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Articles

Legal pluralism and domestic water supply in locality Kilómetro 30, Acapulco, Mexico

Pluralismo jurídico y abastecimiento de agua para uso doméstico en la localidad Kilómetro 30, Acapulco, México

Raúl Torres-Rico[1], ORCID: https://orcid.org/0000-0001-6965-4203

Erick Alfonso Galán-Castro[2], ORCID: https://orcid.org/0000-0003-1946-3921

Francisco Javier Peña-de-Paz[3], ORCID: https://orcid.org/0000-0001-8453-2570

América Libertad Rodríguez-Herrera[4], ORCID: https://orcid.org/0000-0002-4145-3300

José Luis Rosas-Acevedo[5], ORCID: https://orcid.org/0000-0003-2744-7454

Héctor Becerril-Miranda[6], ORCID: https://orcid.org/0000-0001-5794-5740

[1]Universidad Autónoma de Guerrero, Acapulco de Juárez, Guerrero, Mexico, torresjrr1@gmail.com

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[2]Programa Investigadoras e Investigadores por México, Conahcyt, Xalapa, Veracruz, Mexico, erick.galan@conahcyt.mx

[3]El Colegio de San Luis, San Luis Potosí, San Luis Potosí, Mexico, frape@colsan.edu.mx

[4]Universidad Autónoma de Guerrero, Acapulco de Juárez, Guerrero, Mexico, amerodriguez@gmail.com

[5]Centro de Ciencias de Desarrollo Regional, Universidad Autónoma de Guerrero, Acapulco de Juárez, Guerrero, Mexico, jlrosas@uagro.mx

[6]Conacyt-Universidad Autónoma de Guerrero, Acapulco de Juárez, Guerrero, Mexico, hbecerrilmi@uagro.mx

Corresponding author: Erick Alfonso Galán-Castro, erick.galan@conacyt.mx

Abstract

This paper, as a case study, exposes situated water issues in the locality Kilómetro 30, located in the rural area of the municipality of Acapulco, Guerrero, Mexico. Rather than proposing solutions based on international standardized environmental agendas, this paper highlights the power relations and forms of governability that emerge in critical water supply scenarios as well as the asymmetry in the governance of this resource. It aims to analyze domestic water management practices through the lens of a socio-cultural approach to society-state relations. To this end, qualitative methodology is employed, involving both ethnographic observations and in-depth interviews that follow the model of mapping

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actors involved in environmental policies: state institutionalized, non-state institutionalized and non-institutionalized actors. It is concluded that practices such as actions, discourses, rules and resources that are put into play in the framework of historical relations of political and social violence are at the marginal point between the legal and the illegal, moving freely between both dimensions as long as this allows for survival in hostile socio-environmental conditions.

Keywords: Social practices, environmental policy, co-management.

Resumen

El presente trabajo, como estudio de caso, expone problemáticas situadas de carácter hídrico en la localidad Kilómetro 30, ubicada en la zona rural del municipio de Acapulco, Guerrero, México. Más que pretender proponer soluciones a partir de agendas ambientales estandarizadas internacionales, este documento resalta las relaciones de poder y formas de gobierno que emergen ante escenarios críticos de abastecimiento de agua, así como la asimetría en la gobernanza de dicho recurso. Se tiene como objetivo analizar las prácticas de gestión de agua para uso doméstico bajo la óptica de un enfoque sociocultural de las relaciones sociedad-Estado Para ello, se emplea metodología cualitativa, que involucra al mismo tiempo observaciones de tipo etnográfico y entrevistas a profundidad que siguen el modelo de mapeo de actores involucrados en políticas ambientales: actores institucionalizados estatales, institucionalizados no estatales y no institucionalizados. Se concluye que las prácticas como acciones, discursos, reglas y recursos que se ponen en

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juego en el marco de relaciones históricas de violencia política y social se encuentran en el punto marginal entre lo legal y lo ilegal, moviéndose libremente entre ambas dimensiones mientras esto permita la sobrevivencia en condiciones socioambientales hostiles.

Palabras clave: prácticas sociales, política ambiental, cogestión.

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Introduction

In general, the daily water life of the *Kilómetro 30* inhabitants is located at the intersection of marginality, environmental public policy that has facilitated the emergence and aggravation of territorial conflicts, as well as adverse environments and ecological damage. The citizens are supplied mostly from the water extraction and distribution carried out by CAPAMA (Commission of Drinking Water and Sewerage of Acapulco) at the Sabana riverbank on which the community is settled, as well as from artisan wells of some settlers. Although it could be intuitively thought that the water source proximity such as that of the aforementioned river, it would be sufficient to achieve an optimal distribution of water among the community inhabitants, these crosse by a shortage of the vital liquid that has various forms as a palliative: pipes dynamics provided by the

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municipal government, hauling, Community Drinking Water Committees, on-site domestic practices and, a growing business of selling water by individuals in a process that involves the deregulated water extraction and the re/sale of the vital liquid. This implies a selective presence of the State as drinking water guarantor, as well as a water management that is exclusive, both in the differentiation that the municipal government makes with respect to other state localities and, in the community practices that originate within the same locality.

This document, under the sociocultural perspective approach to society-state relations, aims to analyze water management practices for domestic use in the town of *Kilómetro 30*, located in the rural area of the municipality of Acapulco, Guerrero, Mexico. These water management practices have been built from a historical process that has involved the consolidation of expectations, actions and assignments of emerging meaning in spaces of high political and social conflict. These management practices are developed from a process where legal norms, policies and forms of state advocacy intersect with other mechanisms such as community management of water sources and the incursion of non-legal business stakeholders in the water distribution. This legal pluralism situation (Santos, 2018) not only shows great complexity of the community bond in the study area, but also manifests itself in the framework of a growing environmental degradation of the La Sabana riverside ecosystem, where this community is settled.

It should be mentioned that rather than delving into the legal and regulatory framework of the institutions and dependencies responsible for satisfying the basic need for access to the vital liquid, this research

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dimensions a local reality as a counterpart to the discursive ideal of a national water policy – substrate of state and municipal regulations – which in its elementary principles points to a *sustainability* responsibility of the State and society, whose basis is the integrated management of water resources and which privileges direct action and decisions by local stakeholders and by hydrological basin. Likewise, it gives rise to a deep reflection regarding the forms of territorial expression that take the rights dictated in article 4 of the constitution of the United Mexican States in its fifth and sixth paragraphs:

> "Everyone has the right to access, dispose of and sanitation of water for personal and domestic consumption in a sufficient, healthy, acceptable and affordable manner. The State shall guarantee this right and the law shall define the bases, supports and modalities for the equitable and sustainable access and use of water resources, establishing the participation of the Federation, the federative entities and the municipalities, as well as the citizens participation for the achievement of these purposes.
>
> Everyone has the right to a healthy environment for their development and well-being. The State shall guarantee respect for this right. Environmental damage and deterioration will generate liability for whoever causes it in terms of the provisions of the law.".

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The methodological proposal for this study was qualitative, involving both ethnographic field observations and in-depth interviews with 18 stakeholders who follow the mapping stakeholders model that involved in environmental policies of Gudynas (2001): institutionalized state stakeholders, institutionalized non-state and non-institutionalized stakeholders. At first, a brief definition of the theoretical approach that was handled in the present study is made. Then, the methodology with which the information collection was made is detailed, as the analysis of it. In a following section, the results that were found whitin relation to the analysis of the testimonies and observations on the ground are presented and, at the end some reflections are raised by conclusion way.

Sociocultural approach to society-state relations: basis for the understanding of water management practices at Kilómetro 30

When we talk about a sociocultural approach to society-state relations, we are among the theoretical axes of the anthropology of the State (Das & Poole, 2008; Migdal, 2011; Abrams, 2015; Gupta, 2015), and approaches aimed at the historical violent relations reconstruction (Misse, 2010). Practices such as actions, discourses, rules and resources that are put into play in the framework of historical political relations and social violence, are at the marginal point between the legal and the illegal, moving freely between both dimensions as long as this allows survival in hostile socio-environmental conditions. At the same time, a coexistence is generated between the search for institutional solutions granted by the

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State and the tensions between citizen and governmental stakeholders over the local implementation of these actions. In this sense, the problem of water management practices for domestic use is addressed in two dimensions of analysis: diachronic and synchronous.

The diachronic dimension implies the socio-political evolution of expectations and actions regarding the water management resources. Michel Misse's concept of social accumulation of violence is very illustrative of the scope that is intended to be given from this point of view. This author takes as an example the processes of social and political violence in Rio de Janeiro, Brazil areas of high marginalization, considering them as a vicious circle of the factors that feed back cumulatively from the resolution of conflicts through violence (Misse, 2010: 21). Although Misse's study refers to problems such as gun violence between criminal groups and the police, the substance of his reflections have to do with the use of violence to resolve disputes or generate agreements, which seems relevant in the case of the management of water resources at *Kilómetro 30*. If Misse's argument logic is followed, the constitutive process of the social accumulation of violence occurs within the framework of the constitution of *illegal markets*, that is, 1) the historical emergence of unregulated commodity suppliers, and 2) the increase in the supply of *political commodities*. That is, it is an analysis that seeks to give clues for a reconstruction of conditions in which state legality no longer achieves its task of regulating life and daily relations, emerging conditions of legal pluralism; that is, a constellation of various legalities (or illegalities) that operate on local, global and national scales (Santos, 2018: 196) and that finally, express a violence accumulation of an ecocentric nature.

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The synchronous analysis approach emphasizes that practices such as discourses and strategies used for water resources management are presented within the framework of socio-environmental tensions; in the same way, these can occur in the form of state legalities structured by norms, operational rules, decisions made by bureaucratic commanders and carried out by officials at *street level*, which allow a certain degree of distribution of water resources. However, in parallel to this way of managing water resources, there are other practices ranging from *community water management* - organization of local stakeholders in community committees for the water extraction from underground sources, self-built infrastructure implementation such as plastic hoses or pumps made improvised by the residents of the town - to the stakeholders presence offer their services of sale of water transported by vans half. In this sense, it is pertinent to talk about conditions such as the construction of state action outside the legality of the State itself (Migdal, 2011; Gupta, 2015), an state margins notion in which the geographical and procedural limits of the government generate the emergence of differentiated forms of state management (Das & Poole, 2008), reflections that can be applicable to the use of water resources.

From the above perspective, social practices in relation to water supply are analyzed from a social justice perspective. In this sense, it is about giving light to structural determinants at the local level framed in a comprehensive analysis of the vital liquid problem and that, according to Isch (2012), originate ecological debts between powerful sectors that in an accumulation process have with those who are stripped of access to

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water resources, these occur both in the field of south-north international relations and also within the countries themselves.

The complexity involved in addressing the water problem, in this case, forces us to distinguish fields of action – macro and micro contexts – transversal with each other. The macro context addressed in this research is the field of State environmental policy; According to Merlinsky, Montera, Spadoni and Tobías (2014), all environmental policy is conceived as a distributive policy because its institutions and regulations, in their establishment or omission, facilitate preferential access to some stakeholders to natural resources while limiting that of others. This environmental policy is disaggregated into environmental management, specifically in water management, and finally in the micro contexts of public, private and community management; these, in turn, are framed by problems related to wastewater treatment and the continuous shortage of drinking water in the municipality of Acapulco (El Sol de Acapulco, 2018; La Jornada, 2019; Bajo Palabra Noticias, 2021), violence at the regional and local levels (Illades, 2000; Galán-Castro, 2020; Galán-Castro, 2021) and environmental degradation, juxtaposed with social conflicts (González & Gordillo, 2004; Rodríguez *et al*., 2013; Rodríguez, Ruz, & Juárez, 2009).

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Methodology

The town of *Kilómetro 30*, has its historical origin in the construction in Mexico of the Federal Highway 95 (CDMX-Acapulco) in 1927, from a camp that was absorbing the neighboring rancherias, which gave rise to the town in 1929 and receives its name because it is exactly thirty Kilómetros from the port of Acapulco (Figure 1). This town is listed by Sedesol (2013) as urban along with the city of Acapulco, Amatillo, San Pedro Las Playas, Xaltianguis and Tres Palos. It is located on La Sabana River, in the middle sub-basin of the same name at an average height of 230 meters above sea level. According to INEGI (2015), its population is estimated at 6 561 inhabitants; of its total population, 40 % are professionals, 15 % are engaged in trade, 10 % in the countryside and 35 % work in companies in Acapulco harbor; 3 512 citizenshave access to Social Security, 2.06 % of the population is indigenous, and 0.90 % of the inhabitants speak one of the indigenous languages and have socio-environmental conditions since marginalization (59.4 % of inhabited dwellings that do not have piped water service and 17.4 % without drainage).

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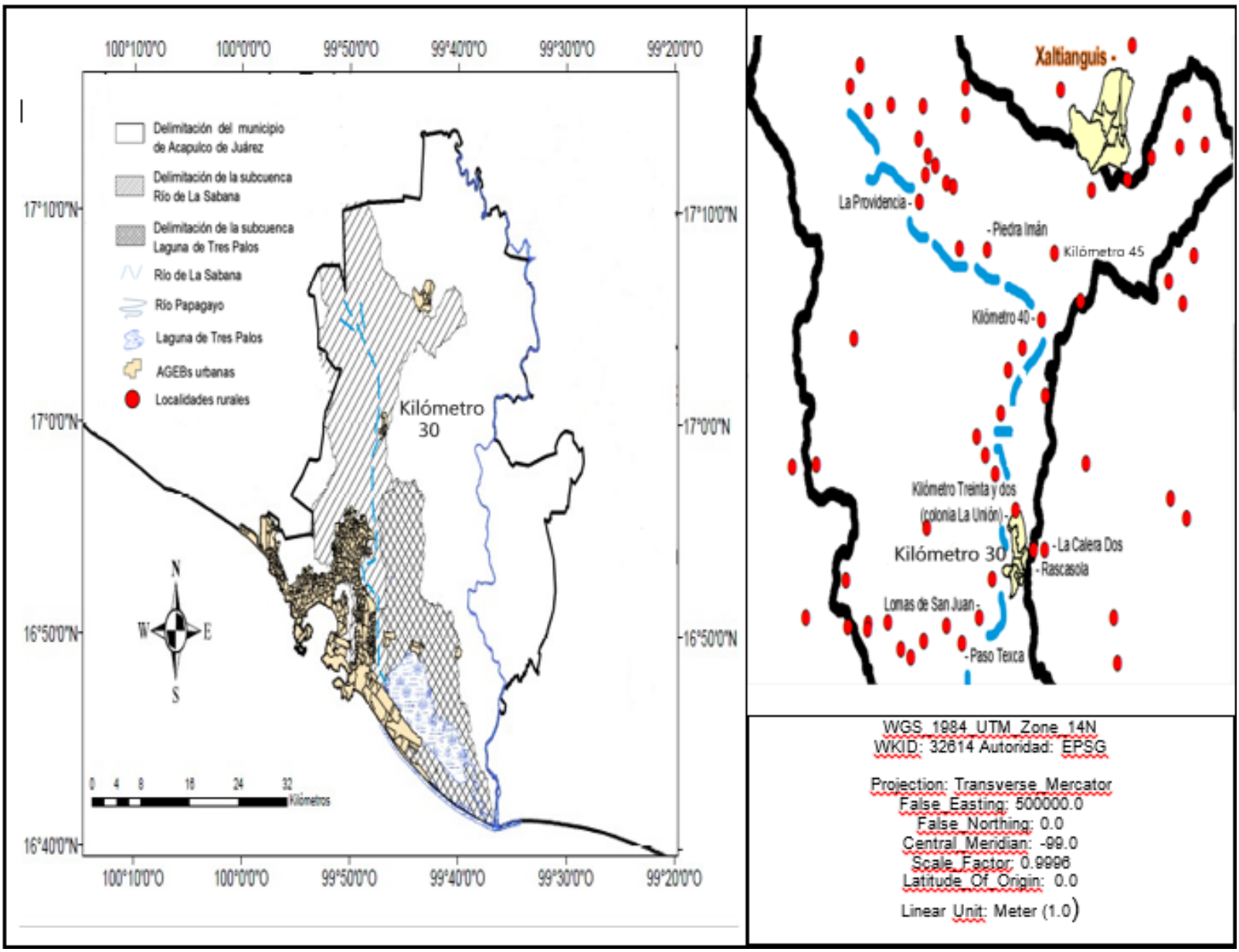

Figure 1. Village Location.

In the fluvial ecosystem, various problems converge such as open dumps on the riverbed (Sampedro, Juárez, González, Reyes, & Torres, 2011), poor water quality, impacting on the health of the inhabitants of

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the sub-basin (Olivier, Matías, Rodríguez, Valera, & López, 2017) and loss of biodiversity (Niño & Rodríguez, 2010). On the other hand, according to De Mauleón (2016), the town is considered an important enclave in the distribution of narcotics within the region. Given these conditions, it is worth questioning about the process of configuring the practices that the inhabitants of the *Kilómetro 30* locality experience to supply themselves with water, in a context of high social violence.

Methods

To identify the space-time construction process of the water dynamics in *Kilómetro 30* locality, a total of 18 semi-structured interviews were conducted during the period March 2019-April 2020, that is, a conversation with key informants in the research problem, guided by the interviewer from a script of previous elaborated questions, with the purpose of favoring the production of a conversational discourse, continuous and, with a certain argument line that allows obtaining related information to the research topic addressed (Merlinsky, 2006: 30). In the mapping of stakeholders with whom the information of this work was constructed, a model was followed for the key informants identification in the construction of environmental public policies: institutionalized state, institutionalized non-state and non-institutionalized (Gudynas, 2001) (Table 1).

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Table 1. Actor mapping.

I	Scope of action	Stakeholders
I1	Institutionalized state	CAPAMA Field Employee -pumping- *Kilómetro 30*
I2		Field employee CAPAMA -maintenance- *Kilómetro 30*
I3		Former Director of Budgetary Control of the municipality of Acapulco
I4		Former CAPAMA Director
I5		Popular preparatory directive *Kilómetro 30*
I6		Popular high school teacher *Kilómetro 30*
I7		Municipal Commissioner of *Kilómetro 30*
I8		Ejidal Commissioner *Kilómetro 30*
I9		Former Ejido Commissioner *Kilómetro 30*
I10	Institutionalized non-state	Former Basin Committee President La Sabana River-Tres Palos Lagoon
I11		President of the Guerrero Watershed Council
I12		Former parish priest Kilómetro 30. Current parish priest La Sabana
I13	No Institutionalized	President local environmental group
I14		Spokesman community drinking water committee
I15		Neighbor of Guadalupe Victoria neighborhood *Kilómetro 30*
I16		Resident of Colonia Centro *Kilómetro 30*
I17		Neighbor *Kilómetro 40* locality
I18		"Owner" of springs *Kilómetro 30*

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As an operational form of the theoretical-methodological discussion of this research, the following analytical axes were proposed that reflect the practices of local water management arising from the analysis of the information collected through interviews: *Environmental Policy* as the set of decisions and actions undertaken by governments to address the environmental issue of countries; and as a public policy emanating from there, it is a process that begins when a government or a public director detects the existence of a problem that due to its importance is incorporated into the government agenda, and that culminates with the evaluation of the obtained results by the actions undertaken in order to eliminate, mitigate or vary that problem (Del Valle-Díaz, 2006). The concepts of environmental management are linked to environmental policy, understood as planned intervention by the State, entrepreneurs, civil society, managers or environmentalists and specialists, for the sake of the resolution of a man-made environmental conflict and against which a series of activities and human, technical and financial resources must be available (Muriel, 2006); and water management, conceived as the collective distribution of resources to achieve specific objectives, involves the control of the supply, distribution, use and water disposal, and involves inputs, costs and benefits distributed among stakeholders (Soares, Vargas, & Nuño, 2008). *The political*, which according to Laclau (2002), is considered as a moment of overflow or politics disarticulation (traditional field of political institutions), as the institution of the social from the clash between antagonistic forces. *Socio-environmental degradation* as the conjunction of ecological damage -that is,

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anthropogenic actions that affect the natural environment, its components and its interactions (Litman & Claude, 1992: 46, 64)-, *the derived socio-environmental conflicts* -resistances, oppositions, proposals and responses that are only understood in the society-nature continuum (Paz, 2012), and the decrease in the quality of life consequent to these imbalances.

The information was analyzed through a process of theoretical dialogue, which implies the interpretation of the experiences, discourses or stories of the stakeholders as theoretical elements from which the theoretical-conceptual proposals made, in turn, by other researchers specialized in the subject can be expanded (Coffey & Atkinson, 2003; Kvale, 2011). Broadly speaking, qualitative data collection was carried out on the basis of observation and interviews; the process of generating information, as well as the interpretation and theoretical analysis arises through dialogue between the authors and a consultation with the stakeholders interviewed in the second run of the field to resize the interpretations. Finally, to systematize data, the qualitative analysis software ATLAS was used IT, version 7.

Results

The analysis of the interviews distinguishes three sections: 1) the historical overview of water dynamics, giving rise to the realization of the 2) social practices associated with water supply and 3) correlates that refer to the degradation of the river system.

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Historical overview of water dynamics at *Kilómetro 30*

The water management process, particularly for domestic use, is articulated by several aspects: the character of a basin with the complexity of the interrelations between the localities settled on the main river, the socioeconomic differentiation that these localities present and the historically constructed social and political violence that Guerrero presents. This gives the opportunity for the geographical space to be permeated by uncertainty, legitimate but illegal acts, and corruption, thereby reducing the resource of citizen participation as a state counterweight. It is observed in this horizon that the problem combines superficial circumstances of the river / riverbank and the extraction of groundwater, non-compliance with laws or omission of these by government agencies, paternalistic practices and clientelism, absence of a collective reflection of well-being, proposals of incidence that reproduce a scheme of class privileges, and an exclusion of forms of community organization in the implementation of water governance in the region (Informants I8, I9, I12). Informants talks about the creation of dams in high areas (La Providencia community) of the sub-basin that prevent the normal flow of water in the river, of deficiencies in the provision of piped water to private homes within the rural region of the municipality of Acapulco by the Municipal Operating Body (hereinafter, OO, or CAPAMA) and, the unregulated discharge of wastewater and solid waste into the river flow (Informant I12).

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Theoretically, this dispositional panorama intertwines what authors call Social Accumulation of Violence (Misse, 2010) and the Margins of the State (Das & Poole, 2008). Misse (2010) refers to a social accumulation of violence for conflict resolution, and this feeds back two-dimensionally: accumulation of criminal networks and the increase of political commodities that promotes unions between illegal informal markets.

The social stakeholders, in relation to this social accumulation of violence, mention that the problem has been constituted since the very creation of CAPAMA at the beginning of the eighties of the last century, and has become increasingly larger as the administrations have passed (Informant I3). Acts of corruption, opacity in the financial management of the Operating Body, constant indebtedness, inflation of the institutional payroll for political reasons and little or no attention to rural sectors of the municipality of Acapulco (I3, I10, I11, I18) are denounced. But the stakeholders not only point to the operating body as the only source of illegality, but, as a result of the absence of CAPAMA in these rural regions -among which is the community of *Kilómetro 30* itself, there have been problems such as the construction of dams in high areas of the sub-basin - specifically in the town of La Providencia-, extraction of water resources from underground sources not registered with CONAGUA, and as a result of the complaint of some residents of the place, there have been threats and murders in the region, carried out, according to the informants themselves, by organized crime groups (Informantes I9, I10, I17). There is talk, in a concrete way, of water huachicoleros that supply all the rural communities near *Kilómetro 30* through the sale of vital liquid in containers transported in vans (Informant I10).

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Communities outside the urban area of Acapulco, such as *Kilómetro 30*, are at the same time places where nature can be imagined as wild and uncontrolled, and spaces where the government is constantly redefining its ways of dominating and legislating. They are places where the implementation of laws and other state practices of government are colonized by other forms of regulation emanating from the pressing needs of populations, in order to ensure political and economic survival. They can be understood as periphery where those people who are considered insufficiently socialized in the frameworks of the law are contained.

Likewise, a second analytical approach to water management practices in the community revolves around the issues of what Das and Poole call margins for readability and illegibility of the law. In this logic, the state is constantly being experimented with and deconstructed through the illegibility of its own practices, documents and words (Das & Poole, 2008).

Given the above, it is possible to understand what was narrated by some informants in relation to the under-registration of water wells before CONAGUA, to the extent that they consider it an injustice for the inhabitants of the community that a space neglected by both CAPAMA and the authorities of the three orders of government must register their water intakes and, at the same time, pay taxes for it (Informants I17, I18). It is, from their logic, a double extractive process: they cannot manage water resources located in their community territory, and at the same time they must pay an instance external to the community for their use. This is aggravated by the conditions of poverty and marginalization in which many of the inhabitants of the area live, dependent on their

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relationship with the Acapulco metropolitan area and their tourist activities.

Complementary to what has already been mentioned, there is reference in the testimony of stakeholders about the emergence of unwritten rules within the community for their own legal regulation (I5), as well as internal sanctions by local self-defense groups (I7, I12, I17 and I18). I12, on the other hand, mentions a territorial delimitation on the sub-basin of the la Sabana River, in its middle and upper parts, depending on the influence of local groups on the geographical space: Paso Texca-La Providencia, controlled by *Kilómetro 30*, and Kilómetro 45-Xaltianguis, controlled by a group belonging to the latter locality, this corroborated by the informant I17. There is also a notion of competition and confrontation between the two localities, ranging from the degree of development (in terms of infrastructure and provision of basic services), to tensions over the total dominance of the disputed territory (I5 and I16). This may be related, according to Galán-Castro (2020) to two important phenomena: the existence in these spaces of a logic of *indirect private government*, in which the groups that have the governmental power of the metropolis achieve the control of discontent from the alliance with private stakeholders, threatening local dissidents to the already established order (Mbembe, 2011); and the emergence of "community orders of security regulation", that is, ways from which communities react to the onslaught of criminalstakeholders, constituting forms of self-defense in spaces of exclusion and violence (Fuentes, 2019).

It should also be noted that, despite the policies and scientific paradigms regarding water management, the provisions continue to

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reproduce environmental practices of exclusion and marginalization: I11 refers to a little/no participation of the CAPCs with the Guerrero Basin Council; As for the SAPI, in case of CAPAMA intervention —either with infrastructure or advice—, the I4 mentions that they usually end up being a burden for the parastatal.

Narrative of practices in specific management contexts

On the emergence of the efforts, there are two relevant events; in the first place, a watershed in the history – and consequently in the sense of practices – of the locality: the adaptation of the federal highway Acapulco-Mexico (1927) to give way to the tourist megaproject Port of Acapulco (1950). This produces a new configuration in the community with respect to the riverbed and in the practices associated with this body of water, population growth and as a result, greater demand for the vital liquid. Another event was the government possession of the central borbollón (place of eruption of water towards the surface and from which the inhabitants accessed the vital liquid) to start the state and later municipal management in the town in order to provide the service of piped and potable water. The respondents, especially the older ones in the community, perceived these changes not only in the growth of the community itself, but in the increase in the scarcity of water for domestic consumption, the gradual use of underground sources and diversity of mechanisms for the access and distribution of water to homes (I9, I14, I15, I16).

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The irregularity of the land in the area, coupled with the population growth and the growth of the demand for vital liquid, made unfeasible over the years the machinery built by the municipal government for the distribution of water to the houses, so soon it had to resort to the search for other underground springs in the community territory, which were managed communally. Particularly highlighted in the testimonies is the community seizure of Colonia Guadalupe Victoria (*the tank of La Guadalupe*, according to the informant I15), which arises from what they denounce as an exclusion by CAPAMA in the distribution of water to the high areas of *Kilómetro 30*, and what, according to the same informants, the paramunicipal argued in relation to the lack of technical feasibility to build infrastructure *exprofeso*.

The interviewees report that during the dry season they experience the following practices: distribution by tandeo, both in the distribution made by CAPAMA and in that carried out by the community committees, purchase of water or collection of surface water in situ; They are also supplied with pipes provided by the government, through wells in the riverbank or extract water from pools or springs in the upper parts (I7, I14). But, if all this fails, they resort to the "purchase of Water Rotoplas", that is, the acquisition of vital liquid through individuals who extract it from unregistered intakes, transport it in vans, and fill domestic water tanks (tanks, cisterns, etc.) by pumping (I7, I14). Before this service was offered, the same inhabitants carried water through buckets from the springs closest to their home, using it for dish washing, sanitary use and washing clothes; today there are still people who resort to this form of

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water transport when they do not have the resources to buy Rotoplas (I14).

Practices are also observed in which the inhabitants make use of the hydraulic infrastructure of the municipality without the official authorization of the government agency – but with knowledge of it – for the management of community outlets with the support of politicians (aldermen, deputies, trustees), to cover as far as possible the demand for water, especially in the upper parts of the town where CAPAMA does not provide the service, as well as cooperation between municipal employees and members of community committees to solve problems, especially of a technical nature (I5, I6, I9). That is, they ask CAPAMA workers with experience in installing domestic outlets to make a connection without a meter by means of galvanized or plastic pipe (hoses) (I9), or they come to connect to the distribution network of the paramunicipal machinery that extracts water from the community wells and distributes it through said network (I6 and I5).

The strategic location of the town, being located on the edge of the main river of the sub-basin and on aquifers is currently expressed in hoarding and in a water market. This sale of water generates the same results as any other commercial relationship: competition, greater production —in this case extraction— and, above all, winning entrepreneurs and their counterpart, consumers who less and less can afford the price of the vital liquid.

I9 and I18 present a landscape of water demand and supply that is experienced during the season of scarcity, and that deserves to be cited directly for the richness of its description:

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> "[...] all those who have their little land out there have their water well and give a lot of water those wells ... then almost the people from there, from there carry and sometimes with the time of crisis then, that people go to the race with the hauling of water, because the cars queue sometimes until ... row of cars to fill... then others go elsewhere, there are other water wells but there... there are some that are going to fill there heading ... as if they were going to *Ejido*... like 2, 3 Kilómetros, there are other wells there... some fill up there... others go up, that one from above I do not know exactly where they are going to fill but sometimes I see that they come from the top ...".
>
> "Right now they start (the *truckers* are coming) ... I think that last week they started to come very few, but those are signs that... of itself the river we see ... that is drying up... it's almost dry already... and then with the coming of the vans, they already begin to come... of three trips, four trips... yesterday I took 5 trips.... right now I have 3 trips for local service of the 30 and two trips have come vans from the landfill ... of the libramiento (*Paso Texca*).".

On the other hand, the strongest criticisms of CAPAMA are not for the tandeo system itself, but because price increases have been presented without apparent justification and above all, the most aggravating: the payment for a service that is not provided. Beyond the

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above, there is also reluctance on the part of the community towards municipal public management, which is related to the perception of loss of the common good (I6, I14). The same workers of the paramunicipal operating body, in testimonies within the interviews, affirm these deficiencies in the distribution (I1, I2).

As for the internal sanction mechanisms, it is worth highlighting the visible differentiation that exists between municipal and community management. On the one hand, CAPAMA's field operators are not authorized to do so, or, in the event that the presentation of authorized personnel is required to sanction or mediate a conflict, neighborhood disagreements are observed. In the case of community committees, they do not have institutional support or supervision and, consequently, they see the need to agree on rules of operation for collective benefit, distinguishing two mechanisms: community work and economic cooperation (I14). As for sanctions beyond internal dynamics, there is confusion, negligence and omission on the part of government agencies (I2); this, in turn, gives opportunity to the emergence of local governments that can set the tone in terms of justice, and that cover not only aspects of river pollution or infrastructure damage, but also extend to other areas.

It should be noted that two levels are distinguished, as in the sanctions, in the environmental problem: an internal one typical of the efforts that has to do with damage to the infrastructure, and another that transcends this field, that of the deterioration of the river and riverbank. In the first case, minor problems are addressed by CAPAMA staff or by neighbors with some experience, and when they are major problems they

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require support from the staff of the port of Acapulco, in the case of the paramunicipal (I2). In the CAPCs, the beneficiaries of the water intake do constant prevention work, and in cases of conflicts, they do their best to fix it promptly (I6, I8). On this point, I6 mentions in an interview excerpt the following:

> "Also (the members of the previous committee) misused the field, because where the water tank is, there is a place, a green area because there are trees to shade the well and not dry; that's the idea that the water keeps gushing out of the trees that are there. So, what the last committee did was cut them, cut some parts and pour liquid so that the seedlings that were around would die; right now what they (the new committee) did again is to bring fruit trees to plant in that area and there will be a little more water.".

Despite the neighborhood agreements implicit in the face of contingencies, when crises are greater or widespread, the inhabitants showed signs of tension expressed in feelings such as resignation or anger (I6, I13).

There are also problems of the commodification of water that do not happen until the moment of friction or tensions between those involved in the extraction and sale. In reference to the above, I18 makes a very relevant narrative around this point:

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> "[...] Yes, the truck drivers despair, they despair and want to harass me, to hurry me, but then, what aboutme?, it is the spring that is commanding, I would have to want it never to dry up and for my bombs to be there... that they did not stop and that they were traveling, traveling and traveling and copper and copper and copper [...] normally they are young people who want to take many trips because... they come in desperate and they harass me there.".

There are also problems that indirectly affect the supply and consumption of water, which combine the natural dynamics of the hydrological cycle with primary economic activities, in this case agriculture (I14); in the same way, deforestation and changes of land use in the riverbank and fires in the surrounding mountains and plains, whether of natural origin or provoked, exceeding the limits of the structure and internal dynamics of the committees (I18).

By experiencing state exclusion in terms of water supply, the inhabitants of the locality, in their actions, see the need to strengthen community ties, develop their capacities to the maximum and have initiative to cope, but not overcome, the scarcity of water (I7, I15). In this sense, community takeovers have different origins: either they were found by the community stakeholders themselves, or they are community stakeholders whose management was financed by political or governmental stakeholders external to the community.

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The environmental practices within the committees are framed in a logic of uses and customs, it is argued among the stakeholders the genuine interest of seeking communal well-being and the exercise of a shared decision-making with the inhabitants of the place. Community committees are constituted for the management of underground water sources, which reproduce the same organizational logic that they use for the definition of ejido authorities: a president, a secretary, a treasurer, and 3 to 5 members who are elected annually by assembly -although there are cases in which the same water committee can last more than five years- (I6, I14, I15). When the issues addressed within a community committee are strong, or involve more than one territory (call it a colony or community), representatives of other communities involved are invited to participate to reach agreements (I6). However, when it comes to the emergence of new community intakes, there is no equal treatment for all individuals within the community based on the differentiation between the members of the committee considered partners - commonly, the first members of the community water committee, who have seniority rights such as the inheritance of land and water intakes - and those who do not have this attribution, being manifested in practices of exclusion (I15).

The above elements allow us to affirm the existence of a plurality of parallel legalities within water management, which implies the coexistence of a process of government management for water resources, at the same time as community forms to generate rules and sanctions in the use of the same resource. Conditions such as those mentioned by Santos around his concept of legal field are presented: a constellation of

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various legalities (or illegalities) that operate on local, national and global scales (Santos, 2018: 196).

In relation to the prevention of emergencies related to the supply and quality of this, the cleaning of MSW of the riverbed and the riverbank is the most common practice; other practices are observed such as chlorinating water or refraining from drinking it, especially in the rainy season (I1), which is when the springs are contaminated by the use of agrochemicals, as well as the construction of walls to protect from possible azolvamientos of the community tanks (I14, I15). Water quality is evaluated from characteristics perceptible to the naked eye (color, smell, etc.), without any more systematic process (I15). As for the strategies followed to clean the areas near springs and the river itself, activities such as community work are developed as tasks, and construction of retaining walls to avoid havoc during periods of rain (I6).

Regarding communication and cooperation with government agencies or other agencies, the environmental practices associated with support or joint work account for practices of political culture associated with a paternalistic vision, which expects state action to take the initiative for the impact on the care of water resources. Capama, directly associated with the government although it is really a parastatal body, is expected to carry out environmental education actions (I2), the provision to the population of inputs for water treatment such as chlorine tablets (I14), the cleaning of the riverside area by officials of the City Council of Acapulco for reasons of holidays such as Holy Week (I13), or the search for new sources of underground extraction of water resources, especially

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as political proposals of candidates for positions of popular election in the campaign -which, subsequently, are reported not to comply- (I13).

Authors such as Del Moral-Ituarte (2007) as well as Lacabana and Cariola (2005) argue that the roots of expectations towards paternal treatment in the management of water resources come from a water model based on a traditionalist political culture. This is contrary to the construction of democracy that, they assume, can be reflected in a management model based on the so-called "New Water Culture"; that is, a search for the care of water resources based on sustainability, integrated management, horizontality in decision-making (water governance) and the maintenance of the good *quantitative and qualitative* water status (Del Moral-Ituarte, 2007: 53). However, we consider it useful to discuss the following, how to build a New Culture of Water, in contexts such as the state of Guerrero, where the construction of democracy has been a long, tortuous process, and that the lack of institutional results through social mobilization has given rise to violent responses? An issue that is expressed in aspects such as electoral politics itself, demands for social justice, and defense of the territory (Bartra, 2015; Illades & Santiago, 2019).

Despite these historical inertias, practices are also observed that maintain the conception of care and preservation of common goods, in this case, water sources; despite both the traditional paternalism that has been previously analyzed, and the unplanned demographic growth of the community, specifically in the areas near the riverbank, which has given rise to practices such as the deposit of urban solid waste and domestic wastewater in the riverbed (I5, I7). It was possible to report practices

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such as the community work itself in tasks (I6), the initiatives of cleaning the river carried out by students of the secondary and preparatory schools of the town (I5, I6), and even cleaning initiatives carried out by young people, made outside their educational activities, encouraged by what in social networks is called #GarbageChallenge (Martiniuk, 2020) (I7).

Discussion

Transforming the water reality of the community, which in its practice continues to degrade the environment despite the modifications and adaptations in the regulatory frameworks and various scientific paradigms that accompany them, requires taking into account what Lezama (2010) refers to in terms of environmental policy: 1) advances in environmental matters, in many cases, they are only of a normative and discursive nature, but do not manifest as the containment, prevention or remediation of environmental damage; and (2) a large proportion of environmental laws and regulations are not complied with by omission, corruption, inability of the authority to monitor, by the absence of governmental power to impose the law in the presence of powerful stakeholders in both the public and private spheres.

The determinants of the water problem at the local level, which are manifested in systemic and normalized scarcity of the vital liquid, hoarding of it and community tensions, when placed on a broader horizon, highlight the co-production of the deterioration of the environmental relationship not only with water, but of all nature; this places the problem

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in an extensive discussion, where the identification of principles that support a management dynamic that guarantees the preservation, access and consumption of the vital liquid is prioritized, at the same time as everything that comes from it in terms of environmental well-being and coexistence. While we have developed an argument aimed at understanding the socio-cultural practices of water management in the Community of *Kilómetro 30*, we have also found that there is a very strong link between other non-human entities (the road itself, the river, the sub-basin as a complex ecosystem) that intervenes in the way these practices make sense. Therefore, we believe that the prevalence of legal pluralism in water management in the community can also be explained by an actancial link with the environment (Latour, 2008; Callon, 1995).

Regardless of the fulfillment of environmental agendas that tend to homogenization, emphasis should be placed on research referring to local problems of deterioration, especially those framed in processes of inequality and violence, since that is where aspects are presented to which a public policy should aim for the guarantee of constitutional rights and water justice (Zwarteveen & Boelens, 2014). In this sense, the results show us that the situated perspective of the stakeholdersrs allows us to visualize the limits of state action and its discursive foundations -for example, the strict application of the Sustainable Development Goals-, and that despite the historical debt that the water operating bodies that emerged since the 80s have with communities such as *Kilómetro 30* is still in force, this did not imply the social inaction of the community to provide itself with vital liquid. Inequalities in access to water, as well as

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in access to justice and peace, have constituted state margins of water management (Mbembe, 2011; Galán-Castro, 2021).

Conclusions

The State, in its historical marginality, differentiation and exclusion that it has had over the region, has made possible an environmental relationship of violent characteristics; with forms as subtle as the implementation of the Acapulco Tourist Port megaproject, which disrupted the meaning of social practices or as the appropriation of the central bourbon of the town, which modified the water dynamics of the community. It has also led to more aggravating forms, which lacerate physical integrity and human dignity, such as physical aggression and the commercialization of the vital liquid. It should be noted that the notion or referencing of the violence experienced in the community and in the area of influence it has, is already problematic because of the implications and reprisals by the groups that de facto exercise power and control over the geographical space.

This translates into environmental practices that take shape in a territorial production with a degradative inertia that not only modifies the physical substrate and the consequent loss of qualities of the river system, but, as a collectivity that feeds back, has also been deteriorating the conditions and forms under which these practices are carried out.

The co-management of water in the locality as a daily intervention on the flow, access and use of the vital liquid that in this case become by

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historical provisions of marginalization and violence-, make possible the production of a water territory from social practices that go from the legal, regulated and institutionalized by the State, to the illegal, such as agreements generated communally but not regulated and even illicit, in the form of violent or exclusionary actions outside the law that can generate direct confrontations with the State. Regardless of the lack of recognition or state permissiveness in relation to the management practices previously exposed, in this environmental complex the most aggravating thing is the violation of rights for a healthy environment and access to water, also giving the problem a structural character.

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