

# PSIA in Practice

*An insight into the distributional impacts of policy making*

## EQUITY AND POLITICAL ECONOMY ANALYSIS OF YEMEN'S WATER SECTOR REFORM

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**Abstract:** *This note\* discusses two PSIA's completed in 2007 and 2009 on the Republic of Yemen's water sector reform program. The PSIA's provided information on the political economy aspects of the program, and were designed as participatory "Yemeni exercises" involving the government, the Bank, GTZ, and domestic stakeholders. They succeeded in contributing significantly to policy reforms due to a number of factors, which include close country-engagement, multi-agency cooperation, and use of mixed methods.*

This *PSIA in Practice* study discusses PSIA's completed in 2007 and 2009 on the Republic of Yemen's water sector reform program. While there is no single prescription on how to complete an effective PSIA, and such studies should always be taken on with country- and context-specific factors in mind, the Republic of Yemen's water sector PSIA represents a good example of how distributional and political economy analyses can help link analysis with policy dialogue to design technically feasible and politically acceptable reforms.

### COUNTRY CONTEXT

Most countries in the Middle East and North Africa

(MENA) region cannot meet current water demands, with several countries facing crises in this sector. The region has gone through a number of phases in managing this sector, and has recently turned from its earlier emphasis on increasing supply and expanding services to focusing on water management. Due to complex institutional structures and political challenges to comprehensive reforms, the analysis of political economy around the water sector in this region has emerged as crucial to ensuring that reforms in this area are effective.<sup>1</sup>

The Republic of Yemen is a low-income country with most of its people classified as either poor or

\* This is the first in a series of dissemination notes being prepared as part of the PSIA knowledge management program at the World Bank. Poverty and Social Impact Analysis (PSIA) is an approach to analyze the distributional impacts of policy reforms on different social groups, particularly the poor and vulnerable. These analyses provide empirical evidence on the poverty, social, and distributional effects of reforms; suggest changes to a proposed policy; and help identify alternative policy options to improve poverty reduction and distributional outcomes. PSIA is a flexible approach and takes various forms. Each *PSIA in Practice* note is intended to focus on examples of good PSIA practice conducted by the World Bank in a particular sector or theme, providing a snapshot of the process, methodology, and country-level impacts of specific PSIA's. The notes are aimed toward a general audience interested in knowing more about poverty, social, and distributional analysis as well as practitioners looking for concise descriptions of PSIA examples.

## BOX I. OTHER PSIAS ON WATER SECTOR REFORMS IN MENA

In 2009, the World Bank published a poverty and social assessment on the water sector in **West Bank and Gaza**, with the goal of developing an analysis and awareness of the factors restricting West Bank and Gaza's water sector development. As with the Republic of Yemen, the study relied heavily on political economy analysis, involving consultations on both the analytical process and its findings with Palestinian and Israeli stakeholders. Other poverty, social, and distributional analyses on water sector reforms in other MENA countries have used a similar approach in employing stakeholder analysis and mixed methods, although not stressing political economy analysis to the same degree as with the Republic of Yemen and West Bank and Gaza. Furthermore, quantitative analysis was used to a greater degree if data were more accessible and relevant to issues under analysis. This provides the possibility for triangulation and thus a deeper understanding of results drawn from qualitative or quantitative analysis alone.

In **Morocco**, for example, a PSIA undertaken in relation to the FY07 Water Sector Development Policy Loan was primarily conducted as a desk-based study relying on household survey data to analyze, in its first phase, the distributional impact of raising tariffs and produce a stakeholder analysis matrix. The second phase of the PSIA, however, additionally incorporated qualitative material from focus group sessions to assess, in greater detail, the impacts of these tariff reforms on the poor. The **Lebanon Social Impact Analysis—Electricity and Water Analysis of 2009**, on the other hand, was focused on the inability of water supply to meet demand and the need to improve water access and quality, possibly through metering. The study was able to make use of primary data collected as part of a household survey specifically designed for the study (for both electricity and water sectors). As in the case with the Republic of Yemen and Morocco, however, qualitative analysis also played a role, with qualitative in-depth interviews conducted at the local stakeholder level (of households, municipalities, and building managers).

**Despite being analyses of the same sector in the same region, these varied studies show that an effective PSIA tailors its process and methodology to the specific context and needs of the country under analysis.**

extremely poor. The Republic of Yemen faces burgeoning demographic pressures with a current population of 23 million set to double in the next 20 years and limited resources, such as a small amount of arable land, declining oil reserves, and scarce water. The country has a water deficit of almost 1 billion cubic meters ( $m^3$ ; 100 percent of renewable resources) and depends entirely on rainfall, floodwater diversion, and groundwater extraction for water. Groundwater resources are being used up at twice the rate they are replenished, making water scarcity a structural problem in many urban and rural areas. Freshwater availability in the Republic of Yemen is one of the lowest in the world, with per capita availability of just  $135 m^3$  per year, compared to an average of  $1,250 m^3$  in the MENA region. Limited access to safe water and sanitation has significant negative impacts on the poor.

Politically and socioeconomically, the Republic of Yemen has experienced dramatic changes in the last three decades. After unification of the Yemen Arab Republic in the north and the People's Republic of South Yemen in 1990, the new Republic of Yemen

faced a civil war in 1994. The country shifted toward a market economy—away from the subsistence agriculture in the north and the command economy of the south. This shift has weakened the traditional conflict resolution system while the formal legal system is not yet fully effective. While economic reforms led to a period of solid economic growth from 1994–2000, political reforms yielded a new, hybrid governance structure characterized by misalignment between traditional and often tribal governance structures and modern state structures.

Although decentralization has begun, it is incomplete on the fiscal side. As a result, some tribal leaders act above the law and local power struggles have erupted between ruling families. Recent instability in the north and south further add to the complications. Due to increasing private appropriation of communal land, the distribution of land and water assets has become inequitable. Poor groups suffer from limited access to land and thus access to water. Furthermore, deep well irrigation individualizes water supply and weakens community systems for water management.

### NWSSIP AND POLITICAL ECONOMY REFORM

The Republic of Yemen faces the challenge of managing groundwater resources at sustainable levels while also needing to increase water access for the poor. Past water sector reform efforts were constrained by low institutional implementation capacity, benefit capture, and reluctance to reform. To meet this challenge, the Yemeni government introduced the 2004 National Water Sector Strategic Investment Plan (NWSSIP) with pro-poor and demand-driven measures and new water sector institutions to address the issues of low water resources, inefficient service, and inadequate coverage. In parallel, donors have supported the Republic of Yemen's water sector with a variety of projects and technical assistance, including the World Bank's subsector projects and nonlending work such as an energy PSIA, the Country Water Resources Assistance Strategy (CWRAS), and a Country Social Analysis (CSA).

However, despite NWSSIP's water reform vision and its associated budget, implementation remained hampered by political economy issues. To help the government in its efforts to address its water challenges and implement NWSSIP, the World Bank and the Dutch and German governments prioritized support through the preparation of a US\$340 million multidonor Water Sector Support Project (WSSP). In parallel, the government prepared a NWSSIP update. To meet a government request and provide respective empirical evidence, the Yemeni government, the Bank, and GTZ conducted two Poverty and Social Impact Analyses that: (i) examined the progress of NWSSIP implementation, (ii) analyzed the equity of the NWSSIP reform, and (iii) assessed and addressed political economy constraints to water sector reform.<sup>2</sup>

To better understand the political economy constraints that impede complete NWSSIP implementation, the two PSIA were designed as participatory "Yemeni exercises" involving the government, the Bank, GTZ, and domestic stakeholders. The multiagency team applied mixed methods, using a spatial and multidisciplinary approach, and combined the expertise of integrated water resource management, socioinstitutional analysis, political economy of reform,<sup>3</sup> and local context specialists. The studies looked at the equity and political economy of NWSSIP implementation for groundwater management, irrigation, and rural water supply and sanitation in 2007, and for urban water supply in 2009.

The Yemeni government and sector stakeholders were closely involved throughout the analyses and the accompanying dialogue to ground analyses in reality and to translate analytical findings into operational actions that are technically feasible and politically acceptable. The aim was to enhance the national reform dialogue through the design of the NWSSP update and to provide analytical underpinnings for the design of the multidonor WSSP.

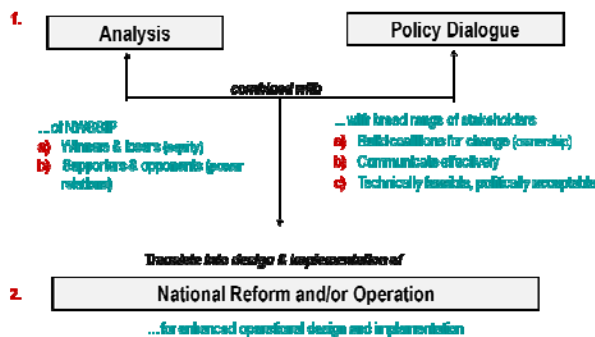
In the Republic of Yemen, the team followed a two-stage approach (see figure 1). During the *first stage* of analysis design, the team purposefully chose to combine the analysis of equity and power relations with a broad stakeholder dialogue to understand stakeholder interests, incentives, and their support or opposition regarding reform; the formal and informal institutions; and impacts, risks, and opportunities. The team also used this approach to build coalitions, communicate reforms effectively, address opposition, and enhance reform ownership to generate actionable recommendations that can overcome current implementation constraints.

### METHODOLOGY

This approach included extensive stakeholder consultations and a series of design and consultation workshops. During the design workshops, stakeholders determined the study focus and field sites. Primary data collection covered several field sites and was compiled for an inductive analysis based on more than 80 key informant interviews, about 25 focus groups, and 650 household and business questionnaires specifically developed for the 2009 urban water analysis. During the consultation workshops, stakeholders provided feedback on preliminary findings and recommendations and produced flow charts to trace budget and information flows; “power matrices” to visually map stakeholder support, opposition, and degree of influence over reforms; and “policy matrices” to illustrate recommendations and stakeholder follow-up.

public good” via their access to land and tubewell drilling at the expense of poor irrigating farmers and rural and urban water users. About 90 percent of Yemeni water is consumed by private sector irrigation. In the urban water sector, network expansion and connection would be the most pro-poor strategy. The current incentive structure promotes increased water consumption instead of efficiency and equity. The perverse incentives include both financial incentives, such as trade policy, energy pricing, subsidies, and laissez faire on *qat* as well as the promoted institutional model of individualistic market-driven development. Although the NWSSIP continues to be the appropriate strategy, it should be implemented as a reform package that combines institutional development and investment.

**Linking Analysis, of Equity and Power Relations, with Dialogue to Enhance Operations**



Source: Beddies 2009.

In the *second stage*, after PSIA completion, PSIA team members continued to work separately as part of government and donor task teams to translate PSIA findings and recommendations into the design of the NWSSIP update and the multidonor WSSP. For instance, the two PSIA are integrated into selective indicators of the WSSP Results Framework, such as the creation of new basin plans and basin committees and 50 percent of smallholder farmers benefiting from the WSSP.<sup>4</sup> PSIA implementation is thus budgeted for and progress can be monitored quarterly or annually through regular WSSP implementation and supervision, as well as through the joint annual review in the case of the NWSSIP update.

**RESULTS AND IMPACT**

These two PSIA showed that the NWSSIP reform is not equitable—although water is being saved, this is at the expense of the rural economy, employment, and income of the poor. The NWSSIP has to be implemented with the right sequencing, dosage, and support because vested interests still hamper its full implementation. For instance, large farmers capture the benefits of water as a “free

**CONCLUSION**

The success of both these PSIA in contributing significantly to policy reforms is due to a number of factors. The careful crafting of a country-owned, participatory exercise that emphasized Yemeni ownership was crucial to better identify and

manage the political economy constraints to water sector reform. Concerted and successful efforts were made to incorporate government agencies, donors, and other stakeholders at the national, governorate, and local levels. This involvement, in addition to a multidisciplinary team with extensive local knowledge, provided a strong basis for an effective and comprehensive analysis that was grounded in the technical and political realities of Yemen's water sector. The appropriate use of mixed methods and multisectoral and spatial perspective was fitting in the context of survey work only feasible in the urban subsector.

Yemeni stakeholder involvement early on in the process helped generate technically feasible and politically acceptable actions that could be implemented. Moreover, the timing of PSIA completion was crucial to influencing the design of the multidonor WSSP and the NWSSIP update by the Yemeni government.

The Yemeni water sector PSIAs conducted in 2007 and 2009 are considered useful sector work and pioneering distributional and political economy analyses that have operational relevance at both country and Bank levels.<sup>5</sup>

<sup>1</sup> World Bank, *Making the Most of Scarcity: Accountability for Better Water Management Results in the Middle East and North Africa* (2007); and C. Ward, "Water Conflict in Yemen: The case of Strengthening Local Resolution Mechanisms," in *Water in the Arab World—Management Perspectives and Innovations*, ed. V. Jagannathan, A. Shawky, and A. Kremer. Washington, DC: World Bank (2009).

<sup>2</sup> Government of Yemen, GTZ, and World Bank, *Equity, Efficiency and Poverty and Social Impact Analysis of Yemen's Urban Water Sector Reform* (April 2009); government of Yemen, World Bank, and GTZ, *Yemen Water Sector Reform—A Poverty and Social Impact Analysis*, Washington, DC: World Bank (2007).

<sup>3</sup> The team drew on the Social Development Group's *Political Economy of Reform Framework*, World Bank Report No 44288-GLB (2008).

<sup>4</sup> World Bank, "RY-Yemen-Water Sector Support," Project Appraisal Document (2009).

<sup>4</sup> Based on a June 9, 2010, presentation at the Political Economy Community of Practice (CoP) Working Seminar Series on Political Economy: "Frontiers of Political Economy and Operational Political Economy Issue Dialogue," organized by Political Economy CoP and GAC in Infrastructure.

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