

S3 10.22.2015 11:45~ 20min (ID: 10651)

Effects of changes in marine ecosystem services on Human Well-being

: International comparison of Human Well-being structure

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What is the “Human Well-being” ? Definitions for HWB.

Peoples’ positive evaluation of their lives including positive emotion, engagement, satisfaction, and meaning
(Diener and Seligman, 2004)

As Psychological concept

Human Well-being has multiple constituents, including basic material for a good life, freedom and choice, health, good social relations, and security. The constituents of well-being, as experience and perceived by people, are situation-dependent, reflecting local geography, culture, and ecological circumstances. These factors are complex and value-laden (Ecosystems and Human Well-being: A Framework for Assessment, 2003)

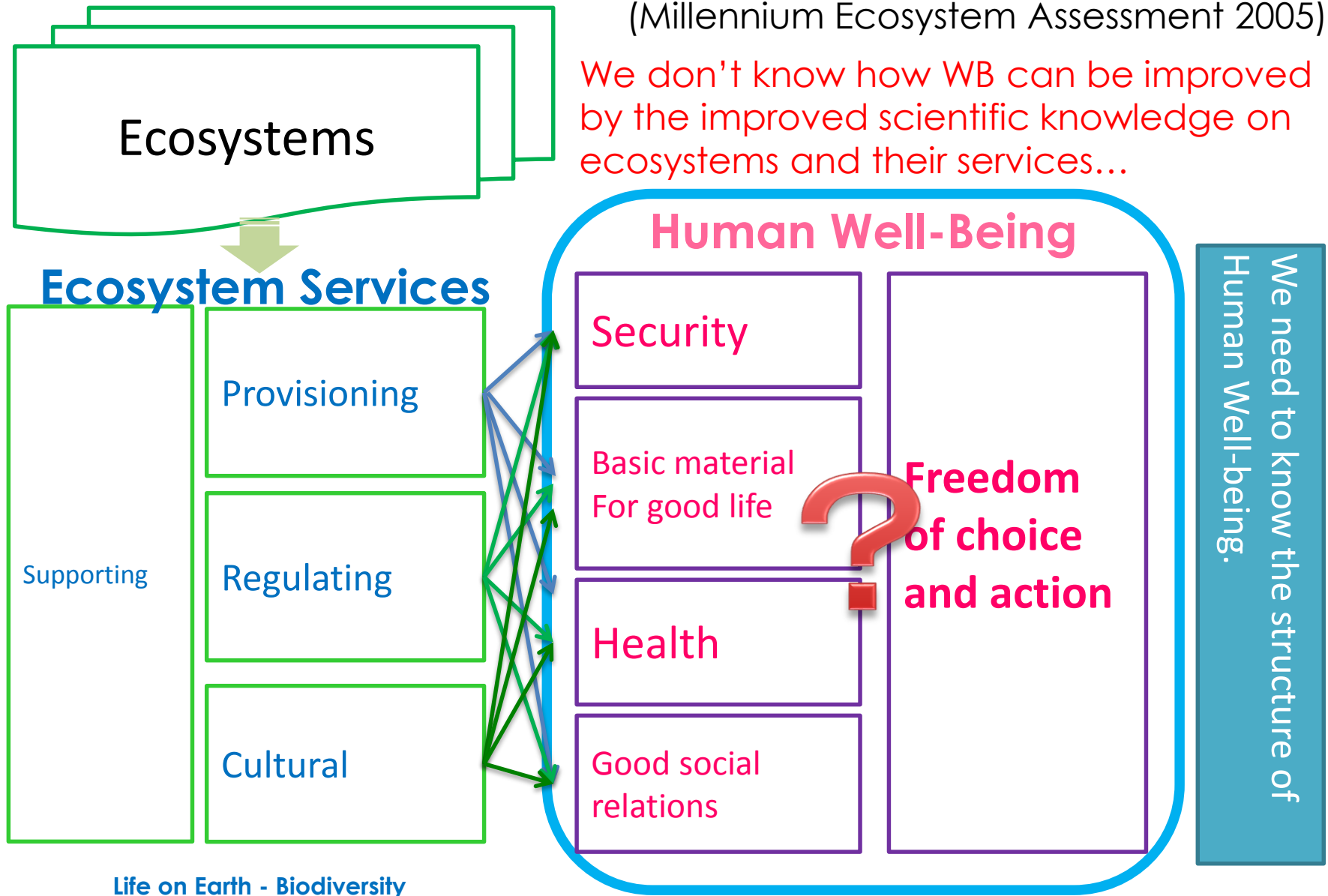
As environmental concept

The objective of it was to assess the consequences of ecosystem change for human well-being and to establish the scientific basis for actions needed to enhance the conservation and sustainable use of ecosystems and their contributions to human well-being (Millennium Ecosystem Assessment, 2005)

Background: Relationship amongst Ecosystems, Ecosystem Services, and Human Well-beings

(Millennium Ecosystem Assessment 2005)

We don't know how WB can be improved by the improved scientific knowledge on ecosystems and their services...



MA's Human Well-beings are parataxis or NOT ?

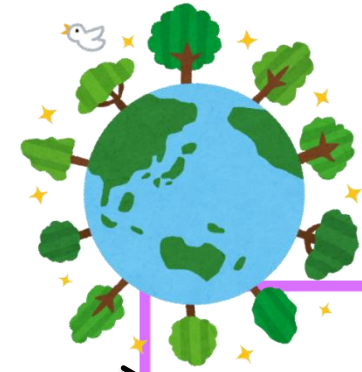
A restructuring of Well-Being elements model
(security, basic material, health, and social relations)

1. Represent a way of remodeling about MA-WB.
2. The dependent variable was “MA-WB’s satisfaction data”, we got it from Web-survey.

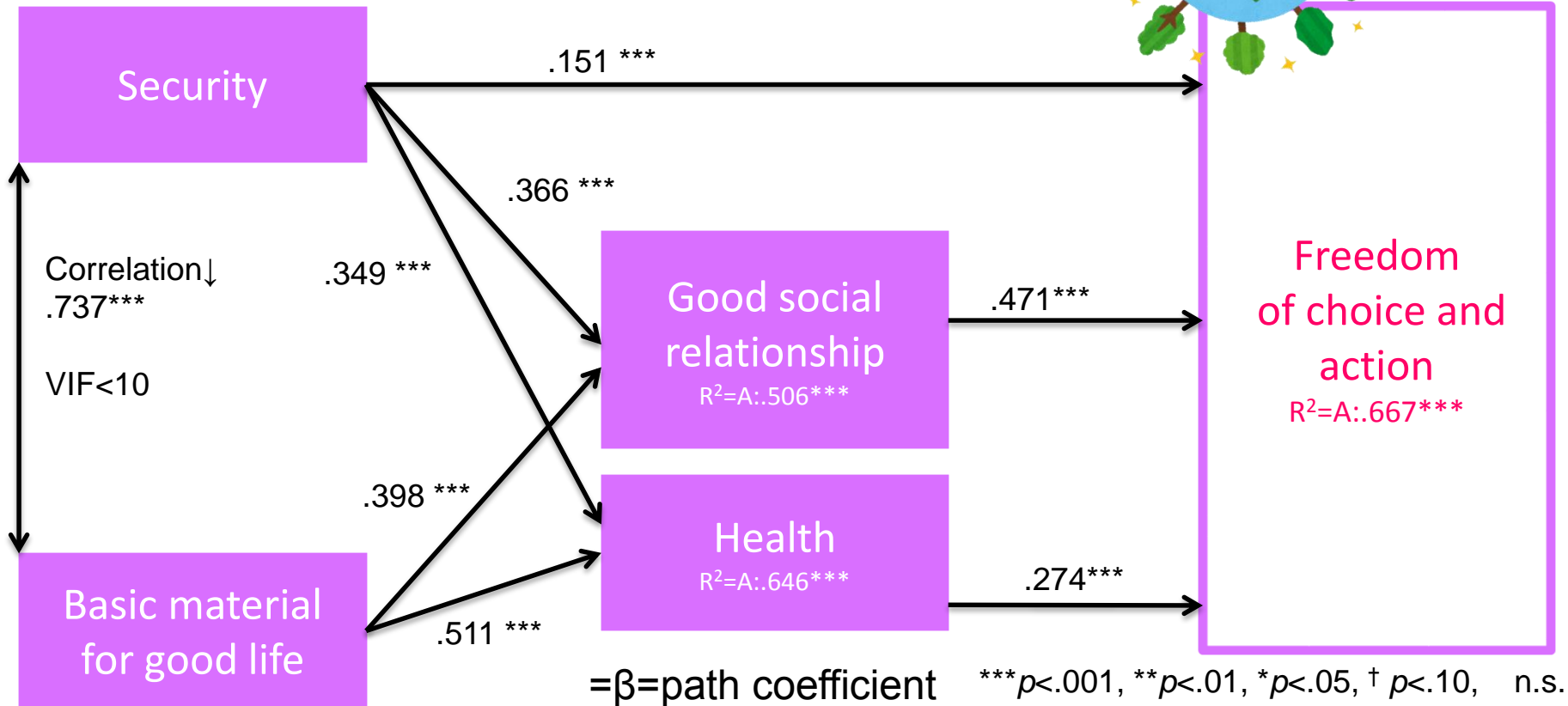


MA_Well-Being MODEL

Total n=2314 (China, Indonesia, Japan, Korea, USA)



【The dependent variable was MA's WB satisfaction LEVEL】



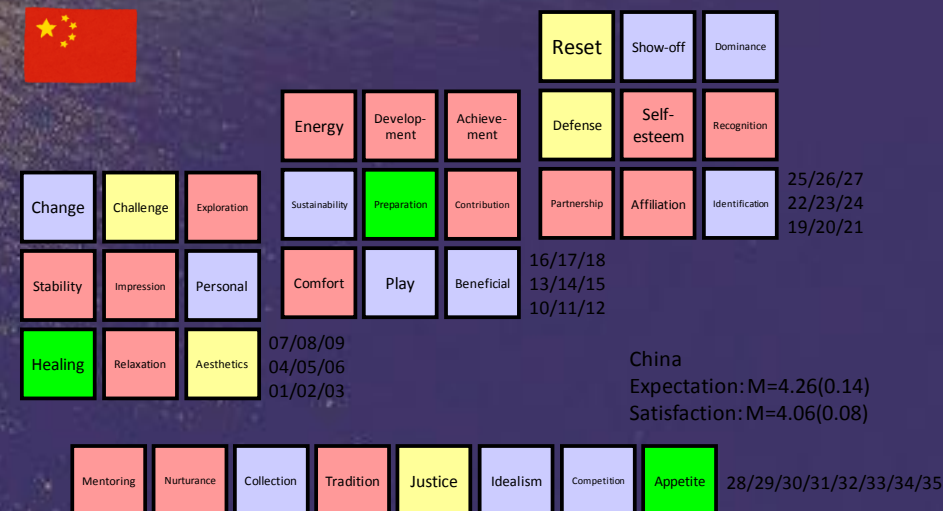
$\chi^2(1) = 3.442, p < .001, GFI = .999, AGFI = .991, CFI = 1.00, RMSEA = .032$

Fit the model

PICES-4countries' _ The Human Well-being CUBE (2015)

The desirable ocean differs from country to country.

Ex: L	Ex: H
Sa: H	Sa: H
Ex: L	Ex: H
Sa: L	Sa: L



Discussion: What else we can do the NEXT ?

- ❑ From SEM analysis, every countries **have same process** of WB model.
- ❑ However, the HWB of ocean's bounty have very **different meanings** depending on the country.
- ❑ Therefore, the desirable ocean differs from **country to country**.
- ❑ Also **the conservation strategy** might be changed from country to country.
- ❑ And we have to think about how do we measure happiness, how do we measure Human Well-Being, how can we do that within environmental limits.

Happiness (Well-being) is ultimate objective achievement for the people, for the society and for the human (Koyasu et al.,2012)
+ For the marine ecosystem services too! (PICES, 2015)

A photograph of a sunset over a vast, flat landscape. The sun is a bright, glowing orb on the horizon, casting a long, shimmering reflection across the ground. The sky is a deep, clear blue, and the ground below is a mix of light and dark patches, possibly sand or snow. The overall mood is serene and peaceful.

Thank you very much!