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INTEGRATED WATER MANAGEMENT – A CASE STUDY OF THE NATIONAL CAPITAL REGION OF DELHI¹

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ABSTRACT

Water is an essential component in every aspect of life and must be valued and safeguarded as it is a natural resource. Many parts of our country have become water stressed due to rapid growth in demand for water due to population growth, urbanization and changing land uses and land cover. Groundwater resources are over exploited. There is a need for integrated water resource management at district/ region level in the country to address to various related issues in line with National Water Policy 2012.

The paper presents a case study of National Capital Region (NCR) of Delhi which is endowed with perennial rivers namely the Yamuna, Hindon and Kali passing through it and the Ganga skirting its eastern boundary and is a water scarce region despite presence of rivers. NCR draws its water needs from the Yamuna, Western Yamuna canal, Upper Ganga canal system and partly from ground water (ranney wells in Yamuna belt and tube wells). With the growing population, depleting ground and surface water resources in the region, meeting the demand of water for various uses such as drinking, industrial and irrigation is a big challenge. There is generally a wide demand-supply gap of water in NCR and the problem becomes acute in dry summer months.

A holistic view of the water demand and supply in the NCR region is required to be taken for the Integrated Water Management taking the regional approach. Also the losses in the various stages of the water supply system need to be assessed and rectified to a reasonable limit to save valuable water from going waste. The paper examines all the potential surface water sources, ground water aquifers, inter-basin transfer of water, demand supply gap, leakages in the existing supply systems, etc. as well as demand and suggests mechanism for improving the water supply scenario in the region. It proposes the need for sound assessment and effective management of available water resources in the region for sustained use and equitable distribution to the entire region through a techno-economic & comprehensive conveyance system linking water surplus area with water-deficit regions.

Keywords: *NCR, demand supply gap, equitable distribution, integrated water management.*

¹ Revised and expanded version of paper presented at 2nd world Irrigation Forum at Chiang Mai, Thailand, 2016.



SWOC Analysis as a basis for Block Level Planning for Industrial - Scenic Blocks: Nalagarh and Dharampur, District Solan, Himachal Pradesh¹

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ABSTRACT

This paper focuses to highlight the importance of adoption of holistic approach during plan preparation and specifically for a regional level plan which is aimed at securing equitable distribution of population as well as economic resources of a region. The approach is to link all the sectors together and see what relation one sector holds to another and how the underlying issues and problems can be tackled as a whole so that the solution for one does not impose a problem for another. The paper starts with the literature study of various aspects involved in planning process of a regional plan preparation. It also involves the study of various aspects of a regional plan and different approaches which are generally adopted during a regional plan preparation. The main purpose of literature study was to help identify characteristics of different approaches and develop a methodology for conducting the studio exercise.

¹ Based on the Studio Exercise for the Fourth Year, Seventh Semester, B. Planning, 2016-17. The Studio was coordinated by Prof. Dr. Mahavir and guided by Prof. Dr. Ashok Kumar, Prof. V. K. Dhar, Prof. Rajeev Malhotra and Sh. Vivekanand Gupta.



ASSESSMENT OF SIGNIFICANCE OF CULTURAL HERITAGE - A VALUE BASED APPROACH

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ABSTRACT

Pilgrimage and worship to sacred places hold immense cultural significance in India. The sacred places are invigorate minds, purify the heart and soul by creating an interface where finite human meets the infinite God. These sacred spaces no longer remain mere religious places, but transform into a cosmos embedded with belief and life activity. They are also now referred to as exemplary Cultural Heritage as they enliven the associated legends and traditions that were practiced years ago and continue to influence us today. This paper uses Value Assessment approach to delve into critical analysis of various values associated with any Cultural Heritage to aid Heritage Conservation. This has been done in accordance with the review of various International Charters dedicated to heritage conservation. Value assessment is a method or an approach to investigate the values associated with a heritage site that has rich cultural importance.

The paper attempts to bring into light the heritage values associated with Shaktipitha Naina Devi. This Shakti temple is an important pilgrimage site in Himachal Pradesh, India along



PUBLIC OPEN SPACES IN INDIAN SMALL CITIES: CASE OF ROORKEE

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ABSTRACT

Quality of public spaces in a city influences the quality of life of its citizens to a large extent. In addition to aesthetic benefits being hub of activities these can result in social, health, economic and environmental benefits as well, all of which require good quality. However, providing good quality public open spaces in cities in rapidly urbanising countries with financial constraints with large population like India and their proper maintenance is a very challenging task and understanding of attributes of good quality of public open spaces, and the essential characteristics as well as the contexts, problems and issues of public open spaces in different urban contexts is essential for developing appropriate approach for their planning and management. This paper presents a study of public open spaces in Roorkee—a small city in India, to understand the scenario of public spaces in Indian cities and provides insights into their issues in context of small cities significantly different and of poorer quality than larger cities, based on which an approach is suggested for their planning and management.

Keywords: *public open spaces; quality of life; small city; management.*

INTRODUCTION

Quality of public spaces that are hub of activities and social interaction is reflective of the quality of life in cities. Public space, defined as ‘a social space that is generally open and accessible to people’, typically includes parks, public squares, common open



IDENTIFICATION OF GREEN CORRIDORS AND THEIR REVIVAL: A CASE OF DELHI RIDGE

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ABSTRACT

This paper focuses on the landscape ecology that improves the relationship between the ecological processes in the environment and ecosystems. The urban green that enables linkages of green patches with the help of green corridors within the land use matrix helps to improve the ability of the species to migrate among the habitats in the human-dominated society.

Natural environment is experiencing destruction and degradation of their natural habitats that are widespread and their conservation is a task of global significance. Urban development and anthropogenic activities have inherent in the task of establishing and retaining the greens of the city and its sustainability.

Changes in major landscape patterns and fragmentation have led the changes of faunal assemblages and affect the ecological processes that also impact the natural heritage of the area, just as in the case of Delhi Ridge.

Delhi Ridge is the chain of oldest mountain system sprawling from north to south of Delhi. Initially, the ridge was continuous and connected as a linear spur of Aravalli mountain creating many ecological functions but with due course of time, it got fragmented into four parts. This fragmented landscape can reconnect by identifying the corridors (natural and man-made) and linking them with the help of 'green corridors'.

Various dimensions are explored to revive and reconnect these patches with the help of innovative landscape tools, involving community and institutions participations and amending building bye-laws of such spaces vis-a-vis creating a self-sustainable plan to revive the fragmented Delhi Ridge.

Keywords: *Green Corridors, Patch-matrix, Fragmentation, Landscape ecology.*



NEED FOR A COLLECTIVE WISDOM

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ABSTRACT

Design wisdom comes from firsthand experiential knowledge and a relevant body of work. The biggest challenge of our current era has been the rejection of this collected wisdom in order to promote individual visionary image based ideas that have been promoted by modernism and other lesser ism's. This has ruptured the fabric of our traditional civilization and has confounded architects in a way that they still not yet found a distinctive style that is Indian nor have they found a way that would challenge the old agenda of the architectural pedagogy. Now the world has created a globalized society who now deliberately demand and foster new ways to grow and thrill themselves. What should be the role of our educational institutions?

Keywords: *Wisdom, modernism, globalism, instant art, directions*

INTRODUCTION

The fundamental event of the modern age is the conquest of the world as picture (Heidegger, 1977:134). By picture Heidegger does not just mean the Image or representation that stands before us, but what it stands for, together as a system as a collection of social wisdom. Vilém Flusser argues that we now live in an Image saturated world, a world of shifting field of images, of permanently changing environments in which one redundant image instantly replaces another. Images that don't show matter; they show what matters. It is making the three-dimensional world lose, it's connect to conceptual and imaginative thinking and becoming increasingly abstract (Flusser, 1985).



Figure 1: Man vs Machine