

Rap, E. and Wester, P. 2013. The practices and politics of making policy: Irrigation management transfer in Mexico. *Water Alternatives* 6(3): 506-531



The Practices and Politics of Making Policy: Irrigation Management Transfer in Mexico

Edwin Rap

International Water Management Institute, Cairo, Egypt; e.rap@cgiar.org

Philippus Wester

International Centre for Integrated Mountain Development (ICIMOD), Kathmandu, Nepal; pwester@icimod.org, and Water Resources Management Group, Wageningen University, Wageningen, the Netherlands; flip.wester@wur.nl

ABSTRACT: This article argues that policy making is an interactive and ongoing process that transcends the spatio-temporal boundaries drawn by a linear, rational or instrumental model of policy. We construct this argument by analysing the making of the Irrigation Management Transfer (IMT) policy in Mexico in the early 1990s, focusing on different episodes of its re-emergence, standardisation, and acceleration. During this period a standardised policy package was developed, consisting of a set of specific policy technologies to effect the transfer to Water Users' Associations (WUAs). These technologies were assembled in response to geographically dispersed trials of strength: experiments, consultations and clashes in the field, and negotiations at the national and international level. A newly installed public water authority increasingly succeeded in coordinating the convergence and accumulation of dispersed experiences and ideas on how to make the transfer work. Our analysis shows how this composite package of policy technologies worked to include a network of support and to exclude opposition at different levels, while at the same time stabilising an interpretation of policy-related events. In this way the policy gathered momentum and was 'made to succeed'.

KEYWORDS: Policy making, Irrigation Management Transfer, politics, bureaucracy, Water Users' Associations, Mexico

INTRODUCTION

To understand policy processes, it is revealing to take the words *policy making* literally. Colebatch's (2006) framing of the question 'What is the work which makes policy?' shifts the focus to how practices produce policies. This focus allows us to demonstrate that policy making is an interactive and ongoing process that is potentially self-reinforcing, but often fragile and reversible in practice. It is only by building a network of support and excluding opposition that a policy idea gathers momentum and is made to succeed. The seed for this insight was sown by Grindle and Thomas (1989), who developed an interactive model of policy implementation, based on their critique of the linear model of policy, and expanded this analysis in Thomas and Grindle (1990). In their view, the linear model ignores the implementation process, because it takes the policy decision as the critical political choice, which then automatically has to result in implementation. Instead, Thomas and Grindle (1990) propose focusing on the societal conflicts and reactions that a policy generates and the political and bureaucratic resources that policy makers need to mobilise to deal with such responses in order to sustain the policy. They argue that "implementation is an interactive and ongoing process of decision-making by policy elites and managers (implementors)[sic] in response to actual or anticipated reactions to reformist initiatives" (ibid).

In this article we contribute to the 'policy as process' literature by building on the interactive model and extending its claim by showing that policy makers have ways of knowing, anticipating and adapting policy to societal responses and build their support network accordingly. Hence, we regard the making of policy as an interactive and continuing practice occurring at different levels and stages of the policy process. In this line of thought, policies are dynamic and change over time: incremental adjustments are made to earlier decisions, changes of direction and routes occur, and the experience of implementing a policy feeds back into the policy-making process (Hill, 2009). Hence, there is no strict separation between the formulation and implementation of a policy, since much of the making of a policy occurs in what is perceived as the implementation process (Page and Jenkins, 2005). Moreover, even after a policy is officially terminated by ministerial decision, its making, support network, and momentum can still continue (Turnhout, 2009).

But then how do policy actors, scales, and stages coalesce and advance a policy process? To answer this question, the case study in this article focuses on the re-emergence, standardisation and acceleration of the Irrigation Management Transfer (IMT) policy in Mexico. In the early 1990s, the Mexican government pioneered this policy, drawing much international attention. As part of the neo-liberal reforms during President Carlos Salinas' administration (1989-1994), some 2.5 million ha of government irrigation districts (out of a total of 3.4 million ha) were transferred to WUAs (CNA, 1994). The speed with which the transfer programme was carried out surprised donors, consultants, water professionals and researchers alike, especially as handing over irrigation systems to farmers on such a scale had not been attempted before anywhere in the world. Consequently, Mexico's IMT programme was considered a 'success' in water-policy circles, and the Mexican policy model became an international showcase for promoting neo-liberal water reforms (Gorriz et al., 1995; Johnson, 1997).¹ The Mexican case is interesting to study because the irrigation reforms actually reorganised irrigation management, in contrast to many other countries where irrigation reforms remained partial due to insurmountable opposition by the hydraulic bureaucracy and farmers. This article particularly focuses on how the Mexican hydraulic bureaucracy overcame these various forms of opposition as an integral part of policy making.

This article constitutes one of the panels of a triptych. Each panel shows a different perspective on the policy trajectory of IMT in Mexico. The first historical panel on the left (Rap et al., 2004; Wester et al., 2009) describes the emergence and expansion of the hydraulic bureaucracy in association with the centralisation of water control and the adoption of the hydraulic mission by the Mexican State in the 20th century (Wester, 2009). The hydraulic mission entails that the state, embodied in an autonomous hydrocracy, takes the lead in water resources development to capture as much water as possible for human uses. Driven by the argument that a single water authority should regulate and control the nation's waters, the hydrocracy consistently managed to renew its always precarious autonomy at different political moments in the country's history. The case of the IMT policy shows how the hydraulic bureaucracy in a neo-liberal era actively renewed its control over water decisions and budgets, and has played a remarkably constant, hegemonic role in defining and shaping Mexico's water laws, policies and institutions at the national level. Nevertheless, in line with neo-liberal ideas, IMT significantly reduced the direct role of the state in irrigation management and, as a result, the hydraulic bureaucracy lost power, people and presence at the local and regional levels.

The second, more contemporary, panel of this triptych, located on the right, focuses on how the Mexican policy of IMT became an international policy model that was widely propagated as a 'success' (Rap, 2006). This panel describes the discursive practices, audio-visual technologies and promotional

¹ This policy model, the empirical backing, and the construction of its 'success' are critically discussed at length in Rap (2006). We do not consider the policy itself successful in terms of policy outcomes but certainly recognise its success as a policy model that was replicated around the world.

events through which an emerging international policy network framed the problem of public irrigation management and promoted the transfer of irrigation systems to WUAs as the only viable solution. The policy network became institutionalised with the establishment of the International Network on Participatory Irrigation Management (INPIM). This panel especially points to the cultural and ideological processes at play, in line with the political and economic pressures, in convincing ever larger audiences that this policy model was successful and thus worthy of emulation in other countries. The particular policy perspective taken further suggests that success in policy making, rather than being based on straightforward evidence of improved management performance, is often part of a cultural performance.

This article forms the third and central panel that connects the outer panels and completes this triptych. We open up the black box of the IMT policy process by focusing on policy-making practices as contingent and inherently political and bureaucratic processes. In the following section, we engage with different perspectives on policy making to develop our view on the practices and politics of policy processes, and introduce the reader to the case. We subsequently identify and analyse three episodes of the IMT policy process in Mexico: the re-emergence of the transfer policy; its assemblage, standardisation and closure; and its promotion and acceleration. As the transfer policy package had largely been standardised by 1992 and a majority of the irrigation districts (50 out of 80) had been transferred by the end of 1994, our analysis of policy-making practices focuses on the period between 1976 and 1994. In addition, we do not provide a detailed analysis of policy outcomes and the intricacies of the struggles engendered by the policy in the numerous irrigation districts, as these merit an article of its own and are not germane to our argument. The concluding section draws out the implications of our findings for the debate on the politics of policy processes.

PERSPECTIVES ON POLICY PROCESSES

Studying how policy processes work challenges deeply held beliefs about what constitutes the policy process. Although much criticised for its lack of empirical accuracy, the linear or instrumental model of public policy remains very enduring in policy circles (Long and van der Ploeg, 1989; Mosse, 2004), partly because it portrays the world as policy makers prefer to see it: controllable and amenable to rational analysis (Fischer, 2003), and partly because it validates the "myth of intentional choice through politics" (March and Olsen, 1989) and the Weberian ideal of an impartial and rule-following bureaucracy. According to the linear model, a policy neatly progresses through the sequential stages of problem analysis, policy formulation, political decision, policy implementation and evaluation. It is central to the linear model that politicians make policy decisions, whereas implementation is an administrative activity. Policy makers are believed to be not much involved or interested in policy implementation and consider it the responsibility of lower-level bureaucrats.

The conventional success-of-IMT-in-Mexico narrative (Gorriz et al., 1995; Johnson, 1997), critically analysed by Rap (2006), is a good example of a reification of the linear policy model. This narrative argues that an economic crisis during the 1980s led to a decrease in government funding for irrigation and a reduction in the payment of water fees by water users, resulting in low cost recovery and a widespread deterioration of the irrigation districts under public management. In 1989, the Mexican President endorsed the policy of transferring the irrigation districts to WUAs in order to reduce subsidies and improve the productivity and viability of the irrigation districts. The *Comisión Nacional del Agua* (CNA: National Water Commission) was established as Mexico's sole water authority to implement various new policy, legal and institutional arrangements, including IMT. CNA designed WUAs to function as financially and administratively autonomous irrigation organisations that are accountable to the water users rather than to the government. According to this policy narrative, CNA achieved this and IMT was thus a successful policy. The conditions believed to have led to this success became prescriptions for replicating the policy (Rap, 2006), such as government commitment, an autonomous

water authority, financially self-sufficient WUAs, a solid legal framework and a promotional campaign (González-Villarreal, 1991).

Thomas and Grindle (1990), in contrast, analyse policy implementation as a political process involving a variety of policy actors and thus an accommodation of interests. Central to their interactive model are four assumptions, listed below, with which we wish to engage:

1. Policy formulation and implementation are discrete and sequential activities that are separated by a political and centrally enforced decision.
2. Specific policy characteristics will determine the reactions of individuals in strategic locations in the public or bureaucratic arena. This can favour, alter, or reverse a policy at every stage of the policy process with multiple potential outcomes.
3. There are fixed policy characteristics that do not change during the implementation phase. Examples of such characteristics are the duration of the implementation and the dispersion of costs and benefits.
4. Policy makers do not sufficiently anticipate the responses to their policies, and they do not adequately develop strategies to overcome opposition.

The empirical findings in our case study prompt us to build on, but rethink, these assumptions. In this article we argue that not only implementation but rather the making of policy as a whole is an interactive and ongoing process. We understand policy here as the decisions and courses of (in)action taken by public institutions under governmental authority (Marinetto, 1999; Hill, 2009). The making of policy is not restricted to the discursive formulation or political endorsement of a decision. The bureaucratic making and contestation of a policy already begins long before and strongly continues after the political decision. In this process, policy makers are able to shape and modify policy characteristics and thereby anticipate opposition and mobilise support; this influences how the policy is implemented and its outcomes. To analyse how policies are constructed discursively and practically and sustained socially and materially we draw on Mosse's analysis of policy processes and insights from STS.

Mosse argues that "policy primarily functions to mobilise and maintain political support, that is to legitimise, rather than to orientate practice" (Mosse, 2004). The operational control that bureaucracies have over practices and events is often limited, but where they can exert control is over the interpretation of events. So success in policy making "depends upon the stabilisation of a particular interpretation, a policy model" (ibid). The success of a policy "is not inherent" or "given at the outset", but "arises from the ability to continue recruiting support and so impose" a "growing coherence on those who argue about or oppose" such an interpretation (Latour, 1996 in Mosse, 2004). The more policy actors are tied up with a particular interpretation, "the more stable and dominant" the policy becomes (ibid).

However, which practices stabilise an interpretation of policy-related events? Here, it is important to recognise the heterogeneous nature of policy making. Building a support network includes sustaining an interpretation not only socially and discursively, but also materially, which together stabilise the form and shape of policy ideas. Here, our idea of a policy package comes in. This is a standardised set of policy technologies that enrol, include, and align actors and resources in support of a policy and exclude, circumvent or resolve the obstacles and opposition that threaten to impede the advance of a policy process. Policy technologies play a crucial role in building a network that shapes, connects and directs such heterogeneous elements as human actors, material devices, organisational spaces and resource flows in support of a policy idea. In this article we show how a policy package was assembled and standardised, consisting of a set of specific policy technologies to realise and legitimise the transfer to locally formed WUAs. Mobile teams of bureaucrats and experts devised and experimented with these policy technologies to identify, anticipate, and incorporate support and avoid opposition, with the

aim of advancing beyond potential conflict points in the policy process and stabilising a particular policy idea.

We aim to show that there is mileage to be gained from applying the insights of STS to the policy process (Latour, 1987, 1996, 1999; Law, 1994; Law and Hassard, 1999). From an STS perspective, policy making can be defined as the process by which policy actors support, modify, displace, and coalesce around a policy idea with as outcome that a policy becomes less or more stabilised and 'real' (cf. Latour, 1999). At the outset a policy idea is a fiction that can only gradually become sedimented into a real object (Latour, 1996). A policy that makes it beyond the ideas stage follows an unstable and unpredictable trajectory through which it becomes or does not become more articulated and dominant through the enrolment of social actors and material allies and the alignment of interests around a policy idea. In the course of assembling a policy package, what Latour (1987) calls *trials of strength* define the characteristics and interpretation of a policy. Particular attention is paid here to how policy technologies create and connect a supporting policy network and stabilise a particular policy idea. If this heterogeneous policy network holds together, then policy closure occurs, meaning that a strong consensus emerges among different policy actors about the dominant interpretation of a policy (Bijker, 1990).

Besides STS, the idea of policy technology finds its inspiration in two other bodies of thought. First, it draws on Foucault's analysis of governmentality, to which the concept of 'governmental technologies' is central: "the complex of mundane programs, calculations, techniques, apparatuses, documents and procedures through which authorities seek to embody and give effect to governmental ambitions". These technologies contribute to "the conduct of conduct", by "acting upon the actions of others in order to achieve certain ends" (Rose, 1996: 12). For example, Miller and Rose (1992) show how contemporary calculative practices or technologies of government enable neo-liberal efforts to autonomise state institutions from direct control and responsibility over the actions of individuals, organisations and societal domains, whilst retaining some form of "action or control at a distance". These governmental technologies are crucial to the dynamic of "recentralizing while decentralizing" (Ribot et al., 2006) of neo-liberal policy regimes.

Second, Mosse's idea that "development institutions construct rural society in terms of organization imperatives" (1999: 303) informs our understanding of policy technologies. Government bureaucracies tend to label, formalise and up-scale existing local organisational forms in line with official expectations and bureaucratic requirements for how people should organise (Mosse, 1999: 328). "Social technologies – criteria for group membership, roles and offices, conduct meetings and record and account keeping" provide "a means to consult with local people to harness local leadership, mechanisms to channel development inputs, and meet bureaucratic requirements of orderliness, uniformity, quantifiability and control". This "simplification, uniformity and standardization" of local irrigation organisations is essential to their "recasting in bureaucratic terms" (Mosse, 1999: 323). Because of the way policies are being institutionalised, materialised and made routine, bureaucracies often play a crucial role in their stabilisation.

Based on all these ideas, the concept of "policy technologies" has a distinctly double-sided nature. Like any political act, they are both instrumental and expressive (Edelman, 1964). On the one hand, policy technologies are used to generate and govern an ever more stable organisational arrangement of subjects and objects that constitute a heterogeneous support network for the IMT policy. On the other hand, these technologies also express, discursively and symbolically, a policy interpretation that concurs with neo-liberal, modernist and bureaucratic idea(l)s of order regarding the rational organisation of irrigation management. Both these instrumental and expressive aspects of policy making contribute to building a support network and stabilising an interpretation of policy-related events.

This article develops a constructivist perspective on policy processes by focusing on the re-emergence, standardisation and acceleration of the IMT policy in Mexico. This implies that the functional stages of the decision process (Lasswell, 1971) – intelligence, promotion, prescription, innovation, application, termination and appraisal – are not neatly separated and ordered in time. The case rather shows that they are interconnected, overlapping and feed back into each other and therefore do not follow a fixed, linear or predictable sequence. This addresses a major critique on the policy sciences framework, namely that it "breaks the policy process into functionally and temporally distinct sub-processes" (Jenkins-Smith and Sabatier, 1994: 176) and thus orients researchers only to look at one stage at a time, "thereby neglecting the entire process" (deLeon, 1999: 25).

The Advocacy Coalition Framework (ACF) aims to overcome these shortcomings of the policy sciences (Jenkins-Smith and Sabatier, 1994). "An advocacy coalition does consist of actors from a variety of governmental and private organizations at different levels of government who share a set of policy beliefs and seek to realize them by influencing the behavior of multiple governmental institutions over time" (Jenkins-Smith and Sabatier, 1994: 186). To avoid a top-down perspective, it incorporates in the analysis policy players at different levels, such as street-level bureaucrats (Lipsky, 1980) and studies a policy process that "stems from a multitude of overlapping directives and actors", from which none is a priori dominant (Jenkins-Smith and Sabatier, 1994: 176). We have incorporated these insights in the analysis of policy making, but question ACF's assumption that the policy core and the advocacy coalition are somehow stable over the period of a decade. Instead we focus on the building of a support network that stabilises a policy idea.

Methodologically, our research posed the challenge of *studying up* (Nader, 1972). This started with acquiring a detailed ethnographic knowledge of contextual organisational and political practices underlying the transfer of irrigation management to WUAs and the various local and regional political histories of transfer (Zaag, 1992; Rap, 2004, 2007; Wester, 2008, 2009) and then moving on to interview the most senior levels of the hydraulic bureaucracy. However, participant observation is a research method that "may not be readily portable to elite contexts" (Gusterson, 1997). This is partially so because informants are often too busy to engage in frequent interaction, or reluctant to disclose sensitive information and give direct access to policy-making arenas. Because most of the events described in this article had occurred already at the time of research, participant observation of policy making was limited. Hence, this case study research required a multi-method approach to reconstruct the IMT policy trajectory over several decades. We thus interviewed some 20 members of the upper reaches of the hydraulic and agricultural bureaucracy and other key political figures in the Salinas government, as well as staff of international organisations. In a number of cases we constructed life and career histories of these officials. To place this into the wider Mexican and historical context, we also interviewed Mexican water scholars and carried out an extensive review of policy documents and newspaper articles. To document what the written press had published about relevant agricultural and water policy issues we examined a cd-rom database of the news that appeared between 1988 and 1994. This demonstrated the difference in coverage of water-policy events compared to the publicly debated revision of land policies (El Financiero, 1994).

In interviewing senior government officials we focused on those who were most directly involved with water policy making and to a much lesser extent on those more isolated and less vocal groups who opposed these policy changes. This partially restricts our understanding of how the agricultural bureaucracy as well as middle-level irrigation staff viewed and responded to the policy and how they were in practice made redundant, silenced or sidelined. Further, this gives a limited view on what alternative policy alliances were formed or collapsed among different segments in the agricultural and hydraulic bureaucracy.

POLICY EPISODE ONE: RE-EMERGENCE OF THE POLICY IDEA

The common assumption that handing over irrigation systems to organised water users was a policy innovation of the neo-liberal epoch has to be revised. Perhaps the labelling of the policy as 'transfer' in line with international policy discourses was the most important novelty of the 1990s. There are, in fact, important legal and organisational antecedents of user management that predate the neo-liberal period by more than half a century (Rap et al., 2004; Rodríguez Haros and Palerm Viqueira, 2007). Various irrigation and water laws between 1926 and 1946 contained provisions for the creation of irrigators' associations or WUAs and water boards to manage irrigation districts. The 1929 water law already mentions WUAs and confers legal status to them (SAyF, 1929). Subsequent water laws also allowed for the operation of irrigation districts by WUAs or water boards when it was judged opportune by the state.

In line with the law's provisions, water boards were charged with the operation of several larger districts in the north, such as Rio Yaqui (41), Rio Mayo (38), Rio Colorado (14), and Culiacan and Delicias (05).² But monopolisation of water by commercial farmers, combined with the lack of strong government support, was among the problems that were detrimental to the endurance of the water boards. The control of most of these districts was returned to the *Secretaría de Recursos Hidráulicos* or Ministry of Water Resources (SRH) from the Ministry of Agriculture and Livestock in 1951, effectively ending the experiments with water boards (Palacios Vélez, 1993; Vargas, 1996). Nonetheless, water boards continued to function in several irrigation districts, such as in the Tula (3) and the Rio Yaqui districts until the transfer programme of the 1990s.

Rodríguez Haros and Palerm Viqueira (2007) discuss four cases of relatively smaller irrigation districts and units that were partly or entirely handed over to organised water users in the 1940s: Pabellón (01), Ixmiquilpan (27), Module 1 of Valle de Juárez (09), and Module 5 of State of Zacatecas (34). In three cases, water users took over the management of the irrigation districts and continued to manage them for several decades. In fact, the authors argue that the transfer policy of the 1990s did nothing more than ratify an earlier hand-over.

In 1972, Article 46 of the *Ley Federal de Aguas* (Federal Water Law) established that the SRH was completely responsible for the irrigation districts, from construction to management, effectively forbidding user management of the districts (Diario Oficial, 1972). The fact that this law presented users as 'passive receivers of irrigation water', must have been one of the reasons that earlier antecedents were deleted from the public policy debates (Rodríguez Haros and Palerm Viqueira, 2007). Nevertheless, under the formal guise of public management, there were all kinds of informal and customary arrangements in which water users continued to exercise a significant role in irrigation management. Such interlinking of customs, rules and procedures of state, communities and NGOs has been called 'institutional bricolage' (Cleaver, 2002).

To indicate how the changing government policy on irrigation districts was always intertwined with presidential and bureaucratic politics, it is interesting to quote Hernández Terán (1988), the Minister of the SRH during 1964-1970, who recalls his first interview with the Mexican President after being appointed:

One of the subjects he brought up was regarding irrigation districts. He said: you know how they propose things to you in the campaign, some have the opinion that the districts should be given to the Ministry of Agriculture, others that official banks should deal with them, others that they should be handed over to users, and others that they are fine where they are. What do you think? (...) I finally told him that at that time I thought they were fine where they were... and they stayed that way for another 12 years [in the SRH] (cited in Rodríguez Haros and Palerm Viqueira, 2007: 123-124).

² In Mexico, all Irrigation Districts have a number, indicated in brackets here. See Figure 1.

The re-emergence of the transfer policy idea in the 1980s was the fruit of an unhappy union between two bureaucracies. In 1976, the *Secretaría de Agricultura y Recursos Hidráulicos* (SARH: Ministry of Agriculture and Water Resources) arose from a controversial fusion of the SRH and the Ministry of Agriculture. As a result, the SRH, a traditionally strong and affluent hydraulic bureaucracy, lost its autonomy and control over the irrigation districts to the larger, more bureaucratic, and financially poorer Ministry of Agriculture (Wester et al., 2009). This politically enforced union reinforced a protracted bureaucratic struggle between the agricultural and hydraulic bureaucracy that sheds light on the later separation and the role of the transfer policy within that process.

One bureaucratic group played a major role in making the transfer policy and reforming the hydraulic bureaucracy. This group of water resource planners was formed in the *Plan Nacional Hidráulico* (PNH: National Water Plan) commission, created by SRH in 1973 with funding from the World Bank. This was a breeding ground for bureaucratic cadres and innovative policy experiments in water resources planning. Basic recommendations of the PNH were a sole water authority, integrated water planning, decentralisation, introduction of water pricing and greater user participation. However, because of the controversial institutional reforms of 1976 these policy recommendations could not be applied (Rogers, 2002: 41). During De la Madrid's election campaign in 1982, the water resource planners, in coalition with influential civil engineers, lobbied for recreating the SRH. The working group that was formed to define water policies for the incoming administration was coordinated by the later CNA Director Dr. González-Villarreal in close collaboration with De la Madrid's campaign manager, later President Carlos Salinas (IEPES, 1982). This attempt by senior hydrocrats to re-establish bureaucratic autonomy did not succeed, and they had to accept their subordinate position in the SARH for another six years.

During De la Madrid's administration (1982-1988), the team of water resource planners further developed policy ideas favouring water user participation, water pricing and institutional reforms. Several factors combined to precipitate a shift in thinking on the management of irrigation districts. In 1982, the World Bank stopped lending to Mexico in response to the moratorium on foreign debt payments that the government had declared in August 1982 (World Bank, 1983). Investments in the irrigation districts further dropped as cost recovery from 1983 to 1988 was very low. Lastly, the irrigation districts were combined with the rain-fed districts in 1985 to form rural development districts; this resulted in the hydraulic bureaucracy further losing control over the irrigation districts (Palacios Vélez, 1994). This situation was unacceptable to senior hydrocrats, and the need to 'rescue' the irrigation districts from the agricultural bureaucracy played an important role in the emergence of the transfer policy (Vargas, 1996).

In the 1980s, before transfer had been endorsed as a policy at the national level, experiments with user management were initiated by lower- and middle-level bureaucrats in selected irrigation districts, such as El Grullo (Jalisco Sur 94), Río Mayo (38), Río Yaqui (41) and Delicias (05) (see Figure 1 for their location) (Zaag, 1992; Palacios Vélez, 1993). The experiments in these field laboratories were based on trial and error and influenced the design and adaptation of policy technologies that were later assembled into the transfer policy package. These experiences were intertwined with the aforementioned bureaucratic struggle over the control of the irrigation districts.

Río Mayo in the northern state of Sinaloa was one of the first irrigation districts where transfer initiatives occurred (Palacios Vélez, 1993). As part of a World Bank-supported irrigation modernisation programme, SARH engineers informed water users that the district would be handed over to the users. It appeared that SARH was testing how to organise transfer and that the district would serve as a model for other districts to follow. In August 1986, the then minister of agriculture announced at a meeting that "steps are being taken to hand over to organized farmers the operational management of the irrigation districts, so that every peso that is paid in water fees will be invested in the same district" (*El Financiero*, 19 August 1986). This suggests that initiatives on the ground were well underway in 1986, well before the formal endorsement of the transfer policy. On the basis of instructions received from

SARH headquarters at the start of 1988, the Río Mayo district office began to organise WUAs that would become responsible for the operation and maintenance (O&M) of the infrastructure.

Map 1. Irrigation districts in Mexico.



Another important policy experiment – in the El Grullo irrigation district in the western state of Jalisco – strongly contributed to the assemblage of the transfer policy. Farmer involvement was not new in El Grullo, as a team of middle-level SARH engineers had experimented with a water user commission from 1980 to 1983 (Zaag, 1992). The same team of engineers transferred the nearby La Barca irrigation district to a water user committee in November 1985, allegedly the first in Mexico (Lomeli, 1991). This informal group of hierarchically linked and regionally based engineers was led by their former university professor Engineer Velazco,³ who was head of the SARH state delegation in Jalisco in the late 1980s. This bureaucratic faction within SARH had experimented with organising farmers in the 1970s and 1980s and was linked with particular SARH officials at the federal level.

In May 1987, Velazco instructed the El Grullo district head, who was under him in the hierarchical line but not a member of his informal group, to put water users in charge of the maintenance tasks of the district (Zaag, 1992). Initially, the district head opposed this initiative, but in February 1988 he informed farmer representatives that the SARH had a new policy of decentralising its functions to farmer organisations. He proposed the creation of a WUA and stated that he was authorised to hand over machinery for maintenance tasks. During the first months of 1988, district officials went to the

³ As we promised anonymity to the senior official we interviewed, throughout the text fictitious names are used to refer to senior hydrocrats.

*ejidos*⁴ to explain that SARH could no longer maintain the irrigation district and that a WUA could do it better. Delegates were chosen from each *ejido* and by the private farmers. In May 1988 the founding assembly of the WUA was held, and a working group was formed to draft internal regulations. In November 1988, the regulations were accepted and the WUA board was chosen (Zaag, 1992). Interestingly, all of this occurred in anticipation of the presidential elections of July 1988, while transfer was not yet an official policy.

The re-emergence of the transfer policy idea in the 1980s was closely intertwined with three concerns that have historically characterised the hydraulic bureaucracy's identity, namely bureaucratic autonomy, control over financial resources, and control over the irrigation districts (Rap et al., 2004; Wester et al., 2009). González-Villarreal and his technocratic planning group represented a wider national 'advocacy coalition' of senior bureaucratic groups, political party actors, water-related academia, producer organisations and professional organisations, and consultancy and construction companies, with its broadly shared claim for a sole water authority with bureaucratic and financial autonomy (Jenkins-Smith and Sabatier, 1994). But it also partially shaped an emerging international policy network to globally promote the transfer of irrigation systems to WUAs. Towards the end of the 1980s, González-Villarreal and his team proposed transfer to Salinas and convinced him of the need for an autonomous water authority (the later CNA). As González-Villarreal's former right-hand man expressed it in the corridors of a World Bank policy meeting, Salinas 'bought' the idea. Retrospectively, this was later re-framed as a presidential decision. When Salinas started galvanising support from the bureaucracy for his election campaign in 1988, this coalition of engineers fully supported him in return for the creation of an autonomous water agency (Zaag, 1992).

In December 1987 and January 1988, the transfer policy idea was taken up at national meetings on water. Because 'access to water' was the "most frequently voiced demand" during his working tours, this became an important ingredient in Salinas' election campaign and policy agenda (Salinas, 1991). "However, an encouraging feature of these demands is that they are generally accompanied by offers to participate". This type of participation fitted with Salinas' ideology of 'social liberalism', according to which the state values economic or labour contributions of rural and urban communities and assisted such participation with funds from the National Solidarity Program.

At one of these meetings, Salinas asked González-Villarreal his opinion on the risks of transferring irrigation districts to the users. His answer is illuminating:

The transfer of irrigation districts to users was already an established policy of this administration [of De la Madrid], which has encountered some difficulties. (...) Those of the northwest and north of the country are prepared to start taking on their own administration..In a program that will be financed in the near future with international credit, called *Modernization of Irrigation Districts*, a subsequent phase after the original construction of the districts is proposed, consisting of the bulk delivery of water to the users and an administration directed by them..However, in the districts of the centre of the country (...) we believe that the process has to be more gradual (IEPES, 1987).

This shows the political and bureaucratic life and making of a policy before it was endorsed. Further, it indicates that González-Villarreal and Salinas had reached a basic agreement on the need for transfer. On the basis of the election campaign meetings, Salinas endorsed the transfer policy and publicly reaffirmed that the irrigation districts would be transferred, by stating that "we need to make great strides in the modernization of the operation of the irrigation districts.... In the countryside, I propose to

⁴ Land reform communities created after the Mexican Revolution of 1910. *Ejido* land belongs to the state, with a combination of community (*ejido*) and private (*ejidatario*) usufruct. Following the amendment of Article 27 of the Constitution in 1992, *ejidatarios* can sell their land.

decentralize, gradually, but firmly, the operation of the irrigation districts to organized producers" (PRI, 1988).

Meanwhile at the field level, a new district head was appointed to El Grullo by SARH in early 1989 (just after Salinas had become president). This engineer was an important member of Velasco's team and was fully in favour of transfer. He gave a strong impetus to it by handing over maintenance machinery to the newly formed WUA. The association started to train new personnel, carried out large-scale maintenance in the district, and received visits from national SARH officials and the governor of Jalisco. The team of SARH officials was obviously in a hurry since they anticipated a change in the institutional set-up of the irrigation district as a consequence of the recent presidential elections. As expected, in September 1989 their efforts were interrupted.

This episode shows that the making of the transfer policy emanated from a bureaucratic struggle for autonomy at a crucial political and electoral time for Mexico within a broader policy shift to a neo-liberal agenda. The episode further shows that the bureaucratic making of the transfer policy significantly predated, anticipated, and shaped political decision-making. How the transfer policy was further developed, assembled, and standardised by the hydraulic bureaucracy after its formal endorsement is detailed below.

POLICY EPISODE TWO: ASSEMBLAGE AND STANDARDISATION OF A POLICY PACKAGE

Our second episode shows how a package of policy technologies was assembled and became standardised in coordinated but geographically dispersed attempts to make the policy concrete. In spite of the support from international finance and expertise for a neo-liberal reform agenda, the making of such a policy package was shaped by a non-conducive national policy context: weak political support for the president and his government, ongoing conflicts within the bureaucracy, and substantial opposition to the transfer policy.

In December 1988, Salinas assumed the Mexican presidency after strongly contested elections. There were numerous indications that the elections were rigged in favour of the dominant party *Partido Revolucionario Institucional* (PRI: Institutional Revolutionary Party), although this did not result in an absolute majority in congress. As a consequence, in the initial years of his presidency Salinas took a gradual approach to modernising the state and liberalising the economy under his electoral slogan of social liberalism. This was necessary to regain political support among rural groups, the peasant sector, and urban popular movements, which the PRI was losing (Grindle, 1996).

That irrigation management transfer was central to Salinas' political strategy, and that this commitment dated from before the elections, became clear to insiders when at the end of 1988 an experienced irrigation engineer, Dr. Ramos, was appointed and charged with the actual transfer of irrigation districts. On 16 January 1989, Salinas created the CNA and instructed the agency to give priority to the transfer of the irrigation districts (Palacios, 1994). Salinas appointed his close associate González-Villarreal as CNA director. The new head brought his former team of water resources planners with him to populate this new agency, which resided under, but was semi-autonomous from, SARH. This technocratic group finally arrived at an institutional position to endorse some of the basic policy recommendations of the PNH (Rogers, 2002). The transfer policy was formally endorsed through its inclusion in the National Development Plan 1989-1994, released in June 1989. However, this consisted of only a broad formal statement of intent, whose characteristics significantly changed at a later stage of the policy process.

Assembling the policy package

In spite of the highest political commitment, several obstacles and controversies stood in the way of transfer – something that shaped the assembling of a policy package. First, the transfer of irrigation districts to WUAs was illegal under the 1972 water law, and the irrigation districts were still part of the

rural development districts under SARH, over which the newly constituted hydraulic bureaucracy (CNA) had no control. Second, a large majority of the irrigation districts were not financially self-sufficient, and efforts to convince farmers to pay modestly higher water fees had consistently failed in the past (Rap et al., 2004). Third, many of the irrigation districts were severely run down in the perception of the farmers, making it less likely that they would willingly accept responsibility for the infrastructure. Lastly, many medium- and lower-level officials in the irrigation districts resisted the idea of transfer since it threatened their jobs. Attempts to initiate transfer in many irrigation districts therefore encountered opposition from farmers, unions, bureaucratic staff, and the administrative section of the hydraulic bureaucracy.

In the years that followed, CNA accumulated an institutional capacity to diagnose, adapt to, and govern these obstacles, and overcome opposition. In 1989 and 1990, the transfer package was assembled in response to a set of experiments, experiences, and clashes in the field. Teams of engineers and lawyers travelled intensively between the capital and the irrigation districts. One of the key CNA lawyers at the time remembers:

At the start of 1989 we had a very general idea about how to ensure user participation. However, we started from zero as far as the legal issues were concerned. Everything had to be designed and worked out from a legal point of view. The legal design was drawn up in 1989 by this team and me. We wrote the concession titles and the statutes for the associations. During this process it was very important to listen to the users. We held many meetings in several irrigation districts, mainly in Sonora, in which I carefully listened to the complaints put forward by the users. I did not go to El Grullo, but we also had engineers working there. The idea of alternating the presidency of the associations came up at this time, based on experiences in the field. This is included in the statutes. The content of the concession titles, the statutes and the rest did not change much after 1989, although it was refined a bit. I would work until late at night in 1989 on these legal issues to make transfer possible (Interview, 22.06.1999).

These teams brought their experiences back to the national level, to a transfer policy committee presided over by González-Villarreal and in loan negotiations with the World Bank, where they were discussed, evaluated and modified, and then brought back to the field. These feedback mechanisms were centrally coordinated by CNA and led to a convergence of dispersed experiences and a standardisation of policy technologies with which to implement the transfer. The policy technologies forming the transfer package emerged out of this process of centring: a step-by-step procedure as well as organisational and legal devices and documents for organising and promoting transfer.

When Ramos and his team started assembling the transfer policy package in 1989, they turned to the earlier experiments with transfer before its political endorsement, as discussed in episode one. Ramos and his direct subordinates were respected irrigation engineers with a long career in SRH and SARH, who knew these experiences and had been present at early discussions on transfer. These early pilot experiments with user management were incorporated and brought under the control of CNA. The El Grullo irrigation district continued to play an important role and again serves as an example here. CNA took control in September 1989 by appointing a new district head and incorporating the pre-existing WUA that had been organised by SARH engineers as its own initiative. It also slowed down the transfer process by delaying the transfer of the operation of the irrigation district. The SARH team of engineers was removed from the irrigation district and was denied any credit for their pioneering policy work. Henceforth, El Grullo was presented as a CNA transfer project, deleting all references to the pre-CNA phase and the SARH involvement. In this manner, the hydraulic bureaucracy, represented by CNA, regained control over the transfer process.

Several policy technologies were designed that secured a significant degree of bureaucratic control over WUAs. In 1989 and 1990, senior CNA engineers visited El Grullo several times to draw up the governing documents of the WUA (Hodgson, 2003), namely new regulations, a WUA charter, as well as the Concession Title (*Título de Concesión*), which specified the conditions of transfer. At this time, the

existing WUA was converted into an *Asociación Civil* (civil association). The constitution of WUAs as civil associations was necessary to ensure that they would fall under the control of CNA, as 'normal' WUAs for irrigation units would fall under SARH according to the 1972 water law (Espinosa de León, 1994; Vargas, 2008). This policy technology was subsequently used in other districts, but was not legally sanctioned until 1992 when a new water law was enacted. According to the head of CNA's legal department at the time, the new water law was drafted between 1989 and 1991 based on these experiences, not only to legalise the irrigation transfer programme but more generally to confer powers to the CNA as the single water authority in the country. However, the new water law could only pass Congress in 1992, after Salinas had regained a majority in Congress.

Another important policy technology was the alternation of WUA board members. CNA officials were concerned that the elections for board positions would create conflicts between members of the land reform communities (*ejidos*) and private landowners, the two corporately organised landholder categories that were now subsumed under the policy label of 'water users' (Wood, 1985; Suhardiman, 2008). This issue was resolved by deciding to alternate the posts of president and treasurer of the WUA after board elections every three years between representatives of both the *ejidos* and the private farmers. This policy technology combined traditionally separate spheres of influence on the WUA's board to represent a newly organised constituency of water users and was crucial for reaching agreements and building alliances between groups of farmers and their leadership that had historically been opposed to each other. The alternation was first established in the charter of the El Grullo WUA, which served as the basis for the charters drawn up in many other associations later on.

These policy technologies also have an expressive dimension which contributed to stabilising and legitimising a dominant interpretation of the policy (Rap, 2006). The success of the policy was ritually performed and symbolically visualised in pilot projects as part of a public promotion campaign to gather popular support. In 1990, El Grullo was one of the first irrigation districts in Mexico to be officially transferred.⁵ At the beginning of 1990, the operation of El Grullo was turned over to the WUA and the Concession Title was presented to the WUA in May 1990, detailing the tasks and responsibilities of the WUA and its allegiance to CNA. On 21 January 1991, President Salinas visited the region and officially handed over the irrigation district to the WUA. The public ceremony symbolically demonstrated the transfer of responsibilities between the State and the WUA whereas, in practice, water users had already participated in the management for quite some time. This public ceremony received attention from the national press, and similar publicised events were subsequently enacted wherever transfer took place. During the following years, CNA used El Grullo as a pilot project to promote the benefits and success of its transfer policy to potential water users from other districts and national and international visitors.

A set of policy technologies was thus developed to give effect to the policy in practice in response to concrete experiences and barriers. In El Grullo and several other districts, the participation of water users had already developed a momentum that was difficult for CNA to control. Nevertheless, CNA succeeded in incorporating these transfer initiatives and used them to assemble and promote the transfer policy package. This resulted in the development of crucial policy technologies, such as constituting WUAs as civil associations, alternating the presidency of the WUA, the formulation of Concession Titles and the promotion of the policy via pilot projects. Through such policy technologies the CNA regained bureaucratic control over the irrigation districts, the organisational form of water user participation and the policy process of transfer.

⁵ Only preceded by Río Culiacan in 1989 and Río Mayo in 1990.

The gradual transfer

Initially, gradual transfer was the policy alternative chosen. Based on the transfer policy package assembled in 1989, the National Program for the Decentralisation of the Irrigation Districts was drawn up towards the end of 1989. The 80 Irrigation Districts (IDs) were classified in three groups (Rogers, 2002: 43):

1. 21 districts; 1.98 million ha; "the most advanced in agricultural technology, infrastructure and social organization".
2. 40 IDs; 850,000 ha; "less developed" and needing "a rehabilitation and organization program before the transfer".
3. 19 IDs; 400,000 ha, with "special difficulties so they had to be carefully analyzed in order to establish special strategies" before the transfer.

Only the first group of 21 districts was ready to be modernised, decentralised and transferred between 1990 and 1994. These districts were carefully selected on the basis of an assessment by CNA of the willingness of the users to accept the transfer (CNA, 1991a; World Bank, 1991). Most of them were large, commercially oriented districts located in the north of Mexico with few infrastructure problems. This gave effect to the gradual transfer programme, already conceived by González-Villarreal in 1987, consisting of three policy objectives: substantially raise irrigation service fees, rehabilitate and modernise the 21 irrigation districts designated for transfer, and finalise the transfer of these 21 districts by mid-1994 (CNA, 1991b).

International lending agencies, whose policy advisors were enrolled from the start, gave a crucial impetus to transfer. In 1988 and 1989, the World Bank sent eight missions to Mexico as part of the loan identification phase of what was to become the irrigation and drainage sector project. Extensive discussions were held with CNA concerning the transfer policy, with emphasis placed on the need to eliminate government subsidies to the irrigation districts. In December 1991, a US\$400 million loan was approved by the World Bank to finance part of CNA's irrigation and drainage investment programme for the fiscal years 1991 through 1994, totalling US\$1.2 billion (World Bank, 1991). The loan supported the gradual transfer programme, targeting the 21 irrigation districts for rehabilitation and promoting their transfer.

A policy technology that was informed by both international and national sources of finance and expertise was the involvement of community organisers to organise the transfer. Because the organisation of farmers was blocked by irrigation district field staff, the idea of forming temporary teams of promoters to bypass their blockade was taken up in loan negotiation meetings with the World Bank.⁶ The concept of community organisers had been used by the World Bank and USAID in earlier irrigation loan projects in the Philippines and in Sri Lanka during the 1970s and 1980s (Korten and Siy, 1989; Uphoff, 1992; Oorthuizen, 2003). But more importantly, these ideas matched those developed by the Salinas Administration in the National Solidarity Program (PRONASOL) that promoted forms of social spending to alleviate poverty and restore the PRI's legitimacy in rural, urban and indigenous communities facing harsh structural adjustment (Dresser, 1991; Cook et al., 1994; Cornelius et al., 1994; Fox, 1994; Torres Espinosa, 1999; deLeon and Hernández Quezada, 2001). The intellectual source of these governing practices was the doctoral dissertation of President Salinas at Harvard, which studied the weaknesses of the traditional forms of government spending to elicit political support for the PRI regime. His policy recommendation was to promote the emergence of a new generation of community organisers that would bypass the rigid and corrupt traditional elites and party cadre. These disparate forms of intelligence informed the CNA's strategy to acquire local support for the transfer. The CNA

⁶ Interview with World Bank country manager in Mexico and interview with one of the leaders of a promoter team.

thus formed interdisciplinary promoter teams and briefed them on the transfer strategy and the steps that had to be taken to form a WUA. Subsequently, these teams visited the public assemblies of *ejidos* and private landholders to explain the objectives of transfer, the rights and obligations involved, and the need for a substantial increase in the fees.

These promoters encountered the practical problem of having to deal with large numbers of water users organised according to different types of landownership. In response, they developed the idea of appointing water delegates from the *ejidos* and the associations of private landholders in a designated area to form an assembly of water delegates.⁷ After the approval of this idea by CNA, the promoters were given the responsibility of organising an assembly of user delegates with a fixed number of delegates from both the *ejidos* and the private landholder associations. The assembly of delegates was then given the responsibility of constituting the WUA and electing a board. For CNA, persuading an assembly of delegates to take over irrigation management was much easier and facilitated the transfer in a context where a majority of water users opposed it.

In July 1991, CNA published an important document, *Instruction for the Transfer of the Irrigation Districts to Water Users* (CNA, 1991c). This document detailed how to transfer irrigation districts and formally presented the transfer policy package some three years after the political decision to go ahead with transfer had been made. The publication of these instructions entailed the operational closure of the transfer package and the definition of its main characteristics. The document sets out a step-by-step procedure to transfer irrigation districts, consisting of policy technologies that formed the heart of the transfer policy package. The sequential steps were as follows (CNA, 1991c):

- *Diagnosis.* To initiate transfer, a thorough study is made of the district to assess the feasibility of transfer and the willingness of users to participate in the transfer process.
- *Promotion.* A large number of meetings are held with *ejido* members and private farmers to promote the transfer programme, to determine the boundaries of the modules, and to appoint the water delegates to represent the users in the assembly of delegates.
- *Constitution of the WUA.* The promotion team helps the water delegates with drawing up the charter of the WUA, constituting it as a civil association, and drafting the Concession Title according to CNA formats.
- *Acceptance of commitments.* The WUA signs an agreement in which it accepts the conditions of transfer and commits to increasing fee levels and maintaining them to achieve financial self-sufficiency.
- *Concession Title.* A comprehensive legal contract between CNA and the WUA is drawn up, detailing the rights and obligations of both concerning transfer.
- *Actual transfer of the module.* At an official ceremony, the Concession Title is signed and the module is handed over to the WUA.
- *Parallel operation.* After the transfer, CNA manages the module together with the WUA for six to 12 months, after which the WUA becomes fully responsible for the management of its module.

Although CNA assembled and standardised the policy package in 1989 and 1990, it continued to be difficult to convince the large majority of farmers to accept transfer. Aside from the three irrigation districts where transfer initiatives had already developed their own momentum, the gradual transfer ground to a halt in 1991 in the other 18 irrigation districts listed for transfer. Attempts by CNA to convince farmers of the benefits of water users accepting the poorly maintained irrigation

⁷ Interview with one of the leaders of a promoter team and interview with a senior CNA official.

infrastructure, while at the same time agreeing to pay significantly higher water fees and taking on greater responsibilities in the management of the irrigation districts, were met with staunch opposition (Espinosa de León, 1998). In addition, many of the CNA field staff, heads of irrigation districts, and the administrative section of CNA resisted transfer as it was clear that they would lose either their jobs or control over financial resource flows.

Towards mid-1991 it became apparent that the gradual transfer programme was not making much headway. In combination with a shifting political tide, this led to the dismissal of Dr. Ramos, the head of irrigation districts, as his approach to transfer, with its emphasis on rehabilitation and the gradual transfer of a limited number of districts, was not working fast enough. This second episode shows that policy making continues after the political decision. In order to concretise the policy, a package of policy technologies was assembled to diagnose and resolve a set of initial obstacles and controversies. The following episode illustrates how this contributed to an acceleration of transfer.

POLICY EPISODE THREE: PROMOTION AND ACCELERATION

This third policy episode shows that the transfer policy was made to succeed by a standardised policy package developed by policy makers to create and mobilise networks of support for the policy, whilst diagnosing and overcoming opposition and potential conflict.

Accelerating into the fast track

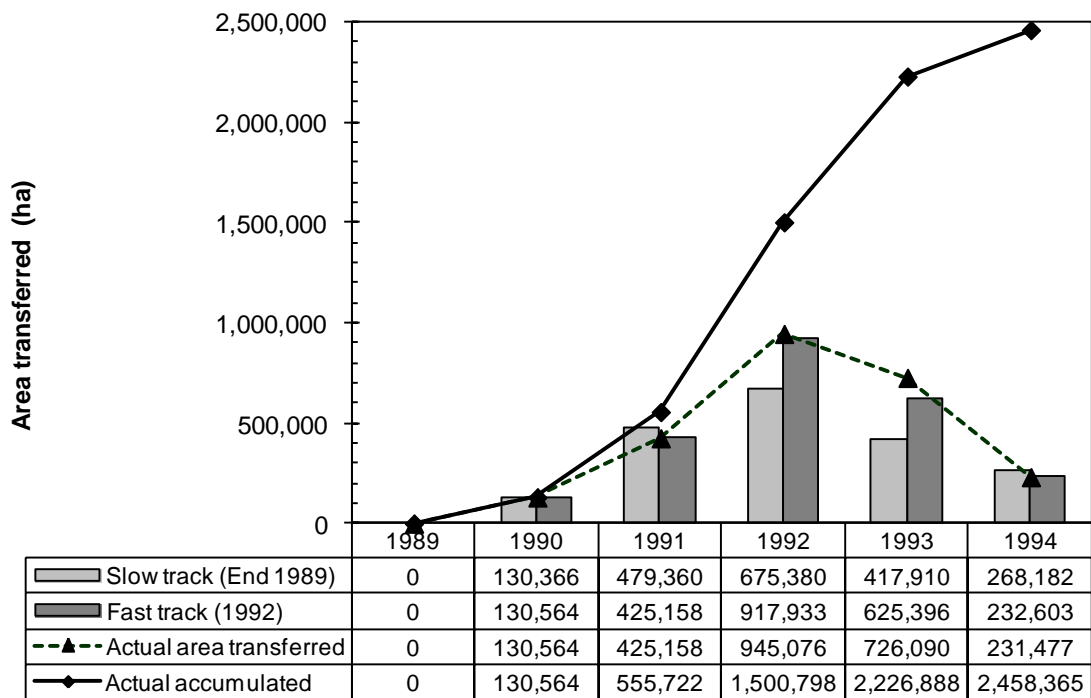
Mid-term elections in 1991 pushed the transition from a slow to a fast transfer. In August 1991, the PRI regained an outright majority in Congress. This political victory for President Salinas was the major turning point of his presidency (Grindle, 1996). Salinas used his renewed electoral legitimacy to carry out a radical neo-liberal reform programme (Centeno, 1997; Teichman, 1997). In 1992, Salinas succeeded in pushing a revision of Article 27 of the Mexican Constitution through the PRI-dominated Congress without much opposition or public dissent, although it was widely debated in the press and academic circles (Grindle, 1996; Nuijten, 2003). This changed the legal basis of landownership and the *ejido* system. Later that year, the National Water Law, which formed the legal basis of the transfer programme, was accepted with even fewer problems. Although some opposition members of Congress walked out during the vote, a public and academic debate on the water law did not ensue (El Financiero, 1994). The increased popular support for party and president greatly enhanced the acceleration of the transfer programme. In an interview, a former official of the Ministry of Agriculture speculated that Salinas increased the political pressure on CNA to increase the rate of transfer and to transfer as many districts as possible before the end of his administration. This added to his international prestige as a strong reformer, as a result of which his name started to circulate as a candidate for the presidency of the World Trade Organization.

In the summer of 1991, Dr. Sánchez was appointed as head of the CNA Directorate of Irrigation Districts to manage the transfer programme. CNA insiders characterised him as politically very skilful in striking deals with government officials, farmer leaders, politicians, and private-sector interest groups. When Sánchez joined CNA, there were strong pressures to make rapid progress with transfer. The conditions he encountered were more favourable than those his predecessor had faced, as the transfer policy package had already been assembled and an organisational structure was in place to promote transfer. However, CNA shifted to a more exclusive and targeted approach, paving the way for a more routine-like implementation of the policy package in different parts of the country.

As a consequence of these developments, the second half of 1991 saw a strong effort being made to accelerate transfer (see Figure 1). The efforts of Sánchez and his team were concentrated on the northwest. In the Culiacan district, successful negotiations with important regional leaders led to the transfer of two-thirds of the district. More than half of the Río Yaqui district was transferred in the last months of 1991. These two large districts in the northwest alone sufficed to comply with almost the

whole area planned for transfer in 1991. Thus, by the end of 1991, CNA had succeeded in catching up with the original planning agreed with the World Bank, giving a much needed boost to the transfer programme.

Figure 1. Area transferred in the period 1989-1994.



Source: Espinosa de León (1994).

By mid-1992, the original target of transferring 21 districts over a period of four years was already reached. This was the result of increasing political pressure not only from the presidency and state governors but also from an increased interest on the part of user groups to take over the modules, as they came to realise that the WUAs were becoming powerful actors managing important resources in a rural setting. CNA came to believe that the transfer could be accelerated and that the transfer of all the irrigation districts in Mexico was possible. In 1992, transfer activities around the country multiplied, with nearly a million hectares being transferred – some 300,000 ha more than originally planned under the gradual transfer programme. In 1993, the transfer policy was consolidated, and some 725,000 ha were transferred – 300,000 ha more than planned under the gradual programme. In 1994, the transfer slowed down because the end of Salinas’ term was approaching – a period in Mexican politics in which the bureaucracy concentrates on the presidential succession – and around 230,000 ha were transferred.

A more strategic use of the policy package led to the politically desired acceleration. This was necessary since there was significant resistance amongst farmers, given the suggested fee increase, the condition of the infrastructure, and the fear of rural leaders of losing their power base. In some cases, CNA pushed through the transfer, arguing that the transfer had to occur, because otherwise the irrigation districts would stop functioning in the absence of government subsidies. This pressure led to very complicated situations, both socially and politically, which were often related to existing social, ethnic, or political problems. In extreme cases, violent protests erupted, such as in the Tula District (03)

where the CNA offices were torched.⁸ However, in most cases, the widespread opposition to transfer among farmers was dealt with by more subtle means that avoided or contained public conflict and open opposition. In spite of fierce opposition amongst users in the small irrigation units and districts with an indigenous population of El Rodeo (16) and Estado de México (33), WUAs were finally constituted through the set of policy technologies described here (Guzmán Ramírez, 2008; Montes de Oca et al., 2012). Also, the already existing water user organisations discussed by Rodríguez Haros and Palerm Viqueira (2007) had to assume the only legally recognised organisational form for a WUA and agree to be governed (at a distance) by the CNA through a set of policy technologies, in order to secure their water rights (Title of Concession) and to acquire state support and benefits for maintaining or improving their infrastructure. Interestingly, we did not find any instances of these protests being reported on in the national press (El Financiero, 1994).

The diverse government strategies to advance the policy can best be characterised as *coerced persuasion* (Desai et al., 1998). CNA used an array of political strategies and policy technologies, partly ingrained in the transfer policy package, to overcome opposition and advance with the transfer. Below, we review how diagnostic studies, selective transfer negotiations, calculated resource distribution, and policy promotion worked in practice, and how this contributed to the acceleration of the transfer process.

Diagnostic studies

Diagnostic studies were carried out strategically in the districts to evaluate the willingness of different groups of farmers and their leaders to accept the transfer policy. Around 24 of these studies were carried out by the *Instituto Mexicano de Tecnología del Agua* (IMTA: Mexican Institute of Water Technology). Influential people in an irrigation district were identified and interviewed to ascertain their opinion about the transfer, including leaders of *ejidos*, private landholders, political leaders, and representatives of producer organisations. Initially, in many districts the mood was against transfer because of the poor state of the infrastructure and the substantial increase in irrigation service fees that had to precede the transfer. IMTA researchers estimated that, initially, around 60% of the farmers in the irrigation districts opposed transfer, 30% were not aware of the changes, and only around 10% supported it. In many districts, farmers argued that the infrastructure had to be improved to an acceptable level before they would agree to take over the district.

The diagnostic studies also assessed the resistance of three other important groups in the irrigation districts, namely, lower- and middle-level bureaucratic staff and peasant leaders. According to Sánchez (pers. comm.), two explicit aims of the transfer programme were to 'eliminate' the:

- SARH workers' union, which formed a serious obstacle in the water distribution process, and
- Corrupt peasant leaders who, through their political influence, systematically hindered attempts to raise the water fees and improve O&M conditions.

These 'corrupt unionised people' were especially found among the lower field staff, who would lose their job and income because of the transfer. The SARH unions lost influence because the WUA staff received temporary contracts and could no longer be organised in government unions. As a consequence of the transfer, the number of CNA district staff was reduced in phases (from 40,000 to 4,000) (Johnson, 1997). Most of the CNA field staff were retired and received a pension, others were shifted to other CNA departments, and a small group was engaged by the WUAs on temporary contracts (Zaag van der and Rap, 2012).

⁸ Interview with one of the leaders of a promoter team.

The peasant leaders were effectively neutralised as a result of the organisational forms designed for the WUAs. Few made it directly onto the WUA boards, since a provision stated that user delegates had to be irrigation farmers (intended to exclude professional politicians). According to a senior CNA engineer, the 'corrupt peasant leaders' lost considerable influence in irrigation management to the new WUA presidents. Both groups were also bypassed by involving community organisers in the process. These specific policy technologies thus did the work of politically excluding these forces that opposed the transfer and fee increases.

Potential opposition from middle-rank officials, such as CNA district chiefs and state delegation heads, was neutralised by a phased strategy of rotation and dismissal. The diagnostics served to assess the position of the higher-level CNA staff. A senior CNA engineer recounted that district chiefs were shifted to other districts in the country while a district was being transferred, in most cases to be fired at a later stage. This prevented the district chief from slowing down the transfer or mobilising protests against the staff cuts. The official mentioned that this was a sort of kamikaze exercise, because the district chiefs who played an important part in organising the transfer in the end also lost their jobs.

Selective inclusion in transfer negotiations

The diagnostic studies informed a more exclusive and selective approach to the transfer. CNA used them to identify and convince potentially willing leaders and to enrol them to lead the organisation of the water users. The studies were also used to evaluate the possibility of reaching agreements between different influential local leaders and groups in order to form an alliance that would support the transfer. In addition, they were used to identify the opposing groups and leaders in order to exclude or circumvent them for the transfer process. The teams sent to the districts to do these studies received detailed instructions from Sánchez, who wanted to know whom to talk or not, in order to negotiate the transfer.

On the basis of the diagnostic studies and other information sources, CNA targeted the politically influential, economically powerful, and organised groups in the district. These farmers were generally more favourable to the transfer than the large majority of farmers. They often had their power bases in local PRI-affiliated organisations for peasants and for private producers, or in other producer organisations. Consequently, they maintained close relations with the district, local PRI politicians, and elite interest groups. These types of leaders were in many cases enrolled to represent the water users and negotiate the transfer with senior CNA officials. A senior CNA official says the following about this:

One of the important things was to choose the leaders; one had to look who was the leader, go to him and convince him, for example, the president of the Association of Farmers of Culiacan. At the beginning we had four or five meetings which were very tense. We said to him: look, the problem is that the government does not have money anymore to go on subsidising the irrigation districts. If you do not take charge of the infrastructure, you will end up without water. In the end, many of these leaders, agricultural entrepreneurs also, in the Northwest of the country began to see that these changes were necessary, and we began to have a good acceptance in some districts like Río Mayo, Delicias, and the central part of Río Lerma. The district chiefs did very intensive work (Interview, 21-05-1999).

The agreements negotiated with these pre-selected groups often resulted in WUA board positions for their leaders. In socially and politically more complicated districts, CNA negotiated the transfer between different groups by assigning posts to them, or brokered alliances between the different leaders. A policy technology that facilitated such negotiations was the alternation of board positions between the different landholder categories. It served to establish alliances between leaders and to unite different groups in one user organisation.

The creation, targeting, and selective inclusion of user groups who were in favour of transfer significantly simplified increasing the irrigation service fees and the acceptance of transfer. It also contributed to accelerating the formation of WUAs. Initially, the position of large agricultural

entrepreneurs was neutral. These producers, who owned agro-industrial companies and controlled large areas in irrigation districts for export agriculture, often maintained close relations with the district staff and already enjoyed privileged access to water and maintenance services. However, they became convinced of the need to support the transfer not only because they saw evidence in the first districts transferred that they could acquire direct control over crucial resources, such as water and machinery, but also because the WUAs were becoming politically and financially powerful organisations.

A senior ex-CNA official explained that nowadays it is more important to become president of a WUA than to become a member of Congress or a mayor (Rap, 2006). An example is the Alto Río Lerma irrigation district where a group of influential agro-industrial entrepreneurs at first opposed the transfer. After private negotiations with Sánchez and his staff, they reached an agreement with CNA in early 1992, after which they supported the creation of the WUAs in which several of them were appointed presidents. Almost a decade later, this became one of the platforms from which Vicente Fox won the presidential elections, which ended the PRI's seven-decade reign (Wester, 2008).

Calculated distribution of public resources

Another CNA strategy to create support and manage opposition in the irrigation districts was through the calculated distribution of public resources (Grindle, 1996). This approach made producers focus on the allocation process instead of on opposing the transfer itself. By regulating access to resources and by promising to invest more or less in a district, CNA selectively enticed and sanctioned user groups according to their willingness to accept transfer. User groups obstructing the transfer process faced the danger of missing out on the resources and projects that CNA could distribute among the irrigation districts. The promise of rehabilitating the districts and undertaking deferred maintenance after transfer was frequently made by CNA, and nearly as frequently broken. The lack of actual rehabilitation was partly compensated for by giving the modules modern maintenance machinery. The allocation of these smaller and more suitable machines was used to persuade the user leaders to accept the transfer.

Promotion of the transfer policy

CNA organised a promotion campaign that monopolised the public information on transfer and favoured its acceleration. Instructions, documents, and videos produced by CNA were communicated to water users, indicating how CNA wanted the transfer process to take place. Besides this centrally coordinated circulation of information, a vast movement of people around the country was organised by CNA. Teams of engineers and lawyers were sent from CNA headquarters to the state and district offices to promote the transfer and assist the promotion teams. In addition, prospective board members and managers of WUAs were taken on trips to irrigation districts that had already been transferred to convince them of the possibilities and benefits of transfer. Pilot districts such as El Grullo served as exemplars of successful WUAs and were visited by many groups of water users from all over the country. CNA's careful selection of pilot projects from the more commercial and well-maintained irrigation districts, mostly in northern Mexico, added to the positive image of transfer. Although these visits projected policy idealisations of actual user management, they helped to visualise and imagine how transfer could work. International interest in visiting these exemplary districts also increased, as 'IMT in Mexico' became a global policy model (Rap, 2006).

The press paid attention only to government information on the transfer, reporting on the official transfer ceremonies throughout the country, which were attended by political leaders, party representatives, senior bureaucrats and large crowds. Virtually no press attention was given to the widespread opposition to transfer in the irrigation districts. As a result, the opposition in different irrigation districts remained isolated and deprived of information from other districts.

This episode shows how the hydraulic bureaucracy's use of the policy package contributed to the acceleration of the transfer by mobilising a support network for the policy, whilst diagnosing and sidelining opposition. Policy implementation is thus an ongoing process of policy making.

DISCUSSION AND CONCLUSIONS

This article argues that policy making is an interactive and ongoing process that is potentially self-reinforcing, but often fragile and reversible in practice. It is only by building a network of support and excluding opposition, thus stabilising a policy interpretation, that policy gathers momentum and is made to succeed. In support of this argument we have investigated the practices and politics of a policy process by looking at three episodes in the life of a policy – 1) re-emergence, 2) assemblage and standardisation, and 3) promotion and acceleration. These episodes partly overlap and are not generalisable, since this account reconstructs a very particular policy trajectory. Yet, this periodisation allows the opening up of the black box of decision making as a centred and predictably ordered activity. Such a policy-making perspective further broadens our understanding of the variety of policy actors, practices and levels that, over time and space, engage and connect in policy work. The value of this approach is that it clarifies how the momentum and success of a policy depend on how it actively works to include a network of support and to exclude nodes of opposition, whilst stabilising an interpretation of policy-related events.

The argument of this article is about the making of policy and focuses on the stabilisation and acceleration of the IMT policy. Numerous authors have studied IMT policy outcomes and impacts at different scales (Trava Manzanilla, 1994; Kloezen et al., 1997; Torregrosa Armentia, 1998; Palacios Vélez, 2000; Rap, 2006, 2007; Garcés Restrepo et al., 2007; Wester, 2008; Wester et al., 2009; Ahlers, 2010; Zaag van der and Rap, 2012). However, a comprehensive overview relating the IMT policy process with a variety of specific outcomes would merit another article. This would show that the standardisation of a policy package does not mean uniformisation, but generates a diverse pattern of organisational responses and outcomes (Long and van der Ploeg, 1989). As a result, it would also demonstrate that the nature and extent of bureaucratic control over local forms of organising varies substantially, producing mixtures of institutional bricolage (Cleaver, 2002). Nonetheless, at the same time, a hegemonic policy model was being produced that focused on success and thereby disguised such a heterogeneity.

However, here we looked at different episodes in the process of making a policy. The bureaucratic life of a policy starts before, and continues after, its political endorsement. The first episode shows that the bureaucratic making of the IMT policy significantly antedated and shaped the political decision process. After the political decision was formalised, the bureaucratic making of the policy resumed. True or not, the hydrocrats in this case study appear to have carefully read and taken to heart Thomas and Grindle's (1990) advice for policy makers. They actively diagnosed and anticipated potential support and opposition in order to shape the policy's course. In the process, these policy makers adopted and adapted policy technologies that operationalised the policy in such a way that strategic support was won and potential opposition was overcome. In short, these policy bureaucrats were not mechanically implementing, but actively making, the policy, as skilled performers of the interactive model.

Our analysis of policy making contributes to improving on the interactive model, by explaining several points: Firstly, policies have a bureaucratic life before political endorsement. Important policy characteristics of what became transfer were developed long before any official political endorsement. Policy experiments anticipated and shaped formal decision-making and political and institutional transitions in the run-up to the presidential elections of 1988. This shows how bureaucratic processes shaped policy not just in the sense of informing rational problem analysis and technical policy choices, but by being embedded in a struggle over autonomy, control over resource flows and irrigation

districts, and upward mobility. Secondly, policy characteristics such as the duration of implementation (acceleration from a gradual to a fast track) and the dispersion of benefits and costs (from the original 21 irrigation districts to more than 60) are not stable and can change quite drastically after the policy decision facilitating policy implementation. Thirdly, policy technologies can also contribute to bureaucratic control.

The second episode of this Mexican case study illustrates that policy making is not an orderly top-down process; rather, it is contested and geographically dispersed. To make the IMT policy operational, a policy package was assembled that resolved a set of initial obstacles and controversies. Dispersed policy-making exercises by lower- and middle-level officials developed a momentum that was sometimes difficult to control centrally and shaped a set of specific policy technologies to give effect to the transfer to locally formed WUAs. This shows the practices of lower- and middle-level bureaucrats and their important contribution to policy making (Lipsky, 1980; Page and Jenkins, 2005). Nevertheless, the policy-making efforts of these lower-level actors were structured economically, bureaucratically and politically in the following ways (Marinetto, 1999): initially, policy was made, goals were set, performance measured and progress reported in pilot areas (McKenzie, 2001). These "policymaking sites" (Peck and Theodore, 2010) were economically privileged and received more financial and technological support than less-endowed regions. Subsequently, the hydraulic bureaucracy increasingly coordinated the convergence, standardisation, and accumulation of dispersed experiences and ideas on how to make transfer work. A policy package was composed that was stabilised legally and promoted nationally and internationally. Further, the relocation and dismissal of middle-level CNA officials to prevent opposition shows that the policy making became increasingly centrally enforced. Finally, after the victory of Salinas' party in mid-term elections in 1991, political pressure contributed to accelerating the transfer.

When bottom-up and top-down policy-making coalesces, policy closure can occur. The standardisation and acceleration of the policy resulted in the hardening and closure of the IMT policy package, the mobilisation and enrolment of ever larger groups of policy actors, the exclusion of opposition, and an increasing momentum with which it extended outwards and affected an increasing number of groups, institutions and localities. This produced an objectification of the transfer policy, the process through which it acquired a seemingly tangible existence and legitimacy (Shore and Wright, 1997). However, temporary closure does not necessarily imply policy termination (Turnhout, 2009). Hence, a focus on policy making, unmaking and remaking as a continuous process reveals that there are different rounds of policy making in the life cycle of a policy.

The third episode suggests that policy making works to include a network of support and to exclude nodes of opposition, and that in this way the policy gathers momentum. This substantiates the assertion that policies do not succeed under their own impetus, but that they are 'made to succeed' (cf. Latour, 1996; Mosse, 2004). The hydraulic bureaucracy, and by extension the state, is not by itself all powerful. Although the strategies and technologies developed by CNA to attract support and overcome opposition strongly contributed to the acceleration of the transfer process, this was significantly shaped by the reaction of farmers, water user leaders, and bureaucrats to the transfer policy. Thus, the political contests, compromises and contingencies involved in accomplishing policy (cf. Li, 1999; Mosse, 2004) highlight the importance of policy making as an ongoing process. To paraphrase Mosse, policies have to be made and sustained socially and materially. Much of today's policy development is directed at defining preconditions for success. This article shows that such preconditions are no guarantee but that the 'success' of a policy is in its making.

REFERENCES

- Ahlers, R. 2010. Fixing and nixing: The politics of water privatization. *Review of Radical Political Economics* 42(2): 213-230.

- Bijker, W.E. 1990. The social construction of technology. PhD thesis. Twente University, Enschede, the Netherlands.
- Centeno, M.A. 1997. *Democracy within reason: Technocratic revolution in Mexico*. (2nd edition). University Park, PA: The Pennsylvania State University Press.
- Cleaver, F. 2002. Reinventing institutions: Bricolage and the social embeddedness of natural resource management. *The European Journal of Development Research* 14(2): 11-30.
- CNA (Comisión Nacional del Agua). 1991a. *Programa de transferencia de los distritos de riego a los usuarios. Noviembre 1991*. Mexico City: CNA.
- CNA. 1991b. *Transferencia de los distritos de riego a los usuarios. Abril 1991*. Mexico City: CNA.
- CNA. 1991c. *Instructivo para la transferencia de los distritos de riego a los usuarios (versión preliminar)*. Mexico City: CNA.
- CNA. 1994. *Transferencia de los distritos de riego en México*. Mexico City: CNA.
- Colebatch, H.K. 2006. What work makes policy? *Policy Sciences* 39(4): 309-321.
- Cook, L.M.; Middlebrook, K.J. and Horcasitas, J.M. 1994. The politics of economic restructuring in Mexico: Actors, sequencing and coalitions change. In Cook, L.M.; Middlebrook, K.J. and Horcasitas, J.M. (Eds), *The politics of economic restructuring in Mexico: State-society relations and regime change in Mexico*, pp. 3-52. San Diego, La Jolla: Center for US-American Studies, University of California.
- Cornelius, W.; Craig, A. and Fox, J. 1994. *Transforming state-society relations in Mexico: The national solidarity strategy*. San Diego: Center for US-Mexico Studies, University of California.
- deLeon, P. and Hernández Quezada, J.M. 2001. The case of the national Solidarity program in Mexico: A study in comparative policy termination. *International Journal of Public Administration* 24(3): 289-309.
- deLeon, P. 1999. The stages approach to the policy process. In Sabatier, P. (Ed), *Theories of the policy process*, pp. 19-32. Boulder, CO: Westview Press.
- Desai, U.; Holden, M. and Shelley, M. 1998. The politics of policy: Prospects and realities. *Policy Studies Journal* 26(3): 423-433.
- Diario Oficial. 1972. *Ley Federal de Aguas*. Mexico City: Diario Oficial.
- Dresser, D. 1991. *Neopopulist solutions to neoliberal problems: Mexico's national Solidarity program*. San Diego: Center for US-Mexican Studies, University of California.
- Edelman, M. 1964. *The symbolic use of politics*. Urbana: University of Illinois Press.
- El Financiero. 1994. Agro CD: Información de Prensa, Sector Agropecuario, Ganadero y Forestal 1984-1994. Mexico: El Financiero.
- Espinosa de León, E. 1994. *Transferencia de los distritos de riego. Libro Blanco general*. Mexico City: CNA.
- Espinosa de León, E. 1998. La transferencia de los distritos de riego a las asociaciones de usuarios. In *Proceedings of the First International Seminar on Integrated Water Use (August 1998), Part I. Article 2-13*. Chapingo, Mexico: Universidad Autonomo Chapingo.
- Fischer, F. 2003. *Reframing public policy: Discursive politics and deliberative practices*. Oxford: Oxford University Press.
- Fox, J. 1994. The difficult transition from clientelism to citizenship: Lessons from Mexico. *World Politics* 46(2): 151-84.
- Garcés Restrepo, C.; Vermillion, D. and Muñoz, G. 2007. *Irrigation management transfer: Worldwide efforts and results*. FAP Water Reports No. 32. Rome: FAO. www.fao.org/docrep/010/a1520e/a1520e00.htm (accessed 18 September 2013)
- Gonzalez-Villarreal, F.J. 1991. Inaugural Ceremony International Seminar on Efficient Water Use (21 October, 1991).
- Gorriz, C.M.; Subramanian, A. and Simas, J. 1995. *Irrigation management transfer in Mexico. Process and progress*. World Bank Technical Paper No. 292. Washington, DC: World Bank.
- Grindle, M.S. 1996. *Challenging the state. Crisis and innovation in Latin America and Africa*. Cambridge: Cambridge University Press.

- Grindle, M.S. and Thomas, J.W. 1989. Policy makers, policy choices, and policy outcomes: The political economy of reform in developing countries. *Policy Sciences* 22(3/4): 213-248.
- Gusterson, H. 1997. Studying up revisited. *Political and Legal Anthropology Review* 20(1): 114-119.
- Guzmán Ramírez, N.H. 2008. 'El Rodeo', una caso de unidad de riego autogestionada. *Boletín del Archivo Histórico del Agua* 34: 48-55.
- Hernández Terán, José. 1988. Conferencia magna de clausura al IV Congreso Nacional de Irrigación. In *Memorias IV Congreso Nacional de Irrigación*, Cd. Reynosa, Tamaulipas, November of 1988, Asociación Nacional de Especialistas en Irrigación (ANEI), pp. 49-53.
- Hill, M. 2009. *The public policy process*. Harlow, UK: Pearson Longman.
- Hodgson, S. 2003. *Legislation on water users' organisations*. FAO Legislative Study No. 79. Rome: FAO.
- IEPES (Instituto de Estudios Políticos, Económicos y Sociales). 1982. *Tema agua. Documento de referencia. Grupos de Trabajo para la Elaboración del Plan de Gobierno 1982-1988*. Mexico City: IEPES.
- IEPES. 1987. *Dialogo nacional. El agua: Recurso vital*. Mexico City: IEPES.
- Jenkins-Smith, H. and Sabatier, P. 1994. Evaluating the advocacy coalition framework. *Journal of Public Policy* 14(2): 175-203.
- Johnson III, S.H. 1997. Irrigation management transfer: Decentralizing public irrigation in Mexico. *Water International* 22(3): 159-167.
- Kloezen, W.H.; Garcés Restrepo, C. and Johnson III, S.H. 1997. *Impact assessment of irrigation management transfer in the Alto Rio Lerma irrigation district, Mexico*. IIMI Research Report No. 15. Colombo, Sri Lanka: IIMI.
- Korten, F.F. and Siy, R.Y. 1989. *Transforming a bureaucracy: The experience of the Philippine National Irrigation Administration*. West Hartford, Connecticut: Kumarian Press.
- Lasswell, H. 1971. *A pre-view of policy sciences*. New York: Elsevier.
- Latour, B. 1987. *Science in action: How to follow scientists and engineers through society*. Cambridge, MA: Harvard University Press.
- Latour, B. 1996. *Aramis or the love of technology*. Cambridge, MA: Harvard University Press.
- Latour, B. 1999. *Pandora's hope: Essays on the reality of science studies*. Cambridge, MA: Harvard University Press.
- Law, J. 1994. *Organizing modernity*. Oxford: Blackwell Publishers.
- Law, J. and Hassard, J. 1999. *Actor network theory and after*. Oxford: Blackwell.
- Li, T.M. 1999. Compromising power: Development, culture, and rule in Indonesia. *Cultural Anthropology* 14(3): 295-322.
- Lipsky, M. 1980. *Street-level bureaucracy: Dilemmas of the individual in public service*. New York: Russel Sage.
- Lomeli, J.J. 1991. La transferencia de la operación, conservación y administración de los distritos de riego a los usuarios, en el estado de Jalisco. MSc thesis. University of Guadalajara, Mexico.
- Long, N. and van der Ploeg, J.D. 1989. Demythologizing planned intervention: An actor perspective. *Sociologia Ruralis* XXIX(3/4): 226-249.
- March, J.G. and Olsen, J.P. 1989. *Rediscovering institutions*. New York: Free Press.
- Marinetti, M. 1999. *Studies of the policy process: A case analysis*. London: Prentice Hall.
- McKenzie, J. 2001. *Perform or else: From discipline to performance*. London: Routledge.
- Miller, P. and Rose, N. 1992. Political power beyond the State: Problematics of Government. *British Journal of Sociology* 43(2): 174-201.
- Montes de Oca Hernández, A.; Camacho Pichardo, G. and Lizcano, F. 2012. *Participación democrática y descentralización en distritos de riego del Estado de México*. Paper presented at the Segundo Congreso Internacional ALASRU 2012, Cuernavaca.
- Mosse, D. 1999. Colonial and contemporary ideologies of 'community management': The case of tank irrigation development in South India. *Modern Asian Studies* 33(2): 303-38.
- Mosse, D. 2004. Is good policy unimplementable? Reflections on the ethnography of aid policy and practice. *Development and Change* 35(4): 639-671.

- Nader, L. 1972. Up the anthropologist – Perspectives gained from studying up. In Hymes, D.H. (Ed), *Reinventing anthropology*, pp. 284-311. New York: Pantheon Books.
- Nuijten, M. 2003. Family property and the limits of intervention: The article 27 reforms and the PROCEDE programme in Mexico. *Development and Change* 34(3): 475-497.
- Oorthuizen, J. 2003. Water, works and wages: The everyday politics of irrigation management reform in the Philippines. New Delhi: Orient Longman.
- Page, E.C. and Jenkins, B. 2005. *Policy bureaucracy: Government with a cast of thousands*. Oxford: Oxford University Press.
- Palacios Vélez, E. 1993. *Diagnóstico sobre la administración de los módulos operados por las asociaciones de usuarios*. Montecillo, Mexico: Colegio de Postgraduados.
- Palacios Vélez, E. 1994. *La agricultura de riego en México*. Mexico City: FAO/CNA.
- Palacios Vélez, E. 2000. Benefits and second-generation problems of irrigation management transfer in Mexico. In Svendsen, M. and Groenfeldt, D. (Eds), *Case studies in participatory irrigation management*, pp. 3-26. Washington, DC: World Bank Institute.
- Peck, J. and Theodore, N. 2010. Mobilizing policy: Models, methods and mutations. *Geoforum* 41(2): 169-174.
- PRI (*Partido Revolucionario Institucional: Institutional Revolutionary Party*). 1988. *Los retos de la modernización. agua y desarrollo*. Mexico City: PRI.
- Rap, E. 2004. The success of a policy model: Irrigation management transfer in Mexico. PhD thesis. Wageningen University, Wageningen, the Netherlands.
- Rap, E. 2006. The success of a policy model: Irrigation management transfer in Mexico. *Journal of Development Studies* 42(8): 1301-1324.
- Rap, E. 2007. Cultural performance, resource flows and passion in politics: A situational analysis of an election rally in Western Mexico. *Journal of Latin American Studies* 39(3): 595-625.
- Rap, E.; Wester, P. and Pérez Prado, L.N. 2004. The politics of creating commitment: Irrigation reforms and the reconstitution of the hydraulic bureaucracy in Mexico. In Mollinga, P. and Bolding, A. (Eds), *The politics of irrigation reform: Contested policy formulation and implementation in Asia, Africa and Latin America*, pp. 57-94. Aldershot, UK: Ashgate.
- Ribot, J.; Agrawal, A. and Larson, A. 2006. Recentralizing while decentralizing: How national governments reappropriate forest resources. *World Development* 34(11): 1864-1886.
- Rodríguez Haros, B. and Palerm Viqueira, J. 2007. Antes de la transferencia: La entrega de Distritos de Riego. *Agricultura, Sociedad y Desarrollo* 4(2): 105-125.
- Rogers, P. 2002. *Water governance in Latin America and the Caribbean*. Washington, DC: Inter-American Development Bank, Sustainable Development Department, Environment Division.
- Rose, N. 1996. *Inventing ourselves*. Cambridge: Cambridge University Press.
- Salinas de Gortari, C. 1991. Inaugural Ceremony International Seminar on Efficient Water Use (21 October, 1991). SAyF (Secretaría de Agricultura y Fomento). 1929. *Ley de Aguas de Propiedad Nacional*. Mexico City: SAyF.
- Shore, C. and Wright, S. 1997. *Anthropology of policy: Critical perspectives on governance and power*. London: Routledge.
- Suhardiman, D. 2008. Bureaucratic designs: The paradox of irrigation management transfer in Indonesia. PhD thesis. Wageningen University, Wageningen, the Netherlands.
- Teichman, J.A. 1997. Neoliberalism and the transformation of Mexican authoritarianism. *Mexican Studies* 13(1): 121-147.
- Thomas, J.W. and Grindle, M.S. 1990. After the decision: Implementing policy reforms in developing countries. *World Development* 18(8): 1163-1181.
- Torres Espinosa, E. 1999. *Bureaucracy and politics in Mexico: The case of the secretariat of programming and budget*. Aldershot: Ashgate.
- Torregrosa Armentia, M.L. 1998. Modernización del campo y crisis de las identidades sociales tradicionales en México: Un Estudio del los Distritos de Riego. PhD thesis. El Colegio de México.

- Trava Manzanilla, J.L. 1994. Transfer of management of irrigation districts to WUAs in Mexico. In Indicative Action Plan and Proceedings of the National Seminar on Farmers Participation in Irrigation Management. Aurangabad, Maharashtra: Water and Land Management Institute.
- Turnhout, E. 2009. The rise and fall of a policy: Policy succession and the attempted termination of ecological corridors policy in the Netherlands. *Policy Sciences* 42(1): 57-72.
- Uphoff, N. 1992. *Learning from Gal Oya: Possibilities for participatory development and post-Newtonian social science*. Ithaca, NY: Cornell University Press.
- Vargas, S. 1996. Las grandes tendencias históricas de la agricultura de riego. In R. Melville and Peña, F. (Eds), *Apropiación y usos del agua. Nuevas líneas de investigación*, pp. 31-50. Chapingo, Mexico: Universidad de Chapingo.
- Vargas-Velázquez, S. 2008. Presentación. *Boletín del Archivo Histórico del Agua* 34: 3-5.
- Wester, P. 2008. Shedding the waters: Institutional change and water control in the Lerma-Chapala basin, Mexico. PhD thesis. Wageningen University, Wageningen, the Netherlands.
- Wester, P. 2009. Capturing the waters: The hydraulic mission in the Lerma-Chapala basin, Mexico (1876-1976). *Water History* 1(1): 9-29.
- Wester, P.; Rap, E. and Vargas-Velázquez, S. 2009. The hydraulic mission and the Mexican hydrocracy: Regulating and reforming the flows of water and power. *Water Alternatives* 2(3): 395-415.
- Wood, G. 1985. The politics of development policy labelling. *Development and Change* 16(3): 347-373.
- World Bank. 1983. *Mexico irrigation subsector survey – First stage. Improvement of operating efficiencies in existing irrigation systems*. Volume I – Main findings. Volume II – Annexes. Report No. 4516-ME. Washington, DC: World Bank.
- World Bank. 1991. *Mexico. Irrigation and drainage sector project*. Staff appraisal report. Report No. 9779-ME. Washington, DC: World Bank.
- Zaag, P. van der. 1992. *Chicanery at the canal: Changing practices in irrigation management in Western Mexico*. CEDLA Latin America Studies No. 65. Amsterdam: CEDLA (Centrum voor Studie en Documentatie van Latijns-Amerika).
- Zaag, P. van der and Rap, E. 2012. The pivotal role of canal operators in irrigation schemes: The case of the canalero. *Irrigation and Drainage* 61(4): 436-448.

THIS ARTICLE IS DISTRIBUTED UNDER THE TERMS OF THE CREATIVE COMMONS *ATTRIBUTION-NONCOMMERCIAL-SHAREALIKE* LICENSE WHICH PERMITS ANY NON COMMERCIAL USE, DISTRIBUTION, AND REPRODUCTION IN ANY MEDIUM, PROVIDED THE ORIGINAL AUTHOR(S) AND SOURCE ARE CREDITED. SEE [HTTP://CREATIVECOMMONS.ORG/LICENSES/BY-NC-SA/3.0/LEGALCODE](http://creativecommons.org/licenses/by-nc-sa/3.0/legalcode)