



An assessment index system for the performance of marine ecological civilization construction

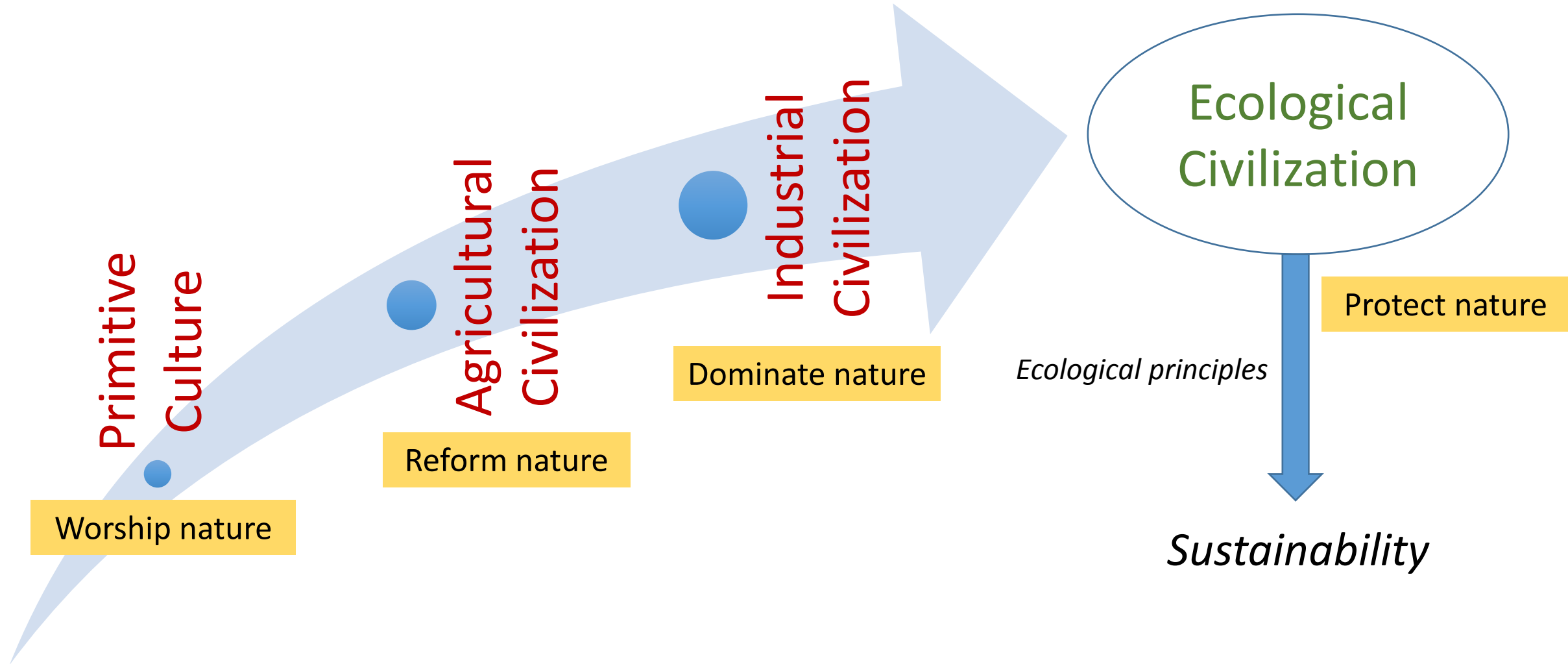
Wei Liu, Shang Chen, Tao Xia, Linhua Hao

The first Institute of Oceanography, SOA

- First phase: build the assessment index system
- Second phase: simulation assessment and modification
- Third phase: put forward the policy recommendations about implementation of assessment index system

1. Background

- Civilization



1. Background

- Marine Ecological Civilization

How do we define a healthy ocean?

How do human beings manage the largest resource system on Earth?

How does China, the nation with the largest population, sustainably explore its marine resource, and protect its ocean?

How does the nation balance between its population pressure and vulnerable marine environment?

2. Connotation

- **Marine ecological material civilization**

refers to ecological resources, ecological industry, ecological products and ecosystem services based on the coordinated development of population resources and socioeconomy

- **Marine ecological consciousness civilization**

refers to ecological consciousness, responsibility, obligation, rights and interests in the whole community based on the maintenance of the marine environment and social justice

- **Marine ecological institutional civilization**

refers to the restriction and incentive of social institution including ecological laws, statutes, policies and principles as well as guiding mechanism (policy, public opinion, market), driving mechanism (policy, interests, incentive) , and restriction mechanism (law, morality, regime)

- **Marine ecological behavior civilization**

refers to behavior rule, behavior expression and behavior judgement containing production mode and life style

3. Purposes

Building and implementing the assessment system of marine ecological civilization construction is the important guarantee to transform the ruling idea of the government.

1. promoting the integration of the economic, political, social, cultural, and ecological development and implementing the task of marine ecological civilization construction
2. Finding deficiencies and providing a basis for decision-making
3. Improving public satisfaction and enthusiasm

4. The basis of assessment

- Policy basis

Such as the overall plan for ecological civilization system reform, implementation plan of marine ecological civilization construction of SOA...

- Legislation basis

Such as environmental protection law, Water Pollution Prevention and Control Law...

- Science basis

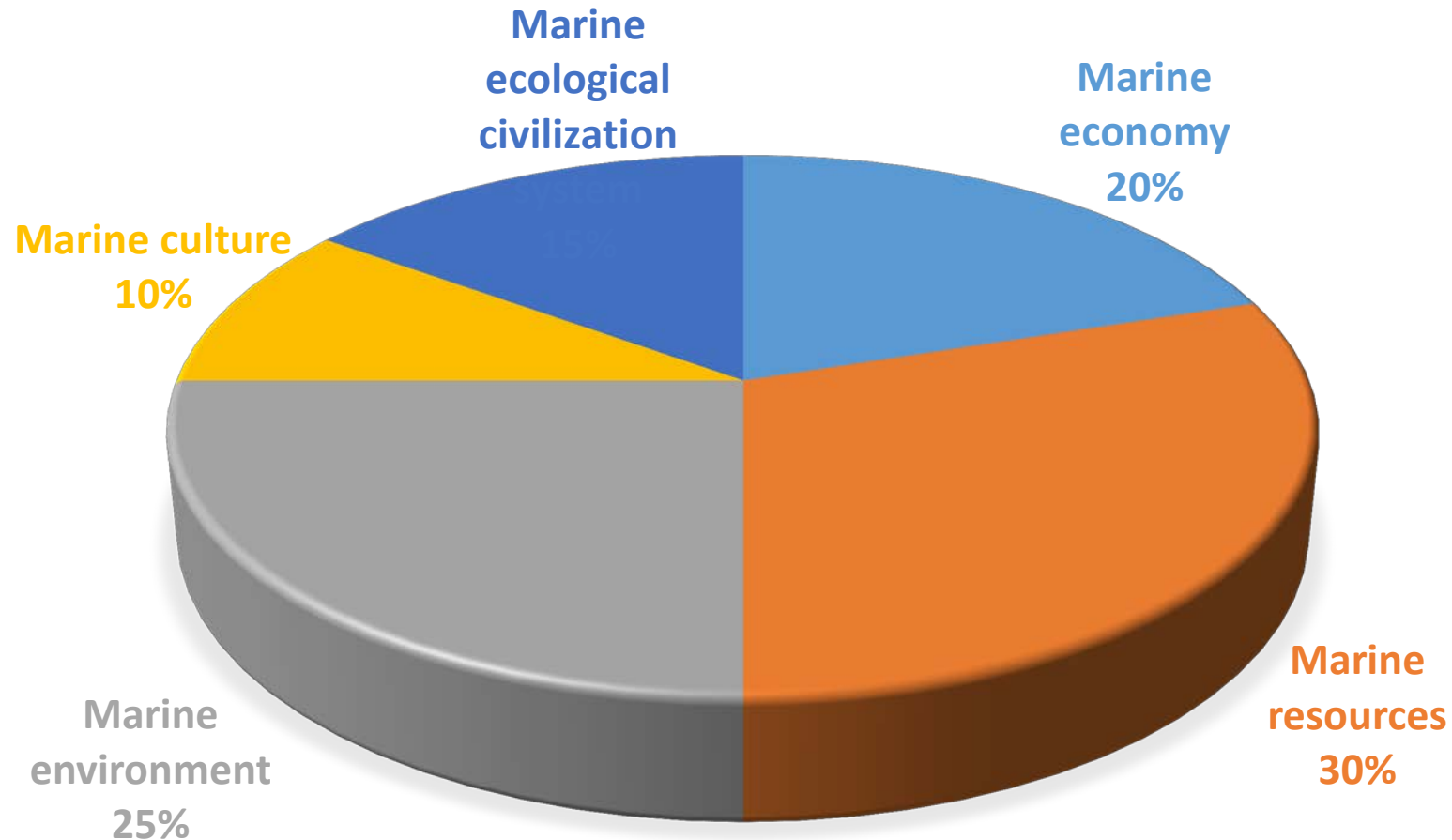
Responsible government theory, Environmental public trust theory, public goods theory, Environmental right theory

5. Principles

- Science-based
- Integration
- Dynamic
- Operability

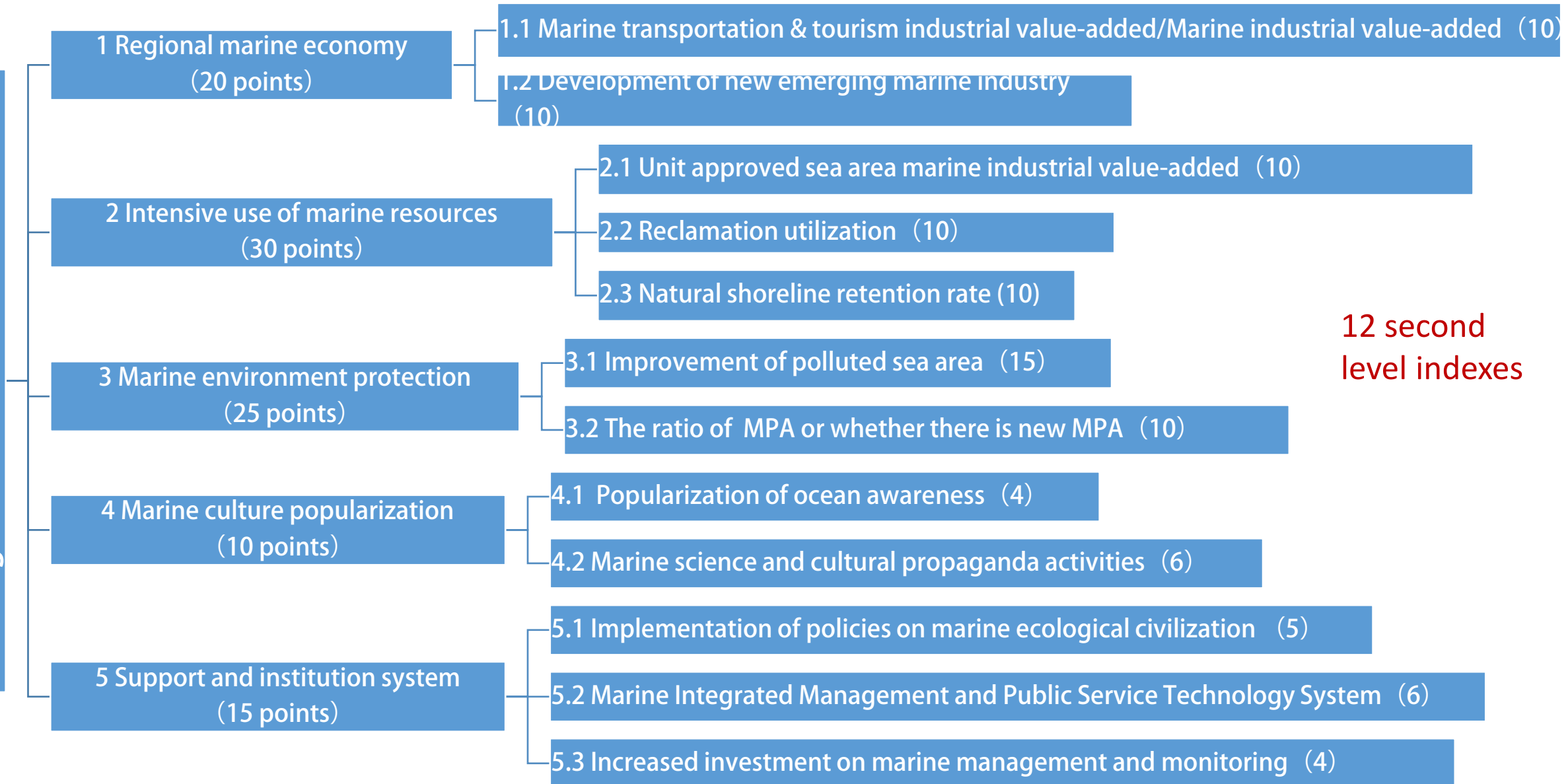
6. Assessment index system

5 first level indexes, total score 100



5. Assessment index system

Assessment index system for marine ecological civilization construction



5. Assessment index system

- Determination of weight value

Analytic hierarchy process (AHP)

- Calculation methods

1. Comparison of actual value and target value (includes 1.1, 2.1, 2.2, 2.3, 3.1, 3.2, 5.3)

if actual value \geq target value, full marks; if not,

X_{mn} score = actual value/target value *full marks *100%

target value: local average data or data specified in official document

2. scoring based on level (includes 1.2, 3.2, 4.2, 5.1, 5.2)
3. Questionnaires (include 4.1)

6. Next works

- Simulation assessment in Shandong province (7 coastal cities)
- Modified based on the results of simulation assessment
- Put forward the policy recommendations about implementation of assessment index system
- Modified from time to time

Thank you !