Comments on:

Construction of a Pragmatic Scientist Community Contributing to the Stakeholder-driven Management of the Local Environment

3rd Symposium

Science in Society – A Challenge in Japan

JST/RISTEX

Interactions between Science, Technology &Society Program

August 24, 2010

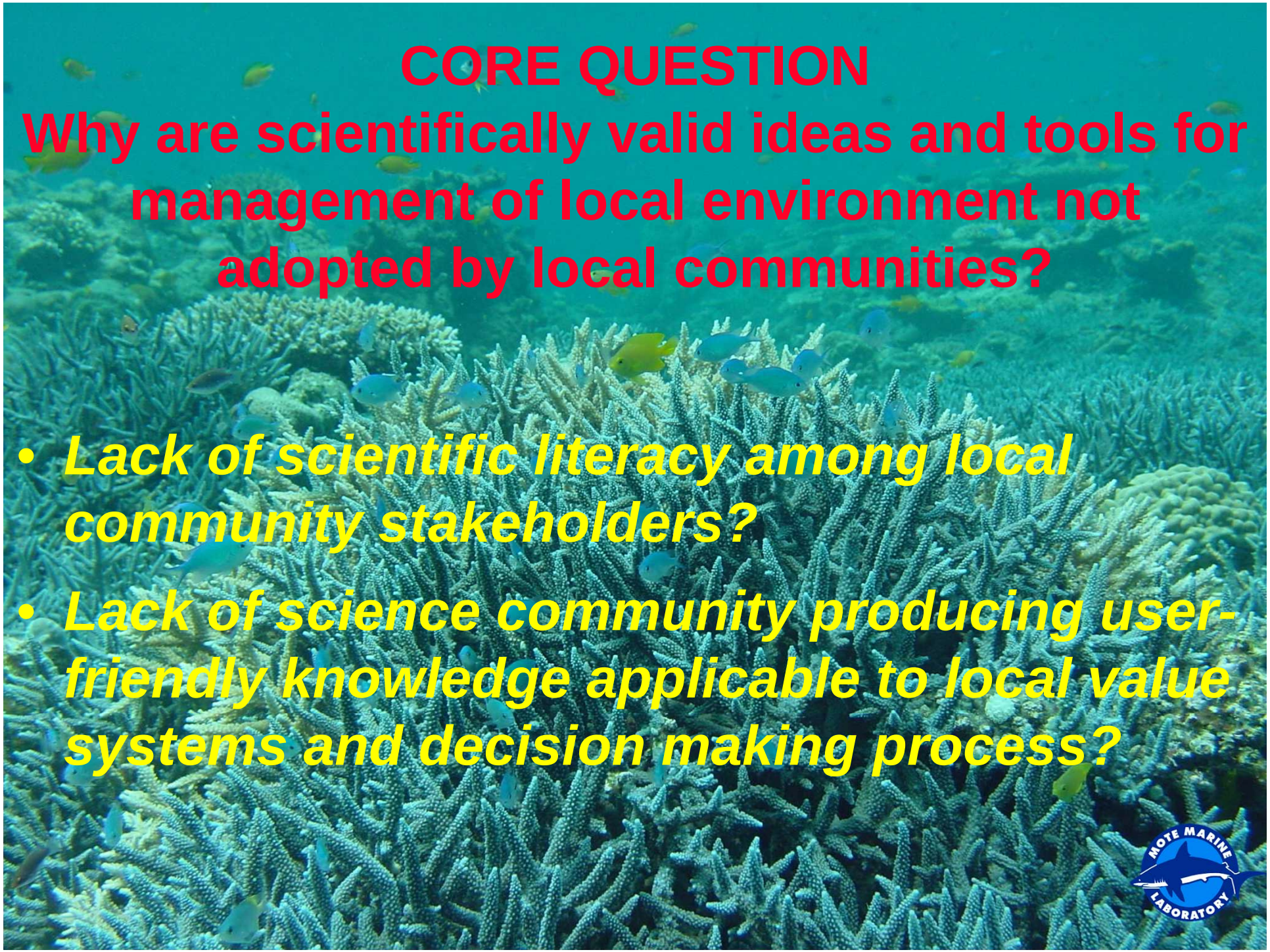
Dr. Michael P. Crosby - Senior Vice President

MOTE MARINE LABORATORY

www.mote.org

CORE ISSUE
Challenges with Interaction Between Managers, Scientists, & the Public

- *Poor and/or tenuous linkages between managers, scientists & stakeholder communities.*
- *Scarcity of truly management-oriented science to address local community issues.*
- *Political goals & poorly informed public pressure driving priorities of science support & resource management policy.*


CORE QUESTION
Why are scientifically valid ideas and tools for management of local environment not adopted by local communities?
• Lack of scientific literacy among local community stakeholders?
• Lack of science community producing user-friendly knowledge applicable to local value systems and decision making process?
MOTE MARINE LABORATORY

ROLE OF SCIENCE/RESEARCHERS

(Classic Scientific Method)

Scientist observes nature

↓

Scientist formulates null hypothesis (Ho)

↓

Scientist designs experiment/study to test Ho

↓

Scientist conducts study to test Ho

↓

Scientist interprets results as disproving or not disproving Ho

↓

Modification of Ho and/or experimental design, and run again

↓

et cetera

↓

Theorem established

MOTE MARINE LABORATORY

Management-Oriented Research

- *Focus on ecological & human dimension (socio-economic, cultural, historic use) factors in determining sustainability of resource management strategies.*
- *Enhance partnerships between Managers/Scientists/Special Interests/Public for developing and implementing sustainable use strategies.*
- *Provide information, analyses & recommendations for dealing with current & emerging issues on resource sustainability.*

Improved Translation & Transfer of Information Among & Between Scientists, Managers & the Public

- *Agencies & other funding institutions must commit long-term support for translation & transfer of S&T information in formats that are understood by different user groups.*
- *New generation of professionals must be trained & employed as "translators" to bridge gap in cultural "personalities" of different communities (i.e., scientists, managers, public).*

ROLE OF SCIENCE/RESEARCHERS

(Classic Scientific Method)

Scientist observes nature

↓

Scientist formulates null hypothesis (Ho)

↓

Scientist designs experiment/study to test Ho

↓

Scientist conducts study to test Ho

↓

Scientist interprets results as disproving or not disproving Ho

↓

Modification of Ho and/or experimental design, and run again

↓

et cetera

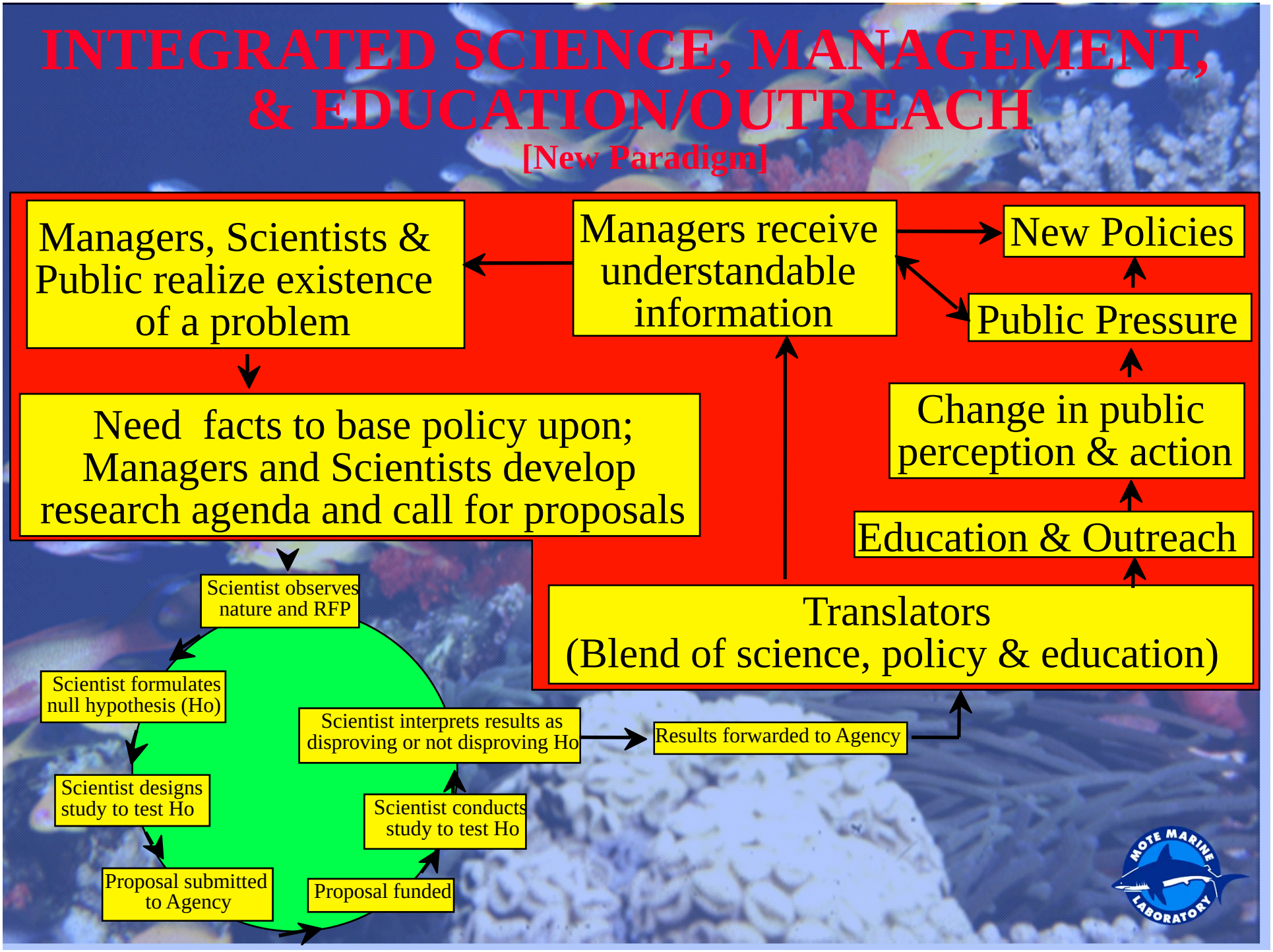
↓

Theorem established

MOTE MARINE LABORATORY

INTEGRATED SCIENCE, MANAGEMENT, & EDUCATION/OUTREACH

[New Paradigm]



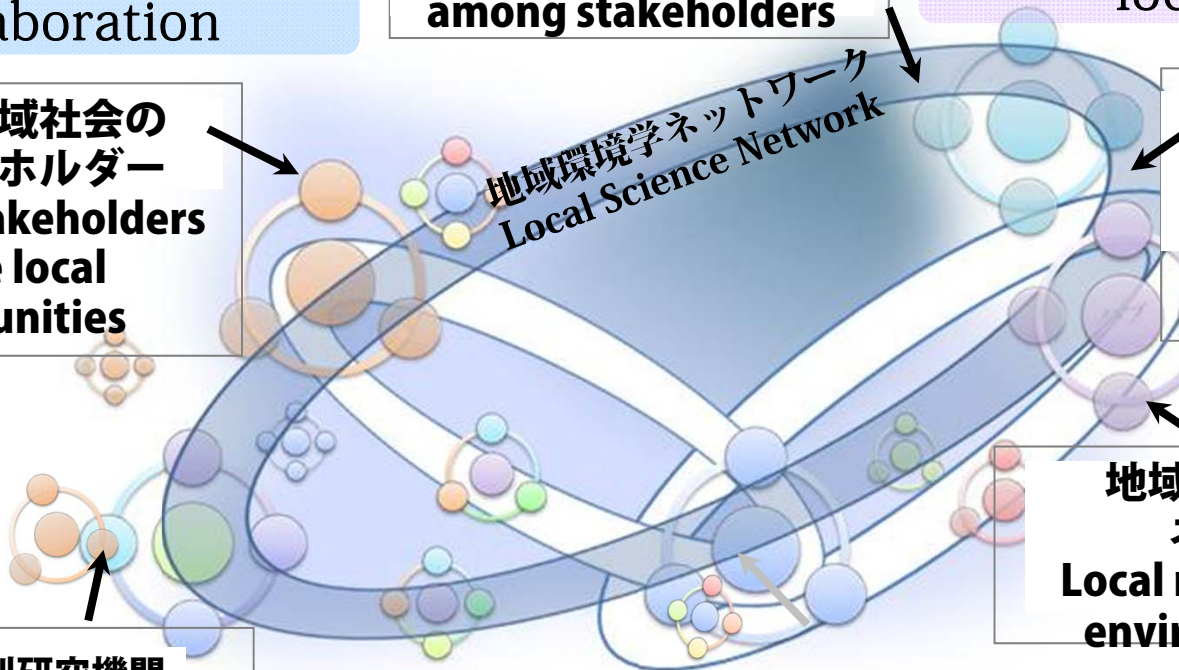
科学者とステークホルダーのコミュニティ「地域環境学ネットワーク」の構造

Structure of the Local Science Network for Environment and Sustainability

協働のガイドライン
Guideline of collaboration

科学研究に取り組むステークホルダー
Knowledge producers among stakeholders

参加型研究評価システム
Participatory evaluation of local science



多様な地域社会のステークホルダー
Diverse stakeholders of the local communities

個別課題のネットワーク
Network for specific environmental problem

地域ごとの課題解決ネットワーク
Local networks tackling environmental issues

レジデント型研究機関
Residential research institutions

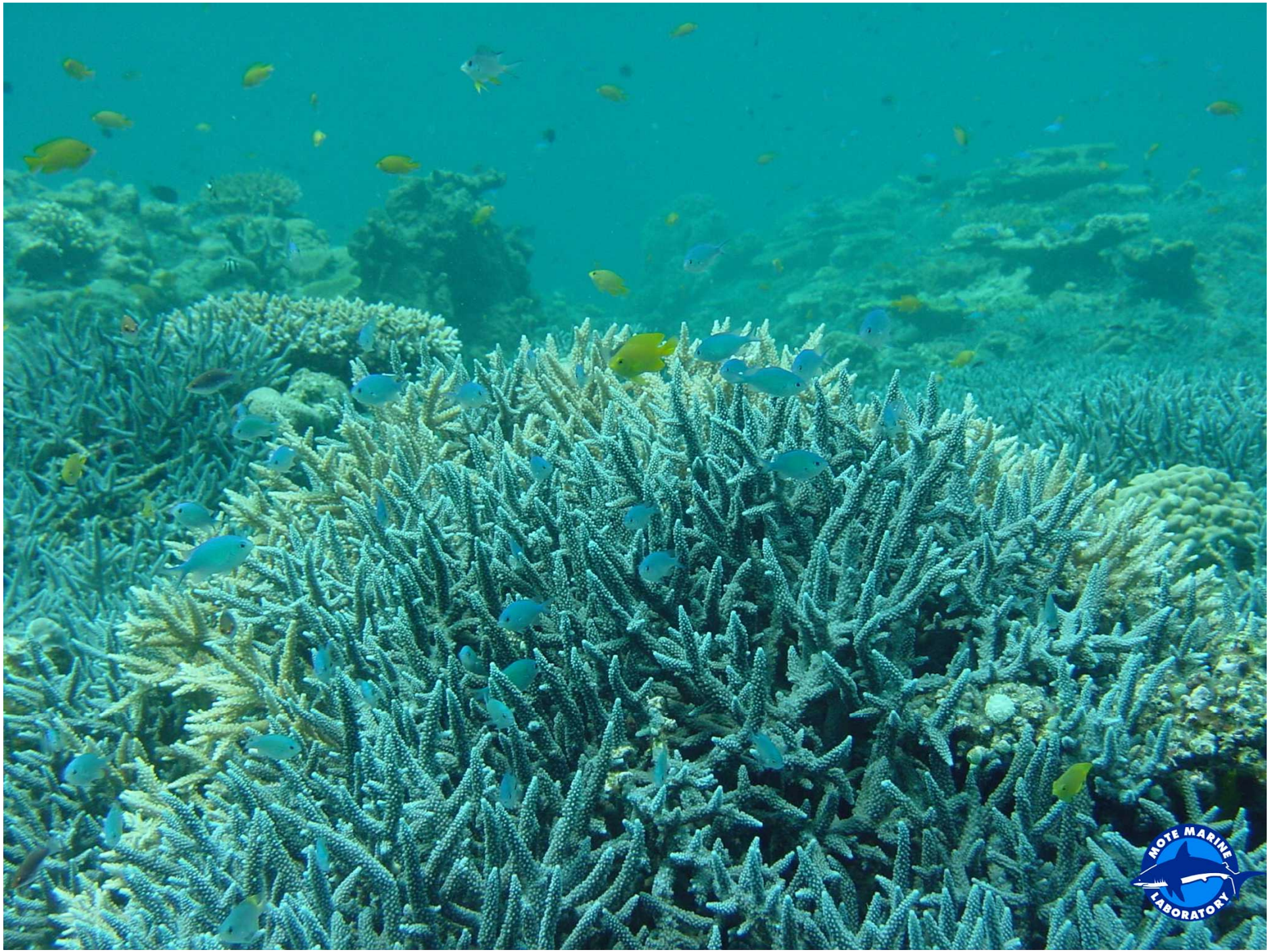
多様な事例についての情報共有
学びあい、育てあうネットワーク
Sharing information among diverse examples
Network for collaborative mutual learning

Key to New Paradigm: Integration of Science, Resource Management & the Local Community

- *Local Science for Environment and Sustainability*
- *Residential Research Institutions in Collaboration with Local Community*
- *Visiting Researchers as link to Academia*
- *Value and Incorporate Traditional Knowledge*
- *Long-term Sustainable support provided by partnership of local and national government, NGOs, and business and volunteers.*

Vision for the Future of Local Science Network for Environment and Sustainability

- *Paradigm for relationships between scientists, resource managers, & local communities shifts from fragmentation to collaboration*
- *Identification and understanding of economic & social driving forces behind sustainable & non-sustainable use of natural resources*
- *Shared evaluation & feed-back within network*
- *User friendly information & validated analytical models*
- *Establish an International Network of Local Science Networks*


MOTE MARINE
LABORATORY