Water resources and rural development 4 (2014) 104–111

Contents lists available at ScienceDirect

Water resources and rural development

journal homepage: www.elsevier.com/locate/wrr

Sharing hydropower revenues in Nepal, over time and across districts and regions

Soumya Balasubramanya [a,*], Mark Giordano [b], Dennis Wichelns [c], Tashi Sherpa [d]

[a] *International Water Management Institute, Colombo, Sri Lanka*
[b] *School of Foreign Affairs, Georgetown University, Washington, DC, USA*
[c] *Independent Scholar, Bloomington, Indiana*
[d] *International Water Management Institute, Lalitpur, Nepal*

ARTICLE INFO

Article history:
Received 2 June 2014
Revised 19 October 2014
Accepted 20 October 2014
Available online 29 October 2014

Keywords:
Benefit sharing
Economic development
Equity
Water resources

ABSTRACT

In recent years, the Government of Nepal has increased the amount of revenue it collects from hydropower operations and then distributes among districts and regions of the country. Larger, wealthier districts, which receive larger amounts of general revenues from the central government, also receive larger allocations of hydropower revenues. The per capita shares of hydropower revenue are notably larger in the Central and Western Regions, which are home to most of Nepal's hydropower facilities. Thus, the revenue sharing program does not favor poorer districts and regions with little hydropower development. Further, the hydropower revenue allocations to all development regions are small portions of the general revenues they receive. Consequently, the program is unlikely to have a substantial impact on economic development in poorer districts and regions.

1. Introduction

In the construction boom of the mid-20th century, commercial hydropower development was justified on the basis of its net positive economic and political benefits. However, two issues have been identified, which are common to both storage and run-of-the-river hydropower projects. First, communities are often subject to centralized decisions regarding hydropower development, without

* Corresponding author. Tel.: +11 288 0000; fax: +11 278 6854.
E-mail address: soumyahb@gmail.com (S. Balasubramanya).

http://dx.doi.org/10.1016/j.wrr.2014.10.007

consultation [1]. Second, the primary benefits of large dams (electricity, irrigation, flood control) have accrued largely to communities in distant urban areas and to wealthier, land-owning farmers, while the risks and negative impacts of large dams have been borne by local communities, upstream and downstream of project sites [2,3]. Opposition to commercial hydropower development has been attributed to both issues [4]. Thus, efforts to enhance public consultation and achieve equity in hydropower development have been identified as strategic priorities [1,5].

Many countries collect revenue from hydropower plants by levying annual tariffs on fixed capacity and variable charges on each unit of power generated, over the operational lifetime of the plant. Hydropower revenue is a significant source of income for some governments, particularly those in developing countries. The revenue can be invested only by the central government or a portion can be transferred each year, in perpetuity, to local governments or communities to achieve broader distribution of the benefits of hydropower development [6,7]. Revenue sharing might also enhance the image of hydropower projects among those who oppose them, in part, due to the negative impacts on local communities. Perhaps partly for these reasons of supporting local investments and promoting a positive outlook, the Government of Nepal distributes hydropower revenues across all 75 administrative districts in the country.

Most of the hydropower facilities in Nepal are run-of-the-river projects. Opposition to hydropower projects was first observed in the mid-1990s in Nepal, largely as a response to the inequitable distribution of electrification between the Kathmandu Valley and other portions of the country [8,9]. As part of larger political developments in Nepal, the Local Self Government Act (LSGA) was introduced in 1999 to improve equity by transferring administrative, fiscal, and resource management roles to district governments (Government of Nepal, 1999 [10]; in Preamble). Two years later, the Hydropower Development Policy of 2001 formalized the sharing of hydropower revenues with district governments (Government of Nepal, 2001 [11]; clause 6.12.1). At present, 50% of the revenue collected by the central government from hydropower projects annually is shared with districts. These transfers are in addition to any compensation and restitution payments made by project developers to affected communities.

We examine revenue sharing in Nepal to determine the degree to which the financial benefits of hydropower development are distributed across districts with and without hydropower projects. Although we cannot evaluate the equity impacts of revenue sharing with the available data, we can offer initial insight regarding whether or not the program improves the status of poorer districts or leaves the initial, relative status of districts unchanged.

2. Conceptual framework

Hydropower revenue sharing usually involves a transfer from a central government to local governments in dam affected areas, and possibly in other regions, as determined by an administration or legislature. Similar to other measures of fiscal decentralization, the degree to which revenue sharing improves equity in hydropower development depends on the following: (a) the amount of revenue shared (how much); (b) how the revenue is shared (who gets how much); (c) how the revenue is spent or invested (what activities are financed); and (d) the broader, pre-existing spatial patterns of hydropower development.

For a given combination of these factors, the implications for equity might vary also with the scale of comparison [12]. For example, fiscal decentralization in China improved equity between the wealthy center and regions, but increased inequality between regions [13]. Fiscal decentralization of health care in Zambia, which established equity between districts, did not guarantee equity within a district [14]. Decentralized joint forest management programs in Ranchi, India improved the equity of access to forest resources between state-level forest departments. However, many of the program benefits were captured by well-to-do households at the lowest level of the village forest committee, leading to heterogeneous livelihood consequences in the community [15].

Thus, even though transferring revenues from the center to districts can potentially improve equity, such an outcome is not guaranteed. The revenues might be distributed unequally, or the distribution program might reinforce existing inequalities. In addition, the equity outcome of a revenue sharing program depends on the manner in which the receiving districts expend or invest the funds they receive.