

Singapore Index on Cities' Biodiversity

by Dr Lena Chan



Current Indices

- Environmental Sustainability Index (ESI)
- Environmental Performance Index (EPI)
- Cities of Opportunity
- European Green City Index

Jan 2008, Dr. Djoghla's call for cities to share and pool knowledge, develop new approaches, methods and tools.



Tenth Conference of Parties to the CBD

- Decision X/22 - Endorsement of the Plan of Action on subnational governments, cities and other local authorities for biodiversity
- “.. and to set benchmarks for local biodiversity management in line with the 2011-2020 indicator framework under the Convention on Biological Diversity, using tools such as the Singapore Index on Cities’ Biodiversity”
- Para 3(d), 5(k), 5(n), and 11 of the Plan of Action



**The Singapore Index on Cities' Biodiversity is a
CBD-led collaboration with the Global
Partnership on Cities and Biodiversity (GPCB)**



GPCB

SCBD

City of Curitiba (Brazil)

City of Montreal (Canada)

City of Bonn (Germany)

City of Nagoya (Japan)

Singapore

ICLEI - LAB

UNESCO

UNEP

UN-Habitat

IUCN

URBIO

UNU

Conservation International



Convention on
Biological Diversity



Expert Workshops on the Singapore Index

First Expert Workshop on the Development of the CBI (10-12 Feb 2009), Singapore



Second Expert Workshop on the Development of the CBI (1-3 Jul 2010), Singapore



How did the Singapore Index develop?

- Workshop objectives are to develop an index to:
 - Assist national governments and local authorities in **benchmarking** their **biodiversity conservation efforts** in the urban context
 - Help **evaluate progress** in reducing the rate of biodiversity loss in urban ecosystems
- Proposed index:
 - a self-assessment tool
 - easy to apply
 - scientifically credible
 - objective and fair



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Part I: Profile of the City

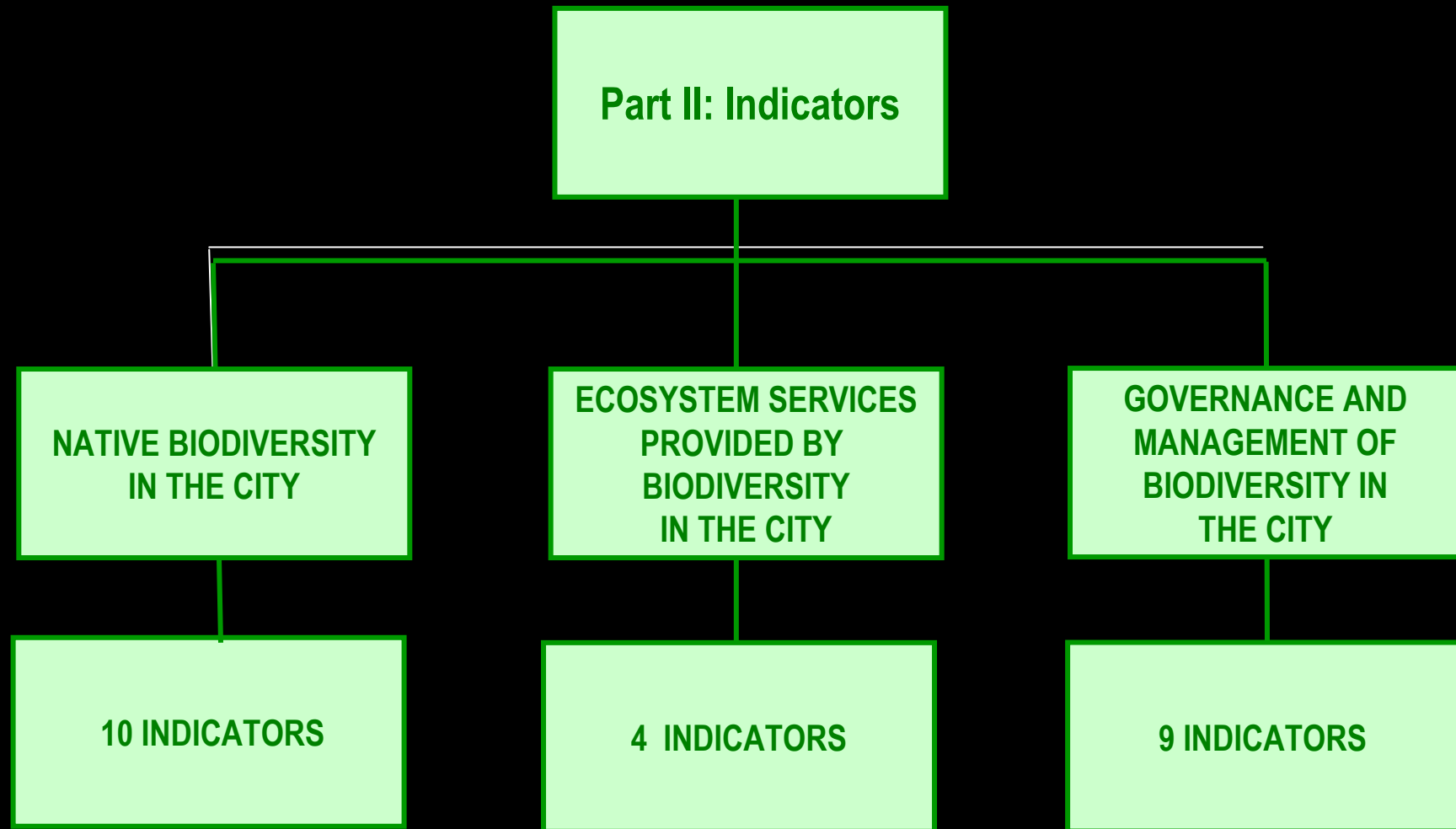
Indigenous ecosystems found in the city

Native species found in the city

Quantitative data on populations of key
biodiversity indicators

Other relevant biodiversity data

Singapore Index on Cities' Biodiversity



Indicators – Native Biodiversity in the City

- Indicator 1: Proportion of Natural Areas in City
- Indicator 2: Connectivity Measures or Ecological Networks to Counter Fragmentation
- Indicator 3: Native Biodiversity in Built-Up Areas
- Indicator 4: Change in Number of Native Species (Vascular Plants)
- Indicator 5: Change in Number of Native Species (Birds)
- Indicator 6: Change in Number of Native Species (Butterflies)
- Indicators 7 & 8: Changes in Numbers of Native Species (any 2 taxonomic groups of choice)
- Indicator 9: Proportion of Protected Natural Areas
- Indicator 10: Proportion of Invasive Alien Species (as Opposed to Native Species)

Indicators - Ecosystem Services of Biodiversity

- Indicator 11: Regulation of Quantity of Water Through Permeable Areas
- Indicator 12: Climate Regulation: Carbon Storage and Cooling Effect of Vegetation
- Indicator 13: Recreational Service
- Indicator 14: Educational Service

Key Indicators - Governance and Management of Biodiversity

- Indicator 15: Budget Allocated to Biodiversity
- Indicator 16: Number of Biodiversity Projects Implemented by the City Annually
- Indicator 17: Existence of Local Biodiversity Strategy and Action Plan
- Indicators 18 - 19: Institutional Capacity
- Indicators 20 - 21: Participation and Partnership
- Indicators 22 - 23: Education and Awareness



List of Participating Cities

Curitiba (Brazil)
Edmonton (Canada)
Montreal (Canada)
Hamilton (New Zealand)
Singapore
Nagoya (Japan)
Brussels Capital Region (Belgium)
Tallinn (Estonia)
Frankfurt (Germany)
Bandung (Indonesia)
Waitakere City (New Zealand)
Bangkok (Thailand)
Chiang Mai (Thailand)
Krabi (Thailand)
Phuket (Thailand)
London (United Kingdom)
Joondalup (Australia)
Phnom Penh (Cambodia)
Siem Reap (Cambodia)
Ottawa (Canada)
European cities participating in the
European Capitals of Biodiversity Competition
(from five countries – France, Germany, Hungary,
Spain and Slovakia)

Paris (France)
Padang (Indonesia)
Pekanbaru (Indonesia)
Vientiane (Lao PDR)
Xayaboury (Lao PDR)
Sibu (Malaysia)
Kuantan (Malaysia)
Iloilo City (Philippines)
Puerto Princesa City (Philippines)
Quezon City (Philippines)
Ourense (Spain)
Montpelier (USA)
Kings County (USA)
Danang (Viet Nam)
Hanoi (Viet Nam)
Helsinki (Sweden)
Stockholm (Sweden)
Heping District, Shenyang (China)
Amsterdam (Netherlands)
Barcelona (Spain)
Jerusalem (Israel)
New Orleans (USA)
Calgary (Canada)
Guatemala City (Guatemala)



Convention on
Biological Diversity



Other Applications

- Guidelines on how to enhance native biodiversity
- Good practices for sustainable development
- Provision of biodiversity inputs into the master planning of cities
- Basis for calculation of economic value of biodiversity and ecosystem services
- As the biodiversity component of other indices
- Decision-making tool
- Diagnostic tool
- Capacity-building in biodiversity conservation for cities

Quotes

Ms. Liana Bratasida, Chairperson of the ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)

“Initiatives like the City Biodiversity Index should be integrated with other efforts at the regional, national and local levels. For example, in addition to incorporating the index with the AIESC, it can be included in Indonesia’s ‘Towards Green Indonesia’ programme, which aims to achieve sustainable natural resources utilisation for human welfare. Cities are in the forefront of innovative thinking and policy innovation for the future, and therefore are in an excellent position to lead the way in addressing environmental degradation, including biodiversity loss.”

Ms. Vu Thi Mai Huong, Officer from the Danang Department of Natural Resources and Environment, Vietnam

“The Index is a novel concept, it is also timely, as Danang is currently developing a plan for biodiversity management. Therefore, we are using this Index as a springboard to evaluate first how we are faring in terms of information gaps and in turn, guide what we need to do for biodiversity in the city.”





THANK YOU
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<http://www.cbd.int/authorities/gettinginvolved/cbi.shtml>

