TECHNICAL BRIEF

Advancing Participatory Natural Resource Management and Democratic Outcomes:

Lessons Drawn from the Evidence

Technical Brief: Advancing Participatory Natural Resource Management (PNRM) and Democratic Outcomes

Contents

INTRODUCTION

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Participatory natural resource management (PNRM) is an increasingly important part of development programming. PNRM is a form of collective action bringing together natural resource-users and communities, interacting with government, to make coordinated decisions about resource rights, responsibilities, and the access, use, benefits, and stewardship of natural resources. These interactions involve relationships of power and political choices about dialogue, institutions, and accountability.

PNRM has been used in recent decades as a part of biodiversity and environmental programming, including forests, fisheries, wildlife, parks, and rangelands (Currie-Alder 2005; Child and Barnes 2010; Anderson et al. 2013; Salerno et al. 2021). More recently, the dialogue on participatory approaches to environmental programming has expanded to include governance of climate change mitigation through payments for ecosystem services (Leventon et al. 2014; Hoang et al. 2019; Corbera et al. 2020) and Nature-based Solutions to protect, manage, and restore ecosystems (Tugendhat 2021). Many environmental organizations and donors—including the U.S. Agency for International Development (USAID)—have also endorsed climate adaptation programming based on Principles of Locally Led Adaptation that emphasize the devolution of decision-making to the lowest appropriate level (Global Commission on Adaptation 2021). Taken together, program activities reliant upon PNRM—from land and resource governance to biodiversity conservation to climate change—now compose a large portion of the global development assistance portfolio.

PNRM is of particular relevance for development practitioners working on issues of democratic governance. A recent systematic evidence synthesis conducted for USAID examined more than 150 articles covering the period from 2005-2020 for linkages between PNRM and democratic outcomes. The depth and extent of the evidence base surfaced critical patterns and trends, particularly on the role of power, politics, and socio-cultural norms within PNRM and their impact on linkages between PNRM and downstream democratic outcomes (Table 1).[1]

These outcomes include contributions to citizen participation, community organization, social capital, institutional innovation, political stability, and conflict resolution, as well as increased voice and advocacy for women and recognition of Indigenous Peoples' rights. However, the evidence also shows that progress toward these democratic advances is mediated by

contextual factors such as power asymmetries, institutional histories, corruption, and local socio-cultural norms. This technical brief draws upon this recent assessment of the evidence on the linkages between participatory natural resource management (PNRM) and democratic outcomes to identify implications for program activities that use PNRM to advance environmental and democratic governance objectives.

TABLE 1

Patterns Associated with Positive or Negative Democratic Outcomes

POSITIVE OUTCOMES	SUBOPTIMAL OR NEGATIVE OUTCOMES
1. New collective action capacities and alliances increase negotiating power.	1. Failure of state authorities to cede power constrains implementation of decentralized NRM.
2. Density of social networks increases influence and community benefits.	2. Mismatch between devolved responsibilities and resources hinders local democracy.
3. Institutional development and adaptation produce broader downstream effects.	3. Creation of new institutional elites undermines downward accountability.
4. Integrating customary and formal institutions increases effectiveness.	4. Local NRM institutions reproduce gender inequality.
5. Institutional legitimacy and credibility contribute to conflict management.	5. Local NRM institutions reproduce class and caste discrimination.
6. Co-management supports community interests in limited political spaces.	6. External actors with global environmental goals underestimate community complexities and may undermine elected local government.
7. Supporting Indigenous Peoples' NRM enhances biodiversity-democracy linkages.	

Source: Stark et al. 2022

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1   See Annex 1 for more detailed information on the systematic evidence synthesis process, coding, and meta-data.

Thinking and Working Politically in Support of PNRM and Democratic Outcomes

PNRM's close relationship to democracy derives from its fundamentally political nature. The governance of shared natural resources requires boundaries, rules, rights, responsibilities, monitoring, sanctions, dispute resolution, and coordination with outside authorities (Ostrom 1990). While these tasks and procedures have many technical dimensions, their delineation and agreement as a matter of collective action involves an ordering of authority, power relations, costs, and benefits. The selection of executive committees, the creation of platforms and venues for expressing views, and the prerequisites for participation produce (or reproduce) hierarchies of influence and decision-making among community members. PNRM's institutional arrangements also intersect with and may reflect the power asymmetries, gendered norms, and social tensions that already exist in local communities.

Most PNRM interventions are linked to national policies for decentralization. The evidence highlights that incomplete or flawed decentralization is one of the most persistent constraints on successful implementation of PNRM. Authorities at higher levels are frequently reluctant to cede decision-making downward, despite blueprints for the devolution of power. Program activities often take place in an explicitly or implicitly contested space between the commitments of state authorities to empower local resource users, the imperfect implementation of those commitments, and the efforts of resource users and communities to assert their role in natural resource management.

These competing interests of key actors, operating at multiple scales of governance, indicate the need for [thinking and working politically (TWP)](#) (USAID 2018) in designing, implementing, and evaluating PNRM and in gauging its likely effects on democratic outcomes. The outlook and basic tenets of TWP can be summarized in three essential attributes:

Awareness of power relations and political dynamics:	**Understanding and working with the local context and culture:**	**Flexibility to reflect, revise, and adapt for learning and sustainability:**
Recognizing and taking into account stakeholder interests, incentives, institutions, alliances, and the capacity for collective action	Appreciating the influence of historical legacies, socio-cultural norms (gender, class, and culture), social capital, and community networks	Testing and adapting program activities to changing contexts; merging design, implementation, monitoring, and evaluation; and sustaining program support

TWP practices in these three areas help development practitioners anticipate and respond to some of the political and socio-cultural dynamics common to program activities for both PNRM and democratic governance. As discussed below, the recent USAID evidence review on PNRM and democratic outcomes provides lessons about key factors that constitute opportunities and challenges in each one of these categories of thinking and working politically.

POWER RELATIONS AND POLITICAL DYNAMICS

Opportunities for Strengthening Institutions and State-Society Relations through PNRM

Creating mechanisms that help to bridge differences between formal and traditional governance:

One of the main governance challenges in countries with large rural populations is integrating Indigenous and traditional systems of governance—based on deep local knowledge and community legitimacy—with formal institutions and legal mandates of national governments. PNRM can develop mechanisms for multistakeholder discussions and learning that help to bridge differences in interests and values, and it facilitates the distribution of power and authority across the institutions of formal and traditional governance (Haller et al. 2016).

Engaging local NGOS to help to fill the "implementation gap":

Local NGOs often play key bridging roles between communities and the state at the outset of PNRM. They provide organizational know-how; clarify agendas; share experiences in advocacy and mobilization; and bring together actors from government institutions, local customary institutions, civil society, and resource-user groups who may have had limited prior interactions. Support for these local NGOs and the bridging functions they serve can enhance the development of more positive state-society relations and promote successful PNRM (Kongkeaw et al. 2019; Gonzales Tovar et al. 2021).

Addressing issues and reforms that are part of larger national political debates:

PNRM spotlights the need for defined and secure land rights, often leading to legislative reforms that also serve as models for other sectors such as water and forests. As PNRM becomes a vehicle for broader legislative and political reform, it can also become an influential force in national political debates (Paudel et al. 2012; MET/NACSO 2020).

Providing a platform for government-community dialogue and dispute resolution:

In countries or regions with low levels of state legitimacy, dialogue between government and local communities on contentious issues and conflict is difficult. PNRM based on transparency and accountability accumulates legitimacy and credibility that allows it to function as an honest broker for dispute resolution and conflict management. PNRM's institutional arrangements can serve as venues to serve as a platform to voice diverse perspectives within heterogeneous communities and community grievances about the implementation of state policies (De Pourcq 2015; Soliku and Scraml 2018; Ide et al. 2021).

Representing local community interests in limited political spaces:

Even in countries with limited political space, government officials who need to address environmental or resource-related problems engage with PNRM co-management institutions. As co-management arrangements demonstrate the capacity to formulate and implement solutions to natural resource challenges, their institutional reach increases, connecting them with state actors at various levels, including government agencies and officials with other sectoral, social welfare, and security responsibilities. These interactions can help to represent community interests at different levels, despite the predominance of top-down governance. (Fidelman et al. 2017; De Koning et al. 2017)

Bringing attention to issues of equity and inclusion in international environmental initiatives:

The centrality of PNRM within global environmental initiatives like Reducing Emissions for Deforestation and Forest Degradation (REDD+) has added to momentum for increased local participation for women, Indigenous Peoples, and marginalized groups (Ojha et al. 2014).

PHOTO CREDIT: JASON HOUSTON FOR USAID

Challenges Faced by PNRM from Flawed Decentralization and Resistance to Power Sharing

Adapting to persistent, centralized top-down decision-making:

The evidence identifies many cases—from sub-Saharan Africa to Latin America to Southeast Asia—in which the central government, despite ostensible decentralization, maintains control over decision-making or retains control over high-value resources and revenue. In these cases, PNRM may be limited by top-down decisions about such issues as the composition of management committees, the role of sectoral ministries and implementing agencies (e.g., forests, fisheries), and the prioritization of national revenues over community benefits (Nkhata and Breen 2010; Bouda 2011; Hajjar et al. 2012; Mutune and Lund 2016; Nhem and Lee 2019; Cassidy 2021).

Adapting to mismatches between community responsibilities and community resources:

Conversely, the transfer of day-to-day operational responsibilities from government to communities without attention to actual local capacities or providing the necessary technical and financial resources may lead to inequitable outcomes or even conflict (Erbaugh 2019; Mustalahti and Agrawal 2020).

Balancing customary practices and institutional change:

The relative effectiveness of PNRM often hinges on the degree to which new institutional structures can integrate with customary institutional practices and traditional leadership patterns. The recognized roles of traditional leaders frequently diverge from the criteria for efficiency and expertise that government officials and donors prioritize. When new sets of decision-makers displace or marginalize customary practices and traditional community elites, there can be a loss of local legitimacy, community cohesion, and an increase in disagreements over participation, rights, and benefits (Brown and Lassoie 2010; Faye 2015).

Monitoring shifts in power in the context of institutional change:

PNRM reconfigures institutional arrangements and the way that power is shared at multiple scales. In flawed democracies, these changes in patterns of power may generate perceptions of winners and losers and motivate influential actors to adjust and "re-scale" their positions to advance their own interests. When powerful individuals or groups engage in "scale-jumping" to redefine their roles, each new institutional platform is potentially a site for elite capture, self-dealing, and corruption (Green 2016).

LOCAL CONTEXT AND SOCIOCULTURAL NORMS

Opportunities for Using Social Capital for Collective Action and Improved Governance in PNRM

Building social capital to strengthen communities' capacity to exercise voice and advocacy:

PNRM can significantly increase the forms of association and social capital within communities. Natural resource committees, forest user groups, wildlife patrols, peace committees, and women's and youth groups are all venues for learning and developing skills in collective decision-making. Social trust and inter-community networks—especially among women—develop and expand when these groups function with effectiveness, transparency, and accountability. Strengthened social capital and solidarity from PNRM can be used to bolster citizen advocacy and advance political and programmatic goals that benefit participating communities (Agarwal 2009; Valenzuela et al. 2020).

Establishing links with broader coalitions for expanded rights and environmental sustainability:

The social capital accumulated through PNRM facilitates other forms of organizational development that can expand the representation of communities' political interests. Groups engaged in PNRM link up with other national and international environmental organizations to become part of more powerful coalitions and address a broader range of issues such as women's rights, land rights, climate change, and environmental defenders (Giri and Darnhofer 2010; Ojha et al. 2014).

Building on existing cultural bonds and social capital to forge new forms of collective action:

Pre-existing social capital from bonds based on cultural identity or vocational associations like fishing cooperatives can be a source of collaborative experiences that can be applied to cooperation for PNRM and participation in democratic governance programming. Experiences from countries as different as Honduras, Indonesia, and Bhutan demonstrate how embedded socio-cultural capital linked to natural resource management can be a resource for a range of program activities based on collective action (Buffam et al. 2010; Asmin et al. 2017; Rivera et al. 2021).

Bridging divides between Indigenous communities and formal governance:

Land rights and access and use of natural resources in and around Indigenous lands is an increasingly fraught challenge for democratic governance. Because of the intertwined linkages of cultural practices and natural resource management in Indigenous communities, participatory and inclusive decision-making is of particular importance. Local and national perspectives about the proper relationship of traditional participatory processes and other levels of governance often diverge. Evidence from countries like Brazil, Bolivia, and Indonesia indicates that PNRM can help to bridge these divides and find innovative ways to integrate customary practices within multilevel governance (Gonzales Tovar 2017 et al.; Asmin et al. 2017; Dawson et al. 2021).

Challenges of Gender Inequality and Marginalization in PNRM

Managing and responding to culturally embedded power asymmetries and inequities:

PNRM institutional arrangements interact with the traditional norms and social cleavages that already exist in local communities. Despite participatory designs and aspirations for empowerment and equity, PNRM can fail to address or even reproduce culturally embedded and skewed power relationships. While male participants with education and assets are more likely to have leadership roles, negotiating influence, and decision-making power, women, marginalized groups, and the poor are more likely to be limited to passive consultation and consent, often lacking the social standing to challenge dominant perspectives (Baker-Médard 2017; Hyle et al. 2019; Etiegni et al. 2020; Friedman et al. 2020).

Recognizing and responding to patriarchy and gender inequality:

Gender inequality is the most persistent example of PNRM reinforcing social hierarchies and discriminatory norms. The nominal representation of women on executive committees is accepted in many communities, but women participants remain constrained by structural issues related to their gender roles such as time poverty (e.g., caregiving or home care duties), limited educational opportunities, lack of tenure rights, and other gendered norms. With unequal voice and representation, women often receive fewer benefits, and communities do not realize women's potential contributions to rule-making and conflict management (both of which show women performing better than men) (Agarwal 2009; 2010; Coleman and Mwangi 2013; Nunan and Cepić 2020).

Recognizing and responding to discrimination based on identity, caste, and class:

Groups marginalized by ascriptive identity, caste, or class also sometimes face forms of exclusion in the context of PNRM. Even when these groups take part in decision-making, dominant community members may ignore their input, capacities, and preferences. Indigenous Peoples and marginalized groups often rely more directly and heavily on natural resources for their livelihoods than leaders of local community committees, who may own or control larger and more diversified assets. As a result, without their substantive participation, the impact of restrictions on resource use to promote conservation can fall disproportionately on Indigenous groups, lower castes, and classes who have limited influence on the design and implementation of rules (Hyle et al. 2019; Mustalahti et al. 2020).

FLEXIBILITY TO REFLECT, REVISE, AND ADAPT FOR LEARNING AND SUSTAINABILITY

Opportunities to Adapt and Diversify PNRM to Support Democratic Governance

Diversifying activities and achieving successful programs through learning and adaptive management:

Some of the best known case studies of PNRM success stories (e.g., community forestry in Nepal, community conservancies in Kenya and Namibia) reflect decades of cumulative learning in complex cultural settings and a diversification of activities that produce positive downstream effects for democracy, including increased political stability, strengthened conflict resolution, improved local government performance, and legislative reforms that extend beyond the natural resource sector. Each of these experiences is grounded in adaptive management made possible by sustained political and financial support that allowed communities to respond to changing political conditions, redesign under-performing program activities, and adjust institutional arrangements to meet local needs (Anderson et al. 2013; Ojha et al. 2019; Northern Rangelands Trust 2019; MET/NACSO 2020).

Linking institutional evolution to positive downstream effects on democratic governance:

The pattern of positive downstream effects over time is seen in diverse political settings. The evidence shows that, when PNRM is sustained for some period of time, the institutional evolution and adaptation of PNRM has linkages to broader political reforms and democratic developments, as has occurred in countries like Kenya, Tanzania, Namibia, India, Nepal, and Brazil. These effects occur at all scales and appear in such areas as citizen rights for participation, sectoral reforms, more secure and better enforced tenure rights, and new national policies for decentralization and local government (Cinner and McClanahan 2015; Nelson et al. 2020; MET/NACSO 2020; Salerno, Andersson, et al. 2021; Salerno, Romulo, et al. 2021; Das 2011; Laudari et al. 2020; Anderson et al. 2013; Gonzales Tovar et al. 2021).

Adapting PNRM to help cope with absent governance at times of political crisis:

In crisis situations, PNRM also may provide adaptive mechanisms to fill a political vacuum to provide stability and mitigate conflict. In Nepal, during the years of Maoist control of the countryside, community forest user groups (CFUG) provided a stabilizing presence, as rebel leaders knew many CFUG leaders and respected the transparency of their management of community resources. In Timor-Leste, in the aftermath of violence, displacement, and land disputes, there was an urgent need for national reconciliation. Because the new state could not meet this challenge, communities turned to customary forms of PNRM to help guide dialogue and provide the necessary settings for positive, peaceful social interactions (Nightingale and Sharma 2014; Ide et al. 2021).

Challenges in Implementing PNRM in Externally Driven International Environmental Initiatives

Balancing international environmental goals and community livelihood and cultural priorities:

Internationally supported environmental programs like REDD+ are implemented through linkages with national governments, ministries, provincial leaders, and local communities. These actors negotiate rights, responsibilities, and benefits, and then implement projects through PNRM in local communities. The evidence shows that tensions can arise between the environmental goals of external actors and the livelihood and cultural priorities of communities. Inadequate understanding of historical legacies and intra-community social and political rifts, as well as competing understandings of environmental goals and economic justice, can lead to miscommunication and missteps that—without adaptive responses—produce suboptimal program results or negative democratic outcomes (Scheba and Rakotonarivo 2016; Hoang et al. 2019).

Maintaining efficiency and reliability while working with weak or flawed local governments:

External actors may be tempted to circumvent the messy local realities of PNRM by either working with compliant elites at different scales or by creating new, project-specific institutions. Domestically, high-ranking government officials may support climate initiatives in hopes of using their patronage networks to realize benefits for themselves and their allies. Newly created local committees may be designed to meet project requirements, and NGOs may take on important areas of coordination and oversight. These apparent expediencies, however, can displace or disrupt the normal functioning of local government and the mandated responsibilities of elected officials (Chomba 2017; Nuesiri 2017).

STRENGTHENING PNRM AND DEMOCRATIC OUTCOMES— CHALLENGES FOR THE FUTURE

Looking forward, there are two important domains with large potential for enhancing the positive linkages between PNRM and democratic activities: 1) the expanding number of program activities addressing the looming crises of climate change and biodiversity loss and 2) the growing programmatic attention to gender inequality and the need for inclusive development.

It is now widely believed that for both normative and practical reasons, projects that address climate change (both mitigation and adaptation) and biodiversity loss benefit from PNRM (e.g., Springer et al. 2021). This includes participation of intended beneficiaries in program design (co-creation), implementation (co-management), and evaluation (participatory monitoring, evaluation, and learning). Programmatic initiatives for land and water conservation, pay-ment-for-ecosystem services (PES), and Nature-based Solutions (NbS) are likely to increase in number. These initiatives often promote land-use interventions in areas inhabited by rural populations and Indigenous Peoples whose territorial and land rights may be unrecognized or weakly enforced. In many countries where USAID works—especially flawed democracies, electoral autocracies, or clientelist states—the relevant institutions for sound governance are likely to be absent or weak. These challenges make TWP and continued improvements in PNRM pivotal for reaching project goals in both environmental management and democratic governance.

The recent USAID evidence review found that while program interventions often consider women in project design, and some articles include statements about gender inequality, relatively few systematically examine impacts on women. The observations that do appear in the PNRM literature find gender inequality to be a persistent problem, reflecting socio-cultural norms that are still prevalent in many local communities. There is a gap, therefore, in both knowledge and practice that limits the current capacity of PNRM to better serve women to provide safeguards against exacerbating existing bias and inequities. The most immediate opportunity for maximizing positive linkages between PNRM and democratic outcomes is ensuring the meaningful and equitable participation and leadership of women in all aspects of natural resource management. This involves shifting from nominal forms of participation and remedial responses to empowerment and gender-transformative change that "addresses the root causes of gender inequality, moving beyond the individual to the structural" (Mullinax et al. 2018). PNRM has the potential to contribute to gender-transformative change that increases the representation, voice, advocacy, and decision-making power of women in the daily life of local commu-nities, with positive downstream effects on their participation in other organizational forums and arenas of democratic governance.

This technical brief identifies some of the main lessons learned to date from the available evidence on the types and range of PNRM impacts on democracy. However, more remains to be learned about these interactions in specific national and local contexts. Building on this evidence base can help to further refine these lessons and contribute to program options and recommendations to address growing global environmental problems and the challenges of democratic governance.

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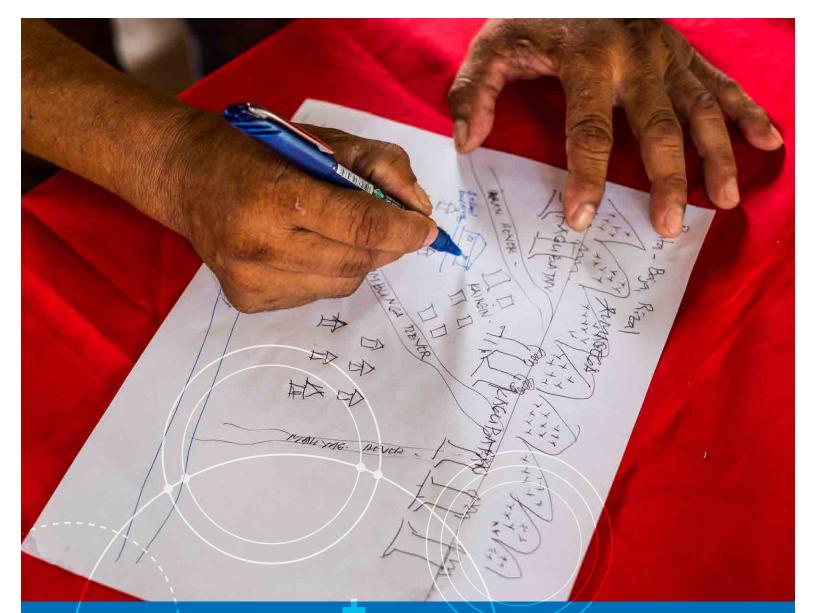
SYSTEMATIC EVIDENCE SYNTHESIS CODEBOOK

The USAID evidence review conducted by the Integrated Natural Resource Management (INRM) activity employed systematic evidence synthesis methods to evaluate the links between PNRM and impacts on democratic outcomes. Covering the period 2005–2020, a search yielded 7,202 results (including articles, reports, and other types of research literature). After assessing these results for relevance at title and abstract, the authors examined the full texts of 645 potentially relevant articles.

Of these, 151 relevant articles were identified, from which meta-data was drawn to better describe the distribution and extent of the evidence base. All data extracted from the 151 included studies using the codebook below is available here.

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General	Article ID	Number
	Name of Assessor	Text
	Date of assessment	Date
1. Bibliographic information	Publication type	List
	Authors	Text
	Year of publication	List
	Title	Text
	Journal	Text
	Indicated Affiliation of first author	Text
	Affiliation type of first author	List
	DOI	Text
	Source	List
2. Contextual information	Where does this study focus on?	Text
	What country (ies) does this study focus on?	List
	What is the resource type under study?	List
	Describe the existing context around the resource in question	Text
3. Study information	What is the objective of this study (as stated by authors)?	Text
	Do the authors use a clearly defined theoretical/conceptual framework or approach about links between PNRM and democratic outcomes?	Y/N
	If so, describe it	Text
	At what scale does the study occur? Check all that apply	Local
		Subnational
		National
		Regional
		Global
		HL coding notes
	What comparator(s) is used in this study? Check all that apply	Continuous time series
		Punctuated time series
		Before/after intervention
		With/without
		During intervention
		Spatial
		Between Groups
	If possible, provide details on timing of study	Text
	Study type	List
	Research approach	List
	Data type	Quantitative
		Qualitative
		Ordinal/Likert

4. Intervention	Name of intervention	Text
	Describe the intervention(s)	Text
	Describe the motivation for pursuing the intervention(s)	Text
	Does that motivation include changes to downstream democratic outcomes?	Y/N
	At what scale does the intervention/do these interventions occur? Check all that apply	Local
		Subnational
		National
		Regional
		Global
	Where does the intervention occur (be as specific as possible)	Text
	Who are the key actors in the intervention?	Text
	Does the intervention explicitly include considerations for women and/or marginalized groups?	Y/N
	If so, describe	Text
5. Outcome(s)	What is the category of outcome being examined?	
	What is the subcategory of the outcome being examined?	
	Describe the outcome being observed/measured (one row per outcome)	
	Is measurement of this outcome disaggregated between groups? If so, check all that apply	Sex/Gender
		Age
		Occupation/class
		Race/ethnicity
		Indigenous Peoples Group
	How is the outcome measured?	
	Describe the direction of the outcome	
6. Outcomes adjacent	Who defines the measurement/indicator?	Text
	Who validates the measurement/indicator?	Text
	Does the study consider links between multiple outcomes?	Y/N
	Describe links considered between multiple outcomes	Text
	Do the authors describe the mechanism that links PNRM and the outcome (s)?	Y/N
	What category does the mechanism that links PNRM and outcome(s) fall into? (check all that apply)	social capital
		power (between users or state/users)
		relationships (between users or state/users)
		human capital
		economic/financial capital
		political/social, conflicts/ stability
		access to participation (GESI)
		constraints to participation (GESI)
	Describe the mechanism(s) that links PNRM and the outcome (s)	Text
	Does the outcome (s) occur in parallel to implementation or downstream from implementation, or both?	List
	Describe the outcome(s) in relation to the implementation (parallel and/ or downstream)	Text