Farmland Investments and Water Rights in Africa: The Legal Regimes at Stake

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Glossary of Legal Terms

Civil law systems: States that adopted their laws and administrative systems from essentially any other state than the United Kingdom. System of laws based on a detailed codified written law. Civil law states are more likely to have a developed codified law.

Common law systems: States that adopted their laws and administration from the United Kingdom. System of laws based on binding precedent, largely unwritten un-codified law. Common law states are less likely to have a developed written codified law and are more likely to rely on practice and general principles.

Customary international law: International obligations that are binding on all states based on a combination of consistent state practice accompanied by an acknowledgment that the practice carries a legal obligation (*opinio juris*). It is generally unwritten (though more and more codified), evolves over time and is legally binding on all states in principle.

Customary rights: Rights that have developed in domestic law and based on local practice and usage over an extended period of time. In Africa, most local communities hold customary land and water rights. Customary rights are often informal, unwritten and unregistered, although most legal systems expressly recognize the validity of customary rights.

Procedural rules/obligations: Legal obligations and rules may be categorized as either substantive or procedural. Procedural rules provide the means to enforce substantive rights. A treaty will provide for substantive rights and obligations and procedural rules to enforce those rights.

Riparian Landowners: A person who owns land on the bank of a watercourse or natural body of water.

Riparian State: A state along the bank of a watercourse or natural body of water – State A and State B along River X are Riparian states on River X.

Soft law: Rules or guidelines that are not legally binding but nonetheless may develop into legally binding obligations, or may provide the relevant guidance and framework in the absence of a legally binding framework.

Statutory rights: Rights that are codified in written law. They are formal and will prevail over informal customary rights in the event of conflict. (In many developing countries, foreign investors predominantly hold statutory rights while local communities predominantly hold customary rights).

Treaty law: Another primary source of international obligations are international treaties. Treaties legally bind all state parties to the agreement over a particular subject matter. However, obligations from a treaty may evolve into customary international law that binds all states.

Umbrella clauses: Provisions in investment treaties that commit the host state to honour contracts and other commitments with foreign investors, even when these commitments are not related to the investment treaty. If the investor claims that the host State breached the contract, the umbrella clause may allow the investor to bring the claim under the investment treaty, and therefore to access international arbitration.

Executive Summary

The rise of foreign investment in farmland over the past decade is partly driven by a search for access to water resources. Land without water has no value; it is the key ingredient for agricultural production. Over 70 per cent of all freshwater resources are used for agricultural production. However, the value of water has yet to be fully understood or appreciated, and its fundamental role is often overlooked in the context of farmland investments.

Africa is the primary recipient of farmland investments[1] and is the focus of this report. It has been promoted as having abundant and untapped land and water resources. But a significant number of Africans already live in water-stressed environments, and population growth and climate change are predicted to drastically increase the number of Africans living in water-stressed places. Climate change is predicted to increase the number of droughts and floods, and further destabilize agriculture, particularly rain-fed agriculture in Southern Africa. These effects are predicted to reduce agricultural yields and the amount of arable land available in Africa by the 2020s and then again by the 2050s. Farmland investments—and the large-scale commercial farming they entail—will further exacerbate this strain on water resources because they require vast amounts of water for their operations.

Since many farmland investments are in place for 50 years or more, they will still be in operation as the effects of climate change become more pronounced. The first fundamental step to addressing this reality is to recognize the role of water in the context of farmland investments and the potential consequences of not taking that role seriously. The physical properties of water make it particularly vulnerable to the impacts of farmland investments. Water is interconnected and in constant motion. It evaporates into the air from any surface, falls from the sky, and is absorbed into the soil where its intricate webs lead it to rivers or other watercourses, where it eventually runs off into other bodies of water. The amount of water extracted for farmland investments, and the quantity and nature of chemicals discharged by the use of pesticides and fertilizers, directly impacts the water resources available for other users, including local communities, other investors or neighbouring states. The different legal regimes that govern the management of water resources need to be understood and integrated into the existing legal framework for farmland investments.

There are multiple legal regimes that govern water allocation in the context of farmland investments. The domestic law of the host state is the primary source of law. Then there is international investment law, which is comprised of investment treaties that are signed between states that form the basis of foreign investors' rights, and the specific investment contracts signed between investors and governments. These two sources of law fundamentally alter the rules of the game by giving foreign investors hard statutory rights and the ability to enforce those rights against the host state in international arbitration. In parallel to international investment law are other sources of binding international law, namely international freshwater law, human rights law and environmental law. These parallel regimes create various obligations for host states to ensure their own inhabitants have adequate access to water, to ensure the sustainable management of water resources and the prevention of transboundary harm. They must be respected regardless of the investment contracts and treaties in place.

Reinforcing binding international law are a range of soft law instruments and principles designed to further assist government efforts to promote responsible and sustainable investments. The two most authoritative global instruments in this respect were adopted by the UN Committee on World Food Security (UNCFS), the top UN forum for reviewing and following up on policies related to food security. The first one is the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Forests and Fisheries, adopted in 2012. The second is the Principles for Responsible Investment in Agriculture and Food Systems, adopted in 2014. At the African level, the most authoritative instrument is the Framework and Guidelines on Land Policy in Africa, adopted in 2010 by heads of State at the African Union summit.

[1] See Deininger, K., & Byerlee, D. (2010).

On the one hand, the parallel legal regimes provide useful guidance to address the water use by foreign investors. They can support host state and investor efforts to responsibly and sustainably manage water resources in the context of farmland investments. On the other hand, international investment law may interfere with a host state's obligations under international freshwater, environmental and human rights laws. Unfortunately, these other legal regimes are not as easily enforced as investors' rights in the contract or investment treaty. This can exacerbate the legal imbalance between foreign investors' and local communities' rights. It typifies the problem: there are different layers of laws (domestic and international) and different types of laws (water, land, environmental, investment and human rights) that each come into play and can undermine each other at various stages of the investment.

Foreign investors are typically afforded greater legal protection than local communities. Foreign investors obtain formal statutory rights through the contract with the host state that prevail over informal customary rights in most cases. Local communities, on the other hand, typically hold their land and water rights in customary law and are thus legally vulnerable compared to foreign investors. Although water and land are inextricably linked, water rights linked to land use are often overlooked in domestic law. In most states, water rights are directly linked to land rights: landowners or users have unfettered access to the water accessible from their land. So when an investor obtains a large tract of land for agricultural production, they may automatically gain unfettered access to the available water resources from that land. In states that do have a relevant water code, most water rights of local communities fall within the minimum exception that do not require registration and others simply continue to rely on customary water rights despite a formal legislative framework. That means that even where there is a relevant legal framework governing water allocation, local communities continue to hold informal rights while foreign investors hold formal rights by contract. This puts foreign investors in a stronger legal position.

Foreign investors obtain statutory rights to water through the contract with the host state. This contract grants the investor water rights either expressly or implicitly through the authorization to operationalize and maintain an agricultural investment. Although most domestic legal systems recognize customary law, the customary rights of local communities cannot prevail over the statutory rights of foreign investors in most cases. This means that if there are competing claims to water resources in an area covered by a contract with the foreign investor, the foreign investor will prevail in most cases. This is the case even where the contract does not expressly refer to water use, because water is an implicit element for the operation of an agricultural investment, which the host state committed to allow in the contract. Local communities, with their informal customary rights, are thus legally vulnerable to the secured formal statutory rights of foreign investors (see Text Box 1).

Foreign investors obtain additional protection of their water rights through the operation of investment treaties in force with the host state, because water is essential for the maintenance and production of agricultural goods. Foreign investors may claim a breach of the investment treaty if their water use is interfered with, interrupting the operation and maintenance of their investment. They may claim to have a legitimate expectation of water use necessary for the maintenance of the investment, or claim an indirect expropriation if the allocated water becomes insufficient to maintain the commercial viability of the investment. Host states must therefore be mindful to include express provisions in the domestic law and the contract relating to water use, specifically providing for fees and the periodic review of usage and rates.

International freshwater law poses further obligations and considerations on host states for the protection and preservation of shared water systems, the prevention of transboundary harm and the protection of the right to water of local communities. Many of these investments take place on or near transboundary basins and are clustered around or within the major river basins in Africa. Given the interconnected nature of water, the water use by farmland investments in State A along River X will inevitably impact both the quantity and quality of water resources available for State B along River X. International freshwater law advocates an integrated approach to water resource management that moves from the general international level, to the regional level, then to the basin level and the local watershed level. For most watercourses, there is a detailed specific basin

agreement/authority in force, and a relevant regional framework in force, in addition to the general framework provided by the United Nations Convention on the Non-Navigational Uses of International Watercourses of 1997.

International freshwater law thus provides relevant obligations, particularly not to unreasonably harm the equitable share of other state users. These obligations are enforced through the duty of host states to notify and consult other state users *before* authorizing a farmland investment on or near a shared water system.[2] For some states, the basin-level management scheme goes even further than general international law by requiring that the authorization of these investments be given by the basin authority and not unilaterally by the host state. This is the case for states along the Senegal River Basin and the Lake Chad Basin. This means that host states along the Senegal and Lake Chad Basins may not unilaterally authorize farmland investments in or near those basins. International freshwater law further provides that priority water use should be given to vital human needs, and the Water Charters of the Senegal River, Niger River and Lake Chad Basin each recognize that host states must protect and give effect to the human right to water.

International environmental and human rights laws further elaborate on the relevant host state obligations. Most notably, environmental law imposes an obligation to conduct a transboundary environmental impact assessment in the event a planned activity may cause transboundary harm. This obligation has been recognized by the International Court of Justice as part of customary international law and therefore a binding obligation on all states in principle. This is particularly relevant for shared water systems, and is therefore a particularly relevant obligation on farmland investments near a border or transboundary basin. Accordingly, there is an obligation to conduct a transboundary environmental impact assessment considering the impact on transboundary basins *before* the authorization of farmland investments where the investment is located near a transboundary basin. Further, international human rights law imposes the obligation on the host state to recognize, protect and give effect to the human right to water of its population.[3] This means that host states must ensure that farmland investments do not interfere with the right to water of local communities.

This is not an easy task, however, given the directly enforceable water rights of the investor in both the domestic law of the host state (because statutory rights prevail over customary rights), the investment contract, and the investment treaty. Although international freshwater, environmental and human rights law are as equally binding and more directly relevant for water resource management, they are not directly enforceable in the way the investors' rights are. Nonetheless, they are extremely relevant in this context and provide the framework to address unregulated water use by foreign investors and options for how to better understand and regulate investors' rights to water in the context of these international obligations.

Unfortunately, obligations under international freshwater, environmental and human rights law have been poorly implemented and enforced at the national level. Further, even where domestic laws exist and provide a regulatory framework that could effectively manage water use by foreign investors, it is often not implemented or enforced. This has serious consequences for the water use of farmland investments. Local communities and other state users rely on the host state's effective implementation of these regimes to protect their rights. Foreign investors on the other hand do not require host state action for the protection of their rights, but have seemingly secure water rights by contract and the means to directly enforce them against the host state through the investment treaty.

[2] This applies to any farmland investment on or near a transboundary basin, or to any farmland investment that may potentially impact a transboundary basin.

[3] International human rights law also imposes an obligation to respect the right to food of its population. The right to food has been the main focus of literature in the area of farmland investments alongside the focus on land. This report therefore does not deal with the right to food but focuses on the right to water and the water implications of farmland investments, a less explored and understood issue in this area. For more information on the right to food in this context, see Cruz (2011).

TEXT BOX 1. DIFFERENT SOURCES OF LAW TRIGGERED BY THE USE OF WATER FOR FARMLAND INVESTMENTS

- **Domestic law of the host state:** Varies depending on the country. Can require investors to apply for permits for water extraction and fees for water use, and an environmental impact assessment. Local communities mainly have informal customary rights, while foreign investors have formal statutory rights that prevail in most instances. The water rights of local communities are legally vulnerable compared to those of foreign investors. Water and other environmental laws are often poorly implemented.
- **Investment contract**: The contract is the legal basis of the foreign investors' statutory (formal) rights to the land and water under the domestic law of the host state. Any express reference to water use, rates, and periodic review of water use rates will govern the water use of foreign investors and allow the host state to periodically review and adjust those rates and rights accordingly. Water rights may be implicit whether or not they are expressly referred to in the contract.
- **Investment treaties:** Safeguards foreign investors' rights that come from the contract with the host state and additional guarantees provided in the investment treaty. Most commit the host state to binding international arbitration with foreign investors in the event of a dispute.
- **International Freshwater law**: Governs the protection and preservation of international watercourses. Extremely relevant for farmland investments located near a transboundary basin. Although the primary source of obligations is the Watercourses Convention, which is only binding on state parties, some principles, like the no-harm principle, are now customary international law that binds all states, even non-parties to the Watercourses Convention. The Watercourses Convention urges an approach that moves from the international to the regional to the subregional for sustainable water management, and this has taken place. Thus each transboundary basin may be covered by a subregional, regional and international framework, including:
  - » **The Economic Community of West African States (ECOWAS)**: Regional community that provides the framework for the management of transboundary basins within the ECOWAS region.
  - » **The Southern African Development Community (SADC)**: Has developed the SADC Protocol on Shared Watercourses and the SADC Regional Water Policy that further elaborate and tailor the principles of the Watercourses Convention to the SADC region. The Protocol and Policy, as well as the Watercourses Convention, encourage the establishment of river basin institutions to implement and enforce their principles.
- **International environmental law**: Provides for the obligation not to harm the environment of another state, expressed through the obligation binding on all states to conduct a transboundary environmental impact assessment when a farmland investment is planned near a transboundary basin. The interconnected use of water triggers these obligations: water use in one state affects the quality and quantity of water for downstream states.
- **International human rights law**: Provides for the obligation to protect and ensure the human right to water.
- **Soft law instruments**: Principles and guidelines that have achieved global consensus but are not legally binding on States or other actors unless enshrined in law or integrated into company codes of conduct. The most relevant for farmland investments come from the Committee on World Food Security.

Being aware of the range of international obligations related to water will help ensure the sustainable management of water resources and protection of the right to water in the context of farmland investments. Understanding the parallel legal regimes at stake is a fundamental first step toward resolving the water issues surrounding farmland investments.

Introduction

Water is essential for the health and survival of all life on earth. Its value is often overlooked, perhaps because the earth is primarily covered by it. Less than 3 per cent of all global water resources are freshwater, and only a fraction of this is available for human use.[4] Agriculture accounts for over 70 per cent of freshwater expropriated for human use, yet many may overlook the water resources necessary to sustain farmland investments. This report thus focuses on water in the context of large-scale foreign agricultural investments in Africa.

Benjamin Franklin noted that humanity tends to take water for granted until it is gone, famously stating: "When the well's dry, we will know the worth of water."[5] This report seeks to draw attention to the mounting pressures on water so that its true value may be appreciated before the well has run dry. It further seeks to highlight the relevant legal regimes to provide a clear overview of the water issues involved in farmland investments in Africa. These regimes constrain host state action and provide guidance for the sustainable management of water resources particularly relevant to addressing issues raised by farmland investments. Understanding these regimes is the first step toward the protection and preservation of water resources in the context of farmland investments.

Part I demonstrates the necessity of water for farmland investments and outlines the increasing pressures on water resources. Climate change forces, population growth and increased urbanization all put pressure on water resources and on states to provide adequate water for the domestic needs of its population. The secured water use of farmland investments and their legal safeguards further exacerbate these pressures and may constrain the host state's ability to ensure adequate water supplies for its people and other states sharing the water resource (riparian states).

This report therefore provides an overview of the parallel legal regimes governing this intersection of investment, land and water issues. Given the fundamental importance of water for all life, multiple interests and regimes converge that must each be understood. Each regime is one piece of the puzzle, understanding one without the other does not present a clear view. For example, a consideration of international investment law alone fails to recognize the other important obligations of host states relevant to farmland investments from international freshwater, environmental and human rights law.

Part II accordingly provides a full picture of these parallel regimes governing water rights and allocation in this context. It shows that foreign investors have secured water rights as compared to local communities arising from the contract with the host state, the domestic law of the host state and international investment law. However, water is interconnected, and water use in one place impacts both the quality and quantity of water available for other users, including users in other states sharing water systems. International freshwater law therefore poses additional constraints on host states where there is a potential transboundary effect of a farmland investment. International environmental and human rights law further add to and inform obligations relating to the protection, preservation and management of water resources from international freshwater law. These regimes thus further guide the way host states should manage the water use of farmland investments.

Once the full picture of these regimes is understood, it is possible to fully grasp their implications in practice. Part II will thus further highlight what the regimes actually do and what their impact has been so far. In light of these findings and in light of the clear view of the multiple legal regimes, Part III concludes with moderate recommendations to remedy any deficits highlighted, with a view to sustainable water resources management. The essential purpose of this report is to highlight the parallel legal regimes in order to provide a clear picture of water issues involved in farmland investments. Understanding these regimes and the considerations and guidance they pose is the first step to truly appreciating the issues involved in farmland investments and water use. In so doing, states may realize the detrimental effect of these investments on water resources and may be empowered to take steps for the sustainable management of water resources.

[4] Boisson de Chazournes (2013).
[5] Quoted in McCaffrey (2007).

Part I.
The Growing Pressures on Freshwater Resources

Part I. The Growing Pressures on Freshwater Resources

1.0 Population Growth

In the last century, the world population has tripled, while water use has grown at twice that rate (McCaffrey, 2007). In just over the last 50 years, the global population has grown from 2.5 billion to over 6.4 billion, but the per capita renewable water supply has fallen by 58 per cent, and over 1 billion people currently lack access to water as the situation stands (Schreiber, 2008). The continuing population growth poses a growing demand on freshwater supplies. The global population is expected to grow to 9.2 billion in the coming decades, which will further increase demands and strain on water resources (Schreiber, 2008). Increased urbanization poses additional pressures on states to provide adequate water supplies to their inhabitants, further straining available water resources within the state (McCaffrey, 2007). Climate change further adds to the strain and unpredictability in the context of water supply and management.

Farmland investor conferences around the world repeatedly advertise Africa's water resources as ready to be harnessed for export-oriented agricultural projects due to their vast underutilisation and abundance (GRAIN, 2012). However, the reality on the ground in Africa is that almost a fourth of Africans already experience high water stress, and climate change alone is likely to increase these figures significantly (GRAIN, 2012). The population at risk of increased water stress in Africa is projected to be around 75–200 million people by the 2020s, and 350–600 million people by the 2050s (Boko, Niang, Nyong, et al., 2007). The secured water use of farmland investments will therefore become a more pressing problem as population growth strains available water resources.

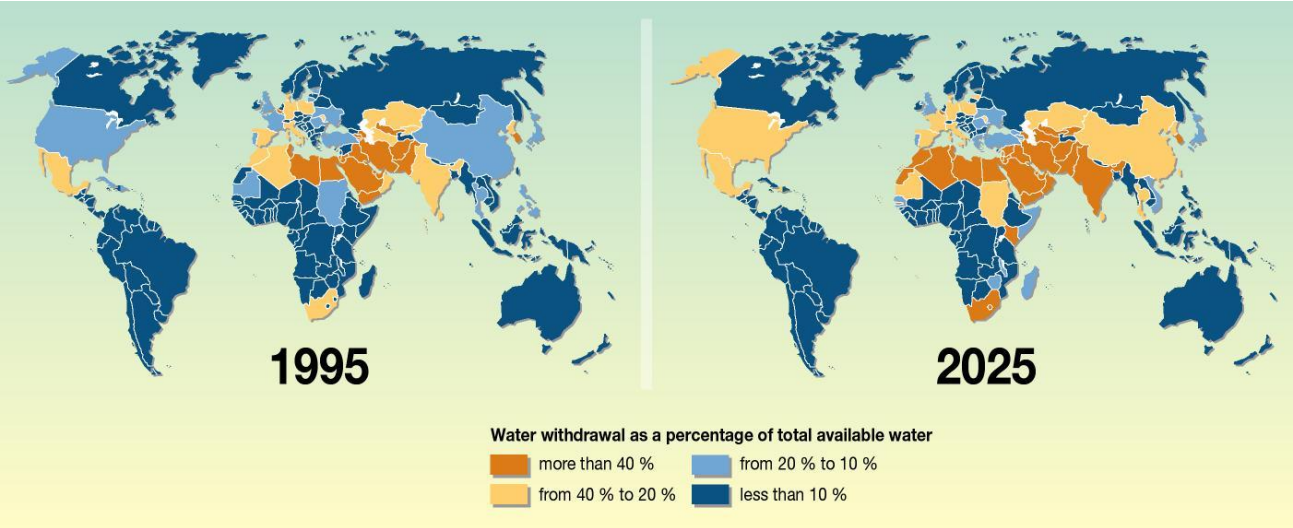

FIGURE 1. MAP OF GLOBAL WATER SCARCITY

Source: United Nations Environment Programme (n.d.).

2.0 Climate Change

The effects of climate change are not just projected risks: they are already being experienced in parts of Africa. Lake levels have declined in Zimbabwe, Zambia and Malawi due to the combined effects of drought, warming and human activities (Bates, Kundzewicz, Wu & Palutikof, 2008). Annual runoff has decreased in West Africa, meaning that the amount of water running back into rivers is declining (Bates, et al., 2008; Niang, Ruppel & Abdrobo, 2014). Further, groundwater recharge is projected to decrease by more than 70 per cent by the 2050s in southwestern Africa, although projections vary and the impacts of climate change on water resources is not uniform across the continent. Groundwater, however, is the main source of water for 70 per cent of the population of Southern Africa (Southern Africa Development Community, 2011). This may force more adaptation to climate change if recharge rates are affected or more groundwater is abstracted to maintain production of farmland investments, and may not be recharged as usual due to the effects of climate change.

The Intergovernmental Panel on Climate Change (IPCC) notes that the most significant impact of climate change is related to water resources, and that Africa is one of the most vulnerable continents to this process (Boko et al., 2007). There is, however, an important knowledge gap due to the lack of observational data on freshwater availability in Africa (Niang, Ruppel & Abdrobo, 2014). Nonetheless, recent literature suggests that climate change will have an overall modest effect on water scarcity in Africa as compared to other factors such as population growth, urbanization, agricultural growth and land-use change (Niang, Ruppel & Abdrobo, 2014). However, the IPCC notes that "broad-scale assumptions about drivers of future water shortages can mask significant sub-regional variability of climate impacts, particularly in water-stressed regions that are projected to become drier, such as northern Africa and parts of southern Africa" (Niang, Ruppel & Abdrobo, 2014).

The most visible impact of climate change on water resources is an increase in the risks of flooding and drought in many areas (Kundzewicz, Mata, et al., 2007). Semi-arid and arid areas are particularly vulnerable to the impacts of climate change on freshwater, particularly in water-stressed regions that are expected to become drier, such as northern Africa and parts of Southern Africa (Niang, Ruppel & Abdrobo, 2014). Global studies indicate that surface drainage is more sensitive to, and will be more impacted in dry regions, where the effects of reduced rainfall are more significantly felt than in wetter areas (Niang, Ruppel & Abdrobo, 2014). In arid regions like Southern Africa, lack of groundwater wells or reservoirs (storage), leads to a high level of vulnerability to climate variability (Kundzewicz, Mata, et al., 2007). Southern Africa also happens to be the main recipient of farmland investments, thus further aggravating the strain on water resources from population growth and climate change.

Climate change also negatively impacts water quality through higher temperatures (Kundzewicz, Mata, et al., 2007), further compounding water-quality issues that arise from increased use of chemicals and pesticides in commercial farming. In addition, some studies suggest a significant decrease in suitable rain-fed agricultural land, and it is estimated that arid and semi-arid land could increase in Africa by 5–8 per cent (that is, 60–90 million hectares) (Boko, Niang, Nyong, et al., 2007). This makes the duration of the agreements between foreign investors and host states and the location of the investments even more important. States may find that as water and suitable lands decrease, the secured rights of foreign investors over the remaining arable land will become more significant.

For northern Africa, it is estimated that climate change will account for 22 per cent of future water shortages by the 2050s, while 78 per cent of increased water shortages can be attributed to other socioeconomic factors such as population growth, increased urbanization and land-use change (Niang, Ruppel & Abdrobo, 2014). The changed land use brought on by farmland investments is thus a significant factor in future water shortages. Host states should therefore be mindful of the location and duration of the agreements, paying particular attention to transboundary basins and the likelihood that the above forces will continue to strain them.

All countries within the Zambezi River Basin will contend with increasing water shortages due to climate change and other factors (Niang, Ruppel & Abdrobo, 2014). In Zimbabwe for example, climate change is expected to increase water shortages for downstream users dependent on the Rozva dam (Niang, Ruppel & Abdrobo, 2014). The IPCC further notes that "climate change impacts on the Nile Basin are of particular concern given the basin's geopolitical and socioeconomic importance. Reduced flows from the Blue Nile are estimated by late century due to a combination of climate change (higher temperature and declining precipitation) and upstream water development for irrigation and hydropower" (Niang, Ruppel & Abdrobo, 2014, p. 1217). Some have estimated that stream flow in the Nile River will increase in the medium term but will decline in the latter half of the century due to declining rainfall and irrigated agriculture downstream from the High Aswan Dam (Niang, Ruppel & Abdrobo, 2014).

Recent studies further indicate that the frequency of wet days will decline in northern Africa, which will negatively impact the predominantly rain-fed agriculture in that region (Niang, Ruppel & Abdrobo, 2014). Climate change impacts will vary across different regions throughout Africa, but several studies indicate an overall decrease in water abundance due to climate change forces in southern and northern Africa (Niang, Ruppel & Abdrobo, 2014). This will significantly impact agricultural production in the region, and will call greater attention to the water use of farmland investments.

2.1 Climate Change Impacts on Food Security

Climate change will affect the water demand of crops grown in both irrigated and rain-fed agricultural systems (Cisneros, Oki, & Arnell, 2014). The IPCC notes that agricultural production and food security are likely to be severely impacted by climate change in Africa (Boko, Niang, Nyong, et al., 2007). A number of African states face semi-arid conditions that already make agriculture challenging. Climate change is likely to create further challenges by reducing the length of growing seasons as well as forcing large regions of marginal agriculture out of production (Boko, Niang, Nyong, et al., 2007). Rain-fed agriculture is the most vulnerable to climate change forces since rainfall will be highly variable as a result of climate change (Cisneros, Oki, & Arnell, 2014). Accordingly, the IPCC observes that "Africa's food production systems are among the world's most vulnerable because of extensive reliance on rain-fed crop production, high intra-and inter-seasonal climate variability, recurrent droughts and floods that affect both crops and livestock, and persistent poverty that limits the capacity to adapt" (Niang, Ruppel & Abdrobo, 2014).

The IPCC notes that climate change is "very likely to have an overall negative effect on yields of major cereal crops across Africa, with strong regional variability in the degree of yield reductions" (Niang, Ruppel & Abdrobo, 2014, p. 1218). Some projections estimate that reductions in yield in some African states could reach as high as 50 per cent by 2020, and that crop net revenues could fall by as much as 90 per cent by 2100, the greatest impact falling on small-scale farmers (Boko, Niang, Nyong, et al., 2007). The value of water will thus be felt more and more. As these forces continue, it will increase competition for freshwater resources and arable land between foreign investors, local communities and other states.

2.2 Increased Use of Irrigation as a Response to Climate Risks

Human water use is dominated by irrigation, which accounts for over 70 per cent of global water withdrawals (Kundzewicz, Mata, et al., 2007). Developing states currently account for 75 per cent of the global irrigated area, and irrigation is expected to increase as a response to climate change, particularly in North Africa (Kundzewicz, Mata, et al., 2007). This will be necessary even in places currently dependent on rain-fed agriculture, since rain-fed agriculture is the most vulnerable to increased precipitation vulnerability as a result of climate change (Cisneros, Oki, & Arnell, 2014). However, if irrigation is simply increased in response to demand, this would amplify the decreases in runoff and stream flow downstream (Kundzewicz, Mata, et al., 2007). It could thus increase water use that deprives downstream areas of water that would have re-entered the stream as return flow (Kundzewicz, Mata, et al., 2007). This means that if farmland investments increase the overall irrigated

area, there is significantly less water left for downstream users. Irrigation alone therefore poses a threat as a single-minded response to increased variability and uncertainties brought on by climate change.

Nonetheless, states seek farmland investments as a means to adapt to climate change by increasing irrigated areas and overall agricultural productivity. Host states should also be aware, however, that the subsidiary bodies of the United Nations Framework Convention on Climate Change are available to provide the relevant technical assistance for adaptation to climate change pressures on water resources. For example, the Nairobi work programme on impacts, vulnerability and adaptation to climate change has undertaken a number of actions related to climate change and freshwater resources, though none directly relevant to the water use of farmland investments.[6] The Nairobi work programme and other subsidiary bodies of the United Nations Framework Convention on Climate Change may nonetheless provide the appropriate advice and technical assistance to adapt to climate change in order to protect and preserve freshwater sources. Moreover, host states should not feel dependent on foreign investors to adapt to climate change, but should seek the assistance of the appropriate mechanisms of the United Nations Framework Convention on Climate Change.

[6] See The Nairobi Work Programme on Impacts, Vulnerability and Adaptation to Climate Change, (2011). Most projects concern capacity building, training, raising the profile and awareness of water and water issues etc. No projects mentioned therein are directly relevant to the water use of foreign investors. Nonetheless, the Nairobi Work Programme may provide an alternative avenue to seek assistance to adapt to climate change, rather than foreign investors to develop irrigation.

3.0 Industrial Agriculture

Large-scale farming impacts both water quantity and water quality. Given these strains on water resources, host states must be mindful that farmland investments do not further undermine the water rights of local communities or other state users. The first step is to truly understand the water required for specific crops and location in large-scale farmland investments and thus the implications that arise as a result of allowing foreign investment in agricultural land. The impact of farmland investments on the domestic water situation and on transboundary water will depend on whether the production is rain-fed or irrigated, the location and size of the project, the type of crops and rotation and whether the storage facilities are being constructed, among other factors (Jagerskog, Cascao, Harsmar, & Kim, 2012). In any case, substantial impacts on water consumption and availability are expected as a result of water use by farmland investments (Jagerskog at al., 2012).

Nearly all farmland investments are located close to water sources, in areas with high rainfall or with good groundwater sources, particularly clustered within major river basins (Mirza, Speller, Dixie, & Goodman, 2014). These same water resources are lifelines for local farmers, pastoralists, and other rural communities, which makes understanding the legal framework governing these investments all the more necessary (Mirza et al., 2014). Further, states may not always realize that their cluster around major river basins triggers host state obligations from international freshwater law, and from regional or basin-level agreements in force. These will be discussed in Part 2. As exhibited, the majority of farmland investments are clustered around the same geographic location and coincide closely with Africa's largest river and lake systems (GRAIN, 2012). In most of these areas, irrigation may be considered a prerequisite of commercial production (GRAIN, 2012). The increased pressure on these water resources, however, is not fully appreciated, which could have severe consequences on the environment, local communities and other state users.

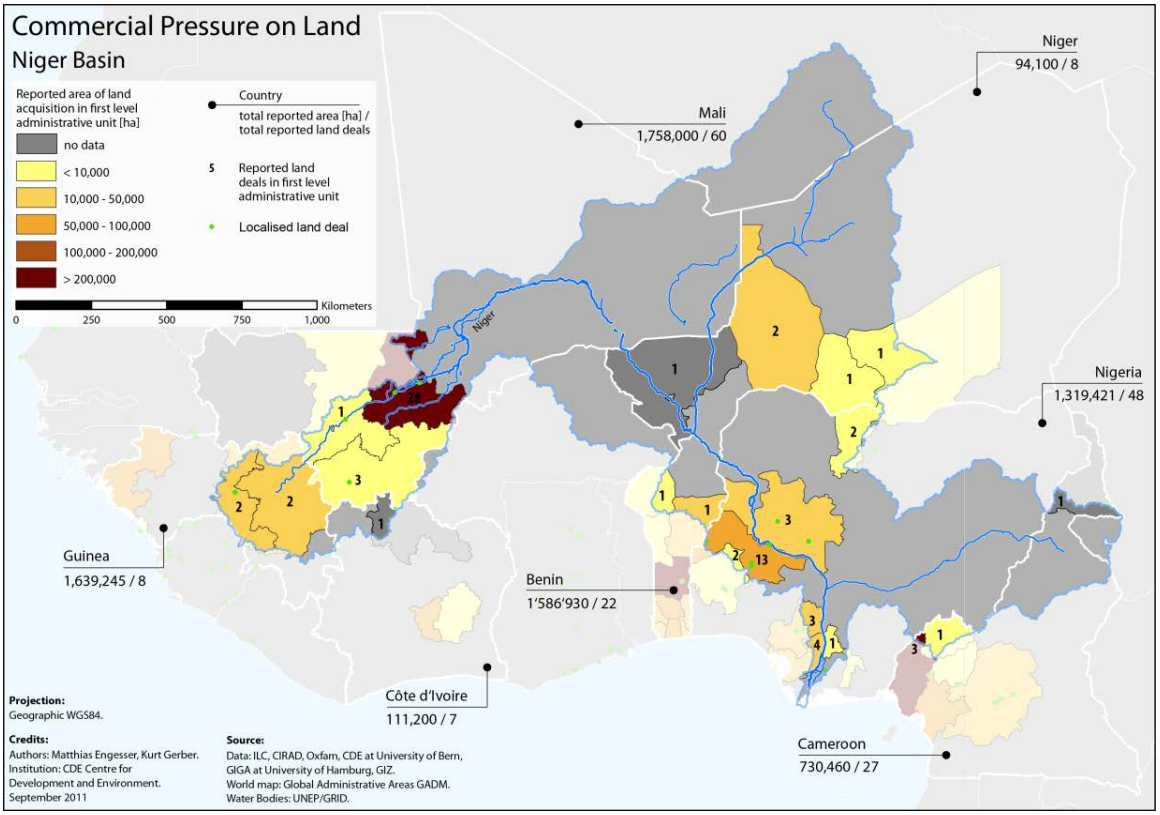

FIGURE 2. CONCENTRATION OF INVESTMENTS

Source: Land Matrix, base 2011

Southern Africa and the Horn of Africa have attracted considerable interest from foreign investors (Oakland Institute, 2011a). Arable land is substantially undervalued in this region (Oakland Institute, 2011c). A majority of recipients of farmland investments are members of the Southern African Development Community (SADC), where the majority of agricultural production is rain-fed and thus susceptible to increased droughts and floods (SADC, 2011). Rain-fed agriculture in Southern Africa is notoriously unpredictable due to the excessive risk of drought and flood, making agriculture in the region highly undependable (Aquastat, 2005). This erratic rainfall increases vulnerabilities to food security in an already vulnerable region (Oakland Institute, 2011b). Irrigation is thus considered critical in the SADC region to ensure food security and rural development, particularly since less than 5 per cent of cultivated land in the region is currently equipped for irrigation (SADC, 2011).

Nonetheless, host states should consider that in developing irrigation, large amounts of water may be diverted to maintain the production of these investments to the detriment of local users and users in other states. Some express fears that if all farmland leased to foreign investors was put into irrigated production it would amount to "hydrological suicide," because the amount of water required to maintain irrigated production of these investments is simply more than what is available, particularly in the Nile River Basin (GRAIN, 2012). These fears may be exaggerated, but it is clear that the investments will pose an additional strain on water resources, further compounding the pressures of climate change and population growth. Moreover, host states may be constrained by investment treaties from intervening in the event that water resources are allocated to foreign investors rather than local populations in need.

In a recent World Bank study sample, only one third of farmland investments produced crops (biofuels and food crops) primarily for the domestic market of the host state (Mirza et al., 2014). Although two thirds of investors in the study did grow food crops, half of the investments studied produced crops primarily destined for export (Mirza et al., 2014). Even in cases where food was produced for the host state market, investors tend to produce higher end products priced for urban consumers (Mirza et al., 2014). Accordingly, the food available within a country may be increased by these investments, but this does not necessarily translate into improved access to food for rural populations most in need. Food security can thus hardly be seen as a trade-off for the extra strain on water resources.

The Global Land Matrix notes that investments "may exacerbate water stress and aggravate land degradation, in turn impeding local people's livelihoods and triggering conflicts" in the target host states, particularly in Africa (Anseeuw et al., 2012). They claim that on average, the land deals analyzed would increase water consumption by 12.7 per cent overall in target countries (Anseeuw et al., 2012). It is possible that the actual figure is higher considering the secrecy involved in these land deals and thus the lack of reliable figures. At least two thirds of this water consumption comes from rain falling on the farmland, but the rest is extracted from rivers or aquifers for irrigation (Pearce, 2013).

Farmland investments by foreign investors are estimated to account for around 5 per cent of total global water extraction for irrigation (Pearce, 2013). Although this may seem low, the World Bank study also notes that farmland investments are proceeding so fast that governments face difficulty assessing and monitoring the investments in a realistic manner, particularly their water use and impacts (Pearce, 2013). As a result, water use by foreign investors has thus far largely gone unnoticed.

4.0 Unregulated and Unlimited Access to Water

Foreign investors have notoriously recognized that (in the words of Neil Crowder from Chayton Africa, an investment fund), "in Africa the value is not in the land. Water is the key aspect of what we are looking for with our investments" (qtd. in Smaller, 2010). Water has been referred to by the Chairman of Nestlé as "essentially a freebie" (qtd. in Smaller, 2010). When a host state authorizes the operation of an agricultural investment, it implicitly authorizes the investor to use as much water as is necessary to sustain and operationalize the investment, even when it is not explicitly provided for in the contract.

UNCTAD and the World Bank found that in around half of the 39 investments analyzed, the water use was totally unregulated (Mirza, et al., 2014). It found that even where there were well-established water acts with use rights, monitoring and reporting systems, the capacity of the state to enforce them was not sufficient (Mirza, et al., 2014). It further found that when "investors did have to apply for water rights or adhere to extraction limits, these were often only enforced at the project approval stage and there was no subsequent monitoring of adherence to agreements made" (Mirza, et al., 2014, p. 46). It stressed that although "investors were increasingly responsible with regard to water pollution . . . some bad practices remained" (Mirza, et al., 2014, p. 46). In one examined case, an investor "discharged untreated agricultural runoff into a local river, the only water source for surrounding communities" (Mirza, et al., 2014, p. 46). The study found that the monitoring of water contamination by host states is "cursory at best and investors appear to be virtually unregulated" (Mirza, et al., p 46). This is a serious problem in this context, but seems symptomatic of the overall weak implementation of the regimes described in this report, with the exception of international investment law.

The study also noted that negative impacts on water were mentioned on a local level, but that "the broader impact on water tables and regional or national resources does not seem to be known or have been sufficiently evaluated" (Mirza, et al., 2014, p. 46). This is a serious deficit in this context given the high amount of farmland investments and increased pressure on water resources from climate change and population growth.

This "virtually unregulated" water use by foreign investors is in contradiction to the requirements of international law that will be described in Part II. International law requires the regulation of water use to ensure it does not infringe the rights of other riparian states under international freshwater and environmental law or local communities under international human rights law. If farmland investments continue to abstract water without effective management or monitoring, the consequences for water resources in Africa will be dire in light of climate change and population growth. One way to improve this understanding is to monitor existing farmland investments for water implications such as water quality, quantity and access. UNCTAD and the World Bank have thus suggested that states may consider slowing down or temporarily halting the approval of new farmland investments, so that the investments in place may be effectively monitored (Mirza, et al., 2014) and the effects of the investment may be more fully understood.

Most land and water rights of local users are predominantly informal customary rights, while foreign investors obtain formal statutory rights that prevail over informal rights in most systems. These investments thus "fundamentally alter the rules of the game" (Anseeuw, Boche, et al., 2012, p. 37) by introducing players with hard statutory rights in a field where the majority of other players have (and have had for generations in most cases) informal customary rights. In most cases, the investor's water rights trump the rights of locals; a consequence rather underappreciated by host states. Truly understanding the rights that foreign investors obtain when they invest in agricultural land is critical. However, investor's rights are not the end of the story here. Water use by farmland investments has a spillover effect on other states that triggers obligations in international freshwater and environmental law. International human rights law adds a further layer into the mix given the fundamental right to water as a prerequisite to all life. These multiple layers must each be understood to fully evaluate and respond to water issues in the context of farmland investments.

Part II.
The Parallel Legal Regimes Governing Water and Farmland Investments

Part II. The Parallel Legal Regimes Governing Water and Farmland Investments

There are several legal regimes that govern farmland investments. They form the legal framework for farmland investments. Each regime must be understood because they all play a role in determining the rights and obligations of the investors and host states, as well as other stakeholders. The domestic law of the host state is the primary source of law governing these investments, and may privilege investors' rights above local users. Investors derive their formal land and water rights in the domestic law of the host state and from the contract with the host state. In much of Africa, local users in rural areas hold customary rights that in most cases will not prevail over the formal statutory rights of investors. Investors also have further rights stemming from international investment law as a result of any investment treaty between the host state and the home state of the investor. The investors will have the ability to directly enforce their rights in international arbitration flowing from the investment treaty.

In addition to the corresponding obligations on the host state from the contract and investment treaty, international law places further obligations on the host state, particularly considerations stemming from international freshwater law, environmental law, and human rights law. Each of these legal regimes is binding on states and all are relevant in the context of farmland investments and water issues (see Table 1). While the rights and obligations under international freshwater, environmental and human rights law are not as easily enforced as obligations in international investment law, they nonetheless provide considerations that host states must take into account.

Each of the legal regimes must be understood as they each play a role in the context of farmland investments, and can impact the allocation of water resources in host states. For example, international investment law is a bit of an exception in international law, since it applies directly to foreign investors and gives them directly enforceable rights against the host states. This is a unique aspect of international investment law that is particularly troubling when dealing with farmland investments and water rights. Nonetheless, the obligations from international freshwater, environmental and human rights law, which all guide the sustainable management of water resources, may in turn counter any claim by the investor of its rights arising from the investment (see Table 2). These regimes are examined further below.

TABLE 1. OVERVIEW OF THE ENFORCEMENT MECHANISMS FOR THE SOURCES OF LAW RELATED TO FARMLAND INVESTMENTS

LEGAL REGIME	ENFORCEMENT MECHANISMS	AVAILABLE TO
Domestic Law	Domestic courts. Local communities are vulnerable because they have predominantly customary rights that do not prevail over the statutory rights of foreign investors in most cases.	Host states, local communities and foreign investors
Investment Contract	Domestic courts or arbitration (national or international).	Foreign investors and host states
Investment Treaty	International Investment arbitration.	Foreign investors and host states
International Freshwater law	Affected states may initiate the cooperation procedures (consultations) if impacted by water use of farmland investments. If the affected state's rights have not been respected by the host state, the affected state may submit a dispute to impartial fact finding that both parties are bound by in good faith. If accepted by both the affected state and the host state, the dispute may be submitted to the International Court of Justice (ICJ) or to international arbitration.	All host states that are party to the Watercourses Convention and all states to the extent the Convention represents customary international law
Regional Agreements or Water Basin Commissions that impose obligations beyond international law	All of the obligations of international freshwater law and regional agreements are enforced through basin organizations or institutions according to their specific agreements. All of the procedures require negotiation before formal initiation of enforcement procedures. • For the Senegal River Basin and Niger River Basin: Any affected state may have resort to the Commission of Conciliation and Arbitration of the African Union, and as a last resort, to the ICJ to enforce the obligations above against a host state responsible for the activities of farmland investments within its territory. • For the Lake Chad Basin: Any affected state may initiate arbitration or a dispute at the ICJ to enforce the obligations above against a host state responsible for the actions of farmland investments within its territory. • For the Zambezi River Basin: Any affected state may refer a dispute to the Tribunal of the SADC to enforce obligations above against a host state responsible for the actions of farmland investments within its territory.	
International Environmental Law	See box for international freshwater law. In the alternative, any state that has accepted the compulsory jurisdiction of the ICJ may initiate a dispute against any host state that also accepts the compulsory jurisdiction of the ICJ.	All states party to the Watercourse Convention. For the ICJ, all states that have accepted the compulsory jurisdiction of the ICJ.
International Human Rights Law	International human rights treaty bodies periodically review states' compliance with the different human rights treaties. Local communities may have an ability to enforce their human rights before the African Court of People and Human Rights* or using the optional protocol to the Convention on Economic, Social and Cultural Rights, through the individual complaints procedure.	All states and local communities

** This has yet to occur and would need to be developed. In theory, it should be possible, but it would entail local communities bringing action against the host state for failing to respect their human rights, not against the foreign investor.*

5.0 Domestic Law

The primary source of law that should regulate all farmland investments is the domestic law of the host state.[7] Given that states are entitled to exercise their rights of sovereignty over their natural resources, subject to their obligations under international law, the domestic law of the host state is the logical starting point in this context (Fisher, 2009). African states have derived their domestic water laws and institutions from the legal systems imported by foreign powers during the past centuries (Caponera, 2007). States that were formerly under Belgian, French, Spanish, Italian or Portuguese administration have generally adopted the civil law system, while those that were under British administration adopted their water laws and institutions from the common law system (Caponera, 2007). Islamic water law also plays an important role in states that were reached by Arab influence or were once part of the Ottoman Empire (Caponera, 2007). The basic principles of Islamic water law continue to be observed as customary law in Chad, Mali, Mauritania, Niger, and Senegal and by parts of the populations of Benin, Burkina Faso, Cameroon, Central African Republic, Ethiopia, Gambia, Guinea, Ivory Coast, Nigeria, Sierra Leone, Tanzania and Togo (Caponera, 2007). In addition, these domestic legal systems have generally developed together with customary law, which varies from area to area, and is particularly significant in Africa in matters relating to land and water (Caponera, 2007).

Although there are a wide range of laws and regulations that may regulate farmland investments, the most relevant for the discussion of water allocation and water rights are water and land laws. Despite the close link between land and water—and the clear necessity of water as an input in agriculture—in most parts of the world the administrative and regulatory frameworks governing land and water have evolved in isolation (Hodgson, 2004). This reflects sectoral concerns at the expense of a more integrated approach and complicates an overview of water rights in the context of farmland investments. In many states, water rights have long been considered a subsidiary component of land tenure rights, where a right to use water is dependent on the existence of a land tenure right (Hodgson, 2004).

Water rights have received less attention and a lower profile than land rights (Hodgson, 2004). This is due in part to the fact that while water is necessary for most productive uses of land, water *rights* are not (Hodgson, 2004). With regards to agricultural land, in temperate climates with sufficient moisture provided by rainfall to permit production, water rights are not normally necessary (Hodgson, 2004). However, in states with arid climates that struggle with drought, like southern African states, water shortages call for greater consideration of water rights where irrigation may be required and may appropriate water resources formerly used by local communities (Hodgson, 2004).

It is surprising that despite the importance of the relationship between land and water, few mechanisms exist in domestic law to ensure a coordinated approach to the allocation and administration of land and water rights (Hodgson, 2004). As noted, water rights have historically been considered as a subsidiary element of land tenure rights and have thus not required specific consideration or a need to create a specific link from the perspective of land rights (Hodgson, 2004). However, modern statutory water codes have reversed this process through the complete separation of water rights from land tenure rights (Hodgson, 2004). The result is that land tenure rights are largely irrelevant in modern statutory water codes and the regimes are increasingly blind to the form and content of land tenure rights (Hodgson, 2004). Modern water codes or statutes are therefore not directly relevant to farmland investments, as they do not provide rights in the context of land use, particularly relating to agriculture (Hodgson, 2004). Water rights are an aspect of water law and policy that has developed into its own sector, focusing on sanitation and access to water issues, rather than on water use for specific purposes, including agricultural production (Hodgson, 2004).

Constitutional arrangements governing water resources are extremely varied, but there are certain common elements that can be seen in the legal systems that have developed from both the common law and civil law

7 See Anseeuw et al. (2012, p. 9). They note that this might typically include laws relating to the admission of foreign investment, laws on incentives for foreign direct investment (FDI), property, taxation, water rights and rates, and an array of laws relating to the potential impacts of the investment on the local community: environmental, human health and safety, worker safety, labour rights, and possibly more.

perspective, and in the role of custom throughout Africa (Fisher, 2009). These common elements will be outlined below, in addition to case studies to illustrate the domestic laws in practice in this area. In most states, water belongs to the public domain and therefore rights to use water resources can either be exercised by the State itself (or local authority), or be granted to private individuals or corporations according to the applicable domestic law (Pannatier, & Ducrey, 2005).

5.1 Informal vs. Formal Rights: The role of custom in Africa

Most local communities hold their land and water rights in customary law (Pannatier & Ducrey, 2005). Customary law is also the most known and respected source of law by the population and evolves from local practice (Pannatier & Ducrey, 2005). It thus plays a key role in this context, but places local users at a disadvantage when compared to foreign investors who obtain statutory rights from the contract with the host state that are formally registered in domestic law. In Africa, custom and traditional uses have often determined and continue to determine water rights and their administration among domestic users (Pannatier, & Ducrey, 2005). Rights under customary law are acquired from continuous activities over years, accompanied by a general acknowledgment of the practice (Fisher, 2009). It is mostly unwritten, and may vary from region to region, state to state, and even from area to area within a single state (Fisher, 2009). Customary law in this area is generally based on the principle that the land and water belong to the community and that the individual therefore only has a right to use the water according to the relevant communal, tribal or community land tenure system (Fisher, 2009). The concept of private ownership of water is usually unknown, and not provided for under customary law in Africa (Fisher, 2009). Due to their unwritten, unregistered status, customary rights are less secure rights than the formal statutory rights of foreign investors. While customary rights are legally binding and may be enforced, they will not prevail over formal statutory rights in case of a conflict.

Even when the domestic legal system recognizes the right to register customary rights, they mostly remain unregistered, and are instead passed orally from generation to generation (Fisher, 2009). Although written codified law has lessened the importance of custom as a source of law, its influence is still felt, particularly in Africa, as the most accessible and available source of law to local people (Fisher, 2009). Traditional and customary water administrations and institutions coexist with government administrations, and are generally more detailed where water is scarce (Fisher, 2009).

In states that have written water legislation and adequate water administration, local usages and customs are left unwritten and unrecorded for the most part, since most apply to minor water utilizations and in cases where the written law does not cover the specific issue at hand (Fisher, 2009). Traditional customary rights are normally recognized by later written law following detailed procedures, including an inquiry and recognition of the rights in the manner detailed by the written law (Fisher, 2009). This process, the written recording or registration of existing customary rights, is one of the main characteristics of almost all modern regulations and legal systems. This, however, poses an important question: the relationship between written and unwritten arrangements, or between law and custom. Practically speaking, this often means that the choice is perhaps between private or exclusive sources of water on the one hand, and communal or shared sources of water, on the other (Fisher, 2009).

Following independence, many African states faced the challenge of trying to define the place and position of customary law, while simultaneously building modern nation states (Juman & Maganga, 2005). Many conferences were conducted to outline the future of customary and Islamic law within the emerging legal systems of newly independent African states (Juman & Maganga, 2005). The prevailing view was to allow customary law to organically grow within the legal systems of the emerging states, and then for it to be absorbed into the mainstream written (formal) laws (Juman & Maganga, 2005). Although the majority of African legal systems formally recognize custom in their written law, most legal systems also make clear that customary laws cannot apply over areas covered by written law, which confirms the predominance of formal written law over unwritten custom (Juman & Maganga, 2005).

This has important consequences in the context of farmland investments. Foreign investors have formal written rights under the domestic law of the host state that arise from the contract with the host state. Local communities, for the most part, derive their rights from informal unwritten custom. The consequence is that, in the event of a conflict, the statutory rights of the investor will in most cases prevail over the customary rights predominantly held by local users. If the rights of local communities were statutory and not customary, these risks could be mitigated and the water rights of investors and local communities would be on an equal footing. But this may serve to erode the traditional communal rights that have developed over generations, and could entail the end of communal rights and thus the final victory of individual property rights. Yet, one cannot deny that water is an economic asset attracting these investments in the first place. A balance must be struck so that water is not overexploited due to the individual ownership exercised by farmland investments in a system that is unfamiliar and therefore ill-equipped to deal with individual property rights in the first place.

5.2 Common and Civil Law Systems:

There are around 25 states in Africa that follow the civil law system (Caponera, 2007). In these states, water is generally placed in the public domain in the hands of the state. Most uses of public water are subject to administrative authorization, permit or concession under the formal legal regimes in these states. Most water use by local communities are considered minor and therefore do not require authorization (Hodgson, 2004). Further, in most states, rain-fed agriculture falls in the same category and does not require authorization, although irrigation schemes may (Hodgson, 2004). Recently, in many of these states, the bulk of water-management functions have been transferred to ministries responsible for water resources (Caponera, 2007). It is too early to tell whether these administrative arrangement and management functions will be successful.

African states that have adopted the common law system have adopted the British water administration, under which water is *res communis omnium* (common to all), and the person who owns land on the bank of a watercourse or natural body of water (riparian landowners) can make use of it unless it has been specifically brought under government control through legislation or judicial decision (Caponera, 2007). Land ownership is particularly important for water rights in common law systems, since riparian landowners automatically have use rights for the water accessible from their land. In most of these states, with a few exceptions, no centralized water administration exists. However, there has been a recent tendency to establish water resources administration, authorities, boards or commissions that are either autonomous or connected to ministries responsible for natural resources or environmental protection (Caponera, 2007).

The growth of these bodies is part of a recent attempt to coordinate activities and projects and centralize the administration of water rights (Caponera, 2007). Such measures/reforms have recently been undertaken in Ghana, Kenya, Swaziland, South Africa, Tanzania, Uganda, Zambia and Zimbabwe (Caponera, 2007). It should be noted, though, that under the common law system, agricultural uses of water have only recently been incorporated into comprehensive water law (Caponera, 2007). In addition, a number of these states have established river basin institutions to further facilitate water resource management (Caponera, 2007). River basin institutions will become increasingly important in the future given the concentration of farmland investments in river basins and other water abundant locations. These institutions and the international developments that gave rise to them will be examined below.

Some African states have derived their legal systems from systems other than the common or civil law, or from a combination of both legal systems. For example, Liberia has derived its water law and administration from that of the eastern United States, while the existing systems in Ethiopia and Mauritius are a combination of both civil and common law systems (Caponera, 2007). In addition, states north of the Sahara, which were once a part of the Ottoman Empire, have derived their water laws from the Islamic water law system (Caponera, 2007). The basic principle of Islamic water law is that water should be available to all members of the Islamic community, which is why many modern Islamic states consider water resources as belonging to the whole community; meaning the state or the public domain (Caponera, 2007). In these states, all waters are generally

declared to belong to the state, the crown or the public domain as representing the Islamic community, and every use of water other than for drinking purposes is under government control (Caponera, 2007). South of the Sahara, despite the introduction of written western laws, that basic principle of Islamic law fostered by the Arab influence continues to be observed as local customary law (Caponera, 2007).

Regardless of the origins of the domestic legal system, the predominant approach in Africa has been the management of water resources by local communities in accordance with custom and practice, but always subject to centrally administered laws of the state to ensure the ongoing and effective management of the water resource (Fisher, 2009). Basically, the formal written laws have been derived from local custom and practice. This has been overtaken in many systems by the emergence of more formal rights and obligations in written law that are directly enforceable through the legal system (Fisher, 2009). Most African states therefore have some degree of centralized written law for water allocation, which, combined with customary law, govern the allocation of water within the domestic law of the host state. In any case, in the majority of African states there is no private ownership of water: it is vested in the state in the interest of the community at large, and users only have use rights. This is a significant obligation on the state, as it is entrusted with ensuring that water is allocated in the public interest. The gap between law and practice must nevertheless be borne in mind in this area.

5.3 Weak Implementation and Enforcement of Domestic Law

Even where formal land and water-management systems exist, most are poorly implemented, and in the majority of cases customary rights are not registered and therefore not translated into statutory rights. Moreover, in most cases examined by the recent UNCTAD–World Bank study, local communities did not understand what rights they had under the laws of the state and did not have formal title deeds (Fisher, 2009). This complicates the matter even further.

The effective monitoring of the state of water resources is generally viewed as a prerequisite for the implementation of an effective water rights regime (Vapnek, Aylward, Popp, & Bartram, 2009). The monitoring, enforcement and implementation of these regimes has been lacking in Africa, further undermining water security and weakening the legal position of local communities (Vapnek et al., 2009). Local communities rely on the effective implementation of these regimes for the protection of their rights, a fact underappreciated by some host states. If they had registered rights, local communities would at least be entitled to participate in the contracting process, and be entitled to compensation (Smaller & Mann, 2009). In some cases in Africa, many local users are denied compensation and participation in negotiations due to their lack of formal rights (Mann & Smaller, 2010). The domestic legal framework thus seems to be tilted in favour of foreign investors. Local communities are particularly vulnerable due to their informal customary rights and the poor implementation of the domestic law that could effectively manage the water use by foreign investors.

5.4 Examples of Domestic Law Approaches: Zambia and Mozambique

Zambia

Zambia is one of the primary recipients of farmland investments (Oakland Institute, 2011b). It is therefore useful to understand the contribution of its domestic law to the legal framework in this area. Zambia attempted to streamline water management in 1993 with the Water Act, but water management is still considered "highly fragmented, poorly regulated, and weakly enforced" (Oakland Institute, 2011b, p. 49). Under the Water Act, use permits are required for the development of irrigation infrastructure, but research has revealed that almost no permits have been applied for (Oakland Institute, 2011b). In reality, therefore, investors can carry on with irrigation without applying for a permit. Nonetheless, the legal foundation is in place to put restrictions on such water use, and it should be developed to enforce the requirement to seek a permit for the use of irrigation. Although there have been development plans to focus efforts on improved irrigation, there do not appear to

be any practical limitations on foreign investors water use by law or explicit in any contract with the host state (Oakland Institute, 2011b).

The Water Act separates water into two types: public and private. It provides that the ownership of all water is vested with the president, but that landowners have the right to use water located on their property (Oakland Institute, 2011b). Foreign investors therefore have water rights linked to land ownership/use rights. This seemingly unlimited right of landowners to access water on their property means that downstream users may have less of a share of water resources, and that smallholders who previously accessed water under customary law will no longer have access on newly converted state land (Oakland Institute, 2011b). This requires a further understanding of the land tenure system in Zambia so as to fully appreciate the water rights in the context of farmland investments.

Zambia essentially has two types of land, customary and state land, and the legal system shows a trend of converting customary land into state land (Oakland Institute, 2011b). State land may be granted to foreign investors unilaterally by the president, while local authorities and chiefs must be consulted in the case of customary land.[8] The majority of land is still under customary tenure, but state land is increasing, and state land is located in the most resource concentrated developed regions (Oakland Institute, 2011b). The Zambian Constitution ultimately provides the framework for all investment related legislation. It allows the president to take or acquire land from its owner or occupier for the purposes of agricultural development or improvement.[9] Given the link between water rights and landownership/use, particularly under the Zambian Water Act, it seems that no water rights may be secure when faced with "agricultural development or improvement."

There have been several proposed constitutional amendments that would provide for equitable access to land and water and sustainable management of land resources (among other elements), but the most recent proposals have failed (Oakland Institute, 2011b). A new proposal is currently underway but has yet to be agreed upon (Oakland Institute, 2011b). The 1995 Lands Act facilitates investment in agriculture by easing restrictions on foreign ownership of land, removing the ability of the state to repossess undeveloped land, combining reserve/trust land into customary land and strengthening state leasehold rights at the expense of customary rights (Oakland Institute, 2011b). Importantly, the Lands Act supersedes customary law in the case of a conflict (Oakland Institute, 2011b). That means if a local user holds land and thus water rights under customary law, the water/land rights of the investor will prevail since they are expressly provided for by law under the Lands Act. The Ministry of Lands drafted a "Land Policy" in 2000, in effect to implement the Lands Act, but concerns over respect for the customary system have prevented it from passing (Oakland Institute, 2011b). The initiative is currently on hold pending the passing of the constitutional amendment referred to above (Oakland Institute, 2011b), which has still not passed (Malambo, 2013).

Zambia thus exhibits the typical characteristics described above: water use rights inextricably linked with land ownership and use, a land tenure system that favours foreign investment, and a predominance of customary land and water rights among local users with legal pressures for change to state land to promote agricultural investments. It also exhibits the typical common law characteristics in this area: unlimited right to use water accessible from the land. This means that foreign investors, who obtain water and land rights directly by law, have more enforceable rights to land and water than local communities.

Mozambique

Mozambique is another particularly relevant example to understand in this context as a primary target of farmland investments (Anseeuw et al., 2012). Mozambique has adopted several legal reforms to its land tenure system like many other African states (Anseeuw et al., 2012). Like other African states, this has led

[8] See Articles 3.3 and 3.4 of The Lands Act of 1995, or see The Zambia Land Alliance (1995) 'The Lands Act of 1995 (simplified version)', The Zambia Land Alliance: Lusaka Zambia.
[9] See Article 16 of the Constitution of Zambia and Oakland Institute (2011b) at 34.

to a formalized land and water-management system while most rights of local people remain within the framework of informal customary law. It is generally recognized as having one of the most progressive political and legal frameworks for land in Africa (Anseeuw et al., 2013). The policy and legal framework for land and natural resources, including water, calls for the "sustainable and equitable use of these resources" and includes mechanisms to facilitate access to local land and natural resources through mandatory negotiations between local communities and investors (Anseeuw et al., 2013).

Mozambique is also currently in the process of improving institutional structures for land management and administration incorporating agro-ecological zoning (Anseeuw et al., 2013). In addition, a number of NGOs and donor-funded programs have been supporting the delimitation of local communities and developing approaches to include local land-use plans and community projects to include private sector partners (Anseeuw et al., 2013). As part of this strategy, Mozambique has launched the PRO-Parcerias project that aims to use available legal and policy instruments more effectively to create "fair and fully inclusive community partnerships with investors" (Anseeuw et al., 2013, p. 5). The PRO-Parcerias project is part of the Land and Natural Resources Development Program that began in 2009 through an FAO project designed to train staff working in rural development in the main elements of the land and natural resources framework (Anseeuw et al., 2013).

The starting point of the PRO-Parcerias project was to promote a participatory multistakeholder approach to local development with the local community. It aims to reduce the asymmetry of information between foreign investors and local communities by establishing a group of actors to monitor the community–investor relationship, empower the local community and produce workable and practical partnership agreements (Anseeuw et al., 2013). It establishes a scheme whereby local communities contribute unused land as a legally constituted group that holds the use rights to these lands and contracts directly with the foreign investors (International Fund for Agricultural Development [IFAD], 2012). The project also established an agreement with AgDevCo, a donor fund, who would carry out soil surveys and feasibility studies (including access to water) of the shortlisted land provided by the communities for investment (Anseeuw et al., 2013). However, the result of its survey revealed that none of the land earmarked by the communities as available for investors met the necessary conditions, especially access to water.

Practice has shown that implementing the inclusive policy and legal model has not been easy (Anseeuw et al., 2013). The Water Law of 1991 governs water rights more generally. The Water Law requires that all use must be licensed and registered except for "common use" (*usos comuns*) (Woodhouse, 2012). "Common use" in this context includes use by rural household for their domestic needs, watering livestock and irrigation of an area of up to one hectare per household without the involvement of a mechanical device (Woodhouse, 2012). Although not requiring registration, common use has priority under the law over registered use by individuals or firms for commercial activity. Indeed throughout most of Africa, water uses by local communities will frequently fall within the *de minimis* exceptions and therefore are not required to hold a formal water right where there are regulatory frameworks in place (Hodgson, 2004).

Studies estimate that the use of both registered and non-registered water is around the same in Mozambique, and that while non-registered use may double in the future, registered use will increase by a factor of 13 as planned irrigation reaches around 70,000 ha (Woodhouse, 2012). Some studies have indicated that the maximum amount of irrigated area would be 58,000, which is smaller than the area for which the government is seeking investment (73,000 ha) (Woodhouse, 2012). According to figures from the Global Land Matrix, around 1 million ha have already been leased to foreign investors in Mozambique, while deals covering over 7 million ha have been reported (Anseeuw et al., 2012). Although the majority of this may be for rain-fed agriculture, climate change forces may force more irrigation to adapt. In any case, studies have indicated that it will not be possible to put all of that land into irrigated production. Water competition issues are therefore likely to arise as water demand increases, and water quantity and quality are impacted by climate change, population growth, urbanization and farmland investments.

Studies have shown that the non-registered status of small-scale water use makes it "invisible to government planners and thus vulnerable to competition from registered commercial users who will invariably be equipped with more effective means of abstracting water from rivers or aquifers" (Anseeuw et al., 2013, p. 218). This is the same process as with customary land rights, and has the same result in those regimes without a water law where water use is linked with land rights. Although the law recognizes priority for common use, its non-registration makes it invisible within the formal system and therefore vulnerable. Mozambique therefore presents the same typical issues: the non-registration of locals' rights makes them vulnerable to the registered rights of commercial users. Moreover, although Mozambique has developed a sophisticated framework to address land and water resource management in the context of farmland investments, these have yet to produce beneficial results in practice (Anseeuw et al., 2013).

Nonetheless, Mozambique's developed legal and policy framework in this area is worth noting. In one particular example, a consortium of smallholder irrigators and supporting NGOs succeeded in "securing a tenuous hold on their land and water through a combination of legal action and continued investment in both the infrastructure and marketing facilities of the system" against competing land claims by former Portuguese landowners and aspiring foreign investors (Veldwisch, Beekman, & Bolding, 2012, p. 126). However, in two other examples examined in Mozambique, smallholder farmers were excluded from access to their land and water (Veldwisch, Beekman, & Bolding, 2012, p. 134). The success of the smallholder farmers in the first example can be attributed to the circumstances of that case, particularly the involvement of NGOs for support. The PRO-Parcerias project is therefore welcome to the extent it involves more third parties to support local communities.

Difficulties arise because in this framework it is instinctive to recommend the formalization of land and water rights as a means to provide legal rights for domestic users, equal to those of the investor in the domestic legal system. However, practically speaking, the formalization of land rights in Africa has meant that local communal users become invisible within that framework. The regulatory framework only formally recognizes rights that derive from that system. Since most local communities' rights are not formally registered even where expressly given the right, they are invisible in the eyes of that regulatory framework. The areas covered by these rights thus seem ripe for foreign investment because the framework does not recognize the practically invisible rights of local communities. The framework tends to focus on those registered/recorded rights and the common use of local communities fall through the cracks.

6.0 Contracts Between Foreign Investors and Host States

The role of the contract between the host government and the foreign investor in farmland investments is crucial, especially for the investor (Smaller & Mann, 2009; Smaller et al., 2014). The role of the contract is to set out the rights and obligations of the parties. It is critical for the investors, as the main source of their rights in the domestic law of the host state. These contracts operate within the domestic legal system of the host state and give the investors direct rights in that legal system. However, the contract is also an opportunity to include specific obligations of the investor to ensure some developmental gains for the host state.

The contract will address the price, quantity and duration for the purchase or lease of land, and will address a range of other issues in most cases.[10] Water is an essential element for the operation of an agricultural investment. When a government commits to allow an agricultural investment, this may implicitly guarantee the investor's access to the quantity of water needed to operationalize and maintain the investment, even if the contract does not expressly mention water rights or access.[11] This right can come directly from the contract and is given effect in the domestic legal system. If water rights are specifically addressed in the contract, the investor will only have those water rights expressed in the contract. Specification of water use in contracts therefore serves to limit the water use of the investor to the amount prescribed by the contract.

Another important element of the contract is that it can determine which court or tribunal will be responsible for resolving any dispute that may arise under the contract. Given the massive increase in farmland investments requiring access to water, it is likely that there will be disputes over water rights in the future. The provisions in the contract on dispute settlement may therefore be crucial. The three main choices are: the courts of the host state, arbitration in the host state under domestic law, or an international arbitration proceeding. If the contract specifies international arbitration, the investor will be able to initiate arbitration proceedings against the host state to enforce their rights to access water to maintain their investments. It should be noted, however, that even if the contract specifies the domestic court of the host state in such a clause, any investment treaty in force may still operate to give the foreign investor the right to initiate arbitration proceedings against the host state.

The development of the contract is a crucial moment in the relationship between the host state and the investor to determine whether or not the investment will provide some benefit to the host state. It can be an opportunity to ensure that farmland investments bring about benefits for host states if they are negotiated in a manner so as to bind investors to specific and detailed commitments.

6.1 Provisions Impacting Water Management in a Sample Contract: An American palm oil plantation in Cameroon

A review of a rather detailed contract between Cameroon and SG Sustainable Oils Cameroon PLC (an investor from the United States) demonstrates the hard commitments of host states and extensive rights of foreign investors.[12] Only those provisions that are relevant to water use and management will be highlighted below. Like many contracts in this context, it grants exclusive rights to the investor for a term of 99 years.[13] The foreign investor will have broad water rights over the production area for the next 99 years as climate change and population growth strain water resources in Africa more with every passing decade.

[10] These include: taxation and investment incentives for the investors, rights to export production, right to import personnel and equipment along with any associated infrastructure or logistics requirements (e.g., road, rail, shipping), and other operational issues, see Smaller and Mann (2009) and Smaller et al., 2014).

[11] It has been noted that "designation of exclusive rights to use land provides prior rights to 'green' water (rainfall and plant transpiration) on that land. However, in many contexts it also implies a demand on 'blue' water resources (rivers, lakes and aquifers), since agriculture typically accounts for 70–80 per cent of such water 'abstracted' (pumped, stored or diverted) in less industrialized economies," see Woodhouse (2012), p. 208.

[12] Establishment Convention Dated as of 17 September 2009 By and Between the Republic of Cameroon and SG Sustainable Oils Cameroon PLC, available from: http://www.oaklandinstitute.org/sites/oaklandinstitute.org/files/SGSOC%20Convention%20with%20the%20Government%20of%20Cameroon.pdf

[13] See *ibid* Article 2.

It should be noted at the outset that a provision committing the government to allow the operation and production of an agricultural investment may be sufficient to secure the necessary water rights for that production. This provision alone may therefore suffice to secure the foreign investors water needs:

> Government hereby grants to Investor the non-exclusive right,[14] franchise and license for and during the Term to : (i) engage in Production in the Production Area (and subject to the terms of this Convention, in other areas of Cameroon), (ii) *to develop, manage, maintain, rehabilitate* and expand (as may be permitted herein) the Production Area, (iii) to utilize Oil Palm Products in Cameroon and to supply to local markets and to export Oil Palm Products from Cameroon, (iv) to produce other agricultural products after providing Notice to Government and (v) to conduct such other activities as contemplated by this Convention, in accordance with applicable law.[15]

By granting investors the right to engage in agricultural production, and the right to maintain, develop and rehabilitate agricultural production, they implicitly acquire the water rights necessary for such production.

This particular contract, however, does specifically address water use, and seemingly gives the investor unregulated access to water. It provides that the "Investor Party shall have the right: [...] to take and use, subject to any limitations imposed pursuant to Article 10, free of charge [...] such water [...] as Investor may consider necessary or useful for Investor Activities, without the need to obtain any further authorization or pay any further fees."[16] There are several other provisions in the contract that further lock in these water rights. Section 6.3 of the Convention on "Access to Utilities and Natural Resources" provides that:

> "Government shall not, and shall cause any Governmental Authority and/or Governmental Entity to not, take any action that could reasonably be expected to adversely change the quality or volume of natural resources available for Investor Activities (as compared to those conditions present as of the date of the applicable Lease Agreement, *including water flow through rivers in the Production Area*), if such change could have a material adverse effect on Investor Activities."[17]

This means that the investor has absolutely unfettered access to the rivers flowing through its land, and that the host state cannot take any action that would decrease the amount of water available for the investor. This commitment of Cameroon derogates from the obligations of international freshwater law and human rights law because water is connected; the amount of water abstracted by the investor from these rivers directly impacts the amount available for downstream states and local communities. Cameroon, a member of the Lake Chad Basin Commission and the Niger Basin Authority, must consider its duty to notify and consult other states regarding this water use. Moreover, if the water resources in question concern the Lake Chad Basin, this clause will be invalid since such waters are not subject to the unilateral sovereign control of Cameroon but belong to the community of basin states collectively. This is further discussed below.

Although the impact of these investments on water resources may not be obvious or fully evaluated now, as pressures such as population and climate change forces continue to affect water, the impact will become more severe. By that time, however, the investors may have secured their water rights, which may in turn frustrate host state attempts to interfere with them. Clauses like that reproduced above will not be valid where the water abstractions in question are subject to the authorization of the relevant basin authority in circumstances where the states have relinquished individual ownership of the water resources in favour of collective management, like Lake Chad and the Senegal River as outlined below. For other watercourses not subject to such a far-reaching regime, like the Niger River and the Zambezi River regimes, the duty to consult and notify, as well as the other principles of international freshwater law incorporated at the basin level, may also serve to invalidate such a clause in favour of the community of interests over shared water systems. Certainly if the water use by this investment unreasonably caused harm to the equitable share of other states the clause would not be

[14] It should be noted that "non-exclusive right" seems like a misnomer here since the following paragraph grants the Production Area to the investor for its "exclusive use" pursuant to paragraph (a) quoted above.

[15] Article 3.1(a) of the Establishment Convention supra note 210, emphasis added. Article 22 of the Establishment Convention confirms that the applicable law ("governing law") of the contract is the domestic law of Cameroon.

[16] *Ibid* Article 3.3(a)(v); Article 10 refers to "environmental measures" and notes that the Investor's obligations "with respect to the environment shall be as prescribed by applicable Law." However, the express right granted in Article 3.3 to abstract water from rivers on the land without further authorization or fees cancels out any reference to the applicable law, even if there was an effective law in force.

[17] *Ibid* Section 6.3 of the Establishment Convention (emphasis added).

legally valid and Cameroon would be expected to take measures that inevitably "adversely change the quality or volume" of the water resources of the investor. This will be further described below in the discussion of international freshwater law and the integrated water resources management schemes in Africa.

The contract also has a stabilization clause that further locks in the investor's rights. Section 20.4 "Change of Law" provides that "If any Change of Law has the *effect of impairing, conflicting or interfering with the implementation of Investor Activities* [emphasis added], or limiting, abridging or adversely affecting the value of the Production Area or any of the rights, indemnifications or protections granted or *arising* [emphasis added], under this Convention" that the government and investor shall seek to resolve the matter by "amicable negotiations."[18] If they are not able to resolve the matter at the end of a 90-day period, the government must reverse the effects and provide an exemption from the changed law or compensate the investor for costs incurred as a result of the change of law.[19] Again, this means that should the government respond to water scarcity concerns and introduce a law to more effectively manage water resources, they may either have to exempt the investor from the regime, or compensate them. This may further limit host state ability to meet its responsibilities under international law. The term "arising" in the above provision demonstrates that water rights are not expressly provided in the agreement, but arise from the commitment to ensure the operation of an agricultural investment.

Stabilization clauses are particularly problematic clauses in contracts for farmland investment. These clauses either prohibit the application of a new regulatory measure that affects the investment, or require compensation for the introduction of such measures (Smaller & Mann, 2009). These clauses therefore commit the host state to not change the regulatory framework governing the investment in a way that affects the economic equilibrium of the investment, and to compensate the investor if it does so (Cotula, 2011). This means that should the host state adopt an integrated approach to water management and introduce a regulatory framework to reallocate water in accordance with the principles described below, it may have to compensate the investor when these clauses come into force.

Although stabilization clauses do not exist in every contract, studies on stabilization clauses have shown that such clauses are most prevalent in Africa: they have also shown that investment contracts with African states have the most far-reaching stabilization clauses (Cotula, 2011). These clauses are perhaps the most problematic of them all, considering that domestic laws on social and environmental matters are not well developed in many African states (Cotula, 2011). Cotula (2011) observes in this regard that:

> **[I]f not properly formulated, clauses that stabilise applicable law may restrict the ability of the host state to take action in the public interest—for instance, where improving social or environmental standards would increase project costs. The host government would have to either exempt the [investment] from complying with the new standards, or compensate the investor for losses suffered. Stabilisation clauses would also ring-fence the hard commitments that host governments may have entered into to provide specified amounts of water—so that subsequent changes to water allocations would entitle the investor to compensation. Where public finances are a concern, the obligation to compensate investors may make it more difficult for host governments to take action needed to protect people or the environment. If a stabilisation clause is included in the contract, best contractual practice clearly defines its scope to ensure that social and environmental matters are not stabilised.**

Host states must therefore be on the lookout for these clauses when negotiating contracts and should seek to ensure that the clauses do not apply to social or environmental matters. This entails an express inclusion of such a limitation in the stabilization clause itself and not just an oral understanding with the investor.

In addition, this particular contract ensures that the investor's rights will prevail against any claims to land or water from local communities. In Article 4, the Government "represents and warrants that all State Land in the Production Area is not encumbered by any [...] use right, right of way or other encumbrance, and is not subject to any recorded or unrecorded [...] right, privilege or other right of another binding upon, or which at any time in the future may become binding upon, Government. [...] and that no agricultural or other commercial activity, other than that contemplated by this Convention, is currently taking place within any portion of the State Land

[18] *Ibid* Section 20.4(a).
[19] *Ibid* Section 20.4(a)(i).

in the Production Area."[20] In legal terms, this provision extinguishes any claims that local communities may have to the land and water based on their rights in customary law. It ensures that if there are conflicting claims, and if local communities have a customary right to use water within the Production Area, the investor's rights provided in the contract will prevail.

Procedural obligations are particularly important as they provide for the enforcement of legal rights. The dispute settlement mechanism available has a direct impact on the practical situation. Local communities with their customary rights only have redress in domestic law, which may be bound to uphold the above terms of the contract. The investor, however, has the direct means to enforce its obligations against the state through arbitration. This is why investment treaties are particularly important, and why the dispute settlement clauses of contracts are also important.

This contract with Cameroon has a particularly far-reaching arbitration clause committing to investment arbitration and waiving immunity both from jurisdiction and from the execution of the award.[21] This means that the investor further secures its ability to enforce its rights against the host state, and an express right to enforce a financial award against the state pre-empting any claims of sovereign immunity over public funds. States must therefore be aware that these obligations are real, can be directly enforced against them, and can result in financial compensation to investors. This is particularly problematic given the vital nature of water for all life on earth, and the current unregulated use by foreign investors.

These broad host state commitments and far-reaching stabilization clauses give foreign investors secured water rights to operate and maintain their investments. Regulating the use of existing farmland investments may prove difficult given the overarching investment law framework that requires host states to respect their commitments to investors. The other legal regimes in this context—international freshwater law most notably—provides the relevant legal framework to address the problem of water use and allocation by farmland investments. The obligations from international environmental and human rights law further enhance this legal framework and provide a means for host states to address the problems of water use by foreign investors. These regimes will be described below.

[20] *Establishment Convention Dated as of 17 September 2009 By and Between the Republic of Cameroon and SG Sustainable Oils Cameroon PLC*, available from: http://www.oaklandinstitute.org/sites/oaklandinstitute.org/files/SGSOC%20Convention%20with%20the%20Government%20of%20Cameroon.pdf, Section 4.2 Warranty of Ownership and Use.

[21] *Ibid* Article 19.

7.0 International Investment Law

The contract and the domestic legal system do not exist in isolation. Foreign investors may seek to enforce their water rights for the operation of their farmland investments through an investment treaty, particularly bilateral investment treaties (BITs). International investment treaties play a crucial role in this context, as they further secure the rights of investors, and bind the host state thus impacting its ability to effectively manage water resources.

Investment treaties are international agreements between two or more states that are intended to provide investors from one state with protections and legal guarantees under international law (Bernasconi-Osterwalder et al., 2011). Over 3,000 BITs have been signed worldwide, so it is likely that a high percentage of farmland investments will be within the scope of a BIT or other investment treaty addressing similar issues (Smaller & Mann, 2009). Investment treaties apply to the making of the investment and to all host state laws and activities in relation to the investment during the entire life of the investment (Mann, 2006). Any law or activity of the host state that impacts the investment may therefore be challenged under the investment treaty. They provide investors with guarantees to safeguard and operationalize their investment (Smaller, 2010). Water is a necessary guarantee for the operation of a farmland investment that may be safeguarded by the investment treaty.

The investor's rights in international law from the investment treaty are layered above domestic law. The domestic law must therefore comply with and give effect to the terms of the investment treaty. It is fundamentally necessary to realize that the investor will have the right to challenge any law or activity by the host state that is allegedly inconsistent with the terms of the investment treaty. The investor's rights to access water to maintain its investment stems from the contract with the host state. These contractual rights translate into statutory rights in the domestic law of the host state in addition to any rights already existing in the host state favouring foreign investors. Investment treaties further safeguard those legal rights and give them "teeth" by allowing foreign investors to initiate arbitration against the host state regardless of the contract terms. Thus, once a state commits to allow the operation of an agricultural investment by contract, the investor's water rights that arise from that commitment may be enforced through an investment treaty in force.

If long-term droughts develop as predicted or if there are political changes in a host state, it is conceivable that steps to expropriate the land or reallocate water resources may take place (Smaller, 2010). This could lead to investment disputes under the investment treaty on the basis of expropriation or legitimate expectation of water use for an agricultural investment. This has become somewhat familiar in other contexts, like oil, minerals and timber, but water is different (Smaller, 2010). Water is vital to all life and is essential to human welfare, development and sustaining the environment. These farmland investments thus raise difficult issues with how to reconcile the investments with the water needs of the local people, how to protect the environmental integrity of ecosystems and how to ensure that the host state has the capacity to feed its own people (Smaller, 2010).

7.1 Standards in International Investment Agreements Relevant to Farmland Investments and Water Use

7.1.1 The Fair and Equitable Treatment Standard

In times of drought and other instances of severe water shortages, ensuring that basic needs for water are met while maintaining water flows for sustaining river systems and biodiversity—critical for long-term sustainability of the host state—can be in conflict with the water needs of the farmland investment. Standard elements of international investment agreements, like the fair and equitable treatment standard (also referred to as the minimum standards of treatment), apply in this context and may limit the host state's ability to reallocate water

resources in the context of farmland investments.[22] The fair and equitable treatment standard may be the most significant provision in the context of farmland investments, particularly if the relevant contract does not clearly provide for periodic review of water allocation or access. Schreiber (2008) observes that:

> [b]y accepting a foreign investment, host governments generally accept that they will provide the means for them to operate, for example to draw water for agricultural purposes. Unless domestic law or the investment contract clearly provides for a periodic review of water allocation and rights, *the right to have access to the necessary means of production [i.e. water] may become a legitimate expectation of the foreign investor and therefore a legal entitlement of the investor under international law* [emphasis added]. This could provide a secured right to the investor, even if it conflicts with existing or future needs in local communities for potable water, small-scale farming, small industries or subsistence uses.

If the contract does not provide for the periodic review of water access or allocation, the host state may be required to financially compensate the investor if it has formed a legitimate expectation for the necessary water access. In this context, other potential breaches of this standard may include increased pollution controls that impact the profitability of a business and that are not clearly provided for in the domestic law governing the investment, reductions in water allocation for water intensive projects, increase in water tariffs if none are foreseen in a license or domestic law governing the contract, etc. (Mann, 2006).

Where the host state has given express assurances that operating conditions will be maintained for a number of years, any changes to those conditions may frustrate the investor's legitimate expectation. It has been noted, however, that

> . . . the presence or absence of a transparent decision-making process, founded in sound administrative practice, will be a very significant factor. Thus, following a pre-designed decision-making process will reduce chances for investor challenges of the result, while ignoring pre-designed procedures or not having any transparent procedures in place will increase them (Mann, 2006).

This is difficult in Africa, where such pre-designed decision-making processes are currently evolving, and some contracts lock the legal framework in place when the contract is signed (through the operation of stabilization clauses as demonstrated above). Adherence to the detailed procedures of the regional joint management schemes detailed below may nonetheless justify or rebut any potential breach of investor's legitimate expectation with regard to water use.

7.1.2 Prohibition Against Expropriation Without Compensation

Another common standard of investment treaties relevant in this context is the prohibition against expropriation without compensation (Smaller & Mann, 2009). This is a crucial provision in an investment treaty and is common to all of them (Bernasconi-Osterwalder et al., 2011). This obligation to pay compensation in the event of government expropriation applies not only to loss of the land, but also to the loss of business operation (Smaller & Mann, 2009). Host state interference that substantially interferes with the investment, or renders it inoperable, may be deemed an indirect expropriation, and the obligation for compensation is much more significant/onerous than under the domestic law of most African states.

In the context of farmland investments, if there is sufficient water available, but the amount allocated to the investor is reduced to meet the needs of other users, reducing water allocations to the investor may be defined by a tribunal as an expropriation of the right to operate the business (Smaller & Mann, 2009).[23] Host states must therefore be mindful that their actions do not substantially interfere or hinder the operation of the farmland investments, or they may be liable to pay compensation for the indirect expropriation. Again, adherence to the prescribed procedure of the relevant basin authority may provide more room for host state action in this context.

[22] See Schreiber (2008, pp. 448–464) for the way in which the standards of investment treaties impact the human right to water in the context of water concession contracts (for the operation of water utilities) to foreign investors.

[23] For a fuller discussion of how these standards operate in this context, see Smaller & Mann (2009) at 16-17.

7.1.3 Umbrella Clauses

Another important provision is referred to as the umbrella clause. Umbrella clauses are provisions in investment treaties that commit the host state to honour contracts and other commitments with foreign investors, even when these commitments are not related to the investment treaty. They further strengthen the legal value of the deal for the investor far beyond that of a contract under the domestic law of the host state. Umbrella clauses appear in a large number of investment treaties and further elevate the rights of investors in this context. Thus, even if the contract itself does not provide for international arbitration, any claims of the investor for breach of contract can be brought under the investment treaty as a breach of international law through the operation of this clause. If the host state breaches the contract and an umbrella clause exists in the investment treaty with the home state of the investor, that breach of contract becomes a breach of international law (Reinisch, 2007). The water rights of the foreign investors arising from the contract with the host state are thus further strengthened through the operation of these clauses.

7.1.4 Dispute Settlement: Investment Arbitration

The dispute settlement provision is one of the most important provisions in investment treaties. Virtually all investment treaties contain provisions designating a special dispute resolution procedure: investment arbitration (Bernasconi-Osterwalder et al., 2011). It allows foreign investors to directly initiate proceedings against the host state to resolve disputes arising out of the treaty, contracts or domestic law. It gives "teeth" to the agreement as a whole by providing for the procedural enforcement of the rights contained in the investment treaty. It should also be noted that in the event of a conflict between the domestic law and the provisions of the investment treaty, the investment treaty prevails. This further strengthens the legal position of foreign investors.

This reality must be countered by a genuine implementation of the integrated water resources management schemes described below. These and other international legal regimes, including international freshwater, environmental and human rights law, provide the relevant legal framework to address water use by foreign investors. They can potentially counter the extensive rights of foreign investors under the contract and investment treaty by protecting the water use of other state users and local communities.

It is not enough to simply ensure that other legal frameworks are in place because there is no guarantee that arbitral tribunals will take them into account. Therefore, the investment treaty itself must express its relationship to the other legal regimes.

Host states are responsible for the way shared water resources are managed, and may be held liable for the actions of private investors that interfere with other states' rights. In the context of farmland investments, this means that states must consider the transboundary impact of these investments, particularly since they require vast amounts of water given their size and scale. These other areas of international law must be understood by host states and borne in mind throughout the life of a farmland investment. They may further constrain host state actions, and at the same time pose justifications for imposing higher requirements on investors in order to meet host state obligations under international freshwater, environmental and human rights law.

8.0 International Freshwater Law

International law governing fresh water resources has developed to govern transboundary movement of freshwater, mainly focusing on the management of international watercourses (Boisson de Chazournces, 2009). It governs the allocation of water between states, based on the principle of reasonable and equitable use and the "no-harm" principle, as is discussed below. The primary focus of international freshwater law is the relationship between and among riparian states and the impacts that their activities have on each other (Fisher, 2009). International freshwater law has developed significantly during the latter half of the 20th Century and now reflects the theoretical framework of a community of interests in water rather than a framework favouring territorial or absolute sovereignty (Weiss, 2013). This community of interests "derives from the vital nature of water to all life, the unity of a watercourse, and the importance of watercourses as means of transportation, communication and socio-economic development" (McCaffrey, 2007, p. 161).

As noted, water and water use are intricately connected, and the use of water resources in State A may negatively impact the water resources in State B, both in terms of quality and quantity. This is particularly true in Africa, where international watercourses cross the boundary of every single state on the continent. The law governing these international watercourses is therefore particularly relevant to the water use by large-scale foreign agricultural investments. Africa is also home to over 60 international river basins, many of which have developed their own institutional mechanisms for the use and protection of the shared water resources. This section will therefore highlight the relevant rules of international law governing international watercourses and then highlight some regional basin approaches adopted to govern international river basins. Host states must be mindful that the water use of foreign investors is in compliance with and does not interfere with these regimes. Further, these regimes may provide guidance and facilitation of effective water management where the water use of farmland investments is called into question.

8.1 The Watercourses Convention

The 1997 Convention on the Law of the Non-Navigational Uses of International Watercourses (the "Watercourses Convention") entered into force on August 17, 2014, and is therefore particularly relevant in this context. Its entry into force may accelerate the process of transforming the norms of the Convention into customary international law that would bind and guide all states—whether they are party to the Convention or not. Whether or not it can be said to represent customary international law,[24] it is particularly relevant in Africa, where every single state has at least one international watercourse to manage. It provides a framework for the management and protection of shared watercourses by providing general principles and rules that may be tailored to suit the conditions of specific watercourses and the needs of states sharing those watercourses.[25]

The Watercourses Convention applies to non-navigational uses of international watercourses, including measures of protection, preservation and management.[26] It does not affect the rights or obligations under pre-existing agreements, but encourages state parties to "consider harmonizing" existing agreements in line with the "basic principles" of the Convention.[27] It defines a "watercourse" as "a system of surface waters and groundwaters constituting by virtue of their physical relationship a unitary whole."[28] This definition corresponds to the physical characteristics of water itself and calls attention of states to the interrelationship between all parts of the hydrologic system. It makes it immediately clear that an effect on one part of the water system

[24] It should be noted that the Watercourses Convention is referred to in several regional agreements, most notably in this context, for example in the preambles of the Revised Protocol on Shared Watercourses in the Southern African Development Community (SADC), the Water Charter for the Lake Chad Basin, The Water Charter for the Niger Basin (La Charte de l'Eau du Bassin du Niger), the Water Charter of the Senegal River and the Agreement on the Establishment of the Zambezi Watercourse Commission. The express reference to the Convention and further elaboration of the principles and norms espoused therein are further evidence that the Watercourses Convention represents customary international law and therefore binds all states in the context of shared watercourses, whether they are party to it or not.

[25] See the Article 3 of the Convention on the Law of the Non-Navigational Uses of International Watercourses, New York, 21 May 1997; see also McCaffrey (2007).

[26] *Ibid* Article 1(1).

[27] *Ibid* Article 3 (1) and (2).

[28] *Ibid* Article 2 (a).

could, depending on the circumstances, be transmitted to other parts of the water system (McCaffrey, 2007, p. 360). It thus indicates that host states must be cautious that the water abstracted for the operation of farmland investments does not negatively impact watercourses, so intricately connected. The Watercourses Convention itself provides guidance as to how this may be done.

8.1.1 The Principle of Reasonable and Equitable Use

Part II of the Watercourses Convention sets forth the general principles in this area. The principle of reasonable and equitable utilization is considered the fundamental rule governing the use of international watercourses.[29] It may be more usefully seen as process, however, that heavily depends on the active cooperation between states sharing water resources (McCaffrey, 2007, p. 404). The International Court of Justice (ICJ) has confirmed that the principle of reasonable and equitable use is a part of customary international law.[30] The principle is therefore binding on all states in respect of all shared water resources, regardless of whether a state is a party to the Convention or whether the Watercourses Convention covers the water resource in question. The concept of equitable utilization recognizes that "A river is a 'treasure' that 'offers a necessity of life.' Therefore, when it flows through more than one jurisdiction, it 'must be rationed among those who have power over it.' It would be intolerable for the upstream state to cut off all the water from the downstream state, or for the latter to require the former to 'give up its power altogether.'"[31]

The determination of "equitable use" requires a balancing of different interests and a consideration of all relevant factors such as the physical and climatic conditions, the consumptive use of the water in several areas of the watercourse, the character and rate of return flows, to name but a few relevant factors (McCaffrey, 2007, p. 387). The principle prevents one state from depriving another state of its equitable share of the water resource. The definition of that equitable share may change over time, which is why consultation and notification are vital in this area given the fluctuations and uncertainties surrounding water resources. To fulfill the obligation of equitable utilization a state must exercise due diligence to avoid depriving co-riparian states of their equitable shares (McCaffrey, 2007, p. 402). They must also conduct a transboundary environmental impact assessment to determine whether a planned activity might have adverse impacts upon other riparian states.[32]

8.1.2 Transboundary Environmental Impact Assessments

Where a farmland investment is located within a transboundary basin, the host state is required to conduct a transboundary environmental impact assessment to determine whether the water use of the investor will interfere with the equitable water use of other riparian states. There is some evidence of environmental impact assessments taking place before an agricultural investment, but none have explicitly focused on the transboundary impact for freshwater sources, or even on the impact for water resources more generally. Moreover, the overall quality of environmental impact assessments is particularly low in Africa due to a lack of capacity in many cases (Jagerskog et al., 2012).

Nonetheless, as is discussed below in the section dealing with international environmental law, this obligation has now been recognized as part of customary international law. Therefore the obligation to conduct the transboundary environmental impact assessment will apply regardless of whether the state is a party to the Convention or whether the water resource is covered by the Convention. Host states should bear this in mind throughout the negotiations of farmland investments and ensure that the investors understand the host state obligations vis-à-vis shared water resources under international law. The transboundary environmental impact assessment is a golden opportunity to address and consider the water use of foreign investors before it becomes an issue. Weak environmental impact assessments will increase the likelihood of negative impacts (on both other states and local communities) and of a dispute between riparian states (Jagerskog et al., 2012).

[29] See Article 7 of the Convention on the Law of the Non-Navigational Uses of International Watercourses and McCaffrey (2007).
[30] *Case concerning the Gabcikovo-Nagymaros Project* (Hungary/Slovakia), 197 ICJ 7, Judgment of 25 September 1997, paras. 78, 85, 147 and 150.
[31] McCaffrey (2007), quoting Justice Oliver Wendell Holmes in the case of New Jersey v New York, decided by the United States Supreme Court in 1931.
[32] Article 12 of the Convention on the Law of the Non-Navigational Uses of International Watercourses; see McCaffrey (2007).

8.1.3 The "No-Harm" Principle

The Watercourses Convention also provides that when utilizing an international watercourse, states have an obligation to "prevent the causing of significant harm"[33] to other states that share the watercourse. This is referred to as the "no-harm" principle or obligation. The no-harm principle requires the avoidance of harm to an international watercourse to the extent that is reasonable under the circumstances—it complements and supports the principle of equitable utilization (McCaffrey, 2007). The International Law Commission has explained the concept of harm in this context: "There must be a real impairment of use, i.e. a detrimental impact of some consequence upon, for example, public health, industry, property, agriculture or the environment in the affected State."[34] This concept of harm encompasses damages to water quantity and quality of an international watercourse. The harm may take various forms including pollution damage and insufficient water for agricultural needs (McCaffrey, 2007). Harm may therefore result to other riparian users from over extraction of a shared watercourse by foreign investors, or from the pollution caused by the drain off of pesticides and fertilizers that flow overland or seep into the soil and find their way into shared watercourses, both surface and groundwater.

Host states must consider that they will still be responsible for breaches of the no-harm or equitable utilization principles even when the harm or breach of another riparian state's equitable share is caused by the actions of foreign investors. Under international law, the host state is sovereign and thus presumed to be in control of the activities within its territory. International freshwater law imposes certain obligations on the management and protection of international watercourses and other shared water resources that must be implemented.

8.1.4 Consultations and Negotiations if a State Considers It Has or May Sustain Harm

State practice has shown that when a state considers it has sustained or may sustain a certain level of harm relating to a shared freshwater resource (the "affected state"), it will lodge a complaint with the state it believes to be responsible for the actual or perceived harm (McCaffrey, 2007). This normally triggers discussions usually in the form of "consultations" or "negotiations" as to whether and to what extent harm has occurred and if it has, whether it is reasonable for the affected state to insist on being free from the harm (McCaffrey, 2007). The unilateral action of host states allowing foreign investors to abstract transboundary water has not yet been a source of conflict but could become contentious if future water withdrawals increase significantly as a result. In any event, abstraction of water by farmland investments means there is less water available in the transboundary basin and increased competition among users (Jagerskog et al., 2012). If/when that occurs, the consultation and negotiation mechanisms will kick in to determine whether the equitable share of another state has been harmed by the water use of foreign investors.

According to McCaffrey (2007, p. 433), the function of the harm threshold thus seems to

> **indicate the point at which a riparian state, believing it has suffered harm as a result of the conduct of another riparian state [or foreign investors within that state], may raise the matter with that other state, with a legitimate expectation that the other state will respond to it in an appropriate way.**

The no-harm and equitable and reasonable utilization principles thus compliment and reinforce each other in this way. The no-harm principle provides a threshold of harm that must be considered reasonable or in breach of the affected states equitable share. The causing of significant harm per se is not prohibited under the Watercourses Convention; only the unreasonable causing of such harm is prohibited (McCaffrey, 2007). Some causes of harm, perhaps even significant harm, may be deemed reasonable under the circumstances and may therefore have to be tolerated. It is not clear whether abstraction of large quantities of water to sustain large-scale commercial agricultural investments could be deemed reasonable. Much would depend on the

[33] See Article 7 of the Convention on the Law of the Non-Navigational Uses of International Watercourses

[34] Yearbook of the International Law Commission, (1988), Vol. 2 pt. 2, at 36; see ibid at 49; The International Law Commission was responsible for drafting the Watercourses Convention that formed the basis of the negotiations in the Sixth Committee of the General Assembly before its adoption on May 21, 1997. It was adopted by a vote of 103 for and 3 against, with 27 abstentions. Belgium, Nigeria and Fiji subsequently informed the UN Secretariat that they intended to vote in favour of the Convention, which would bring the total votes in favour to 106; see McCaffrey (2007) at 359.

circumstances. However, large amounts of water abstracted, combined with high amounts of chemical runoff (pesticides and fertilizers) could be deemed unreasonable given the fundamental value of water and its growing scarcity when faced with population growth, increased urbanization and climate change pressures.

McCaffrey (2007) observes that the no-harm principle provides an obligation of due diligence on host states and triggers a duty to discuss the issue if another state claims to be harmed, to be able to determine whether such harm is reasonable in the circumstances. In practice, this means that if the affected state makes a showing that it has been significantly harmed as a result of another state's conduct in relation to an international watercourse, the burden shifts in effect to the alleged initiating state to show that it has fulfilled its obligation of due diligence to prevent the harm. If the initiating state cannot meet this burden and demonstrate that it fulfilled its due diligence duty to prevent the harm, it will be responsible for a breach of the due diligence obligation. Even if it can demonstrate that it met the due diligence duty, however, it must also establish that its conduct or use is reasonable and equitable (McCaffrey, 2007).

The no-harm and equitable utilization principles thus work in tandem: the no-harm obligation works to sound the alarm bell when the balance of interests that form an equitable utilization regime tips too far in one direction (McCaffrey, 2007). International environmental law further informs the manner and form of this due diligence and duty of prevention, and is discussed below. Host states have a due diligence duty to prevent the water use by farmland investors from unreasonably harming the equitable share of other riparian states.

8.1.5 Protection and Preservation Against Pollution and Overexploitation

International freshwater law has developed to encompass matters of protection, preservation and management to address issues of overexploitation and pollution. Part IV of the Watercourses Convention provides for the preservation of international watercourse ecosystems and obligations concerning the "prevention, reduction and control of pollution."[35] It defines "pollution" broadly and establishes the basic and general obligations with regard to pollution of international watercourses. It requires states sharing an international watercourse to enter into consultation at the request of any state in order to reach agreement on specific measures and methods to prevent, reduce and control pollution (McCaffrey, 2007).

Article 20 of the Watercourses Convention on the protection of ecosystems does not mention the need for a transboundary impact. It therefore appears to require a state to protect and preserve the ecosystems of an international watercourse flowing through or along its territory even if a failure to do so would not result in a transboundary effect (McCaffrey, 2007). The precise content and implications of the obligation to protect the ecosystems of international watercourses are not entirely clear (McCaffrey, 2007). It is nonetheless vital to recall the interconnected nature of water: degradation and exploitation affects the quality and quantity of the entire water source and thus impacts every living being dependent on that source for survival that make up its ecosystem. The obligation of due diligence thus extends to prevent the degradation of the ecosystem of the watercourse (McCaffrey, 2007). It is therefore an extension or expression of the no-harm principle, since it follows that harm in breach of another states equitable share would also impact the increasingly vulnerable ecosystem dependent on the water source.

8.1.6 Procedural Obligations and Institutional Structure

Although procedural obligations may often be overlooked, they are quite significant because they provide the means to bring practical effect to the substantive rights contained in the Watercourses Convention. A state can rely on the rights provided in the Convention or be faced with a potential breach of an obligation through the procedural obligations described below. Procedural rights and obligations are particularly important because they provide the means to enforce substantive rights, just as investment treaties provide for the procedural obligations related to investment arbitration as the means to enforce foreign investor's substantive rights in the contract and investment treaty.

[35] Articles 20 and 21 of the Watercourses Convention.

The Watercourses Convention provides a general obligation to cooperate to "attain optimal utilization and adequate protection of an international watercourse."[36] The inclusion of this article "represents a broadly shared recognition that cooperation between riparian states is vital, and will become even more so in the future as demand for fresh water increases while its quantity and quality decrease" (McCaffrey, 2007, p. 470). The Convention also devotes an entire section in Part III to detailed rules on the notification, consultation and negotiation of "planned measures" in one state that may have a significant adverse effect on other riparian states.[37] It is significant that the duty to provide notification under the Convention is triggered when the planning state has reason to believe that the measure in question may have a "significant adverse effect" upon other states, not when it believes the measure may result in significant harm to other riparian states (McCaffrey, 2007). This is a lower threshold. It therefore obliges the host state to enter into the required procedures of notification and consultation with other states in order to address the impact of the investment on the shared watercourse, when the farmland investments are sought on or near an international watercourse.

International freshwater law has emerged through the interplay of norms adopted at the universal, regional and basin levels (Boisson de Chazournces, 2009). Many of the norms are further reproduced and detailed at the regional and basin level, as prescribed by the Watercourses Convention. These will be further discussed below. Moreover, host states must be aware of these norms because for riparian host states, increased water use by farmland investments may cause the host state to breach its obligations owed to other riparian states under international law. For example, Niger, a party to the United Nations Watercourses Convention, must ensure that farmland investments abstracting water from the Niger River Basin for production do not interfere with the equitable and reasonable use and must exercise due diligence to prevent harm to the water resources of other riparian states. If such farmland investments do interfere or cause harm to the equitable and reasonable share of another state party to the Convention, say, Nigeria, then Niger's international responsibility may be triggered for failing to fulfill its obligation to Nigeria, another riparian state. Other relevant considerations in this example arise from the joint-institutional management of the Niger River Basin to be discussed below.

The substantive and procedural obligations above are a reflection of the framework of community of interests. McCaffrey (2007, p. 164) notes that the interests of states along a shared watercourse are "unquestionably interconnected intimately with one another." The community of interests framework provides an accurate conception of the relationships of states along a shared watercourse: the actions of one state in its territory concerning a shared watercourse can affect other states, as well as common resources like the sea. The framework also more accurately reflects the physical fact that a watercourse system is a single unit in many ways, an essential thing shared by one or more states (McCaffrey, 2007). It implies collective or joint action, which is absolutely essential for sustainable water management.

It is logical that this community of interests framework is expressed in the form of regimes of joint-institutional management of the watercourse. Unlike land tenure rights, water rights are dependent upon the active management of the resource (Hodgson, 2004). The trend in water administration institutions is increasingly toward a drainage basin approach: water is managed by reference to the shape or form of the land that forms the catchment of a major river and its tributaries from the upper watersheds down to the sea or other final "terminus," like a lake (Hodgson, 2004).

An arbitral tribunal has highlighted that "[w]hen the States bordering an international waterway decide to create a joint regime for the use of its waters, they are acknowledging a 'community of interests' which leads to a 'community of law.'"[38] The following section briefly examines some of the "communities of laws" formed by the regional joint-institutional management schemes relevant to farmland investments in Africa. These are organizations or institutions that have been developed to facilitate the transboundary cooperation and

[36] Article 8 of the Watercourses Convention.

[37] See Part III of the Watercourses Convention and McCaffrey, 2007, p. 472.

[38] *Case concerning the Auditing of Accounts between the Kingdom of The Netherlands and the French Republic pursuant to the Additional Protocol of 25 September 1991 to the Convention on the Protection of the Rhine against Pollution by Chlorides of 3 December 1976*, Arbitral Award (Perm. Ct. Arb., Mar. 12 2004), at para. 97, available at http://www.pca-cpa.org/upload/files/Neth_Fr_award_English.pdf.

management of shared water systems at the regional and subregional level. These regional joint-institutional management schemes provide more specific detailed guidance and considerations concerning sustainable water management. Most target states are party to one or more of these organizations, and must therefore be mindful to effectively participate in the joint management schemes developed therein. Given that many farmland investments take place within shared international basins, states may face complaints through some of these mechanisms. They may also seek guidance for the effective management of the shared watercourse through the operation of the joint-institutional management embodying the integrated approach to water management. Most of these are an elaboration or more tailored description of the principles described above, and will therefore be dealt with briefly.

9.0 Integrated Water Resources Management Schemes in Africa

The quantity and quality of water resources are infinitely connected to a range of land-use and water-management decisions. An approach or methodology called integrated water resources management (IWRM) (or integrated river basin management) has emerged to address and balance these different issues that impact water (Hodgson, 2004). The above regime reflects this integrated approach to water management. The Global Water Partnership has defined IWRM as "a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems" (qtd. in Vapnek et al., 2009, p. 53).

The IWRM approach has developed at the regional level and further informs the issue of water in the context of farmland investments. Africa has around one third of the world's major river basins—between 63 and 80 transboundary river and lake basins (depending on how they are counted) (United Nations World Water Day 2013). The basin-level approach is thus particularly relevant in Africa, and an understanding of joint-institutional mechanisms even more important in this context. These regional institutional mechanisms reflecting an IWRM approach are highlighted below. The situations in the SADC and ECOWAS are particularly relevant, because some of the member states in these regions are also the major recipients of farmland investments.

9.1 The Southern African Development Community (SADC)

Water is limited and unevenly distributed in geographical terms and throughout the year in the SADC region (Ramoeli, n.d.).[39] The SADC aims to become an integrated regional economy on the basis of equity and mutual benefit, and is governed by both treaty and declaration signed in 1992. Water resources are frequently shared between several states in transboundary hydrological basins throughout the region. Eight riparian members share the Zambezi River Basin, for example. In fact, over 70 per cent of renewable water resources in the region occur in shared water, and there are 15 shared watercourses between two or more members of SADC (Ramoeli, n.d.). According to the SADC Regional Water Policy (2005), shared watercourse systems are a characteristic feature of the region, with complex water rights and potential conflicts over utilization of shared resources.

Widespread poverty is another characteristic of the region. Studies by the United Nations and World Bank indicate that a number of SADC countries have the lowest human development indices in the world. It is estimated that around 70 per cent of the region's population lives below the international poverty line of US$2 per day (SADC, 2005).

The SADC region is particularly relevant in this context as the primary target region of farmland investments (Oakland Institute, 2011c). Given the high number of shared water systems throughout the region and the vast amounts of water required for the operation and maintenance of farmland investments, the SADC framework is extremely relevant in this context both for guidance and for setting out the obligations of host states. Changes in the environment due to climate change are expected to have an adverse effect on agricultural production in the region, including staple crops such as maize and millet (Oakland Institute, 2011c).

For the region as a whole, reduction in net productivity of more than 10 per cent is estimated in the case of maize and other major crops like sorghum, millet, sugar cane and wheat (Oakland Institute, 2011c). The same report observes that more than 70 per cent of the region depends on agriculture for food, income and employment, which means that a loss of productivity will have a ripple effect throughout the region. It also indicates that farmland investments may become more of an issue since the majority of food grown in these investments is

[39] The Members of the SADC and amount of land leased to foreign investors according to the Land Matrix where known are: Angola, Botswana, the Democratic Republic of Congo (close to 3 million ha), Lesotho, Madagascar (close to 4 million ha), Malawi, Mauritius, Mozambique (around 1 million ha), Namibia, Seychelles, South Africa, Swaziland, United Republic of Tanzania (around 2 million ha), Zambia (less than 500,000 ha) and Zimbabwe, see Anseeuw et al. (2012) for the amount of land leased to foreign investors in the relevant states.

shipped back to the home country of the investor. Further, in their zeal to develop irrigation, host states must be mindful that the water use by foreign investors does not infringe the SADC Protocol on Shared Watercourses, the SADC Regional Water Policy, or the overarching framework of the Watercourses Convention.

The management and preservation of shared water resources is paramount in the SADC region. The SADC adopted its first Protocol on Shared Watercourse Systems in the Southern African Development Community Region in 1995. It expressly provided that SADC members are to "respect and abide by the principles of community of interests in the equitable utilization of [shared water] systems and related resources."[40] It was the first binding agreement among SADC member states, illustrating the important role of water within the region. The SADC adopted a Revised Protocol on Shared Watercourses in 2000 to bring the provisions in line with the Watercourses Convention. The Revised Protocol serves as a specific framework agreement for the management of transboundary basins within the region, complementing the Watercourses Convention.

The provisions of the Revised Protocol largely mirror those of the Watercourses Convention, particularly the general principles and definitions. It embodies the principles of reasonable and equitable utilization and no-harm as discussed above, and calls for the protection and conservation of the environment and ecosystem, in line with the Watercourses Convention. It highlights the importance of taking a basin-wide approach to water management and encourages the movement away from bilateral agreements for the management of shared water resources. It thus provides flexibility for states to enter into specific basin-wide agreements as promoted under the Watercourses Convention. It proposes the establishment of River Basin Organizations to conduct research and data gathering, manage water control and utilization and promote environmental protection measures, among others.[41] The establishment and strengthening of River Basin Organizations is considered a direct effort in the implementation of the Protocol (Ramoeli, n.d.).

The SADC Regional Water Policy in 2005 provides a further institutional framework guiding states in the context of water management in the region. The policy promotes measures to increase water use efficiency in agriculture, which is particularly relevant in the context of farmland investments. It notes that the pricing of irrigation water "shall be consistent with the need to provide economic incentives for efficient use" (SADC, 2005, xi). This suggests that in the context of farmland investments, higher rates should be applied to irrigation to encourage lower water usage. The Policy further provides that "water resources development for irrigation in commercial agriculture should be planned in coordination with other sectors in the interest of [Integrated Water Resource Management] IWRM" (SADC, 2005, p. 26). This further requires coordination with other states and other sectors in order to ensure sound water management where irrigation is required in the commercial context, regardless of whether there is transboundary harm or breach of the equitable utilization principle. Host states in the SADC must therefore ensure proper coordination is carried out in the event irrigation will be required for the maintenance of a farmland investment. This also requires discussion with foreign investors as to the extent of their water and/or irrigation needs.

The Regional Water Policy calls for increased irrigation in light of advantages including increased agricultural productivity and economic development (SADC, 2005). This in turn implies that that many of the farmland investments in this region will require more irrigation. According to the Policy, the agricultural sector of the SADC region contributes more than 35 per cent to the regional economy. Most of this production comes from rain-fed production systems that are susceptible to droughts and floods. Climate change increases rainfall variability and further increases the vulnerability of these systems. Irrigation is therefore considered critical in the region (SADC, 2011). SADC members are therefore encouraged to increase irrigated areas, but must keep in mind the duty to cooperate through notification and consultation in the event commercial irrigation is planned.

[40] Article 2(2) of the Protocol on Shared Watercourse Systems in the Southern African Development Community (SADC) Region, 28 August 1995; However, the Protocol was revised to harmonize its provisions with the Watercourses Convention, and that article does not exist in the revised Protocol currently in force. This follows the Watercourses Convention as the Convention reflects a community of interests framework but does not expressly enunciate it in the manner above. Regardless of its deletion in the revised Protocol, the Protocol reflects a community of interests approach to the integrated management of shared watercourses in the region; see McCaffrey, (2007).

[41] See Article 4 of the Protocol on Shared Watercourse Systems in the Southern African Development Community (SADC) 2000.

River Basin Organizations are particularly relevant in this context, as they may be in the best position to effectively manage the large-scale abstraction of water to sustain farmland investments. The Regional Water Policy (2005) of the SADC also provides that River Basin Organizations are the primary implementing vehicle of the IWRM approach. They will certainly play a role in the mandatory cooperation through the notification and consultation requirements involved in a planned activity near a shared watercourse. This means that where a farmland investment is planned on or near a shared watercourse, the host state must cooperate with the relevant basin authority according to its established procedures. Where no relevant basin authority exists, the SADC Protocol and the Watercourses Convention require such cooperation in the form of notification and consultation with other riparian states in any case. Where there are no such institutions or agreements in force, the customary obligations referred to above will be triggered to compel the host state to prevent transboundary harm to shared water systems.

9.2 The Economic Community of West African States (ECOWAS)

There is another regional agreement that also provides the framework for the management of transboundary basins within its region relevant to this context: The Economic Community of West African States (ECOWAS),[42] whose members are very dependent on each other when it comes to water resources (International Network of Basin Organizations [INBO], 2012). ECOWAS provides an additional relevant regional framework for the management of water in the context of farmland investments, as many other recipients of these investments are members of ECOWAS. There are 25 shared river basins in the region. Six of these shared river basins are managed by River Basin Organizations: the Gambia, Mono, Niger, Senegal and Volta Rivers (INBO, 2012).

The Heads of State of ECOWAS initiated a permanent framework for dialogue on water resources led by the Water Resources Coordination Unit. This unit has focused widely on transboundary water management by facilitating the creation of new transboundary authorities, most recently the Volta Basin Authority. Although ECOWAS does not have a developed water protocol like the SADC, the promotion of these river basin institutions greatly benefits the integrated management of shared water resources in the region.

These river basin institutions take various forms and may have specific mandates, and their effectiveness depends on their links with national governments (Pietersen & Beekman, 2008). This may be challenging because national governments normally consist of different sectoral ministries that may have competing interests and different perspectives on issues. In the context of farmland investments, an example of this would be the ministry responsible for investment, which would encourage the investment to proceed at all cost, and the environmental ministry, which may urge more caution and reflection. Each river basin has its own characteristic and institutional arrangements that are "central to the management of water resources and are crucial to the implementation of the principles of international law, particularly the principle of equitable use of transboundary water resources and the obligation not to cause harm in the management of transboundary water resources" (Pietersen & Beekman, 2008, p. 1). They are therefore particularly relevant and must be considered in the context of farmland investments.

9.3 The Legal Regimes of Some Major African River Basins

A number of legal regimes have evolved to deal with transboundary river basins. When identifying the legal framework for water rights related to farmland investments, host states must first look to whether the specific water resource is governed by a particularly regional regime, then look at the broader framework. Below is an overview of the legal regimes for most of the major African river basins. If there are no such agreements in place, the Watercourses Convention will kick in to provide the general fallback in the absence of a more specific detailed framework. The recent entry into force and the codification of many customary norms in the

[42] The Members of ECOWAS and the amount of land leased to foreign investors according to the Land Matrix where known are: Benin, Burkina Faso, Cabo Verde, Cote D'Ivoire, Gambia, Ghana (over 500,000 ha), Guinea, Guinea Bissau, Liberia (over 500,000 ha), Mali, Niger, Nigeria (less than 100,000 ha), Senegal (around 100,000 ha), Sierra Leone and the Togolese Republic, see Anseew et al. (2012) Figure 4 for the amount of land leased to foreign investors in the relevant states.

Watercourses Convention could also mean the principles of the Convention may be applicable to all states as customary international law, regardless of whether the water system in question is covered by the Convention or whether the state is party to it. The obligation to prevent harm to a shared watercourse and to conduct a transboundary environmental impact assessment is already such a universally binding obligation, as discussed above.

9.3.1 The Legal Regime Governing the Senegal River

The Senegal River is generally characterized as being governed by the most pioneered, progressive and articulated legal regime (Mbengue, 2013). It is the second-most important river in West Africa, after the Niger River. The basin has experienced periodic droughts due to climate change that have resulted in reduced rain-fed agriculture (Pietersen & Beekman, 2008). Three of the four riparian states (Mali, Mauritania and Senegal) concluded the Convention on the Statute of the Senegal River in 1972 that strengthened the unanimity or "prior agreement" rule. It provides that "No Project which is likely to bring about serious modifications on the characteristics of the river's regime, on its navigation conditions, the agricultural and industrial exploitation of the river, the sanitary state of the waters, the biological characteristics of its fauna and its flora, as well as its water level, will be implemented without the prior approval of the contracting States."[43] This means that for farmland investments on or near the Senegal River, *all* of the riparian states must approve of the water abstraction for the maintenance of the investment *before* it goes into operation. Unfortunately, there is no evidence that this has taken place, most likely due to the poor implementation and enforcement of the regime at the domestic level.

The Statute deals with the substantive rights and obligations of the riparian states, particularly relating to agricultural and industrial uses and navigation and transport purposes (see Mbengue, 2013 & Mbengue, 2014). At the same time, the parties established a separate institutional agreement establishing the Organisation pour la Mise en Valeur du fleuve Sénégal (OMVS, or "Senegal River Development Organization"). The drafters thus fragmented the substantive joint legal regime and the procedural joint legal regime applicable to the Senegal River Basin. This was intended to ensure that compliance with substantive obligations would be constantly supervised and scrutinized by the joint machinery of the OMVS (Mbengue, 2014). The OMVS is the only one, through its Permanent Water Committee, that may determine whether or not a planned measure affects the quality of the waters. By extension, only the OMVS can approve a planned measure on the Senegal River through the unanimous decision of its members. Member states cannot make unilateral decisions regarding the river. Given the difficulties with rain-fed agriculture in the region, most farmland investments in the region would need to rely on the river for their operation. Host states of farmland investments along the Senegal River therefore may not commit to a farmland investment without the prior approval of the OMVS.

The riparian states went even further in 1978 with the Convention on Common Works. This Convention subjected all works on the river to a regime of common and indivisible ownership in the name of solidarity (Mbengue, 2013 & Mbengue 2014). The riparian states have thus relinquished their sovereign control and their ownership of land and river works to the OMVS to a far greater degree "than would be expected under the most cooperative theories of basin management or good neighbourliness" (Vick, 2006, p. 216). Although these legal instruments were progressive and pioneering in many respects, they did not elaborate provisions on the protection of the environment. Further, the adoption of the Watercourses Convention prompted a reconsideration of water management. A water charter was thus elaborated upon.

The 2002 Waters Charter of the Senegal River was the first such instrument in Africa. It is a treaty, but may be seen as a sort of "constitution" in the pyramid of legal instruments governing cooperation over the Senegal River Basin (Mbengue, 2013 and Mbengue 2014). This means that the Waters Charter sets the overarching legal framework governing the Senegal River. Both the 1972 Statute and OMVS Convention must be implemented and interpreted in accordance with Waters Charter. It provides the new relevant framework for the management of the resources of the Senegal River through cooperation in an "inclusive framework". This required Guinea-

[43] Article 4 of the 1972 Convention on the Statute of the Senegal River, original in French.

Conakry, the upstream state, to become a member of the OMVS after 30 years (Mbengue, 2013). Other African river basin organizations have followed suit in the development of their own waters charters. The Niger Basin Authority adopted the Niger Basin Water Charter in 2008, and the Lake Chad Basin Commission adopted its Water Charter in 2011. These will be briefly discussed below.

The Waters Charter of the Senegal River is governed by three main patterns: the pattern of sustainable development, the pattern of public participation and the pattern of universalism (Mbengue, 2013). The management of the river is driven by principles of equity and cooperation under the Charter (Vick, 2006). The objectives of the Charter include "preservation and protection of the environment, particularly with regard to the wildlife, the flora, and the ecosystems of the floodplains and the wetlands."[44] It requires that the distribution of water give priority to the human right to water.[45] It further provides that technical standards for water distribution provided in the Charter are "secondary to the principle of non-discrimination, to the obligation to satisfy vital needs, and to the safety of the population."[46] In addition, it provides that water use for drinking, particularly for the most vulnerable, is prioritized over other needs, including agricultural needs.[47] This means, for instance, that water use by farmland investments near the Senegal River Basin must not interfere with the obligation to ensure priority water use for vital human needs in fulfillment of the right to water.

It also expressly refers to the applicability of general principles and customary principles of international water law as codified in the Watercourses Convention.[48] This confirms the intrinsic interplay between universal and basin perspectives (Mbengue, 2013). It further reveals significantly that "norms established at the universal, regional and basin levels [can] be read together, and a systemic interpretation of international law [can] be promoted" (Boisson de Chazournces, 2009). The Senegal River legal regime thus complements the international freshwater law principles described above and further informs water rights and management in this context. Most relevant in this context, it aims to define the methods of examination and approval of new projects affecting the quantity and quality of water.[49] It provides that the OMVS shall fix the priority between water needs, and that in the event of a shortage, drinking water and other domestic uses will be given particular attention.[50] Farmland investments may therefore be impacted in the event the OMVS determines that as a result of water shortage, priority must be given to the water needs of the local vulnerable populations. Host states are bound by their determination and will have to interfere with the water use of farmland investments if that situation arises. This applies regardless of the contractual arrangements with the individual investor. In addition, the Charter provides that any planned activity that may harm the watercourse is subject to prior notification, consultation and authorization, in reference to the obligations in the Statute discussed above.[51] Again, this means that farmland investments near the Senegal River may not be unilaterally approved of by the host states, but must be approved of by the OMVS.

Host states along the Senegal River must therefore be aware that farmland investments near or along the river must first be approved by the OMVS *before* they can be authorized. It is crucial to recognize that these investments are not only about land, but potentially involve large abstractions of water in many cases from shared watercourses. In the case of the Senegal River, these investments qualify as a planned activity subject to the notification, consultation and authorization requirements above. For those investments that have gone into production without this authorization, the OMVS may determine priority use should be given to protect vital human needs, which would require host state interference with the water use of the investment. Host states must understand this process, and ensure that foreign investors are also aware of these overarching obligations that arise as a result of shared watercourses.

[44] Article 2 of the 2002 Waters Charter of the Senegal River.
[45] Article 4 of the 2002 Waters Charter of the Senegal River.
[46] Article 6 of the 2002 Waters Charter of the Senegal River.
[47] Article 8 of the 2002 Waters Charter of the Senegal River.
[48] See the preamble of the 2002 Waters Charter of the Senegal River and Mbengue (2013).
[49] Article 2 of the 2002 Waters Charter of the Senegal River.
[50] Article 9 of the 2002 Waters Charter of the Senegal River.
[51] Articles 10 and 24 of the 2002 Waters Charter of the Senegal River.

9.3.2 The Lake Chad Basin Commission

The Lake Chad Basin Commission was established to manage and preserve the ecosystems of the Lake Chad Basin and resolve any disputes that may arise over the lake and its resources (Pietersen & Beekman, 2008). It was established in 1964 by the four states that border Lake Chad: Cameroon, Niger, Nigeria and Chad. The Central African Republic joined the Commission in 1996, and Libya was admitted in 2008. Sudan, Egypt, the Republic of Congo and the Democratic Republic of Congo also hold observer status in the Commission. The Commission aims to regulate and control the use of water and natural resources in the basin and to initiate, promote and coordinate natural resource development projects and research. The relatively dry climate and high agricultural demands for water have reduced the water supply of Lake Chad (Pietersen & Beekman, 2008), making its integrated management all the more imperative in the context of rising farmland investments.

The statutes governing the Commission forbid the unilateral exploitation of basin water where such use detracts from the interests of other states, as described above. Members are required to refrain from measures or actions that are likely to alter the water budget, quality, integrated water and resources management health or water access by other member states (Pietersen & Beekman, 2008). Member states are also required to notify and consult the Commission *prior* to undertaking new projects that are likely to have an "appreciable" effect on the overall water quantity or quality of the water in the basin (Pietersen & Beekman, 2008). The approach thus mirrors the Watercourses Convention, in line with the other examples above. This means that host states in the region must notify and consult other states in the event a farmland investment is planned.

The Commission recently adopted the Lake Chad Water Charter that further reinforces the integrated and coordinated management of Basin water resources. The Lake Chad Water Charter reinforces the institutional framework designed to ensure subregional cooperation and integration discussed above (Lake Chad Basin Commission, n.d.). It creates a binding framework for the integrated, equitable and coordinated management of the shared water resources of the Basin, including groundwater.[52] The Charter recognizes that "uncontrolled increase in abstractions could cause significant effects and critically reduce the volume and surface area of the Lake."[53] It is vital that host states recognize that uncontrolled water use by farmland investments impacts shared watercourses triggering these obligations at the international, regional and subregional levels. This is imperative for Cameroon, Niger, Nigeria, Chad, the Central African Republic and Libya because the water resources of the Lake Chad Basin are not subject to the sovereign ownership of the individual states but are the common property of all of them. The Water Charter for the Lake Chad Basin provides that all water resources contained in the Basin are "common property or heritage that the State Parties undertake to preserve for the benefit of all States concerned."[54] These states have relinquished their sovereign control over the water resources of the Lake Chad Basin in a similar manner as states along the Senegal River Basin. This means that host states along Lake Chad are not free to allow farmland investors unfettered water access within their territory as the water resources are not subject to their sovereign control to begin with.

In addition to implementing the principles of the Watercourses Convention discussed above (reasonable and equitable use, "no-harm," protection and preservation), the Charter sets a limit on the amount of water that can be abstracted from the Basin,[55] which makes the effective monitoring of farmland investments even more important. It provides detailed guidance on how to ensure the equitable and sustainable utilization of the shared water system and expressly provides that the "right to water for all people living in the Basin" will be given consideration to determine the equitable and sustainable use.[56] In line with international freshwater law described above, it provides for the priority usage for essential human needs of the population.[57] In this context, this means that the human needs of the populations of host states must be given priority over farmland investments when it comes to water use management. This consideration is mandatory since the Charter also

[52] Article 3 of the Water Charter for the Lake Chad Basin; see Section 3 of the Water Charter for the groundwater management provisions.
[53] Preamble of the Water Charter for the Lake Chad Basin.
[54] Article 7(i) of the Water Charter for the Lake Chad Basin.
[55] Article 11 of the Water Charter for the Lake Chad Basin.
[56] See Article 13 of the Water Charter for the Lake Chad Basin.
[57] Article 14 of the Water Charter for the Lake Chad Basin.

"acknowledges" that "their people have a right to water and sanitation, which is a fundamental human right and is necessary for human dignity" and commits state parties to "take all normative, institutional and operational measures necessary to guarantee that the said right is effectively implemented."[58] This means that host states must ensure that farmland investments do not interfere with the effective implementation of the people's right to water. This will be further elaborated upon below in the discussion of international human rights law.

The Charter further provides that any abstractions from the Lake or groundwater of the Basin are subject to "authorization or shall be declared prior to implementation."[59] It provides that authorizations to abstract shall be issued by state parties, but that the state parties must submit all applications for authorization to the Commission for its opinion, which shall be binding.[60] If, however, the Commission does not express its opinion within three months, the state party "may proceed to respond to the applicant without the opinion of the Commission."[61] It thus seems that any application for authorization of abstraction for existing farmland investments must be submitted to the Lake Chad Basin Commission for its binding opinion. If, however, the Commission does not issue an opinion within three months, it seems that the host state may proceed to authorize the abstraction without the approval of the Commission.

In addition, the Charter provides that any planned measure that is liable to cause significant harmful effects in another Basin state "shall be subject to prior authorization from the Commission."[62] It states that the Commission shall provide a list of planned activities that automatically fall within this category and trigger this obligation, but it is not clear whether this has taken place yet. It may be presumed that farmland activities near the lake would automatically trigger the obligation considering the amount of water required to sustain the investments and the potential transboundary impact for other states along the Basin. The Charter also confirms that the "polluter pays" principle applies in this context: that the cost of pollution, prevention, control and abatement measures shall be covered by the polluter.[63] This means that foreign investors are required to cover the costs associated with the pollution caused from pesticides and fertilizers, but that host states will be liable if they do not do so. Poor implementation and enforcement of these obligations at the national level have meant foreign investors are not held to this obligation in practice.

Perhaps most significantly, the Charter provides that "none of the State Parties shall reserve future rights to utilize the Basin's water resources to the detriment of the existing equitable and reasonable utilization."[64] This means that host states along Lake Chad cannot grant extensive long-term water rights to foreign investors in breach of the equitable and reasonable use of the water resources, which requires priority consideration for the human needs of the population. This provision is therefore very useful in this context and may be used as a justification to interfere with the water use of farmland investments. The Charter further elaborates that parties "undertake to prevent infringements of the Water Charter regarding fishing, navigation and the protection and conservation of the environment and water resources and, in particular, compliance with authorizations to abstract water and to discharge pollutants and the maintenance of environmental flows and water quality in the Basin." Host states along the Lake Chad Basin therefore would have solid ground to interfere with the water use of farmland investments to prevent infringements of the Charter, particularly related to sustainable and equitable use, no-harm, and the priority use for vital human needs of the population. Provisions like these may become more useful in the future as pressures and demands on water increase and the water use of farmland investments is more clearly recognized as a threat to water security of other riparian states as well as local communities. In general, a provision like this, in force for a shared watercourse near a farmland investment, would prevent investor's water rights from prevailing over the equitable and reasonable utilization of other states. Where such a provision is in force, it would also provide sound justification for host state interference with foreign investors' water use if such use negatively impacts other state users.

[58] Article 72 of the Water Charter for the Lake Chad Basin
[59] Article 16 of the Water Charter for the Lake Chad Basin.
[60] Article 17 of the Water Charter for the Lake Chad Basin.
[61] *Ibid*.
[62] Article 52 of the Water Charter for the Lake Chad Basin.
[63] Article 7(d) of the Water Charter for the Lake Chad Basin.
64 Article 15 of the Water Charter for the Lake Chad Basin.

9.3.3 The Niger Basin Authority

The Niger River is the third-longest river in Africa and the ninth-largest river system in the world (Pietersen & Beekman, 2008). The basin is shared by nine states: Mali, Nigeria, Niger, Benin, Burkina Faso, Cameroon, Chad, Cote d'Ivoire and Guinea, in the order of the percentage of water resources they receive, with Cote d'Ivoire and Guinea receiving the smallest share (Pietersen & Beekman, 2008). The Niger River Basin is particularly vulnerable to climate change variability, which manifests itself in frequent floods and droughts. This has caused water scarcity for agriculture, hydroelectric power generation and for domestic purposes (Pietersen & Beekman, 2008). Land degradation from clearing forests to make way for agricultural land has resulted in serious erosion and siltation problems (Pietersen & Beekman, 2008). Even without the added strain of farmland investments, there are water scarcity issues and already serious erosion problems from the extension of agricultural land. It can only be presumed that an increase in such activities will further strain the resources around the Niger River Basin.

The Niger Basin Authority will thus play an increasingly important role in facilitating cooperation among Niger Basin states to address these issues. It must be understood that water use by foreign investors in one member of the Basin impacts the water quantity and quality of other Basin states. Unfortunately, the Niger Basin Authority does not play a role in coordinating farmland investments; they are solely coordinated at the national level at present and viewed as an issue within the competence of national governments (Jagerskog et al., 2012).

All nine Niger Basin states are parties to the Convention that established the Niger Basin Authority, originally the Niger River Commission. The Niger Basin Authority was established to "promote cooperation among the member countries and to ensure integrated development in all fields through the development of its resources, notably in the fields of energy, water resources, agriculture, forestry, transport and communication industry" (Pietersen & Beekman, 2008, p. 20). In 2004, at a Conference of the Heads of State of the Niger Basin Authority a Declaration was signed on the principles of proper management and good governance. The Conference led to the ratification and endorsement of a roadmap leading to an investment plan (Pietersen & Beekman, 2008). However, the institutional framework for basin management has been considered weak in the Niger Basin (Pietersen & Beekman, 2008). Although the Niger Basin Authority is charged with the coordinated regional management of the basin's water resources, individual states have their own setups for the management of water resources within their territories through the responsible government ministries, and there seems to be little coordination between those authorities and the Basin Authority (Pietersen & Beekman, 2008). The Niger Basin Authority thus seems to fall short of fully implementing the regime of community of interests set out in the Watercourses Convention.

However, these shortfalls were recently remedied in 2008 through the adoption of the Water Charter of the Niger Basin in line with the other water charters outlined above. The Water Charter of the Niger Basin is very similar to the charters above, particularly the Lake Chad Basin. It further entrenches the principles of international freshwater law by reiterating the applicability of the reasonable and equitable use principle, the "no-harm" principle, the "polluter pays" principle, the obligation to consult and notify and the obligation to protect and preserve the water sources of the Niger Basin.[65] As with the other charters, it defines the modes of authorizing planned activities likely to have a detrimental transboundary effect,[66] which includes water use by farmland investments.

The provisions of the Water Charter of the Niger River Basin largely mirror the other charters outlined above. In particular, it provides for reasonable and equitable use and provides that the right to water of the population in the Basin must be considered to determine a reasonable and equitable share.[67] In line with the other agreements above, it also requires priority use given to vital human needs of the population.[68] As in other regions, this means

[65] See Article 4 for the principle of reasonable and equitable use, Article 5 for the "no-harm" principle" Article 8 for the "polluter pays" principle and Article 12 for the protection and preservation of the environment of the Water Charter of the Niger River Basin.
[66] See Article 2 of the Water Charter of the Niger Basin.
[67] Article 4 of the Water Charter of the Niger Basin.
[68] Articles 14 and 15 of the Water Charter of the Niger Basin.

that states around the Niger River Basin must prioritize the right to water of its population over the water use of farmland investments. This will be further explored below in the discussion of international human rights law.

The Water Charter of the Niger River Basin also creates a Permanent Technical Committee charged with ensuring the reasonable and equitable use of the water resources and issuing an opinion on *all* projects that impact the waters of the Basin.[69] It also requires the prior notification, consultation and negotiation of all planned activities likely to have a significant negative effect on the water resources in the Basin,[70] including farmland investments. This is in line with the Watercourses Convention, but falls short of the required authorization for such measures in the other two water charters referred to above for the Lake Chad Basin and the Senegal River Basin. Farmland investments near the Niger Basin therefore trigger obligations for host states to notify, consult and negotiate with other states along the Basin, and obligate host states to protect and prioritize water use for the Basin's own population over the water use by farmland investments.

9.3.4 The Zambezi Watercourse Commission

The Zambezi River is another central watercourse in the SADC region. It includes parts of Angola, Botswana, Malawi, Mozambique, Namibia, Tanzania, Zambia and Zimbabwe (Pietersen & Beekman, 2008). Climate change is expected to cause increasing droughts and floods affecting agricultural production along the river, making integrated water management all the more important.[71] The riparian states signed an agreement establishing the multilateral, basin-wide Zambezi Watercourse Commission in 2004, after decades of negotiations.[72] The Commission aims to "promote the equitable and reasonable utilization of the water resources of the Zambezi Watercourse as well as the efficient management and sustainable development thereof."[73] It further implements the principles described above, most notably the principles of reasonable and equitable use, no-harm, cooperation and the duty to notify and consult.[74] Therefore, as noted above, host states along the Zambezi River must consider whether water use by foreign investor will adversely impact other state users, and must notify and consult in the event a farmland activity will abstract high amounts of water on or near a shared watercourse.

The Zambezi Watercourse Commission is envisioned to be a water-management organization for the entire Zambezi River Basin, in line with the revised SADC Protocol on Shared Watercourses. As noted above, the revised SADC Protocol on Shared Watercourses is in turn in line with the more general Watercourses Convention. The Watercourses Convention provides the general framework for the management of international watercourses, the SADC Revised Protocol provides a more specific regional framework for the region, and the Zambezi Watercourse Commission provides the most specific and detailed basin-level regime for the Zambezi River. IWRM has therefore permeated from the international, to the regional and then local level. Many major watercourses have similar layers.

9.4 The Link Between International Freshwater Law and the Integrated Water Resources Management (IWRM) Schemes in Africa

International freshwater law obliges host states to cooperate and consult with other riparian states if a farmland investment is planned within a transboundary river or lake basin. For states along the Senegal and Lake Chad Basins, these investments must be approved by the relevant basin authority and may not be unilaterally authorized by the host state where they occur near the basins. In addition, the guiding principles in this area of law, particularly the principles of reasonable and equitable use and no-harm (along with the priority emphasis on vital human needs) are useful tools to consult in the allocation of water in domestic systems, particularly in the context of farmland investments.

[69] Articles 16 and 17 of the Water Charter of the Niger Basin.
[70] Articles 20 and 22 of the Water Charter of the Niger Basin.
[71] Integrated Water Resources Management Strategy and Implementation Plan for the Zambezi River Basin, (2008), SADC/Zambezi River Authority at 9, available from: http://www.icp-confluence-sadc.org/sites/default/files/Final_Strategy_Summary.pdf
[72] *Ibid* at 49.
[73] Article 5 of the Agreement on the Establishment of the Zambezi Watercourse Commission.
[74] See Articles 12 and 13 of the Agreement on the Establishment of the Zambezi Watercourse Commission.

Moreover, the integrated approach to water management advocated by the Watercourses Convention has taken hold in the expression of the regional institutions as referred to above. The principles discussed above, both regional and international, have all worked together to develop this area of law. These forces in turn drive change in water management at the national level. Other areas of international law further add to the layer of obligations and considerations outlined above. These considerations from international environmental and human rights law build on the principles discussed above to a large degree. Water use in the context of farmland investments requires a consideration of these multiple regimes. These regimes, although at times "fragmented" and dealt with in specialized fields, must all be understood in the context of farmland investments.

9.5 The Problems of Poor Implementation and Enforcement of the Legal Regimes Governing Water Use

Unfortunately, weak implementation and enforcement of the above legal regimes has meant that they play little practical role for the water use of farmland investments. Thus far, there is no evidence of any basin institution playing a role in a farmland investment (Jagerskog at al., 2012). The water used for irrigation by farmland investments has not featured in any basin institution. These investments will nonetheless most likely impact the mandate of these institutions and their ability to function (Jagerskog at al., 2012).

Inadequate institutional capacities of national water authorities and/or river basin organizations constrain the effective management of water resources throughout most of Africa.[75] Weak policy frameworks for sustainable development of *national* water resources along with low levels of awareness and training on issues related to water management also contribute to the weak impact of these principles and the institutions meant to enforce them.[76] Lack of financial resources and knowledge in evaluation and monitoring also contribute to these deficits (Pietersen & Beekman, 2008). Although committed and bound to the integrated approach to water management at the basin level, many states fail to implement these policies and practices at the national level (Pietersen & Beekman, 2008). This means that farmland investments slip under the radar in the absence of their implementation. Although binding on states, their poor implementation and enforcement at the national level means they have little practical effect on the water use of farmland investments.

The absence of funding mechanisms in many River Basin Organizations, like the Lake Chad Basin Commission, further contributes to its weak impact and inability to effectively manage water resources (Pietersen & Beekman, 2008). Further lack of coordination frustrates the effective implementation of these regimes.[77] As noted, many sectors are involved in farmland investments within each state. Poor coordination within and between other states further contributes to the lack of effectiveness of the regimes (Pietersen & Beekman, 2008). The lack of coordination arises in many cases due to unclear definitions of roles and responsibilities within the state, combined with a lack of harmonization of laws and policies related to environmental management (United Nations Department of Economic and Social Affairs, 2014). The roles and responsibilities have been clearly provided by the international and regional framework for water resources management as described above, but the obligations have not been translated through effective coordination within state parties. This is a serious deficit in this context.

These deficits must be remedied so as to effectively manage water resources in light of the strains from climate change, population growth and increased use by farmland investments. However, some positive initiatives have emerged from these developments. Namibia, for example recently adopted a Water Resources Management Act at the end of 2013 implementing the integrated approach to water management. The developments at the international and regional level, particularly through the SADC, have fuelled the emergence of this new comprehensive regime. The Water Resources Management Act fully captures the IWRM approach to management by dealing with issues related to both water and land, and requiring the government to evaluate

[75] Regional Water Policy of the SADC supra note 306 at v.
[76] *Ibid*.
[77] Like the Niger Basin Authority for example, see Pietersen & Beekman (2008) at 25.

and decide on plans for any use of water, particularly irrigation.[78] It further establishes a Basin Management Committee in line with the approach advocated by the Watercourses Convention, the SADC Revised Protocol on Shared Watercourses, and the Zambezi Watercourse Commission, all applicable to Namibia.

As noted above, however, its impact will depend on how effectively it is enforced and implemented. It could provide an avenue to address water allocation concerns surrounding farmland investments in Namibia. However, Namibia may face problems enforcing it against foreign investors that have stabilization clauses in their contracts. Nonetheless, it represents a positive impact of the development at the international and regional level and demonstrates that the approach and principles are slowly trickling down to the national level. The need for funding to further encourage similar steps and their effective implementation in other states is desperately needed to ensure sustainable water management in the face of farmland investments.

Water use in the context of farmland investments reveals a problem with the basin approach advocated and adopted above. Important water resources management decisions are typically made at the basin level, for example, decisions involving the construction of a dam (Hodgson, 2004). However, land-use planning more typically takes place at the local level, within administrative boundaries (Hodgson, 2004). Those administrative boundaries do not correspond with the boundaries of river basins or sub-basins, however, and water use for agricultural activities thus falls through the cracks in many instances (Hodgson, 2004).

The first step to resolving this is recognizing the water implications of these farmland investments. Once these are recognized, the need to effectively implement the IWRM approach at the basin level is quite clear. It seems, however, that the decentralized nature of many of these farmland investments means they slip through the cracks of the wider regulatory framework at the basin, regional and international level. A clearer understanding of water availability, variability, risk and how this impacts agricultural decisions such as site selection, crop choices etc. are important considerations overall in improving water management.

[78] Article 5(h) of the Water Resources Management Act, 2013, No. 11 of 2013, Republic of Namibia.

10.0 International Environmental Law

As described in Part I, farmland investments potentially impact both water quality and quantity. In many cases, pesticides and fertilizers seep into the soil and trickle downhill, eventually finding their way into shared watercourses due to the interconnected cyclical nature of water. Further, given the unreliability of rain-fed agriculture in Southern Africa and the commitment to developing irrigated infrastructure discussed above, many of these investments entail large-scale irrigation, particularly in Southern Africa (Oakland Institute, 2011b). Farmland investments thus trigger obligations from international environmental law.

The no-harm principle elaborated above is particularly relevant to address the issues raised by the water use and chemical discharge of farmland investments. The no-harm principle has its foundation in international environmental law—the principle is further elaborated upon beyond the context of an international watercourse. It finds its roots in the Stockholm Declaration of 1972 and the Rio Declaration of 1992. Principle 21 of the Stockholm Declaration provides that "states have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or other areas beyond the limits of national jurisdiction."[79] This is the classic formulation of the no-harm principle in international environmental law. It represents the tension between the two competing values in this context: the right to act freely within ones territory and the duty not to harm others (McCaffrey, 2007, p. 424).

The no-harm principle has been pronounced upon in numerous international agreements. There is no doubt that it is "part of the corpus of international law relating to the environment."[80] The no-harm principle and the duty of due diligence that goes along with it, as described above, therefore apply regardless of whether the host state is a party to the Watercourses Convention or whether the water system in question is covered by a specific agreement. This is translated and implemented through the requirement to conduct an environmental impact assessment. As can be seen, each of these regimes builds upon the same principles and reinforces the objective of sustainable water resource management.

10.1 The Obligation to Conduct a Transboundary Environmental Impact Assessment

A transboundary environmental impact assessment is an extremely important tool to assess and prevent harm to an international shared watercourse, both in terms of quantity and quality. The obligation to conduct a transboundary environmental impact assessment is now recognized as part of customary international law whenever a planned activity may cause transboundary harm.[81] It is therefore an obligation binding on all states, and applies regardless of the water resource in question. This is a broader obligation than the obligation to conduct an assessment under the Watercourses Convention since it applies whenever there is a potential transboundary effect, regardless of the state or the water resource concerned. The International Court of Justice (ICJ) found that the requirement to undertake the assessment is linked to the risk that the proposed activity may have in a transboundary context, particularly on a shared water resource.[82] It described the requirement to apply the transboundary environmental impact assessment as: "due diligence, and the duty of vigilance and prevention which it implies, would not be considered to have been exercised, if a party planning works liable to affect the regime of the river or the quality of its waters did not undertake an environmental impact assessment on the potential effects of such works."[83]

[79] Principle 21 of the Stockholm Declaration, adopted at the United Nations Conference on the Human Environment in 1972; see McCaffrey (2007, 423).
[80] *Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion*, 1996 ICJ pp. 241-2, para. 29; see McCaffrey (2007, 424).
[81] See *Pulp Mills on the River Uruguay* (Argentina v. Uruguay), Judgment, I.C.J. Reports 2010 (I), p. 83, para. 204.
[82] See *ibid* and De Mulder (2010).
[83] Pulp Mills on the River Uruguay supra note 81 at para. 204.

In addition to confirming the obligation, the ICJ has therefore affirmed that states conduct may incur international responsibility when failing to conduct due diligence in their environmental impact assessment. It further confirmed that this obligation applies even when the planned activity is conducted by a private corporation but authorized by a public authority, and that it must be conducted *before* the implementation of the planned activity (De Mulder, 2010, p. 268–269). This means that all states have an obligation to conduct a transboundary environmental impact assessment for farmland investments planned within a shared basin or near an international border, with particular emphasis on the impact on the quality and quantity of the shared water resource.

However, the ICJ did indicate that international law does not determine the specific content and scope of the assessment, finding that the content of the assessment must be determined by each state within its domestic law or the authorization process for the planned activity.[84] It recalled the United Nations Economic Commission for Europe (UNECE) Espoo Convention on Environmental Impact Assessments in a Transboundary Context as guidance. However, since the states in dispute were not party to that convention, the content and scope of the assessment is left to be determined in accordance with domestic law (De Mulder, 2010, p. 268–269). This is a problem in this context where the laws either do not exist or are poorly enforced and regulated.

It is important to recall the obligation nonetheless to ensure that such assessments are conducted for farmland investments with a potential transboundary effect. Moreover, host states should feel empowered to insist that investors conduct the assessments as required by international law. It is not an unreasonable request in this context, and does not render an investment less attractive. These international rules further encourage the adoption of their principles at the national level. These principles may therefore permeate to investments that do not have a transboundary impact. As the integrated approach to water management spreads and becomes effectively implemented in Africa, these considerations will be all the more relevant.

As demonstrated above, the move toward an integrated approach to water management means a move away from a sovereignty-oriented view favouring the right to act freely within ones territory and toward a "community of interests" in shared water systems. Some states have even given up their ownership over water resources in the name of collective management. This is the future of sustainable water resource management. Most African states are struggling with the same issues: climate change, population growth, rapid urbanization, poverty and an influx of large-scale foreign agricultural investments—addressing these issues collectively is the optimal way to ensure an equitable solution for all.

For farmland investments that occur around river basins where there are potential transboundary effects, there is therefore an obligation on host states to conduct an environmental impact assessment *before* implementing the investment. The contract between the government and the foreign investor should specify that the costs of the environmental impact assessment shall be borne by the investor. If not specified, the host state will be forced to assume the cost in order to comply with its obligations under international law, which apply to the host state only, not the foreign investor. This is particularly important in the context of water rights and allocation. The environmental impact assessment should reveal the potential strain on water resources and force an express consideration of water before committing to the investment. This in turn further increases the chances that the water use will be expressly limited and subject to review in the contract.

10.2 The United Nations Framework Convention on Climate Change

As noted in Part I, climate changes forces have affected (and are expected to continually impact) both the quantity and quality of available freshwater resources. The United Nations Framework Convention on Climate Change (UNFCCC) is the multilateral convention that commits states to stabilize greenhouse gas concentrations to prevent the dangerous impacts of climate change. One of the fundamental principles of the UNFCCC is the principle of common but differentiated responsibilities and respective capabilities, according

[84] See *Pulp Mills on the River Uruguay supra* note 81 at para. 204.

to which developed countries take the lead in combating climate change and the adverse effects thereof.[85] As a result of this principle, developing states, including African states, are entitled to certain technical and financial assistance to adapt to climate change.[86] As noted in Part I, the Nairobi work programme on impacts, vulnerability and adaptation to climate change is one such mechanism developed to provide assistance to developing countries, and they are undertaking actions relating to freshwater resources.

Host states should therefore be aware that foreign investment is not the only answer to develop irrigation as an adaptive response to climate change. The UNFCCC expressly recognizes the vulnerability of developing states to climate change, and the difficulties in adapting. The mechanisms developed by the UNFCCC may provide useful support and assistance when responding to the effects of climate change on freshwater resources.

[85] See Article 3(1) of the United Nations Framework Convention on Climate Change.
[86] See Article 4(3) of the United Nations Framework Convention on Climate Change.

11.0 International Human Rights Law

Many international human rights instruments govern access to water, either directly as an explicit guarantee in a human rights convention, or indirectly as an implicit element or precondition to the fulfillment of a human right.[87] All of these instruments tend to share a focus on consumptive uses of water and, to a lesser extent, on agricultural uses (Vinuales, 2009). The Universal Declaration of Human Rights, the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights collectively contain the primary rights protected by international human rights law (Schreiber, 2008). The right to water is not expressly listed as a free-standing right, but is recognized as a "prerequisite for the realization of other human rights."[88] Its absence as a free-standing right may be explained by the fact that water and environmental issues were not a concern when these instruments were drafted (Schreiber, 2008). Subsequent human rights treaties have included the right to water, including the Convention on the Elimination of All Forms of Discrimination Against Women and the Convention on the Rights of the Child, following growing environmental concerns after the Stockholm Declaration.

The General Assembly of the United Nations has recently recognized "the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights."[89] The Human Rights Council has also affirmed that the right to water is a fundamental human right that all states have the primary obligation to ensure.[90] Accordingly, it is an obligation binding on all states. It implies that host states must ensure that water use by farmland investments does not interfere with the right to water of its population. In realizing the human right to water, the Human Rights Council calls upon states to "pay particular attention to persons belonging to vulnerable and marginalized groups [...]."[91] As noted, farmland investments tend to occur in rural areas where local communities have customary rights that are vulnerable compared to the statutory rights of investors. This means that host states must pay particular attention in this context to ensure that these vulnerable populations have adequate access to water as required by international law.

The United Nations Committee on Economic, Social and Cultural Rights (ESCR) has provided an international framework establishing water as an independent human right and to help clarify the obligations of states in this regard.[92] The framework provides that "the human right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses" and that "priority should also be given to the water resources required to prevent starvation and disease, as well as water required to meet the core obligations of each of the Covenant rights."[93] It commits states to take "deliberate, concrete and targeted" steps toward the realization of the right to water.[94] This entails that water "should be treated as a social and cultural good, and *not* primarily as an economic good."[95]

In the context of farmland investments, this means that the state has an obligation to ensure that its people have access to water for domestic uses, including agricultural uses to prevent starvation, regardless of the activities and rights of foreign investors. This creates a dilemma. While water is a human right and a fundamental ingredient of all life and should be treated as such, it is used for economic purposes and gains, like in the context of farmland investments in Africa where investors seek lower water and land rates abroad. If an economic value is not placed on such a valuable resource, it risks being overexploited by these investors with no incentive to limit its use. A balance must be struck between the need to provide economic incentives and recognize the value of the precious resource, yet prioritize its value as a human right and thus ultimately a social good. The

[87] For a comprehensive list of the dozens of instruments that include access to water as a human right, see Vinuales, (2009).
[88] General Comment No. 15 of the United Nations Committee on Economic, Social and Cultural Rights, para. 1.
[89] General Assembly Resolution 64/292. The human right to water and sanitation. Adopted by the General Assembly on 28 July 2010, para. 1.
[90] Human Rights Council resolution 15/9 of 30 September 2010, Human rights and access to safe drinking water and sanitation, see Official Records of the General Assembly, Sixty-fifth Session, Supplement No. 53/A (A/65/53/Add.1).
[91] *Ibid* para. 8 (c).
[92] General Comment No. 15 of the United Nations Committee on Economic, Social and Cultural Rights; Vinuales (2009) and Schreiber (2008).
[93] *Ibid* paragraphs 2 and 6. See also Vinuales, J.E. *supra* note 422 at 739.
[94] General Comment No. 15 *supra* note 92 at 17; see Schreiber (2008).
[95] General Comment No. 15 *supra* note 92 at 11.

integrated approach to water management as described above provides the general framework to address this balance.

In any case, host states must ensure that water use by foreign investors does not interfere with the realization of the right to water for their populations. The right to water encompasses issues of water quantity, quality and access (Weiss, 2013). This must be borne in mind at all stages of the farmland investment, in addition to ensuring that the investments do not infringe the water rights of other riparian states as described above. Unfortunately, many water codes and regimes that provide for the human right to water focus solely on water for drinking or sanitation and ignore the inextricable link between water and land (Schreiber, 2008). Again, the integrated approach to water management provides the general framework to address these deficiencies.

Many states are taking steps in their national legislation in that direction, most recently Namibia's comprehensive Water Resources Management Act, 2013 as noted above. These initiatives and the binding obligation to ensure the right to water of local populations are further supported by the express inclusion of the right to water in the Senegal, Niger and Lake Chad Water Charters referred to above and the priority use for vital human needs provided under international freshwater law. This means that states have a primary obligation to ensure adequate water for local populations in the context of water management. This obligation cannot be contracted out of by allowing farmland investments to overuse or contaminate vital water supplies and the ecosystems that depend on it.

In the context of farmland investments and the water they require, it is imperative that states understand their responsibility of *respecting*, *protecting* and *fulfilling* the human right to water.[96] Protecting this right means ensuring that water use by foreign investors does not compromise "equal affordable, and physical access to sufficient, safe and acceptable water"[97] for their populations. As the law catches up to science by recognizing the need to manage and preserve water resources to maintain healthy ecosystems and sustain all life on earth, the human right to water will become an increasingly relevant obligation on host states in the context of integrated water resource management. It will become increasingly relevant in this context as water strain increases as described in Part I.

Host states must recognize their obligation to ensure that local people have access to water, and seek to ensure this obligation is recognized in the contract with the foreign investor. Although in theory host states should not be able to contract out of their obligations relating to ensuring local people have access to water, local people have no legal remedy in the event that they do. On the other hand, investors do have remedies available. More than 300 of the 800 million people in sub-Saharan Africa already live in a water-scarce environment (United Nations World Water Day 2013). It is this region that is most vulnerable to climate change impacts on water resources, and is also a particular target of farmland investments. Ensuring that the right to water is protected from further encroachment by farmland investments is therefore a vital task for host states.

The right to water provides a means for people to claim access to water for their basic needs regardless of the domestic law (Fisher, 2009). The right to water also provides a sound justification for host states to interfere with the water use of foreign investors if the use interferes with this basic human right. Host states must therefore realize these obligations toward their populations, and ensure that these are reflected and respected in contracts with foreign investors. International freshwater law further reinforces the human right to water by prioritizing water use for vital human needs. It is further strengthened and reinforced in this context by its inclusion in the Water Charters referred to above for the Senegal River, Niger River and Lake Chad Basins.

International law therefore comes into play in several ways in the context of farmland investments. It provides hard rights to investors through investment law that may constrain host state actions when it comes to water allocation. International law further imposes responsibilities on the host state to cooperate with other states where the farmland investment occurs near a shared water system. It also provides that host states must protect

[96] See Schreiber (2008, p. 445) for a discussion of the more general substance of this responsibility.
[97] General Comment No. 15 *supra* note 92 at 23; see also Schreiber (2008, p. 445).

the right to water of their populations. Host states should therefore be mindful that farmland investments involve much more than just land and more legal issues than those related to investment law.

It is important that the legal obligations owed to investors under investment law are not viewed in isolation from the states wider international obligations in this context. As Schreiber (2008) notes, international human rights law is as equally binding on host states as investment law. Unfortunately, its rights are not directly enforceable in the manner that investment rights are. The investment protections of the investment treaty make the realization and protection of the right to water of its population more difficult (Schreiber, 2008). There is tension between the need to protect the right to water and the obligation to safeguard the agricultural investment under the investment treaty, which entails access to water.

The question has been raised as to "whether a foreign investor can reasonably expect, at the time it makes its investment, that if access to water and sanitation by the population becomes threatened, the State would not take measures to ensure access, even if such measures adversely impact the interests of the investors" (Vinuales, 2009, p. 755). It has been argued that in such circumstances, the investor could not claim that he/she has been unfairly and inequitably treated (Vinuales, 2009). It thus seems that an investor cannot form a legitimate expectation that would result in depriving local populations of the fundamental right to water. The integrated approach to water management, if effectively implemented, can provide the relevant framework to address these issues as elaborated above. As such, priority use would go to protecting vital human needs, and the tension would be resolved in favour of the right to water.

It is in the interest of host states to implement the obligations described above and develop the IWRM approach at the national level, particularly considering the increased demands on water. In addition, if host states engage with these areas of law they may develop into justifications or defences to allegations of host state interference with farmland investments. It is plausible that actions taken in the fulfillment of obligations to other riparian states or in the fulfillment of a fundamental human right could constitute a defence in certain circumstances, even where the investors have seemingly secure water rights. Host states should feel empowered to demand these investments do not infringe their responsibilities under international law, and should use these obligations as leverage and justification to demand more from these investments. A host state is well within its rights to insist that an investor limit water use out of respect of the principles of international law.

Moreover, the normative framework created by the Principles for Responsible Investment in Agriculture and Food Systems further supports and implements the regimes described above relating to investment rights and most notably to respect for human rights and other environmental obligations. These soft law principles encapsulate the above obligations into one normative framework that applies to farmland investments and their water use.

TABLE 2. OVERVIEW OF THE LEGAL REMEDIES AVAILABLE UNDER DIFFERENT LEGAL REGIMES.

LEGAL REGIME	LEGAL REMEDIES	AVAILABLE TO
Domestic Law	Foreign investors may be eligible for compensation in the event of expropriation. Local communities may be entitled to compensation in the event of expropriation, if their customary rights are recognized or if they have formal legal title.	Foreign investors and local communities
Investment Contract	Financial compensation in most cases in the event of a breach.	Foreign investors and host states
International Investment Agreement	Financial compensation in the event of a breach.	Foreign investors and host states
International Freshwater law	The host state's international responsibility will be triggered if a breach of an obligation is determined in accordance with the above procedures. In such an event, full reparation shall take the following forms, either alone or in combination of all three: • Restitution: The host state would be under an obligation to re-establish the situation that existed before the breach was committed (to the extent it is possible and is not more burdensome than financial compensation). • Compensation covering any financially assessable damage insofar as such damage is not made good by restitution. • Satisfaction in so far as it cannot be made good by restitution and compensation. Satisfaction may consist of an acknowledgment of the breach, an expression of regret, a formal apology etc.	All states party to the Watercourses Convention
Regional Agreements/ Institutions that impose obligations beyond international law	The host state's international responsibility will be triggered if a breach of an obligation is determined in accordance with the above. See above box for international freshwater law for the available legal remedies.	All states party to the relevant Regional or Basin-level agreement
International Human Rights Law	The host state's international responsibility will be triggered if it fails to protect and fulfill the human right to water for its population. However, this obligation from international law may only be enforced by other states. Local communities may be able to submit individual complaints under the optional protocol of the Covenant on Economic, Social and Cultural Rights. Local communities may also have the ability to seek legal remedy before the African Court of People and Human Rights.**	All states party to the Watercourse Convention. For the ICJ, all states that have accepted the compulsory jurisdiction of the ICJ.

*** This has yet to occur and would need to be developed. In theory, it should be possible, but it would entail local communities bringing action against the host state for failing to respect their human rights, not against the foreign investor.*

12.0 Soft Law

Reinforcing binding international law is a range of soft law instruments and principles, designed to further assist government efforts to ensure responsible and sustainable investments. While these laws are not legally binding, they often present a global consensus, provide a normative framework for dealing with specific issues, and have strong moral ground. The two most authoritative global instruments related to farmland investments were negotiated and adopted by the UN Committee on World Food Security (CFS), the top UN forum for reviewing and following up on policies related to food security. This is the only global forum that includes participation of governments, civil society and the private sector, and therefore represents the most appropriate forum for consensus. At the African level, the most authoritative instrument is the Framework and Guidelines on Land Policy in Africa, adopted in 2010 by heads of State at the African Union summit.

12.1 The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Forests and Fisheries

The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Forests and Fisheries (Voluntary Guidelines), were endorsed at the CFS in 2012. It is the first detailed and internationally accepted guide to best practice in land governance (International Land Coalition, 2014). They give new direction and authority on how to promote land policy and practice that is people-centred and sustainable (International Land Coalition, 2014).The Voluntary Guidelines focus on the tenure rights of local communities and provide guidance on how to ensure equitable access to land, fisheries and forests.[98] They aim to improve transparency and functioning of tenure systems and strengthen the capacity of the agencies that implement land governance and reforms.

The Voluntary Guidelines do not limit or undermine any existing obligations of states, but must be applied in a way that is consistent with national and international law. They "are about what land policy should look like" and focus principally on best practices across a range of areas of land governance and go into detail about how land tenure rights should be recognized, allocated, transferred, and administered in a range of contexts. In short, they focus on actions that governments should take (International Land Coalition, 2014).

The Voluntary Guidelines are not legally binding or enforceable but they have a degree of legitimacy and influence that have made them hard to ignore or argue against (International Land Coalition, 2014). Since their adoption in 2012, the G-20, Rio+20 and the UN General Assembly have all encouraged implementation of the Voluntary Guidelines. In November 2013, Coca-Cola and Nestlé announced they would adopt the Voluntary Guidelines by reference in their corporate policies. (Smaller, 2014)

OVERVIEW OF THE CONTENTS OF THE VGGT

Part 1 – The objectives, nature and scope of the VGGT

Part 2 – General and cross-cutting principles and guidance general, cross-cutting principles (3)

- the nature of tenure rights, and states' obligations in relation to them (4)
- general guidance on policy, legal and organisational frameworks related to tenure (5)
- general guidance on the delivery of services (6)

Part 3 – Guidance on the recognition and allocation of tenure rights by states

- general safeguards to ensure that the recognition or allocation of rights does not infringe on the rights of others (7)
- the allocation/recognition of tenure rights to use public land, fisheries and forests (8)
- the recognition of indigenous and customary tenure rights (9)
- the recognition of informal tenure (10)

Part 4 – Guidance on actions that involve transfers of tenure rights

- the use and regulation of land markets (11)
- the regulation of land tenure transfers for investment purposes (12)
- designing and implementing land consolidation and readjustment programmes (13)
- designing and implementing land restitution programmes (14)
- designing and implementing redistributive land reforms (15)
- general guidance on land expropriation and compensation (16)

Part 5 – Guidance on the administration of tenure rights

- systems to record tenure rights (17)
- land valuation (18)
- land taxation (19)
- regulated spatial planning (20)
- the resolution of tenure disputes (21)
- the management of resources that traverse national boundaries (22)

Part 6 – Guidance on responding to climate change, natural disaster and conflicts

Part 7 – Responsibilities for the promotion, implementation, and monitoring and evaluation of the Guidelines

Source: International Land Coalition, 2014

[98] It should be noted that the Guidelines safeguard and protect "legitimate tenure right holders" from dispossession (see paragraph 12.4) and from risks that could arise from the investment (see para. 12.6). If there is a conflict over the tenure rights in question, and the foreign investor has statutory rights while the local community has customary rights (as in most cases), the "legitimate tenure right" in that instance would be the foreign investor, and the customary rights of local community would not be protected. The Guidelines thus do not seem to necessarily legally protect the rights of local communities.

Importantly, the Voluntary Guidelines recognize the importance of promoting investment in the agriculture sector. They state the centrality of small-scale farmers in promoting responsible and sustainable investment. They also propose a number of steps to manage investments in land, including (1) the need for national policies and laws that lay out the scale, scope and nature of such transactions; (2) safeguards to protect land rights and labour standards; (3) the need to integrate and consider alternative ways to invest in agriculture; (4) the importance of conducting environmental and social impact assessments; (5) the need for consultations and participation of all people who will be affected by the investment; (6) access to information; (7) grievance mechanisms for people negatively affected by the investment; and (8) monitoring and enforcement of commitments (International Land Coalition, 2014).

12.2 The Principles for Responsible Investment in Agriculture and Food Systems

The Principles for Responsible Investment in Agriculture and Food Systems, were endorsed at the CFS in 2014. The CFS approved the Principles for Responsible Investment in Agriculture and Food Systems ("the Principles") in October 2014. These principles were adopted over an intensive-two year process open to all interested parties, and their value has been recognized by the General Assembly of the United Nations (Swiss Agency for Development and Cooperation [SDC], 2014). The Principles aim to develop 10 essential principles to "guide national regulations, corporate social responsibility policies and individual contracts covering all types of investment along agricultural value chains and food systems" (Picard, 2014, p. 1). The Principles therefore provide the normative framework in this area and should be used to guide any planned farmland investment.

The Principles demonstrate progress toward greater coherence of the binding legal regimes described above. They are entirely founded in the human rights framework and provide for respect for environmental obligations and the sustainable use of water resources (Picard, 2014). In addition, the principles call for safeguards to "legitimate tenure rights"[99] (including water rights) and the environment, from risks that could arise from investments.[100] Further, the principles encourage states to "take corrective action where necessary to enforce agreements and protect tenure and other rights and provide mechanisms whereby aggrieved parties can request such action."[101] The Principles also encourage prior independent assessments on the positive and negative impacts that farmland investments could have on tenure rights.[102] Host states should therefore be encouraged to take the necessary corrective action in addressing water use by farmland investments to ensure coherence with the obligations detailed above in environmental and human rights law. In other words, the principles expressly recognize that the investment protection accorded by investment treaties cannot be the end of the story here: states must take corrective action where necessary.

The Principles are expressly based in human rights treaties that are binding on states, including those above that expressly include the human right to water.[103] In particular, the principles provide that "States should set out clearly the expectation that investors domiciled in their territory and/or jurisdiction respect human rights throughout their operations."[104] In this regard, the Principles elaborate that "States should maintain adequate domestic policy space to meet their human rights obligations when pursuing business-related policy objectives with other States or business enterprises, for instance through investment treaties or contracts [...]"[105] The

[99] It should be noted that the term "legitimate land tenure right" as referred to in the principles does not necessarily entail protection of customary rights of local communities. If there is a conflict over the land or water rights in question, and the local communities have customary rights while the foreign investor has statutory rights from the contract, the "legitimate land tenure right," legally speaking, would be the statutory right of the foreign investor. Thus, the protection to "legitimate land tenure rights" in fact does very little to protect customary rights of local communities.

[100] Principle 5: Respect tenure of land, fisheries and forests and access to water, by reference to the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security, Chapter 12 (see Chapter 12.6 therein).

[101] The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security, Chapter 12.14, incorporated into Principle 5 of the CFS-RAI by express reference.

[102] The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security, Chapter 12.10, incorporated into Principle 5 of the CFS-RAI by express reference.

[103] Committee on World Food Security, (2014) 'Principles for the Responsible Investment in Agriculture and Food Systems' adopted during its 41st session in Rome at paragraph 19, Conceptual Framework.

[104] *Ibid* at paragraph 32, Roles and Responsibilities of Stakeholders.

[105] *Ibid* at paragraph 33.

Principles thus describe the implications of international human rights law to farmland investments in express terms: host states cannot contract out of the obligation to respect the human right to water of its population.

Further, the principles seek to promote access to water by all relevant stakeholders (including local communities)[106] and prevent negative impacts on water and other resources.[107] These obligations echo those of international freshwater law, thus further entrenching their applicability in this area. The Principles also call for the sustainable use of the environment and respect for relevant international obligations, and therefore further solidify the obligation to conduct a transboundary environmental impact assessment where a farmland investment is planned near a border. This should further support a greater consideration and appreciation of water use by these investments.

The CFS is "committed to ensuring that human rights are included in the field of agricultural investments" (Picard, 2014). The Principles represent an opportunity to establish a reasonable balance between protecting the interests of the state and its citizens and protecting the interests of investors (Picard, 2014). The express references to human rights treaties in the Principles gives the human rights obligations therein legal effect despite their status as soft law. In essence, by articulating all of the relevant obligations (through reference to the relevant international human rights instruments and environmental obligations), the Principles encapsulate all of the regimes described above and bring them into one framework. This greatly enhances the chances of coherence in this area.

For these regimes and the normative framework created by the principles to take effect, they must be implemented at the national level. Their effectiveness and impact will entirely depend on their implementation. If states, investors and other stakeholders actively use the principles and take into account the relevant obligations from international law referred to therein, it will greatly contribute toward sustainable water use of farmland investments. For example, the principles call for the implementation of all relevant obligations in domestic law.[108] This is particularly important given that the regulatory framework for sustainable management of water resources is firmly in place, and the principal barrier is poor implementation.

[106] *Ibid* Principle 2.
[107] *Ibid* Principle 6.
[108] The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security, Chapter 12.14, incorporated into Principle 5 of the CFS-RAI by express reference.

Part III.
A Holistic Approach to Rethinking the Legal and Policy Framework on Water and Agricultural Investment

PART III. A Holistic Approach to Rethinking the Legal and Policy Framework on Water and Agricultural Investment

The purpose of this report is to explain the multiple legal regimes that apply and interact when a farmland investment takes place. Below are some recommendations to help reconcile the different legal regimes and ensure water issues are adequately addressed when dealing with farmland investments.

13.0 Recommendations Concerning Domestic Law

Many states have already begun to assess and transform their water governance structures in view of increasing global water scarcity (Vapnek et al., 2009). These efforts, and their effective implementation, are vital in the context of farmland investments and water management. Common elements that would be beneficial in this context include: increased stakeholder participation in water-management decisions, incorporation of principles of IWRM (i.e., recognize and give effect to the link between land and water) and clarification of institutional roles and responsibilities through formal legislation and informal customary rights (Vapnek et al., 2009). Due to the interconnected nature of water systems, water policies are most effective when they are created within a larger interdisciplinary framework that includes economic, social and natural resources concerns. A fundamental objective of sustainable water policy in this context is to integrate the management of water and land (Vapnek et al., 2009).

Practice has shown, however, that the challenge in this context mostly arises from the lack of implementation and enforcement of existing laws. These reform processes should therefore be accompanied by efforts to improve the implementation of these regimes.

Climate change will affect water resources in Africa with greater force in the coming decades. Currently, foreign investors are legally protected in the event there is water scarcity and reallocation must occur. By contrast, local communities are not, and as such, host states are currently not in a position to meet their obligations under international freshwater, environmental and human rights law. Reforms adopting and implementing the IWRM approach, like Namibia described above, provide a valuable framework to address the present legal imbalance between foreign investors and local communities. Moreover, states should engage with the mechanisms established by the UNFCCC to provide assistance and advice for the protection of freshwater resources and necessary adaptation in response to climate change. These mechanisms will become more necessary as climate change, land-use change and population growth continue to put a strain on freshwater resources. The effectiveness of these advisory mechanisms, like the other regimes, depends on their implementation and engagement by host states.

Further, host states should effectively implement their water-related international responsibilities in their domestic law by providing for the cooperation and consultation with affected states in the event a farmland investment is planned within a shared water basin. States along the Senegal River and Lake Chad Basins also must implement existing agreements and ensure that they do not unilaterally authorize farmland investments on or near those basins. In addition, states must implement the obligations from customary international law relating to the duty to conduct a transboundary environmental impact assessment in their domestic law. Such an assessment, conducted effectively, could greatly assist the management of water resources in this area.

As evidenced in Part II, there are several legal regimes that govern farmland investments and their water use. Each regime has developed to suit the needs of the particular field: investment law is concerned with safeguarding the rights of investors, human rights law is concerned with safeguarding the rights of people, environmental law is concerned with protecting the environment, etc. Nonetheless, each of these regimes apply to farmland investments because of the many interests that converge over water and land. There is thus

a need for more policy and legislative coherence in this area. This coherence is not only important for host country protection, but also for international investment sustainability and transboundary water management. The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Forests and Fisheries, and the Principles for Responsible Investment in Agriculture and Food Systems are a key step toward greater coherence in this area.

14.0 Recommendations Concerning Investment Contracts

Before entering into a contract with an investor, host states should carefully consider the range of obligations that exist, not only under investment law, but also freshwater, environmental and human rights law. This involves an examination and mapping of existing rights over the land and water in question, including a comprehensive assessment of the local tenure situation and related water rights. It requires serious discussions and acknowledgment of the costs and benefits of the transaction, particularly concerning water use for the duration of the investment. Host states must understand and assess the investor's capacity to deliver on ambitious projects and the overall water resources required to operationalize the investment (Cotula, 2011).

Contracts should include separate provisions to deal with water rights, use and fees. This provision should also clearly provide for a periodic review of water allocation and rights, and allow for the periodic revision of water fees, particularly where revisions are needed due to environmental and health concerns (Smaller et al., 2014). It would be particularly useful to include provisions that recognize human rights and environmental concerns and the need to reallocate water resources to respect environmental and human rights obligations as a valid ground for termination of the contract.

Host states should therefore include a provision in the contract that recognizes that none of the rights of the investor shall impede or frustrate the implementation of any host state obligations under international freshwater, environmental and human rights law, and that the implementation of these obligations from international law shall not require compensation to foreign investors. Contracts should also include a provision which provides that in the event of a conflict between the contract and obligations binding the host state in international law, the obligations under international law will prevail over the terms of the contract.

15.0 Recommendations Concerning Investment Treaties

Negotiations of future investment treaties could potentially address the conflict between international investment law on the one hand and human rights and freshwater law on the other. Negotiators could seek to include a provision to the effect that nothing in the investment treaty can prevent the host state from taking action to adopt measures to fulfill its obligations under international freshwater, environmental and human rights law, particularly relating to health and safety concerns, nor would such action require the host State to compensate the foreign investor. This will help prevent the investor from claiming compensation or damages in the event the host state adopts measures concerning water allocation that negatively impact the foreign investor.

Concluding Observations

This report brings together the multiple legal strands that weave together and form the context of farmland investments and water rights. It demonstrates that farmland investments are about much more than simple commercial land transactions. They have great impacts on the amount of water available for local communities and other states. The report demonstrates that water is a precious resource facing growing pressures from climate change, population growth and urbanization. The water abstracted to maintain production of large-scale commercial farming further exacerbates these strains, and must be given due consideration.

Farmland investments trigger parallel and sometimes competing obligations from international investment treaties, freshwater law, environmental and human rights law. An understanding of these parallel legal regimes is crucial to ensuring the responsible and sustainable water use for farmland investments. In particular, the transboundary impact of farmland investments near shared river basins triggers a multitude of obligations under international freshwater and environmental law that can be better integrated into the investment process. Similarly, international human rights law should be further integrated into the process to ensure that water use by farmland investments does not undermine the human right to water for local communities.

Understanding the multiple interests and regimes at stake is a fundamental first step toward the sustainable and equitable management of water resources.

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