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...

We need to know the structure of Human Well-being.
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

Security

Basic material for good life

Correlation ↓ .737***

VIF<10

.151 ***

.349 ***

.366 ***

.398 ***

Good social relationship

R²=A:.506***

Health

R²=A:.646***

Freedom of choice and action

R²=A:.667***

=β=path coefficient

*** p<.001, ** p<.01, * p<.05, † p<.10, n.s.

χ²(1) = 3.442, p < .001, GFI = .999, AGFI = .991, CFI = 1.00, RMSEA = .032

Fit the model
The desirable ocean differs from country to country.
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)
Thank you very much!