

Greening Experiences in Indian Cities

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Liveability of Cities and Urban Green Spaces

Urban Green Spaces are public and private open spaces in urban areas directly or indirectly available for the users

With the accelerating rate of urbanization worldwide urban green spaces are becoming increasingly important to society

Multiple Benefits of Urban Greens

Physical and psychological health

Social cohesion

Climate change mitigation

Energy efficiency in city functioning

Pollution abatement

Ground water –recharge

Prevention of soil erosion

Biodiversity conservation

Provisioning of ecosystem goods and services

Multiple Benefits of Urban Greens

In Sweden, people of all categories, professions and age consider parks/gardens/urban forests as most effective means for stress relieving and relaxation

In Guangzhou, China 50% of its residents use urban forests for urban recreation

In Beijing, China 2.4 million urban trees over 300 sqkm. remove 1261 metric ton environmental pollution annually, of which 776 million were particulate matter.

Multiple Benefits of Urban Greens



The Maidan

Multiple Benefits of Urban Greens



Multiple Benefits of Urban Greens



Multiple Benefits of Urban Greens



Multiple Benefits of Urban Greens



Multiple Benefits of Urban Greens



Multiple Benefits of Urban Greens



Multiple Benefits of Urban Greens

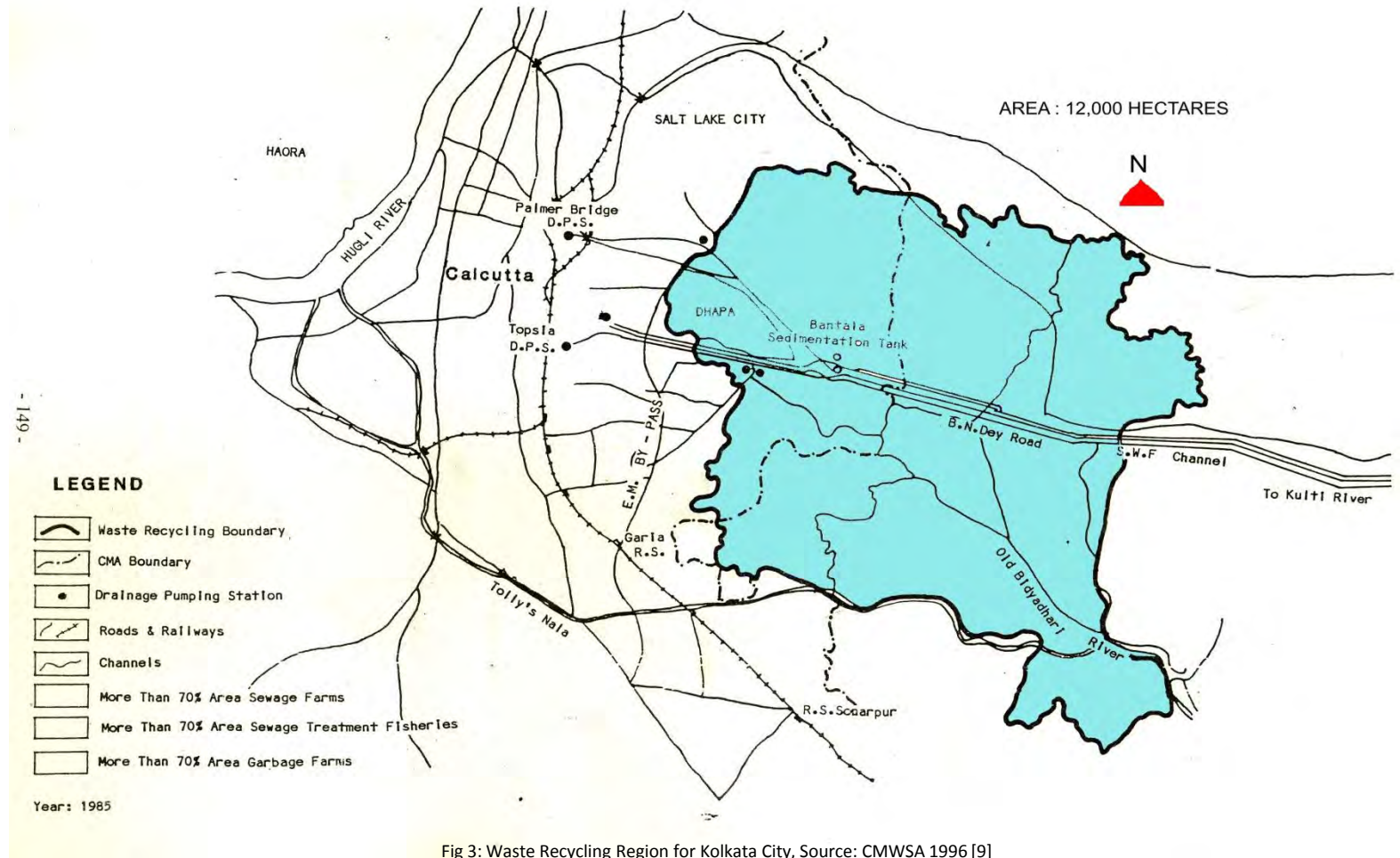
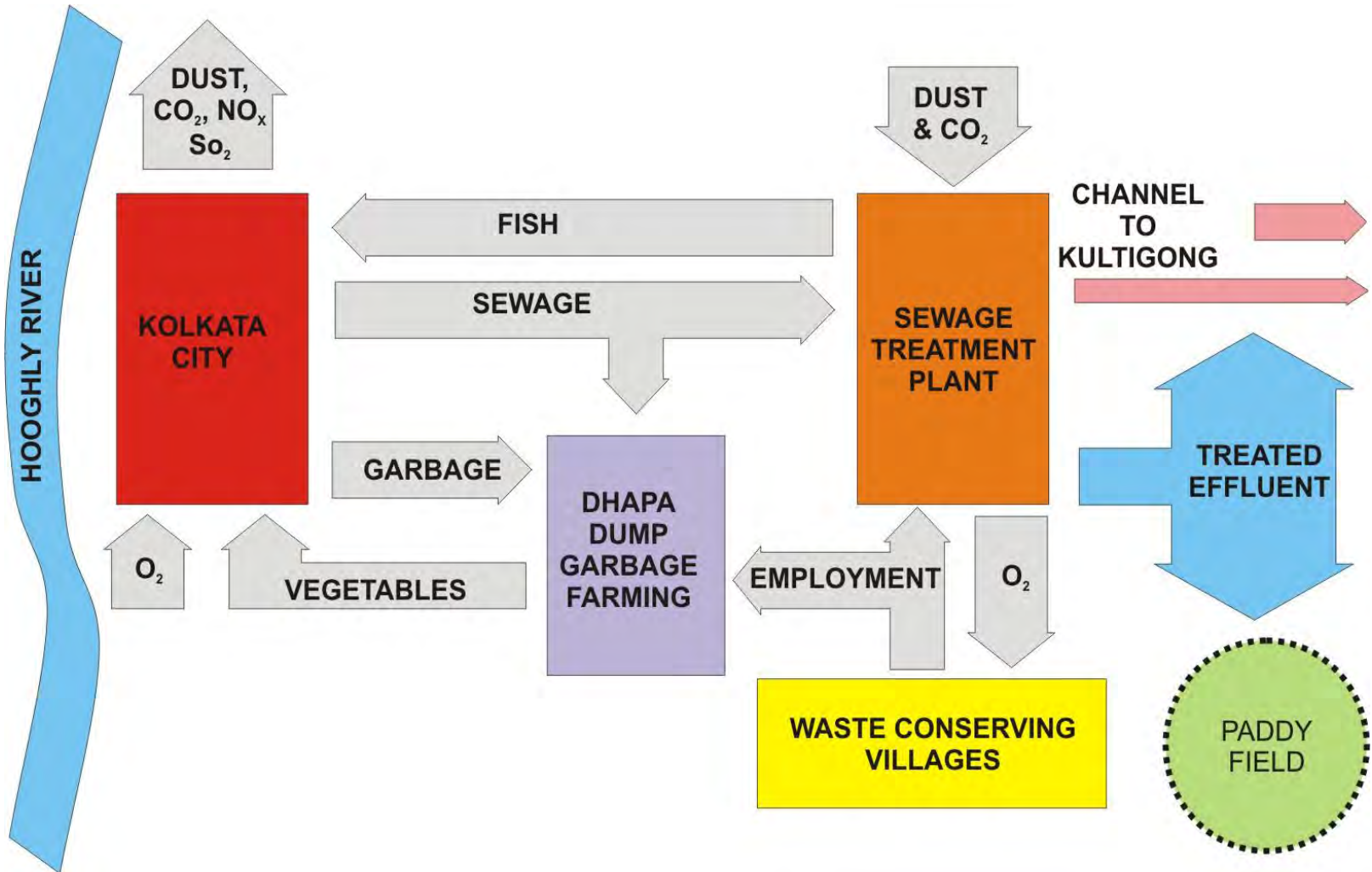


Fig 3: Waste Recycling Region for Kolkata City, Source: CMWSA 1996 [9]

Kolkata Wetlands: Waste Water Recycling Zone

Multiple Benefits of Urban Greens



Kolkata Wetlands: Waste Water Recycling System

Few Indian Cities: Urban Green Space Scenario

City	Population in million (2001)	Forest Tree Cover (sq km.)	Per Capita Green Space (sqm./person)
Delhi	13.80	297.00	21.52
Bangalore	5.60	97.00	17.32
Gandhinagar	0.20	32.56	162.80
Chandigarh	0.90	49.00	54.45
Jaipur	2.32	5.43	2.30

WHO norm: 9.0 sqm./person

Few Indian Cities: Urban Green Space Scenario (Contd...)

Delhi one of the greenest capital in the world

20% of geographical area under green cover

Agencies working for 'Green Capital' mission are NCT, MCD, NDMC and DDA

Recently, Parks and Garden Society in Delhi constituted to coordinate greening activities

Gandhinagar **57.13%** under tree cover

Chandigarh **35%** under tree cover

Bangalore **19%** under tree cover

International scenario

Urban greenery development relies not only on investment and technology but largely on the attitude and involvement of urban residents

Program of “ **Tree City USA**” and “ **National Garden City**” in China

Criteria like per capita green space, green space to land ratio, green space canopy coverage ratio

China conducting excellent research on role of urban forestry on **CO₂ sequestration, O₂ generation, removal of gaseous and particulate pollutants and microclimate amelioration**

Delhi Case

Clubbing of archaeological conservation with creation of urban green spaces

About **100 monument sites resurrected** with green spaces around them and **1200 aimed for future**

Free distribution of saplings to schools, RWAs, NGOs and financial assistance to RWAs

3000 eco-clubs in Delhi to engage school students

Delhi Case



Green Space and Urban Poor



Example of Slum Networking at Indore

Green Space and Urban Poor



Example of Slum Networking at Indore

Critical Factors for Management of Green Space

The share of green space in urban landuse

Not only quantity but deployment and quality are important

Hierarchy of green spaces

The changes in these shares over time

Native flora – resource conserving

The intensity of involvement of city administration

The degree of citizen participation

Inclusive principle in distribution and access to green spaces

Innovative mechanism for resource mobilisation- public, private, community involvement

Fundamental Approach

With an integrated approach to combine strategic planning for green spaces with innovative design, delivery and sustained maintenance through active involvement of the community at all stages, urban green spaces can be part of an “*urban renaissance*”.

Thank You

