Sustainability Indicators for Cities: Planning Sustainable Cities

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Protection of Water Resources and Effective Policy Making for Sustainable Urbanization.

Case Study:
Revitalization of the Chapulco Lagoon in Puebla, México
Puebla State

Puebla Municipality

Source: INEGI, 2010
Puebla City 1980 Urban Plan

The role of Universities in Climate Change Adaptation and Mitigation Action, and Sustainable Environmental Protection responses.
Puebla’s Green Spaces per capita
The Chapulco Lagoon is located the southern area of the City of Puebla and it was named after the rural town that borders it.
It has been threatened mainly by sprawl and pollution in the past 20 years with the proliferation of housing complexes and the construction of a peripherical freeway.
The growth process of urban areas in developing countries like Mexico has been devastating to the environment.
Economic and political interests linked to land have promoted the creation of dispersed and extended urban developments in substitution of natural elements necessary for the sustainability of cities, the population and the natural environment.
Since the 80’s the water flows which feed it have decreased and the lagoon has been contaminated by sewage and consequently many animal and plant species disappeared as the volume and surface of the lagoon decreased dramatically. Early in this century the lagoon was expected to disappear.
In order to save the lagoon and involve people, the landscape architect Mario Schjetnan was in charge of the project that included not only the rescue of the lagoon but the design of public space for a large population in a marginalized area of the city.
LOCATION - Parque del Centenario. Laguna de Chapulco

Source: Agencia de Protección al Ambiente y Desarrollo Sustentable
Ayuntamiento de Puebla (2009)
BASIC PROJECT - Parque del Centenario. Laguna de Chapulco

Habitat Recovery (Amphibians)

Observation Promenade

Fauna Recuperation Islands

Environmental Educational Centre

Vegetation and Trees Corridor

Wetland

Source: Agencia de Protección al Ambiente y Desarrollo Sustentable Ayuntamiento de Puebla (2009)
ZONIFICATION- Parque del Centenario. Laguna de Chapulco

Source: Agencia de Protección al Ambiente y Desarrollo Sustentable
Ayuntamiento de Puebla (2009)
MASTER PLAN- Parque del Centenario. Laguna de Chapulco

Source: Agencia de Protección al Ambiente y Desarrollo Sustentable Ayuntamiento de Puebla (2009)
The awareness of the importance to rescue the Chapulco Lagoon is the beginning of public involvement in government policies in order to build sustainable cities where the sense of community is the main asset.
Landscape Architecture

Source: Agencia de Protección al Ambiente y Desarrollo Sustentable Ayuntamiento de Puebla (2009)
An environmental education centre was built and spaces of dispersion and relaxation for the entire population were generated.
Landscape Architecture

Source: Agencia de Protección al Ambiente y Desarrollo Sustentable Ayuntamiento de Puebla (2009)

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The Chapulco Lagoon rescue project is benefiting 20,000 inhabitants and it has become something to be proud of because it is a successful example of how urban sustainable policies can transcend from speech and become a reality.
The Role of the University

Signing an agreement with the environmental agency to serve as guardians from future urban developments that may put at risk this park and lagoon.
The Environmental Education Centre was opened to public on the 24th of November. Public, Private, Academic and Social sectors were there.
The Role of the University:

Promote activities that will help build better communities and better cities.
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Build interdisciplinary work with other Academic Departments, particularly with the Interdisciplinary Environmental Project at the University.
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Research and Academic Intervention Projects:

• The Master’s Degree in Sustainable Urban Design and Management is working with graduate and undergraduate students in Chapulco and similar places to promote projects susceptible to be applied.

• There is a research project with other universities from the Jesuit System in Mexico to build indicators on economic, environmental and urban situation. Chapulco was chosen for this purpose.

• The Interdisciplinary Environmental Program is receiving several funds from national and international entities for research on climate change. Further information benjamin.ortiz@iberopuebla.edu.mx
Thank you for your attention!

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