

## Request for Planning Grant Applications



### Multiple-Use Water Services to Reduce Poverty and Vulnerability to Climate Change

The John D. Rockefeller 3<sup>RD</sup> Scholars Program, with support from UNICEF India, seeks planning grant concepts for a two-year applied research initiative. The goal is to assist key decision makers to design and plan for water services that meet the domestic and productive water needs of the rural poor, and are resilient to changes in water availability and access caused by climate change.

The two-phase grant competition is open to researchers interested in forming a multi-disciplinary team to conduct research in two or more states in India. In Phase I, the top three planning grant concepts will receive \$1,500 each, which they will use to recruit a multi-disciplinary team and jointly develop a two-year research proposal. In Phase II, one proposal will win the two-year research grant. Please see the *Planning Grant Application Instructions* for how to apply.

#### **Background: Multiple-Use Water Services in India**

In relation to the Millennium Development Goals, the Government of India reports universal coverage of drinking water supply to rural populations. Yet the technical and financial sustainability of water delivery systems remain critical challenges. One important concern is that access to clean drinking water meets only one need of poor households; poor people also require water for productive purposes, including subsistence agriculture and small water-dependent enterprises. As a result, communities nearly always use available single-use water systems to meet multiple water needs. Unplanned uses of single-service systems compromise the technical sustainability of water delivery systems and create conflict over available water resources, often resulting in inequity for the socially and economically marginalized.

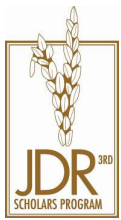
#### ***Multiple-Use Water Services: A Consumer-Oriented Approach***

Planning for multiple-use water services (MUS) may improve water availability and access for the poor and achieve technical, financial and water resource sustainability. MUS is a consumer-oriented approach to water service delivery that takes poor people's multiple domestic and productive water needs as the starting point to plan, finance, and manage integrated water services. A 2007 Winrock study for the Gates Foundation (<http://winrockwater.org>) found that simple, low-cost design upgrades to single-use water systems, paired with strategies to improve equity in water access, management and use, can significantly decrease poverty by providing improved income, food security and livelihood diversification opportunities for the poor. The increased household income generated by MUS, in turn, allows poor households to contribute to the on-going costs of water delivery and management.

#### ***Achieving Multiple-Use Services in India: The Challenge of Climate Variability***

While there is increasing evidence that the poor (women in particular) draw significant benefits from having access to multiple-use water services, there is little corresponding information on the direct and immediate impacts of climate variability on water access and use by poor households. Expertise to assess, understand and mitigate the impacts of climate change on water resources at the local level is lacking among decision makers and program implementers across the water sector – in governments, NGOs and the private sector.

In addition, successful water initiatives have often remained 'islands of relative success,' as there has been little focus on developing strategies for wide-scale replication or institutional collaboration. All of the above challenges point to the need for an in-depth analysis of water



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needs, availability, access and management at the household level. This two-year research project aims to explore two critical challenges in the water sector: ensuring access to equitable multiple-use water services, and mitigating the adverse impacts of climate variability on water delivery systems. In order to provide a comparative overview and generate recommendations for policy improvements, the research will be conducted in two or more states in India which have experienced significant climate-change induced impacts on water availability and access.

### Request for Planning Grant Concepts

The JDR 3<sup>rd</sup> Scholars Program is holding a two-step, open competition for researchers interested in forming a multidisciplinary team to work on the topic: *Multiple-Use Water Services to Reduce Poverty and Vulnerability to Climate Change*.

The first step in the grant competition is for interested researchers to submit a five-page planning grant concept explaining how they would carry out a two-year research project on this topic. For the required concept format, please see the *Planning Grant Application Instructions*.

### Research Goals

The goals of the research are to:

1. Identify sustainable upgrades to current drinking water systems to provide multiple-use services that prioritize domestic and productive water needs for the poor, and
2. Develop a framework for piloting MUS which is resilient to disruptions caused by climate variability, including droughts and floods.

### Involving Key Decision Makers

Key decision makers are people who are in a position to analyze results and adjust policies and/or legal frameworks according to the findings of this study. Applicants should explain how they would create an active dialogue during the research project between community representatives, local water supply institutions and other water stakeholders to identify sustainable, poverty-focused strategies for water access and services. Involvement of these key decision makers is critical to the success of this research project.

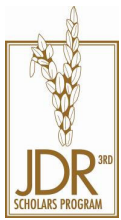
### Research Questions

Field work should target poor communities in states affected by climate change, including areas where conflict and/or inequity interfere with access to water, and areas where water resource management interventions have resulted in improved access, equity and/or technical, financial and resource sustainability. Research should be conducted at the household level and should also include institutional analysis at the community and local, state and national government levels.

**Please note: the research questions below are meant to be examples; applicants should be innovative in adapting or changing these questions.**

*Assess the social, economic, and environmental factors that influence community and household decisions about water use.*

1. In the research areas, to what extent is there reliable access to safe drinking water? Are existing institutional measures for water quality control effective, technically sound and financially viable?



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2. To what extent is there reliable access to water for productive uses? Does disparity by caste, class and gender impact access to and availability of water for productive uses?
3. How do communities prioritize uses of water? What factors influence these decisions?
4. During times of scarcity and/or flooding, what factors determine which livelihoods and water uses are prioritized, and how is the water access of poor households impacted? What strategies have poor households adopted to cope with changes in access to and availability of water?
5. What is an estimate of overall domestic and productive water needs of poor households critical to their health and livelihood security? What is the comparative economic significance of water-dependent activities to overall livelihood security?

***Assess the technical, economic, and social factors that influence the relative success or failure of existing water supply infrastructure in meeting consumptive and productive water needs.***

6. For existing water systems which have been relatively successful, what characteristics do they have in common, if any, which enabled their success? How equitable have these interventions been for the poorest households?
7. What technical modifications to existing single-use systems will best meet the multiple domestic and productive water needs of the poor in each targeted region? What would be the relative costs and benefits (financial and non-financial) of these modifications?
8. What are the projected future impacts of climate change, particularly droughts and floods, on the availability and use of water for consumptive and productive purposes? How will climate change increase disputes and inequity among water users?
9. What governance systems determine current access to and allocation of water resources and infrastructure? What changes are recommended in policy, institutional practices, and community decision making processes to enable multiple-use water access for the poor?

### **Expected Outputs**

The expected outputs of this research project are:

- A detailed MUS feasibility plan for target areas, outlining technical and management changes, costs, and benefits of the most promising interventions.
- Recommendations for specific training and capacity building for key stakeholders to promote analysis, planning and implementation of MUS pilots in the target areas.
- Recommendations targeted at key decision makers for adopting a MUS approach in the design and implementation of drinking water schemes, which take into account possible disruptions caused by the local impacts of climate variability.

### **Expected Outcomes**

The expected outcomes of this research project are:

- Target communities, local agencies and key decision makers will have increased awareness of and the ability to design and implement multiple-use services that are technically and financially viable, and resilient to climate variability.
- Increased capacity and engagement of all participants in formulating policy and developing local and national-level plans to scale-up and replicate the most promising applications of MUS in India.