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Regional Centre on Urban Water Management
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Training of Trainers Manual on Integrated Urban Water Management

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Table of Contents

SECTION A: Training Manual

Preface	v
Acknowledgement	vii
Note	ix
Introduction	xi
Chapter 1 Introduction to Integrated Urban Water Management and Realistic Strategies for Realization of MDG	1
Chapter 2 Approaching Urban Water Governance	27
Chapter 3 Planning.....	65
Chapter 4 Urban Water Supply Source Management.....	123
Chapter 5 Demand Management.....	169
Chapter 6 Urban Water Disaster Management	227
Chapter 7 Design Issues.....	277
Chapter 8 Ecosystems Interaction.....	316
Chapter 9 Information Management.....	348

Section B: Annexes

Annex I. Operational Guide	
Annex II Case Studies	
Annex III Power Pints	
Annex IV Slides	
Annex V Additional Resources and Tools	





4- Urban Water Supply Source Management

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4.1 Introduction

Streams and rivers are the most important sources of water for public water supply schemes. It is well known fact that most of the urban areas develop on the banks of a river as it is easy to get water supply to the city. As cities grow, the nearby water sources are used, often to the limit of their capacity. Pollution from the urban area eventually threatens the sources, and then new supplies are sought further away. Alternatively, steps should be taken to clean the streams and protect these so as to use it as potential sources of drinking water. In India, some of the large scale such measures is taken at various cities located on the banks of various rivers. The “Ganga Action Plan” and “Yamuna Action Plan” are the major plans initiated at various stretches of river Ganga and Yamuna.

Water is a valuable resource, which is essential for survival of life. It is a unique product with no substitute and continues to be the basic need of mankind. However, growth process and expansion of economic activities has led to increasing demands for diverse uses of water. An ever-increasing proportion of the world's population lives in cities. About half of the world's population already live in cities, and by the middle of the 21st century, close to 90% of the then 10 to 12 billion people could be living in cities. Continued urban development poses challenges to water resources management. Presently about two-thirds of freshwater usage is for agriculture (over 90% in some countries), but the proportion used by cities will increase with time. Competition for water between cities and other users—in some places agriculture, in others in-stream requirements for nature—will continue to escalate. Over the next 20 years, the world's population will increase from 6 billion to an estimated 7.2 billion, while the average supply of water per person is expected to drop by one-third. As per the World Population Report released in 2001, as many as 48 developing countries are likely to face stresses due to water scarcity by the year 2025. At present also, about 20 % of the world population is deprived of access to safe drinking water. In a period of 25 years, this figure is likely to increase dramatically to about half of the world population, i.e., nearly 3.5 billion.

As many urban areas are located along major rivers, they have relied principally upon surface-water by construction of major reservoirs and centralized water treatment systems. Smaller urban (and rural) areas, however, have traditionally relied upon ground-water. Where local surface-waters are not sufficient to meet urban demands, inter-basin long-distance water transfer may be required.

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