Progress of IMBeR Project

John Claydon

Executive Officer, IMBeR International Project Office

THE 8TH

CHINA - JAPAN - KOREA IMBeR SYMPOSIUM

International Project Office
Institute of Marine Research, Bergen, Norway

HAVFORSKNINGSINSTITUTTET
INSTITUTE OF MARINE RESEARCH

The Research Council of Norway

www.imber.info | @imber_ipo | imber@hi.no

Regional Project Office
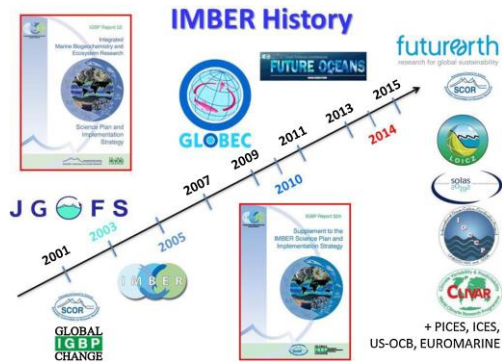State Key Laboratory of Estuarine and Coastal Research
East China Normal University
Shanghai, China

SKLEC

imber@ecnu.edu.cn

SCOR
International Council for Science
Scientific Committee on Oceanic Research

futurearth
research for global sustainability

What is IMBeR?

International project that promotes integrated, disciplinary and transdisciplinary marine research that addresses key ocean science issues, to provide evidence-based knowledge and guidance towards -

Ocean sustainability under global change for the benefit of society

CO_2
O_2
N_2
H^+
HCO_3^-

€ ¥ $ £

IMBER History

Hoffman (2015) Anthropocene 12: 42-53

IMBeR History

2005	2010	2015

IMBER
Integrated Marine Biogeochemistry and Ecosystem Research

IMBeR
Integrated Marine Biosphere Research

Changed to reflect the broadening of scope of the project[1]

Integrating more social science

Providing links to governance

[1]Hofmann, E.E. and the IMBeR Scientific Steering Committee (eds.) (2016): IMBeR 2016-2025: Science Plan and Implementation Strategy. IMBeR International Project Office, Bergen, Norway www.imber.info

Science Plan & Implementation Strategy 2016-2025

Grand challenge I
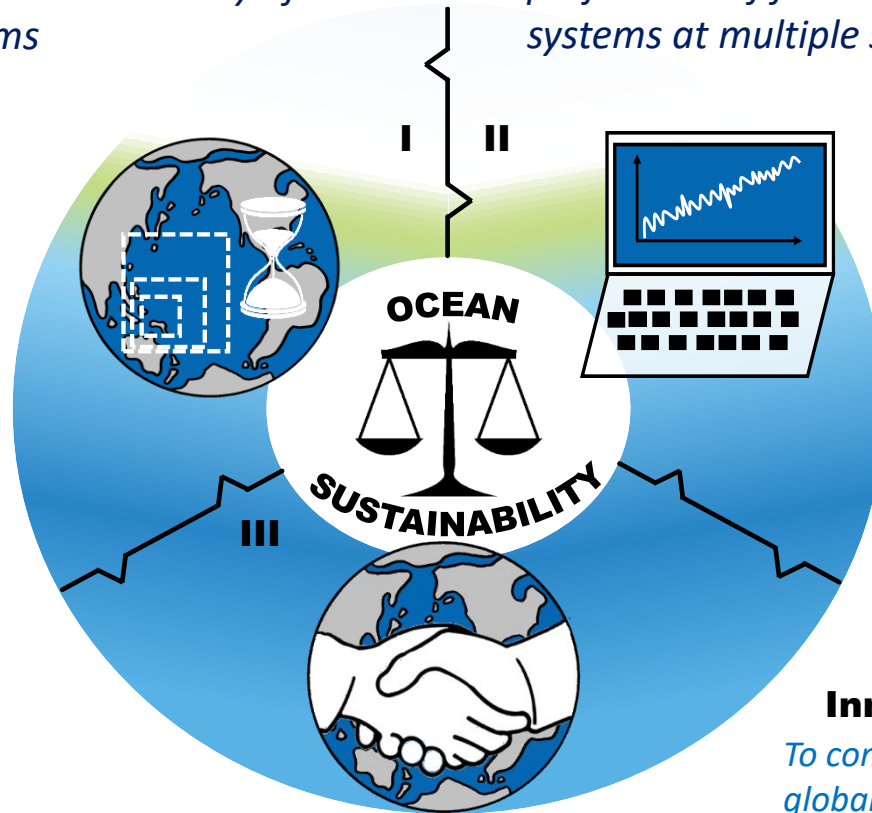*Understanding and quantifying the state and variability of marine ecosystems*

Grand challenge II
Improving scenarios, predictions and projections of future ocean-human systems at multiple scales

Innovation challenge 1
Understanding the role of metabolic diversity and evolution in marine biogeochemical cycling and ocean ecosystem processes

Innovation challenge 3
To advance understanding of ecological feedbacks in the earth system
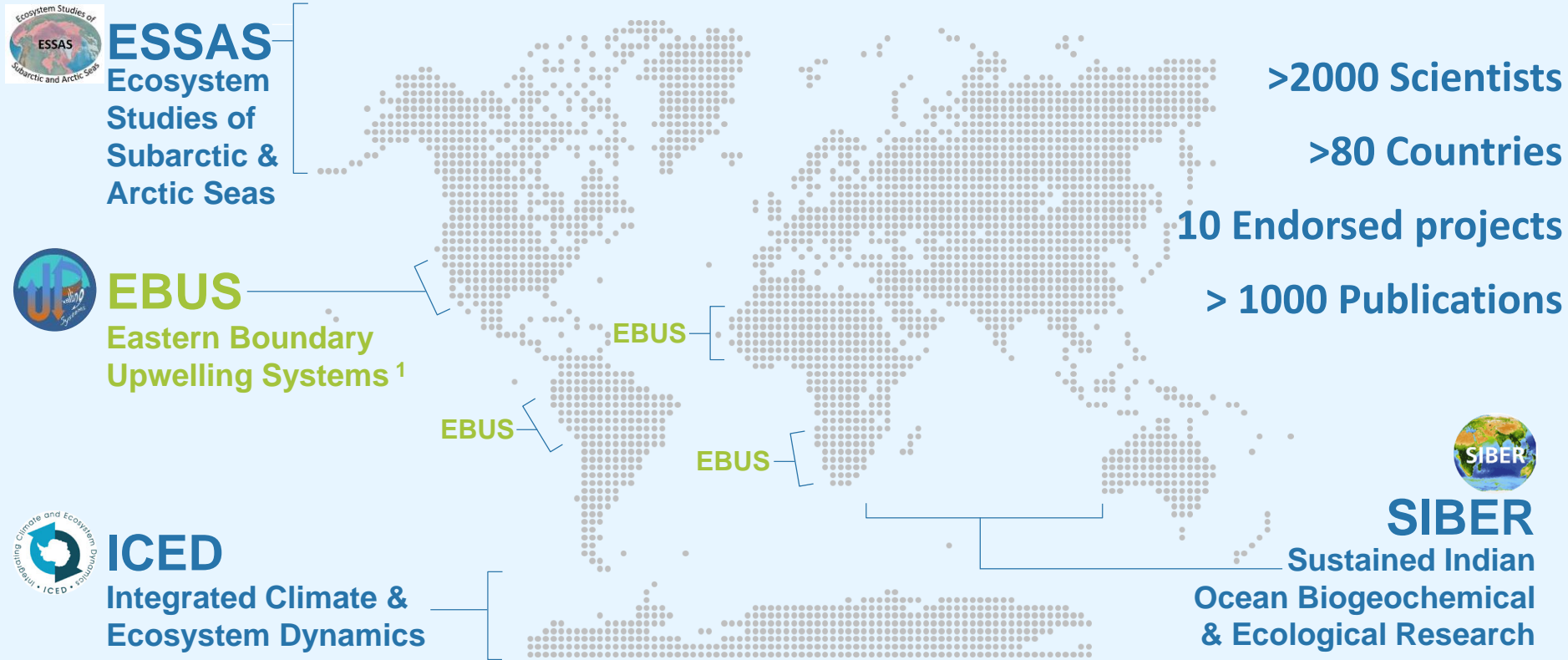
OCEAN SUSTAINABILITY

Innovation challenge 4
To advance and improve the use of social science data for ocean management, decision making and policy development

Grand challenge III
Improving and achieving sustainable ocean governance

Innovation challenge 2
To contribute to the development of a global ocean ecosystem observational and modelling network that provides ecosystem essential ocean variables (eEOVs) and to improve marine data and information management

[1]Hofmann, E.E. and the IMBeR Scientific Steering Committee (eds.) (2016): IMBeR 2016-2025: Science Plan and Implementation Strategy. IMBeR International Project Office, Bergen, Norway www.imber.info

IMBeR Regional Programmes & Working Groups

Integrated Marine Biosphere Research

ESSAS
Ecosystem Studies of Subarctic & Arctic Seas

EBUS
Eastern Boundary Upwelling Systems [1]

ICED
Integrated Climate & Ecosystem Dynamics

EBUS

EBUS

EBUS

SIBER
Sustained Indian Ocean Biogeochemical & Ecological Research

>2000 Scientists

>80 Countries

10 Endorsed projects

> 1000 Publications

Global

CLIOTOP
Climate Impacts on Oceanic Top Predators

HDWG
Human Dimensions Working Group

CMWG
Continental Margins Working Group [2]

SIC
SOLAS-IMBeR Carbon [3]

[1] EBUS is a collaboration with CLIVAR – Climate and Ocean - Variability, Predictability, and Change

[2] CMWG is a collaboration with Future Earth Coasts [3] SOLAS – Surface Ocean Lower Atmosphere Study

THE 8TH

CHINA - JAPAN - KOREA IMBeR SYMPOSIUM

MARINE BIOGEOCHEMICAL SCIENCES FOR THE SUSTAINABILITY OF THE WEST PACIFIC BIOSPHERE

IMBeR
Integrated Marine Biosphere Research

SKLEC
State Key Laboratory of
Estuarine and Coastal Research

4TH
CLimate Impacts on Oceanic TOp Predators
CLIOTOP
Symposium

National Taiwan Ocean University, Keelung, Taiwan, 15-19 October 2018

Oceanic biodiversity under climate change: shifts in natural and human systems

Objectives

1. Evaluate the responses to and impacts of climate variability and change on marine top predator species and their food chains, and dependent socio-economic and management systems over short to longer time scales.

2. Identify risk assessment and evaluation tools that incorporate climate variability in order to improve sustainable resource management.

3. Develop and evaluate adaptation and mitigation strategies at the single species, multi-species and ecosystem scales that address the cumulative nature of pressures placed on top predators and the ecosystems that support them.

Scientific Committee

Kevin Weng (USA)
Karen Evans (Australia)
Haritz Arrizabalaga (Spain)
Mary Gasalla (Brazil)
Alistair Hobday (Australia)
Takashi Kitagawa (Japan)
Masashi Kiyota (Japan)
Lilis Sadiyah (Indonesia)
Sebastian Villasante (Spain)

Organising Committee

Kevin Weng (USA)
Karen Evans (Australia)
Alistair Hobday (Australia)
Kuo-Wei Lan (Taiwan)
Ming-An Lee (Taiwan)
Joel Llopiz (USA)
Lisa Maddison (Norway)
Nan-Jay Su (Taiwan)

Themes

1. Global and regional trophic pathways and connectivity – trophic responses to variability and change in the marine environment.

2. Integrated modelling of systems based on shared socio-economic scenario pathways – projection and exploration of future patterns in marine ecosystems.

3. Adaptive approaches to biodiversity and resource management – strategies for incorporating climate variability and long-term change.

4. Responses of top predator life history dynamics to natural and anthropogenic drivers of variability and change.

5. Implications of variability in and change to the spatial dynamics of top predators for food security, species conservation and ecosystem functioning.

6. Management strategies for whole of systems – moving from biophysical systems to biophysical-socioeconomic systems – what are the key needs for guiding decision making into the future?

Important dates

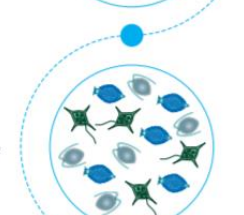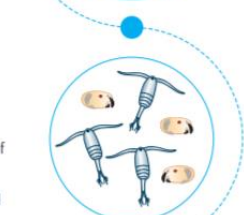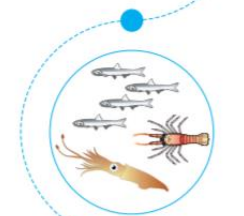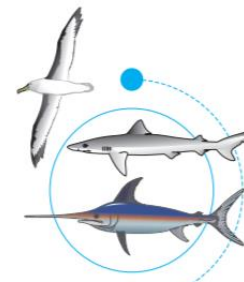Early bird registration and abstracts open: **January 2018**
Deadline for abstracts: **May 2018**
Acceptance of abstracts: **June 2018**
Early bird registration closes: **July 2018**
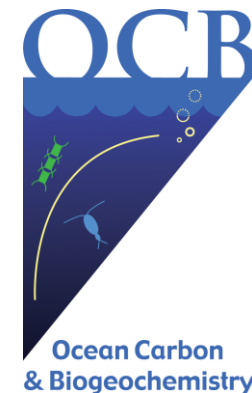Registration closes: **September 2018**

http://imber.info/science/regional-programmes/cliotop

ClimEco 6

Gadjah Mada University
Yogyakarta, Indonesia
1-8 August 2018

Interdisciplinary approaches for sustainable oceans

IMBeR
Summer School

Topics to be covered

Impacts of climate change on marine ecosystems and implications for food security

- Delineating the issues of climate change and impacts to marine ecosystems
- Oceanographic and biogeochemical processes
- Social impacts of climate and change in marine systems, including food security and links to human health
- Economic impacts of climate change in marine systems
- Ecological impacts and processes of changes

Social and economic research techniques

- Introduction to social science
- Quantitative vs qualitative social science research techniques
- Social psychology and behavioural economics

Governance and managing marine resources

- Introduction to marine governance, and different models of governance
- The role of science in marine governance, how to improve knowledge exchange between science and policy to allow adaptive decision-making processes
- Unexpected management outcomes – real examples and how they might be prevented in the future

Workshops interspersed between lectures

- How to write a winning research grant
- Social media for researchers
- How to write scientific papers (and to know where to target them)
- How to develop a research impact plan
- How to prioritise workloads
- How to work across disciplines (collaborate well)

Early Career Scientists

Building the capacity of EU early career marine researchers to operate effectively at the science-policy-society interface

17-20 June 2018, Lošinj, Croatia
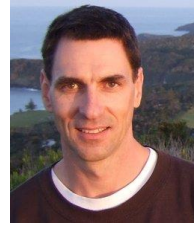
Scientific Steering Committee 2018

14 Countries

Carol Robinson
Microbial Oceanographer
UK

Oscar Iribarne
Ecology, fisheries
Argentina

Olav Sigurd Kjesbu
Fish stock productivity
Norway

Alice Newton
Social-ecological
Portugal

Suvaluck Satumanatpan
Management & governance
Thailand

Cisco Werner
Fisheries, modelling
USA

Alistair Hobday
Biological oceanographer
Australia

Frank Muller-Karger
Biological oceanography
USA

Ingrid van Putten
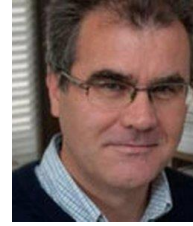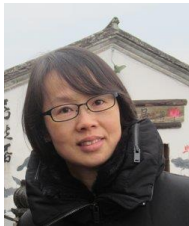Socio-economist
Australia

David
VanderZwaag
Law
Canada

Ying Wu
Geochemist
China

Chris Cvitanovic
Marine governance
Australia

Gerhard Herndl
Microbial ecologist
Austria

Marion Glaser
Social-ecological
Germany

Eugene Murphy
Biological models
UK

Ruben Escribano
Zooplankton
Chile

Dan Costa
Mammals, seabirds
USA

Mark Dickey-Collas
Fisheries biologist
Denmark

Laurent Bopp
Climate modeller
France

International Project Office

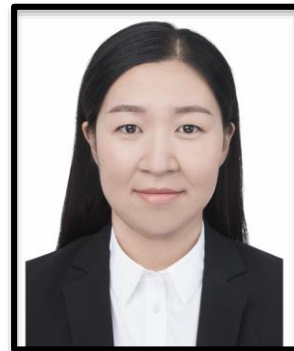Executive Officer
John Claydon

Deputy EO
Lisa Maddison

Veslemøy
Kjersti Villanger

Regional Project Office

Deputy Executive
Officer – Fang Zuo

Project Assistant
Xiaona Wang

East China Normal University

State Key Laboratory for Estuarine and
Coastal Research

Wish you all a successful Symposium