

Funded PhD, MS, and BS Programs in HEC Funded Project:

“Achieving SDG 6: Inclusive Governance of Urban Water & Sanitation”

Summary

The proposed PhD and MS program will focus on the strategic planning of water and sanitation services in urban areas of the Khyber Pakhtunkhwa. The study will be interdisciplinary and involve a socio-institutional study of decision-making with a technical assessment of optimal planning pathways for investment in water and sanitation infrastructure in urban peripheries. The research will focus on small number of case study cities in the Khyber Pakhtunkhwa Province of Pakistan. There are a total of 04 PhD, up to 16 MS, and 12 Undergraduate positions in the field of water and sanitation.

Full description

In many areas of the world, urbanization is leading to the rapid expansion of cities with significant population growth beyond official urban boundaries. For example, in 2019, 36.91 percent of Pakistan's total population lived in urban areas and cities. Evidence indicates that people living in these types of neighborhoods are more likely to have poor water and sanitation services. The provision of basic services like water and sanitation is complicated in these contexts due to ambiguity over institutional responsibility, mismatches between infrastructure capacity and demand, and growing and dynamic populations. This leads to what can be characterized as a “peri-urban service gap” and there remains a lack of evidence on how best city planners, engineers and other decision-makers can help to address it.

The IMSciences funded PhD and MS program will therefore focus on the strategic planning of water and sanitation services. The program will be interdisciplinary and involve a socio-institutional study of decision-making with a technical assessment of optimal planning pathways for investment in water and sanitation infrastructure in urban peripheries. The research will focus on case studies of major cities of Khyber Pakhtunkhwa Province of Pakistan.

The investigation into real-world decision making will draw on institutional and political economy approaches to unpack how decisions within and beyond the planning system shape the trajectories of development within water and sanitation systems. An emphasis will be placed on considering how decisions are affected by processes across different scales and time frames, recognizing the tension between planned and unplanned urban growth. The study into optimizing planning pathways will bring together approaches from adaptive management and economic planning to examine possible pathways for managing rural-urban transition. The emphasis will be on developing an approach that can be used to assess pathways that can be optimized to different policy-making priorities such as financial efficiency, equity or the circular economy. The overall aim will be to synthesis these elements to propose a workable methodology that city planners,

engineers, economists, project-management specialists, and other decision-makers can use to generate locally appropriate strategies for addressing these challenges in the urban Peshawar.

Expected Outcomes:

This research study will provide valuable insights for improved water and sanitation management in fast urbanizing cities of KP in line with the SDGs agenda. Key outcomes include:

- Spatial proposals for balanced institutional arrangements in dense urban, semi-urban, slums, and rural areas so that equitable and sustainable water coverage is achieved throughout the city;
- Strategies to promote sustainable and inclusive WatSan services with a mix of approaches treating water as a public, common good or commodity;
- Optimizing pricing, management and infrastructure can be addressed by addressing governance challenges;
- Pilot researches on use of ICTs in planning, delivering, and monitoring;
- Devising grievance redressal mechanisms so that citizens develop trust in public services delivery thereby contributing to better governance models for basic services.

Proposed Topics for Research

- Strengthening human rights to water & sanitation
- Developing a scientific methodology for valuation of Ecosystem Services (ESS) of Water in KP
- Economic valuation of water and sanitation in KP
- Institutional mechanisms, stakeholders role and progress on SDG 6 goals and targets for KP
- Willingness to pay for improved water supply and sanitation; An institutional overview of water supply market in Peshawar
- Assessing the role of local governments in the urban development of Pakistan; Assessment of smart metering for domestic water supply in Peshawar
- Tariffs & pricing for commercial water supply in Peshawar; Low-Tec; solutions for urban sanitation
- Barriers in access and allocation of safe drinking water in urban areas of Peshawar (A case study of Town-1 Peshawar);
- Groundwater extraction and impact on sustainable water supply
- The role of Organisational Development in the provision of water and sanitation services
- Evaluation of cognitive processes to bring about changes in behaviour towards water and sanitation
- Water-use efficiency in the Urban Khyber Pakhtunkhwa
- Water stress and its impact on the socio-economic development of Khyber Pakhtunkhwa
- Analysis of barriers in the implementation of Integrated Water Resources Management (IWRM) in the Khyber Pakhtunkhwa

How to apply

The aforementioned opportunities are available to all the existing and newly enrolled students (Development Studies, Social Sciences, Economics, Management, and IT). Formal applications should be submitted to the concerned office by clearly stating that the degree you wish to be considered for the project, entitled “Achieving SDG 6: Inclusive Governance of Urban Water & Sanitation”. We welcome applications from all suitably-qualified candidates from different disciplines who wish to work in the field of Water & Sanitation. All scholarships will be awarded on the basis of merit.

Entry requirements

Applicants for the proposed PhD program should normally have at least a first class or an upper second class MS degree (or equivalent) in an appropriate discipline. All applicants are advised to check with the concerned office prior to making an application.

Funding on offer

The recipients in the Doctoral and MS programs would receive stipend of approximately PKR 40,000 per month for PhD and up to PKR. 20,000 for MS (including thesis research support) respectively. Thesis support will also be provided for selected BS students.

Contact details

For further information regarding your application, please contact the following:

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