



Convention on Biological Diversity

Distr.
GENERAL

CBD/COP/14/INF/34
9 November 2018

ENGLISH ONLY

CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY

Fourteenth meeting

Sharm El-Sheikh, Egypt, 17-29 November 2018

Item 22 of the provisional agenda*

PROGRESS OF THE APPLICATION OF THE SINGAPORE INDEX ON CITIES' BIODIVERSITY

Note by the Executive Secretary

INTRODUCTION

1. The Conference of the Parties, in its decision XIII/28, welcomed an updated list of indicators for the Strategic Plan for Biodiversity 2011-2020. One of the indicators that was welcomed was the number of cities applying and reporting on the Cities Biodiversity Index (Singapore Index). In the light of this, the Executive Secretary is circulating herewith for the information of participants in the fourteenth meeting of the Conference of the Parties to the Convention on Biological Diversity an information document submitted by the National Parks Board of Singapore.
2. The report is being circulated in the form and language in which it was received by the Secretariat.

* CBD/COP/14/1.

PROGRESS OF THE APPLICATION OF THE SINGAPORE INDEX ON CITIES' BIODIVERSITY

I. THE EXPANSION OF URBANISATION

1. The rate of urbanisation globally is projected to accelerate at an unprecedented rate in the coming decades, such that by 2050, 70 per cent of the world's population will be living in urban areas. Within the next 20 years, cities will have to double the amount of infrastructure that they currently have in place in order to accommodate the additional population. This presents both challenges as well as opportunities for biodiversity conservation, as cities expand into the habitats in the areas surrounding them, regarding how best to construct the additional infrastructure while simultaneously allowing biodiversity to have a place within the city. This is where the mainstreaming of biodiversity into the infrastructure sector will increase in prominence, in terms of long term development planning that allows for urban biodiversity to thrive.

2. To facilitate biodiversity conservation becoming part of the mainstream within urban planning, city councils need to have some way in which they are able to assess and measure their efforts, as this would provide relevant and specific feedback on how well their efforts to incorporate biodiversity into their development plans have succeeded. It was in this context in which the Singapore Index on Cities' Biodiversity was developed.

II. THE SINGAPORE INDEX ON CITIES' BIODIVERSITY – AN EVALUATION TOOL FOR CITIES

3. The Singapore Index on Cities' Biodiversity, or Singapore Index (SI), is a self-assessment tool for cities which is designed to quantify and monitor the progress of their biodiversity conservation efforts against their own individual baselines. This information could be used by national governments to consolidate the work that their cities and subnational governments are doing in this area, and to engage them further in this respect, thus contributing to national efforts. The development of the index was led by the Secretariat of the Convention on Biological Diversity (SCBD) in partnership with the Global Partnership on Local and Sub-National Action for Biodiversity and Singapore leading in the technical development of the indicators.

4. The SI comprises two parts: the profile of the city which provides background information against which the application should be taken, and the second part consists of 23 indicators under three core components: (a) native biodiversity in the city; (b) ecosystem services provided by biodiversity in the city; and (c) governance and management of biodiversity in the city. Each indicator is assigned a scoring range between zero and four points, with a total possible maximum score of 92 points. Cities will have to conduct a baseline scoring for 18 indicators in the first application of Singapore Index while five of the indicators measure their change in quantitative value over time.

II. A DECADE OF THE SINGAPORE INDEX

5. Following the beginning of its development at the First Expert Workshop on the development of the City Biodiversity Index in 2009, the SI has garnered wide attention from city officials who wished to measure the results of their biodiversity conservation efforts. As we approach the 10th anniversary of the SI, it is timely to take stock of the ways in which the SI has been used, adapted or modified for use around the world. As of October 2018, 26 city governments have applied the SI, and 12 more city governments are currently in the process of applying. The following tables show the breakdown of these cities.

List of 26 cities that have applied the SI:

Country	City	Country	City
Belgium	Brussels	New Zealand	Hamilton
Brazil	Curitiba	Portugal	Lisbon
Canada	Edmonton	Portugal	Porto
Canada	Montreal	Singapore	Singapore
Estonia	Tallinn	South Africa	Durban
Finland	Helsinki	Spain	Vitoria-Gasteiz
Germany	Heidelberg	Thailand	Bangkok
Guatemala	La Antigua Guatemala	Thailand	Chiang Mai
India	Hyderabad	Thailand	Krabi
India	Mira-Bhayandar	Thailand	Phuket
Indonesia	Bandung/West Java	UK	Edinburgh
Japan	Nagoya	UK	London
New Zealand	Auckland/Waitakere	USA	Los Angeles

List of 12 cities that are in the process of applying the SI, but have not completed their application:

Country	City	Country	City
Canada	Calgary	New Zealand	Wellington
China	Hong Kong	Philippines	Iloilo
Curridabat	Costa Rica	Spain	Ourense
Ecuador	Cuenca	Sri Lanka	Galle City
France	Paris*	Sweden	Stockholm
India	Thane	Taiwan	Kaohsiung

* - There is a presentation available online in French by Paris that indicates a complete application, however we have not received confirmation that this was endorsed by the city officials.

6. In some instances, academics have conducted the application of the SI to specific cities, or a few cities together. One of the main objectives of the SI is for cities to monitor their biodiversity conservation efforts, and noting that the city government is in the best position to effect such efforts, the applications of the SI conducted by academics could be strengthened by working with the city governments and getting their endorsement. Below is a list of 14 cities where the application was conducted by academics:

Country	City	Country	City
Germany	Frankfurt	Japan	Kobe
Germany	Neubrandenburg	Japan	Kyoto
Japan	Chiba	Japan	Osaka
Japan	Fukuoka	Japan	Sapporo
Japan	Hiroshima	Japan	Sendai
Japan	Kawasaki	Japan	Tokyo
Japan	Kitakyushu	Japan	Yokohama

7. One notable example of an adaptation of the SI by academics from Japan was the use of SI land use indicators in a study encompassing 791 Japanese cities (Uchiyama, Hayashi and Kohsaka, 2015). The authors used some of the spatial related indicators in the SI and remote sensing data and applied these to all cities in Japan, using the results to classify cities into three groups which may be useful for generating collaborative efforts based on similarities between the cities.

8. Other academic treatises involving the SI did not focus on applying it to cities, but explored the use of the SI indicators in monitoring biodiversity conservation efforts at the broader scale. SI indicators were used in a project on Earth Observation for Cities Biodiversity Index (EO4CBI) involving the European Space Agency, space4environment (a private company specialising in using satellite imagery in environmental applications) and a researcher from Concordia University. The project used satellite imagery to provide cities with data on four of the SI indicators that required spatial data analysis. Some cities that had previously applied the SI were chosen to verify the information that they already had, and others were new to the Singapore Index. The cities involved in the study were:

Country	City	Country	City
Argentina	Buenos Aires	New Zealand	Hamilton
Canada	Edmonton	Portugal	Lisbon
Luxembourg	Luxembourg Pro-Sud	Spain	Barcelona
Estonia	Tallinn	Sweden	Stockholm
Ethiopia	Addis Ababa	USA	Portland

9. To facilitate application by cities or organisations from non-English speaking countries, the Singapore Index User's Manual has been translated into several languages. Through Montreal, Canada, and Natureparif from Paris, the User's Manual has been translated to French. The Federal Ministry for Environment (Germany) with assistance from Mr. Peter Werner (Institute for Housing and Environment, Darmstadt, Germany) has translated it to German. The City Hall of Vitoria-Gasteiz has translated Part II of the SI into Spanish, and the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) of Japan developed a Japanese version of the Singapore Index which caters to specific needs and context of Japanese cities. Singapore had the User's Manual translated into Thai, Chinese and Vietnamese.

10. Cities' experiences in applying the Singapore Index, the challenges they face, lessons learnt and success stories will be documented and disseminated if the information is submitted to Singapore. A two-page summary write-up of each city will be generated and posted online. Some of the existing write-ups can be downloaded here: <http://tinyurl.com/SI-Factsheets>.

11. For proper monitoring of their progress in conserving urban biodiversity, cities should conduct assessments based on the Singapore Index at regular intervals. The User's Manual recommends cities to apply the index every three years. National governments will also benefit from cities' results - where cities' contribution to biodiversity conservation can be included in the national reports to the CBD. At the present moment, some cities have initiated or completed their second applications of the SI.

III. LINKS WITH OTHER PLATFORMS

12. Over the past decade, the SI has been adapted for use in numerous other platforms or indicator frameworks intended to measure biodiversity for cities. Singapore works closely with numerous partners to see how best the indicators can be incorporated or adapted for use in these other frameworks. Some of the projects or initiatives below have already applied all or selected indicators of the SI while some are in the process of exploring the best way to do so.

- ASEAN Environmentally Sustainable City Award

- Benchmark, Best Practices, and Framework for Sustainable Development and Cities project (Singapore)
- Biodiversity Index for Residential Towns (Singapore)
- Biophilic Cities Network
- CitiesWithNature initiative
- Global Platform for Sustainable Cities
- European Capitals of Biodiversity Competition
- IUCN Biodiversity Indicators for Local Authorities
- Japanese City Biodiversity Index
- Natural Systems and Sustainable Cities project
- Urban Biodiversity Hub
- Department of Environment and Natural Resources of the Philippines
- ICLEI

13. These frameworks and initiatives might adapt the SI for use in specific circumstances, or they might be incorporating the indicators into a broader indicator framework. Singapore is committed to working with any organisation that might wish to adapt the SI to their specific needs or to provide technical assistance in adapting the SI to any other platforms.

IV. THE FUTURE OF THE SINGAPORE INDEX

14. The Singapore Index was developed as a dynamic tool, evolving along to be relevant with the changing environment but based on a sound scientific foundation. The ever-changing landscape of the global biodiversity conservation arena needs tools that can adapt and maintain their applicability to cities and countries that apply them. The SI can be one such tool, that must evolve and adapt to new circumstances and to broaden its dimensions to keep up with the growing diversity of the increasing number of cities. However, to do this, there is a need for feedback to mould the SI, and shape its future appearance. As such, we are seeking inputs from all stakeholders: city, subnational and federal governments, biodiversity practitioners, organisations and anyone who feels strongly about urban biodiversity conservation on what other elements the SI should take into consideration if the indicators were to be reviewed, what might be aspects that could be streamlined, or if there was any format more appropriate for this that was not considered when it was first developed etc.

15. Cities that have applied the SI could give salient, important and pertinent feedback on their experiences in their application; which indicators they felt to be useful in guiding their efforts, or which indicators they felt did not quite capture the intended purpose and so on; and if possible, to provide suggestions as to how these should be improved. Other respondents can provide their feedback based on the User's Manual of the SI, in suggesting improvements or other areas that should be considered. If there are suggestions for the inclusion of specific issues or topics, it would be most welcome if these could be accompanied with suggestions for potential indicators as well, but if this is not possible then just suggest the topic for consideration and open the discussion for others who might be better able to develop indicators.

16. The User's Manual on the SI can be found at <https://www.nparks.gov.sg/~media/nparks-real-content/biodiversity/singapore-index/users-manual-on-the-singapore-index-on-cities-biodiversity.pdf>. Feedback or queries on the SI should be submitted to Singapore_Index@nparks.gov.sg by 31 July 2019. We look forward to receiving your comments and feedback.
