

WATER-SENSITIVE PLANNING (WaSP)

Integrating Water Considerations into Urban and Regional Planning

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WaSP – Water Sensitive Planning – is an innovative approach to integrated planning of construction and water systems, as part of **Sustainable Development**. Through a dozen years of joint work of an urban planner and a water engineer, together with our collaborators and students, **a new trans-disciplinary framework has evolved**; a framework with its unique paradigms and models, which are beyond the common knowledge and practice of the two separate fields.

New Paradigms

- **Spatial planning should respect the natural hydro-geographical structure, and work with it.** The importance of this principle rises as the size of the planned area increases, but it holds true at all levels and carried all the way down to detailed planning at the neighborhood and single lot level.
- **Urban runoff is a resource**, not merely a nuisance. Hence, instead of removing it from the built environment as quickly as possible (the conventional practice) WaSP directs the planner to prefer detention and retention of runoff on site, so it can be used directly for enhancing the landscape, rejuvenating urban streams, and/or recharging the groundwater; this also helps in controlling the discharge and quantity of runoff so as to reduce flooding and the cost of drainage systems, and helps to improve its quality.
- **Runoff Management is accomplished in collaboration with Landscape Architecture and Roads Design**, through the use of structural and non-structural measures (called **BMPs** = Best Management Practices), which minimize runoff volumes and discharges from every unit of the area, large or small, and improve runoff quality.

Outcomes – which can be achieved simultaneously and synergistically, frequently by common means

- Protection of quantity and quality in the water sources, especially the groundwater
- Rehabilitation of rivers and streams for environmental improvement and social uses
- Improved urban landscape
- Lower drainage costs
- Lower flooding damages
- Lower consumption of water from the supply systems
- Improved public awareness and participation
- Improved environmental health in the urban areas



Basic Professional Guidelines

- **Regional Planning** – Watershed planning that is aimed at prevention of flooding and rehabilitation of rivers should serve as a basic framework
- **Urban Planning and Landscape Design** – Placement of open spaces should be done in the first phase and be coordinated with runoff management; runoff should serve as a resource for landscape development
- **Runoff Management** – Should replace conventional drainage design, and emphasize detention, retention and infiltration
- **Roads Planning and Design** - Should be coordinated with and be part of runoff management
- **Urban Water Management** - Should emphasize conservation and use of un-conventional sources



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