

***CUSTOMARY WATER RIGHTS
AND CONTEMPORARY
WATER LEGISLATION
MAPPING OUT THE INTERFACE***

BY

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***FAO
LEGAL PAPERS
ONLINE #76
December 2008***

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ACKNOWLEDGEMENT

The editorial contributions of Ms. Ambra Gobena, Legal Consultant to the Legal Office of FAO, are gratefully acknowledged.

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Preface

In supporting the new water legislation efforts of countries spread across the globe with diverse climatic exigencies, major consideration must be given to the operation and status of customary laws and traditional practices. Customary laws and traditional economies are characterized by different mechanisms from modern societies, and such mechanisms are identified with a different terminology. The incorrect use of non-equivalent legal and economic terminology can potentially cause misunderstandings. Modern individual property or ownership of land for example does not have an equivalent in traditional societies where, as a general rule, land is the common property of the clan or tribe. Additionally, the concept of land in many customary societies is wider than the prevalent modern interpretation and extends to the soil trees and water resources found both above, on and below it.

The main pretext on which this paper is based, is that legal systems and economic systems are interrelated - they justify and legitimise each other. No comprehension of customary laws and institutions is complete without linking shifting cultivation and transhumance to land and water laws. Contemporary literature provides only a superficial understanding of customary laws and institutions in existence today, with traditional justice being the least understood or analyzed. An anthropological analysis provides the linkage between religion, community life, values and legal systems.

This paper seeks to deal with the range of issues relating to the customary and statutory rights interface. While it does not always propose specific solutions to those questions, it raises a host of factors to be considered while drafting new laws on water, and it is hoped that these considerations will stimulate debate and open up avenues for addressing legal pluralism.

A long list of questions can be raised but then, what should be the approach to study these legal systems? Many legal specialists tend to maintain that there is only one legal method to study and analyze formal legislation, whereas in reality customary rules are also law whether or not this is officially recognized and sanctioned by the formal legal system.

It is put forward in this paper that customary laws *can* supplement the state's effort to enforce statutory laws, albeit not without challenges. Complications arise where the choices and values of those who live under communal arrangements are not taken into consideration nor adequately respected. This reveals the crisis of the relationship between the many post-colonial states and its citizens. Therefore it is necessary that modern water management techniques housed in current water laws must to a certain extent mould with customary practices and reflect the exigencies of the particular region and state.

This discussion seeks to map out the relationship between statutory law and customary law in the water sector, deriving from eight selected case studies spanning North America, Latin America, Africa and Asia. Eight legal experts were called upon to survey their own country's customary legal systems. The experts dealt with their customary laws according to the mainstream legal method. The country reports deal with customary water laws with various levels of detail; differences in the amounts of material collected are apparent according to availability of information in the various case studies. This often reflects the ease in which the two systems interact, or where not much information is available, their degree of separation from each other.

Extracts or summaries from eight studies are presented by subject matter and country to facilitate a comparative review. Authors of the country case studies are: Marta Brunilda-Rovere (Argentina), Linda Nowlan (Canada), Monica Tobar (Ecuador), G.A. Sarpong (Ghana), Melinda Janki (Guyana), Paul Kuruk (Nigeria), Manuel Pulgar-Vidal (Peru), James Kho and Eunice Agsaoay-Sano (Philippines).

1. INTRODUCTION

Many questions about customary legal developments go unexplained if no recourse is made to the connection between legal and economic systems. Since time immemorial they interact, justify and fertilise each other. Most of all, if we believe that customary laws and justice develop and transform themselves, the question is: how much does economic development influence legal institutions and rules? An historical, inter-sectoral juridical (and economic) approach is necessary to define differences between customary and modern systems, because these systems were born as a result of specific historical circumstances and will eventually die out or be replaced. A historical and anthropological dimension has been incorporated in this paper, as a sound understanding of current customary laws and practice is incomplete without reference to colonial and pre-colonial water use and management practices.

Arid zones within a state are often subject to stricter and more detailed water rules; there is often a higher risk of conflict and a higher proportion of rules on dispute resolution. Similarly there is a nexus between increased development and population concentration particularly in urban centres, and the availability of water. Differences in internal development (hunting and fishing, traditional agriculture), that is, non-capitalist uses contrasted with modern capitalist practices (like irrigated intensive agriculture, industry and hydropower) imply different uses of water. In both customary and contemporary statutory water laws, water rights are often strongly associated with land rights and tenure – a linkage that creates a host of other rules and practices to be taken into consideration. Water planning and management systems must be set up accordingly, with water laws and policy balancing these competing interests. Customary practices with different priorities also compete for water resources. Differences in political power can sometimes imply biased rules on water rights and distribution, and there are many situations where the water concessions granted exceed physical availability.

Both developing and developed countries are faced with the problems of pollution of water sources, while potable water and sanitation is a major difficulty for developing countries.

The interface question raises many issues: what are the differences between these systems and their underlying logic? Why do some people choose one and others opt for the alternative even within a state or part of a state? How is it possible to overcome the (unavoidable) competition between the two systems? Are they going to merge into another new system or are they going to remain separate? What happens if the state imposes its own legal system at the expense of customary ones? Why do some groups feel customary laws protect them and statutory laws do not? What are the interests at stake? It is often overlooked that these problems should be also analyzed from the perspective of customary laws or from the perspective of those people who follow customary laws rather than statutory norms.

Approaching these problems from a state or legislator perspective, the crossing point between the two systems can be identified by three main issues: recognition by the state of customary water rights; statutory mechanisms to reconcile customary water rights and practices with statutory rights; and statutory and judicial mechanisms to settle disputes between customary water rights and statutory rights.

This paper attempts to support the drafting of new legislation by hammering out some of the issues which should be incorporated or at minimum considered by drafters. Legal drafting is not merely a legal technical undertaking: it is, at the same time, also a political and socio-economic exercise. Laws do not operate in a social and cultural vacuum. While, water needs in each country are different and legislation should express such needs with rules and institutions appropriate to each country, some common denominators can be distilled from regions and a legislative cross-fertilisation can occur of useful practices and experiences.

2. CUSTOMARY WATER RIGHTS AND PRACTICE

This section provides highlights of discussions on customary rights and practices from the eight selected case studies. It should be borne in mind that water has a myriad of uses and functions for the environment and for humans. For the latter it is linked to survival, drinking and household uses, and various production activities such as irrigated and non-irrigated agriculture, fishing, navigation and transport on water, and energy production. In turn, each possible use of water brings about specific norms and in some cases, specific institutions.

2.1 Argentina

Indigenous groups in Argentina are characterized by a communitarian style of life and traditionally protected their water resources, as part of their culture of the "sacred". The loss of their lands, together with an erosion of their cultural identity, added to the problems of natural resource pollution, in general, and to water resources in particular, contributing to the abandonment of ancestral practices on water uses. Indigenous groups in Argentina are less "visible" in comparison to other Latin American countries, such as Peru, Ecuador and Bolivia, which have larger percentages of indigenous groups in their populations. Information on cultural practices of indigenous communities is therefore not readily available.

2.2 Canada

It is difficult to trace the evolution of customary laws of Aboriginal Peoples in Canada, given the large numbers of such groups and a dearth of authority or compilation on the evolution of their practices and traditions. Locating customary water rules is difficult because information is preserved in the oral tradition and often not recorded in written form. Aboriginal Canadian rules on water allocation and disputes settlement mechanisms are sparse.

To date, litigation and treaty-making on aboriginal rights and title has focused on land resources rather than water. There has been no thorough consideration of the evolution of aboriginal water rights. The evolution of judgements issued formally regarding customary rights can be traced through the following extracts from cases.

"It is not correct to say that Indians did not "own" the land but only roamed over the face of it and "used" it..... The patterns of ownership and utilization which they imposed upon the lands and waters were different from those recognized by our system of law, but were nonetheless clearly defined and mutually respected.....every part of the Province was formerly within the owned and recognized territory of one or the other of the Indian tribes."¹

The Report of the Royal Commission on Aboriginal Peoples (1996)² noted that "the customary or traditional laws of most Aboriginal peoples share certain characteristics:

- they are usually unwritten, embodied in maxims, oral tradition and daily observances;
- they are transmitted from generation to generation through precept and example;
- the laws are not static but continue to evolve;
- tribal or band territories – often thousands of square miles – were communal property to which every member had unquestioned right of access;
- in no case were land or resources considered a commodity that could be alienated to exclusive private possession;
- all Aboriginal peoples had systems of land tenure that involved allocation

¹ Duff, W. 1964. *The Indian History of British Columbia*, quoted in *Calder v. Attorney General of British Columbia* [1973] SCR 313.

² Report of the Royal Commission on Aboriginal Peoples, Volume II, Ch 4 Lands and resources-property and tenure (Ottawa: Queen's Printer, 1996), available at www.ainc-inac.gc.ca.

within the group, rules for conveyance of primary rights (and obligations) between individuals, and the prerogative to grant or deny access to non-members, but not outright alienation."

Research on dispute settlement mechanisms is almost non-existent, and challenges are heightened by the large variation of informal structures and institutions administering water rights and settling disputes among Aboriginal communities in Canada. However, some similar traits of dispute settlement processes are that they employ the principle of consensus, emphasize communal rather than individual and stress the importance of non-consumptive uses of resources such as water.

2.3 Ecuador

Under customary tradition, water is not considered a commodity; it belongs to communities, and those regarded as "sacred" waters are strictly communal. There is a profound difference between the customary concept of land, which comprises soil, subsoil, water, streams, woods and prairies, and the modern legal one which subdivides each resource with its own discrete legal regime.

Ecuadorian indigenous communities share water resources in the form of participation. This means that customarily individuals have a right to use water as part of a shared resource, use irrigation infrastructure, and participate in associations.³ Fees are collected through membership of water user associations and participate in community *mingas*. The latter is a form of communal labour for maintenance of the irrigation infrastructure and is the method by which rights over the water are acquired and strengthened. Sanctions take the form of social control and financial penalties for failure to meet obligations under the arrangement.

³ Boelens, R and Doornbos, B. The battlefield of water rights: rule making amidst conflicting normative frameworks in the Ecuadorian Highlands. Human Organization, Winter 2001.

2.4 Ghana

Prior to colonisation, communities had evolved their customary laws and specific rules to govern the various uses of water: human consumption, agriculture, transportation and environmental protection. Colonialism and the modern state introduced new uses for water: primarily power production and irrigation. Ownership of water, under customary law, is vested in stools (seat of a West African or head of a lineage chief that is symbolic of his authority and of the line of continuity between his ancestors and descendants), communities and families.

It is unclear whether customary law treats ground water as part of land so as to render it under the private possession of the land owner.

Customary law evolved rules for reasonable or equitable use of water resources among communities. Where two or more communities are located close to each other, they normally agree on a spot where they may go to collect water for domestic use. Each user may collect as much water as may be required, provided he or she leaves enough for other users and also leaves the waters in a clean state. The drinking part of the river is often located upstream from the swimming or bathing part or the part reserved for watering animals.

Protection of the environment, including rivers, is the responsibility of everyone in customary societies. Through customary beliefs, enforceable rules were evolved for the conservation and management of water. Violation of these rules was an offence punishable by fines – in money or in kind – payable to the local chief, priests or priestesses. Religious and customary beliefs served as potent instruments for ensuring compliance with customary rules on water usage.

As a result of colonisation and the advent of the modern state, the potency of customary norms as tool for the enforcement of norms on water usage has significantly diminished. Christian beliefs, for example, have supplanted customary beliefs as propounded by religious figures; hence sanctions that were feared would be visited on would-be violators have paled into

insignificance. The power of chiefs has also been replaced; laws or ordinances have replaced traditional customary edicts propounded by some religious authorities. Customary law as a basis for the enforcement of norms on the usage of water is observed only in rural communities.

2.5 Guyana

Customary water entitlements in Guyana imply use (agricultural and domestic) by the Amerindian communities only (8 percent of the population). Amerindian rights to water are held communally, not individually, and pass from one generation to another. There are no formal rules of water allocation within Amerindian communities: the likely reason is the abundance of water relative to the size of the population. If there is a shortage, then use has traditionally been reduced by consensus. The pressure on water resources is reduced by the fact that families tend to live at some distance from one another and to locate their farms away from the village. The abundance of water resources means there is no reason for the state to seek to limit customary use and they have not done so.

There is no evidence to suggest that the Dutch recognized Amerindian use of water. It is unclear to what extent, if at all, the Dutch recognized the Amerindian ownership of land and its related right to abstract ground water. There was no recognition of aboriginal systems of tenure and all land in Guyana was treated as having become the property of the state. The 'orthodox' legal reasoning, entrenched in a number of statutes, does not recognize Amerindians as landowners (nor indeed, the holders of any rights to water, whether as an incident of land ownership or otherwise).

In 1991, the government issued documents of title to Amerindian communities with respect to land within the village boundaries and 66 feet landwards from the mean-low water mark of rivers. Each document stated that the transfer was in recognition of the fact that the Amerindian communities had "from time immemorial been in occupation". There were no reservations or limitations in respect of water. Consequently, the titles could include rights to use ground water as recognized under Roman-Dutch law. This

reasoning would not, however, apply to surface water which is regarded as owned by the state. Amerindians would have to show that they had some other basis for these rights.

2.6 Nigeria

Customary law consists of practices accepted by members of indigenous groups as binding upon them. For the most part, the rules are unwritten and their evolution can be traced to the social organization (lineage, clan or tribe) of Nigerian societies. Group relations are normative and give rise to a series of well-defined rights and obligations between group members. Kinship rights and obligations are specific when the individual is interacting with members of his lineage, but they become more general as the degree of kinship widens. Observance of all traditional norms is secured through a system of sanctions that may vary according to the degree of kinship. Customary laws are not uniform across ethnic groups. Among the Yoruba language group, it is possible to identify several component ethnic groups each with its separate customary law system.

To the extent that water resources are found on land, access to such resources would be affected to a large degree by rules governing possession of land. A customary grant of land generally confers rights on all products of the soil which includes water resources.

"When asked about rights to trees, water holes, fishing sites, or mineral deposits, Tiv people say that such things belong to no one and are for the use of all".⁴

Land is the common property of the tribe as represented by the chief of the political group. Village land would be held in trust and apportioned by the chief. Such administrative control of the land by the chief is referred to by the people as "ownership", a term also used to refer to the direct utilization and control of land by a family head or individual. The term also denotes collective right of the people in the land as the territory belonging to a village.

⁴ Bohannan P and Bohannan L. 1968. *Tiv Economy*, pp. 110–11.

According to land acquisition rules among the Nupe,⁵ an individual acquires rights to land by virtue of membership in a kinship group holding rights to land, for services rendered, or through contracts between individual landowners. These can be short-term contracts considered to be the "borrowing" of land or a long-term or indefinite arrangement similar to tenancies.

In general, there are no customary restrictions to access water from large sources. For access to smaller water bodies, particularly in the more arid areas, northern and central Tivland practices stipulate that non-family members would need permission to access resources owned by family groups. Such permission is said never to be refused. Anyone may improve a spring that nobody else claims, and thereafter claim ownership. Before anyone else can regularly draw water from it, his permission must be requested and the owner can often refuse in cases where seepage is slow and several hours may be required for it to settle and clear.

For water used by livestock, similar permission is usually required prior to watering by non-family members in areas where access to the relevant resources are controlled a family or other community groups. Grazing rights obtained by the Fulani (Peulh) in northern communities of Nigeria are usually temporary and are not governed by the ordinary rules of land tenure. Often, they are obtained by gifts of sheep or cows to the head of the family that has control over the land.

Water used for farming comes from rainfall, although rudimentary irrigation techniques have been developed to improve family farming in the arid areas. Access to water in wells or streams for irrigation purposes is regulated by families or community groups with rights over the underlying land, in accordance with the normal land tenure rules. Thus, permission from the heads of such families (or groups) would generally be required by non-landowners who require water for irrigation.

⁵ Nadel, SF. 1965. A Black Byzantium: the Kingdom of Nupe in Nigeria, p. 181–182.

2.7 Peru

"The unquestionable importance of hydraulic systems and their complexity of uses must have produced a pre-hispanic water juridical system accepted by the mountain and flat country peoples."⁶

However, information or documentation of such a juridical system has not been found. In countries like Peru, there are social groups who mainly regulate their lives by customary laws, like the peasant and native communities, even where formal legislation is the main source of law.

Historically, the Spanish rule organized Peru so as to maintain a separation between a Spanish state and the Indio communities. Since 1570, the Viceroy Francisco de Toledo organized the country, regulated the uses of water, in towns and in the rural areas and organized *reducciones de pueblos de indios*, villages of indigenous people converted to Catholicism, for collecting contributions and controlling the indigenous population.

At present, customary laws are in force in a majority of over 6 000 recognized peasant communities and approximately 1 300 native communities. In Peru, customary law produced through the source *costumbre* (custom), implies that such rules are produced by repetition in time, carried out by a specific group of people in a certain territory, and accepted by the people or part of the people as binding upon them for any length of time (a specific duration is not required). Differently from social or religious customs, a custom may become legal by generalised compliance, that is, if a majority of people abide by it in the majority of circumstances and knowing that compliance with the rule is compulsory having the conscience of the rule as being compulsory.

At the same time, these customary rules originate in agreements within the community and by heritage, and *legatos* or bequests, so as to establish rights of ownership, use and access to natural resources. The relationship between these groups and the rest of society has its

⁶ Rostworowski, M. 1981. Recursos Naturales Renovables y Pesca, siglos XVI y XVII. IEP. Lima.

influence on their organization, their customs and their internal rules.

The most important use of water in customary communities is irrigation, where users' groups and organizations have developed – sometimes over centuries – irrigation management practices that incorporate elements from the Andean, colonial and post-colonial water traditions and contemporary norms and technologies. Both the older irrigation systems and new ones - whether communal, state-owned or private - feature their own specific practices and norms. Therefore, each irrigation system operates by a different set of rules.

Customary water rules are the result of technical factors as well as of basic interaction between individuals and communities. Such an interaction is for example, participating in the construction of irrigation works which give an individual right (or a family right) to use water and a right to participate in collective decision-making with regard to water use and management. Maintaining those water rights is the result of a negotiation process and of organized family participation in communal water works maintenance.

2.8 Philippines

Customary rights and practices include those that are based on tradition or culture rather than written law, whether they are practiced by recognized indigenous groups or not. The rights to access and use of resources are rooted in the concept of land. Land includes all resources, both above and below its surface, water being among these. Indigenous people consider land as granted and entrusted by one Creator, to be harnessed, cultivated and lived upon by everyone. This concept does not recognize the idea of private ownership but abides by the spirit of collectivism. Therefore, land was considered sacred, not subject to ownership, sale, purchase or lease. Among Filipino people, land was held in usufruct and the community could not be deprived of its use. While use of access to resources is open to all, customary law disapproves of the abuse of these rights. Resources are used by the people based on their needs and they have the corresponding responsibility of regenerating those resources.

Among the iBesao for example (an indigenous group found in the central western portion of the Mountain Province in the Cordillera Mountain Range in Northern Luzon), customary leadership and authority is vested in community elders. Customary laws are contained in the *inayan or lawa*, which are culturally prescribed taboos that speak of values such as respect for and helping others, nature, justice, morality, harmony, sharing resources and helping others. The *inayan* serves as a guide in determining whether one's act is right or wrong and prohibits the violation of norms through the notion that fate will impose punishment on the wrongdoer. *Inayan* forbids any act that inflicts harm on anybody or anything.

In relation to natural resources, the *inayan* teaches self-restraint or discipline in its utilization and discourages wasteful and destructive practices. This is reinforced by the people's belief in nature spirits. Nature spirits inhabiting water sources are believed to be the primary forces in the production and supply of water. *Inayan* cautions against doing anything that might displease these spirits, which may cause them to stop the flowing or production of water.

"Water is a resource which cannot be owned by any private individual even if it is found in privately held property. The landowner can only be accorded the right to prior use; he cannot stop or divert it from its natural flow. Rights to water according to customary law belong to those who first tapped the source for their use, but it does not include the right to divert water from its natural flow and depriving those who claim "natural rights" by virtue of being located along the natural course of the water.⁷

In the customary structure, the *dumapats* are groups of rice fields owners sharing a common water source for their irrigation use.

⁷ Bang-oa, E. 2003. Traditional Water Management Systems of the Kankanaeys of Besao (Northern Philippines) in *Water and Cultural Diversity: Indigenous Worldviews and Spirituality* presented at Third World Water Forum, 16-17 March 2003, Kyoto, Japan.

They are akin to the modern equivalent - irrigation associations, which claim prior use rights to a particular water source.

Maintaining the water supply as well as canal maintenance to ensure adequate water flow involves *dumapat* collaboration, labour and resources.

According to Bang-oa,

"Religious practices also contribute to water management. Traditionally, the *legleg* ritual (which is essentially for thanksgiving and perpetuation of the water source), is performed annually in Besao, which is intended to please the water spirit and prevent it from leaving. Such traditional rites reinforce the high value and regard for water, thus maintaining its quantity and quality through culturally prescribed and environmentally sustainable use, as well as reaffirming man's relationship with nature."

The nature of the rights to water as practised by the iBesao may be said to be typical of the indigenous peoples of the Philippines, which is not to imply that traditions and customs among more than a hundred identified indigenous groups are homogeneous. It may be assumed that certain basic characteristics are common among the groups, namely that:

- water and other natural resources are God-given;
- ownership is communal and temporary;
- one may use only what one needs and give others and other generations opportunity to enjoy the resources;
- resources have to be protected.

Traditional water rights in irrigation systems

Indigenous irrigation systems may possess some common characteristics but they are still distinct from each other. In the Tukuran village of the Bontok people in Central Cordillera, Northern Luzon, rice farming is the major activity and water is their most valuable resource. A unique characteristic of the Tukuran irrigation system is the role that rituals play in regulating social relationships in relation to the management and distribution of water. All the villagers are landed, but the aristocrats own the bulk of

the land. Members of the community have for a long time grouped together to develop an irrigation system to nourish their farms and they collectively maintain the system. There are cases where rice fields owned by a single individual are situated at the head, middle or tail end of an irrigation system. This pattern of fragmented ownership instils in the farmers a vested interest in ensuring that water is equitably distributed up to the lowest and farthest rice field. Citizenship in the village and being descendent of original field owners confer upon a farmer membership in the irrigation association.

Ownership of a rice field automatically entitles the individual the rights to irrigation water. Older rice field owners have priority rights to receive irrigation water ahead of owners of newly constructed rice fields. Members of the irrigation association are expected to send a family representative to contribute labour to undertake the irrigation activities, which include cleaning and rip-rapping the irrigation canals. Failure to fulfil this obligation would subject the family to pay a fine. Water distribution is supervised by a person chosen by the irrigation association members; normally, each member takes a turn as supervisor. The rationing of water among members becomes necessary when water levels drop requiring a system of water rotation to be implemented. Water is distributed among the rice fields at intervals based on a set schedule. Water rights are allocated by farm lots, regardless of ownership; thus a farmer with more farm lots will get a larger share of the total volume of water available. Being a member of the aristocracy does not entitle one to more water for a particular lot. A system of guarding is instituted, since some farmers tend to steal and divert water into their own fields. Stealing water or monopolizing the use of water leaves the offender to be verbally reprimanded by the aggrieved party and reported to the other field owners. Punishment is believed to befall the offender or any member of his family in the form of misfortune such as illness, death or crop failure. The key to maintaining equality in water distribution among the Bontoks is their belief system founded on rituals and supernatural sanctions.

There are between 1 000 and 1 200 *zanjeras* in Ilocos Norte. The activities of the *zanjeras* include the construction of dams and the maintenance and management of the irrigation system to ensure that irrigation water is adequately and regularly delivered to its members. The entire *zanjera* may be mobilised for major dam repairs or canal cleaning, while routine maintenance and repair jobs are undertaken by smaller work groups.

Zanjeras may be classified according to land rights and use: one type encompasses farmers which assist each other in irrigating lands they cultivate, and the second includes landless farmers who build and maintain irrigation systems in exchange for the rights to till portions of irrigated land. The landowner therefore retains ownership of the land and the *zanjera* farmer holds the land in usufruct; the produce or its cash equivalent is divided between the two, with 25 percent going to the landowner and 75 percent kept by the *zanjera* farmer.

The organizational structure of a *zanjera* depends on its size. There are three levels of collective control for using water, corresponding to the layout of the irrigation system,

- by a board of directors, over water distribution across municipal and administrative boundaries;
- by a supervisor, over the activities of 4 to 10 farmers sharing the canal;
- by family elders of water use below the canal turn-out by a cluster of farm parcels or canal segment.

The allocation of water to the members of a *zanjera* is determined by the membership share which is based on the measure of land area cultivated and implies a structure of rights and responsibilities. Labour duties and material resources to be contributed towards construction and maintenance works in the irrigation system are also distributed according to the number of membership shares. In situations of conflict within or between *zanjeras*, mediation is facilitated by officers and litigation is avoided as much as possible.

There are no rules of water allocation if there is abundance of water relative to the size of the population. Traditionally, to the

extent that water resources are found on privately owned land, access to such resources would be affected to a large degree by rules governing possession and ownership. While in towns this relationship disappeared (a public or private organisation distributes water and users have no relationship with water-land ownership rules), it still applies in traditional small irrigation schemes. If water comes from a dam, again land ownership is irrelevant.

2.9 Commentary on customary practices

An excerpt from a Canadian text can summarise and highlight important aspects of customary practices that can be applicable across the board in other countries as well:

"Our traditional laws are not dead. They are bruised and battered but alive within the hearts and minds of the indigenous people across our lands. Our elders hold these laws within their hearts for us. We have only to reach out and live the laws. We do not need the sanction of the non-indigenous world to implement our laws. These laws are given to us by the Creator to use. We are going to begin by using them as they were intended. It is our obligation to the children yet unborn."⁸

This excerpt highlights an important issue: customary practices and traditions take place with or without the sanction of the formal legal system. On one level, this can be problematic. Rules applied in this manner can often entrench the status quo; if the societies' traditions exclude or discriminate against a certain segment of the population, and often it is women or those of a different caste, exclusionary practices can be entrenched and inequality is perpetuated.

Customary laws have been traditionally oral in character, and only documented in some cases more recently or codified by formal

⁸ Sharon Venne Sauteau First Nation, Fort St. John, British Columbia, 20 November 1992, Report of the Royal Commission on Aboriginal Peoples, Volume II, Ch 3, s. 1.2 Traditions of Governance, available at www.ainc-inac.gc.ca.

statutes. It should be noted that compilations of customary law artificially freeze the natural development of customary law; furthermore challenges are presented by concepts lost in translation and social nuances that are difficult to reconstruct in differently operating social systems.

Water rights associated with land

Relating to natural resources, ownership is communal and temporary. Water rights are often associated with land use, and loss of the latter would mean a corresponding loss of water rights – this can often pose challenges to the social fabric of the community dependant on these resources.⁹

"Most land (and water) disputes derive from the conflict between, on the one hand, expectations and ideas regarding property relations under customary systems and, on the other, the rights and privileges flowing from individualisation, titling and registration. Conflicts over land and natural resources are threatening to tear the country (Kenya) apart..."¹⁰

In traditional societies, village land would be held in trust and apportioned by the village chief. Ownership also means direct utilization and control of land by a family head. An individual acquires rights to land by virtue of membership in a kinship group holding rights to land. Pastures, the world over, were mainly under communal property: it would be impossible and useless to maintain western individual ownership of pastures when the main pastoral technique would be transhumance or nomadism, because pastoralists needed to roam to get water and pastures at the same time. During interviews conducted in rural parts of West Africa it was discovered that stealing from a state farm was not considered a crime as the state farm cannot be protected by magic, like that of an ordinary peasant. This is

⁹ A recent FAO publication also deals with the relationship between land and water, see Hodgson, S. 2004. Land and water – the rights interface. FAO. Rome, Italy.

¹⁰ Odhiambo, Ochieng (1999) quoted by Cousins B. 'Tenure and common property resources in Africa', p. 157 in *Evolving land rights, policy and tenure in Africa*, editors Toulmin, C and Quan, J (2000) DFID, IIED and NRI. London.

because the state is an entity whose ancestors are unknown or non-existent, consequently the state or its derivative entities cannot be protected by magic, which works only on the basis of influencing ancestors (one way or the other). Such a statement gives the perception that the concept of the state differs according to different cultures.

Production systems

Although differences exist between the different regions in terms of cultural identity, geography, and climate, the underlying rationale for customary practices can essentially be considered analogous. This is because fundamentally, the different modes of production of food are comparable and accordingly, the rules regulating the social organization are similar. Cultural identity for these purposes refers to the ways in which people organize themselves, family structures, social etiquette and norms, subsistence methods, etc. Legal systems may also have their *raison-d'être* in ethnic connection or citizenship, in caste and sex. The Fulani or Peul people of West Africa, traditionally pastoralists, had a social organisation based on pastoralism, and their legal system (rules, rights and obligations, institutions) was functional for (agro-) pastoralism. The Bambara-Bamanan one of the larger ethnic groups in Mali, are agricultural people and their legal system reflects their production system and their comprehensive identity.

In times and areas of the plantation economy, after colonisation, land soon acquired the status of a good and it was sold and bought. But the plantation economy marked the first appearance of a capitalist mode of production among Africans (not just Europeans) in Africa. The nexus between the mode of production and laws for its organisation as propounded in this paper can be illustrated by three market economy states, Australia, Canada and the USA who also recognize and apply the customary rules of their indigenous populations. These indigenous groups maintain their customary rights possibly as a result of their social modes of production such as fishing, hunting, and subsistence agriculture. Market economies enable individual independence in contrast with the social structure such as families, clans or tribes that is associated

with those groups still adhering to customary practices. Socio-psychological and legal explanations can be put forward as to why indigenous groups in these three countries may enjoy at minimum *de jure* greater recognition than other communities in Latin America, Asia and Africa organized under customary practices. Legislative recognition has been used as a mechanism for healing past abuses of rights of indigenous groups, but it is much more difficult to deny these groups the principles of freedom from discrimination and equality by law that are afforded to other citizens of the state.

Population growth

Customary land and water laws have an in-born limitation: they do not easily accommodate demographic increases, particularly in smaller spaces. Lack of water, poor soil fertility, and long distances for nomads limit production are exacerbated by exponential population figures. Over the last years, communal organisations have become weaker because their members try to obtain individual or family modern title to the communal lands they work on. It is a reality that formal, state granted titles are stronger than customary ones.

Dispute resolution mechanisms

Elders, are often considered keepers of the law as a result of their age and experience, and apply rules which are passed to future generations. Using a modern legal analogy, these elders are synonymous with judges, legislators, legislation and enforcers or sentences implementers. The aim of customary justice is often to re-establish peace in the community; less emphasis is placed on guilt or innocence or apportioning blame. There is no concept of "separation of powers" doctrine which sees distinctions in different government branches responsible for upholding the law such as the legislative, executive or judicial branches. This new structure has caused adjustment problems in Africa, Asia and Latin America where there are few trained officials, poor social and infrastructural organisation, few resources and unmanageably large areas of competence, (or gaps and overlaps in competence). In the rural areas of developing countries, even among officials under the formal legal system, the separation of powers concept is more

blurred and clearer distinctions are more likely to be found in the country or regional capitals.

Conflicts should be solved from within or "inside the village belly" according to a Wolof (Senegalese) adage.¹¹ A dispute affects the world's spiritual order and this order must be re-established according to custom and purification rituals; a conflict is like a group disease and it should be treated as a disease. Judicial values and practices are profoundly marked by the sacred and religious and impacted by the spirits of the ancestors of the community. In Africa, different kinds of community arrangements can be found: societies without a primary chief which function through the lineage system, societies where power is delegated to a *primus inter pares*, or a leader among equals which is frequently but not always the oldest man, and those with a hierarchy where power is accorded to a chief or king. An informal meeting can be transformed to a "court of justice" without the use of specific procedures. However, secret gatherings may occur and decisions may be made without the calling of witnesses and executions of such decision are immediate and not negotiable.

3. LEGAL STATUS OF CUSTOMARY WATER RIGHTS AND THEIR INTERFACE WITH STATUTORY RIGHTS

3.1 Argentina

3.1.1 Statutory water rights and recognition of customary law

Constitutional and legislative rules recognize and legitimise the claim of indigenous communities to their ancestral lands. There is recognition of the legal personality of the "*comunidades indigenas*" (indigenous communities) and of their rights on land, cultural values and customs. The Constitution recognizes the ownership of

¹¹ Le Roy, E. 2004. *Les Africains et l'Institution de la Justice. Entre mimétismes et métissages*. Paris, Dalloz.

property by communities of the lands they traditionally occupy. These communities have a right to participate in the administration, management and conservation of their natural resources.

Argentina is a civil law country that follows the Roman legal tradition. Under the Civil Code, article 2340 enshrines the concept of public ownership of surface and groundwaters, while concessions and permits are the mechanism for water use in articles 2341 and 2342. The 1994 Constitution through article 124 declares that provinces have original ownership of the natural resources found within their territorial boundaries. Modern water legislation is based on *codigos de agua provincials* - provincial water laws and statutes. Provincial administrations assign water rights through *permisos y concesiones* (permits and concessions) and are the locus for the water schemes and arrangements. The legal nexus between water and land is strong in Argentina, and related property rights concepts which link both are followed by all the regions except San Luis. Under the Civil Code streams that are formed and end within a state belong to that state and waters that arise in private property belong to the owners of the land who may freely use them and change their natural direction.¹² The Water Code of the province of Córdoba stipulates that an individual has the right to use common terrestrial waters.¹³ It also states that common uses are free of charge and have priority over any private uses - rates can only be set when the provision of a service is required.¹⁴

There is no recognition specifically of customary water rights in the relevant legislation namely the national and provincial water laws. Provincial management of water resources began as far back as 1940 in some provinces, and rules for water uses accommodated during that period in time was primarily for irrigation.¹⁵

¹² Articles 2350 and 2367 respectively.

¹³ Article 37.

¹⁴ Article 40.

¹⁵ World Bank. 2000. *Argentina Water Resources Management Policy Issues and Notes, Thematic Annexes, Volume III*. Argentina Country Management Unit and Environmentally and Socially Sustainable Development Network, and Finance, Private Sector and Infrastructure Latin America and

The international treaties and conventions, which Argentina has ratified, do not oblige the state to recognize customary laws. Its obligations are to "take into consideration" customs and customary laws, to protect the communities' rights in the natural resources existing on their lands, as well as the right to participate in the use, administration and conservation of such resources.

3.1.2 Statutory mechanisms to reconcile customary water rights and practices with statutory rights

No statutory mechanisms are explicitly for the reconciliation of customary water practices with the statutory regime.

Water use permits are granted upon the condition that they are not to the detriment of third parties, which in theory can be used to protect previously acquired rights, although this might extend only to previous rights acquired under the formal legal system.

There are public entities, like the National Parks Administration (APN), with experiences that could be a useful starting point in developing mechanisms for dealing with conflicts on water uses between formal and informal users. The APN has created an advisory council on indigenous peoples' policy issues within its directorate.

3.1.3 Judicial records of conflict between the two systems

Present conflicts centre on the recognition of indigenous rights to life, health, culture, ownership of property, and a safe environment. Although most conflicts entail the request for (ancestral) lands, they are nevertheless intertwined with issues relating to water and environmental pollution, lack of access to potable water, problems created by mines, oil production, gas-pipelines and dam construction. The primary formal mechanisms are judicial ones. The provincial water authorities assign water rights and solve water conflicts through water tribunals or similar bodies. Before or after the application of such mechanisms, there is always the possibility of using alternative conflict management systems.

the Caribbean Regional Office, available at siteresources.worldbank.org.

*Menores Comunidad Paynemil*¹⁶

An injunction order was sought by the Public Defender of Children in Neuquen province against the provincial government, that aimed at protecting the health and access to fresh water for the children of the Paynemil Aboriginal Mapuche community. The order sought to compel the government to provide the community with fresh water since its water bodies were contaminated, and to stop further pollution of community lands and water. The argument for this case was framed in terms of the right to water as fulfilment of the right to health. Despite the provincial government's defense that it was taking some steps in that it had studied the causes and types of pollution present, the court found in favour of the community considering the urgency and gravity of the matter.

Yacyretá Hydroelectric Dam

Construction of one of the largest dams in Latin America along the Argentina-Paraguay border has had social and environmental ramifications for the neighbouring ecosystems, agricultural lands, water quality, and decrease in fish species the cumulative effect of which has meant considerable economic loss to nearby communities such as *Corrientes* and *Misiones*. For many indigenous villages this has meant eviction from ancestral lands with a high spiritual value. The World Bank Inspection Panel, authorized to hear complaints relating to projects the World Bank finances, advised the government to take immediate remedial measures to mitigate the damages caused. In May 2004, "the panel found that important environmental problems persisted at the resettlement sites and that the impacts of these sites on adjacent areas had not been fully assessed. On social issues, the panel determined that the World Bank had fallen short on implementing its policy on resettlement of families and businesses and that there was no transparent and independent procedure for hearing grievances."¹⁷ The lack of response by the government prompted a new claim to be

brought forward in 2002; also civil society organisations have rallied public participation of the affected communities on issues such as preventing the raising of the dam water level.

3.1.4 Future directions for research and policy recommendations

The right to involvement or participation in natural resource management could form the basis for a future claim by the communities for formal recognition of their water customary laws and water ancestral practices. Arising from the relationship between land and water, and the historic relationship between indigenous communities and water, it is unavoidable to link the request for traditional land rights with traditional water rights and for greater accommodation of customary land and water laws.

3.2 Canada

3.2.1 Statutory water rights and recognition of customary law

"Aboriginal rights lie in the practices, customs and traditions integral to the distinctive cultures of Aboriginal peoples".¹⁸ In order to constitute an Aboriginal right, an activity must be an element of a practice, custom or tradition integral to the distinctive culture of the Aboriginal group claiming the right. Sustenance rights and traditional practices of hunting, fishing and trapping have been upheld by the courts. The indigenous Aboriginal population signed treaties first with British and later with Canadian governments before and after the Confederation in 1867. While these historic treaties pertain primarily to land, they contain specific provisions relating to water. However, even in absence of specific treaty rights to water "Canadian law recognizes a treaty right to water for traditional and contemporary uses by Indians"¹⁹ and treaties are to be construed as including water rights. The Canadian Supreme Court case *Guerin* has described an Aboriginal title as a legal right which both pre-dated and survived claims to sovereignty in North

¹⁶ Menores Comunidad Paynemil s/accion de amparo, Expte. 311-CA-1997. Sala II. Cámara de Apelaciones en lo Civil, Neuquen, 19 May, 1997.

¹⁷ Available at siteresources.worldbank.org

¹⁸ R. v. Van der Peet [1996] 2 SCR 507.

¹⁹ Bartlett, R. 1988. *Aboriginal Water Rights in Canada* (Calgary: Canadian Institute of Resources Law), p. 52 (hereafter Bartlett, R (1998)).

America by European settlers and which arises from historic use and occupation of tribal land independent from British and Canadian acts of recognition. In the *Calder* case,²⁰ the court found the Aboriginal title included the right "to enjoy the fruits of the soil of the forest and the rivers and streams within the boundaries of said lands". "A right to water is accordingly an integral part of Aboriginal title. It includes and does not distinguish between land and water. Both were central to traditional Aboriginal life."²¹

There is no central federal water law; water is primarily regulated at the provincial level, while Aboriginal rights cross jurisdictional boundaries. The federal government has jurisdiction concerning aboriginal rights primarily due to the Constitution of 1867, which enables the Parliament of Canada to enact laws regarding "Indians and lands reserved for Indians". The enactment of the Constitution Act of 1982 elevated existing common law aboriginal rights to constitutional status.

"...Aboriginal interests and customary laws were presumed to survive the assertion of sovereignty and were absorbed into the common law as rights unless (1) they were incompatible with the Crown's assertion of sovereignty, (2) they were surrendered voluntarily via the treaty process, or (3) the government extinguished them Barring one of these exceptions, the practices, customs and traditions that defined the various Aboriginal societies as distinctive cultures continued as part of the law of Canada."²²

Each province has its own administrative structure to manage water resources. This scope of jurisdiction is dependant on how much of the provinces' natural resources are subject to Aboriginal titles. Aboriginal rights can exist without title; contemporary Aboriginal rights arise from the customs and practices of the Aboriginal peoples. However this does not preclude Aboriginal

groups or individuals from acquiring other water rights through the operation of statutes like other citizens if they meet the necessary statutory criteria. It is likely that in the event of a dispute over provincial water licenses, federal powers related to Aboriginal peoples and Aboriginal rights themselves would prevail. No federal statutes specifically address customary water laws or Aboriginal water rights. The Indian Act is the chief federal law regulating the communities' activities and it has limited provisions regarding the types of water bylaws relating to reserve land.

Aboriginal rights have evolved due to rulings from the Supreme Court on the nature and extent of Aboriginal title and rights over certain resources, and also due to land claims and treaty settlements. When land was set aside for indigenous groups, sufficient quantities of water were similarly reserved to meet the needs the residents of the reserve. These should be differentiated from the common law right of riparians, that is, the rights derived under the English common law tradition which recognize water rights of owners of land that border a body of surface water. They are not Aboriginal rights. Under the riparian doctrine, these rights are not that of ownership, but rights of use and access to water for domestic use. A landowner exercising riparian rights must not impair the rights of downstream users.

The distinctions between the existing Aboriginal rights recognized by Canadian law, the continuing institutions of Aboriginal government, and Aboriginal customary laws recognized as effective under Canadian law are not entirely clear, but together they demonstrate that Canadian law "does not ordinarily displace the institutions, laws and properties of the Aboriginal peoples".²³

3.2.2 *Statutory mechanisms to reconcile customary water rights and practices with statutory rights*

Treaty settlements are the major mechanism for the reconciliation of these two systems of rights. Also, the Indian Claims Commission set up in 1991 is an independent, federal

²⁰ *Calder v. Attorney General of British Columbia* [1973] SCR 313.

²¹ Bartlett R. (1998) above quoting *Calder*.

²² Slattery, B. Understanding Aboriginal Rights (1987), 66 *Canadian Bar Review* 727.

²³ Borrows, J. 2002. *Recovering Canada- The Resurgence of Indigenous Law*, University of Toronto Press: Toronto, p. 4.

body to conduct inquiries and report on disputes between First Nations and the Government of Canada relating to claims based on treaties, agreements or administrative actions. It provides an alternative to court litigation. Some provinces have similar Commissions such as the British Columbia Treaty Commission which facilitates treaty negotiations. In British Columbia, the hydroelectric industry is reviewing its water use policies and working with the provincial government and other stakeholders to better accommodate a wider range of water needs. Negotiations are also a favoured method for ascertaining rights within a given area. Other mechanisms include administrative appeals of water licensing decisions to an independent tribunal and judicial review.

Water managers in Canada have generally taken two approaches to reconciling customary water rights with statutory rights:

- consultation with Aboriginal groups, to ensure their rights are considered in the decision-making process and if their rights are to be infringed, to ensure that the infringement is justified;
- establishment of co-management regimes where indigenous peoples participate directly in decisions over water resources.

There is a legal duty of consultation. Aboriginal peoples are not treated like other stakeholders and a separate consultation is required for these groups, as they have priority in the exploitation of resources. However it should be noted that there are thousands of land claims filed against the Canadian government by Aboriginal groups, and hundreds filed against individual provinces. Also, the dispute resolution process can be slow and take many years to finalize.

3.2.3 Judicial records of conflict between the two systems

Canadian courts have applied customary Aboriginal law as part of the common law on many occasions. The difficulty lies in determining the customary law that should be applied in a particular case primarily because the law is unwritten. The Supreme Court of Canada accepted the use of oral evidence (oral histories, personal

recollections of members of the appellant nations, territorial affidavits on land ownership).

There are only a few Canadian reported judicial decisions involving conflicts between customary water rights and statutory water rights. The following brief case summaries highlight the kinds of issues that have been raised before the courts concerning water resources.

James Bay project

The Cree and Inuit of James Bay sued to halt the development of a huge hydroelectric project initiated by the Quebec province authorities. The court determined that the impact of the hydroelectric project would be immense, "In view of the dependence of the indigenous population on animals, fish and vegetation of the territory, the works will have devastating and far-reaching effects on the Cree Indians and Inuit living in the territory and the lands adjacent thereto." Although the project was given authorisation to proceed, as a result of the lawsuit some changes were made. It also resulted in the James Bay and Northern Quebec Agreement which has been characterized as "more a statement of the rights of the James Bay Hydro Project than it is of the rights with respect to water of the Cree and Inuit."²⁴

Saanichon Marina case

A treaty right to use water to maintain a traditional fishery was upheld by the British Columbia Supreme Court²⁵ and an injunction was granted to prevent the construction of a marina in an area that had been traditionally used as a fishery.

Heiltsuk Tribal Council case

In this case,²⁶ members of the Heiltsuk Aboriginal group had asked the court to set aside a number of licences granted to a commercial aquaculture operator as they were not consulted prior to issuance of the water licenses arising from their title to the

²⁴ Bartlett, R (1998), p. 222.

²⁵ *Saanichton Marina Ltd. v. Claxton* [1987] 4 CNLR.48.

²⁶ *Heiltsuk Tribal Council v. British Columbia (Minister of Sustainable Resource Management)* [2003] British Columbia Supreme Court 1422.

land and rights to the water in the area under dispute. The judge found there was no evidence that the state had impacted the right of the Heiltsuk to hunt and fish in the area and that their position of zero tolerance towards Atlantic salmon aquaculture reflected an unwillingness to consult.

Piikani case

The Piikani indigenous tribe sued the province of Alberta where the latter authorized the construction of the Oldman River dam which was claimed to affect the natural in-stream flow through the reserve to meet their reasonable domestic and economic needs. After 12 years of litigation and negotiations, the case was settled and did not go to trial. Instead, a 2002 treaty terms were negotiated, some of which were the payment of settlement funds into a trust together with annual pay indexed to inflation and revenues generated on the trust. Additionally, among other stipulations included in the treaty, water supply was assured from the Oldman River to meet residential, community, and agricultural needs.

Haida case

The Haida aboriginal group claimed title to all of the Haida Gwaii – the Queen Charlotte Islands and sought: an order quashing all licenses, leases, permits and tenures incompatible with Aboriginal title and the exercise of Aboriginal rights; an accounting of all profits, taxes, stumpage dues, royalties and other benefits acquired by the province, Canada and third parties; damages and compensation for alleged "government's unlawful conduct". At the time of writing this paper, a final outcome for this case is still pending.

Chippewas of Nawash and Saugeen

These two indigenous peoples are pursuing an Aboriginal title claim to part of the lakebed of Lake Huron and Georgian Bay. In 2004, the governments of Canada and Ontario were unsuccessful in their second attempt to quash their claim on the grounds that it was incompatible with Crown sovereignty over the same waters. At the time of writing this paper, a final outcome for this case is still pending.

3.2.4 Future directions for research and policy recommendations

Customary water laws of individual Aboriginal groups should be assembled, starting with the compilation and analysis of existing information found in individual studies of the laws of particular groups. Substantial changes in Aboriginal case law and Constitutional law also deserve further analysis to evaluate their impact on water rights. Another area for research is the decisions of Canadian administrative tribunals on aboriginal water rights and their conflicts with other statutory rights.

3.3 Ecuador

3.3.1 Statutory water rights and recognition of customary law

The most important laws affecting the water sector are the Constitution and the *Ley de Agua y Reglamento* (the Water Law and Regulations), even though a large number of other laws to a lesser extent deal with water and water management. Under this legislative framework, the state has the *dominio y propiedad*, dominion and ownership of water resources found in the country. This statutory arrangement is based on the provinces' competence over water infrastructures and watersheds. The principles enshrined by the framework is that water is a national good for public use and no individual can appropriate water without due authorisation. Interestingly, land ownership does not carry with it rights over the subsoil, or surface and underground waters. The Ecuador Water Law dates from 1972, even though water management priorities have changed since. Public water management capacity is weak and there is no plan for water quality control.

The Ecuadorian legal system has increasingly recognized the collective rights of indigenous peoples and nationalities, but the legal framework on water resources merely indicates that water is a national good for public use. Under the Civil Code, *la costumbre* or custom, does not constitute law unless the (state) law refers to it. The "*estatutos internos*" (statutes) or "*ley de todos*" (laws for all members) were produced for clarifying the rights and obligations in water management of all members of an indigenous or ancestral group.

3.3.2 Statutory mechanisms to reconcile customary water rights and practices with statutory rights

With specific reference to customary rights issues, on the institutional front, the *Consejo de Desarrollo de las Nacionalidades y Pueblos del Ecuador*, (Ecuador Development Council of Nationalities and Peoples) CODEMPE is charged with registering nationalities, peoples and communities which define themselves as "*indigenas de raices ancestrales*" or indigenous peoples with ancestral roots, and bestowing upon them legal personality.

3.3.3 Sources of conflict in the water sector in general

Conflicts result primarily because of the lack of registers for water licenses (often the same license is given to more than one user), or concessions are granted where the supply cannot sustain the use or withdrawal of the quantity stipulated in the permit. Increasingly, conflicts over irrigation are not dealt with through arbitration or negotiation but through hearings and tribunals where those who have unduly influenced the judiciary, have in many instances, prevailed in court.

3.3.4 Dispute settlement mechanisms

At national level, water administration is entrusted to the *Consejo Nacional de Recursos Hidricos*, the National Council of Water Resources, then to *Agencias de Agua*, Water Agencies. These bodies deal with permits and licenses and they are also the first instance for hearing water disputes. The next tier of hearing is the *Consejo Resolutivo de Aguas*, Water Dispute-Solving Council. The *Corporaciones Regionales de Desarrollo*, Regional Development Organizations deal with all aspects of irrigation and with the *Juntas de Usuarios de Agua*, Water Users Committees.

Arbitration and mediation are also mechanisms employed in Ecuador. Community mediation is legally recognized and entrusted to the community organizations; agreements concluded thereunder have the value of court sentences. According to the *Ley de Arbitraje y Mediacion* (Arbitration and Mediation Law), "Authorities will exercise the functions of

administering justice on the basis of rules and internal procedures for conflict solution which exist in their customs or customary laws"[...] "The authorities of indigenous peoples may administer justice by applying their rules and procedures in agreement with their customary law." However, due to the fact that customs do not constitute law unless explicitly referred to under state law, indigenous justice cannot be contrary to the Constitution or to the other laws.

The *Ley Organica de Juntas Parroquiales* which is an all-inclusive parish council law, allows councils to organize traditional mediation centres. No mechanism exists for solving water disputes between customary water rights and statutory rights *per se*.

3.3.4 Future directions for research and policy recommendations

The civil society in Ecuador is involved with supporting and promoting the rights of indigenous groups. Among those supportive of customary justice are *Projusticia*, *Red Andina de Justicia*, *de Paz y Comunitaria*, and *CIDES*. Organisations such as *Conferencia y Confederacion de Nacionalidades Indigenas*, *Consejo de Desarrollo de las Nacionalidades y Pueblos del Ecuador* and *Foro de los Recursos Hidricos*. These groups advocate the following issues among others:

- greater public participation in water management;
- institutionalising the collective rights of traditional peoples;
- the recognition of preferential access for water licenses for human consumption and irrigation, in community lands or in private lands belonging to community members;
- the recognition of the religious significance of certain water sources belonging to traditional peoples, and their designation as special protection zones;
- the right to compensation when traditional peoples suffer limitations or interferences with the exercise of some of their rights.

3.4 Ghana

3.4.1 *Statutory water rights and recognition of customary law*

The existing regime regulating water use is a mixture of customary rules and statutory enactments in consonance with article 11 of the 1992 Constitution. Customary law is defined under article 11(3) of the Constitution as the rules of law which, by custom, are applicable to particular communities in Ghana. The water sector, as all other legally regulated spheres, contain a mixture of various sources of law: primarily, the Constitution; enactments by or under the authority of the Parliament; orders, rules, regulations by any person or authority under a power conferred under the Constitution; common law which includes principles of the English common law tradition as well as customary law. Some customary rules on water rights have disappeared, at least on paper, after the coming into force of the Water Resources Commission Act (WRC Act) of 1996. The WRC Act abolishes the pre-1996 customary regime for ownership of water which resided in customary stools, communities, families and individuals. In their place, the state has assumed monopoly ownership, management and control of water via the Water Resources Commission (WRC). In practice however, customary rights and practices as regards the usage of water go on unabated particularly in rural areas.

As a general rule, all water sources (sea, rivers, lakes) are regarded as public property and not subject to individual appropriation. This rule is said to be strictly applied especially in areas with scarcity of water. It can, however, be relaxed where there is relative abundance to allow an individual the use of a stream or pond in his or her land, but this does not create private ownership over the resource.

Water management is assured by the WRC, pursuant to the Water Resources Commission Act of 1996. Under law, 'water' refers to all types of surface and underground water, with the exclusion of any stagnant pan or swamp wholly contained within the boundaries of any private land. No person can deal in any way with or use water without the permission of the WRC. The only exception is fire-fighting. The Act vests in

the state through the WRC, the right to grant water rights; individuals may apply in writing to this body for water concessions. The Act also recognizes the rights of persons with lawful access to water to abstract and use the same for domestic purposes. Among largely illiterate communities who are unaware of the changes introduced by the legislation, the net effect of the legislation could divest customary holders of proprietary rights to water without prompt, adequate and effective compensation as required in such circumstances by the 1992 Constitution. To date, the WRC has not exercised any of its far-sweeping powers in the area of appropriation of water rights. The WRC has 15 members and there is only one representative of chiefs, who are the embodiment of custom in Ghanaian society.

There is recognition of customary law on land matters but none specifically in customary water rights. Until the passage of the WRC Act, customary water rights were, by and large, regarded as part of land rights. Customary land holdings are recognized by the Constitution which makes state intervention and appropriation of lands subject to stringent conditions in article 20. The implementation of the Act raises a fundamental issue as to whether or not water resources can be separated from land and accorded statutory treatment where customary law is the prescribed norm on land matters – a matter which has not yet come before Ghanaian courts. Further the WRC in its twelve years of functioning has not exercised its powers of appropriation. If the Constitution provides that the regime of land tenure ought to be in conformity with customary law, then any attempt by the state to fashion a separate regime for water runs counter to this constitutional edict and will offend the letter, if not the spirit, of the Constitution.

3.3.2 *Statutory mechanisms to reconcile customary water rights and practices with statutory rights*

The WRC Act itself does not provide for any mechanisms to reconcile customary rights with statutory rights. It only enjoins parties whose rights have been affected to stake their claims within 12 months of the coming into force of the 1996 WRC Act, although as previously noted given the lack of awareness of this provision and lack of

information on how to go about registering rights, many customary rights are excluded from this framework. However, constitutional recognition (and in 'sources of law') should in essence make it superfluous for the water legislation itself to again specifically mention 'customary water law'. While this would be desirable for the sake of completeness, it does not demonstrate less recognition or legitimacy of custom as a source of water law. Nevertheless, customary law rules are subordinate to statutory enactments. According to the Constitution, customary law could yield to statutory law or to the English common law in instances where the customary law is "repugnant to good conscience and morality".

3.3.3 Dispute settlement mechanisms

Any disputes arising out of the use of water were resolved by the chiefs and elders in line with the prevailing rules and edicts handed down by the fetish priests and priestesses. These determinations were adhered to through fear of potent "hidden" and divine powers of these religious figures and through enforcement powers wielded by the village chiefs.

The Ghanaian 1993 Courts Act established community tribunals throughout the administrative regions with jurisdiction to hear land and resources issues and other civil cases such as contracts and family law. Following the English common law tradition of judicial precedent as a binding authority, lower courts will follow the principles laid down by higher courts such as the High Court, Court of Appeal and Supreme Court. In this way customary rules recognized and endorsed by courts become general principles of customary law applicable across the board. This result has its dangers given the degree of divergence in rules and practices between communities, villages and regions within the county.

The WRC Act does not provide a judicial mechanism or basis for the settlement of disputes between customary water rights and statutory rights *per se*. Furthermore the Act does not provide information regarding the possible avenues of redress for grievances under the statute. It is put forward that the High Court's supervisory jurisdiction or the protection of property rights under the constitution could be used to fill this lacunae.

3.5 Guyana

3.5.1 Statutory water rights and recognition of customary law

The primary law on water is the Water and Sewerage Act (2002). Water rights are regarded as the property of the state, which authorizes use. The Ministry for Housing and Water has primary responsibility, and through the National Water Council is responsible for developing a water national policy. Every region should have a public water supplier, and at present, one company Guyana Water Inc. Hydrometeorological Dept. (Hydromet) issues licenses for underground water and sometimes also surface water. Hydromet reports back to the Ministry of Agriculture, who has the power to issue drought orders that restrict water use thereby affecting customary water rights. Groundwater concessions are granted only to Guyana citizens, and persons operating a well or a borehole, must make a notification to Hydromet to this effect. It is illegal to operate a borehole unless such an operation is authorized by a valid licence or other lawful authority. There is no attempt to extinguish customary use of groundwater but neither there is any explicit recognition of customary use. The abstraction of surface water must be authorized if pumped water quantities are superior to limits set by regulations; however these have yet to be established. Rights must not be exercised in a way that would jeopardise or threaten the water supply for existing or potential water users. Surface water rights are similarly granted to Guyanan citizens and abstractions must remain within the amount prescribed by regulation.

There is no comprehensive regime in Guyana for the identification or recognition (and registration) of customary water rights. In order to qualify as customary, Amerindian use of water would have to be ancient, certain, reasonable and continuous; the burden of proof falls upon the Amerindian communities to prove the existence of such a custom. Where these communities are unable to show that they have a customary right of water, it then becomes necessary to consider whether their traditional use of water may still be protected under Roman-Dutch law or under common law.

Amerindian village councils have the power to make rules for the provision, maintenance and regulation of water supplies and the prohibition of poisoning the waters of any river and stream. These regulations bind the Amerindian community, but no one else. The state has usually avoided dealing with the question of Amerindian (customary) rights when it promulgates new legislation, preferring instead to save existing rights. This approach has been followed for customary rights to fish, hunt, cut timber, navigate and travel on the rivers and, to some extent for mining activities such as panning for gold and diamonds. There do not appear to be any instances of administrative action which could threaten customary use. There appears to be a culture of non-interference with customary use and, in some cases, enhancement of customary use through the provision of wells and pumps. The way in which the public water suppliers fulfil their licence terms will have an impact on the extent to which customary rights to water will be respected in practice. There is a danger that the traditional free and unrestricted access may be replaced by a system that is closer to rural water delivery, including some cost recovery or subsidy.

If courts recognize some form of aboriginal title or pre-existing right, there are grounds for arguing that Amerindian customary use of water amount to a legal right. There are two possibilities. The first is where Amerindian ownership of surface water is itself recognized by a court, which is unlikely considering the Dutch extinguished Amerindian rights to the major rivers. This point should still be regarded as open to challenge until there is a final decision by the courts on it. A second option would see Amerindian rights operate as a burden on the state's ownership. It would amount to an interest which is recognized within the framework of the common law or analogous to an existing interest.

Amerindian communities could assert that, as owners of the land, they are entitled to take water from the creeks and rivers belonging to the state. There is scope for the court to find if such a right exists against the state because there is a pre-existing right based on aboriginal occupation and use.

When English law was introduced in Guyana, the English common law of personalty was applied to land and interests in land. The law relating to easements and real servitudes²⁷ as administered by the court was saved. In theory, customary use could amount to an easement but this argument is rather tenuous - a servient tenement interest is slightly more tenable. The Civil Law Ordinance of 1916 retains servitudes as a part of the law of Guyana and section 2(3) of the same chief provides support for the argument that Amerindian rights could have survived. For a servitude to exist there must be a dominant and a servient tenement. If Amerindians are recognized as owners of land with aboriginal title, their land could constitute the dominant tenement. Any attempt to protect water rights on the basis of a personal servitude would fail as Amerindian rights to water are held communally and pass from one generation to the other. Further, it appears that personal servitudes are no longer legally recognized in Guyana.

The person claiming the servitude has the burden of proving its existence. The best approach would be to rely on the doctrine of *Vetustas* which gives rise to a legal presumption that the origin of the servitude was legitimate: the Amerindian communities would have to show that their use of water "dates back to a period to which the memory of man does not extend...". The acknowledgement in the title deeds of occupation from time immemorial would support this approach.

The Constitution does not provide for the recognition of customary water rights. These are protected only to the extent that they can be brought within the heading of property. The Constitution provides protection from deprivation of property. Amerindian ownership of land, including any right to ground water incidental to that ownership, would therefore be protected against arbitrary state action. Servitudes in relation to the state would be protected because servitudes are property rights.

²⁷ Easements refer to the legal right to use the real property of another for a specific purpose, although legal title remains with the owner of the real property for all other purposes. A servient tenement is real property which is subject to an easement.

3.5.2 Statutory mechanisms to reconcile customary water rights and practices with statutory rights

The state has usually avoided dealing with Amerindian customary water rights preferring instead to save existing customary rights to fish, hunt, cut timber, navigate and travel on the rivers and, to some extent for mining activities. The State Lands Act 1903 does however recognize that Amerindians have some rights in relation to the rivers and creeks. The law gives the minister the power to "make any regulations that to him seemingly meet defining the privileges and rights to be enjoyed by Amerindians in relation to the state land and the rivers and creeks of Guyana". It also states that

"...all existing rights to own, use, abstract, manage and control the flow of water are hereby saved upon the terms of their grant or other lawful authority under which they are held."

[...]

Nothing in this act shall be construed to prejudice, alter or affect any rights, privilege, freedom or usage possessed or exercised by law or by custom by any person."

The Water and Sewerage Act (2002) does not establish any mechanisms specifically for reconciling customary use with the new regime for regulating water use. The approach adopted by the Act is to provide for verification of the existing lawful uses; customary use could therefore be brought within the legal framework through this manner. The problem with this approach is that to a large extent, Amerindian communities and their village councils are unaware of these provisions. Furthermore, it is not definite that even if they did, they would feel the need to subject their customary system to that of state enactments. That being said, the Amerindian councils are entitled to hold water licences and this may be an attempt to recognize customary use while bringing it within the regulatory framework. But there are mandatory terms which may lead to conflict with customary rights or which may impose conditions that Amerindian communities cannot comply with.

3.5.3 Dispute settlement mechanisms

Amerindian communities traditionally make decisions collectively and based on general consensus. A dispute is normally settled by a meeting between the parties involved. If this is not possible, then the chief of the village is called on to provide advice and to mediate. More serious disputes may be subject to some form of adjudication or mediation by the village council or other persons with sufficient influence. Where a dispute occurs between members of two separate villages, meetings then take place between the affected parties, who may be accompanied by their chiefs of village or other members of the village council to serve as counsel and mediators in order to reach a consensus. Under current practice, if an agreement cannot be reached, the community will request the Minister of the Amerindian Affairs to intervene and mediate, or the community will bring the matter to the Regional Democratic Council.

Traditional institutions for the administration of rights and for the settlement of disputes within Amerindian communities have not generally concerned water. Traditional institutions for settling disputes are the village chief, the village council and the community itself, through the village meeting. The chief does not have any formal power to impose a result and village councils do not have power to make decisions, but they are supposed to reflect the will of the community. The Amerindian Chiefs of Villages Area Council has provided a forum for some mediation and for concerns to be expressed and dealt with at the wider community level. New Community Development Officers (CDOs) are Amerindians with legal and social training provided by the Ministry of Amerindian Affairs to offer support and advice to the communities. They have no official powers to settle disputes, but may support and strengthen the traditional institutions.

There is, as yet, no case law in Guyana, on the question of Amerindian rights to water. The Act does not establish any mechanism such as tribunals or inquiries to reconcile customary water rights with statutory provisions. The village meeting is used as a traditional mechanism for solving disputes, but it is not recognized by the formal legal system. There have been no cases, either

formally litigated or brought to village councils over water use. No cases of conflict between customary and statutory water rights were found in judicial records.

3.5.4 Future directions for research and policy recommendations

It would be useful to look at how customary rights may be identified and incorporated into legislation. Judicial cross-fertilization and the benefit of comparative jurisprudence in states with similar groups enjoying customary rights and practices would also be beneficial. To protect their customary water rights, communities need to have full access to information and to ensure that they take part fully in decisions that affect them.

3.6 Nigeria

3.6.1 Statutory water rights and recognition of customary law

The constitutionally recognized sources of law in modern Nigeria are customary law, Islamic law and statutes passed by the legislature. Customary *water* law is not explicitly mentioned by the Water Resources Decree of 1993. This decree vests the right to the use and control of surface and groundwater in the federal government for watercourses in more than one state.

The ministry is supported by the River Basin Authorities and the National Water Resources Institute. Under the law, any person may:

1. take water without charge for his domestic purpose or for watering his livestock from any watercourse to which the public has free access;
2. use water for the purpose of fishing or for navigation;
3. take and use water from the underground water source or from a watercourse, if abutting on the bank of any watercourse, or if he has a statutory or customary right of occupancy to any land, without charge for domestic purposes, for watering livestock and for personal irrigation schemes (non-profit motives).

A customary rule that restricts fishing and navigation rights could be used to bar

parties claiming such rights with reference solely to the general provisions of the statute.

3.6.2 Statutory mechanisms to reconcile customary water rights and practices with statutory rights

While no direct recognition of customary water rights as such exist, similar to the Ghanaian context, Constitutional recognition renders it unnecessary for the water laws to explicitly endorse customary practices. Again, while contributing to clarity and comprehensiveness, it does not negate the operation of customary laws in the water sector.

It can be assumed that in cases where there is a conflict between statutory law and customary law, the former would take precedence. Under the Land Act, customary rights of occupancy in land granted by local governments are made subject to the statutory rights of occupancy which the state governors are empowered to grant. Customary law is to be applied by the courts if the customary law rule is not repugnant to natural justice, equity and good conscience or is not incompatible with any statute.

3.6.3 Sources of conflict between the two systems

Conflicts involving the use of water for fishing and navigation are likely to be resolved in favour of customary law, because these activities are permitted as long as they are not inconsistent with any other law in force, for the time being. Many of the major conflicts over water resources have arisen, not so much as a conflict between statutory and customary rights, but rather among users asserting various customary rights. This is particularly so between traditional pastoralists and agriculturists due to water shortages from droughts erratic rainfall, with water scarcity and conflict exacerbated by a rapidly increasing population and the inability of the government to effectively implement an efficient water resources management policy.

3.6.4 Dispute settlement mechanisms

There are currently two basic mechanisms for the enforcement of customary law.

Customary courts mandated to ascertain and apply customary laws have been established in the different states throughout the country; and, the non-statutory adjudication systems of chiefs and elders that was left intact but not officially recognized by colonial and post-independence governments.

Non-statutory customary adjudication systems vary depending on whether the ethnic group is centralised or not. In centralised groups, an elaborate informal administrative machine exists and the constituent units of the society tend to be bound together by common interests and loyalty to a political superior, which is usually the chief or king. On the other hand, un-centralized societies have no single authority that enjoys a concentration of political, judiciary or military power which can control the activities of members of the group. The judiciary is based on the authority of elders derived by their seniority and status in the group.

Under this non-statutory adjudication process, the principal method of obtaining evidence is to call witnesses. The losing party could be censured or fined. In serious cases, the offender may be ostracised or expelled from the society. Pressure to comply with a judgement can come from the family and members of the community concerned about the effects of non-enforcement on the family and the community itself.

In some Nigerian states, customary courts have unlimited civil jurisdiction regarding certain types of cases while in others, they are restricted to civil cases meeting a threshold value. The Constitution authorizes the creation by each state of a Customary Court of Appeal. In order to be appointed judge, a person must show "considerable knowledge of, and experience in the practice of customary law". There is also a Federal Customary Court of Appeal. The Land Use Act grants customary courts jurisdiction over proceedings in respect of a "customary right of occupancy" which is defined to include the right of a person or community lawfully using or occupying land in accordance with customary law.

Customary rights can be proved by three ways. Witnesses acquainted with the native

customs may be called. Secondly, reference can be made to books or manuscripts recognized as legal authority, or also to reports from statutory customary courts, statutes, declarations or case law. Finally, in appropriate circumstances, judicial notice may be taken of well-established rules of customary law.

3.6.5 Future directions for research and policy recommendations

As a basic information gathering process, assessments of rural and remote areas should be carried out in order to investigate more precisely the nature and operation of customary water rights and practices. The existing regulatory regime could be improved through the adoption of regulations providing guidance on the customary water practices of the different ethnic groups, and the provision of information regarding new statutory laws for the rural population.

3.7 Peru

3.7.1 Statutory water rights and recognition of customary law

The Political Constitution of 1993 recognized several aspects important to the furtherance of customary rights. It enshrined the individual right to an ethnic and cultural identity and the capacity of defending such right with juridical mechanisms. It also confirmed the ethnic and cultural plurality of the nation. It endowed peasant and native ancestral communities with legal personality, confirmed their land ownership and conceded their customary laws within their jurisdiction and territory on the condition that they respected established human rights. However, these communities must register with the 'Register of Juridical Persons' of the Public Registries in order to claim their constitutional right to an ethnic and cultural identity, otherwise they are not considered part of the legal system. Under Peruvian legislation, water belongs to the state, but the communities' perception of water laws is far removed from that of the official water legislation.

Historically, a large quantity of rules was collected in the *Leyes de Indias*, one of the earliest statutes which allowed to a certain extent for the preservation of the indigenous

communities. In 1920, indigenous communities were once again recognized under law and communal lands brought within the remit of legal protection. Since the 1920 Constitution and including subsequent versions, the legal personality of the peasant and native communities have been recognized, together with their organizational autonomy, communal works, land uses and economic and administrative peculiarities, within the limits of state law. The 1993 Constitution extended the recognition of community autonomy to include the free transfer of communal lands. It also allows judges to apply the general principles of law and customary law where *vacíos* (deficiencies) have been found in the legislation. At the same time, the Constitution allows the authorities of peasant and native communities to exercise certain juridical functions, such as acting as judges or arbiters, within their territories and in accordance with customary law, provided there is no violation of human rights.

Although Peru has ratified several international treaties which recognize the peasant and indigenous legal system, the "*indígena*" or indigenous persons, are still largely unrecognized in the national legislation. Some mentions are made, however. According to the 1987 *Ley General de Comunidades Campesinas* (the General Law on Peasant Communities) PNAC,

"...are formed by families living and controlling specific territories, linked by ancestral social, economic and cultural bonds, expressed by communal ownership of land, communal work, mutual aid, democratic government and the development of multi - sectorial activities..."

Accordingly, the state respects and protects the uses, customs and traditions of such communities which have as their basic principles, the defence of environmental equilibrium, preservation and the rational use of natural resources. However, the state has dominion over water resources, in whichever form they are (liquid, solid, gaseous), and wherever they may be found (surface, subsoil, sea, or atmosphere). This dominion is maintained even where it has granted rights of exploitation to others through licenses and the charging of a fee.

While customary water rules give an individual right to use water through the participation in construction of irrigation works, under the statutory law, the state builds the irrigation works and assigns water rights to individuals. Any person using water is defined as a user, and must be part of an irrigation district, through Users Committees and Irrigators Commissions. Users' organisations do not receive much attention in the General Water Law with regard to the formulation and implementation of irrigation plans. According to the 1994 Agrarian Census, there were 1 800 000 agrarian farms but only 60 000 farmers had their water licence. A special program, PROFODUA, was set up to formalise the water rights of farmers and has thus far rendered positive results. Nevertheless, peasant and native communities are not considered 'users' and therefore do not get corresponding licences. The state only recognizes their "traditional uses", which is a limitation to their rights and interests. Recently, the *Comisiones de Regantes*, irrigation users organisations have become weaker because community members have increasingly sought individual or family titles to the communal lands they work on, following the 1993 Constitution which allowed the selling of communal lands, and the 1995 *Ley de Tierras* (Land law), which allowed community assemblies to give land titles to community members.

The *Ley Organica para el Aprovechamiento Sostenible de los Recursos Naturales*, which is an all-inclusive law on the Sustainable Exploitation of Natural Resources, recognizes that

"the inhabitants of a geographical area, and especially the members of peasant and native communities may exploit natural free-access resources (in the soil and subsoil) in areas around their lands, freely and without exclusivity, to satisfy their subsistence needs and ritual customs, unless exclusivity or excluding rights exist in favour of third parties or of a state reserve."

Therefore, the ancestral ways of using natural resources are recognized, unless they go against rules of environmental protection. This law gives prominence to customary laws in force, with special

reference to the use and exploitation of natural resources in their areas; these rights must be exercised according to present legislation, in agreement with the privatisation policy and with regard to Peru as a market economy.

In situations where there is a lack of water, the water law provides a list of water use priorities as follows:

- primary necessities and human consumption
- livestock;
- crop production;
- energy, industry, mines;
- other uses.

According to the 2005 *Ley General del Ambiente*, which is the general environmental law, article 72.3 stipulates that "In accord with the law, indigenous peoples and native and peasant communities may benefit from free-access resources for their subsistence and ritual needs." They enjoy preferential rights in the sustainable exploitation of natural resources within their territories if they possess title over them, unless there exists a state "reserva" or third parties' exclusive rights. In such a case, they have a right to just and equitable participation in the economic benefits coming from the resources' exploitation.

According to article 3.e of the *Ley para la Proteccion de Pueblos Indigenas y Originarios en Situacion de Aislamiento y en Situacion de Contacto Inicial* (the Law on the Protection of Indigenous and Original Peoples in Situation of Isolation or of Initial Contact), the state protects their free access and extensive use of their lands and of natural resources for their traditional subsistence activities.

The above indicates that under the law, the Peruvian State recognizes the indigenous populations' rights to the use of natural resources. In practice, however this recognition is limited.

3.7.2 Sources of conflict between the two systems

In order to protect their rights on natural resources including land and water, communities must show title over the

resources which presents significant difficulties in light of the fact that more than 20 percent of the communities have do not have formal titles or have some problem in relation to it. For example, indigenous communities may only have titles on agricultural land, not on forest land, when in reality, a majority of their territory consists of forested areas. The *Ley General de Aguas* has not been applied in forest areas. Title ownership is a constant source of conflict.

Conflicts may also arise because mines and oil extraction activities cause pollution of water sources; and between towns and rural communities where towns subtract water away from communities. Tensions arise where an indigenous group or peasant community finds itself limited in its use of water, while water is granted to a third person. This is particularly an issue where this granting is authorized without any mediation or participation by the affected native communities. The law gives water priority to towns, which are constantly enlarging and becoming more densely populated.

According to state legislation and administrative practice, the rights of water of the indigenous peoples and native and peasant communities do not have priority neither over statutory laws nor in the granting of permits.

3.7.3 Future directions for research and policy recommendations

In line with trends in Ecuador and Bolivia, previous neo-liberal governments were transforming water in into a negotiable, tradable good independent from land. A new water law is needed together with a new institutional setting based on local capacity-building, participation and decentralisation, and overcoming the old differences in economic and legal treatment between the coast and the mountain areas.

Among its various functions, the National Institute for the Development of the Andean, Amazonian and Afro-Peruvian Peoples (INDEPA) could study uses and customs of the Andean, Amazonian and Afro-Peruvian Peoples as sources of law and advocating for their formal recognition. This research could then be useful in getting customary laws and cultural diversities effectively

recognized by the state. Some Peruvian experts on water are convinced that converting customary rules into statutory legislation will make them disappear or twist them into something very different.

3.8 Philippines

3.8.1 *Statutory water rights and recognition of customary law*

Statutory water rights have been influenced by both the Spanish and the American water legislations. In 1949, the Congress of the independent Philippines approved the new civil code, and the parts related to water were clearly influenced by the Spanish Civil Code. It continued to recognize the public use of water and water of private ownership and riparian rights. At the end of 1976, a water code was issued which set forth various tenets. These were, among others that all waters belong to the state and cannot be the object of acquisitive prescription. Also the state may allow the use or development of waters by administrative concession which shall be controlled by the government through the National Water Resources Board (NWRB), which was formerly the National Water Resources Council. Preference or priorities in the use and development of waters shall take into consideration current usage and be responsive to the changing needs of the country. The Water Code explicitly favours collective management of water over individual control of water. Only Filipino nationals and entities may apply for water permits. Permits are not required in the following circumstances: personal use of the owner of the land where water is found; for persons using hand-carried receptacles, or for bathing, washing, watering or dipping of domestic or farm animals, for navigation and for the transport of logs.

The Board is authorized to impose and collect reasonable fees and charges for water resources development from water appropriators, except when it is purely for single family domestic purposes or when the quantity of water appropriated for agricultural use is no more than 5 litres per second. Although the Water Code has been in effect for almost three decades, compliance with the permit requirements is low (only 40 percent of users have a permit and actually pay). The NWRB does not have

field offices or staff in the provinces or municipalities. An ordinary citizen would not know where to go to get a permit nor that a permit is required or that NWRB even exists. As it does not have field personnel, there is no monitoring or enforcement of the permit requirement.

Customary water laws equate the right to access and use water with land ownership, which is communal in nature. Land, including those above and below its surface, is considered as owned by the gods and the spirits and is merely held by people in stewardship. Insofar as indigenous peoples are concerned, land and the resources found therein constitute one integrated ecosystem. By contrast, statutes and laws on land and natural resources provide that ownership and control over natural resources belong to the state and rights to these resources can only be acquired through a grant given by the state.

The Water Code is silent insofar as customary water rights are concerned. Section 95 recognizes claims to the right to use water existing on or before 3 December 1974. These holders of prior use rights were required to secure a new water permit within two years from the promulgation of the Code, otherwise they were excluded from the use of water. This provision of the Code was hardly implemented at all, in part due to the lack of any information campaign regarding the necessity to secure a permit.

The 1987 Constitution recognizes the existence of indigenous cultural communities or indigenous peoples and their rights. Article 2.22 stipulates that the state recognizes and promotes the rights of indigenous cultural communities, while article 12.5 declares that "The state ... shall protect the right of indigenous cultural communities to their ancestral land ... The Congress may provide for the applicability of customary laws governing property rights and relations in determining the ownership and extent of ancestral domain". Article 13.17 declares that "The state shall recognize, respect and protect the rights of indigenous cultural communities to preserve and develop their cultures, traditions and institutions."

Further, the Republic Act No. 8371, known as the Indigenous Peoples' Rights Act (IPRA) of 1997, contains provisions that recognize the primacy of customary water rights over statutory water rights. "Ancestral domains" under this statute include water sources; therefore the right of ownership of indigenous cultural communities over their ancestral domains cover rights to claim all lands and natural resources within the domains, including bodies of water which they have traditionally and actually occupied. The Act further introduces the "indigenous concept of ownership" which sustains the view that ancestral domains and all resources therein shall serve as the material bases of their cultural integrity. It generally holds that ancestral domains are community property which belongs to all generations and therefore cannot be sold, disposed of or destroyed. It covers sustainable traditional resource rights which in turn are defined as "the rights of indigenous cultural communities to sustainably use, manage, protect and conserve a) land, air, water and minerals; c) collecting, fishing, hunting grounds [...]" *inter alia*. The rights of the indigenous groups to claim ownership and develop natural resources are not absolute. It is qualified by specific situations, such as when there are existing property rights within the ancestral domain or when such rights were vested prior to the coming into force of the IPRA 1997. Indigenous populations are given priority rights to harvest, extract, develop or exploit natural resources within the ancestral domains. Non-indigenous people are not excluded, but require a formal and written agreement with the indigenous community concerned.

3.8.2 Statutory mechanisms to reconcile customary water rights and practices with statutory rights

The key to resolution of conflicts between customary and statutory rights is not the Water Code but IPRA (Indigenous Peoples' Rights Act), which states that customary laws and practices shall be used to resolve the dispute. Furthermore, it advocates the "primacy of customary laws and practices" of indigenous groups, which means that conflicting parties shall amicably settle their disputes by first exhausting all remedies available in customary laws before resorting to regular courts. Any doubt or ambiguity in

the application and interpretation of laws shall be resolved in favour of indigenous people.

3.8.3 Sources of conflict between the two systems

The statutory and customary rights interface can pose challenges. Customary water rights and practices were kept intact notwithstanding the enactment of the Water Code of 1976. The only imposition was the obligation of securing a water permit as evidence of water rights. However, traditional societies may not appreciate the need to do so, particularly because the process is costly and taxing. By complying with permit requirements, indigenous peoples betray their customary beliefs about the concept of land – that it is owned by the gods and spirits and merely held by men who act as stewards. Furthermore, when there are conflicts between different claimants over the resource, holders of customary rights could not avail of the conflict resolution process under the Water Code: the claimant should be a water permittee. Holders of customary water rights do not have water permits.

The present trend is towards an agro-industrial economy. To attract investments, such as those requiring water, investors have to be guaranteed of their water rights. Conflicts between existing water rights holders and industrial projects will be inevitable. Conflicts are bound to escalate because significant portions of the watersheds are under indigenous groups claims.

3.8.4 Judicial records of conflict between the two systems

There is no practical procedure in the Water Code to address conflicts between indigenous and non-indigenous resource users, nor between customary water rights and statutory water rights. The holder of a customary right would not be recognized before the NWRB should he have a grievance relating to his water use.

The Supreme Court case *Carino vs. Insular Government* of 1909, made the following ruling:

"when, as far back as testimony of memory goes, the land has been held by individuals under a claim of private ownership, it will be presumed to have been held in the same way before the Spanish conquest and never to have been public land."

Indigenous cultural communities /indigenous peoples have been in possession of their lands prior to the colonial era. The decision in the *Carino* case may be invoked to assert their rights over their lands and natural resources.

3.8.5 Future directions for research and policy recommendations

Even before the passage of IPRA, the state already realized the importance of building on the strength of traditional water systems instead of changing or imposing a system recommended by the state. Customary water rights and practices can be kept intact and accommodated in the state regime and greater efficiency of water allocation can be achieved. To date, a number of indigenous groups have filed claims over millions of hectares of ancestral domains and ancestral lands, which constitute a large percentage of the country's territory. There is growing fear that these communities would eventually own the bulk of the country's land and therefore receive a majority of the water rights, which would result in inequitable allocation of water resources.

Some observations present interesting challenges for the future. An accounting of all water uses and an inventory of water rights is a requisite for an organized water rights system. Currently, NWRB does not account for customary water rights that are unregistered. The absence of data or information on existing customary water rights creates the risk of potential conflicts between holders of customary water rights and holders of statutory water rights.

The common (and Filipino) assumption regarding community-based natural resources management is that communities in the uplands should perform a function of

protecting the watersheds, for which they should be compensated by the lowlanders who benefit from the water supply. The Philippines are currently developing mechanisms for lowland users to pay for the cost of protecting the upland sources of water and to pay for water itself. The assumption is that the market economy is based on the private ownership of goods. The issues of property and tenure rights over water and water sources are complex, given the nature of land and watersheds as property. Can uplands be privatised? Despite IPRA, the Department of Environment and Natural resources still insists that ancestral domains are public lands. In order to account for customary water rights a documentation of customary rights and practices is necessary.

4. CONSIDERATIONS FOR DRAFTING NEW WATER LEGISLATION

This section touches upon the various considerations in order to sensitise decision makers regarding the customary practices and rules that are in operation and thrashes out some formal legal questions and methodologies for reconciling the two systems. It should be emphasised first and foremost that there are enormous conceptual challenges posed by attempting to identify and delineate the myriad rules, rights, practices and arrangements in different indigenous and rural communities in one district let alone the entire country. This challenge is particularly problematic when unified rules and objectives are fashioned out through statutory instruments that seek to balance equality with diversity. Nevertheless in considering the arguments below prominence should be given to "supplementing" customary practices by the statutory regime, instead of supplanting its own version in the community context. Some of the solutions have been adapted from the Sunningdale Discussion Group (1999) as cited in Cousins' 'Tenure and common property resources in Africa'.²⁸

²⁸ Cousins B. 'Tenure and common property resources in Africa', p. 157 in *Evolving land rights, policy and tenure in Africa*, editors Toulmin, C and Quan, J (2000) DFID, IIED and NRI. London.

Communal tenure systems are not homogenous; they can be individual, family, group or village level rights, pertain to various resources and change in line with socio-economic trends and dictates. Factors such as population increases and migration (or urbanisation of rural areas) affect the structure and culture of indigenous and customary communities. Demographic changes have meant that smaller towns are encroaching the rural areas once isolated to smaller communities. Development priorities have also resulted in competition with rural communities for water and other natural resources. Environmental and economic policies also alter the degree of freedom with which customary rules operate.

Studies should be undertaken as a *preliminary* stage which provides insight into the economic and social use and value of the water resources used by community groups and take stock of the ways in which the water source is used. This facilitates the registration of community interests in a Public Register. Such studies would also serve to identify a major cause of tension between customary regimes and contemporary 'modern' water and economic structures – *de jure* and *de facto* access discrimination.

Where there is an inadequate protection of communal and customary property rights under the law, possible approaches could be taking stock of the various groups claiming use of water resources and securing their rights to the commons. Various organisational and tenure options should be provided to allow for heterogeneity amongst indigenous communities. Decentralised management from the state to local communities would also enhance participation and maintain the communal groups' control over the resources. Furthermore, a sufficiently flexible drafting of rights at constitutional or provisional level should be broad enough to encompass the range of rights in operation, but not so much so as to render the provision worthless. While it would be logistically impossible and potentially technically inaccurate to codify all customary rules in statute form, a broadly phrased provision could result in statutory recognition and acceptance of a general system of rules. There have been some suggestions "to isolate and codify water rights, taking the elements of indigenous

common law that are essential to perpetuate the existence of local lifestyles and ensure their continued collective community ownership".²⁹ This then prompts considerations such as:

"To what degree should existing water laws incorporate principles of customary indigenous law, as applicable for i) consumptive uses and to preserve use of flowing water; ii) such activities as fishing, navigation, hunting or the use of drinking-holes, springs, plains and wetlands, and iii) activities that require no rerouting of flow.

[...]

If indigenous *in situ* rights and uses are to be recognized in water legislation, does this make it necessary to codify the type, form and amount of the right as a community property right? How to assure effective, beneficial and equitable uses?³⁰

Lack of recognition of community rights in the statutory system facilitates abuse of those rights by third parties, who under statutory law have not infringed upon any rights in the first place. A case in point is the construction of development infrastructure projects in rural areas which, as seen above, constituted a violation of the rights of communities to their ancestral grounds and access to natural resources. In this regard prompt and adequate compensation should be included in the legislative framework where groups or individuals have been deprived of their access and use rights. Further, support initiatives which provide information and avenues of legal redress should be made available at community level. This is particularly important with respect to possible inequalities heightened by factors such as gender, that pervade customary practices and affect access to water resources.

²⁹ Gentes I. Water Law and Indigenous Rights in the Andean countries: conceptual elements. Water Law and Indigenous rights (WALIR) *Towards recognition of indigenous water rights and management rules in national legislation*. Summary of the presentations at the public meeting (7 March 2002) on the occasion of the International WALIR Seminar, 4–8 March 2002, Wageningen, The Netherlands.

³⁰ Ibid.

Where there are multiple and overlapping rights to common resources that are claimed by a variety of actors with ambiguous territorial boundaries, frameworks for negotiation and conflict management should be created. These frameworks should incorporate the essential element of participation and transparency in attempting to accommodate as broad a spectrum of rights as possible.

In situations where there is conflict over who has management authority, ie community leaders or elected state officials, or possibly between local and regional state authorities, the legal response could be, in the latter case to devolve as far as possible management rights and duties.

Nevertheless, there should be sufficient coordination mechanisms to exchange information with other tiers of government. Through the clear establishment of property rights for members of user groups these rights holders could then select the governing organ of their choice. A co-management role of the state over water resources in community areas could be limited to facilitation and support. This would include for example programmes to provide support to local decisions, via information, facilitation, capacity building, conflict management services, and access to legal redress.

This paper advocates that land and water customary laws find their justifications in systems characterized by shifting cultivation in agriculture and in nomadic pastoralism – transhumance in pastoralism, and in the delimitation of fishing areas along the coast for traditional fishermen. From an socio-economic perspective, in assessing degree to which customary laws and practices are still prevalent within a particular society, legislative decision-makers should take into account the following questions:

- Are shifting cultivation and extensive modes of production still in existence?
- Is the security and precise demarcation of customary land becoming less accepted?
- Are institutions divided among political people according to ethnic lines?
- Do states consult local communities when water matters are involved?
- Are rural people presently participating in water management?

- Which receives greater social adherence customary or statutory law within a given area?
- Is an indigenous/Aboriginal identity still important?
- Is the individual taking over the importance once held by the group?
- What is the role and status of women in the community?

This list is by no means exhaustive. On the institutional side of things, many indigenous communities and those in rural areas are dissatisfied with, and do not trust, state justice. Many surveys on the ability of those in rural areas and the poor in urban areas in accessing justice, reveal that people feel state issued law is too remote from their lives and their daily community-based occupations. This perception is complicated by problems of a general nature which plague the ability of individuals in developing countries to access justice. These include corruption and lack of transparency or accountability by the judiciary or law enforcement officers, a lack of information and literacy which renders formal legal remedies inaccessible and significant expenses and delays which cripple court-based justice in many developing countries.

Some issues to consider when delineating the parameters of authority for institutions in water management are:

- Are the state's services evenly distributed across the country so that people can effectively make recourse on them?
- Are these services so expensive that only wealthy people use them (against the interests of poor people)? Are there any mechanisms which grant legal aid to those who cannot afford to access courts?
- Does the law accommodate traditional courts and tribunals as part of the recognized legal system?
- What measures and mechanisms are envisioned in the law to prevent and combat corruption?
- Are the languages used in dispute resolution or information forums accessible to the rural population?

- Is there a mechanism for the inclusion of representatives of indigenous groups and customary communities into management (decision and policy making) institutions?

Since modern water laws are or should be concerned with environmental protection and sustainable management, the effect of customary practices on water sources should also be studied. Such research should note whether environmental degradation, if found in communities under customary law, is the result of an abandonment of original and traditional customary practices. Given considerations such as climate change and other environmental phenomena, it should be looked into whether customary practices are sufficient to deal with the new challenges presented by such changes. The support role of the state can be particularly visible in this context – by providing mechanisms that incorporate principles of integrated water management towards the goals of sustainability and protection of ecosystems and water dependent habitats such as wetlands and forests.

What is difficult to account for is the extent to which the population who live under customary practices will continue to do so, nor how effectively customary laws will continue to regulate the lives of those in communities. While legal pluralism seems easy enough on paper, and is in fact increasingly common in many spheres of legal regulation in African and Latin American countries in particular, states are not always keen to take on a pluralistic legal regime.

5. CONCLUDING OBSERVATIONS

A custom becomes juridical not because the state supports it, but rather it achieves adherence and is generally accepted as binding. The state may then recognize that rule as having "legal strength"; in turn this support will reinforce its generalised use. Modern states are split between those people and areas where modern laws and institutions are enforced and accepted, and other areas where customary laws provide

social and cultural adhesion. Le Roy observed that in Senegal, the French Civil Code was introduced in 1830, and that 160 years after, at the beginning of the 1990s, only 10 percent of the Senegalese people felt the "modern" legislation of civil law tradition was of concern to them. Only 1 percent would have a direct and personal interest in using the written law texts, and even less people would voluntarily live by "modern" legislation. The rest of the population abides by the customary laws. In a few states, modern statutory legislation constitutes the "tyranny of the minority" and is in fact undemocratic in principle. In order to accommodate these important customs and practices into contemporary water policy, serious adaptation efforts of integration must be undertaken, and enforced by the formal law and institutions.

One answer to these problems could be legal pluralism, which takes into account contemporary social complexities. RD Roy expresses the landscape of legal pluralism as diverse from juridical pluralism where the former:

"exists on account of the concurrent application of customary, regional, and national laws to the region. Juridical pluralism is reflected through such matters as the co-existence of traditional and state courts, based upon different traditions of justice, litigation procedure, penal and reform systems, restitution and compensation processes, and so forth."³¹

Pluralism is a compromise between indigenous groups and ancient ways of life, and new (sometimes imported) institutions and rules introduced by colonial powers and codified by the newly independent states. According to Abdou Diouf,³² the predominance of the modern legal system with its statutory laws provides an orientation and a stimulus based on the public willingness to consolidate the basis of a modern nation which tends towards

³¹ Roy, RD. 'Challenges for Juridical Pluralism and Customary Laws of Indigenous Peoples: the case of the Chittagong Hill Tracts, Bangladesh. *Arizona Journal of International & Comparative Law* Vol 21, No. 1 2004, p. 127.

³² Sidibe, AS. 1991. *Le Pluralism Juridique en Afrique*. Quoted from the preface.

development. The modern state will develop only with a modern statutory legal system. Customary laws have been set aside, but this decision did not eliminate behaviours which still survive. As demonstrated by case studies in Ghana, the Philippines and Guyana, often customary rights and practices are unhindered in rural areas, whether or not there is a permit system in place, primarily because no awareness has been created regarding those rights. By and large, when disputes are internal to a community and there is no clash of systems, then communities are allowed to maintain (or develop) their own dispute solving rules and institutions. The "droit positif", the state laws which are being applied, does not replace the rules created by groups and communities. How are the customary laws, which have been left behind the modern legal system, going to be reabsorbed? It has to be asked whether customary laws are in fact adequate for the development needs of a society, and that essentially translates as to whether those types of laws are appropriate for a market-oriented economy. Electricity production in Canada for example affects the right to fish and farm of small rural communities, even where they are land and water owners according to customary and modern law. Many cases around the world involve the dislocation of rural groups for dam construction, mining and development in general. This is more problematic in developing countries where the rural population can be a sizeable majority. Is there a distinction between individuals in rural areas striving for their own food security and the prosperity of their communities rather than for market production and individual profits?

A fundamental principle of a sound legislative water framework based on human rights and integrated water management is the education and empowerment of the people to whom the laws pertain. Laws are useless unless people are aware of their rights and obligations and how to enforce them. This can present difficulties in areas where a different type of education process has taken place and customary procedures are applicable to daily lives of those in communal societies, while the formal or statutory framework is far removed from it. Challenges presented the intersection between customary and statutory rules often stem from the fact that policy decisions (at

least in the past) were taken with very little consultation with customary societies. Water legislation is passed without any significant attempt to create an awareness of the rights and obligations that are contained therein.

Most international treaties and conventions to date do not oblige a state to recognize customary laws. Nevertheless, the defence of customary rights on land and on its resources is one of the basis of the indigenous movements that have been gaining momentum. With reference to water rights, indigenous movements generally claim:

- peoples' participation in water management;
- institutionalising the collective rights of traditional peoples;
- recognition of a preferential access for water licenses for human consumption and irrigation, in community lands or in private lands belonging to community members;
- recognition and respect of holy places, such as water sources, streams, rivers, waterfalls belonging to traditional peoples, as special protection zones;
- the right to compensation when traditional peoples suffer limitations to the exercise of some of their rights to water, to their uses and customs on water management or suffer for interferences, to their lands' environment.

Few countries adequately protect customary laws, and even less states recognize customary water laws. Some countries recognize generic rights on natural resources of ancestral, aboriginal communities but do not actually recognize customary laws *per se*. State recognition is complicated by the need to have state-issued titles: either the community may not know of the existence of the rule, or they feel that when they request a state title they are betraying their culture as they have their titles that pre-date the state, and that are endowed upon them by powers higher than men.

A distinction should be made between pre-colonisation laws, customary laws in colonial times, customary laws immediately after independence and current customary laws or "legal practices". We know nothing or

extremely little of what customary laws really were and meant in pre-colonial times, because what is known now has been mainly "filtered" through colonial anthropologists, likely through western concepts of law, institutions and justice which again were very different from the African ones. The transcribing of customary laws in post-colonial times went through the same filters.

Without the benefit of customary rules and practices studies and research, most law-makers have a lack of knowledge about the various dispute resolution mechanisms under customary practice such as mediation, conciliation procedures and customary tribunals. As regards the future agenda, it is clear that without a systematic and thorough review and analysis of the types of cultures and practices in existence

within a state, reconciliation between the two systems will always be problematic.

Steps for better understanding through research should be taken towards this end. There has already been a cross-fertilization of customary and statutory legal systems, not just evidenced by legal and juridical pluralism, but also more directly seen in situations for example, where land is bought and sold through customary laws under certain conditions. Through participation and dialogue, existing customary laws can be accommodated in the main legislative framework and even used to ensure compliance with rules and secure enforcement. This would contribute to bridging the gap between law and implementation in many countries.

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ANNEXES

Annex 1: Overview of the existing water situation in each of the case studies

1.1 Argentina

The country is divided into humid and dry or semi-dry provinces, covering two-thirds of the country. Wealth and population are concentrated in the more humid area (Cuenca del Plata), and this distribution has several consequences. The development of some indigenous communities has come to be more associated with water than others: this is the case of sedentary agriculturalists using irrigation in the North-West and nomadic canoe fishers and hunters in the North-East.

1.2 Canada

Canada is endowed with enormous amounts of water, although 60 percent of it flows north toward the Arctic Sea, away from the populated Southern areas. Climate change and pollution threaten Canada's fresh water resources. Canada ranks as second in the world for per capita water consumption, mainly because of irrigation needs. Contemporary economic development is required to take into account the land and water rights of Canada's indigenous population, which will then have an impact on the present and future availability of sufficient quantities of water. A case in point is the way in which hydroelectric development has threatened the traditional way of life of Aboriginal communities in the past, and remains a source of conflict in the present.

1.3 Ecuador

Ecuador has four times more water per capita than the world average and forty times more than the required per capita. However, the distribution of rains is irregular; some areas are severely short of water and other areas are characterized by the lack of potable water. The country is facing a reduction of water reserves worsened by inappropriate and inequitable water distribution. Land uses also impact water availability such as increasing deforestation and resultant erosion of river banks, population growth and increasing urbanization, agricultural production growth and a corresponding need for irrigation, and poor water systems planning. Water permits were previously strongly connected to land distribution between large and small farmers, and the interests of the more affluent sectors of Ecuadorian society were privileged for many years, while poorer parts of the populations were compelled to travel great distances to satisfy their basic needs. The state sometimes grants water concessions in excess of what is physically available which strains depleted sources and creates conflicts. The transfer of water administration from the public sector to the private one (users' associations) has been problematic as users lack organization and the capacity to collect water fees.

1.4 Ghana

The climate in Ghana is generally hot and humid in the south, and hot and dry in the north. The country is fairly well-endowed with surface water resources and is drained by three main river basin systems, covering 70 percent, 22 percent and 8 percent of the total area of the country. The water resources of Ghana are synonymous to a large extent with the Volta River and industries dependent in some way on this water system dominate a large part of the economic life of the country. Groundwater resources are ample and good. Only 41.6 percent of the population have access to potable water and 81 percent of the rural population have no potable water.

1.5 Guyana

Guyana means "land of many waters". It has four main rivers and the average annual rainfall is very high: between 1800 mm in the savannahs to over 4300 mm in the rainforests. The amount of surface water resources compares favourably with the levels of consumption but, because of the uneven

distribution of rainfall over the year, Guyana has problems with drought and floods. Groundwater is the main source of public water in the coastal zone, where 90 percent of the population live.

1.6 Nigeria

Nigeria has a humid southern region and a Sahelian northern one. It is endowed with a vast expanse of inland freshwater and brackish ecosystems. The water resources are spread all over the country, where there are 7 major rivers and 13 lakes and reservoirs. The total surface area of water bodies in Nigeria - excluding deltas, estuaries and miscellaneous wetlands (4 million hectares) - that is suitable for rice cultivation (but not for fish cultivation), is about 15.9 percent of the total area of Nigeria.

1.7 Peru

Peru is characterized as being under very heavy water stress. According to quantity estimates produced by the South American Technical Advisory Committee of the Global Water Partnership, presently Peru has 1 548 m³ of water per inhabitant per year. (For comparative purposes, it should be noted that Paraguay has 57 720 m³, and an average for Latin America is 30 000 m³). The estimated figure for 2050 for Peru is at 760 m³.

Nevertheless, Peru still has important water resources: 12 200 mountain lakes and 1007 rivers totalling 2 046 000 m³. The *Cordillera de los Andes*, the Andes chain, creates three regions. The *Vertiente del Atlantico* carrying 26 percent of the population and contributes 17.7 percent of the GDP has 44 basins flowing to the Amazon river, with a total volume of 1 998 752 m³ (97.7 percent) of the national waters. The *Vertiente del Lago Titicaca*, carries 4 percent of the population that contributes 1.9 percent of the GDP. It has 9 basins, an estimated total of 10 172 m³ and 0.5 percent of the national waters. The *Vertiente del Pacifico*, the Pacific watershed, with 53 hydrographical basins totals 1.8 percent of the national water. 70 percent of the population inhabits this 'vertiente' and produces 80.4 percent of the GNP, but comparatively has the least water available.

In the country, agriculture predominates water use (88.75 percent), domestic use takes up 7.28 percent, while industries and livestock consume 1.65 and 0.43 percent respectively. According to quality estimates: 75 percent of the urban population and 25 percent of the rural inhabitants receive potable water. 82.8 percent of domestic sewer waters go untreated even if there are 45 sanitation enterprises in the major cities. Industrial and mining wastes also go untreated.

1.8 Philippines

The Philippines are a mountainous archipelago with a population of 87 million people in 7 107 islands in an area of 300 000 km². Only about 5 percent of the islands are more than one km² in size. Rainfall ranges between 1000 and 4000 mm per year with significant variation from one area to another. Surface water consists of rivers and lakes, covering 0.61 percent of the total area of the country, with a potential supply of 125 790 m³ while groundwater reservoirs cover 50 000 km² and have a storage capacity of 251 100 m³. Fresh water availability per capita is approximately 1 907 m³ - one of the lowest in Asia and in the world. Where the larger cities are located, with high agricultural and industrial development, demand will outstrip supply, even though other areas might have surplus availabilities.

Annex 2: Land private ownership as immovable property (or real estate)³³

Western World	Africa
one right <i>in re</i>	bundle of interdependent rights
individual right	collective right
imprescriptible	prescriptible if not improved
absolute and transferable	inalienable outside the community
exclusive	inclusive
perpetual	temporary
promethean	archaic
socially equalitarian	hierarchic

Annex 3: The modern judge and the traditional chief – identification by binary opposition³⁴

Modern	Traditional
law	custom
written	oral
universality of the statute	local law
general and impersonal rules	personalized, discretionary criteria danger of abuse
neutrality, independence of courts	partiality and dependence from political power
unity, homogeneity of a codified system	plurality and diversity of indigenous solutions
civilisation	primitivism
guarantee of individual freedoms	tyranny and enslavement
equality of conditions	hierarchy and gerontocracy

³³ Identification by binary opposition – Source: Source: Le Roy, E. 2004. *Les Africains et l'Institution de la Justice. Entre mimétismes et métissages*. Paris, Dalloz, p. 17.

³⁴ Source: Le Roy, E. 2004. *Les Africains et l'Institution de la Justice. Entre mimétismes et métissages*. Paris, Dalloz, p. 125.