

*LOCAL WISDOM AND RIVER BASIN*

**KEARIFAN LOKAL DAN DAERAH SUNGAI**

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**ABSTRACT**

*This simple study attempts to answer common questions related to flood events that are devastating and claiming lives. With the descriptive-analytic method, which relies on literary sources, the study found that the management of natural resources in the river basin will greatly depend on the involvement of residents and the performance of local wisdom. However, local wisdom will also depend on the quality of community interaction and the local environment.*

*Key-words: Local Wisdom, River Basin, River*

**INTISARI**

Kajian sederhana ini mencoba menjawab pertanyaan umum terkait peristiwa banjir yang menghancurkan dan merenggut nyawa. Dengan metode deskriptif-analitis yang bertumpu pada sumber-sumber kepustakaan, kajian ini menemukan bahwa pengelolaan sumber daya alam di daerah aliran sungai akan sangat bergantung pada pelibatan warga dan kinerja kearifan lokal. Namun, kearifan lokal juga akan bergantung pada kualitas interaksi masyarakat dan lingkungan setempat.

Kata kunci: kearifan local, daerah aliran sungai, sungai

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## **BACKGROUND**

When looking at the existence of the natural resource in the river basin and the impacts it causes, three events could be used as material for observation. First, in 1927, there is big flood in the United States, which was caused by the overflowing of the Mississippi River. The Britannica (2020) report that this event is one of the worst natural disasters in American history. With more than 60,000 square kilometers of land were submerged. This flood causes thousands of people to be displaced, and about 250 people died.

The second events was reported from BBC (2020), where there was a flooding in Sudan in September 2020. the flood was caused by the overflowing of the Nile that reportedly reached an unprecedented height. This disaster not only targeting the lives of citizens but also threatening the existence of historical traces, in this case, the ancient pyramids. Big floods not only has the potential to drown present-day life, but also all of human legacy.

Third, flooding not only occur abroad but also occurs in Indonesia. There have been many floods that have hit many region this year like in Garut Regency, North Aceh, Medan, North Luwu, Lebak, Sukabumi, Garut, and Cilacap. All with the same characteristics, namely that there is a river overflows, which brings many casualties.

From the three events above, the question arises that guide this simple research, namely why did this happen? This question presupposes that the event is not an event that is entirely the result of an extraordinary event from nature which humans are unable to cope with, but instead, its an event that could be

said to have something to do with human actions.

This study certainly will not answer all of these questions. The main focus of this study is the relationship between community knowledge (local wisdom) and community efforts to manage river basin.

## **LITERATURE REVIEW**

There was an awareness that development does not always bring benefits in the form of progress to people's lives. Development could also cause impacts in the form of environmental damage, that if there was no change in the development approach, then it will make the situation worse and in time, harm the community itself (Azis, et al., 2010; Firmansyah & Gunawan, 2007). Environmental approach, community involvement, and local wisdom can be said to be part of the steps to review the development paradigm, reduce damage, and on the other hand, ensuring the sustainability of development.

In terms of river basin management (DAS), river basin degradation in the form of deforested land of critical soil, erosion on steep slopes for both agriculture and other uses such as settlements and mining, has been recognized and recognized as a challenge (Direktorat Kehutanan dan Konservasi Sumberdaya Air, n.d). The absence of integrated action involving all the stakeholders has made degrading to continue. From a development perspective, there is an increasing urgency for a comprehensive approach to river basin management, including the involvement of local communities, from planning to utilization.

From the study of the performance of local wisdom in the Lempur area, Gunung Raya District, it is known that the optimal application of local wisdom will also determine the quality of natural resource conservation, in this case, water sources. Without full use of local wisdom, the water of that region is damaged, although it has not yet reached a dangerous level. The thing that took interested in this study is that local wisdom is not a concern for the younger generation. Therefore, the older generation is worried about the existence of local wisdom, which if the local wisdom in their area is lost, the environment will also be damaged (Ferry, 2019).

Meanwhile, from studies in the Lam Ta Kong river basin, it is known that to address water needs, the use of local wisdom alone is deemed inadequate, and therefore, a combination of management models is needed, including technology. There are two types shown, namely (1) original local wisdom and (2) local wisdom combined with technology. If only rely on indigenous local wisdom, there are limitations founded in meeting the increasing need for water, which is in line with population growth. Meanwhile, if only rely on technology, it is seen as endangering environmental sustainability. Therefore, the combined model, local wisdom and technology, is considered to be able to answer the need, namely to provide water for the population equally (Kongsat, et al., 2009).

Therefore, efforts to maintain the sustainability of the carrying capacity of the environment will depend on: First, the use of a development paradigm that is not solely an economic development. Second, community involvement, including the use of local knowledge, to manage the local resources (Nugroho, 2003). However, community involvement cannot only be artificial but

must be “organic”. A Knowledge called organic knowledge when that knowledge is living knowledge in there. The knowledge itself will become living knowledge if humans or the local community depend on the environment for their lives..

## **STUDY METHOD**

The research method used in this study is descriptive-analytic. The data was obtained through literature study, using materials from journals regarding local wisdom in river basin management. The analytical method used is descriptive analysis by providing an overview of the relationship between local wisdom that grows as a community interaction with the natural surroundings, with the management of natural resources in the river basin.

## **RESULTS AND DISCUSSION**

A balanced life, could be interpreted as a way of life that fully follows the logic and rhythm of the ecology. Nature was not part of human life, or humans are not part of nature, but instead, an order of life, where each element is mutually reinforcing and protecting one another. It would mean that any event that is out of rhythm and has a destructive nature, such as a flash flood, could be said to be the product of an ecological imbalance. Of course, more attention is needed, considering that what is now called local wisdom, does not always mean a thorough and accurate knowledge of environmental realities (Tran, Marincioni, & Shaw, 2010).

Human or community action, therefore, is a function of ecological consciousness. The higher the awareness of humans or communities, that their life depends on the quality of the environment, or that the

environment was an irreplaceable source of life, then all actions that protect, care for, and or do not damage will automatically emerge. The case in the management of PLTMH electricity in Gunung Sawur hamlet, Lumajang, can be an example, where the community has an awareness of protecting the environment, especially rivers and forests (Rosaira & Hermawati, 2014).

The opposite situation is when a community has no interaction between living and its environment, then, of course, there is no awareness of the importance of protecting the environment, and thus there will be no concrete action by the community to protect its environment from damage. The rivers in cities could be said to be separate from the life of the citizens. The river was not a source of livelihood, not a direct source of drinking water and water for daily living needs. The only interaction that occurs is when rivers overflow and inundate human settlements. And when that event occurs, the thing that arise is not an awareness of the importance of protecting the river basin. Instead, various reactions will arise, including assuming that the incident is a disaster.

This reality certainly brings its challenges, especially when the government tries to involve the community and revive the local wisdom to increase the ability to manage natural resources in the river basin. The challenge lies in how much the community depends on its environment. In this case, there are three possibilities, which are: (i) high dependence; (ii) moderate and low; and (iii) completely unrelated. This relationship will also determine the quality of community knowledge.

If what is present in reality is the third situation (iii), namely a situation where the community, or the locals, has no connection with local natural resources, such as rivers and forests, then naturally there will be no

concern and care to it. Especially if residents only make their village a place to live. Even if there are actions for the benefit of the environment, then it refers more to actions to maintain environmental security.

In such a situation, all the programs intended to involve citizens will be artificial. Or, it will never bring out the authenticity of local wisdom and full citizen involvement. What is called local wisdom performance, could only exist as long as the program is running. Or as long as there are monitoring and various activities that directly involve residents. We could even say that any activity will only be possible outside of the residents' working hours.

Awareness for this is very much needed that community involvement steps do not become a kind of additional project, which is known to have not brought significant changes. To fully involve the citizens, and especially so that local wisdom will emerge, requires not only integration but also requires a paradigm shift in the lives of citizens. Of course, the concept of development requires fundamental changes.

To developing a full awareness that could become the basis for the practice of local wisdom, strategic efforts are needed in such a way that people's lives are no longer distant from nature where they live. Of course, this was is not easy to do, considering that the separation of the population from nature is, to a certain extent, the impact of the development movement. The efforts to bring people closer to nature (river basin environment), through development projects based on local wisdom, was a good step, which needs improvement in the future, by developing management activities that involve residents, as in the case of the Kahayan river management (Sihombing, Widen, & Sangalang, 2018).

The project is not just an additional activity and budget, but an effort which, in this case, can be said to restore the lives of residents in such a way that a river basin environment is a place where residents depend on their lives and livelihoods. This idea will have some difficulty to carry out, especially when faced with the fact that in big cities, or even in sub-district cities, the people distance themselves from the local ecosystem. The case of developing the tourist villages of Kalibiru and Lopati, to a certain extent, can be seen as an effort so that the village could become a source of livelihood for residents (Vitasurya, 2016)..

To some extent, efforts to make sub-districts or villages as growth centers, through increasing economic activity based on local resources, can be said to be part of a step closer to residents with local socio-ecological realities. This step, although it looks like through an economic approach, is an effort to build awareness of local geographic space. This effort certainly needs to be complemented by awareness education, namely creating new imaginations among citizens, that their future is not there, but here..

## CONCLUSION

Original local wisdom is a form of the closeness of humans (residents) to nature, namely a condition in which humans are fully aware that their life and life depend on the preservation of natural resources (DAS). If closeness was nowhere to be found, then nature was not seen as the determining factor, and because of it, the environment is not protected and was even damaged. As a result, nature does not bring benefits, but instead, it creates a disaster. Strengthening local wisdom in the management of natural resources in the river basin must be followed

by efforts to restore the formation of dependence on nature of the population so that local wisdom grows naturally, and not artificially, or as a project.

## REFERENCE

- Acharya, A., & Prakash, A. (2019). When the river talks to its people: Local knowledge-based flood forecasting in Gandak River basin, India. *Environmental Development*, 31, 55-67.
- Ferry, D. (2019). Local Wisdom Based Water Resources Conservation for Environmental Sustainability. *Scientiae Educatia: Jurnal Pendidikan Sains*, 8(2), 220-230.
- Kongsat, S., Karang, A., & Srisa-Ard, K. (2009) An Applied Local Wisdom to Manage Water for Developing Riverside Community: A Case Study of the Lam Ta Kong River Basin. *Journal of Social Sciences*, 5(2), 134-138.
- Mungmachon, M.R. (2012). Knowledge and Local Wisdom: Community Treasure. *International Journal of Humanities and Social Science*, 2(13), 174-181.
- Teodosiu, C., Barjoveanu, G., & Telesman, D.(2003). Sustainable Water Resources Management 1. River Basin Management and the EC Water Framework Directive. *Environmental Engineering and Management Journal*, 2(4), 377-394.
- Tran, P., Marincioni, F., & Shaw, R. (2010). Catastrophic flood and forest cover change in the Huong river basin, central Viet Nam: A gap between common perceptions and facts. *Journal of Environmental Management*, 91, 2186-2200.

- Vitasurya, R.V. (2016). Local Wisdom for Sustainable Development of Rural Case on Kalibiru and Lopati Village, Province of Daerah Istimewa Yogyakarta. *Procedia - Social and Behavioral Sciences*, 216, 97-108.
- Emilia, F., Hendrarto, B., & Taruna, T. (2013). Pengelolaan sumber daya alam berbasis masyarakat dalam upaya konservasi Daerah Aliran Sungai: Studi Kasus Desa Keseneng, Kecamatan Sumowono, Kabupaten Semarang, Jawa Tengah. *Bonorowo Wetlands*, 3 (2) 73-100.
- Sudarma, I.M., & Widyantara, W. (2016). Persepsi masyarakat terhadap ekosistem daerah aliran sungai ayung menuju sumberdaya air berkelanjutan. *Jurnal Bumi Lestari*. 16(2), 78-91.
- Salampessy, M.L., Aisyah., & Febryano, I.G. (2019). Persepsi Masyarakat Terhadap Pengelolaan Sumberdaya Alam di Daerah Aliran Sungai. *TALENTA Conference Series*, 2. Downloaded on 5 December 2020, from <https://talentaconfseries.usu.ac.id>
- Mississippi River flood of 1927. (2020, 26 May). Retrieved on December 1, 2020, from <https://www.britannica.com/event/Mississippi-River-flood-of-1927>.
- Sudan floods: Nile water level threatens ancient pyramids. (2020, 8 September). Retrieved on December 1, 2020, from <https://www.bbc.com/news/world-africa-54070697>.
- Nugroho, S.P. (2003). Pergeseran kebijakan dan paradigma baru dalam pengelolaan daerah aliran sungai di indonesia. *J.Tek.Ling*. 4(3): 136-142.
- Rosaira, I., & Hermawati, W. (2014). Dampak listrik PLTMH terhadap kehidupan sosial ekonomi masyarakat di dusun gunung Sawur, Desa Sumber Rejo, Candipuro, Lumajang. Downloaded on 8 December 2020, from [http://repository.ipb.ac.id/jspui/bitstream/123456789/82502/3/6.\\_PROSIDING-M-Pemasyarakatan\\_TTG-1.pdf](http://repository.ipb.ac.id/jspui/bitstream/123456789/82502/3/6._PROSIDING-M-Pemasyarakatan_TTG-1.pdf).