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Evolving property rights in water and their impact on water allocation and reallocation

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Chapter 4

A water ownership and allocation inventory in Africa and Asia

Sections 4.2 and 4.3 of this chapter have been published in: Bosch, H.J., Gupta, J, & Verrest, H. (2021). A water property right inventory of 60 countries. *RECIEL*, 30(2), 263-274. doi:10.1111/reel.12397. The conclusion and introduction have been modified to fit into this thesis.

4.1 Introduction

Over the course of 5,000 years, diverse property theories have developed that apply specifically to water (Dellapenna & Gupta, 2009). The importance and increased scarcity of water has moved states to reform their water laws with the aim to take (back) or increase control over water. However, while countries worldwide are reforming water law, chapter 3 has shown that there is little systematic comparative analysis of the current state of water ownership, especially in the Global South, and the water allocation instruments in place. Hence, this chapter addresses the question: How is water ownership organised in Anglophone and Francophone Africa and Asia, and how do states allocate their freshwater resources?

This chapter first discusses how water ownership is organised in the researched countries (see 4.2). It then discusses the different water allocation instruments available to the states (see 4.3). The analysis shows that one of the main instruments to allocate water is through a national water use permit system, which will be discussed in more detail in chapter 5. Section 4.4 draws inferences.

4.2 Water Ownership in Africa and Asia

The researched Anglophone African countries were British colonies or protectorates³² and inherited or were influenced by English common law. Francophone African countries were either French colonies, protectorates or mandates (Hirschman & Touzani, 2011; Huillery, 2014; Lumumba-Kasongo, 1992; Magnarella, 2005), and inherited or were structures built on the land gave the right to use water (Hodgson, 2006). The civil law tradition distinguished between public and private water, where public water use required administrative permission (Hodgson, 2006, 2016). Asian countries were under British,³³ Dutch,³⁴ French³⁵ or Spanish rule,³⁶ or part of the Soviet Union³⁷ or the Chinese empire.³⁸ The civil law tradition applied to the former Soviet Union (before it nationalized water under Communism), the Philippines and Indonesia (Hodgson, 2016). I now discuss how post-independence these states have organised water ownership.

³² Ethiopia was never colonized.

³³ Malaysia, Myanmar, Pakistan, Sri Lanka.

³⁴ Indonesia.

³⁵ Cambodia, Lao, Vietnam.

³⁶ Philippines.

³⁷ Armenia, Azerbaijan, Georgia, Kyrgyzstan, Tajikistan.

³⁸ Mongolia.

4.2.1 De jure water ownership vested in the state

Following independence, most countries have put surface and groundwater resources in the public domain.³⁹ In Anglophone Africa, states take back control by: abolishing private rights to water;⁴⁰ announcing state ownership;⁴¹ vesting water property in the state,⁴² president, government or nation;⁴³ seeing water as a national resource;⁴⁴ managing water in public trust;⁴⁵ and recognizing water as the people's common property.⁴⁶ Similarly, Francophone African countries see water resources as part of the public (hydraulic) domain,⁴⁷ as the common heritage of the nation⁴⁸ or public property.⁴⁹ Unlike Anglophone Africa, the water laws of Francophone African countries do not refer to 'water ownership', 'water (property) vested in state, president, government or nation', 'trusteeship/ trust for the people or nation', 'rights vested in the state', or 'state ownership'. As in Africa, the Asian states either state that water resources are state-owned,⁵⁰ vested in the state, president, government, or nation⁵¹ the common property of people⁵², or 'controlled by the state and used for the optimal welfare of the people'.⁵³

4.2.2 Exceptions to state water ownership

There are exceptions to state water ownership: in Malawi public water is subject to 'any rights of a user granted by or under this Act or any other written law'.⁵⁴ In Botswana, public water does not include lawfully appropriated water use or water for extracting minerals.⁵⁵ In Ghana and Sierra Leone, state control excludes 'any stagnant pan or swamp wholly contained within the boundaries of any private land'.⁵⁶ In South Sudan, natural

³⁹ Except Malaysia.

⁴⁰ Botswana, Eswatini, Zambia, Zimbabwe.

⁴¹ Eritrea, Lesotho, Namibia.

⁴² Nigeria, Uganda.

⁴³ Ethiopia, Gambia, Ghana, Kenya, Liberia, Malawi, Sierra Leone, Tanzania, Zambia, Zimbabwe.

⁴⁴ Eswatini.

⁴⁵ Botswana, Ghana, Kenya, Lesotho, South Africa, Tanzania.

⁴⁶ Ethiopia, South Sudan.

⁴⁷ Algeria, Benin, Burkina Faso, CAR, DRC, Chad, Congo, Djibouti, Guinea, Mauritania, Morocco, Niger, Senegal, Togo.

⁴⁸ Benin, Burkina Faso, Cameroon, Côte d'Ivoire.

⁴⁹ Mali.

⁵⁰ Armenia, Azerbaijan, Cambodia, Myanmar, Nepal, Philippines.

⁵¹ Bangladesh, Bhutan, Georgia, Kyrgyzstan, Malaysia, Mongolia, Tajikistan.

⁵² Lao, Vietnam.

⁵³ Law No 7/2004 on Water Resources 2004 (Indonesia) art 6(1).

⁵⁴ Water Resources Act 2013 (Malawi) art 5.

⁵⁵ Water Act 1968 (Botswana) art 2.

⁵⁶ The National Water Resources Management Agency Act 2017 (Sierra Leone) arts 1 and 3(1); Water Resources Commission Act 1996 (Ghana) arts 12 and 37.

water resources are ‘commonly owned by all riparian people.’⁵⁷ In Zimbabwe, a water use permit for mining purposes is issued by the mining commissioner of the mining district,⁵⁸ and the water law does not affect the ground water use rights conferred on holders of mining locations or prospectors by the Mines and Minerals Act.⁵⁹

In Francophone Africa, exceptions include water collected in private works,⁶⁰ water intended for domestic use,⁶¹ rainwater that falls on, and ponds created by, rainwater or overflows from watercourses on private land,⁶² sources emerging from private land⁶³ and structures (e.g. swimming pools, ponds, cisterns, artificial water reservoirs and watercourses, wells, boreholes and irrigation or drainage canals) built by individuals on private land.⁶⁴ In Togo, these structures need ministerial authorization. In Morocco, historical rights that have been recognized are excluded from the public domain.⁶⁵

In Asia, there are various exceptions in the public interest. In Azerbaijan, for instance, water bodies that are considered municipal property can be granted for use, lease and ownership to citizens and legal entities of the Azerbaijan Republic.⁶⁶ In Bangladesh, ‘all rights over the surface water on any private land shall remain with the owner of such land and such rights to use the water shall, subject to the provisions of this Act, be continued to be enjoyed.’⁶⁷ In Lao ‘individuals, legal entities, or organisations shall have the right to possess and use any natural water and water resource in any activity, provided that they have received approval from relevant authorised agencies.’⁶⁸ And any person in the Philippines ‘who captures or collects water by means of cisterns, tanks, or pools, shall have exclusive control over such water and the right to dispose of the same’.⁶⁹

4.2.3 Customary law and water ownership

By putting water in the public domain, states expropriated existing water rights including customary rights and rights of colonists owning land, unless there were explicit exclusionary clauses. Customary law includes the long-standing historical traditional

⁵⁷ South Sudan, ‘Water Policy’ (2007) <<http://extwprlegs1.fao.org/docs/pdf/ssd147091.pdf>> 8; The policy does not define ‘riparian people’.

⁵⁸ Water Act 1998 (Zimbabwe) art 34(3).

⁵⁹ *ibid* art 5.

⁶⁰ Benin, Burkina Faso.

⁶¹ Benin, Burkina Faso, Niger.

⁶² CAR, Niger.

⁶³ CAR.

⁶⁴ CAR, Niger, Togo.

⁶⁵ Loi N° 36-15 Du 10 Aout 2016 Relative à l’eau’ 2016 (Morocco) art 2.

⁶⁶ Water Code of the Azerbaijan Republic 1997 art 13(2).

⁶⁷ Bangladesh Water Act 2013 art 3(3).

⁶⁸ Law on Water and Water Resource 1996 (Lao) art 4.

⁶⁹ The Water Code of the Philippines 1976 art 7.

norms, rules and practices at the local level (Burchi, 2005; von Benda-Beckmann et al., 1997) and is a basis for claiming individual or collective property rights (Meinzen-Dick & Pradhan, 2002) (even though many Indigenous communities use the language of responsibilities rather than that of rights).

Prior to colonization, customary and/or Islamic law prevailed in Africa (Ramazzotti, 1996). In African customary law, communities collectively owned the water resources, which was under the chief's control (Tewari, 2009). Some countries had customary law subject to Islamic influences (Ramazzotti, 1996) where water was a 'substance that cannot be owned unless it is taken in full possession' and was considered a 'gift of God' and thus belonging to 'His community' (Naff, 2009). In many Asian countries, water belonged to the local communities under different elements of Hindu or Islamic law (Cullet & Gupta, 2009).

Recognition of customary law in the constitutions

Post-independence constitutions in 18 out of 20 Anglophone African countries mention customary law.⁷⁰ Eleven countries⁷¹ explicitly recognize customary law in their constitutions subject to other constitutional provisions. Eswatini's Constitution, for example, reads: 'Subject to the provisions of this constitution, the principles of Swazi customary law (Swazi law and custom) are hereby recognised and adopted and shall be applied and enforced.'⁷² Namibia's Constitution states that the 'customary law and the common law ... shall remain valid to the extent to which such customary or common law does not conflict with this Constitution or any other statutory law.'⁷³ And in South Africa, the 'Bill of Rights does not deny the existence of any other rights or freedoms that are recognised or conferred by common law, customary law or legislation, to the extent that they are consistent with the Bill'.⁷⁴

Six countries indirectly recognize customary law, by recognizing customary (appeal⁷⁵) courts,⁷⁶ by requiring formal courts to also apply customary laws,⁷⁷ by seeing 'customs and

⁷⁰ The constitutions of Eritrea and Tanzania do not make reference to customary law.

⁷¹ Botswana, Eswatini, Gambia, Ghana, Kenya, Lesotho, Malawi, Namibia, Sierra Leone, South Africa, Zimbabwe.

⁷² Swaziland's Constitution of 2005 (Eswatini) art 252(2).

⁷³ Namibia's Constitution of 1990 with Amendments through 2014 art 66.

⁷⁴ South Africa's Constitution of 1996 with Amendments through 2012 art 39(2)-(3).

⁷⁵ Nigeria.

⁷⁶ Ethiopia.

⁷⁷ Liberia.

traditions' as a source of law,⁷⁸ by acknowledging land ownership through customary land tenure systems,⁷⁹ and/or installing a House of Chiefs advising on customary matters.⁸⁰

Unlike Anglophone Africa, only one Francophone country explicitly recognizes customary law in its constitution and six countries indirectly refer to customary law. Rwanda's Constitution reads: 'Unwritten customary law remains applicable provided it has not been replaced by written law, is not inconsistent with the Constitution, laws, and orders, and neither violates human rights nor prejudices public security or good morals.'⁸¹ Countries that indirectly refer to customary law are for example Chad, which recognizes the customary and traditional rules that are only applicable in the communities where they are recognized, until codified.⁸² Burkina Faso and Niger both recognize traditional leadership as a depository of customs and traditions⁸³ or customary authority.⁸⁴ The constitutions of most Francophone African countries do not mention customary law.⁸⁵

As in Francophone Africa, only five out of 20 Asian countries refer to customary law. The Constitution of Indonesia 'recognises and respects traditional communities along with their traditional customary rights.'⁸⁶ The Philippines states that '[t]he Congress may provide for the applicability of customary laws governing property rights or relations in determining the ownership and extent of ancestral domain.'⁸⁷ The constitutions of three other countries⁸⁸ recognize custom or usage as having the force of law.

Recognition of customary law in the water laws

While in Anglophone Africa nine countries acknowledge customary law as part of law, this is not reflected in their water laws. Only Tanzania explicitly recognizes customary rights, stating that '[c]ustomary rights held by any person or community in a watercourse shall be recognised and is in every respect of equal status and effect to a granted right.'⁸⁹ Sierra Leone allows the continuation of a customary use as an existing lawful water use.⁹⁰

⁷⁸ South Sudan.

⁷⁹ Uganda.

⁸⁰ Zambia.

⁸¹ Rwanda's Constitution of 2003 with Amendments through 2015 art 176.

⁸² Chad's Constitution of 2018 art 161.

⁸³ Burkina Faso's Constitution of 1991 with Amendments through 2015 preamble.

⁸⁴ Niger's Constitution of 2010 with Amendments through 2017 art 167.

⁸⁵ Algeria, Burundi, Cameroon, Congo, Côte d'Ivoire, Djibouti, Guinea, Mali, Mauritania, Morocco, Senegal, Togo.

⁸⁶ Indonesia's Constitution of 1945, Reinstated in 1959, with Amendments through 2002 art 18B(2).

⁸⁷ Philippines's Constitution of 1987 art 5.

⁸⁸ Bangladesh, Malaysia, Pakistan.

⁸⁹ Water Resources Management Act 2009 (Tanzania) art 52(1).

⁹⁰ The National Water Resources Management Agency Act 2017 (Sierra Leone) art 3(4).

Other countries refer indirectly to customary rights. For instance, Malawi and Namibia consider customary water rights and practices in issuing water use licences.⁹¹ In Eswatini, permits may not divert, store or use water from a ‘sacred’ water course.⁹² Zambian authorities recognize ‘traditional practices as recognised in customary areas, and which are beneficial to water resource management.’⁹³ South Sudan supports allocation based on ‘water resources availability and existing uses (including customary uses)’.⁹⁴

Seven Francophone Africa countries discuss customary law: e.g. water exploitation in Chad via a declaration or authorization has to comply with customary law.⁹⁵ In Mali, customary rights should be respected when appropriating water,⁹⁶ and in Niger and Benin, the authorities should consider customary practices in water management.⁹⁷ Three Asian countries consider customary rights. Bhutan allows for the continuation of customary water allocation practices, if they do not deny others of water and if this is acknowledged by a water users association.⁹⁸ Indonesia recognizes traditional community rights if they do not contradict national interests and legislative regulations and their existence is confirmed by local regulations.⁹⁹ While rights in water vest in the Bangladeshi state, this does not prevent a person from using water allowed earlier under customs or rituals having the force of law.¹⁰⁰

Thus, in all analysed countries, pre-colonization, customary or religious law prevailed, colonial rule allowed private water ownership, and post-colonization, water has been put in the public domain with few exceptions. Many Anglophone African countries recognize customary law but the interaction between customary and state water entitlements remains complex.

4.3 Inventory of water allocation instruments

Having taken ‘control’ over water, governments allocate the water in five different ways through: (i) recognizing existing (historical) water use (pre-independence uses); (ii) domestic water use (small volumes for non-commercial purposes); (iii) allowing limited

⁹¹ The Water Resources Act 2013 (Malawi) art 41(1)(i); Water Resources Management Act 2013 (Namibia) art 45(2)(j).

⁹² The Water Act 2003 (Eswatini) art 45.

⁹³ The Water Resources Management Act 2011 (Zambia) art 5.

⁹⁴ South Sudan, ‘Water Policy’ (2007) <<http://extwprlegs1.fao.org/docs/pdf/ssd147091.pdf>> 10.

⁹⁵ Loi N° 98-005 Portant Régime de l’Eau 1998 (Chad) art 1.

⁹⁶ Loi N° 02-006 Portant Code de l’Eau 2002 (Mali) art 3.

⁹⁷ Loi N°2010-44 Du 24 Novembre 2010 Portant Gestion de l’Eau En République Du Benin 2010 art 13; Ordonnance N°2010-09 Du 1er Avril 2010 Portant Code de l’Eau Au Niger 2010 art 11.

⁹⁸ The Water Regulation of Bhutan 2014 art 40.

⁹⁹ Law No 7/2004 on Water Resources 2004 (Indonesia) art 6.

¹⁰⁰ Bangladesh Water Act 2013 art 3(1) and (4).

water withdrawal above domestic use without a water use permit; (iv) water use permits, and (v) contracts, leases and concessions, allowing states to enter into public-private partnerships. These instruments will be discussed in turn.

4.3.1 Existing water use

With putting water in the public domain, states expropriated existing customary and riparian (associated with land ownership rights) water rights (Teclaff, 1972). Anglophone (except Nigeria) and Francophone African countries with a water law, and seven Asian countries¹⁰¹ regulate existing water use. In most countries, the existing pre-independence water use and rights are continued under the water permit system. In Anglophone Africa, states deal with existing water uses by: (i) requiring permit application within a specified period¹⁰² (one to two years) or recording the right and issuing a permit with conditions¹⁰³; and (ii) allowing continued use by regarding the existing use or right as issued under the new Act.¹⁰⁴ South Africa allows existing water use to be continued under 'Existing Lawful Use' (to the extent that it is not limited, prohibited or terminated by the new Act), until the holders are required to apply for a licence under the process of Compulsory Licensing.¹⁰⁵ In Ghana, users have to notify the Water Resources Commission of an existing use or right which is then investigated and decided upon by this Commission.

In nine Francophone African countries,¹⁰⁶ the existing water rights, use, works, or authorizations have to be brought into conformity with the law within 1 – 2 years. In four countries,¹⁰⁷ existing water uses are regarded as a right issued under the new law and users have to declare this to the authority. Other countries¹⁰⁸ require existing water use or works to declare and/or to apply for an authorization within six months after the promulgation of the new law. In Burundi, the Water Code does not affect the rights acquired and exercised pursuant to former laws.¹⁰⁹ In Asia, seven countries recognize existing water use or rights. In four countries, water use prior to the commencement of the new water law is recognized without the need for a new permit.¹¹⁰ Two states require a permit application,¹¹¹ while in Bangladesh water permits remain valid until restricted, controlled or cancelled by the state.

¹⁰¹ Armenia, Bangladesh, Indonesia, Nepal, Philippines, Vietnam.

¹⁰² Eswatini, Ethiopia, Namibia, Rwanda, Tanzania.

¹⁰³ Malawi, Zambia.

¹⁰⁴ Botswana, Kenya, Lesotho, Sierra Leone, Uganda, Zimbabwe.

¹⁰⁵ National Water Act 1998 (South Africa) art 34.

¹⁰⁶ Algeria, Benin, Burkina Faso, Cameroon, Côte d'Ivoire, Djibouti, DRC, Guinea, Morocco.

¹⁰⁷ CAR, Chad, Mali, Mauritania.

¹⁰⁸ Congo, Niger, Senegal, Togo.

¹⁰⁹ Loi N°1/02 Du 26 Mars 2012 Portant Code de l'Eau au Burundi 2012 art 153.

¹¹⁰ Bhutan, Indonesia, Philippines, Vietnam.

¹¹¹ Armenia, Nepal.

4.3.2 Domestic water use

In most countries considered, people can abstract water for domestic water use without a permit. In 15 out of 16 Anglophone African countries¹¹² domestic water use is exempted; the only exception is Lesotho.¹¹³ In 11 out of 19 Francophone Africa countries,¹¹⁴ domestic use is generally, if not explicitly, exempted from permits.¹¹⁵ The water law of three countries ambiguously state that permits or authorizations are needed for activities and installations that will, for example, change the water flow and level, degrade water quality, or threaten the environment or public health.¹¹⁶ Four countries recognize that individuals may use water for basic needs.¹¹⁷ Fourteen out of 16 Asian countries with a water law in place exempt domestic water use from permit requirements.¹¹⁸ Bangladesh and Lao do not have a permit system and people have a right to potable water.

4.3.3 Exempt water use

Authorities in two countries can specify a level of water use that is exempt from requiring a licence: under a 'General Authorisation' in South Africa (see 8.2.4.3) (DWS, 2012); and in Sierra Leone.¹¹⁹ Three countries have a provision in place that allows the authority to exempt a class of water users or works from the licence requirement.¹²⁰ Francophone countries do not exempt water uses above domestic use, but some countries require water users to inform an authority, rather than requiring an authorization.

4.3.4 Water use permits

In relation to water permits, all researched African countries with a water law have either strengthened the colonial permit system or introduced a modern permit system. Unlike Anglophone Africa, 12 Francophone African countries allow water use subject to a declaration¹²¹ and/or permit.¹²² A declaration requires individuals to inform the competent administration of the water works the person plans to carry out, or the intended use of water. The distinction between an authorization and declaration depends on the nature, location, importance or seriousness of the effects of these water works on

¹¹² Gambia, Liberia, and South Sudan do not have a water law in place. Sudan's water law is written in Arabic.

¹¹³ The Water Act 2008 (Lesotho) art 20(1).

¹¹⁴ Gabon does not have a water law in place. Equatorial Guinea's water law is written in Spanish.

¹¹⁵ Burundi, Cameroon, Congo, Djibouti, DRC, Guinea, Mali, Mauritania, Niger, Senegal, Togo.

¹¹⁶ CAR, Côte d'Ivoire, Rwanda.

¹¹⁷ Algeria, Benin, Burkina Faso, Morocco.

¹¹⁸ Myanmar, Pakistan, Sri Lanka, and Thailand do not have a water law in place.

¹¹⁹ The National Water Resources Management Agency Act 2017 (Sierra Leone) art 28.

¹²⁰ Water Code of the Republic of Armenia 2002 art 22; Water Resources Act 2013 (Malawi) art 45; Water Act 1995 (Uganda) art 19.

¹²¹ Benin, Burkina Faso, CAR, Chad, Congo, Côte d'Ivoire, Djibouti, DRC, Mauritania, Niger, Senegal, Togo.

¹²² Francophone countries use the word 'authorization'.

water resources and aquatic ecosystems. Waterworks or water use that does not result in pollution, hazards or adverse impacts on water and aquatic ecosystems are subject to prior notification to the local authority. Similar to Africa, most Asian countries have adopted or strengthened a water permit system¹²³ except Bangladesh (which allocates water based on rules),¹²⁴ Lao (which has approvals, not permits¹²⁵) and Azerbaijan (which uses contracts).¹²⁶

4.3.5 Contracts, leases and concessions

States can allocate water through contracts, leases and concessions for water service provision and the organization of water use and abstraction. These may also take the form of public-private partnerships (de Jong et al., 2010). In Francophone Africa and part of Asia, there is a greater use of water contracts than in Anglophone Africa.

Water service provision

Five Anglophone African countries allow governments to partner up with private companies.¹²⁷ These include Uganda¹²⁸ and Kenya.¹²⁹ All Francophone countries (except Morocco and Gabon) may award contracts, lease and/or concession agreements regarding public service provision.¹³⁰ Generally, a public authority can entrust a natural or legal person (the concessionaire) with the rights to operate and manage a public service through an agreement. Such an agreement can include investing in service provision at the concessionaire's own expense and risk, for a fixed and generally long period, under contractual conditions, and in return for the right to collect charges from service users. As in Francophone Africa, seven Asian countries¹³¹ with a water law enable private sector involvement in public service management. For example, in Armenia 'state-owned water systems can be under state and/or private management'.¹³² Bhutan, Cambodia and Nepal enable the state to enter into contracts or agreements with the private sector for providing

¹²³ Armenia, Azerbaijan, Bhutan, Cambodia, Georgia, Indonesia, Kyrgyzstan, Malaysia, Mongolia, Myanmar, Nepal, Philippines, Tajikistan, Vietnam.

¹²⁴ Ministry of Water Resources – Government of the People's Republic of Bangladesh, 'National Water Policy' (1999) <<http://extwprlegs1.fao.org/docs/pdf/bgd146075.pdf>>.

¹²⁵ Law on Water and Water Resource 1996 (Lao) art 18.

¹²⁶ Water Code of the Azerbaijan Republic 1997 art 30.

¹²⁷ Ghana, Kenya, Namibia, Nigeria, Uganda.

¹²⁸ Water Act 1995 (Uganda) art 89.

¹²⁹ Water Act 2016 (Kenya) art 93(1).

¹³⁰ Algeria, Benin, Burkina Faso, Burundi, Cameroon, CAR, Chad, Congo, Côte d'Ivoire, Djibouti, DRC, Guinea, Mali, Mauritania, Niger, Senegal, Togo.

¹³¹ Armenia, Bangladesh, Bhutan, Cambodia, Nepal, Philippines, Tajikistan.

¹³² Water Code of the Republic of Armenia 2002 art 48.

and managing public services. Nepal specifically states that this can be with national or foreign companies.¹³³

Water use

Five Francophone African countries and four Asian countries¹³⁴ allow water use allocation through permits and/or contracts. In the Democratic Republic of the Congo and Guinea, water use of a more permanent nature (e.g. for agriculture, mining or industry) is subject to a concession. In Mali, groundwater withdrawals are subject to the concession regime if they are large and likely to present a danger to public health and safety, cause significant harm to the free flow of water, reduce water quantity or impair the aquatic environment.

I see that in all analysed countries there are similarities in the way water resources are allocated: (i) in most countries, domestic use is exempted, while five countries exempt specified uses or users from the permit requirement; (b) most post-independence water laws allow for the continuation of existing water use, by bringing it into conformity with the 'new' water laws; (iii) some countries, mainly in Francophone Africa, may award contracts, leases and/or concessions to the private sector; (iv) all countries allocate water uses through permits as the main instrument.

4.4 Inferences on the state of water ownership and water allocation instruments

In analysing how states in Asia and Africa with laws in English or French are addressing ownership in water, and how the states allocate their freshwater resources, I conclude that there are a number of trends. First, most states have put water in the public domain and governments are the custodians of the nation's freshwater.

Second, doing this implies expropriating existing water rights, but this is not easy, and countries are struggling to address the issues of prior customary and riparian rights. This has led to exceptions, where states recognize customary or existing legal uses in their national laws. This has caused a confused plural system where often different rules apply to the same jurisdiction.

Third, having taken 'control' of the property rights in water, these states then use permits, concessions and contracts to allocate water to people and legal entities. In most countries, household use, or sometimes use up to a certain threshold above household use, is allowed without a permit, and is subject to payment if households are connected to formal water services. Beyond this, permits are allocated to water supply utilities, farmers

¹³³ Water Resources Act, 2049 (1992) (Nepal) art 12.

¹³⁴ Azerbaijan, DRC, Guinea, Kyrgyzstan, Lao, Mali, Mauritania, Mongolia, Morocco.

and industries. Since water use permits are the main instrument for allocating water, the next chapter discusses the extent to which the water use permits may exhibit quasi-property rights, and assesses the policy in place regarding the reallocation of the granted permits.