Reports on the test of

CBI

City of **Nagoya**, Japan

1st Jul. 2010

2nd Expert Workshop, Singapore

URBIO 2010

Urban biodiversity

An international conference on urban biodiversity and design

Member of the Global Partnership on Cities and Biodiversity.

1st URBIO

May 2008, in Erfurt, Germany

URBIO 2010

May 2010, in Nagoya, Japan

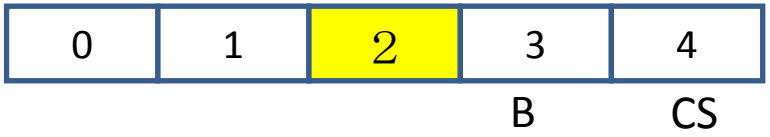
460 people participated from 30 countries.

"Workshop on CBI" was held during URBIO 2010.

1. Native biodiversity in the city

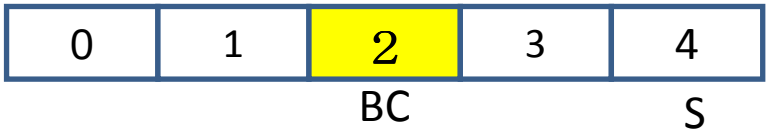
(1) % of natural/semi-natural areas

9%



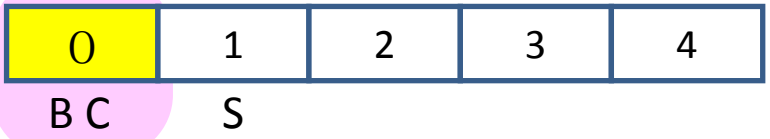
(2) Number of natural ecosystems in the city

5 systems



(3) mean patch size of natural/semi-natural ecosystems

0.05sqkm



(10) % of protected areas

0.7%

(1) The boundary between Natural/Semi-natural areas and anthropogenic green space is blurred in cities.

Agricultural land and low-quality habitat are also important in cities.

(2) It is hard to count natural ecosystems without list of ecosystem types.

The number of ecosystems in a city depends on its geographical conditions.

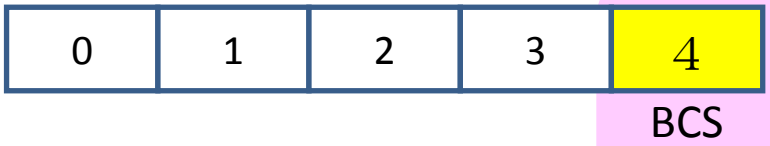
(3) Mean patch size will be different depending on the minimum mapping units.

(10) The definition of ***protected area*** *is not the same for all cities.*

*"Areas where conservation of the current situation are officially secured (****areas of conservation/regulation + parks with abundant nature****)" is better.*

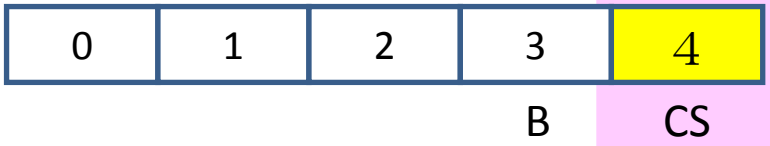
(4) Native biodiversity in built-up area (birds)

100 species



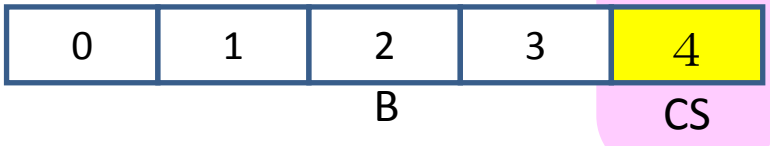
(5) Number of native species (plants)

1000 species



(6) Number of native species (birds)

269 species

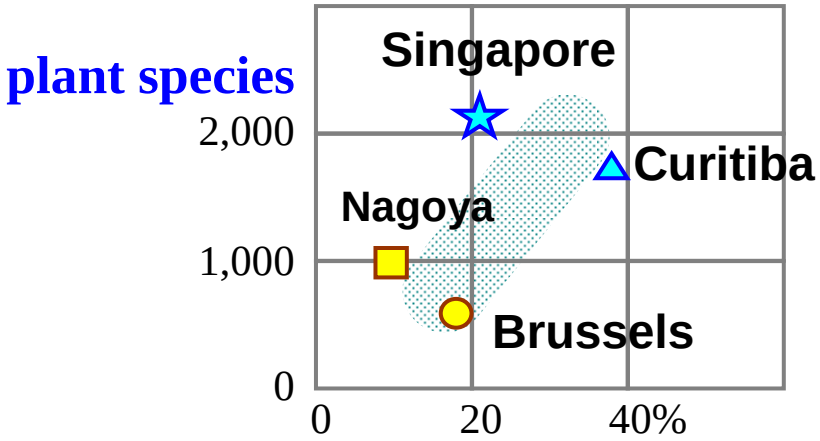


(7) Number of native species (butterflies)

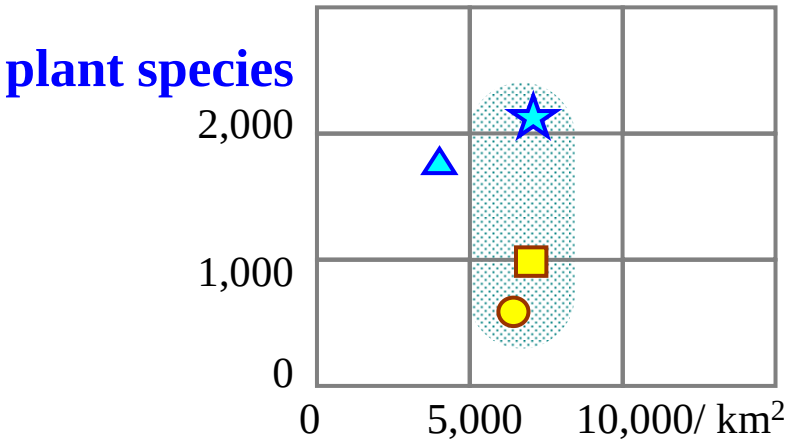
75 species

“No. of species” reflects climate of the city.

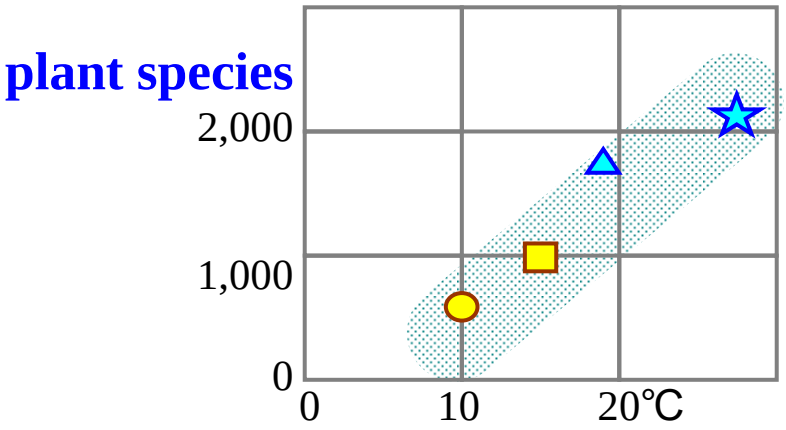
% of natural/semi-natural areas



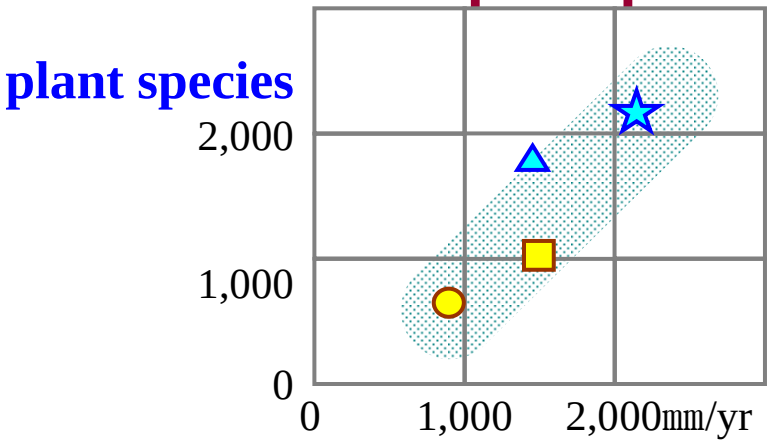
Population density



Average temperature



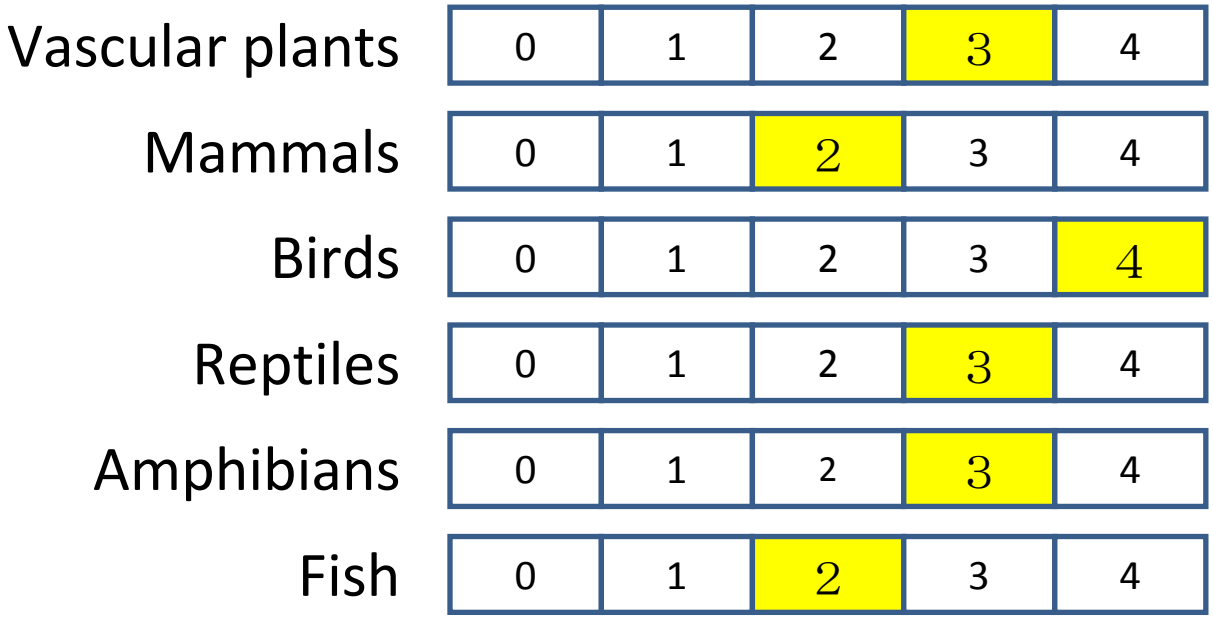
Annual precipitation



(8)(9) Number of native species

	Ex-tinct	Total	Native	Threat-ened	Forma/ Hybrid	Exotic	Inva-sive
Plants	75	±1600	±1000	(**167**)	±120	±440	(**45**)
Mammals	3	26	19	(**15**)		7	(**2**)
Birds		271	269	(**24**)		2	
Reptiles		14	13	(**2**)		1	(**1**)
Amphibians		12	11	(**7**)		1	(**1**)
Fish		63	56	(**16**)		7	(**7**)
Insects	14	3510		(**55**)			
Spiders		301		(**17**)			
Crabs		41		(**5**)			
Shellfish	4	101		(**37**)			

(11) **Proportion of invasive alien species**



(11) *Indicators for "**threatened species**" are also necessary.*

2. Ecosystem services provided by the native biodiversity in the city

(12) **Fresh water services** (cost of cleaning the water in the city) ***12 %***

(13) **Carbon storage** (total number of trees)

0.47million

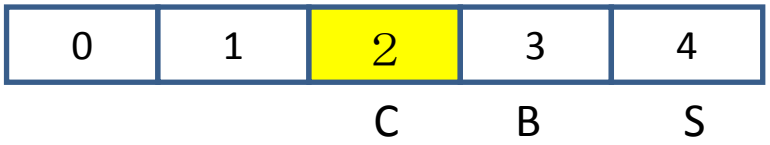
*(12) "Ratio of **raw water & water purification cost**" is better.*

*(13) The amount of greenery in the city shall be used **not as** an indicator for **carbon storage** **but as** an indicator for other services, such as **countermeasure for heat island phenomenon**.*

Recreation & educational services

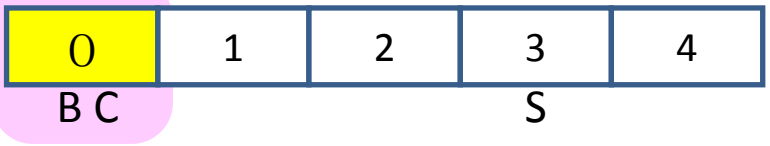
(14) No. of visits to parks & nature reserves/person/year

31 times



(15) Area of parks & protected area/ person

0.01 ha



(16) No. of educational visits to parks or nature reserves/ child under 16 years/year

2 times

(14)(16) In fact, it is rather difficult to count the frequency.

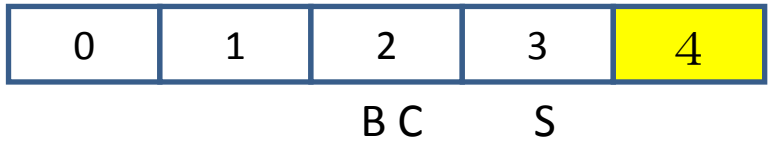
3. Governance & management of biodiversity in the city

(17) Budget allocated to biodiversity projects

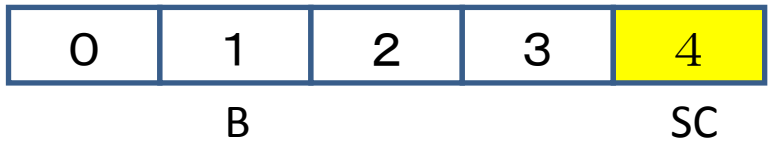
2 %

(18) Number of biodiversity projects & programmes organized by the city annually

42 times



(19) Rules, Regulations & Policy



(17) Projects related to biodiversity

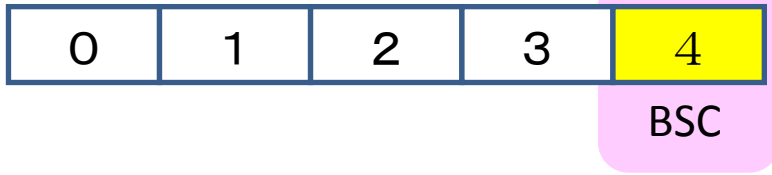
(18) how to define the programs and projects

(19) Irrelevant Options

Institutional Capacity

(20)No. of institutions covering essential biodiversity-related functions

16



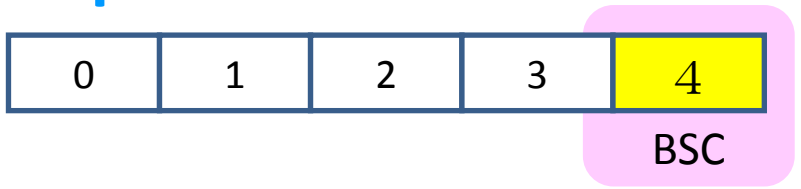
(21) No. of agency coordinate on biodiversity matters

5

(20)(21) To list types of biodiversity-related institutions and function.

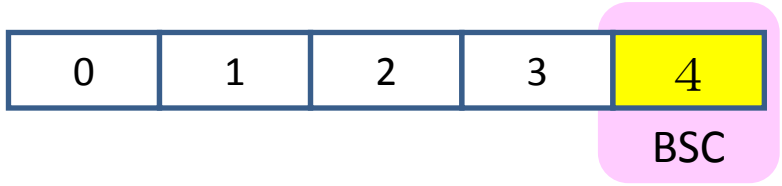
Participation & Partner

(22) Existence of a consultation process



(23) Existence of partnerships

32



(22) To ask whether citizen participation is ensured for each process.

(23) Find out whether partnership exists / at what level with each type of institution?

Education & Awareness raising

(24) **Incorporation of biodiversity Into the school curriculum**

0	1	2	3	4

BSC

(25) **No. of outreach programmes/ public awareness events per year**

170

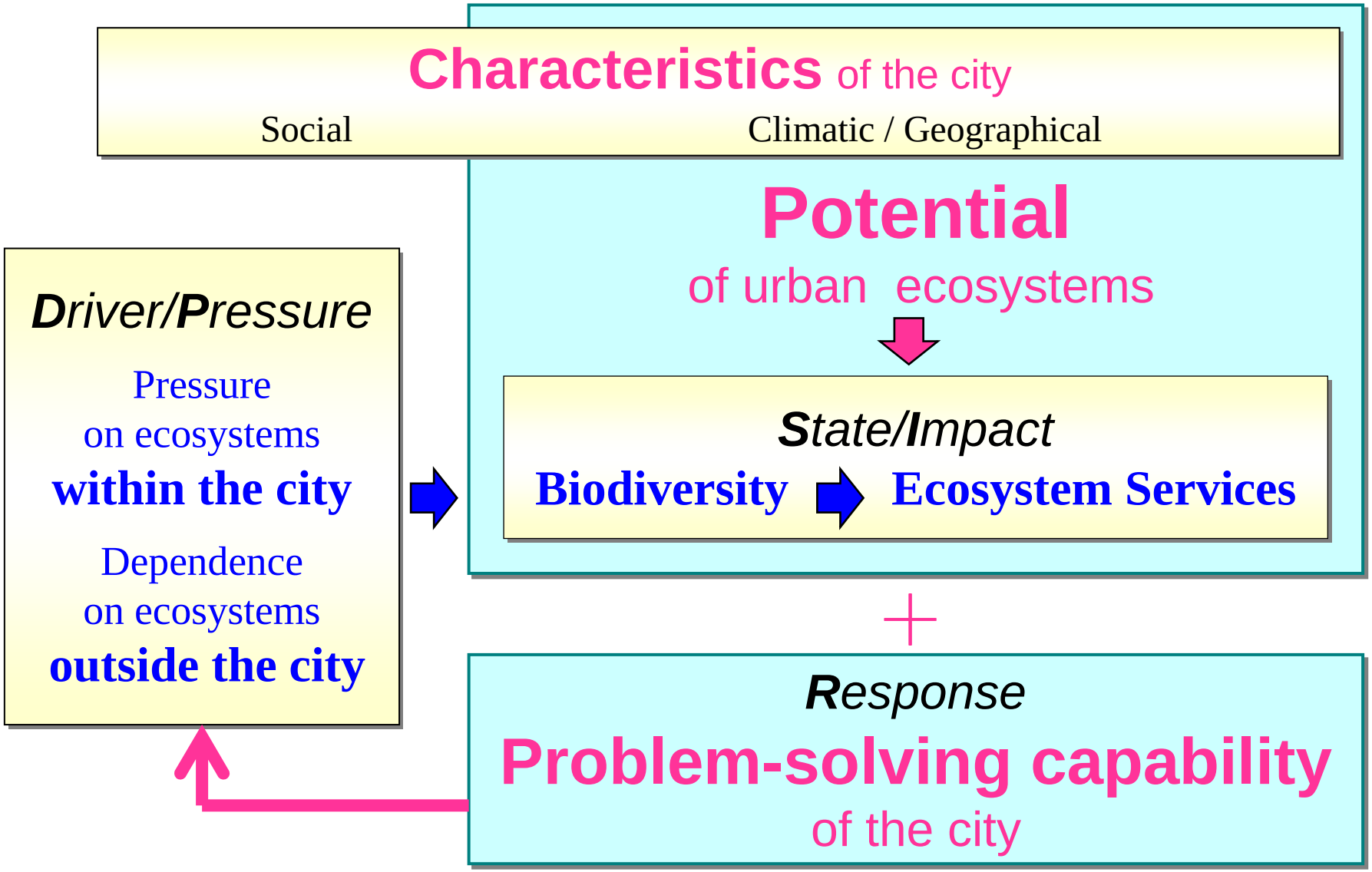
0	1	2	3	4

BSC

(24) (25) Enumerate concrete types of biodiversity courses/programs.

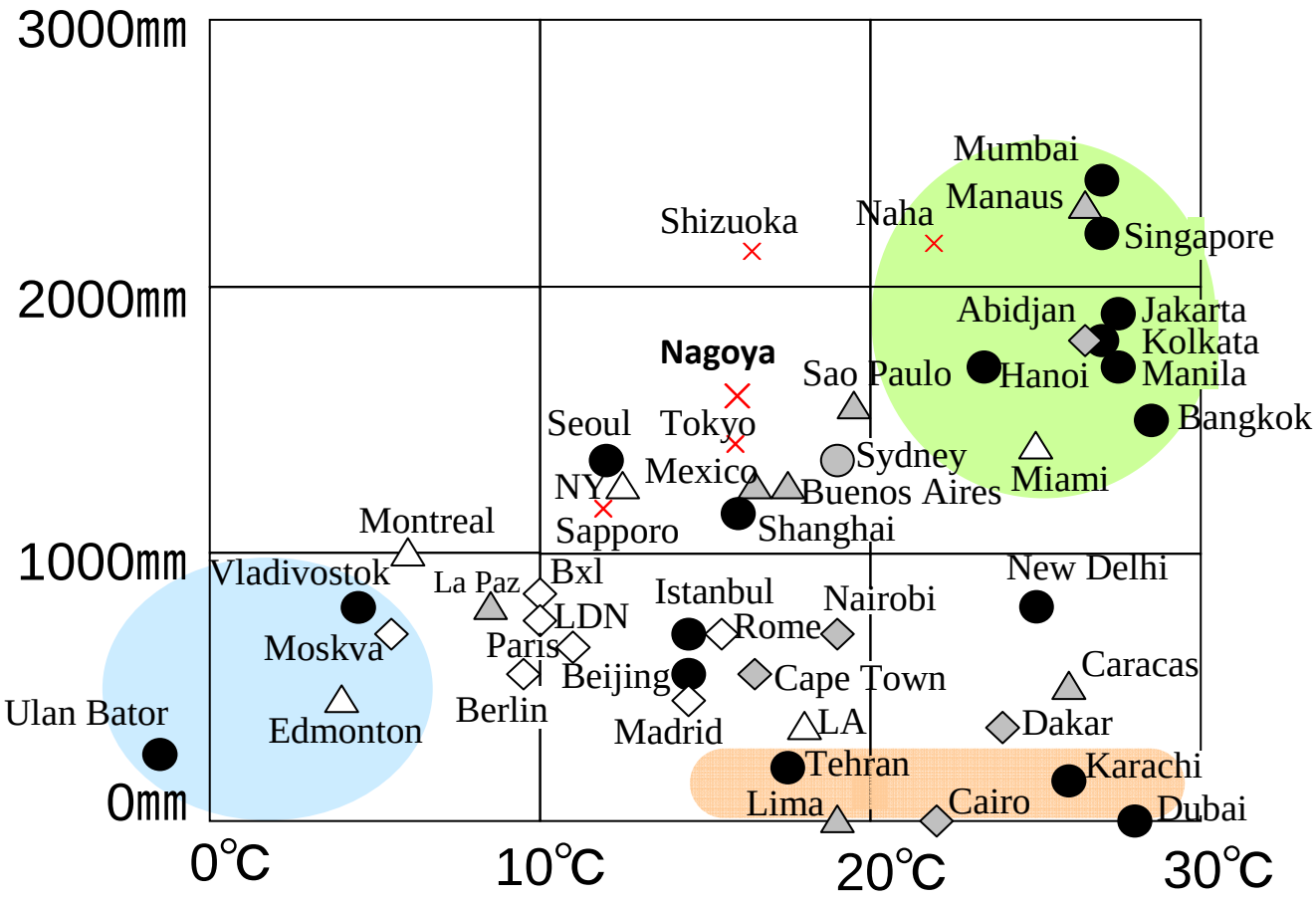
Is the total score necessary?

Why CBI ?


Characteristics of the city
Social
Climatic / Geographical
Potential
of urban ecosystems
State/Impact
Biodiversity
Ecosystem Services
Driver/Pressure
Pressure
on ecosystems
within the city
Dependence
on ecosystems
outside the city
Response
Problem-solving capability
of the city

Diversity of cities

Annual precipitation & average temperature



Points of proposals

1. Provisional **Common Indicators**

2. **Additional Indicators**

for development by each city

3. **Continuous fine-tuning**

through sharing of experience

Please read the handout

"Proposals for CBI" for details.

Thank you for your kind attention.