

1 **Civic Habitus and the Challenges of Depoliticized Participatory Irrigation**
2 **Management Reforms: Insights from Pakistan**

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9 **Key Points:**

- 10 • PIM reforms failed to achieve equitable resource distribution and financial sustainability
11 in Pakistan and other countries.
- 12 • Neoliberal understanding of citizens' participation in PIM overlooks power asymmetry
13 issues and farmers' engagement processes.
- 14 • Depoliticized irrigation management transfer processes fail to redistribute social power, a
15 necessary shift for successful PIM implementation.
- 16 • PIM reforms effort better described as an attempt to acquire donor funds and generate
17 international credibility through isomorphic mimicry.
18

19 Abstract

20 In 1980, the World Bank began to promote Participatory Irrigation Management (PIM) reforms
21 to overcome disparities in the distribution of public irrigation water for agricultural uses. Yet, in
22 Pakistan as in other countries, PIM was unable to achieve its objectives of equitable resource
23 distribution and financial sustainability. This paper examines how the neoliberal understanding
24 of citizens' participation/participatory development as demonstrated in PIM fails because its
25 underlying theory of change overlooks power asymmetry issues, institutional politics, and
26 farmers' engagement processes. Drawing on quantitative and qualitative data collected through
27 structured and semi-structured interviews, focus group discussions, and participant observation
28 in Pakistan's agrarian heartlands of Punjab and Sindh, we argue that traditional irrigation
29 bureaucracy, donor agency technocrats, and depoliticized participatory development approach
30 intentionally or unintentionally ignore the muted voices of small and landless peasants in the
31 reform process. Under such circumstances, reform cannot generate hydro-solidarity, trust, and
32 collective action from below. Moreover, the irrigation bureaucracy only mimics the institutions
33 of participation under an externally assisted push because the PIM model was never adequately
34 tested and implemented. We argue that without active farmers' agency—small and landless
35 peasants, these paper organizations cannot create multi-level accountability in irrigation
36 management. We elucidate an important but under-theorized factor contributing to these failures:
37 depoliticized irrigation management transfer processes that fail to redistribute social power.
38 Donor articulations of the PIM “theory of change” do not make explicit that a shift in social
39 power – not just management authority and responsibility – is necessary.

40 Plain Language Summary

41 This paper discusses how Participatory Irrigation Management (PIM) reforms, promoted by the
42 World Bank since the 1980s to improve the distribution of public irrigation water for agricultural
43 use in Pakistan, have failed to achieve their objectives of equitable resource distribution and
44 financial sustainability. The paper argues that the neoliberal understanding of citizens'
45 participation/participatory development, as demonstrated in PIM, overlooks power asymmetry
46 issues, institutional politics, and farmers' engagement processes, leading to the exclusion of small
47 and landless peasants from the reform process. The irrigation bureaucracy only mimics the
48 institutions of participation under an externally assisted push, as the PIM model was never
49 adequately tested and implemented. The paper emphasizes the need for active farmers' agency,
50 especially small and landless peasants, to create multi-level accountability in irrigation
51 management. The depoliticized irrigation management transfer processes fail to redistribute
52 social power, and the PIM "theory of change" fails to make explicit the need for a shift in social
53 power, not just management authority and responsibility. The paper highlights the importance of
54 including the voices of small and landless peasants in reform processes to achieve hydro-
55 solidarity, trust, and collective action from below.

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1. Introduction

“[T]he main effects of the language of social capital in World Bank-speak are to suggest that ‘getting the social relations right’ is a technical and not a political process.”

-- Harriss (2001, p. 102)

The influence of neoliberalism on international development can be seen in the proliferation of free-market ideology and the expansion of policy recommendations taken from the Washington Consensus playbook. Indeed, in the post-Keynesian era of the 1980s and 1990s, trade liberalization, privatization, and deregulation gained policy prominence. Neoliberal restructuring often included institutional reform such that state responsibilities and economic processes were devolved to lower level administrative units or assigned to the private sector (Ahlers 2010; Wilder and Lankao 2006). In this way, decentralization was often conceptualized as reducing the role of the state through “a transfer of powers from central authorities to lower levels in a political-administrative and territorial hierarchy” (Larson and Soto 2008, p. 216) – thereby expanding the space available for market forces to do their magic.

However, decentralization could also be conceptualized as localization of decision-making such that decision-makers are those who are both most knowledgeable about the problem and most impacted by any solutions to it. In this latter version, decentralization – and perhaps in particular, devolution of authority to community organizations (Larson and Soto 2008) – can be akin to community empowerment.

At least this is how the “liberal democratic ideal” characterizes the “re-casting” of poor “beneficiaries” as “engaged citizens” who “must voice their concerns while state actors consult and respond to feedback” (Pettit 2016, 89). And herein is how a neoliberal agenda was merged with participatory development approaches that were popular in the 1980s and 1990s (see Cernea 1985). This “neoliberal participation” served two kings then, and perhaps as such it is no surprise that it failed in both regards in many instances. This article examines one such instance, the case of participatory irrigation management in Pakistan, and offers a critique of the depoliticized irrigation management transfer model propagated not only in Pakistan but in many developing countries beginning in the 1970s and 1980s but especially since the 1990s due to funding interests of the World Bank (Cambaza et al. 2020; Dewan et al. 2014). We present an alternative “politicized model” that (i) recognizes that local power dynamics manifest not only through formal institutional structures but also informal ones, and (ii) extracts the neoliberal agenda and incorporates a sustainable development one focused on equity, justice, and hydro-solidarity for collective action. Such a politicized model of PIM in Pakistan is long overdue.

Much of the literature on participatory reform in Pakistan falls into one of three categories: first, an optimistic assessment of PIM that strains credulity for most people familiar with the on-the-ground realities; second, a negative assessment that levels its critique against either the old irrigation bureaucracy or alleged failures of farmers’ agency; and third, critiques of donor-driven development. We attempt to navigate across these three categories—drawing on relevant references to support our argument—to examine how bureaucratic inertia and resilience,

98 community social dynamics, and donor frameworks all combined to create barriers to
99 meaningful community empowerment for sustainable resource management. Rather than pass a
100 verdict on PIM for Pakistan, we pass a verdict on its depoliticized theory of change.

101 This paper analyzes the way in which history, culture, politics, and “development”
102 intersect with each other and affect outcomes under the participatory irrigation management
103 model in Sindh, Pakistan. To make this argument, we conduct a textual analysis of the PIM
104 policy and the fidelity of its implementation in Sindh, drawing on the extant literature, including
105 PIM training materials, as well as the lived experience and deep cultural and institutional
106 knowledge that several of us have as farmers and researchers in Pakistan.

107 The particulars of this case bring to light broader considerations about the generally
108 depoliticized nature of the PIM model as it is conceptualized and implemented in other contexts,
109 and we make the argument that PIM reforms are often inherently about shifting power regardless
110 of whether the theories of change used to discuss them make this explicit. Moreover, if this
111 power shift is not made explicit and incentivized – most of all for those who perceive themselves
112 as losing power – then PIM reforms will struggle to manifest any meaningful change in
113 governance as it is practiced in the fields and canals of the real world.

114 The articulation of our argument of the depoliticized model of PIM versus a politicized
115 model of PIM fleshes out ideas touched on by other authors ([van der Velde and Tirmizi 2004](#);
116 [Mukherji et al. 2009](#); [Mustafa 2002](#); [Rap 2006](#); [Reddy and Reddy 2005](#); [Suhardiman 2015](#); [Ul
117 Hassan 2009](#)) and contributes a new framework for development actors – especially those
118 involved with international donor organizations – to approach thinking through a middle-way
119 that is neither government control nor market mechanisms. Common property management
120 through farmers’ organizations is possible, but devolving responsibility is not equivalent to
121 shifting power. In the absence of meaningful authority and power – and exacerbated by contexts
122 of power asymmetry – elite capture hinders PIM. The challenge ahead is how to shift power for
123 water management in such contexts. For this, we draw on ideas about civic habitus, social
124 mobilization, and hydro-solidarity.

125 The argument is organized into five sections. First, we provide a brief history of the
126 assumptions and arguments underlying water governance reforms in the developing world and
127 we present the depoliticized PIM theory of change that characterized Irrigation Management
128 Transfer (IMT) efforts supported by the World Bank, the Asian Development Bank, and other
129 international funding agencies. Second, we summarize the key components and actors involved
130 (or not) with participatory reforms in the irrigation sector in Pakistan. We highlight the
131 consequences of this reform process through an analysis of the Sindh Water Management
132 Ordinance (SWMO) of 2002 and the extent to which it has been implemented. Third, we argue
133 that PIM did not have the anticipated benefits in terms of improved efficiency and financial self-
134 sufficiency due at least in part to weak attention paid by PIM implementers to the importance of
135 *civic habitus*, namely bureaucratic inertia, power relations, community trust, and hydro-
136 solidarity. By paying attention to civic habitus, we can develop a more properly politicized
137 theory of change for advancing PIM. Fourth, we argue that Paulo Freire’s concept of

138 *conscientização* can help us rethink social mobilization strategies to reform existing power
 139 structures and produce better outcomes under PIM. Finally, we conclude by exploring how such
 140 power shifts and solidarity expansions might be achieved in practical terms, and how such an
 141 achievement would represent a transformation of the old theory of change from neoliberal
 142 agenda to sustainable development.

143 2. Origins of the PIM Model

144 The United Nations World Water Report 2021 focused on the theme of “valuing water”
 145 and noted the role of power in shaping water use: “Those who control how water is valued
 146 control how it is used. Values are a central aspect of power and equity in water resources
 147 governance” (United Nations 2021, p. 1). The report deconstructs the various ways that water
 148 valuation is determined, including via traditional economic approaches that still dominate the
 149 water sector. Indeed:

150 “Traditional economic accounting, often a key means of informing policy decisions,
 151 tends to limit water values to the way that most other products are valued – using the
 152 recorded price or costs of water when economic transactions occur. However, in the case
 153 of water there is no clear relationship between its price and its value. Where water is
 154 priced, meaning consumers are charged for using it, the price often reflects attempts for
 155 cost recovery and not value delivered” (United Nations 2021, p. 21).

156 This economic approach to water valuation is reflected in decades of World Bank
 157 projects to enhance water security. Generally, the World Bank has conceptualized water as an
 158 economic good – and its approaches reflect the underlying assumption that by putting a price on
 159 water, water management systems performance will improve (Easter and Yang 2005; Johansson
 160 2000). Perhaps unsurprisingly then, the World Bank’s discussion of the benefits of participatory
 161 irrigation management approaches has tended to highlight benefits not only in terms of improved
 162 performance but also increased cost recovery and reduced government expenditure (Araral 2011;
 163 Meinzen-Dick 2007).

164 The application of a technocratic water management approach that emphasizes
 165 engineering and economics while downplaying or even ignoring the political ecology of water
 166 has contributed to a *depoliticized* participatory irrigation management framework. In a
 167 depoliticized PIM framework, social power asymmetries – including differential access to
 168 political influence, economic opportunities, and physical force (e.g., police, military, gangs) – do
 169 not significantly affect irrigation management outcomes. A valid critique of international
 170 development is that it is too often driven by foreign funding agencies, consultants, and others
 171 who – by emphasizing technical and apolitical economics – can end up reinforcing existing
 172 inequities and fail to deliver transformative change (Easterly 2006; Harriss 2002).

173 It is from within the context of the mid-1990s through the early 2000s that the World
 174 Bank’s turn towards “social development” must be understood. At the time, many ideas were
 175 circulating in the development sector about the importance of social capital, community,
 176 participation, and empowerment (for an analysis of how these concepts came to be integrated
 177 into the World Bank’s paradigm, (see Bebbington et al. 2006; Mansuri and Rao 2004). Some of

178 these ideas had been around since the 1950s and 1960s in the form of participatory development,
 179 but perhaps due to ongoing skepticism about the approach, it faded until the mid-1980s when
 180 critics of “big development” revived it (Mansuri and Rao 2004, p. 4).

181 Over time, the development discourse increasingly emphasized *community-driven*
 182 *development*, which became foundational to the World Bank’s Comprehensive Development
 183 Framework (see Mansuri and Rao 2004). It was seen as a kind of cure-all for many of the ills of
 184 development:

185 “The potential gains from community-driven development are large. It has the explicit
 186 objective of reversing power relations in a manner that creates agency and voice for poor
 187 people, allowing them to have more control over development assistance. This is
 188 expected to make the allocation of development funds more responsive to their needs,
 189 improve the targeting of poverty programs, make government more responsive, improve
 190 the delivery of public goods and services, and strengthen the capabilities of the citizenry
 191 to undertake self-initiated development activities.”(Mansuri and Rao 2004, p. 2).

192
 193 Yet, some critics (e.g., Harriss 2002) remained cynical about “participatory” approaches
 194 supported by the likes of the World Bank. He argued that the World Bank embraced the concept
 195 of “social capital” (i.e., social relationships, trust, and norms of reciprocity) as the “missing link”
 196 in international development because it could be (and was) subverted to the bank’s neoliberal
 197 agenda: “the work of often very clever and well-intentioned social scientists derives from and
 198 contributes to an hegemonic social science that systematically obscures power, class and
 199 politics” (Harriss 2002, p. 2). The way in which this obfuscation occurs is this: by emphasizing
 200 the importance of strengthening social relationships through building of community
 201 organizations, water user associations, and the like, international development agents end up
 202 essentially arguing that local people – if only they were well-organized – could overcome their
 203 problems through “self-help” (Harriss 2002, p. 7). But such an argument effectively treats
 204 “participation” as if it can be enacted through sheer individual will, rather than being a political
 205 activity that may be thwarted by those in power. In fact, Harriss argued, real democratic
 206 participation often involves significant power struggles and class conflict. Furthermore, the
 207 language of “social capital” – with its economic valence and jargon-implied analytical substance
 208 – can have the effect of suggesting “that ‘getting the social relations right’ is a technical and not
 209 a political process” (Harriss 2002, p. 102).

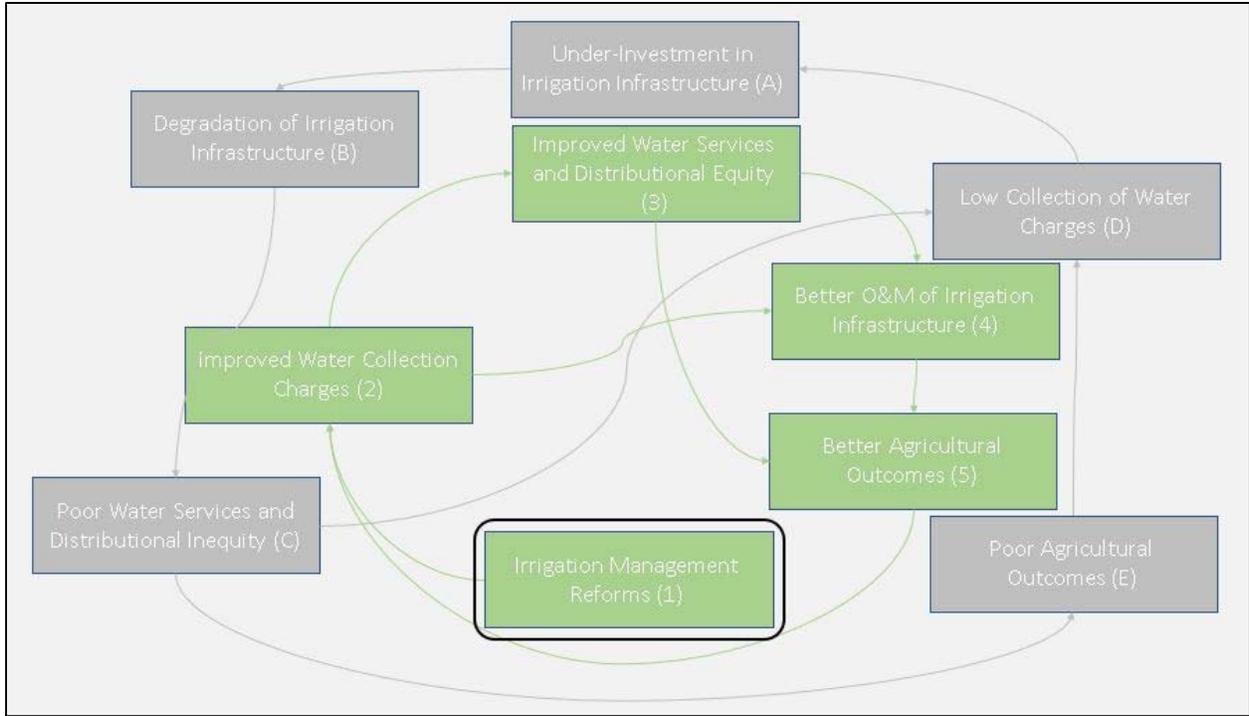
210 This depoliticized perspective of participation is reflected in the underlying theory of
 211 change driving irrigation management transfer (IMT), a phrase that is itself rather sanitized or
 212 depoliticized given that it refers to a process in which power and authority is transferred from
 213 one group to another. Specifically, IMT is an irrigation governance reform process through
 214 which a centralized bureaucratic irrigation management system is decentralized to local level
 215 farmers organizations (FOs) and water user associations (WUAs).

216

217 To elucidate more systematically what this depoliticized theory of change looks like, we
218 reviewed seven case studies of irrigation reform presented in [Mollinga and Bolding \(2004\)](#).
219 Across all these case studies, we found that the reform process starts with the irrigation system's
220 financial unsustainability due to budgetary cuts or economic crises and low irrigation service fee
221 collection. If appropriate responses can be applied to address a set of interconnected irrigation
222 policy problems, then agricultural outcomes will be improved. Figure 1 depicts this set of
223 irrigation policy problems (grey boxes), which flow from under-investment in irrigation
224 infrastructure (A) to degradation of irrigation infrastructure (B), poor water services and
225 distributional inequity (C), poor agricultural outcomes (D), and low collection of water charges
226 (D). Figure 1 also shows that the theory of change begins with irrigation management reforms
227 (1) and proceeds to improved water fee collection (2), improved water services and distributional
228 equity (3), better operations and maintenance (O&M) of infrastructure (4), and better agricultural
229 outcomes (5).

230 However, what is missing from this theory of change is the details of what happens in the
231 “black box” of “irrigation management reforms” (see also Rap 2006). IMT and PIM are
232 supposed to break the vicious circle depicted in red boxes in Figure 1 through the devolution of
233 functions and roles—previously associated with state departments—to newly formed
234 associations of farmers. To delve into the details of what irrigation devolution in particular
235 entails – from the vantage point of the World Bank, which is typical of large development
236 funding agencies – we can turn to their own documents.

237 The World Bank gave US\$70.36 million to the Philippines for a participatory
238 development project for which the following theory of change was used, as shown in Figure 2
239 ([World Bank 2019, p. 7](#)). This theory of change included three core activities, including
240 restructuring the National Irrigation Administration (NIA), capacity building of irrigation
241 associations (IAs) and the “turn-over of O&M responsibilities to IAs,” and the rehabilitation and
242 modernization of physical infrastructure ([World Bank 2019, p. 7](#)). The political act of turn-over
243 of responsibilities is seen as an activity void of political dimensions. This is a highly
244 depoliticized theory of change for IMT – and it is grossly inaccurate in terms of the real world.
245 The subsequent sections of this paper uses a case study of Pakistan’s irrigation reforms to
246 counter this inaccuracy and lay the foundation for a politicized theory of change for participatory
247 irrigation management that we present in the penultimate section.

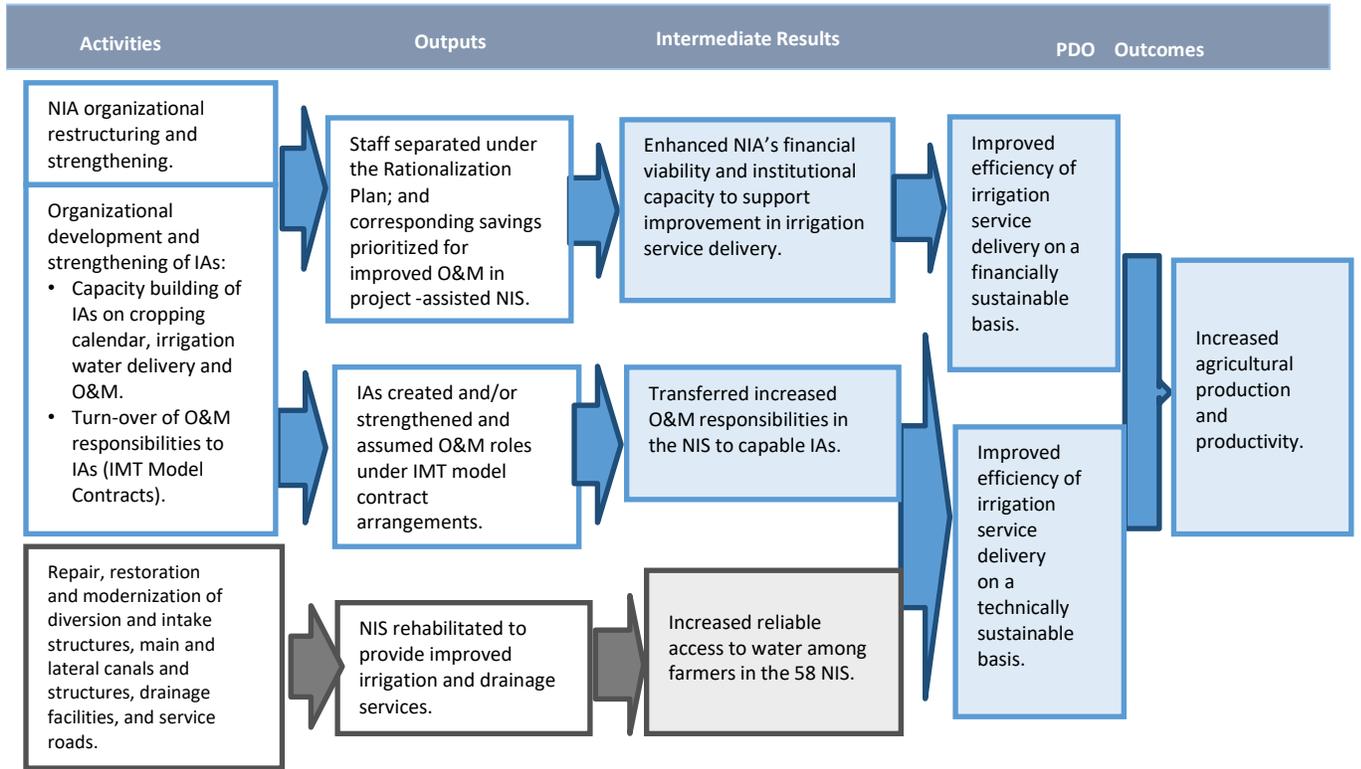


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250 Figure 1. Vicious Cycle of Irrigation Policy Problem and a “black box” Theory of Change

251 **3. Neoliberalism and PIM Reforms in Pakistan**

252 Pakistan’s water reform agenda merged both chronologically and ideologically with this
 253 neoliberal economic transformation that began to take shape in the late 1980s, accompanied by a
 254 political opening that resulted in the election of Benazir Bhutto—leader of the leading opposition
 255 alliance called Movement for Restoration of Democracy (MRD)—as the first female prime
 256 minister of Pakistan in December 1988. Bhutto's victory was widely celebrated and interpreted
 257 as a democratic transition after an 11-year rule by the military dictator, General Muhammad Zia-
 258 ul-Haq, who had seized power in a coup in 1977. During her election campaign in 1988, Bhutto
 259 promised to carry out industrialization by means other than state intervention. This shift away
 260 from nationalization and towards privatization was also pursued during the 1990s by Prime
 261 Minister Nawaz Sharif, who was inspired by the success of the privatization agenda introduced
 262 by British Prime Minister Margret Thatcher. During this period, Pakistan’s economy began to
 263 open up to global trade, as exemplified by its 1995 participation in the General Agreement on
 264 Tariffs and Trade (GATT) (Noshab 2000).



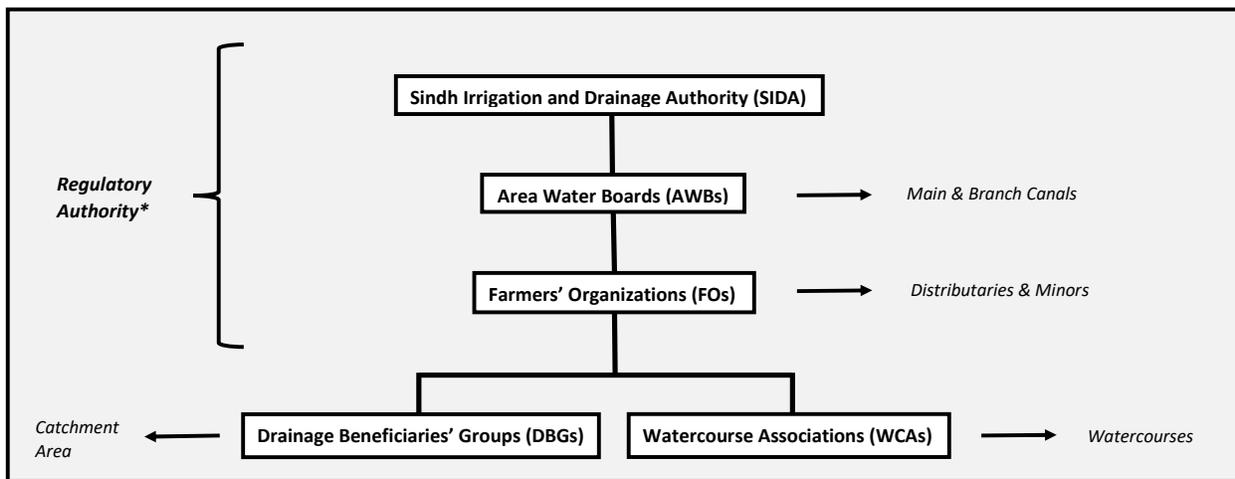
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267 Figure 2. An example of a depoliticized theory of change from a World Bank-funded
268 participatory irrigation development project in the Philippines. (Source: [World Bank 2019](#),
269 [Figure 1: Theory of Change, p. 7](#); Figure reprinted with permission.)

270

271 The shift towards privatization extended to the water sector, including the irrigation
272 bureaucracy, where the neoliberal economic agenda manifested in the devolution of water
273 governance from a centralized bureaucracy (i.e., the Irrigation Department) to a decentralized
274 system. Figure 3 depicts this a new nested governance model consisting of the Sindh Irrigation
275 and Drainage Authority (SIDA), which took over many of the responsibilities of the old
276 Irrigation Department, Area Water Boards (AWBs), Farmers' Organizations (FOs), Watercourse
277 Associations (WCAs), and Drainage Beneficiaries' Groups (DBGs). This devolution of
278 governance via "irrigation reforms" was an approach adopted by many developing countries
279 under the influence of the World Bank and its funding ([Liebrand 2019](#); [Santiso 2001](#); [Ul Hassan 2009](#)).
280 Indeed, for developing countries heavily dependent upon the Bank's lending – and facing
281 severe financial indebtedness – the Bank's argument that the best route to financial solvency was
282 to eschew the inefficiencies of the state and embrace market forces and privatization could be
283 quite compelling; indeed, conditionality has long been a strategic tool of foreign aid ([McNeill 1998](#);
284 [Rich 2004](#); [Santiso 2001](#)).

285 According to Briscoe and Qamar (2005), the World Bank published a report in 1994 on
 286 Pakistan’s water sector that found that “[i]n Pakistan, as in many other countries, the government
 287 treats irrigation water as a public good, whereas it is a private tradable good, for which markets
 288 can operate” (Briscoe and Qamar 2005, p. 110). The Bank’s argument for countries to shift
 289 towards a more market-oriented approach to irrigation service delivery was likely made more
 290 persuasive (or coercive; Ul Hassan 2009) with the promise of loans to support the transition
 291 (Suhardiman et al. 2014; Ul Hassan 2011; Vermillion et al. 1999). Following a period of lending
 292 for physical infrastructure in Pakistan’s water sector since the Indus Water Treaty of 1960, the
 293 Bank began to focus its lending on management and governance reforms during the 1980s.
 294 Specifically, the World Bank invested US\$175 million in four projects from 1981 to 1992 that
 295 were designed to use existing infrastructure and incorporated institutional reforms (Bandaragoda
 296 2006).



297
 298 *Although the Regulatory Authority is tasked with promoting “fair dealing between FOs, WCAs,
 299 DBGs and their members” (SWMO 2002, p. 39), the all references in the line-item tasks and
 300 powers deal with SIDA, AWBs, and FOs.

301 *Figure 3. The nested governance structure of the participatory irrigation management system.*

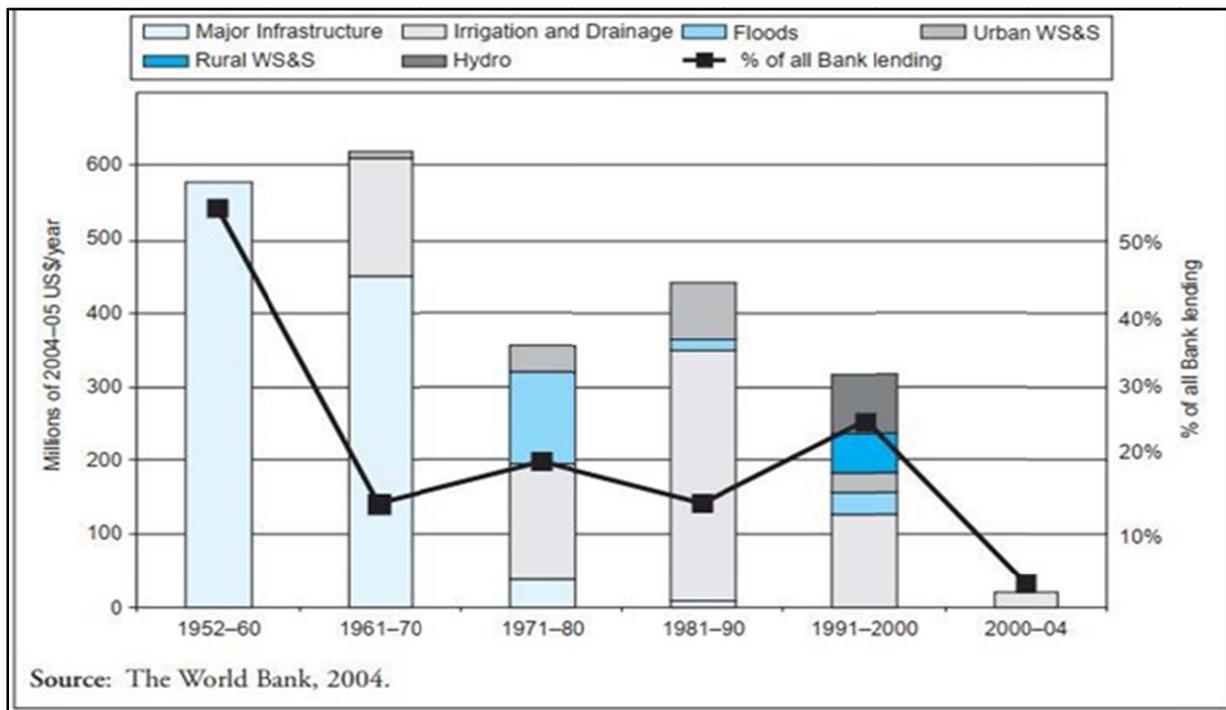
302 However, despite the Bank’s interest in privatization and market forces, the actual
 303 irrigation reform agenda held little in common with private markets except that water users were
 304 expected to pay a water fee based upon the amount of irrigated land. This water fee, or *abiana*,
 305 was not based on any market valuation of water. Therefore, rather than establishing market
 306 mechanisms to price irrigation water, the irrigation reforms focused on giving farmers and other
 307 water users a more participatory role in water management. This “participatory irrigation
 308 management” model aimed “to bring equity, efficiency, reliability and user satisfaction in water
 309 distribution and improve water charges collection for operation and maintenance of the system to
 310 reduce subsidies” (Mari 2013, p. 2). Indeed, irrigation management transfer as a policy option is
 311 generally understood as a means to save the government money while optimizing irrigation
 312 performance at the same time (Vermillion 1997). This win-win scenario was thought to result

313 from decentralization because farmers have every incentive to optimize irrigation management;
 314 therefore, their participation in water management decision-making would improve water
 315 distribution services, including in terms of equity (i.e., everyone getting their due share), which
 316 would in turn improve cost recovery, leading to better maintained infrastructure and ultimately
 317 improved water efficiency and greater agricultural productivity (Garces-Restrepo et al. 2007;
 318 Meinzen-Dick et al. 1995; Vermillion 1997).

319 Ironically, this PIM model – at least in its early conceptualizations – was an attempt to
 320 formalize informal institutions of decentralized water governance (see [Bandaragoda and Firdousi](#)
 321 [1992](#)). [Bandaragoda and Firdousi \(1992\)](#) identified the key barrier to better irrigation water
 322 management as a mismatch between the formal and informal institutions, the latter of which had
 323 evolved in situ over many years:

324
 325 “Interestingly, before the advent of colonial administration in the region, despite
 326 autocratic political control, the management of local resources such as water was
 327 substantially in the hands of the local people, and even a little later, *kacha* warabandi was
 328 seen to be a locally managed system. At least some pilot studies in transferring
 329 responsibility to farmer groups in Pakistan may be a worthy attempt to arrest the
 330 country’s main problem in irrigation management, the overriding influence of informal
 331 rules over the formal rules.” ([Bandaragoda and Firdousi 1992, p. 47](#)).

332



333
 334 Figure 4. World Bank lending to Pakistan for water sector (1952-2004) (Source: Briscoe and
 335 Qamar 2005, p. 101; Figure reprinted with permission.)

336 However, this analysis downplayed the importance and resilience of the existing power
337 structure. No doubt this de-emphasis was seen as a way to recognize the capacity of farmers to
338 manage their own water. At the time, there were popular notions that water users could not
339 feasibly be organized due to the “constraints of an integrated socio-technical system, illiterate
340 farmers, social pressure from big landowners and obstacles caused by the hierarchical society”
341 (Bandaragoda 1999, p. v). These popular notions were shown to be inaccurate through action
342 research carried out in pilot sites in Punjab and Sindh: water users could be organized into
343 effective associations if given the right kinds of support for social mobilization (Bandaragoda
344 1999). Such findings surely contributed to the scaling up of these pilot efforts (Giordano et al.
345 2006) through, for example, the Sindh Water Management Ordinance (2002) which laid out the
346 policy details for PIM and IMT in Sindh.

347 In any case, the notion of taking a loan from the World Bank for the water sector was not a
348 new idea in Pakistan in the mid-1990s. Moreover, the opportunity to secure a World Bank loan
349 for introducing PIM had a certain appeal for irrigation bureaucrats who were keen to obtain
350 funding for their irrigation and drainage programs. So, when the Bank proposed the PIM reform
351 based on its experience with the model in Mexico, the Philippines, and Indonesia, the irrigation
352 bureaucracy in Pakistan acquiesced. Although irrigation bureaucrats did not want their decision-
353 making power curtailed, their desire for the loan package led to a loan of US\$28.5 million for the
354 National Drainage Programme (NDP) in 1997 (Briscoe and Qamar 2005). According to Young
355 et al. (2019, p. 63), the core elements proposed in the NDP were the following:

- 356 • Reorganize the provincial level irrigation departments into decentralized public utilities at
357 the canal command level with full authority to collect and spend water fees such that over
358 time, the government would withdraw subsidies and the public utilities would become
359 privatized.
- 360 • Provide full authority to farmers for management at the distributary level and involve
361 them at higher levels for fee collection and expenditure decisions.
- 362 • Establish water markets for water trading and delink water rights from land ownership.

363
364 This reform agenda was opposed by provincial governments and key stakeholders, namely
365 the irrigation bureaucracy, the Farmers Associates of Pakistan (a powerful lobby group of large
366 farmers) and the Pakistan Kissan Board (small farmers’ lobby group), leading to a modified
367 version of what would ultimately be enacted as the Provincial Irrigation and Drainage Authority
368 Acts of 1997 (Rinaudo and Tahir 2003; UI Hassan 2009).

369 These modifications were largely driven by the interests of the provincial irrigation
370 departments and the rural landholding elite (Rinaudo and Tahir 2003; Young et. al. 2019). Key
371 modifications included that the public utilities would be called Area Water Boards (AWBs),
372 farmers would hold absolute majority in Provincial Irrigation and Drainage Authority (PIDAs)
373 and AWBs, farmers who did not pay their water charges would not have their water supply cut,
374 AWBs had no provision for privatization, water pricing was the purview of the PIDA, and water
375 markets were not established, meaning that water rights still were associated with land rights and

376 were not transferable (Rinaudo and Tahir 2003, p. 48-49). Although much of the overt rationale
377 for opposing the World Bank's original vision was claimed to be in defense of small farmers and
378 Pakistani sovereignty, the hidden reasons included concern about the thousands of irrigation staff
379 who would become irrelevant – and the reduced scope for rent-seeking that would accompany
380 that shift (Young et al. 2019). Yet, much of the overt rationale was itself a form of manipulation
381 of small farmers through misinformation, driven in no small part by the fear among the elite that
382 delinking water rights from land rights was equivalent to land reform – and that privatization was
383 a conspiracy for foreign interests to gain control of Pakistan irrigation (see Young et al. 2019).
384 Thus, through collusion of interest between irrigation bureaucracy and big landowners –
385 reinforced by opinion leaders and the media – the PIDA Act of 1997 was significantly different
386 than the original vision.

387 During the twenty-five years since, in Punjab province, the scope of participatory reforms
388 laid out in the Punjab Irrigation and Drainage Authority Act of 1997 was trimmed via the Punjab
389 Khal Panchayat Act of 2019 (Bell et al. 2022; Memon et al. 2019). In Sindh province, the Sindh
390 Irrigation and Drainage Authority (SIDA) Act of 1997 was amended via the Sindh Water
391 Management Ordinance (SWMO) of 2002, the Sindh Water Management (Amendment) Act of
392 2005, and most recently in 2021 (following a consultative engagement with a civil society
393 organization, Strengthening Participatory Organization and in collaboration with the
394 Commission on Status of Women in Sindh) via a new amendment to ensure women's
395 participation at different tiers of the nested governance structure. The SWMO 2002 specified the
396 governance structures of AWBs, FOs, WUAs, including domains of authority, power, and O&M
397 responsibilities (see below for a detailed analysis in Table 1).

398 **4. PIM Policy Implementation in Sindh**

399 The advocates of IMT argued that PIM would improve cost recovery, operations and
400 maintenance, service delivery and distributional equity, and agricultural productivity – all in a
401 virtuous circle as depicted in Figure 1. Unfortunately, these outcomes of PIM in Pakistan have
402 fallen short of these expectations (S. A. M. Ali 2020; Ghumman et al. 2014; Jacoby et al. 2021;
403 Memon and Mustafa 2012; Mustafa 2002; Ul Hassan 2011).

404 We argue here that any determination of PIM as having succeeded or failed would first
405 require full implementation of the PIM policy, which has not been the case. The policy
406 assessment shown in Table 1 is based on the extant literature, interviews with key informants,
407 and our own observations of and experiences with the system. As shown, the overall
408 implementation of SWMO 2002 has been incomplete, especially with regards to the
409 establishment of the Regulatory Authority – which has never been established independently of
410 SIDA. This conflict of interest surely limits the extent to which enforcement of violations of
411 SWMO 2002 are brought to light since such violations may raise doubts about SIDA's efficacy.

412 Perhaps even more significantly, WCAs must do the manual labor of watercourse
413 maintenance – and they are responsible for ensuring that all members comply – but they do not
414 have authority or power explicitly mentioned in the ordinance to punish those who shirk their
415 responsibilities. It may be that such power and authority is assumed, but it is not articulated in

416 the law. Moreover, WCAs are not empowered to turn to the Regulatory Authority for help with
417 resolving disputes. Indeed, the option for addressing “internal dissent” is to give up their right to
418 distribute water to a “caretaker” assigned by the FO. The provision that only 1/3 of a WCA’s
419 members must agree that a replacement to the Board is necessary opens the possibility for a
420 power grab by a powerful FO. In this way, an FO can legally take control of water distribution at
421 the WCA level. This power imbalance characterizes the relationship between FOs and higher
422 levels in the governance system: “The contractual arrangements between FOs and AWBs
423 remained one sided and top down, where FOs were accountable to AWBs and PIDAs, but not the
424 other way around” (Ul Hassan 2009, p. 137-138).

425 The essence of PIM is that it empowers organizations of farmers to take ownership over
426 management affairs of the irrigation system. In our experience, we have found that although
427 farmers may be aware of the PIM reform process, they rarely have in-depth knowledge of the
428 bylaws of the SWMO 2002. The possible reasons for this are that there was limited direct
429 involvement of non-elite farmers in the reform process, insufficient investment in awareness
430 raising and training, and dependency on oral communication due to low literacy rates.
431 Typically, farmers know that the FO chairman has authority to collect the water fee, of which
432 60% is submitted to SIDA and 40% retained by the FO for operation and maintenance expenses
433 as per SWMO 2002. However, in practice sometimes 100% of the fees collected cover only the
434 SIDA share and there is therefore no FO budget for operations and maintenance, leading to the
435 deterioration of the distributary level irrigation infrastructure. Even worse, one of FO chairman
436 told during an interview that we collected SIDA share of *abiana* from influential landowners
437 rather than all FO members – and those influential landowners are compensated through
438 increased access to water above their legal share. This type of elite capture and misuse of power
439 has been documented in Pakistan (S. A. M. Ali 2020; Jacoby et al. 2021; Rinaudo 2002) and
440 other countries in South Asia (e.g., India; Wade 1982). For example, Jacoby et al. (2021)
441 analyzed discharge measurements in Punjab and found that water theft was higher on
442 distributaries managed by Farmers’ Organizations compared to distributaries managed by the
443 Irrigation Department. The authors also found that water theft is greater along the channels
444 where land inequity is greater and big landowners are situated at the channel's head (Jacoby et al.
445 2021).

446 SWMO 2002 aimed to decentralize irrigation power by including farmers in decision-
447 making. There was a clear recognition that this devolution of governance would require “social
448 mobilization” – so SIDA established social mobilization units to prepare farmers for their new
449 roles and responsibilities. SIDA’s social mobilization included three types of training—
450 basic training, specialized training, and refresher courses. A review of the topics covered by
451 these training programs suggests that they focused on technical aspects like explaining PIM
452 institutional features, best practices for record-keeping and financial management, procedures for
453 assessing and collecting the water fees, and technical competencies like flow measurement. To
454 our knowledge, none of these trainings explicitly dealt with the political significance of the shift
455 in power and authority from previous institutions to Farmers’ Organizations, or how FOs could

456 hold AWBs and even SIDA accountable for failing to deliver services. Nor did these trainings
 457 focus on building trust, cooperation, and hydro-solidarity to facilitate collective action and
 458 counter existing kin-based and land-based power asymmetries. In other words, the social
 459 mobilization curriculum did not include the political dimensions or implications of PIM; social
 460 mobilization was largely depoliticized.

461 Moreover, the order of steps involved in social mobilization for PIM reinforces the lack
 462 of power held by farmers. Farmers only get the right to manage their own water by achieving a
 463 certain level of technical capacity. Thus, a right to self-governance is morphed into a privilege
 464 earned through good management performance. The implications of these approaches are
 465 developed in the next section.

466 **5. Civic Habitus as Constraint and *Conscientização* as Liberation**

467 A fundamental assumption in participatory irrigation reforms is that the irrigation
 468 bureaucracy and farmers are two distinct categories whose interests are in opposition to each
 469 other; however, this is not the case. The irrigation bureaucracy exercises its power and authority
 470 with the consent and support of powerful landlords. The question for policy makers is whether
 471 the SWMO 2002 alone provides enough power and authority to smallholder farmers to engage
 472 meaningfully with these existing power structures and challenge this nexus? In the social context
 473 of high kin-based and land-based power asymmetries (Alavi 1971 and 1972; Hussain 2019 and
 474 2020; Lieven 2011; Gazdar and Mallah 2012), it appears that the provisions of the SWMO 2002
 475 were insufficient for truly participatory irrigation management that would result in efficient,
 476 reliable, adequate, and equitable water distribution.

477 It may be that the irrigation power nexus cannot be challenged without a critical mass of
 478 small farmers who organize for meaningful land reform (see for example, N. Ali 2020 and
 479 Nawab 2019). Indeed, some have noted that previous attempts at land reform failed in part at
 480 least due to a lack of proactive peasant agency because where peasant agency was proactive, the
 481 stranglehold that the landlord and state power nexus held was weakened (N. Ali 2019). For
 482 example, Noman Ali studied the Hashatnagar Peasant movement and highlighted how land
 483 reform “from below” was able to succeed in replacing old landlord power structures with “new
 484 and renewed institutions of peasant power”(N. Ali 2019, ii). Habib Ullah Nawab noted that land
 485 reforms and peasant movements helped to reduce peasants’ sense of alienation and landlords’
 486 hostile attitudes, and improved agricultural productivity (Nawab 2019).

487 Moreover, empowerment is not a simple choice in a context of institutionalized and
 488 historical inequities that manifest in socialized norms. As Jethro Pettit observed, “Citizen
 489 engagement is shaped by what I would call *civic habitus* (after Bourdieu 1980): the tacit, rational
 490 collusion with socialised norms of power in order to survive and evade harm” (Pettit 2016, p.
 491 90). Referencing an evaluation of efforts by Swedish civil society organizations to strengthen
 492 partners in Pakistan, Nicaragua, and Uganda (Pettit et al. 2015), Pettit (2016) elucidated the
 493 “internalised constraints” of “stress, depression, despair and low self-esteem” as well as “norms
 494 and identities that prescribe one’s status and agency according to gender, sexuality, age,
 495 disability, class, race and ethnicity” that contributed to people’s “tacit compliance with power”

496 (Pettit 2016, p. 92). According to Pettit (2016), these internalized constraints are not easily
497 overcome through people's increased knowledge of their rights because to reject the status quo
498 of long-established patron-client relationships would put them at risk; furthermore, when people
499 have become habituated to a particular civic habitus, rational evaluation of the pros and cons of
500 their "rights" does not necessarily lead them to take steps towards enacting these rights.
501

Table 1. Key Features of the Sindh Water Management Ordinance (2002) – For full text of the ordinance, see http://sida.org.pk/download/swmo_2002_English.pdf (retrieved 07/05/21)				
Governance Level	Operations & Maintenance	Power and Authority	Additional Notable Features	Implementation Assessment
Regulatory Authority (RA)	N/A	<ul style="list-style-type: none"> - Enforce compliance with ordinance - Approve all regulations set by SIDA, AWBs, and FOs - Establish AWB performance standards - Establish Customer Service Committees for each AWB to investigate complaints related to FO distributor functions - Form tribunal for dispute resolution 	<ul style="list-style-type: none"> - Although the RA is supposed to be established soon after the commencement of the ordinance, SIDA may function as the RA until the latter is established - Annual report on conduct of SIDA, AWBs, FOs, WCAs, and DBGs should be submitted to the government and a summary published in local newspapers in English, Urdu, and Sindhi as well as provide summaries to SIDA, AWBs, and FOs 	<ul style="list-style-type: none"> - RA has authority to enforce SIDA to comply with ordinance. However, the RA has not been established as an independent body as per SWMO 2002. Rather, SIDA has been playing the role of RA. Thus, there is a significant conflict of interest that has persisted for nearly 20 years.
Sindh Irrigation and drainage Authority (SIDA)	<ul style="list-style-type: none"> - Operate and maintain aspects of irrigation and drainage system within its purview (i.e., barrages, outlets, spinal drains, and other drainage infrastructure) - Implement flood protection - Receive irrigation water and deliver agreed quantities to AWBs, FOs, and other relevant parties 	<ul style="list-style-type: none"> - Establish Water Allocation Committee (WAC) at each barrage level to determine water shares (i.e., water rights), develop water schedules, ensure discharge measurements are taken correctly, compare planned vs actual discharges, publish information publicly on regular basis, and receive complaints and negotiate priorities as needed - Levy and collect fees, rates, cess, and surcharges from areas outside the jurisdiction of AWBs and FOs - Investigate and solve problems 	<ul style="list-style-type: none"> - Community Advisory Committee (CAC) may be established for the purpose of “smooth interaction” with communities. - Conduct research studies to appraise options and enhance environmental protection - Manage transition process and support development of AWBs and FOs 	<ul style="list-style-type: none"> - SIDA never took over control of the barrages where it is working. The Irrigation Department still maintains control of regulation. -Although SIDA has authority to operate and maintain irrigation infrastructure, SIDA lacks relevant technical expertise/capacity to have legitimate authority and power to make these decisions. - SIDA does not have rules to hire new technical staff for the operation of irrigation infrastructure - WACs never fully

		<p>referred by RA</p> <ul style="list-style-type: none"> - Report non-compliance of AWBs to RA - Provide strategic advice to government 		<p>operationalized: irregular meetings, no meeting minutes, and no publicly posted water schedules. Canal officers (ex-Irrigation Department officials) prepare water schedules rather than WACs.</p> <ul style="list-style-type: none"> - CACs never established or not functional. - Staff transferred from Irrigation and Power Department (IPD) work on the terms and conditions of SIDA but those terms and conditions shall not be less favorable than the terms and conditions admissible to them immediately before their transfer to SIDA. - SIDA is not allowed to hire new technical staff (new staff recruitment continues to be administered by IPD)
<p>Area Water Board (AWB)</p>	<ul style="list-style-type: none"> - Operate, maintain, and improve aspects of irrigation and drainage system within its purview (e.g., main canals, branch canals, drainage tube-well drains with >15 cusecs) - Implement flood protection - Receive irrigation water from SIDA and deliver agreed quantities to FOs and other entitled parties (e.g., industries, wetlands, etc.) - Receive and convey 	<ul style="list-style-type: none"> - Establish WAC, if AWB has branch canals such committees also established at branch level. - Provide strategic advice to local and provincial government - Public disclosure of information, including publishing the planning of water distribution, the actual water distribution, and the comparison of the two - Charge fees for services and surcharges for late payments 	<ul style="list-style-type: none"> - AWBs have a duty not to extend the provision of water supply if doing so results in failure to meet pre-existing water supply obligations - Support development of FOs in its command area - CAC may be established for the purpose of “smooth interaction” with communities. 	<ul style="list-style-type: none"> - WAC Formation at AWB Level is not fully functional - Only Branch level WAC present whose working is not different from the SIDA level WAC - Variation across AWBs in performance, but generally weak in terms of information management, analysis, and dissemination (e.g., no publication of planned vs actual water distribution; outdated FO records; fee collection data not readily

	<p>drainage effluent</p> <ul style="list-style-type: none"> - Monitor surface and groundwater quality - Monitor withdrawals of groundwater - Monitor toxic disposal of effluent - Maintain equipment 	<ul style="list-style-type: none"> - Reduce irrigation water supplied to FOs for non-payment of water charges by its member(s) - Prevent unauthorized construction and encroachment - Notify RA of toxic effluent offenses 		<p>available in disaggregated form to analyze compliance by FO; etc.)</p> <ul style="list-style-type: none"> - AWB farmers members election was not held from last two decades - AWB chairman is a nomination rather than vote of FO’s electorate - Weak enforcement of rules - CAC never established
<p>Farmers Organization (FO)</p>	<ul style="list-style-type: none"> - Operate, maintain, and improve aspects of irrigation and drainage system within its purview - Implement flood protection - Receive irrigation water from SIDA or AWB and deliver agreed quantities to WCAs and other entitled parties, ensuring tail-enders and small farmers receive water and drinking water is available - Receive and convey drainage effluent 	<ul style="list-style-type: none"> - Establish WAC - Provide strategic advice to local councils - FO General Body can decide not to implement decision of WCA or DBG if doing so would have negative effect for FO or AWB levels - Charge fees for services and surcharges for late payments - Reduce irrigation water supplied to WCAs for non-payment of water charges by its member(s) - Public disclosure of information 	<ul style="list-style-type: none"> - Support development of WCAs and DBGs in its command area - Although FO has authority to decide not to comply with decision of WCA or DBG, the latter may appeal and seek arbitration by RA - WAC is supposed “to determine (initially on basis of design discharges, evolving over time to negotiated water rights incorporating the limitations posed by the infrastructural conditions, historic discharges, and market principles) the water share of the WCAs under “normal water availability” for a weekly interval.” (SWMO 2002, p. 29) - CAC may be established for the purpose of “smooth interaction” with communities. 	<ul style="list-style-type: none"> - WAC never formed at FO level. - CAC never established
<p>Watercourse Association (WCA)</p>	<ul style="list-style-type: none"> - Operate, maintain, improve, and rehabilitate watercourse, tube wells, lift pumps, field 	<ul style="list-style-type: none"> - Organize labor for watercourse repairs - Ensure that WCA members 	<ul style="list-style-type: none"> - Ensuring all members contribute in the agreed manner for their share of labor or money 	<ul style="list-style-type: none"> - WCAs must do the manual labor of watercourse maintenance – and they are responsible for ensuring

	<p>drains, and drainage infrastructure</p> <ul style="list-style-type: none"> - Receive irrigation water from FO and distribute to members 	<p>contribute agreed share of labor or money to O&M</p> <ul style="list-style-type: none"> - Establish water schedules and ensure all WCA members get due share of water - Assist in “determination and collection of general and special assessment” (SWMO 2002, p. 32) 	<ul style="list-style-type: none"> - If WCA Board does not fulfill its water distribution duty, then 1/3 of WCA members may request a caretaker be made available by the FO until new elections can be held 	<p>that all members comply – but they do not have authority or power explicitly mentioned in the ordinance to punish those who shirk their responsibilities.</p>
<p>Drainage Beneficiaries’ Group (DBG)</p>	<ul style="list-style-type: none"> - Operate, maintain, improve, and rehabilitate drainage structures 	<ul style="list-style-type: none"> - Organize labor for repairs - Assist in “the determination and collection of general and special assessment” (SWMO 2002, p. 35) - Employ labor and obtain loans and grants 	<ul style="list-style-type: none"> - If DBG Board does not fulfill its duty to collect and dispose of drainage water, then 1/3 of WCA members may request a caretaker be made available by the FO until new elections can be held 	<ul style="list-style-type: none"> - DBGs never established. - Drainage issues (e.g., salinity and water logging) are major problems in Sindh (Sohaq, Mahessar, and Bohio 2005).

502

503 In other words, simple knowledge transfer, training workshops, and other “awareness-
504 raising” types of social mobilization via critical reasoning activities may not provide sufficient
505 stimulus to transform “habitual and embodied compliance with power” (Pettit 2016, p. 99). The
506 solution offered by Pettit (2016) is creative expression through storytelling, visual art, theater,
507 music, poetry, and songs – expressions that engage not only the rational mind but also create new
508 lived experiences of emotions and actions of empowerment. This certainly aligns in spirit with
509 John Dewey’s (2015 [1938]) emphasis on “learning by doing” – and it is reflected in the praxis
510 of Paulo Freire’s critical pedagogy.

511 Freire argued that “the purpose of education is to liberate human potential” (Torre et al.
512 2017, p. 1). He believed that this liberation occurred through raising the awareness among
513 oppressed people of their oppression (Freire 2000 [1970]). We believe that this *conscientização*
514 (critical consciousness) is a key missing element in the social mobilization efforts of IMT and
515 PIM.

516 This missing element is perhaps due in part to the way the politics was extracted from the
517 concept of social mobilization, as evidenced in the shift of definitions in the scholarly literature
518 over time and across disciplines. Social mobilization, according to (Deutsch 1961):

519

520 “...denotes a concept which brackets together a number of more specific processes of
521 change, such as changes of residence, of occupation, of social setting, of face-to-face
522 associates, of institutions, roles, and ways of acting, of experiences and expectations, and
523 finally of personal memories, habits and needs, including the need for new patterns of
524 group affiliation and new images of personal identity. Singly, and even more in their
525 cumulative impact, these changes tend to influence and sometimes to transform political
526 behavior” (Deutsch 1961, p. 493).

527

528 This complex suite of changes can be more succinctly expressed as “the process in which
529 major clusters of old social, economic and psychological commitments are eroded or broken and
530 people become available for new patterns of socialization and behavior” [Deutsch 1961, p. 494].
531 In practice, what this means is that social mobilization can result in a transformation of the
532 political elite and its functions such that over time as the number of mobilized people increases,
533 so does the scope of their political participation (Deutsch 1961). Social mobilization is a political
534 transformation of the masses from passive recipients of elite edicts to active political agents.

535 Flash-forward six decades – and shift from the discipline of political science to the
536 discipline of psychology – and we find a rather different conceptualization of social mobilization
537 “as the effort to marshal many people to perform behaviors that impose a net cost on each
538 individual who complies and provide negligible collective benefit unless performed by a large
539 number of individuals” (Rogers et al. 2018, p. 358). This is *social mobilization as collective*
540 *action*, and it is this latter definition that seems to characterize the approach to social
541 mobilization adopted by proponents of PIM. Several social mobilization strategies identified by

542 Rogers et al. (2018, see pp. 360-361) include (a) involving “personal and personalized
 543 interactions between people who can relate to one another” (p. 360), (b) reputation-relevant
 544 behavior that can be observed by others, (c) normative approaches that convey what “relevant
 545 people” do and think others should do, (d) identity-affirmation such that people align their
 546 behaviors with how they would like to see themselves or be seen by others, and (e) leveraging
 547 social networks to propagate behaviors through contagion and diffusion.

548 These are all strategies for getting people to do things that benefit others and only benefit
 549 themselves if enough other people also do them. None of these strategies make direct reference
 550 to asserting one’s legal rights, demanding that others respect these rights, and asserting one’s
 551 lawful authority over new domains previously controlled by others.

552 The problem with aiming to stimulate collective action via appeals to “good
 553 management” for PIM is that too often “participation” appears to be more work – much of which
 554 benefits others – without concomitant gains in status or power (see Meitzen-Dick et al. 1995).
 555 For example, there is a section in a report titled “Social mobilization and institutional
 556 development approach and strategy” about “capacity building and empowerment” (Ul-Hassan
 557 and Nizamedinkhodjaeva 2002, p. 5); however, the capacity building described in this report
 558 focuses on various management tasks (e.g., keeping records, convening meetings, tax
 559 administration) and use of equipment (e.g., measurement devices; see also Memon et al. 2000).
 560 The only empowerment implied would seem to be the “empowerment” of doing work mandated
 561 by the new laws. The empowerment that might come from framing such work in terms of “self-
 562 governance”, “autonomy”, and “authority” might produce more enthusiasm among poor farmers.
 563 Yet, even with such a framing, if poor farmers cannot truly hold wealthy, powerful landlords
 564 accountable for water theft, then whatever limited scope of self-governance they may have is
 565 overshadowed by the tyranny that envelopes them.

566 The challenge before policy makers and PIM implementers is how to use *conscientização*
 567 to change civic habitus? The answer may lie in enacted hydro-solidarity.

568 6. Towards Hydro-solidarity and a Politicized Theory of Change for PIM

569 Hydro-solidarity is “the notion that water management should include considerations of
 570 ethics and equity” (Gerlak et al. 2009, p. 311). It expands the framework for thinking about water
 571 management to include not only technical variables but also human rights and social justice
 572 (Gerlak et al. 2009). This means that a properly politicized theory of change for PIM should
 573 recognize the need for building hydro-solidarity capacity and design social mobilization
 574 strategies and trainings capable of doing so. This may include, as Pettit (2016) suggested, the
 575 enactment of different ways of being and doing (through artistic expressions) such that new
 576 habits of power relations can be formed.

577 Turning to the fact that farmers were not meaningfully engaged during the IMT/PIM
 578 project design phase – and those that did participate tended to be (or represent) powerful
 579 landlords and other special interest groups seeking to maintain rent seeking status quo – we see
 580 that not only was psychological ownership (and thus project sustainability) unlikely (see Aga et
 581 al. 2016) but also there was no enactment of alternative political relationships. Therefore, the

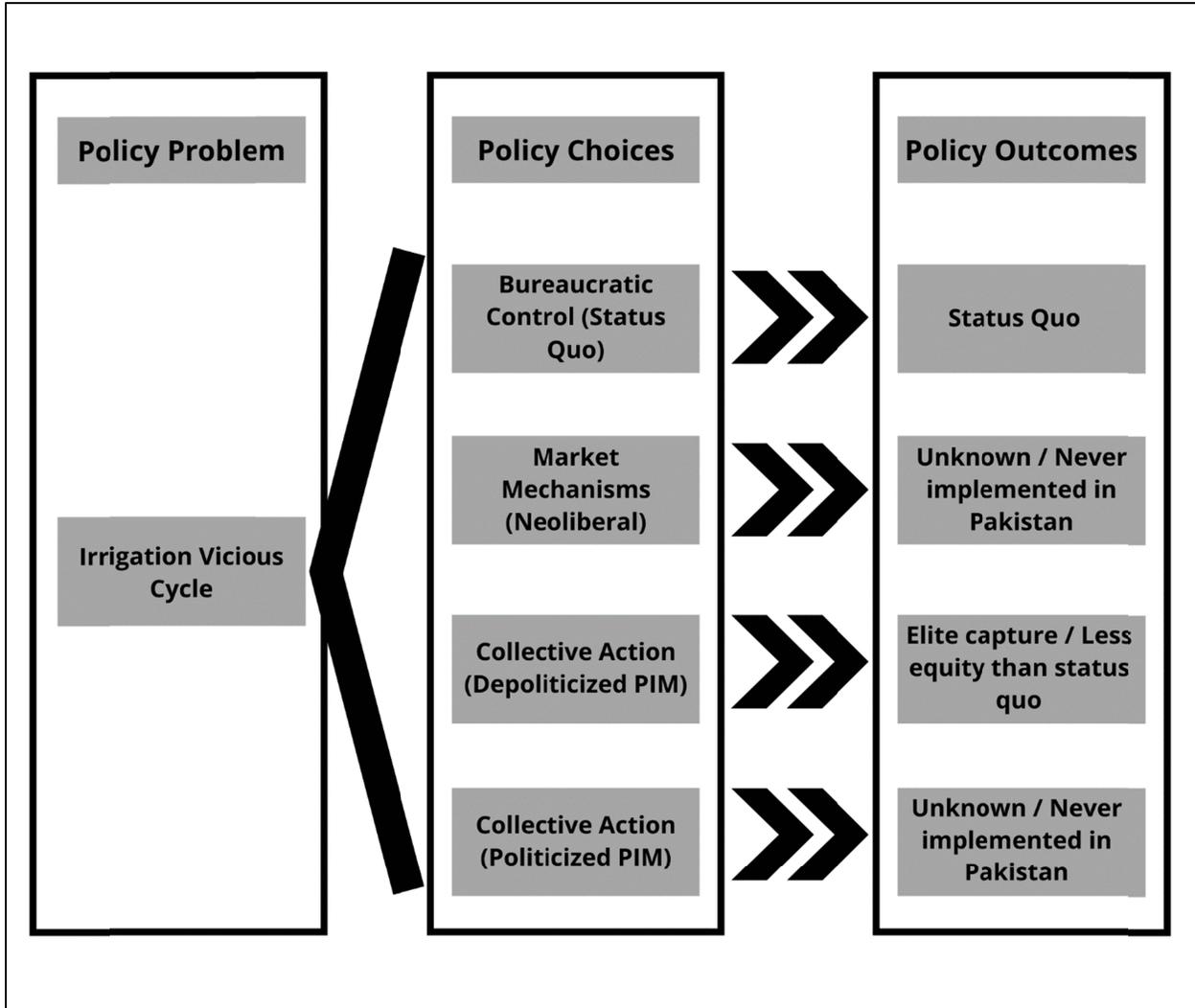
582 status quo civic habitus was not challenged. These lessons from Sindh and elsewhere around the
583 world suggest that one insufficient but necessary condition for successful and sustainable
584 IMT/PIM outcomes is relatively minimal power differentials across farmers. Thus, in contexts of
585 significant power asymmetries, social mobilization may need to embrace a politicized framework
586 to achieve PIM success. Yet, at this point in Pakistan, a politicized PIM theory of change has not
587 yet been proposed or implemented (Figure 5).

588 Meanwhile, the case of Senegal IMT (Meinzen-Dick et al. 1995, Box 5, p. 16) highlights
589 the importance of negotiating rights and responsibilities with farmers to create incentives for
590 them to take on new O&M duties. However, in this case, these negotiations were driven by
591 farmers asserting their rights, a strong civic tradition in the country. In contrast, in Pakistan
592 collective action has been primarily organized around kinship groups rather than civic
593 associations (Hussain 2020). What might a formal PIM system organized around kin groups –
594 and designed specifically to balance power asymmetries among them – look like and would it
595 perform better than the structures under SWMO 2002? We do not know. Evidence does suggest
596 that PIM systems are more effective when they map onto hydro-geographic rather than political
597 boundaries (Meinzen-Dick et al. 1995). Therefore, creative expressions enacting hydro-solidarity
598 for caring for a shared watershed and ecosystem for food security may be a route to meaningful
599 collective action for PIM.

600 We can say that to enhance equitable water distribution, PIM was supposed to formalize
601 informal rules such that socially disadvantaged groups would experience greater procedural and
602 distributive justice. However, in practice, the formalization process resulted in an informal
603 transfer of power from centralized bureaucrats to feudal landlords who were able to increase
604 their control of water distribution via their control of Farmers' Organizations (S. A. M. Ali 2020;
605 Jacoby et al. 2021). The result was that corruption and inequity increased under PIM rather than
606 decreased (Jacoby et al. 2021). This was not a wholly unexpected outcome: in a 1995 World
607 Bank working paper, the authors noted not only that “[p]articipation may also be at odds with
608 equity objectives if some groups have more influence than others” but also that “[i]n cases of
609 very hierarchical social structure and inequitable distribution of assets (for example, Sindh in
610 Pakistan) it may be unrealistic to expect fully equitable and democratic local organizations”
611 (Meinzen-Dick et al. 1995, p. 10). “Therefore,” they argued, “the Bank and government need to
612 recognize their role in controlling vested interests and acting as advocates for the poor”
613 (Meinzen-Dick et al. 1995, p. 10).

614 By adopting an explicitly politicized theory of change for PIM, those interested in
615 advancing farmer participation in water management may well see significant positive outcomes
616 (in terms of O&M, cost recovery, agricultural productivity, and overall equity) – as well as
617 spillover effects into other domains of life that will be affected by the farmers' new sense of
618 social empowerment. It is perhaps these spillover effects that most concern the landed elite; yet
619 these effects may also accelerate sustainable development, particularly in terms of improving
620 environmental and economic conditions that affect everyone. Of the three pillars of sustainable
621 development, the social pillar is the one that has taken the longest to be fully appreciated and

622 incorporated into “sustainability” efforts. By advancing a properly politicized PIM theory of
 623 change, social equity and justice will serve as a foundation for sustainable water management
 624 and robust livelihoods for farmers and their families.



625
 626

627 Figure 5. Policy framework options for PIM, including a politicized theory of change capable of
 628 generating collective action.

629 7. Conclusion

630 Despite some early successes shown through pilot studies (e.g., [Bandaragoda 1999](#)), time
 631 would reveal that the attempt to decentralize irrigation management was constrained by informal
 632 power structures that could not be easily changed by changing formal structures ([S. A. M. Ali
 633 2020](#); [Jacoby et al. 2021](#); [Ward et al. n.d.](#)). The assumption that paper policies which allow
 634 collective action – combined with depoliticized social mobilization efforts – would necessarily
 635 enhance equity, efficiency, and financial self-sufficiency in irrigation management was shown to
 636 be overly simplistic. Power to control irrigation water was not separable from power in other
 637 domains of life – a ground reality perhaps concealed from the technocratic view by the old

638 irrigation bureaucracy. The technocratic orientation of donors, the tendency to implement low
639 quality impact assessments, and the inclination of development actors to present their activities
640 as successful have all contributed to the replication and proliferation of a detrimentally
641 incomplete policy model (Mosse 2004; Senanyake et al. 2015). We argued in this paper that it is
642 time for an honest reckoning with the political dimensions of IMT/PIM.

643 The transfer of formal authority in a context of a civic habitus in which people are accustomed to
644 survival through patronage relationships (Lyon 2002; Martin 2014; Mohmand 2011) could result
645 in an amplification of existing power asymmetries – as has happened under PIM in Pakistan (S.
646 A. M. Ali 2020; Jacoby et al. 2021).

647 We believe that the framing and practice of social mobilization matters for IMT strategies
648 and PIM outcomes. A depoliticized understanding of social mobilization ignores the “civic
649 habitus” and is therefore unable to create a more enactive and imaginative form of citizen agency
650 capable of challenging or transforming invisible power boundaries in society (Pettit 2016).

651 Irrigation bureaucracy and local kin and land-based powerful elite have an invisible power
652 (Jacoby et al. 2021; Mehta 2016) in which only patrons and clients benefited. Disrupting this
653 structure is not part of the typical IMT/PIM reform package. It remains to be seen whether PIM
654 implementing agencies and development aid donors are interested in truly empowering the
655 powerless and small farming community – or if these actors are, as is too often the case,
656 complicit in “performative development” that is better described as an attempt to acquire donor
657 funds and generate international credibility through isomorphic mimicry (Andrews et al. 2013;
658 Arfan et al. 2020; DiMaggio and Powell 1983; Mdee and Harrison 2019).

659 **Author Contributions**

660 Conceptualization: M.A., M.W.; Formal analysis: M.A., M.W.; Writing—original draft: M.A.,
661 M.W.; Review and editing: K.A., A.U., and M.A. All authors have read and agreed to the
662 published version of the manuscript.

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669 **Conflict of Interest Statement**

670 The authors declare no conflict of interest.

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