



INSTITUTIONALISED INDIGENOUS KNOWLEDGE AS A FOUNDATIONAL ELEMENT OF RURAL-BASED SUSTAINABLE DEVELOPMENT GOAL IN OLEHSARI VILLAGE BANYUWANGI

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Abstract:

This study research aims to uncover how the Osing people's indigenous knowledge can contribute to preserving water resources in Olehsari Village, Glagah Sub-district, Banyuwangi. Indigenous knowledge encompasses various cultural, ecological, and epistemological frameworks essential for understanding and addressing today's concerns, particularly sustainable development goals. It is increasingly acknowledged that advancing social justice, cultural identity, and sustainability requires integrating Indigenous knowledge into various fields. It is widely accepted that incorporating Indigenous knowledge into a broad spectrum of fields is critical to fostering social justice, cultural identity, and sustainability. Efforts to commercialize community-owned resources, notably water resources, pose a significant danger to Kemiren Banyuwangi Village's Indigenous Knowledge, a critical pillar for natural resource preservation for decades. The village government's commercialization initiatives through Bumdes will undoubtedly alter the community's Indigenous knowledge, which has been demonstrated to be a critical pillar for the long-term sustainability of water supplies and village residents' lifestyles. This study used descriptive qualitative methodologies, with data collected through documentation, in-depth interviews, and observation. According to the study's findings, indigenous knowledge in sustainable village development has increased dramatically to improve community well-being and environmental sustainability, which face considerable problems. When Indigenous knowledge is compromised, water resources, farming, and the community as a whole are threatened. Sustainable agricultural practices will fail due to a growth-based development paradigm that disregards Indigenous Knowledge, particularly in meeting the United Nations' Sustainable Development Goals (SDGs). Incorporating indigenous and local knowledge into farming systems is a critical strategy for achieving SDG2, which is intended to eradicate hunger and enhance sustainable agriculture.

Keywords: *Sustainable Development Goal, Indigenous Knowledge, and Resources.*

INTRODUCTION

This study The purpose of the study is to investigate how Indigenous knowledge of Osing people in conserving water resources in Olehsari Village, Glagah Sub-district, Banyuwangi? The Osing community in Banyuwangi is one of the ethnic groups that have a diversity of rituals, notably those with an agrarian character (Yashi, 2018). The Osing community in Olehsari Village practices an

assortment of rituals that are closely connected to their daily work as farmers. The religious ceremonies of seblang, barong, and bumi are all tied to their farming pursuits. They have different farming traditions, which can take the shape of rules, beliefs, or rituals that they feel will bring them collective favors. The Osing community in Olehsari Village, Glagah Sub-district, has always organized rice field festivities. At each stage of rice development, the rice field owner hosts a celebration either before planting, during planting, or after harvesting.

Each phase of the selamatan ritual represents a request for Dewi Sri to receive favors while growing rice. Although the Using community follows Islam, this ancestral ritual remains and is carried out by farmers. In addition to slametan sawah, they perform slametan rituals to safeguard the village's springs. During this time, traditional rituals in the Osing Olehsari community were performed voluntarily; however, when the development program in Banyuwangi was aimed at optimizing the tourism sector, the osing ritual activities received a lot of attention, with the commercialization of traditional ritual activities through the Banyuwangi Festival (Maslikatin and Saputra, 2023) When the development programme in Banyuwangi is directed at optimising the tourism sector, then the osing ritual activities get a lot of touch with the commercialisation of traditional ritual activities through the Banyuwangi Festival (Maslikatin and Saputra, 2023; Pranitisari, 2018).

In addition to traditional rituals like Seblang, which became an essential part of the Banyuwangi festival, water resources in Olehsari village began to be handled by professionals to assist the community. So far, there has been a customary mechanism in maintaining the sustainability of water resources by conducting salvations at water sources sacred to the community and only used to irrigate agricultural areas in Olehsari Village, but when the water resources in Olehsari Village began to be managed commercially, the economic and profit-motivated aspects adopted precedence over other aspects. Local knowledge, which frequently represents the outcome of local communities' experiences and practices, plays an important role in the management of natural resources and the environment (Rosyadi, 2014). Indigenous Knowledges is a collection of various knowledge possessed by a group and customarily conveyed orally. It incorporates agricultural techniques, food preparation, and cultural traditions, but is threatened by sophisticated technological understanding, needing recording and preservation efforts (Lalruatpuui, 2024). In the context of development, it is believed that Development that ignores local knowledge often leads to unsustainable exploitation of resources and can damage ecosystems (Kom and Nethengwe, 2024). Conversely, the integration of local knowledge in development planning and implementation can increase the effectiveness of development programmes, strengthen community resilience and preserve the environment. Indigenous peoples, for example, have a deep understanding of their ecosystems and ways to maintain them, which can be a valuable resource in the development of better environmental policies (Beckett and O'Loughlin, 2024).

Furthermore, local knowledge can also serve as a bridge between tradition and innovation (Kamakaula et al., 2024) In the context of development, this means that the resulting solutions consider not only technical and economic aspects, but also social and cultural values that exist in the community. Thus, development based on local knowledge focuses not only on economic growth, but also on social welfare and environmental preservation, which are at the core of sustainable development (Pratama, 2020; Tong, 2024) In some cases, there is often a very sharp dilemma between indigenous knowledges and modern

knowledge, leading to the alienation of indigenous knowledges (Rahmawati and Idris Gentini, 2008). So it is necessary to find a meeting point that can give rise to institutional arrangements that are mutually reinforcing, but if on the contrary, what happens is that it gives rise to institutional arrangements that are weakening and unproductive (Agrawal, 2014). The pattern of relations between indigenous peoples and the government consists of two patterns of relations, either symbiotic relations or relations that are conflictual (Zikir et al., 2021).

The dynamics and epistemological differences between indigenous knowledges and modern knowledge are the main factors in the differences in perspectives in understanding the natural reality faced by humans. Some of the differences include the content and characteristics of knowledge, the methods used to study and understand reality, and the context within which knowledge is developed and used (Hukmi and Khair, 2023). The application of indigenous knowledges in modern life often presents both challenges and opportunities. Despite the growing recognition of such values in various sectors, unconscious biased institutional discrimination often hinders their integration into public policies (Parter and Skinner, 2020). Despite their enormous impact on solving modern problems, indigenous knowledges have the potential to be relegated from the stage of civilization (Onwuegbuzie, 2017). To overcome this, one of the efforts to prevent indigenous knowledges from being lost is to incorporate indigenous knowledges into public policy (Parter and Skinner, 2020). However, in some cases indigenous knowledges face systemic discrimination and marginalisation (Smith, 1999). It is not uncommon for indigenous peoples to be accused of being primitive and that their knowledge is not equal to western knowledge systems ((Hukmi and Khair, 2023)

In this study, researchers chose Olehsari Village as the object of research, because Olehsari Village is a village in Banyuwangi Regency that still holds strong foreign tribal customs. To understand how the Osing community in Olehsari Village, Glagah Banyuwangi District can continue to utilise indigenous knowledges to maintain and solve complex problems, especially how the institutional aspects of the government continue to respect indigenous knowledges as an important potential social capital that can be used as a tourist attraction in Banyuwangi, researchers used the Institutional Development analysis (IAD) framework developed by Ostrom (2009).

Theoretical Background

Indigenous Knowledges as Social Capital

Indigenous Knowledges (IK) have been recognised as a valuable resource for development and can be considered a form of social capital (Islam, 2019). However, the concept of Indigenous Knowledges (IK) and its role in development is complex and highly problematic, requiring efforts to resolve the indigenous vs. science dichotomy (Agrawal, 2014). Social capital, defined as the networks, norms and trust that enable sustainable futures, can be learnt through local interactive learning processes (Falk and Harrison, 1998). Indigenous Knowledges (IK) and social capital are closely interrelated concepts that play an important role in sustainable development and economic growth, particularly for indigenous peoples. Indigenous knowledge is seen as a form of social capital that contributes to community resilience and adaptation (Islam, 2019). This relationship is further emphasised in the context of indigenous knowledge and sustainable development, where traditional knowledge passed down through generations supports community survival and environmental sustainability (Sagajoka and Fatima, 2023). The formation of social capital through customary rights can influence entrepreneurial processes and development pathways, with

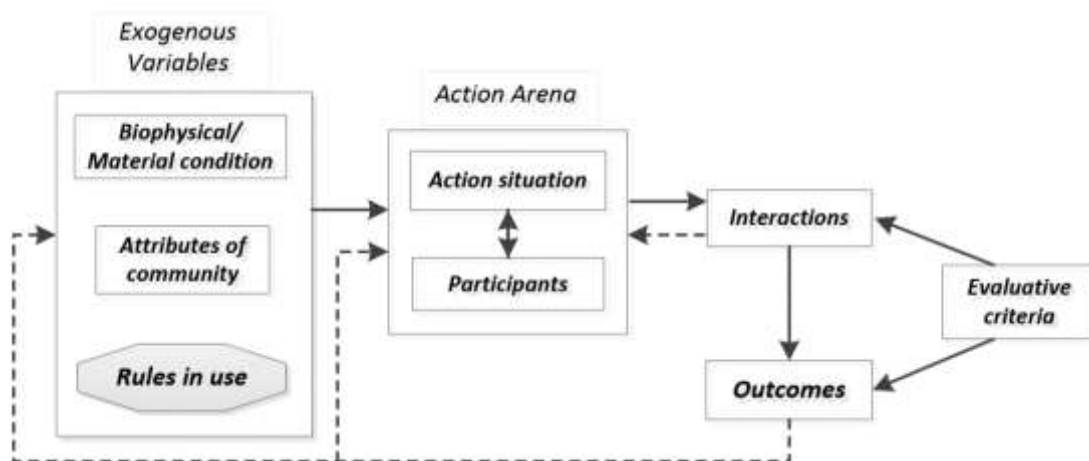
more localised modes of social regulation potentially resulting in higher levels of social capital (Kayseas et al., 2015). However, reconciling customary ties and bridging social capital remains a challenge in economic development and addressing global inequalities. Strategies to connect these forms of social capital are critical to legitimising liberal democratic institutions and promoting economic progress (O'Brien et al., 2005).

Social capital cannot be understood singularly even though each definition has a similar perspective. In this study, we prefer to place social capital in the communitarian perspective Yustika (2008) which places social capital as local organisation. This view sees group cohesion in a community, and considers social capital as inherently good, and its existence is always positive for the welfare of the community. Furthermore, in the communitarian view, the community is a homogeneous entity that automatically includes all members of the community who can benefit (Membiela-Pollán and Pena-López, 2017).

Institutional Development analysis (IAD) framework

The IAD framework (Figure 1) was developed by Elinor Ostrom and her colleagues at the Centre for the Study of Institutions, Population and Environmental Change (CIPEC) at Indiana University, USA. The framework is an integrated approach that aims to explain the relationship between the interaction patterns of actors amidst institutional constraints.

Figure 1. Institutional Development analysis (IAD) framework



Source: (Understanding Institutional Diversity, 2009)

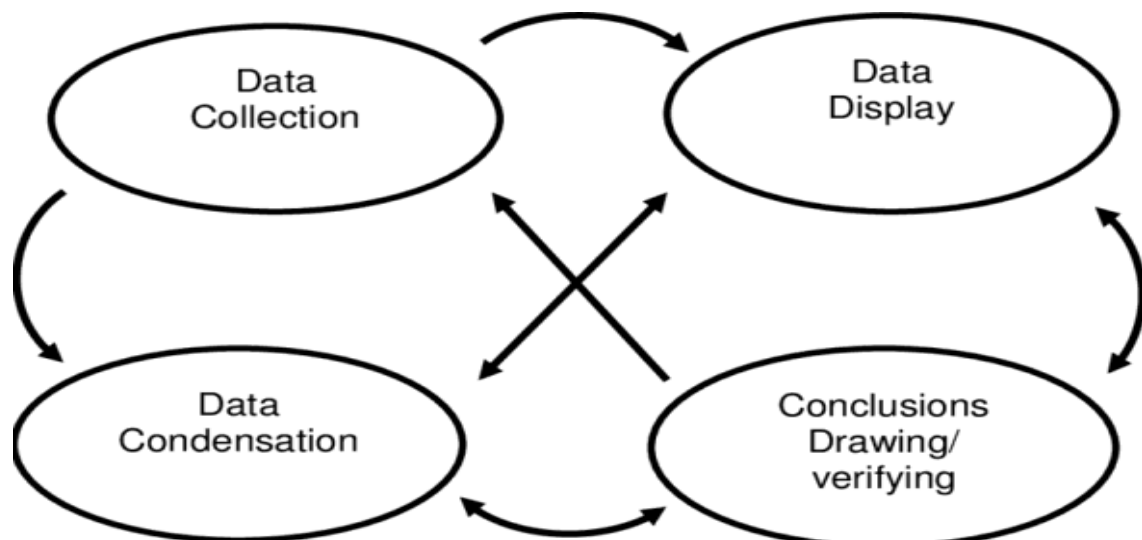
Institutional Analysis and Development/IAD has been applied to understand and improve natural resource management and knowledge systems of indigenous peoples. In Nepal, Institutional Analysis and Development/IAD revealed the need to integrate customary practices with modern technology for sustainable pasture management (Dong et al., 2009). Similarly, Institutional Analysis and Development/IAD, adapted and developed to analyse customary land institutions in sub-Saharan Africa, facilitated the identification of strengths and weaknesses in local land governance (Adekola et al., 2023). The integration of indigenous and scientific knowledge for disaster risk reduction has been proposed through participatory frameworks, especially for small island developing states (Mercer et al., 2010). Indigenous knowledge programmes have gained international attention due to their potential in various fields, including health and development. However, there are still challenges in representing

indigenous knowledge alongside conventional knowledge systems, as demonstrated by case studies of programmes at the World Bank, the National Institutes of Health, and the University of Pennsylvania (Srikantaiah, 2008). The IAD framework helps identify contextual factors, institutional barriers, and potential areas for improvement in resource management policies. Common themes across studies include the need to integrate traditional practices with modern approaches, improve public services and technical support, reform governance structures, and improve communication and build trust among stakeholders. The application of this framework in various situations demonstrates its versatility in analysing complex socio-ecological systems and informing policy development for sustainable resource management.

RESEARCH METHOD

This type of research uses descriptive qualitative which is a research method that utilises qualitative data that is described descriptively. This descriptive qualitative research provides findings of the Institutional Analysis Development Framework (IAD) on how the Osing tribe protects the village's waters. According to Bogdan and Taylor in Moleong (1989) explains that a qualitative approach is a research procedure that produces descriptive data in the form of written or spoken words from people and observed behaviour. The types of data collected are primary and secondary data. The review of primary data collection was carried out by in-depth interviews and Focus Group Discussion. This research data was obtained from interviews, observations and documentation. Data analysis was carried out by organising the data obtained into a category, describing the data into units, analysing important data, compiling or presenting data in accordance with the research problem in the form of a report and making conclusions so that it is easy to understand. In accordance with the type of research above, the researchers used the interactive model of Miles and Huberman and Saldana (2014) to analyse the research data. Activities in qualitative data analysis are carried out interactively and take place continuously until completion, so that the data is saturated.

Figure 2 Components of data analysis using Interactive analysis



Source: Miles and Huberman and Saldana (2014)

RESULT AND DISCUSSION

Based on interviews conducted with the Chief of Adat in Olehsari Village,

it was found that the traditional rituals performed are part of the community's agrarian culture:

All processes in farming always have a ritual, from before planting rice, during planting, to harvesting all have rituals. It is indeed different, land that is slameti and land that is not slameti produces different results. It has been a tradition from generation to generation taught by our elders. Actually, it is not only agricultural slametan, all activities carried out by the community always have a slametan. Even when people have bad dreams, there is always a slametan the next day (Interview, SN, 2024).

One of the most important traditional rituals is the dawuhan ceremony, or a ceremony held at a water source or irrigation stream. With the hope that the rice planting process can run smoothly. The Olehsari Village community has about 7 springs. There are 4 springs that are sacred, one of the springs that is sacred is Sukmo ilang spring, as a spring used for seblang events. As stated by the Head of Olehsari Village:

Water is part of what must be preserved by the Olehsari community, there are several springs that are sacred to the community. One of them is the source of Sukmo ilang, the water from this source is used for traditional events, one of which is seblang. We protect the sukmo ilang water source and hold slametan dawuhan, as gratitude to God. ithuk-ithukan tradition is held every 12 Dulqaidah (eleventh month of the Hijri calendar), with the hope that the process of starting to cultivate rice fields goes well and the irrigation flow flows smoothly). The ritual dish in this procession is tumpeng - Pecel Pitik. After prayers are offered, the top of the tumpeng is cut slightly and then placed in a container of banana leaves (takir) along with the legs (feet), wings (telampikan), head, and tail (berutu) of a burnt chicken. The container containing the food is then placed in the main water channel along with burnt incense and a takir containing betel leaves, areca nut and lime. Afterwards, the procession participants eat tumpeng-pecel pitik together before finally entering the river to clean the main irrigation channel. Besides selamat, we also continue to protect the water source by planting trees around the source that can absorb large amounts of water. (interview, 2024).

The Osing people have a local way of preserving the environment, because the Osing people are very dependent on the natural environment. In addition, nature is related to the livelihood of many people. Therefore, Osing people's rituals are always related to natural resources. For the osing community, the struggle for life is the same as the effort to protect and preserve nature. This ritual practice has been going on for generations until now it is still a ritual that is also an important part of tourism events organised by the Banyuwangi Regency Government through the Banyuwangi Festival Event which is held every year. The inclusion of traditional events into the Banyuwangi Festival is of course a traditional event that has been carried out for generations must involve bureaucratic apparatus in its implementation. Ritual practices in water management in Olehsari Village have local characteristics that are different from other areas, not all water sources in Olehsari Village can be commercialised. There are springs that must be cremated and some that can be commercialised, both for agriculture and for public consumption. The management is different. As stated by one of the customary leaders of Olehsari Village:

Water management in Olehsari Village is twofold, the first for agricultural purposes is managed by HIPPA while water for consumption is managed by HIPAM, but the community does not use sacred water sources such as Sukmo ilang source for commercial purposes. Sacred sources are only for

customary purposes, and must be preserved. If it's a water source like Sumber Sukmo ilang...we don't dare..." (Interview, 2024).

Institutionalization through two institutional models of water governance is a way out that provides a dimension that actually combines customary institutions with economic institutions used in the osing community of Olehsari village, Glagah sub-district, Banyuwangi regency.

Institutional Analysis Development (IAD) Framework in managing water resources in Olehsari Banyuwangi Village

From the perspective of the Institutional Analysis Development (IAD) Framework, the rules in use, material conditions and attributes that exist in Osing society are forms of exogenous variables. According to Ostrom (2009) rules in use are rules that participants refer to if they are asked to explain and justify their actions to other participants. This concept can be used to analyse the content of rules in relation to the structure of the action situation formed, the behaviour that occurs, and the performance produced in the process of forming organisations in indigenous communities in Olehsari Village.

The Institutional Analysis and Development Framework (IAD) approach can be used to analyse patterns of local relationships in the management of water resources by the Osing community in Banyuwangi, East Java. The IAD Framework outlines aspects of institutions that play a role in the management of shared resources, such as water resources. The following is a description of the relationship pattern:

Action Arena

Actors:

- The Osing community: as the main actors, consisting of farmers, traditional leaders and community leaders who have local wisdom on water management.
- Local government: involved in infrastructure provision and formal organisation.
- Informal groups: such as customary institutions or local communities that function as regulators of tradition-based mechanisms.

Based on these three actors, the process of institutionalisation of customary institutions can be carried out, although they have different institutional logic, but these three actors can work together through the tradition of gotong royong and deliberation. Strategies that can be carried out through the concept of Blended Institution (Hidayati et al., 2023).

Action Situations:

- Water distribution for agriculture is based on customary systems, such as the Osing version of subak, which organises irrigation shifts according to community needs.
- Water distribution management is divided into 2, namely springs in Keramatkan and springs for commercial purposes.
- The implementation of traditional rituals such as water salvations at sacred springs that function to maintain the harmony of ecosystems and water.
- Non-sacred springs are used for commercial purposes.

In the situation of action in the utilisation of water resources, Olehsari village classifies between springs that are intentionally sacred, and springs that are used for commercial purposes either for irrigating agricultural land or for community consumption. This kind of separation of springs is indigenous

knowledge to resolve the dilemma between indigenous knowledge and modern knowledge. To some extent, both institutional models are believed to provide communal benefits. In Coleman's view (2000) social capital is not a single entity but is a different entity, and has two aspects of social structure and social capital can facilitate certain actions. Although the perspective that places social capital will always bring the common good. In fact, social capital that relies on interactions between people in the social structure can have a negative impact on the community (Yustika, 2008)

Rules-in-Use

- **Boundary Rules:** Membership in the Osing community is a key requirement for involvement in water management, usually based on lineage or domicile.
- **Choice Rules:** Community traditions and decisions determine who gets access to water at any given time.
- **Aggregation Rules:** Decisions are taken collectively through customary deliberation.
- **Information Rules:** Local knowledge of water resources is passed down orally through generations.
- **Payoff Rules:** Violations of customary rules, such as misusing water distribution, may be subject to social or ritual sanctions.

Rules in Use, are rules of the game that have existed from previous generations, as well as rules made collectively through customary meetings. As stated by Challen (2000) that the characteristics of institutions include: institutions are formal rules and informal conventions and codes of behavior (North, 1990), institutions are also socially organised and supported (Scott, 1995). So the rules in use are basically the formal and informal laws agreed upon and formed by the osing community. Of course, the institutions that have been agreed upon are implemented and used as codes of behaviour, as well as prohibitions and requirements that must exist (North, 1990).

Physical/Material Conditions

- The main water resources are rivers, springs and traditional irrigation systems known as customary irrigation.
- Tradition-based infrastructure such as small dams or lebak are created for efficient water distribution.

Attributes of the Community

- The Osing people view water as part of the harmony of nature that must be preserved together. Conceptually, this model characterises the Commons Pools Resource.
- Solidarity is high due to collective traditions that strengthen cooperation in managing resources.

The concept of Commons Pools Resource in the osing community in Olehsari village is managed through the boundaries of norms that are institutionalised in Indigenous Knowledge. Customary norms that exist in Indigenous Knowledge are institutionalised to limit the actors involved (indigenous peoples, local governments, and informal groups) and can be complied with as an effort to maximise personal interests that have the potential to cause the tragedy of the commons (Hardin, 1968).

Outcomes

- Equitable and efficient water distribution patterns according to community

needs.

- Preservation of local ecosystems through rites and traditions that support resource conservation.
- Strengthening social values such as gotong royong and a sense of collective responsibility.

Since then, the residents of Olehsari Village, Glagah Subdistrict, have lived a sustainable lifestyle, with economic, cultural, and ecological components as the primary goals of what those who came before them left behind. A fair and efficient water distribution system is intended to have a positive economic impact on the community. To attain economic goals, the osing community uses ritual and traditions that support resources. Ritual acts are carried out communally through gotong royong and the collective awareness of its inhabitants.

Evaluation Criteria

- **Efficiency:** Custom-based distribution systems are proven to minimise water conflicts.
- **Sustainability:** This practice preserves ecosystems and promotes the regeneration of water resources.
- **Justice:** Needs-based water distribution strengthens the sense of social justice in the community.

For the Olehsari Village community, adat can survive because it is implemented by the community itself, which is reflected through its traditions, customary laws, cultural values that are in line with human values. The government itself basically approves and fully supports the values that exist in the customs themselves as long as they do not conflict with local government regulations, applicable laws and the religion that is adhered to. In indigenous societies that still hold tightly to tradition, Indigenous knowledges and customary norms that exist in the community are able to control the behaviour of community members for selfishness. The formation of a durable network then strengthens the institutionalisation of social relations that are believed to be shared. For Bourdieu (2002), social relations or social networks that exist in society do not exist by themselves (natural given), but are constructed through investment strategies oriented towards the institutionalisation of group relations that can be used as a trusted source of knowledge for profit. Under these conditions, in terms of interactions between individuals in the osing community, indigenous knowledges rooted in traditions and norms can be a means of controlling the behaviour of individuals or groups.

The rules used to regulate the governance of water resources in Olehsari Village are made separately between sacred water resources and water resources for commercial purposes. These two institutional patterns are very important to be able to measure the action arena, which regulates the action situation and the participants involved in it. According to Rutherford (1999) defines institutions as behavioural regulations that are generally accepted by members of social groups, for specific behaviours in specific situations, either self-supervised or subject to supervision by external authorities. The rules in use are a reflection of the system of values and norms that exist in society, but these values and norms are not the institution itself (Manig and Kortenbusch, 1992). The institutionalisation of sacred and commercial entities is actually an attempt to limit humanly devised behaviour (North, 1990), in order to build a structure of social interaction as a result of the implementation of rules in use in the action space. Ostrom (2009) divides the rules in use into seven types of rules, namely:

position rules, membership rules, action authority rules, aggregation rules, information rules, scope rules and cost-benefit rules.

Indigenous Knowledge used in managing Water Resources in Olehsari Banyuwangi Village

The osing community manages agricultural land and water sources through moral values, knowledge, norms, morals and ethics which then become indigenous knowledge for managing water sources. Based on local values and meanings between the osing community and the environment, indigenous knowledge as a form of norms and traditions from generation to generation. Indigenous knowledge in managing water resources that has been carried out is actually a way used by the Olehsari community to protect water resources in the village and is used to irrigate agricultural land and to meet daily needs, for example for drinks, bathing, washing and so on. In general, all rituals performed by the Osing people are tied to their activities as farmers (Yashi, 2018).

Figure 3 Focus Group Discussion In Olehsari Village



Figure 4 : Meeting of indigenous peoples, local government and informal groups in a Focus Group Discussion with researchers in Olehsari Village Banyuwangi

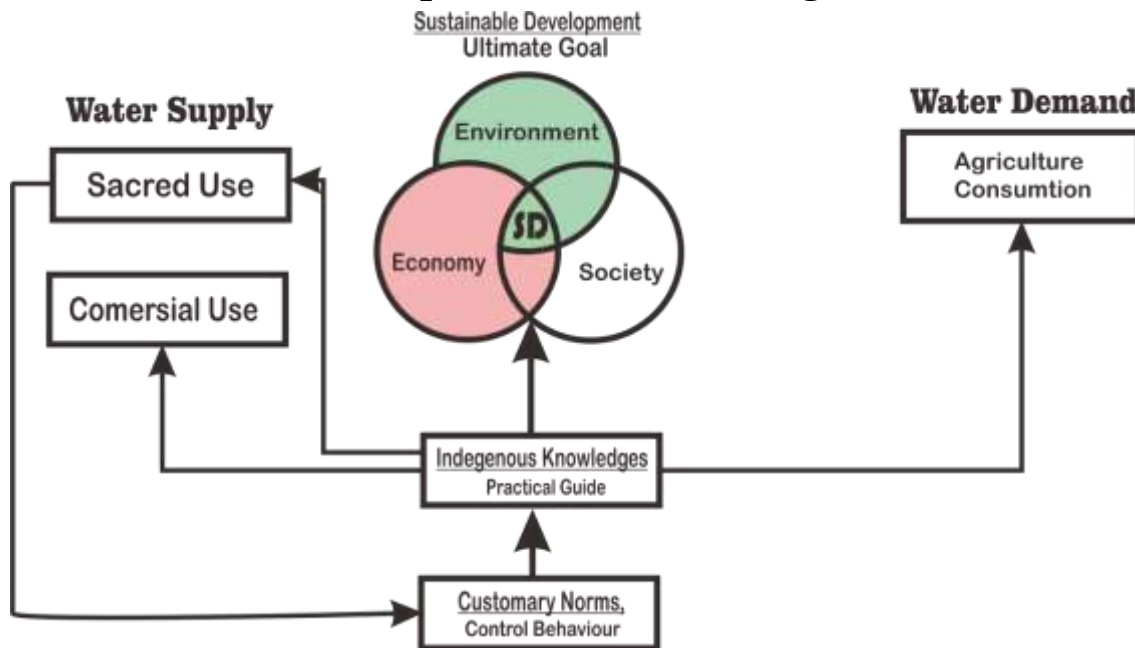


The desire for a life of abundance from agricultural products Zabadi et al.(2023). As a result, the inhabitants of Olehsari Village developed a set of traditions, many of which were associated with the village's agricultural pursuits. Olehsari Village's ritual practices combine Osing art with Javanese and Islamic religious elements. In general, Olehsari Village divides its water resources into two categories: sacred water sources and commercial water sources. The split between the two forms of water resource management is inextricably linked to how the Olehsari Village residents interpret the springs. The osing indigenous people in Olehsari Village modified their water resource management strategies to address the effects of water scarcity by drawing on their extensive traditional knowledge and practices. Water resource management has a huge impact on the Osing people's livelihoods, particularly their health, economic stability, and environmental sustainability. Water conservation practices are crucial components of sustainable development, which emphasizes a balance of social, economic, and environmental demands. Customary norms and indigenous knowledge, for example, help to a sustainable local economy by protecting traditional livelihoods such as agriculture, fishing, and handicrafts, which encourages local resource-based village economies.

Environmental Preservation: Indigenous knowledge offers environmentally friendly practices, such as crop rotation, water conservation, and biodiversity protection. Socio-cultural: Indigenous norms strengthen social bonds and a sense of collective responsibility, which are important for managing development inclusively. The synergy between the three in the Osing community of Olehsari Village is realised in :

- Customary norms control behaviour, ensuring that resources are used fairly and sustainably.
- Indigenous knowledge as a practical guide, providing effective and environmentally friendly methods to fulfil community needs.
- Sustainable development as the ultimate goal, ensuring the welfare of villagers does not jeopardise the resource potential for future generations.

Figure 5 Schematic illustrations for Rural-based sustainable development in Olehsari Village



The Osing community in Banyuwangi, East Java, has various traditional practices in water management:

Fair and Sustainable Water Utilisation

- The water sharing system for agriculture is organised collectively through village meetings or customary rules, which ensure all farmers have access to water equally.
- Prohibition of over-exploitation of water sources, such as diverting flows without community consent.

Water Source Preservation

- The customary prohibition protects the spring (sumber banyu) as a sacred area that should not be destroyed.
- Traditional rituals, such as Selamatan Sumber Air, strengthen the community's commitment to preserving water resources.

Conservation of Water Buffer Ecosystems

- Local knowledge of the importance of forests as water catchment areas encourages communities to maintain vegetation around water sources.

Based on the existing rules in Ostrom (2009, 1990), there are several circumstances that need to be addressed regarding the position rules and membership rules in the indigenous community in Olehsari Village regarding the

existence of indigenous peoples formed through village regulations, which then have implications for how the membership of customary institutions in Olehsari Village, the potential for a situation where the village government, in this case the village head, places its people to occupy the structure of customary institutions can affect the independence of the sacred status that exists in customary institutions. In the context of managing water resources, which is a common pool resource problem as popularised by Hardin (1968), known as the tragedy of the commons can occur if there is a paradigm shift in indigenous communities who no longer believe in the customary norms that have been believed for generations. The social tragedy known as the tragedy of the commons refers to the over-exploitation of common resources by individuals acting in self-interest, leading to the depletion or destruction of resources (Ostrom, 1990). A concept popularised by Hardin (1968) applies to a variety of contexts, including environmental resources, infrastructure, and knowledge (Marciano et al., 2019). Although pessimism about voluntary cooperation has led to centralised control over common-pool resources, such control often results in overuse of resources (Ostrom, 2009). However, research shows that users can develop rules to limit, in this case the osing community uses indigenous knowledges that limit resource overuse of water resources and encourage conservation, especially when communication allows (Ostrom et al., 2008).

CONCLUSION

In accordance to the study's findings, customary norms are the foundation of indigenous knowledge, and they are inextricably related to indigenous peoples' cultural activities and environmental interactions. This knowledge is frequently transmitted orally through traditions, rituals, and daily routines, demonstrating a comprehensive comprehension of their surroundings. The important components of how customary rules contribute to indigenous knowledge. The Osing people follow customary standards, which serve as a source of indigenous knowledge. Their customary norms include rules, traditions, and daily practices that are passed down through generations and serve as guides in a variety of areas of life.

Here's how the Osing people's customary rules are used to generate indigenous knowledge. Some of these traditions include the Selamatan Sawah practice, which involves conducting a selamatan ceremony before and after the planting season in recognition of Dewi Sri as a symbol of fertility. This tradition emphasizes the value of natural cycles and environmental stewardship. Water resources are managed according to customary norms, particularly for rice field irrigation. They have a fair water-sharing system based on mutual consent. In addition, the osing community practices the Selamatan Air ritual at sacred springs. This knowledge is crucial for sustaining agricultural output in a distinct local setting.

The Osing people's customary practices serve as an informal legal system for resolving community problems. For example, using a deliberative mechanism known as berembug. This approach reflects understanding about how to foster social harmony and inter-family ties. The Osing people follow customary rules based on local beliefs, such as respect for ancestors and sacred sites. Knowledge of these places teaches people the value of keeping a balance with nature, such as the prohibition on cutting down particular trees or hunting in sacred areas. With these customary standards, the Osing people not only preserve their local wisdom, but also ensure that their traditional knowledge remains a vital part of their everyday existence, even in the face of modernization.

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Attachment

Seblang dance as a means to ask for freedom from bad luck.



Sukmo Ilang water source is one of the sacred springs in Olehsari Village



Washing one's face at Sukmo ilang Spring is believed to cure various diseases and open one's aura.



Traditional Ritual Place in Seblang Dance

