

Utilization Of Social Networks For Farmers And Fishermen Ups And Downs Of Lake Tempe In Laelo Village South Sulawesi

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Abstract

Farmers' and fishermen's operations surrounding Lake Tempe are heavily reliant on the ebb and flow of the lake's water. On the one hand, fishermen desire a high water level, while farmers anticipate the lake level to remain low and do not care about their property. The purpose of this research is to uncover the usage of social media in anticipation of seasonal circumstances that are damaging to farmers and fishers. The research strategy is descriptive qualitative, with in-depth interviews and a literature review serving as the primary data gathering tools. The findings revealed that family and kinship social networks remained the most important factors. The structure of government institutions' social networks is linked to aid, either directly or indirectly, such as help for manufacturing facilities. During the election campaign era, networks to parties are typically used as ambition money at democratic parties. Non-governmental organizations (NGOs) are another social network that farmers and fishers use for revolving capital assistance, skill development, and environmental facility improvement.

Keywords: lake, social network, fishermen, tides, farmers.

Introduction

As the world's biggest archipelagic country, Indonesia has two-thirds of its landmass covered by seas. Furthermore, Indonesia is physically positioned

between two continents, namely Asia and Australia, as well as two seas, namely the Indian Ocean and the Pacific Ocean, which are the most active places in the world, both economically and politically. Because of its strategic geographical location, Indonesia has both benefits and a significant reliance on the sea (Soemarmi & Diamantina, 2019). Indonesia is also recognized as an archipelagic country with extensive territorial seas and an abundance of seafood resources. One of the sources of income for Indonesian coastal villages is the abundance of fish resources (Pamungkas, 2018). As a result, the fishing sector requires increased attention in order to increase national fish output (Twumasi et al., 2020).

Indonesia is recognized as an agricultural country as well as an archipelagic country. Agriculture has evolved into a climate-sensitive industry with growing surplus labor, and it is emerging as a key contributor to internal migration to climate-insensitive industries (Jha et al., 2018). The primary goal of agricultural development is to provide farmers with improved technologies (Folitse et al., 2019). The government's attempts to accomplish sustainable agriculture are specifically outlined in Law 41 of 2009 about the Protection of Sustainable Food Agricultural Land and Law 22 of 2019 concerning Sustainable Agricultural Cultivation. In the law, sustainable agriculture is defined as an effort to build food security and sovereignty in order to realize people's welfare, as well as the management of living natural resources in the production of agricultural commodities in order to meet human needs in a better and more sustainable manner while preserving the environment (Ikhsani et al., 2020). Food is a basic necessity for about 90% of Indonesia's population (Hasbullah, Muhammad Ahsan Samad, 2021).

The requirement for meeting needs in the midst of ups and downs in the labor market is a problem for farmers and fishers in the Lake Tempe area. A high water level is a boon for fisherman but a curse for farmers; on the other hand, a low water level is a boon for farmers but a curse for fishermen. The rate of reduction in lake area, in addition to the effect of the wet and dry seasons, is a role in the dynamics of the lake's tides. Lake Tempe's area is shrinking at a rate of 1.48 km² per year, and it is even possible that Lake Tempe may vanish during the dry season in 2093. From 2000 to 2015, the area changed from vegetation to agricultural was 63.2 km² as a result of protracted sedimentation (K et al., 2015).

The volume of water follows two seasonal patterns, with the dry season covering an area of 9,087 ha and the rainy season covering an area of 25,858 ha (Surur, 2015). The ups and downs of water that impact ongoing labor activities necessitate farmers and fishermen continuing to use their social networks. The use of social networks is influenced not only by the traditions and dynamics of socioeconomic growth, but

also by the physical characteristics of the surrounding area. As a result, the need to create social networks in response to the dynamics of environmental change and economic development is critical. Social innovation fortifies new tactics, thoughts, ideas, and organizations that are confronted in response to the social demands of diverse components in both developed and developing nations (Adnan et al., 2018). Human health advantages (both physical and mental), community growth, and educational benefits are examples of social effects (Yoshida et al., 2019). Social capital has an important part in agricultural growth. Other goals of agricultural development include carrying out societal changes that include norms, attitudes, or behaviors connected to economic betterment through agricultural goods, in addition to improving production yields (Mubarak et al., 2021).

Individuals' social interactions and personal ties are represented through social networks (Omondiagbe et al., 2017). The new form of social network has more edges and a greater density, indicating that nodes in the new type of social network are actively communicating. Because the average path length in this sort of network is shorter, information dissemination in traditional social networks is more direct and convenient. Because of its greater average centrality, the new kind of social network has significant cohesiveness (Zhang et al., 2021). In this context, our research has demonstrated how the social networks of farmers and fishermen, who are heavily reliant on Lake Tempe tides, are monitored. Researchers are encouraged to investigate how individuals might adapt to changes in their surroundings in terms of social, economic, and environmental factors (Zainuddin Rela et al., 2021).

Method

In accordance with the research's aim, the style of this analysis is descriptive qualitative with a case study approach. This study employs an assessment approach, which is anticipated to enable researchers to evaluate programs, efficiency, and program management procedures (Mufti et al., 2020). During the three phases of project inception, execution, and monitoring, case studies should have been observed and documented (Asai et al., 2018). This study makes use of both primary and secondary data (Adu et al., 2018). Secondary data is gathered through direct interviews with informants (Sulistiyorini et al., 2018). To round out the material gathered, interviews, focus group discussions, and personal observations were performed with a number of important informants (Benard & Dulle, 2017). The contents of the interview subject serve as a reference for answering questions about the amount of involvement present (Tjaija et al., 2021). This was taped and transcribed with the consent of the interviewee. Existing public documents, historical records, and scientific literature are also investigated (Panganiban, 2019). Furthermore, data collecting is carried out in tandem with scientific findings,

resulting in more reliable and methodical study outcomes (Ahsan et al., 2020). The literature review was carried out by browsing the internet and academic libraries. Scientific journals, theses, dissertations, and government or organizational reports are the most common sources of articles aimed for publication (Ren et al., 2019).

Tides and tides in Laelo Village

The greatest threats to the livelihoods of people reliant on coastal resources are primarily caused by the effects of climate change (Yanda et al., 2019). Laelo Village is located on the eastern border of Lake Tempe, Wajo, South Sulawesi, which features lake water with tidal topography characteristics. Every year from April to August, the surface is inundated for four to five months as a result of high and low rainfall. Farmers and fisherman in this area are familiar with the nature of the floods in this area, therefore overflowing water is not regarded as a calamity. High tide may be a boon to the community, particularly fisherman, because it expands fishing opportunities.

When the volume of water exceeds the floor of the home on stilts they live in, it is considered a calamity, and they must construct langkiang, or additional levels of bamboo and planks. In the langkiang, all operations such as cooking, washing, dining, and storing items are carried out and stored. Only the lake area around the patto'balanda (conservation area) becomes muddy during the dry season; the rest of the region becomes dry and the earth cracks. Droughts are most common from late August through March.

Social Network Utilization

Drought makes it harder for fisherman to capture fish, not only because the catchment area is limited as the lake narrows, but also because many places have been controlled by individuals or groups, restricting the space available for fishermen to travel. One of the places controlled by certain individuals or groups is "Bungka Toddo," a fishing gear constructed of bamboo that is plugged into and serves to trap fish with water grass stuck in bamboo. If fishing rights were instead tied to individual fishermen, the picture would be considerably more hazy, with lines intersecting in all directions (Bergman & Ramqvist, 2017). This situation has an impact on the fishermen's revenue; sometimes they don't obtain enough catch for three or four months. During the dry season, the typical revenue of fisherman is approximately Rp. 50 thousand each night, but during the floods (particularly in May), the income is normally Rp. 250-Rp. 1,000,000 per night by running 30-50 jabba units.

Drought, on the other hand, benefits farmers, particularly garden farmers who may produce a range of crops such as maize, green beans, and sesame. Many of Laelo's

garden grounds are owned by outsiders, with locals serving only as cultivators. Many growers must rent or negotiate a profit-sharing scheme with the landowner (use rights), resulting in a low income for seasonal smallholders. The rental price is determined by the mutually agreed-upon land stratum, with first class land/land (langga 1) with an area of 5-7.5 x 100m being the most costly since the puddles are the fastest to depart and the longest to retreat, implying that the cultivation period is greater than the land. Then there's land / land class 2 (langga 2) with a 10 x 200 area and land 3 that's lower or right close to the lake water. Rent or profit sharing based on land strata is considered appropriate compensation for farmers rather than being unemployed.

Fishermen and farmers are nevertheless attempting to sustain their families in these difficult circumstances. By leveraging their social network, they have many answers, both short and long term. Friendship networks are primarily social in nature, whereas advise networks are made up of connections in which people share knowledge, help, and guidance relevant to the accomplishment of their task (Pratiwi & Suzuki, 2017). When knowledge is communicated indirectly through social networks, the ability of a farmer or fisherman is determined by his position in the network (Palareti et al., 2016). They prepare for the dry season by seeking for jobs outside of the hamlet or even outside of the province via family or friendship networks. Many farmers and fishermen have changed careers, becoming construction workers, sarong sellers, clove or cocoa pickers, etc. Whereas in the tidal circumstances of the lake owing to the impact of the rainy season and the dry season that lasts every year, such a network has survived and endured for a long time, such a model has even become a social capital held by farmers and fishermen surrounding Lake Tempe.

The social network established by fishermen and farmers is seen as a key component of their social system and structure, particularly in light of the lake's increasingly precarious natural environment. Social networks are critical for the survival of fishermen's livelihoods in the midst of uncertain lake environmental circumstances, particularly if there is a lengthy drought. The protracted drought, which caused sections of the Lake region to dry up, had a direct impact on tiny fisherman like the Pallanra fishermen. The impact on catches is due to the reduced fishing area caused by the drought, as well as the fact that not all sections of the lake can be fitted with Lanra since specific areas have gained the management rights of particular companies or groups through the government's auction procedure. It is not much different from what fisherman believe since the lake's state is no longer typical as it once was, because floods occur practically every year, affecting the activities of farmers, particularly sharecroppers. If the flood or high water level of the lake is a boon to fisherman, it is a tragedy for farmers, especially if it soaks agricultural regions for an extended period of time. Farmers are threatened by the

protracted rainy season since their land will be inundated and their agricultural activities will be halted sooner or later.

Farmers who wish to sell their produce must locate the proper market, price, customer, and product standards and quality (Minkoua Nzie et al., 2018). Integrated pest management, integrated fertilizer management, soil conservation, and water management are just a few of the sustainable agricultural techniques (Ashrit & Thakur, 2021). According to risk perception, the intensity of market risk is favorably connected to farmers' water quality practices, whereas sensitivity to climate risk is adversely related (Joffre et al., 2019). Gardeners and rice growers both require water. Plants cannot grow in the absence of water. Similarly, if the plant is given too much water, it might die. Floods, which occur often every year, endanger the livelihoods of farmers who rely largely on the output of their gardens or paddy fields. Overcoming and sustaining the sustainability of fishermen's lives during the dry season and farmers' livelihoods throughout the extended rainy season, which forces them to implement and use the social networks they have. The primary goal of the social network that is created is to ensure the economic survival of their family. Several studies have shown the value of social networks in amplifying farmers' local adaptive ability. Farmers' social networks must first and foremost comprehend (1) features of network organization and (2) types of networks in order to become an important component of agricultural development (Chaudhuri et al., 2021).

Social networks, as social capital, have enabled all citizens to engage in mutually beneficial relationships and collaboration. The government's existence is an integral element of the social life of Pallanra fishermen and smallholders around Lake Tempe. The network that is being established between the two for the purpose of carrying out fishing operations nevertheless adheres to the government's restrictions, such as not catching in regions designated as conservation areas by the local government and farmers not growing in places that have been protected.

Growth in Facility Capital is defined as an improvement in the efficiency of human resources through a system of training, preparation, and expected outcomes (Samad & Kusuma, 2020). Another network link is connected to help received by fishers and farmers, either directly or indirectly, such as support for production facilities. Similarly, additional parties such as family/kinship networks, political parties/figures, and non-governmental organizations exist. Family/kinship networks are typically used to provide loans in the form of money or non-binding items, or to assist family or relatives with labor by earning compensation from such activities, such as assisting in the harvesting of clove and cocoa plantations outside the region. While political parties or people are typically at a democratic party during the election campaign time, farmers and fishermen get support that is usually regarded as ambition funding in the form of money or aid with facilities and infrastructure.

Similarly, the existence of non- governmental groups established by the community through empowerment initiatives is noteworthy. This institution assists the community, especially fishermen and farmers, by providing revolving capital support, skills training, and environmental improvements.

Conclusion

Tides are an annual occurrence that farmers and fisherman in Laelo Village are familiar with. Farmers and fishers, on the other hand, are accustomed to live in puddles or drought for months at a time. Drought makes it harder for fisherman to capture fish, not only because the catchment area is limited as the lake narrows, but also because many places have been controlled by individuals or groups, restricting the space available for fishermen to travel. Drought, on the other hand, benefits farmers, particularly garden farmers, because it allows them to produce a range of economically valuable crops such as maize, green beans, and sesame. Floods or rising water levels are a boon to fishers but a curse to farmers, especially if the flood is lengthy.

Farmers and fishers can benefit greatly from social networks in addressing the dangers and consequences of tidal lakes. Farmers and fishers rely on the family, friendship, kinship, and institutional networks that exist in their communities. The key aspect is the social network, which may be viewed as a common property inherent in the pattern of relationships between fishers, farmers, and other stakeholders. The social network created in the structure of the connection produces different social relations traits such as mutual trust (trust), openness (transparency), and the binding of values and norms (values and norms). The social networks that are formed will help to improve one another's talents, are cumulative, and may even be passed down from generation to generation.

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