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Vel, J.A.C.; Bedner, A.W.; Utama, T.S.J.; Ichlas, H.

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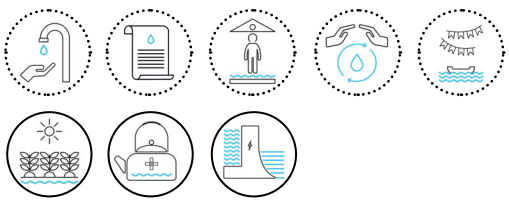
Law and Heritage for Protecting Water Resources and Access to Water in Indonesia

Jacqueline Vel, Tody Sasmitha Jiwa Utama, Hertasning Ichlas and Adriaan Bedner
Van Vollenhoven Institute, Leiden Law School, Leiden University

There are important legal dimensions to the relationship between water and heritage. This paper reports on the challenges Indonesia is facing concerning water management. Age-old customary water governance systems exist in parts of the country and continue to influence local decision making and water use practices. However, such heritage institutions can no longer safeguard local community water rights nor protect the environment. Since the 1990s, business power has been gradually overstepping customary socio-legal arrangements with negative effects on both the local population and water supply. Policy recommendations issued by the World Bank in 2004 supported opening paths to privatization. At present, national legislation and corporate interests have taken control of water management. Simultaneously, water heritage sites have been transformed into tourist attractions. Also, plantation companies promote land heritage issues when that serves their divide-and-rule strategies and turns public attention away from their water grabbing. A change in state legislation is needed that prioritizes the public instead of capitalist business interests regarding water supply and preservation. The lessons from heritage systems are very relevant to bringing about that change.

KEY THEMES



< Fig. 1 Groundwater from deep wells will turn this dry plain into a sugar plantation, East Sumba (Source: Jacqueline Vel, 2017).

Law and Heritage

What is the origin of the rules and laws by which water is regulated? As a local natural resource, emerging from springs and wells and flowing through rivers, water and its use have traditionally been regulated by local societies. What the boundaries of such "local" societies are depends. They have been shaped by mountain ridges, watersheds, and island contours, but also by social and cultural characteristics of kinship and language. From a socio-legal perspective, heritage in the field of water management consists of local customary law, which belongs to a community and defines the territory to which it applies.

In areas where water was never a problem, customary rules about water use and division are usually limited. Scarcity and competing uses turn water into a limited resource and create the need for more elaborate governance mechanisms to distribute water and guarantee access. Moreover, water often flows from one local society's territory to another's, which creates the need for a supra-local legal system of rules and institutions to address water problems such as droughts, floods and pollution. Presently, the state legal system is by far the most prominent one, but how it works in practice can vary. Local variation in how state law is implemented can be the result of decentralization, for instance where it concerns the autonomy of provincial or district governments in regulating water use. Additionally, the local legal water regime can also include customary law and its implementing institutions, particularly when formally recognized by the state.

If we want to learn from water institutions of the past, we need a regional and culturally specific analysis of water use and management that overcomes the limitations of economic and technical thinking about water systems and water management (Mosse 2008, 940). Such an analysis focuses on initial problems with water, the socio-cultural practices associated with that particular water system, the political structure of the society involved, the shape and power of local water management institutions, and the effect of water management on various social groups. The results of the research will indicate whether and why the institutions and their rules provide effective solutions to local problems, but they will also indicate their downsides or limitations, for example, how water politics can increase societal inequalities by excluding part of the population from the benefits of water infrastructures (Fontein 2014; Ley 2022).

The Subak in Bali: A World Heritage Case of Communal Water Management

A famous case of heritage in water management is from the island of Bali in Indonesia. This case is one where autonomy has been granted to local traditional institutions. According to UNESCO:

> The cultural landscape of Bali consists of five rice terraces and their water temples cover 19,500 ha. The temples are the focus of a cooperative water management system of canals and weirs, known as subak, that dates to the 9th century. […]. The subak reflects the philosophical concept of Tri Hita Karana, which brings together the realms of the spirit, the human world and nature. This philosophy was born of the cultural exchange between Bali and India over the past 2,000 years and has shaped the landscape of Bali. The subak system of democratic and egalitarian farming practices has enabled the Balinese to become the most prolific rice growers in the archi-

> pelago despite the challenge of supporting a dense population. (UNESCO n.d.)

In this paragraph, UNESCO gives a rather romantic description of the *subak*, ignoring any downsides of the system, and internal and external threats. Despite its famous reputation, the *subak* is not able to counter present-day threats which do not just arise from increasing population density but are driven by economic policies.

Nowadays the *subak* is challenged by modern agricultural techniques and increasing mass tourism (Roth 2014). These forces of change have transformed water from a social and public resource into an economic good. In the 1970s, the Green Revolution as a national policy to modernize rice production had a profound impact on agricultural technologies, for example by promoting the use of (chemical) fertilizer and high-yielding rice varieties. Agricultural service departments of the national government became important institutions in guiding farmers' rice cultivation, focusing on agricultural inputs rather than water. This sharply contrasted with rice field irrigation in the *subak* system, which was a matter of relationships connected to water. The Balinese water temples were crucial to the operation of water systems, expressing water governance in ritual form (Lansing 1991; Mosse 2008, 942). Traditionally, every *subak* group has its own temple. In each phase of land cultivation, from sowing and planting to water distribution and harvesting, the *subak* members perform ceremonies at their temple by which they recall the community's norms regarding land and water management. Therefore, the temple ceremonies function as an effective means to ensure member compliance with the group norms, including water protection and distribution. If new stakeholders do not acknowledge the authority of the temples as grounded in Balinese Hindu culture, the basis of the temples' power in water management vanishes.

Since the 1980s with the development of mass tourism on Bali, the clash between economic-driven policy objectives and socio-cultural water management has become acute (Benge and Neef 2018). The *subak* cultural landscape has been directly affected by the conversion of agricultural land for building hotels and tourism infrastructure. With increasing numbers of tourists visiting the island, water use in hotels competes for the available water resources on the island – the tourism industry consumes approximately two-thirds of Bali's water resources (Cole 2012). The average tourist uses 20 times more water than the average Balinese rural household. Meanwhile, more than 60 per cent of Bali's catchments are drying up, and saltwater is entering the island's aquifers.[1] At the same time, the rice terrace landscape itself – regardless of its use for food production – has become a tourist destination. The *subak* and its landscape are now an object of the tourist imagination, while powerful stakeholders in the tourism industry are co-opting water management (Benge and Neef 2018, 42). The mechanism for such co-optation works through the legal permits that tourism project developers need when they plan to buy land and build hotels and swimming pools. The regional government institutions authorized to grant the permits are willing to do so when the applications serve their economic interests (Lund 2020; Li and Semedi 2021). At the grassroots level, the local landowners who sell their residential land and rice fields transform themselves into tourism industry loyalists. In such cases, the *subak*

1. https://www.nowbali.co.id/saving-waters-tackling-balis-water-crisis/

^ Fig. 2 Balinese rice fields turned into a landscape for tourist consumption, Bali (Source: Jacqueline Vel, 2022).

loses members and territory. Consequently, the local traditional form of water regulation has been replaced to a large extent by national regulations and therefore has been relegated to second place.

National Water Governance in Indonesia

The developments in Bali show what happens when water becomes the object of competition, and when the stakeholders are no longer just members of local society but include powerful companies from outside the area. Customary law and traditional institutions lose their power to prevent land transfer and conversion, and therefore are slowly discharged from the water governance. The step from local customary water management to regulation based on the national legal system in Indonesia is huge. With the relevant legal permits and some local support in hand, companies are allowed to pump and use water, and can even obtain government assistance in protecting their rights as included in the permits and licenses in the event that neighboring communities protest against their excessive water use.

Indonesia is one nation, but it has many islands and cultures, and a wide variety of water situations. It has one national legal system, in which several aspects of water governance have been decentralized to regional or local governments. National state law concerning water mainly aims at enabling industry, with some protection of water resources in environmental legislation and human rights law. Such fragmentation of legislation also implies that many government institutions are involved in water governance, each of them with only a limited and partial authority (D'Hondt 2019).

Water management is highly politicized, as evidenced by the legal battle in Indonesian water

law between public and privatization. In 2004 a new pro-privatization Water Law was enacted under pressure of the World Bank's Water Resources Sector Adjustment Loan (WATSAL) program. That law was challenged six times by the public before being completely overturned by the Constitutional Court, leaving water management under the previous, outdated 1974 law. Surprisingly, the 2019 Water Law is essentially identical to the one from 2004, giving corporations considerable power to privatize the water business. That privatization process is carried on in the Employment Creation (Omnibus) Law (11/2020) that revised all existing natural resource laws.

Compared to the political attention devoted to land conflicts, water as a natural resource and public good has remained in the shadow of public attention. However, the problems are huge. The current challenges to the water situation in Indonesia listed by the US Agency for International Development (USAID) in its "Indonesia Water Resources Profile Overview" (2021) can be related to four types of causes: (a) the expansion of capitalist industry, (b) climate change, (c) uncontrolled citizen behavior, and (d) poor water governance by the Indonesian government. The problems include:

- Water pollution of surface water
- Little to no control of water use by extractive industry
- Excessive extraction of groundwater in cities and for plantations
- Salination of water in coastal areas due to groundwater extraction
- Subsidence of cities due to the over-exploitation of aquifers, threatening infrastructure and livelihoods, and worsening flood risks
- Excessive rain and floods as well as prolonged droughts
- Poor protection of water resources as public goods
- Poor protection of the rights of citizens to access sufficient and clean water.

State law is key to addressing these challenges, but it can do so only when all stakeholders, including local society members, accept the norms and rules applied to their case. When the regulating capacity of customary law has reached its limits in addressing the above challenges, the state through national law has to take on the role of water protection, or it needs to enable local populations to adapt their customary management systems to this end and provide them with the tools of national law to do so. However, when state institutions obtain the power for regulating water, there is a danger of co-optation, as demonstrated in the following case.

Sugar Plantation on Ancestral Lands in Sumba: A Second Case of Co-Opted Corporate Water Management

An example where several of the problems mentioned above converge is the case of a sugar plantation in Sumba, a sparsely populated island east of Bali, which has a relatively dry climate and a savanna landscape. Until the end of the twentieth century, agricultural land, forest and water were not yet scarce resources and labor was the limiting factor in the local economy (Vel 1994). Consequently, local customary law concentrated on rules that regulate social relations and obligations of Sumbanese people based on their specific position within their clan (gender, class, generation). Customary water law was limited to the protection of springs. In areas with government-built village irrigation systems, the users could manage water distribution and resolve related problems through

their own village institutions, as if applying new style customary law. However, that local capacity cannot cope with extractive industries entering the island.

In 2014, a subsidiary of a large Indonesian business conglomerate obtained a permit from the district government to explore the suitability of around 50,000 hectares for the cultivation of sugarcane (Vel and Makambombu 2019). When villagers downstream of the plantation's enclosed area voiced their concern about a reduction of their irrigation water, the company assured that its operations would not cause any harm. This would be guaranteed legally, because the company needed an environmental permit before being allowed to start its operations. The key step in the legal process to obtain this permit is the environmental impact assessment, which includes projections of effects of operations on surface and groundwater, on quantities as well as dangers of pollution. The assessment, which appeared in 2018, indicated considerable negative effects, but nevertheless the district government used its discretionary power to grant the environmental permit anyway.

This case does not stand on its own: local government officials and local communities can seldom resist corporate power (Lund 2020; Li and Semedi 2021). Gradually, the local community's protests shifted focus from water concerns to claims on the land cultivated by the company. These customary land claims could result in compensation payments from the company, whereas complaints about water issues were not sufficiently visible yet, and legally and politically weak. The company welcomed the turn to local land heritage discussions, which served their divide-and-rule strategies, and turned public attention away from their water grabbing.

Prospects for Water Protection in Indonesia

Despite the huge water-related problems Indonesia faces, the Indonesian government has done little to strengthen legal protection of water resources and citizens' access to sufficient and clean water. Even worse, the latest legal developments further facilitate extractive industry. The Omnibus Law has shortened the procedure for companies to obtain legal licenses for exploitation, while re-centralizing crucial decisions about water resources implies greater control over the licenses by the central government. That takes water management decisions further away from the societies in which water use, distribution and management takes place. The Omnibus Law views water primarily as the object of a license for production on an industrial scale, not as a public good or the object of a citizen's right.

In short, prospects for water protection in Indonesia are bleak. The predictions that Jakarta will sink below sea level within the next 10 years, that there will be an absolute water shortage on Java by 2040 and that the Citarum River will remain the world's most polluted river do not seem to bother most policy makers and lawmakers. Some of the alarming water problems are ignored by moving the industry on to not yet depleted and polluted parts of the country like Sumba. Without counter pressure, large-scale industries and plantations will continue taking over water governance with the single aim of profit for the capital owners. The path to solutions will require respect for and cooperation with customary water governance institutions to create sustainable and locally adjusted water management. To achieve that and to counter the power of extractive industry, changes in the national legal system are needed, with laws and regulations that will restore the balance between public and private interest

in the direction of better protection of water as a public good with access for citizens. Lessons from heritage systems are very relevant for shaping that change.

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Dr. Ir. Jacqueline Vel is senior researcher and Indonesia specialist at the Van Vollenhoven Institute for Law, Governance and Society, at Leiden Law School, Leiden University. She earned her PhD at Wageningen University, Department of Agricultural Law (1994). Her research interests include agrarian change and how it affects local economies, and the strength and weaknesses of customary law in protecting access to land and water. Sumba Island has been Jacqueline's continuous field work site, from 1984 to the present. She has been participating in interdisciplinary projects with international and Indonesian colleagues doing research on democratization and local politics, changes in land tenure security, access to justice for the poor, and social and legal aspects of introducing new crops for developing biofuel production in Indonesia.

Contact: J.A.C.Vel@LAW.leidenuniv.nl

Adriaan Bedner is KITLV professor (by special appointment) of Law and Society in Indonesia and Head of Department of the Van Vollenhoven Institute for Law, Governance and Society. Adriaan's research focuses on access to justice, legal reasoning, family law and land law – in particular in Indonesia. This has led to publications on a wide variety of subjects, ranging from administrative courts and environmental litigation to human rights promotion in marriage law regimes and Indonesian legal education. Adriaan has been involved in many research and legal education projects in Indonesia, sponsored among others by the Royal Dutch Academy of Sciences, the Dutch Research Council, the Dutch Department of Foreign Affairs and NUFFIC. He is Chair of the Board of the International Institute of Asian Studies, editor of Routledge's Book Series *Law, Development and Globalizatio*n, and editor of the *Asian Journal of Law and Society.*

Contact: a.w.bedner@law.leidenuniv.nl

Tody Sasmitha Jiwa Utama is a PhD candidate at the Van Vollenhoven Institute for Law, Governance and Society at Leiden Law School, Leiden University. He is also a lecturer at the Department of Adat (Customary) Law and researcher at Djojodigoeno Adat Law Center, Universitas Gadjah Mada (UGM), Indonesia. Tody's current research focuses on the state utilization of *adat* (customary) law and institutions in Indonesia. He investigates socio-political background and strategies employed by multi-level government institutions in recognizing and incorporating customary law. Prior to that, he also participated in several research projects related to the recognition of the *adat* community; legalization of customary tenure; and women, disability and *adat*. Some of his works are available at https://ugm.academia.edu/todysasmitha.

Contact: t.s.j.utama@law.leidenuniv.nl

Hertasning Ichlas LL.M., M.A., is a PhD student and researcher at the Van Vollenhoven Institute for Law and Society at Leiden University. His interests in law and development are particularly focused on how legislation affects land use and agrarian change in rural Indonesia.

Contact: h.ichlas@law.leidenuniv.nl