

Presentation of:
An Institutional Analysis of Sasi Laut, a Fisheries Management System in Indonesia.

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Introduction

Dear friends and colleagues,

As I am standing here I also represent Irene Novaczek and Ansye Sopacua, my colleagues from Ambon, Indonesia, who have worked on this project very hard. I wish to acknowledge them as research partners of this study, as I do Yayasan Hualopu, the NGO in Ambon that we collaborated with. This research, which was funded by IDRC, ICLARM and the Netherlands' Government, was carried out over the last 2 years and involved an extensive study of sasi laut, a local, traditional fisheries management system that, despite periods of instability and subsequent upheavals, has been in place for more than 400 years. That is, of the villages in central Maluku some have a sound and strong system, while others have not, or not anymore. Because of its dynamism and the fact that within Southeast Asia the sasi institution is one of the most prominent functioning resource management systems, it was thought to be a good case from which we could learn certain lessons, not only in the context of Indonesia's tremendous marine wealth currently under threat, but also in the broader application of co-management elsewhere in the world.

In the 25 minutes I have for this presentation I will try to come up with the highlights of our study. Slides will illustrate the description of the system. A glossary will be presented since some concepts are difficult to translate. Still, if things are unclear, please indicate it. First I will briefly discuss the context of the research and give a definition of sasi. Then I will discuss the 4 components of the research and the methodological approach. Finally I will present the main conclusions.

1. Context

The research took place in central Maluku, Indonesia [map1]. Indonesia has a total coastline of approximately 81,000 km. With its 200 million souls to feed, marine resources are of tremendous importance. However, like most countries that own valuable marine resources, the ecosystem is jeopardised by common threats such as coral reef destruction and over-fishing thereby, in the long run, threatening the livelihood of coastal inhabitants. Maluku is no exception where it comes to destruction of the coastal habitat. What makes the region so special though, is that while marine resources are being destroyed at one place, in specified areas there are regulations in place that implicitly protect the resources. This system is known as sasi. Sasi is still

being practised in Ambon, Seram, and the Lease Islands: Haruku, Saparua and Nusa Laut [map1].

2. Sasi

Sasi can be defined as a set of rules and regulations that govern resource use, that is: sasi regulations prohibit premature harvesting of forest and marine products, but they are also applied on social behaviour. For example, there are rules about whether women should be allowed to climb trees, because if they wear a skirt, it may be indecent. With regard to marine resources, sasi laut (laut = sea), there are regulations on the use of poisonous plants and other chemicals, destructive nets and intensive gear such as the bagan (=lift-net). There are also regulations concerning access to the sasi area, activities allowed in the sasi area, and seasonal rules of entry and harvest.

All these rules are guarded and enforced by an institution known as the kewang, which function as a local police force. Their legitimacy, as well as that of the sasi institution itself, is based on adat. Adat lies at the basis of Moluccan society, and stands for customary law and tradition. Sasi, as part of adat, is an intrinsic part of Moluccan society. Nevertheless, throughout the ages, sasi has been threatened and changed under influence of trade (spice wars), colonisation (Portugese, English, Dutch), religion (Christianity and Islam), and so forth. Current threats to the system are modernisation, commercialisation, and the general loss of traditional values. But we will get more on that later, and these aspects are more elaborately dealt with in my presentation on institutional resilience.

3. Research components and Approach

The research comprised four components:

1. An inventory of sasi villages in Ambon, south Seram, and the Lease islands;
2. A performance study of the 11 strongest and 11 weakest sasi villages;
3. Six case-studies: the two strongest, the two weakest sasi villages, and two villages where sasi was lost and being revitalised;
4. A policy study.

Ad. 1: In this study we wanted to cover all the villages in Ambon and the Lease Islands in order to see how many actually have a working sasi system, and which villages have not. In the end 63 villages were inventoried of which a few in south Seram where sasi is also being practiced. Coverage is 100% on the Lease islands and nearly the whole of Ambon is covered. Of Seram only some southern villages were included.

In every village we talked to 3 village officials using a standard survey with which we could determine the strength (= presence and activity) of sasi. The results are shown in the map [map 1]: villages with sasi, who had sasi, who have sasi for land and sasi for marine resources.

- Ad. 2: From the inventory we were to choose the 15 strongest and 15 weakest villages in order to show the performance, using the ladder scale. However, in reality most villages have some kind of sasi or remnants, and we could not find 15 villages that had no sasi at all. So we ended up with two times 11 villages where we measured equity, efficiency, social- and biological sustainability [sheet]. Additionally, biological surveys were carried out in some sasi areas to check on the state of the resource.
- Ad. 3: From the 22 villages we choose two that had the strongest sasi system according to certain indicators. It was hardly surprising to see that these were Nolloth and Haruku, both celebrated and widely known examples of sasi. Then we found two villages where sasi was lost in living memory in order to understand the process of decline: Tuhaha and Hulaliu. Both these villages appeared to be in the process to revitalise sasi. This made the cases even more interesting with regard to studying institutional resilience or, what makes an institution strong and what makes it collapse. However, in order to make a real comparison between sasi and non-sasi villages, this was not sufficient, and we had to move back to Ambon to find two villages that had no sasi at all: Seri and Hutumuri.

In all these six villages a full institutional analysis was carried out, that is, a 20-page survey, the ladder questions, and semi-structured interviews to understand the patterns of interaction and to find the answers to the ‘why’ and ‘how’ of institutional changes. We worked with a 6-person team and carried out 176 surveys and talked to another 157 persons, among which 45 women.

Additionally to the standard interview, it was imperative to map out the market structure. For this, we talked to another 42 people: pole and line fishers, bait fishers, small- scale fishers, retailers, traders and representatives from the fishers’ cooperatives. Sixteen women were interviewed since they are the main local retailers.

- Ad. 4. One of the outputs of this study was a policy brief in which recommendation are made to the Indonesian government. Prior to this, a team from Hualopu and a Dutch student talked to government representatives on provincial, district- and sub-district level. They talked to representatives from the Ministry of Planning, the Ministry of Forestry, the Ministry of Transport since, since, despite its vast marine territory and never-ending coastline, Indonesia has no Ministry of Fishery! This makes policy development a painstaking issue.

Additionally, our team talked to representatives of the navy and police to figure out the responsibilities of both institutions with regard to enforcement; an interesting issue since none of our 176 respondents had ever seen a patrol boat near the village to enforce the formal fisheries regulations. Likewise the villagers had never heard of fisheries regulations being in place. A clear illustration of the importance of sasi regulations in such regions!

All in all 907 interviews were taken including 150 female respondents. The output thus far consists of a report entitled “An Institutional Analysis of Sasi Laut in Maluku,

Indonesia” (ICLARM WP No. 39), and strongly advised to those who like reading since it beholds 325 pages of up-to-date information. The case studies are translated and being distributed to the villages. A policy document is underway pending the last translations, and about to be published.

I will now present a summary of the research results.

4. Results

Based on adat, in Maluku province, coastal villages claim *de facto* rights over the marine territory. Access and withdrawal rights are usually restricted to- and shared among community members. In other words, the resources are common property goods. In other cases, however, these rights can be sold or auctioned to others, and as such are converted into private goods. Fees to operate within the village territory are paid to the village head. Fishers in small canoes are covering surprising distances and fish side by side with industrial fishers. In the study area there is an overall decline in social interaction and cooperation, compliance to fisheries rules, fish catches and environmental health. Collapsing inshore fish catches have driven subsistence fishers ever farther out to sea (some make up to 19-hour fishing trips in their small canoes). This is, amongst others, caused by a decline in *sasi* while at the same time, the need for local management institutions such as *sasi* is more urgent than ever. The main question therefore is in what ways is *sasi* a suitable model, or basis, for future fisheries management?

Patterns of interaction

Constitutional rules (see Ostrom 1991) in *sasi* stem directly from adat and are rather complex and philosophical. Adat defines the *sasi* institution and lays down the basic ethics and codes of conduct. Respect for the ancestors, the position of traditional village leaders and the use of ceremonies are important components of *sasi*.

The collective choice rules define how the players in *sasi* work together, for example, the selection of *kewang* members, the amendment of (operational) rules, etc. The rights of access and withdrawal are defined under these rules. The day-to-day activities in the *sasi* area are part of the operational rules (timing of the harvest, specifications on gear to be used and marine products to be harvested, etc.). To a certain extent these rules coincide with formal legislation, like the rule on blast fishing and the use of cyanide.

People with a decision-making role are the traditional adat leaders, the village head, the *kewang* head and members and, to a lesser extent, the religious leaders. In many cases, the character and legitimacy of the village head (*kepala desa*) is the key to successful marine *sasi*. He plays a key role in decision-making. His connection with the traditional royal line (*raja*), collaboration with adat leaders, and support during elections are crucial for his legitimacy. Adat positions are inherited through family lineages. The *kewang* (‘traditional police’) enforce the rules and prosecute offenders. Even though the *kewang* have no legal power, their traditional legitimacy is high.

Incentives to cooperate and comply

We see compliance as the key factor in management, because if people do not comply there is simply no management. Incentives to comply are fear for the *kewang* and, to a

far lesser extent, the police. Fear of retributions of God, ancestral spirits, or of being socially outcast are also a powerful incentive. Also the fact that sasi is based on adat and thus part of their culture, is important: “sasi has a spirit and everyone carries it.” Legitimacy, flexibility, clarity of objectives, economic, social and environmental benefits, are all incentives and can be grouped under what most respondents stated: “sasi is good”.

Outcomes

Equity in terms of access to resources regulated under sasi is not a major issue because sasi covers few species and small areas, while fishers freely exploit the larger pelagic fishery. However, the sale or auction of harvest rights to people outside the village is perceived as unfair, and direct communal benefits (a communal harvest like in the Haruku Lompa fishery) are preferred and perceived as equitable. Control over resource management and compliance to fisheries rules is higher in sasi villages. Communal decision-making is stronger and more stable. The level of bureaucracy in the (centrally organised) sasi institution is minimal, making it an efficient institution.

Sasi is not equitable in the sense that fishers are always heard while women are excluded from the decision-making process altogether. Sasi is fundamentally male dominated and hierarchically organised while the general people are not questioning that all is being arranged for the greater common good and according to traditional law.

Sasi has a significant positive impact on social sustainability. Sasi villages have higher levels of interaction around community issues, a stronger tradition of collective action, and less conflict. There is no demonstrable economic benefit from sasi, but neither do they suffer economically.

Sasi has the potential to provide economic and biological benefits. It is clear in the case of *Trochus niloticus* (lola) that this specific species, currently on Indonesia's endangered species list, could easily be extinct in Maluku were it not for sasi. This is also the case for sea cucumbers (Teripang / Bêche de Mer). The effect on the coral reef itself is not clear, but the biological surveys suggest that where the area is guarded, the reefs are protected from blast fishing. The possible impact of sasi on the broader (pelagic) fisheries resources is not clear. Fish-catches are in decline throughout the study area, signalling the failure of higher levels of fisheries management. It is unlikely that sasi provides a benefit to the larger fishery unless these inshore areas happen to be critical spawning or nursery habitats for pelagics.

5. Conclusions

Now that we are moving from state controlled fisheries to co-management, it is imperative to take the centralised character of the Indonesian society into account. In Indonesia, the community, or more specifically, village organisations, are controlled through government structures. Also within the villages, the centralised structure discourages input from the general population. The village leader has a powerful role and fisheries management depends for a great deal on whether he has the motivation and dedication to be proactive. Besides, there is a strong segregation within the

villages between the rich and the poor and between men and women. In this light, it is a challenge to achieve functional and stable co-operation within the village and between the village and the various government levels.

Instead of trying to change the local structures, we should have to find a way to use them, keeping in mind the various incentives at work in the region. Existing or revitalised institutions such as sasi and the latupati, an island-wide congregation of village leaders, could be tools to promote exchange of information. To combat the lack of awareness of fisheries and management, NGOs and universities as well as government departments have an important role to play.

According to the current structures, the village head plays a key role. To avoid the risk of collapsing management structures as the results of political instability or re-elections, it would be an option to base the management institution on a more stable authority such as adat or the church.

Legal researchers have pointed out that under various national laws, the village head has the responsibility to ensure that local resources are managed to provide optimal benefits for the local community. Sasi combines the authority of the village head with the legitimacy and ethics of adat, and therefore seems to be the logical institution for management of inshore waters. This key-role is however not acknowledged through explicit legal rights of tenure or management. Once provided with a defined legal mandate, villages could formally delegate management duties to a local sasi institution or kewang. The involvement of local institutions in monitoring and enforcement, but also as partners in development planning, would lead to a situation in which inshore waters would be managed under a system of co-management.

The strengths of sasi are:

Basic management concepts that are internalised and legitimate, such as open and closed seasons, locally developed regulations, local wardens, local responsibility over resources, etc. [*sheet*].

An efficient and legitimate base through adat, on which to build co-management structures. The sasi institution has already proved to have demonstrable social and environmental benefits.

The sasi institution is resilient in the sense that despite losses of part or the whole institution, most villages still have some form of sasi or at least value it as an intrinsic part of their culture.

The weaknesses of sasi are:

The drawbacks of flexibility that opens the door to manipulation for ends that neither conserve nor manage the resources.

Lack of financial resources which limit the effectiveness of, for example, the kewang.

Limited access to new information and alternative technologies because communication channels are weak or non-existent.

The limited scope of sasi on only a few species and specific local inshore waters.

The influence of urbanisation, population growth and modernisation which cause marine sasi to erode.

Powerful externalities affect fishers and resources over time, including new world-market demands for marine resources, collapsing clove-prices, monetary and political instability, and climate change. The turbulent cultural and social history of Maluku and the impact of national development policy add further layers of complexity. Because sasi has no basis in law, it is very vulnerable to these externalities. In our report we wrote: "However, because of its resilience, the institution has so far withstood the pressures."

I would like to add here that recent political developments on the Lease islands and Ambon have not only affected sasi, but have undermined the total social structure of the islands. Because of reasons we can only guess, since January this year, Maluku has been the scene of violence, terror and murder. The battle which is speculated to have been instigated by outsiders has focused on religion and divided Ambon island in a Christian and Islamic part, villages are burned down and refugee camps house ten thousands of people. The social disintegration is complete and we can only hope that people come to their senses and that this violence will stop. To what extent this rage has affected local structures such as adat and sasi, we can only find out in future times.

Selected references

- Benda-Beckmann von, F., K. von Benda-Beckmann, and A. Brouwer, (1995) Changing 'Indigenous Environmental Law' in the Central Moluccas: Communal Regulation and Privatization of Sasi. In: *Ekonesia. A journal of Indonesian Human Ecology*. No. 2. (pp. 1-38). Program Studi Antropologi-Program Pascasarjana. University of Indonesia.
- Hualopu (1991) *Laporan Penelitian Hak Adat Kelautan di Maluku*. Yayasan Hualopu kerjasama dengan Fakultas Hukum dan Pusat Studi Maluku, Pattimura Universitas, Ambon, Indonesia.
- Hualopu (1996) *Case Study: Coastal Resource Management in the Lease Islands, Maluku, Indonesia*. Report presented to the National Conference on the Role of Communities in Coastal Resource Management in Indonesia. Yayasan Hualopu, Ambon, Indonesia.
- ICLARM-NSC (1996) *Analysis of Fisheries Co-management Arrangements: a Research Framework*. WP No. 1, ICLARM, Manila.
- Kissya, E. (1994) Managing the Sasi way. In: *Samudra report*, Nos. 10 & 11, Dec. 1994. pp. 11-13.
- Kissya, E. (1995) *Sasi Aman Haru-ukui. Traditional Management of Sustainable Natural Resources in Haruku*. Document Treasures of Local Cultures #2. SEJATI Foundation, Jakarta.
- KITLV (1925) *Adatrechtbundels. XXIV: Groote Oost*. Martinus Nijhoff, s'Gravenhage, Nederland.
- Mantjoro, E. (1996) Traditional Management of Communal-property Resources: the Practice of the Sasi System. In: *Ocean and Coastal Management. Vol. 32, No. 1*, pp 17-37.

- Nikijuluw, V.P.H. (1995) Community-based Fishery Management (*sasi*) in Central Maluku. In: *Indonesian Agricultural Research and Development Journal*. Vol. 17, No. 2, pp. 33-39.
- Novaczek, I. and I. Harkes (1998) An Institutional Analysis of Sasi Laut in Maluku, Indonesia. WP No. 39, ICLARM, Manila.
- Ostrom, E. (1990) *Governing the Commons: the Evolution of Institutions for Collective Action*. Cambridge University Press.
- Pomeroy, R. & Simanjuntak, S. (1997) *An Institutional Analysis of the Sasi Laut system in Maluku Province, Indonesia*. Research Proposal. ICLARM, Manila, Philippines.
- Ruhunlela, V. & C. Hitipeuw (1993) *Socio-economic Surveys for the Islands of Saparua, Haruku, Nusa Laut, Ambon, Kei and Aru*. Research Proposal. In: Environmental Programme, Moluccas, Indonesia. Environmental Studies Centre, Pattimura University, Ambon
- Zerner, C. (1994a) Through a green lens: The Construction of Customary Environmental Law and Community in Indonesia's Maluku Islands. In: *Law and Society Review*. Vol. 28, No. 5. The Law and Society Association.
- Zerner, C. (1994b) Transforming Customary Law and Coastal Management Practices in the Maluku Islands, Indonesia (1870-1992). In: D. Western & R. M. Wright (eds). *Natural Connections. Perspectives in Community-Based Conservation*. Island Press, Washington, USA.

Illustrations

- Map of study site
- Slide of bagan
- Sheet with performance indicators
- Sheet with basic management concepts of sasi