Taylor & Francis
Online

International Journal of Water Resources Development ›
Volume 26, 2010 - Issue 3

1,479 Views | 73 CrossRef citations to date | 15 Altmetric

Original Articles

Financing Irrigation Water Management and Infrastructure: A Review

Frank A. Ward

Pages 321-349 | Published online: 23 Jul 2010

Cite this article https://doi.org/10.1080/07900627.2010.489308

Sample our Engineering & Technology Journals
>> Sign in here to start your access to the latest two volumes for 14 days

Abstract

Many of the world's irrigated regions face the problem of aging infrastructure and declining revenues to maintain and repair irrigation structures. Policy debates over climate change, population growth, food security, and impacts of irrigation on ecological assets compound the problem, raising the urgency to invest in irrigation infrastructure. Meanwhile, a global call for full-cost recovery for water infrastructure investments increases the need to identify the economic value of sustaining irrigation infrastructure. Despite the growing debates, little comprehensive research has been conducted summarizing factors affecting irrigation investments or policy options available for sustaining irrigation infrastructure. This paper reviews research on factors affecting the level and value of irrigation infrastructure investments. It also reviews research on policy instruments for sustaining irrigation infrastructure, considering both market and institutional approaches. Several market approaches have been found to

have the potential to influence the economic attractiveness of investments in irrigation infrastructure. These include infrastructure subsidies, clearing titles to water rights, marginal cost pricing, and non-volumetric pricing. Institutional approaches described include regulatory measures, transboundary agreements, and water user associations. Results may contribute to current debates in various regional, national, and international forums on whether and how water should be priced for agricultural use.

Acknowledgements

The author is grateful for financial support by Organisation for Economic Co-operation and Development and New Mexico Agricultural Experiment Station.

Related Research Data

Operational Cost Benefits Study of Flexible On-Farm Irrigation Supply Systems
Source: Journal of Irrigation and Drainage Engineering
Impact of small dams on agriculture and groundwater development: A case study from Pakistan
Source: Agricultural Water Management
Formal risk-transfer mechanisms for allocating uncertain water resources: The case of option contracts
Source: Water Resources Research
Water Conservation in Oman
Source: Water International
Irrigation water pricing: policy implications based on international comparison
Source: Environment and Development Economics
The Financing of Hydropower, Irrigation and Water Supply Infrastructure in Developing Countries
Source: International Journal of Water Resources Development

Related research

People also read | Recommended articles | Cited by 73

Water infrastructure in Asia: financing and policy options >

Edoardo Borgomeo et al.
International Journal of Water Resources Development
Published online: 5 May 2022

Information for

Authors
R&D professionals
Editors
Librarians
Societies

Open access

Overview
Open journals
Open Select
Dove Medical Press
F1000Research

Opportunities

Reprints and e-prints
Advertising solutions
Accelerated publication
Corporate access solutions

Help and information

Help and contact
Newsroom
All journals
Books

Keep up to date

Register to receive personalised research and resources by email

Sign me up

Copyright © 2026 Informa UK Limited Privacy policy

Cookies Terms & conditions Accessibility

Taylor & Francis by informa

Registered in England & Wales No. 01072954
5 Howick Place | London | SW1P 1WG