Water rights and water institutions in Mexico

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As a national policy Mexico started a few years ago a National Water Rights Registration (Registro Público de Derechos de Agua).

This water rights registration is problematic as water rights are being registered to newly recognized or newly established water user associations for set periods of time.
The problem areas are

1) *There is no clear continuity with preceding water rights, there is no consideration of local arrangements over water rights and there is no consideration of loss of access to water due to groundwater exploitation and/or upstream appropriation by other users.*

2) *There is no clear continuity of water institutions.*
a) Preceding water rights.

In the case of irrigation water, water rights in the XVI-XIXth were registered to individual water users and to communities and other corporate groups. Communities lost out on water rights in the late XIXth as "common property" was outlawed. In the early XXth c., with the agrarian reform, community “common property” is again recognized, largely in the form of ejido that established a use right in perpetuity.

Water rights to communities and ejidos were called DOTACION.

The dotación could be:
---a recuperation of an old water right,
---a part of the water right (concesion) the former owner of the hacienda had
---a new water right

The dotación is usually expressed as a right to irrigated land.
But, with the REPDA the water concessions are for the "new" water user associations, these water user associations aggregate the water rights of communities, ejidos and private property.

It would seem that a simple division between water volume and number of individual water users would establish an individual water right.

This is not true or generally not true.
For example,

The Cuautla river water user association has a new registered water concession, *But* the *ejidos* and individual water users (private property) throughout the association do not have access to the same amount of water because they do not have access to the same water sources (springs or river), and they do not use the same appropriation infrastructure to take water from the river or the springs.

The previous water right: *dotación* is still used to establish how much water or proportion of water each community on the same off take gets.
The water user association of the Cuautla River comprises 29 systems, irrigating some 10,000 ha. From the view point of the off takes, each canal is a discrete irrigation system.
b) Local arrangements over water.

All over Mexico we have found different local arrangements that are not taken into account by the national legal framework or by the national water agency. We will give two examples of local arrangements from the Cuautla river water user association.

B-1) Local arrangement over water rights, the return flows (*achololes*)

Rights to return flows, called *achololes*, that are very important in the region are based on local arrangements.

*Acholol* water is the excess water that drains from a field after irrigation, is captured by drainage canals called *achololeras* and used to irrigate lower lying fields.

When the *acholol* water flows beyond the possibility of being used in a field, the water users of the field call this *acholol* water “*aguas muertas*” or “*achololes muertos*” (“dead water”).
The water user association of the Cuautla River comprises 29 systems, irrigating some 10,000 ha. And from the point of view of the *acholol* water it is one system, as *acholol* water flows from one canal-system to another.
However the *acholol* water continues its downhill course and flows directly into other canals of the irrigation systems of the Cuautla river water association or flows into the Cuautla River where it is lifted by downstream irrigation systems, also of the Cuautla river water association. During the dry season (March-May) the use of *achololes* for irrigated agriculture is critical.

Due to a conflict over *acholol* water rights, it was found that *acholol* waters follow not only man made *achololeras* (drainage canals) but also follow social arrangements.
*Acholol* water flowing into the San Esteban canal
Another local arrangement over water rights is the limitation to water cress production.

Water cress is a semiaquatic crop and requires damming and spreading the river flow. Although the river bed is federal property, water cress producers have a special permit to use the river bed.

The Cuautla River Water User Association and the Water Cress Producers Association signed in 1990 an agreement whereby water cress production must cease at the beginning of the dry season.

Irrigators from the tail irrigation system of the Cuautla River Water Association say that suspension of water cress production means up to a 30% increase in irrigation water during the dry season.
The conflict, negotiation and agreement between the Cuautla River Water Association and the Water Cress Producer Association is based on the local conviction that the main source of irrigation water for all the downstream systems are the two large springs located upstream where the perennial flow in the Cuautla river begins, under the principle that as less water enters the upstream irrigation system, less water is drained as *achololes*.

In two specially dry years, 1992 and 2002, all the irrigators of the Cuautla River Water Association, by arrangement, took up their spades and in an orderly and pacific fashion went along the river bed destroying water cress crops and the infrastructure to dam and spread the river flow.

The horizontal agreement between associations as well as the effective mobilization of the irrigators to destroy the water cress crops is another evidence of the importance and extent of *acholol* water.
c) Groundwater exploitation and surface waters.

Although there is much talk about an ordered transfer of water from irrigation to urban and industry, much of this change is coming about through drying out of springs and surface water due to groundwater exploitation, as well as by upstream appropriations.

This over-exploitation of surface water and of groundwater has to do with:

--too many new water rights,
--non-authorized use of water, and
--a lack of conjoint surface and groundwater management.
For example,

Several springs of the Cuautla river water user association have dried up. In the most recent case the Cuautla municipal water system dug a well a few feet from a spring, and the spring dried up. The national water agency (CNA) response to this was a proposal to provide the irrigators with a well. There is no proposal for conjoint management. Government officials said that all the springs were doomed.

Cases of overexploitation of surface and groundwater are very typical in Mexico. It is hoped that basin management may correct this, as well as aquifer management. But local problems need to be solved fast and this is not being done.
The second problem area relates to the water institutions, as there is no clear continuity of water institutions.

Since the late XIXth c. until the 1992 national water law a water institution usually called *junta de aguas* was in charge of water distribution between off takes on a river tract and/or between users of an irrigation system. *Ejidos* and communities counted as a “user” having a “common property” water right.

The water distribution rules were made with the express purpose of a **correct** distribution of water rights.

All the *junta de aguas* had to have an elected committee made from all types of users (*ejido*, communities with private property, larger private property) as well as for all types of non irrigation water use (municipal water, power, industry).
However in 1992 the water institution: *junta de aguas* was taken out of the national water law. Instead, reference was made to *unidades de riego* or *unidades de riego para el desarrollo rural* (irrigation units for rural development).

These *unidades*, in the 1972 national water law, meant a policy of special help for rural communities’ water projects.

This special help meant either modernizing whatever they had or new projects, in the later case many of them initiated with no water right, called at that time *dotación*.

The 1992 national water law made it mandatory for all the *unidades de riego* to organize as *water user associations*.

However, there is no clear understanding if this means the old *junta de aguas* or if it means the rural communities’ *unidad de riego*. 
In some cases the old *junta de aguas* became a water user association, the Junta de Aguas del Canal de Tenango, changed to Asociación de Usuarios de la Junta de Aguas del Canal de Tenangi, A. C.

Since Mexico has some 2.5 to 3 million hectares of irrigated land not in Irrigation Districts the conversion is still on going.

The *junta de aguas* for Irrigation Districts or tracts of Irrigation Districts also had to accept a “new” turnover and usually changed their name from for example Junta de Aguas del Distrito de Riego Ixmiquilpan to Asociación de Usuarios de la Junta de Aguas del Distrito de Riego Ixmiquilpan, A.C.
Conclusion

In Mexico, instead of working with existing water rights and water institutions the decision was made to remake all water rights and water institutions, so that much work and money is being expended on doing the same thing over again. This has not allowed building up of more complex management of water rights and water institutions.