"The art of allocating water through licences and taxes. State power and water resource management in Mozambique"

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1. Introduction

Since 1991 with the approval of the Water Act, Mozambican water sector has experienced great transformations. New forms of water governance were introduced in the Southern region, formalized with the Water Act in 1991 and later on confirmed by the National Water Policies of 1995 and 2007 (Bolding and Alba 2013). River basin became the unit for water resource management substituting existing administrative divisions, followed by the decentralization of decision-making to river basin authorities and creation of new arenas for stakeholder participation, the river basin committees (Inguane et al. 2013). From public management structures, private forms of management and market-based policies have been initiated. Since the middle 1990s, thirteen river basins have been defined following the watershed features and five Regional Water Administrations (ARAs, *Administrações Regional de Agua*) established (Fig. 1). River basin committees have been introduced in most of the basins. Mozambican water reforms followed and partly anticipated Integrated Water Resource Management (IWRM), a dominant paradigm in water resource management that since the 1990s has influenced the governance of water sectors all around the world and in particular of several Southern African countries (Metha et al.2014; Bolding and Alba 2013).[1]

Among other elements, the Water Act established a formal framework for allocation of water rights (*direito de uso e aproveitamento de agua,* in English the right to use and exploit water) based on licenses and payments for use of bulk water. The Law differentiates between *usos comuns* and *privativos*. The former refers to small subsistence water uses for primary needs such as domestic use, watering livestock and irrigation for plots up to 1 ha without the use of siphoning or mechanical instruments (Van der Zaag, P. 2010). The latter concern bulk water use for industry, agriculture and energy production. While common uses are free of charge and do not involve a licence, private ones require a licence (or concession, here also referred as permit) and are subjected to the payment of a *taxa de agua,* in English water tax (GoM, 1991). Regional Water Administrations are responsible both for registering users, issuing water licences and collection fees.

[1] For a discussion about the history and criticisms related with Integrated Water Resource Management see Merrey (2008), Van der Zaag (2005) and Molle (2008). For insights about the introduction of IWRM policies in Mozambique see Gallego-Ayala and Juizo (2011, 2012) and Inguane et al. (2013).

Fig. 1- Regional Water Administrations and Limpopo River Basin
(source: www.limpopopark.org, last visited 25.07.2014)

In Mozambique as in many other countries, water plays a key role for economic growth, poverty alleviation and capital accumulation. Water represents a key input for agricultural production (including smallholder farming, large-scale irrigation schemes, agro-industrial companies, etc.), industry (e.g. mining companies) and potable use. As a World Bank study notices 'Mozambique's poverty is closely linked to its dependence on rain-fed subsistence farming in the context of highly variable rainfall and frequent droughts' (WB, 2005:5). In light of increasing foreign investments in mining, together with 'the adoption by the Mozambican government of an agricultural policy that favours agricultural development through foreign corporate investments' (Veldwisch et al. 2013:129) who gets access to water and how represents a fundamental question in relation to equal distribution of water resources. Water allocation within Mozambique becomes even more relevant given the downstream position of the country that shares with neighbouring countries nine river basins covering most of the Mozambican territory. In this concern, legal water right frameworks play a key role as they involve decisions concerning access and allocation of water resources among different uses and users at river basin level. In other words, they define who has the right to abstract water from a river and use it and 'provide opportunities and/or barriers to sustain one's claim and mobilize resources and people' (Veldwisch et al. 2013:125).

Permits refer to legal entitlements or formal authorization, in the form of licence or concession, to abstract a certain amount of water from a source issued by a stage agency to a

user.[2] Permits contribute to 'reserve' water for certain uses and make users' administratively visible as a licence formally recognize not only the existence of a user but also her or his water requirements. They offer the opportunity to account for committed water use and water available for future development within a river basin becoming a way to secure water. In neoliberal thinking, water permits represents a mean for ensuring rational water use and address water scarcity (Boelens and Zwarteveen 2005). However, a number of 'side effects' play a role in this context. First, power relations and availability of economic resources influence users´ ability to obtain a permit. Large scale and better-off users can make use of their resources to secure access of water at the expense of other, less powerful, users (Metha et al. 2012). Third, in Southern Africa the institution of legal frameworks for water rights allocation has often been tied together with the introduction of forms of water payments such as (volumetric) water pricing (Van Koppen 2003). Registration comes with taxation, discouraging smallholder registration and keeping them ´invisible´ and their uses not accounted for (Veldwisch et al., 2013).

Drawing from the experience of Limpopo River Basin, this paper describes and analyse the articulation of the framework for water right definition introduced by the Water Act and its (side) effects on water resources allocation. It sheds a light on the functioning of licences and payments for private water uses and their implications for the control over water resources. The paper does not aim at providing a complete discussion about water rights as it mostly focuses on the legal aspects. Yet, holding a licence (or not) and pay for water (or not) does not guarantee the physical/effective access to water (Ribot and Peluso 2003).

The paper is based on literature review, interviews and document analysis carried out in the Netherlands and Southern Mozambique between March and June 2013 (Alba, 2013). The research combined fieldwork research and 'studying up' (Nader 1972). The former includes interviews and focus group discussion with representatives of large-scale users and smallholder ones abstracting water for agricultural use along Limpopo riverbanks. The latter focuses on the perspectives of the people that have influenced the policy process (i.e. the introduction of a legal framework for water permits and payments) by setting the terms of reference and taking part to key events such as the drafting the Water Act or the National Water Policies. Interviewees included senior and young engineers, consultants, lawyers, academics, staff of the National Water Directorate (DNA, *Direção Nacional das Aguas*) and employees of the regional water administrations. The combination between field research and 'studying up' provided new insights on the role of international, national and local actors in shaping policy articulation and everyday water management practices. The extended periods of fieldwork in the Limpopo River Basin and in other regions of Mozambique by two of the authors of the paper provided background information and useful insights (Ducrot 2011).

The paper is organized as follow. The first section re-constructs the articulation of water rights framework in Mozambican water policies. The second part focuses on the practices related with water permits and payments for water in Limpopo River Basin. Eventually, some conclusions and recommendations are presented.

2. The articulation of water rights in Mozambique: where do permits and payment come from?

Before illustrating the current practices related with water allocation, we delve into the history of water permits and payments. Through three policy episodes (cf. Wester 2008) we re-construct the evolution of the water sector and the main events occurred at national level and within Limpopo Basin. Each period corresponds with the formulation and endorsement of key

[2] In the case of Mozambique, two types of water permits exist: licence or concession. They main difference resides in the validity of the permit as the licence last 5 years and then has to be renovated, while the concession last 50 years (GoM, 1991).

national policy documents: the 1991 Water Law, the 1995 National Water Policy and the 2007 new National Water Policy). The first episode traces the emergence of the water permits during the Portuguese time and its formalization in the Water Law and the second focuses on the neoliberal transformations occurred in the 1990s. The third describes the promotion and acceleration of the operationalization of the water permits and payments from the early 2000s onwards.

Users' registration and fees collection introduced in the 1990s, remained latent for more than ten years and subsequently experienced a rapid acceleration after 2007. The policies regarding water permits have preserved the wide definition of primary water uses and licenses/payments for private water uses. Meanwhile, water fees have received increasing attention influenced by neoliberal transformations, the limited state funds and the increased attention towards achieving cost recovery. Indeed, the history of permit and payments went hand in hand with the establishment of the decentralized Regional Water Authorities and their effort to reach financial sustainability and decision-making autonomy from the central government.

1. Episode one: emergence of water permits

The reform of the water sector started around the 1970s and culminated with the approval of the Water Act in 1991, the only water legislation ever approved by the Parliament in Mozambique. The Act is the result of the commitment of a small group of Mozambican engineers and the influence of Dutch and international experts supported by FAO and UNESCO (DNA 1984; Mifsud 1986). Several issues steered the formulation of the Act: the need to manage water infrastructures inherited from the Colonial time, the lack of a legal provision for water allocation (Caponera 1983), the national and international impulse for decentralization of water resource management (Inguane et al., 2013) and the consequent need to finance new institutions steered the formulation of the Law. Licences and concession for private uses were introduced. Water charges were intended as a mean to promote *"pratica adequadas à correcta utilizaçao e consevaçao da agua e à prevençao dacontaminaçao ou reduçao do seu nivel"*[3] and as a cost recovery mechanism (Art. 42 and 44 Water Act, GoM 1991). The Law established that the *taxa de agua* (should) represent the main revenue of the ARAs (art. 42), linking revenue collection to the financial and managerial autonomy of the Regional Water Authorities.

Both colonial and early post-colonial government promoted the development of hydraulic infrastructure (Carmo Vaz, 2003). Dams and irrigation schemes were developed for electricity and agricultural production and flood control (Newitt 1995). For boosting the Portuguese presence in Limpopo Valley, the *Colonado do Limpopo* was created following the construction of Chokwe irrigation scheme and Macarretane weir. The post-colonial state further invested in water infrastructures development with the aim of improving the potential production in the agricultural and energy sectors. Limpopo Valley received great attention also after Independence by newly established FRELIMO government. Chokwe irrigation scheme was defined as the 'breadbasket of the nation' (Pellizzoli 2010). In the Limpopo river basin, Massingir dam was built between 1972 and 1977 following a Portuguese project. The first water bureaucracies were established to manage newly constructed infrastructure; the first water fees were introduced to cover maintenance costs of the dams (WaterGroup 1988; Manjate 2010). Among others, the *Unidade de Direcçao de Aprovietamento Hidraulicos (UDAH)* in charge of coordinating the construction works of two main dams Corumana and Pequenos Limbos inspired the creation of the ARAs and their operational river basin units.

[3] "Appropriate practices for the proper use and conservation of water and the prevention of the contamination or reduction of its level" [our translation].

2. Episode two: the neoliberal turn

The first National Water Policy was approved in 1995, followed by the Water Tariff Policy in 1998 (GoM, 1995). Mozambique was worn out by several years of conflict, a sever famine (1991-92) and natural disasters (e.g. floods). The government signed a structural adjustment programme with the International Monetary Fund (IMF) and received aid from the World Bank (WB) and several international donors. After the peace agreement in 1994 and the first multi-party election, the domestic agenda focused on reconstruction and provision of basic service including water supply and sanitation. Following a combination of neo-liberal, market inspired IMF/WB concerns and domestic concerns, the National Water Policy put its emphasis on Water Supply and Sanitation, public-private partnerships in water provision and stakeholder participation (Alba, 2013). Water was defined as an economic and social good. Cost recovery and financial aspects gained much attention, increasing the concerns for water pricing mechanism. Meanwhile, the decentralization proceeded with the formal establishment of the first Regional Water Authority, ARA-Sul in 1993, and the River Basin Committees (Limpopo River Basin committee met for the first time in 1998).

The policy was influenced also by emerging IWRM ideas and demand driven approaches, water pricing and increased private role in the water sector (Savenije and Van der Zaag 2002; Molle and Berkoff 2007; WB 1993).

3. Episode three: promotion and acceleration

In 2007 another key moment occurs when the Council of Ministers approved the new National Water Policy and the National Water Resources Management Strategy (GoM 2007). Both documents represent the result of a long consultation process that involved the creation of a national stakeholder forum, the work of several consultancies directed by the National Water Directorate sponsored by the World Bank. In the same year, the *Regulamento de Licenças e Concesões,* in English Regulation on Water Licenses and Concessions (GoM 2007) was approved. It includes the guidelines for granting water permits, in the form of license or concession, and the collection of water taxes. Together with the 1991 Law, it sets the framework for water rights in Mozambique. The *Regulamento* is the result of more than ten years of discussions started in 1991 with the endorsement of the Water Law and hold back by disagreements regarding the allocation of responsibilities among different state institutions in relation to issuing permits (see also Inguane 2010).

During the 2000s, the last regional water authority was formally created (2006), while several river basin committees were set up. Once that the institutional framework was in place and all ARAs were formally established, the focus shifted towards improving their financial autonomy both from the central state and from the donors by improving their ability to collect fees from water users (Alba, 2013).

3. Water permits in practice: three examples from Limpopo River

As mentioned above, once the *Regulamento de Licenças e Concesões* was approved the attention shifted to its implementation. Yet, the Regional Water Authorities had to deal with limited financial and human resources, geographical constraints and political difficulties. In this section, first the main characteristics of the Mozambican part of the Limpopo Basin and the water governance framework are presented. Then, the process of obtaining a licence is described followed by three examples that offer some insights on the everyday water management practices in the basin.

Limpopo River flows through Botswana, South Africa and Zimbabwe before reaching Mozambique. Here it covers a length of 450 km over the 1460 km full length of the river (Ducrot 2011). The river represents a key source of livelihood for the communities scattered along the riverbanks, as it is the major source of water for irrigation and also for domestic

uses (e.g. livestock watering). Indeed, within the Mozambican part of the basin, most of the users use water for agricultural purposes, most of them cultivating an area between 4 and 30 ha. The river is a source of water for two main irrigation schemes one located in Chokwe and the second in Xai Xai. The river also contributes to cover drinking water needs for the two main cities, Chokwe and Xai Xai.

The Southern Regional Water Administration (ARA-Sul, *Administracaõ Regional de Agua*) through its management unit (UGBL, *Unidade de Gestao de Bacia Do Limpopo*) manages water resources. UGBL is in charge the management of the main infrastructures (dams, hydrometric and pluviometric stations), the registration of water users, organization of the cadaster and the collection of water fees. By managing Massingir dam and Macarretane weir, UGBL influence the quantity of water present in the river in relation to the water demand by the users. The Limpopo River Basin Committee (*Comité da bacía do Limpopo, CBL*) serves as a consultative body for coordination between different users and institution involved in land and water management in the river basin. However, even thought the Committee has been set-up in name of stakeholder participation, these have little say concerning decision-making at basin level and the Committee rather works as an advisory body (Praagman 2013).

As Van der Zaag et al. (2010) highlight, great uncertainties surround the availably and use of water within the river basin. This is due to uncertainties surrounding future water development in upstream countries, incomplete discharge measurements and limited information on the water that is currently consumed particularly for agricultural production and domestic uses. The available information about water uses and users is the cadastre of ARA-Sul. In 2012 within Limpopo Basin 280 private users were acknowledged together with an indefinite number of so-called 'common users'. Private water users are listed according to three categories: known but not registered, registered on the process of obtaining a licence and licenced. In 2012, 92 users were known but not registered, 120 were registered but not licenced and 68 had a formal licence. Registration and licensing of water users concentrated on the areas where water flow is regulated by Massing dam, that correspond to the Olifant river downstream the dam and along Limpopo river downstream the confluence (Fig. 2). These are the only permanent branches of the basin, all other branches including the main riverbed flowing from Zimbabwe dries up at least 3 months a year. This partly explains why in in April 2013, all the users upstream the confluence in the main riverbed flowing from Zimbabwe were (still) exempted from registration and payment. The table below show the number of registered users per use (Tab. 2).

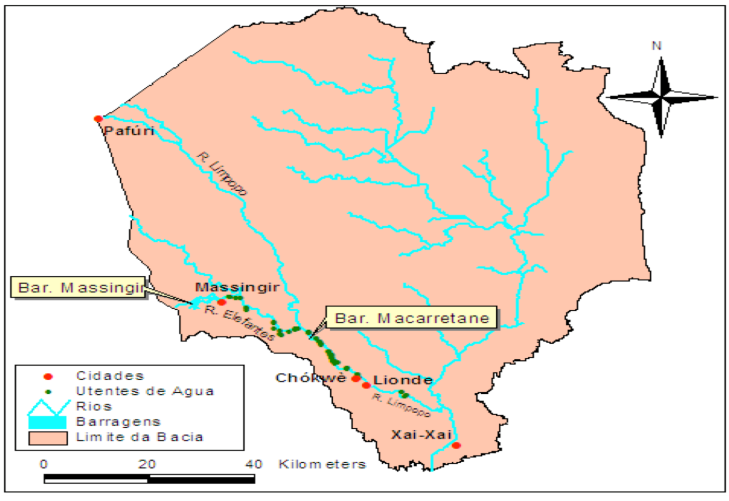


Fig. 2 – Geographical distribution of the registered and licenced water users (source: presentation to Limpopo River Basin Committee 2009)

Tab. 2 – Distribution of users per water use (source: cadastre ARA-Sul 2012)

Type of use and cultivated area	Number of registered users*
Agriculture	
< 1 ha	8
Between 1 and 3 ha	51
Between 4 and 30 ha	207
Between 50 and 1000 ha	8
> 1000 ha	2
Livestock	1
Water supply	2
Industry	1
Total	280

*Registered users are not necessarily licence or concession holders.

According to the *Regulamento de Licenças e Concesões*, in order to obtain a licence, the user should present a series of documents to the ARA including proof of identification, details about the source, place, objectives, period and duration of water abstraction, the purpose and, in case of agricultural use, the area cultivated and the crop produced have to be indicated. The obtainment of a water licence is subjected to the possession of a land right (in Portuguese *Direito de Uso e Aproveitamento da Terra*, DUAT). The ARA´s technical department is in charge of verifying the availability of water resources and together with the legal department, the validity of the documents presented. A field visit is carried out by local staff to check the correctness of the information provided by the users. In case water is available and documents are correct, the user obtains the license. The administrative process is rather bureaucratic and could last even on year. The administrative process is thus rather bureaucratic and could last even one year. Interviews with users and water authorities revealed several reasons that partly explain the length of the process. Water administrations lack human and financial resources. Users do not always have all the documents requested, among others they do not have a DUAT or they are in process of obtaining one (Alba, 2013). According to some interviewees, the users unwilling to pay water charges purposely further slowdown the process by refusing to show the documents listed above.

Once a user holds a licence, he or she is required to pay for the water abstracted based on calculation and invoice issued by the Regional Water Authority. Water tariffs differ per ARA and, within a region, they vary according to the river basin depending on the Organization and Management costs of the hydraulic infrastructure (if present) and the water administration. In the case of Limpopo River Basin the tariffs are provided below (Tab. 3). The tariffs are approved by the Ministry of Public Works and Housing based on a proposal made by the ARAs. In this way, the central government maintained the control over the setting of the water fees, limiting the decision-making power of the ARAs.

Tab. 3 – Tariffs ARA-Sul (source: Ducrot 2011)

User Type	MT/m3 (1MT = 0.0312 USD)
Agriculture	
Household < 1 ha	Free
Commercial sector < 50 ha	0.048
Commercial sector 50-1000 ha	0.08
Commercial sector > 1000 ha	0.096
Industry	0.159
Water Supply	
Big system	0.159
Small system	0.08

Three examples below show how the size (in hectares), political history and relationship with the water authority shape the process of obtaining a formal licence. The first example concerns the allocation of water to state's agricultural enterprises present in the basin, namely HICEP (*Hidraulica de Chokwe –Empresa Publica*) and RBL-EP (*Regadio do Baixo Limpopo-Empresa Publica*). The second focuses on *Massingir Agro-Industrial* (MAI), a large-scale agro-industrial investment for sugar cane production that should start in 2017 (Hall and Paradza 2012). The last example focuses on the smallholder users scattered along the riverbanks. The objective is to show three ways in which the policy, as encoded in the Water Law and the Regulation for Licence and Concession, is translated in contingent practices Three main features are considered in the description of the cases: a) how do the users physically get their water (e.g. one intake, individual pumps); b) presence of a formal licence; c) payment mechanisms. These are briefly summarized in the table below (Tab. 4).

1. **State versus State**

In Limpopo River Basin there are a few big water users, two of them are state enterprises under the Ministry of Agriculture: HICEP and RBL-EP. Due to their political importance and their linkages with the central government, these enterprises enjoy a special regime in relation to water licensing and tax collection. Both of the enterprises are represented in the River basin Committee.

The first, HICEP was created in 1997 to manage Chokwe irrigation scheme. The scheme, with its 22,000 ha command area is the largest and oldest irrigated perimeter in Mozambique with commercial farming, smallholder and medium farmers (Pellizzoli 2010). In 2012, nearly 12,000 farmers were occupying the scheme (Chilundo et al. 2012). However, in 2010 only 9,400 ha were actually irrigated (Van der Zaag et al. 2010) and during the hot season 2011/2012 the area cultivated amounted to 5781 ha (Chilundo et al. 2012). Since Independence, agricultural production in Chokwe scheme has been decreasing together with the actual irrigated area. The poor status of the infrastructure, salinization, limited access to inputs (e.g. seeds and fertilizer), unreliable market access (few buyers, long distance) and lack of processing facilities represent some factors underling the poor performance of the scheme (Veldwisch et al., 2013).

From the perspective of UGBL, the scheme represents only one large-scale user that abstract water from one single intake. From the intake, the water flows for gravity to the whole irrigation scheme and part of it returns to the river through the drainage system (Alba, 2013). Once a month, UGBL and HICEP staff meet at the intake and measure the water flow. Every three months an invoice is issued to HICEP based on the average between the measured water flow in the three previous months discounted by 40% (ibid.). This arrangement has been introduced in order to facilitate the payment of the water charges by HICEP. Water requirements for the irrigation scheme for the whole year and the payment terms for the water charges are defined by HICEP and ARA-Sul/UGBL in a yearly agreement, or memorandum.

It is not clear if HICEP have ever paid for water. During interviews, several explanations for the inability of HICEP to pay were discussed (Alba, 2013). The most common sustains that the irrigation scheme does not 'use' the whole amount of water it requires. Due to the design of the infrastructure gravity led a rather large amount of water is required to reach the last sector of the scheme (80 km far away from the intake). However, not all that water is used for productive use, as the actually irrigated are cover less than 5,000 ha. HICEP collects water fees only for the cultivated area, but it is charged by ARA-Sul for the total volume flowing from the main intake. Thus, HICEP is not able to pay ARA-Sul. Other interviewees referred to the unlikelihood that the state pays back the state. Indeed, HICEP is a state enterprise and UGBL/ARA-Sul is a state administration. However, HICEP budget depend on the Ministry of Agriculture, while UGBL/ARA-Sul is under the authority of the Ministry of Construction and

Housing. Given the huge debt of HICEP towards ARA-Sul, since 2002 negotiations are taking place at ministerial level to settle the debt (GoM 2004).

The second state enterprise, RBL-EP, administers 70 000 ha in the lower Limpopo including Xai-Xai irrigation scheme. The scheme originally covered an area of 12,000 hectares. The area managed by RBL has been recently upgraded from 12,000 ha to 70,000 ha. However, only part of this area is equipped with irrigation infrastructure (Ganho 2013). Since 2005 a Chinese investor is present in the perimeter (Chichava et al. 2013). As in the case of Chokwe, RBL-EP represents one user for UGBL. As June 2013, RBL-EP did not have a licence. A memorandum concerning the volume of water abstracted and water charges, was under discussion between RBL-EP and UGBL/ARA-Sul.

2. Private sector versus state: Massingir Agro-Industrial

Since 2011, MAI (*Massingir Agro-Industrial*) has launched a project for the production of sugar cane in Massingir district. MAI is a consortium between Transvaal Suiker Beperk (TSB) a South African company (51%) and Limpopo Agro-Industrial Investment Company (SIAL), a Mozambican company whose chairperson is the former Minister of Industry (49%).[4] MAI plans to cultivate sugar cane for a total of 37 500 ha and reserve 1000 ha for food security of the population living nearby the project area (Borras et al. 2011).[5] Production should start in 2016. MAI (partly) resume a project firstly proposed by ProCana halted in 2009 (Praagman 2013).

In May 2013, MAI was in the process of obtaining land right for 38 500 ha and water licence. Negotiations with ARA-Sul around a memorandum were taking place in Maputo. According to several interviewees, the draft memorandum allowed MAI to abstract half of the water from Massingir Lake and half from a pumping station downstream the dam. Meters for calculation of the volume of water abstracted were foreseen at each intake, thus MAI predicted payment according to the volume abstracted.

3. Small holders versus state: Focal points

Besides the few large scale users described above, Limpopo and Olifant Rivers supply water to hundreds of small and medium holders who lives along the riverbanks and directly abstract water from the rivers using private or community owned pumps. Here we refer to smallholder as users (individual or collective) that cultivated less than 30ha.

According to the staff working for UGBL, registration and fees collection is quite challenging in remote areas physically difficult to reach due to distance and bad conditions of the roads (Inguane 2010) leading to increased transaction costs for both UGBL staff and users (e.g. transport costs and time required). According to several interviewees, the lack of a culture of payment for water within the river basin further complicates the process. In order to deal with these difficulties, between 2008 and 2009 informal groups of water users led by one Focal Point (FP, in Portuguese *ponto focal)* have been created with the support of UGBL. Often the Focal Point is the leader of the village or a well-known and respected man (e.g. a farmer) appointed by the water users. Since 2009, 13 groups have been established in the area downstream Massingir dam. The groups' size is variable as the number of users as illustrated in Table 5. Due to the difficulties in calculating the volume abstracted, the water charges are calculated according to the area each user cultivates based on a study carried out by ARA-Sul between 2004-2005.

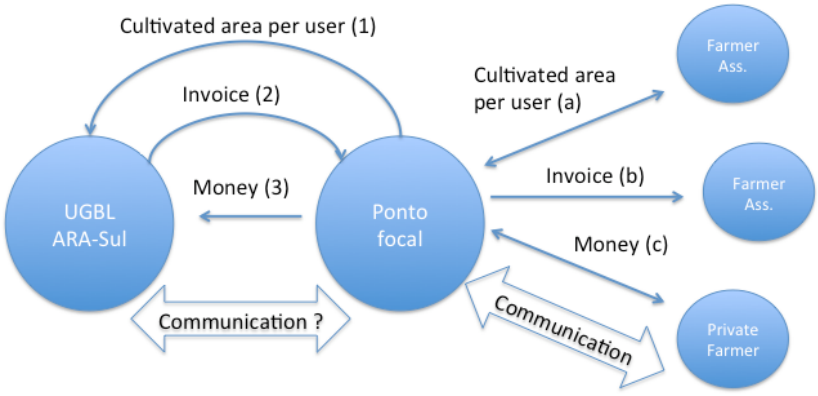
[4] http://allafrica.com/stories/201211120298.html [last visited 10/08/13]
[5] According to the project 23 000 ha will be cultivated directly by MAI, 12 000 ha will be developed by SIAL and 2 500 ha will be cultivated by local communities under an outgrowing model.

Tab. 5 - Water users group Limpopo River Basin (source: our elaboration based on cadastre 2012 of ARA-Sul

Users group	District	Number of users	Area cultivated (ha)*	Users group	District	Number of users	Area cultivated (ha)*
II	Massingir	2	6	VIII	Chokwe	2	2
III	Massingir	14	37	IX	Chokwe	2	3
IV	Massingir	2	4	X	Chokwe	18	35.5
V	Massingir	2	1.5	XI	Guija	36	117
VI	Chokwe	15	26	XII	Chibuto	3	0
VII	Chokwe	6	6				
VIII	Chokwe	2	2				

The FPs facilitate the registration of users and the collection of water fees and improve communication and information exchange. Indeed, the FP represents a connection link between UGBL and the users (see Fig. 4). The Focal Point is in charge of carrying out an inventory of the amount of land that each user has planted and/or effectively cultivated in a specific area and communicates it to UGBL. On the basis of the data collected by the focal point, the Basin Authority calculates the water charges and issue and invoice. Then, the focal point is in charge to collect the money from the users and hand it in to the Basin Authority (Alba, 2013). FPs represents a network of water users that reach the community level and (should) facilitate information exchange with the river basin authority (Pragmaan, 2013). Yet, at the time of the research they seem to serve more as a means to collect water fees, that information. Focal Points and more in general smallholder farmers are little represented in the River Basin Committee and have a limited role in decision-making.

Fig. 4 The focal point system (source: our elaboration)



5. Conclusion

Water policies and practices in Mozambique are closely related to the troubled history of the country, the evolution of its economy and the presence of international donors. The Portuguese colonial period, the war for independence, the conflict between FRELIMO and

RENAMO, the difficult economic situation and the intervention of IMF shaped the ways the water sector has been organized. The 'hydraulic mission' (Molle et al. 2009) initiated by the Portuguese government with the construction of major dams and irrigation schemes, has been carried out by the post-colonial state (Bolding and Alba 2013). The current institutional set up partly originates from the Portuguese way of organizing the water sector with decentralized operational river basin units created for the management of water infrastructure and a central water bureaucracy. The reform of the water sector has been dominated by State institutions (e.g. DNA, ARAs) and little space has so far been reserved for the democratic participation of water users. River Basin Committees represents the only arena for participation of some (but not all) water users (Ducrot 2011).

The historical re-construction of the articulation of water rights framework and the practices presented above feature a key role for the state and its institutions in the definition of water rights (the policy), in the registration of users and in the role of water users (the practices). The Regional Water Authorities with their operational units at river basin level establish who has the legal/formal right to abstract water from the river. Yet, structural challenges and local geographies shape the final outcome of water reforms. The examples portray several differences between water users that are not equal in terms or political connections, availability of financial resources, volume of water abstracted and also position in relation to the source. Ad hoc memoranda have introduced to deal with large-scale water users securing their water needs. Unable to collect money from large-scale users, local water authorities turned to smallholder farmers. Serving more as a means to register users and collect fees, rather then as information dissemination, water users' groups were established. Yet, unable or unwilling to pay water users escape registration remaining 'invisible' and their water use unaccounted, with the risk that the apparently 'unexploited' water is awarded to new large-scale investors (Van der Zaag et al. 2010).

A formal permit system could (still) have a positive impact in water management practices securing water for smallholder subsistence farmers and primary water uses. In terms of equitable resource allocation and sustainable water management, much can be gained by recognizing the unequal position of water users in socio-political and economic terms and the difficulties that water authorities encounter in the licensing process. In Limpopo river basin, water users´ groups and the focal points network offer the opportunity to involve small-scale users that cultivate their land outside big irrigation schemes in decision-making and information exchange. Ensuring their representation in the River Basin Committee will contribute to foster democratic practices in the management of water resources.

Recent developments in the river basin, such as agro-industrial investments (e.g. MAI) and the new forms of agrarian change in Lower Limpopo (e.g. RBL-EP, see Ganho 2013), call for renovated attention towards resource allocation (who gets the water and how) and the role of state actors. Further research on the practices related with access and allocation of water resources within Mozambican river basins are necessary. Beside legal dimension involved with water rights framework, technical and socio-economic one should be investigated (Boelens and Zwarteveen 2005). These include the management and access to infrastructures and technologies that allow the users to physically access water and materialize their formal water rights; together with the ability of users to mobilize resources (e.g. money) and participate to decision-making processes.

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