

# Transforming Periurban Futures

## POLICY BRIEF No. 2



Photo credit: H2O-T2S Project, SaciWATERS, Hyderabad

## WATER MANAGEMENT IN THE PERIURBAN

Periurban spaces are zones in transition at the urban fringes or close to expanding agglomerations. They are often considered as geographical patchwork spaces characterized by diverse functions (food and water security, provision of livelihoods, ecosystem services, etc.), a mosaic of land uses with rural and urban features, a multiplicity of stakeholders sometimes with diverging interests, and overlapping governance structures. These features create diverse opportunities, but also expose periurban spaces to deep transformations and make them challenging to govern

### Policy Recommendations

- Include the multiplicity of stakeholders in planning for periurban waterscapes. This requires identification and understanding of who these stakeholders are and how they see their roles and the challenges involved periurban water management.
- Integrated management is needed for periurban areas. Different agencies have different mandates, but they need to develop coherent visions and plans for periurban development.
- A pro-active approach is needed for periurban areas and not a reactive one. Indicator-based assessment tools and scenario-based planning approaches offer support for such pro-active guidance.
- Periodic monitoring and updating of plans for periurban areas is essential.
- The Jal Jeevan (Urban Water Security) Mission (MHUA) is an important vehicle to improve periurban water management. It allows for including considerations of ecosystem services in shaping future periurban transformations.

### Water-related challenges in periurban spaces

Periurban water management is challenged by the diversity in these very specific zones in transition. Water demands are increasing, for agriculture, domestic needs and industries. Unfortunate trends include an increase of unregulated groundwater withdrawals, degrading quality of water bodies, and threats to water ecosystem services. With changing practices, many community water ponds have lost their traditional function and are no longer maintained. For lowland areas, wetlands are also under pressure, threatening their role as “natural kidneys” for urbanising systems.

Coherent water management is challenged by the lack of congruence of administrative boundaries and watersheds. Periurban spaces are governed by different planning structures and institutions, which often do not function to meet the needs of the periurban. This makes planning, regulation and financing for periurban water management difficult and fragmented.

A large range of actors is involved in periurban water management. Within larger agglomerations multiple government agencies shape the access to water. They tend to limit their interventions to their official mandates. In addition, in more rural areas of the periurban, traditional water management systems are still in place. These governance structures result in a fragmented water governance.

Periurban areas contain different types of water bodies with different functions. Information and data on their status, relevant trends and developments is difficult to obtain. The few existing monitoring programmes create a time-challenge for managing bodies: Once water bodies show decreasing trends, the time for management interventions may be limited, or it may even be too late. Longer-term planning for appropriate water management is complicated by the fact that different drivers affect future scenarios for periurban spaces, resulting in uncertain futures against which to plan. Hydrosocial features constantly change, with evolving water user hierarchies, power structures and social structures around water use.

## Possible policy interventions for improved water governance

**A more integrated water systems management in periurban spaces** - Perspectives on water management will need to shift to an integrated systems perspective. This implies a circular and holistic approach: consider all water resources and all water requirements, with their temporal, spatial, quantity and quality dimensions, including options for treatment and reuse. For instance, many periurban spaces offer opportunities for wastewater reuse in agriculture, which enables integrating wastewater as part of the water cycle, if it is properly managed and treated adequately (e.g., not containing harmful substances, but delivering nutrients and thus closing regional nutrient-cycles).

Changes in perspectives need to be accompanied by suitable tools and technologies. This does not necessarily mean the most innovative or technologically advanced tools. Rather, it means tools and technologies that are fit for communities. For instance, for wastewater reuse in agriculture this includes monitoring tools at farm levels, to ensure that wastewater is suitable for the crops grown by irrigating farmers.

As a governance model, a model of “integrated management”, as opposed to models for “integrated governance” seems useful. Integrated management means that multiple government agencies continue to have a role in periurban water management, but with frequent and open channels for communication. This would seem more fitting than a model with a single overarching government entity, which would be expected to integrate all aspects in one agency.

**Tools for policy, planning and management** - Dedicated categories for land use and water bodies are helpful, even with constant changes and under different institutional and administrative systems. When dedicated land use categories are assigned, these can be used to develop corresponding management standards and monitoring tools for local water bodies. In planning, management and policy making or the communities of users, identification of the key stakeholders and players is a basic but essential step. A dialogue between these different groups needs to be initiated: Farmers, other water users, government agencies, NGOs and further actors. Each one of them has a role to play.

For longer-term planning, scenario-based approaches can help local water users to adapt to hydrosocial uncertainties. Experts and local water users tend to have different expectations regarding periurban futures. Integration of these different scenarios and the types of knowledge they are based on can help shape hydrosocial futures. Current planning tools can be used to support more proactive interventions, for instance by restricting certain types of development or certain zones, depending on water availability.

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