a sustainable manner. It is also hoped that the community can gain an understanding that is used as a guide for social life and also for the sustainability of the watershed ecosystem in the future. 7 Community service activities will be carried out during the community service activity period (1 month), consisting of 3 stages namely: (1) planning stage, (2) implementation stage and (3) evaluation stage. The planning stage has determined the following matters: place/location in Nagari Sungai Sariaik, Sungai Sariaik VII Koto District, Padang

Pariaman Regency. The type of activity is in the form of dissemination of land use for the community for a sustainable watershed ecosystem in Nagari Sungai Sariak, Sungai Sariak VII Koto District, Padang Pariaman Regency.

## RESULTS AND DISCUSSION

According to Wright in Sutaryo (2004), socialization consists of an individual's process of acquiring the culture of the group and internalizing to a certain degree its social norms, so that it can guide society to take into account the expectations of others. Socialization has similarities in the object of socialization, namely society, which is seen from the point of view of the relationship between humans, and the processes that arise from human relations in that society. That is, in socialization there is interaction between humans as members of a group.

Berger and Luckman in Sudarsono (2012) there are 2 types of socialization, namely:

- a. Primary socialization, namely the first socialization undertaken by individuals as children by learning to become members of society (family). This socialization takes place during childhood.
- b. Secondary socialization, is an advanced socialization process after primary socialization that introduces individuals into certain groups in society.

Socialization is a system in people's lives that is very important. Socialization makes two fundamental contributions to people's lives, including:

- a. Providing the basis or conditions to individuals for the creation of effective participation in society.
- b. Making a community sustainable because without socialization there is only one generation so that the sustainability of the community will be very disturbed.

It can be concluded that through socialization the community can participate for the benefit of their lives and create generations for the preservation of further life. There are other factors that support the socialization process, including environmental factors, in which social interaction occurs.

Other factors that affect socialization, including:

- a. Socialization is a form of information that will be given to the community in the form of values, norms and roles.
- b. Socialization involves a learning process.
- c. Dissemination to institutions, mass media, individuals and groups.

According to Lindgren (2005), land use has the same meaning as land, which is a residence, business area, sports field, hospital and cemetery area. Meanwhile, land cover tends to be vegetational and man-made on land to meet human needs. Land use is a human activity on land that is directly related to the location and condition of the land (Soegino, 2007). Land use is a continuous process of land use for optimal and efficient development purposes (Sugandhy,

2008). Jayadinata said that land use is a form or form of business activity of utilizing a plot of land at one time.

Land use according to Edy Darmawan (2003) is land use regulation to determine the best choice in the form of allocating certain functions, so that it can provide an overall picture of how an area in an area should function. Land use in the city is always associated with an assessment based on whether or not a plot of land is used for both residential and business activities on the land. Outreach activities currently being carried out to individuals and community groups in Nagari. The details of socialization activities are:

### **1. Give instructions to the community**

- a. Planting bamboo trees on the banks of the river to prevent erosion of the river banks by very heavy river water during the rainy season.
- b. Planting mixed crops in the garden or fields, so that the water absorption around the watershed is perfect, preventing the overflow of water during the rainy season and maintaining the availability of water during the dry season. The number of standing forest plants in the park results in a lot of water infiltration into the soil.

### **2. Lectures**

- a. Using the right land so as not to damage the watershed.
- b. Rice fields, gardens, fields and others require a lot of water sources, so the community must maintain watersheds properly.
- c. Behave well to the watershed. As land owners and land users, they are 40% for paddy fields, 16% for fields/gardens, 16% for fields/households and 28% for others. Most people use their land for rice fields. The rice fields need a lot of water, which is taken from the river in Nagari. Therefore, the community should not disturb the watershed ecosystem. Because most people depend on the river for their lives. In addition, the river is used by the community to collect sirtukil, fish and other needs. All activities to meet these needs are highly dependent on the watersheds in the vicinity.
- d. Behave well towards the watershed by maintaining the quality of river water and not throwing garbage or other waste into the river.

## **DISCUSSIONS**

Discussions were held to see the existing understanding in the community related to land use and maintenance of watershed ecosystems around the community. From the discussion, some people already understand well, this can be seen from several community statements regarding this matter. Like:

- a) The community agrees that the function of the watershed ecosystem is to accommodate, store and distribute water that comes from rainfall to lakes or to the sea naturally.
- b) Communities agree that their economic activities require a healthy watershed ecosystem.
- c) The community understands that disturbed watershed ecosystems will have an impact on water shortages for rice fields, fields and other fields, which they really need.

Outreach activities currently being carried out to individuals and community groups in Nagari. The details of socialization activities are:



Picture 1. Socialization ecosystem Waters



Picture 2. Land use by the community

The socialization of land use for the watershed ecosystem to the Bendang River Youth Chair, Head of RT and the community, went smoothly and was followed by discussions.

Land use by the community is partly for rice fields, fields, gardens and others. Most people grow mixed crops / agroforestry in their fields or gardens. On the grounds that there are short-lived plants to meet their needs. Meanwhile, these plants are used for children's schools and other large needs.



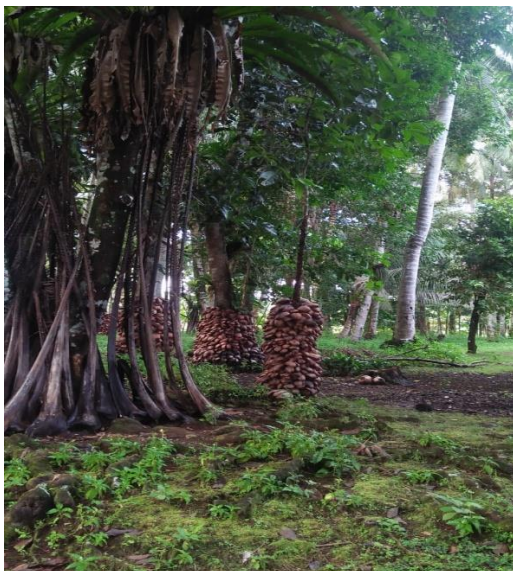
Picture 3. socialization of land use to the community

Land use by the community is partly for rice fields, fields, gardens and others. Most people grow mixed crops / agroforestry in their fields or gardens. On the grounds that there are short-lived plants to meet their needs. Meanwhile, these plants are used for children's schools and other large needs.



Picture 4. Community Fish Pond

The yard of the community's house, there are plants and a pond, this is a form of maintaining the land they own. The function of the fish pond is only from an economic point of view to meet the protein needs of the family but also functions as a water store, which is needed during the dry season.



Picture 5. Community For mixed gardens

The community uses the land for mixed gardens such as: coconut, areca nut, fruit and forest stands



Picture 6. Waters in Bendang Village  
The watershed in Bendang Village, Nagari Sungai Sariak, is still beautiful, which must be maintained with proper land use so that the watershed ecosystem is maintained.

## CONCLUSIONS AND RECOMMENDATIONS

1. Increased public understanding regarding wiser land use. The community has used the land according to its designation. Wet land is used for paddy fields. Meanwhile, loose and infertile soil is used for fields or gardens.
2. Increased public understanding regarding the importance of sustainable watershed ecosystems. So that the availability of river water for people's lives continues to exist and can support the source of life for the people in Nagari Sungai Sariak, Sungai Sariak VII Koto District, Padang Pariaman Regency. The use of land by the community in Bendang Village is in accordance with its designation. The land cultivated by the community is their own land, owned by the wife's family, owned by the community. Even so, people always use it as best as possible to meet their needs. The land was planted with: coconut, areca nut, rice, corn, yams and cassava, vegetables, bananas, papaya and others. The people of Bendang village have the concept of land use, mostly plantations with mixed gardens. Only a few of them grow similar crops, namely: rice, corn, sweet potatoes and cassava. Such plants are not in a large area. The concept of land use with mixed gardens, is really needed to maintain the availability of ground water and the environment is well maintained.

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