

CHAVE DE RESPOSTA DA 1ª ETAPA PROCESSO SELETIVO EDITAL 004-2020 PROAMB

02 de julho de 2020

Despite enormous investments in water storage infrastructure over past decades, the Curu Valley in the semi-arid state of Ceara, Northeast Brazil, is subject to increasing water stress. This study explains the current situation in the valley and explores institutional alternatives for the achievement of more efficient water resources allocation and use. First, the study analyzes the existing institutional arrangements and ensuing incentives for water allocation and use in Ceara, with emphasis on the Curu Valley. Second, two models are developed which incorporate the institutional requirements for a water market and a negotiation model for water resources allocation. The trade-offs of these two alternatives are analyzed in relation to the transaction costs incurred if either were to be implemented in the Curu Valley. The results show that while some positive incentives originate in other sectors, neither the current formal nor informal institutional arrangements in the water sector provide incentives for efficient water allocation and use in the valley. Thus, engineering measures per se are not sufficient to resolve water scarcity. Both use and allocative efficiency can be improved, but with more information transparency, and enforcement, if incentives such as pricing and water rights are to be used. The study also shows that the institutional requirements for a water market, as compared to a negotiation approach similar to the French Model for river basin management, are basically the same. The transaction costs for implementing a market in the Curu Valley are nevertheless higher due to legal, political, and cultural reasons. Due to the current weak institutional framework, the functioning of a water market would be hampered and the outcome in terms of economic efficiency and equity uncertain. Although it lacks market flexibility, the negotiation model would lead to a substantial improvement over the current situation and ought to be introduced first. Its implementation does not exclude a future market, but leads to institutional arrangements that are vital for the functioning of a water market if such were to be the choice at a later point. The principal differences in costs for the implementation of the two models are not of a financial nature, but originate in the political and social realm. This type of transaction cost has to be addressed when a new institutional framework is to be introduced.

- 1 – What is the abstract about?
 - a) The inefficacy of Brazil’s main water law
 - b) An econometric evaluation of watershed conflict
 - c) A proposal of new legislation targeting water storage in the Curu Valley
 - d) Pros and cons of different approaches to water management**

- 2 – Among the study’s objectives is?
 - a) Defend the urgent need for public participation in the water sector
 - b) Explain the negative side effects of market mechanisms
 - c) Argue for a more stable institutional arrangement in the Curu Valley
 - d) Explore ways to achieve efficient water use in Brazil**

- 3 – It can be inferred from the abstract that the institutional arrangements:
 - a) Are an irrelevant factor in policy efficiency
 - b) Must be regulated by the Brazilian government at the local level
 - c) Function well either as water market or negotiation model
 - d) Play a key role in policy effectiveness**

- 4 – With respect to the Curu Valley, it:
 - a) Is representative of Brazil’s water regions
 - b) Has a vibrant water market
 - c) Provides an empirical ground for the evaluation**
 - d) Reflects the same institution arrangements of the French Model

- 5 – The study described in the abstract was based on:
 - a) Quantitative econometric evaluations
 - b) Comparative evaluations of managerial approaches**
 - c) Multiple, mixed-methods case studies
 - d) Field work in the Curu Valley

- 6 – According to the abstract, the efficient allocation and use of water:
 - a) Can only be achieved through mandatory legislation
 - b) Has been worsening in recent years
 - c) Is dependent on institutional factors**
 - d) Is not context-dependent

- 7 – With respect to the trade-off evaluation mentioned in the abstract, it:
 - a) Sheds light on the relative strengths of institutional options**
 - b) Concluded for the preference of market incentives
 - c) Yielded more positive than negative effects
 - d) Was limited by the lack of data



UFOP

Universidade Federal
de Ouro Preto

- 8 – The study concluded that transaction costs:
- Inhibit water allocation efficiency
 - Must be factored in decision-making over water policy**
 - Are irrelevant compared to costs of negotiations
 - Are the best option for water allocation
- 9 – The study described in the abstract has a number of contributions, except:
- Shows that the Curu Valley has a strong institutional framework for market mechanisms
 - Tests the hypothesis that water markets are superior than command-and-control regulation
 - Identifies the equilibrium price for water markets
 - Reveals barriers to the implementation of different water policies**
- 10 – The study was justified on several grounds, excluding:
- Inefficacy of water markets**
 - Ineffectiveness of public investment
 - Growing water shortage
 - Inefficiency of water allocation and use

Prof. Dr. Bruno Eduardo Lobo Baêta
Coordenador do Programa de Pós-graduação em Engenharia Ambiental
Universidade Federal de Ouro Preto