PEER Science

Partnerships for Enhanced Engagement in Research

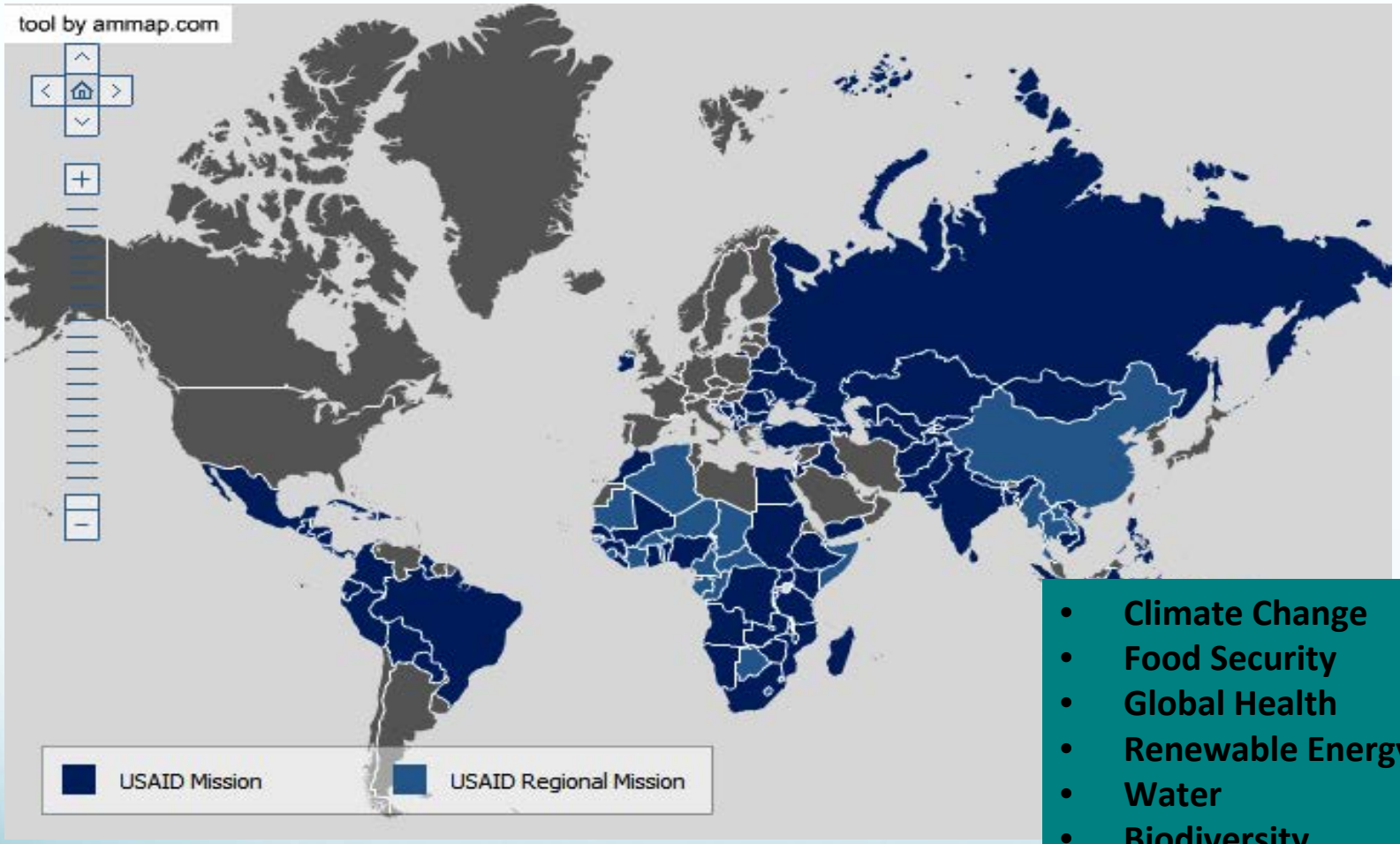
U.S.-Indonesia Frontiers of Science Symposium, Bali 2013

Dr. Ali Douraghy

What is USAID?

The U.S. Agency for International Development is the United States' principal international development agency, devoted to easing suffering, spreading prosperity and improving livelihoods in the developing world.

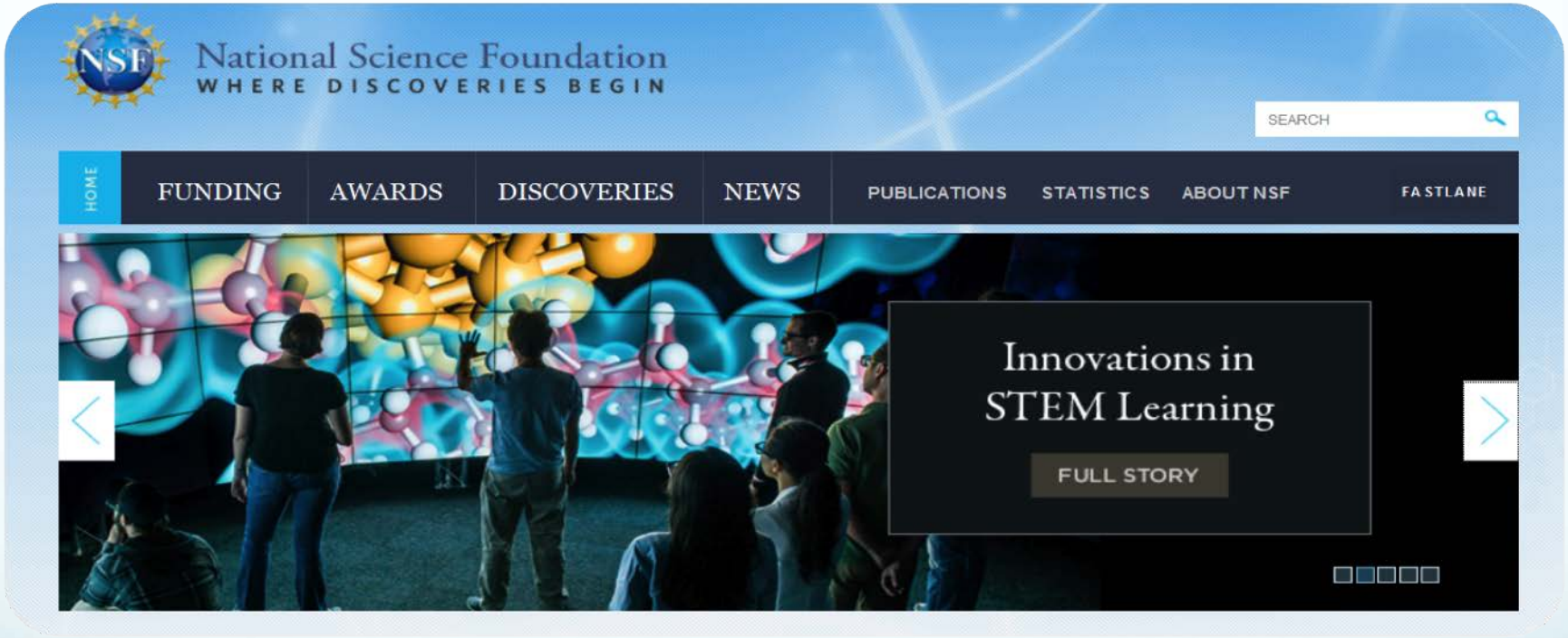
USAID works in many regions and sectors



- ASIA
- LATIN AMERICA
- MIDDLE EAST
- AFRICA

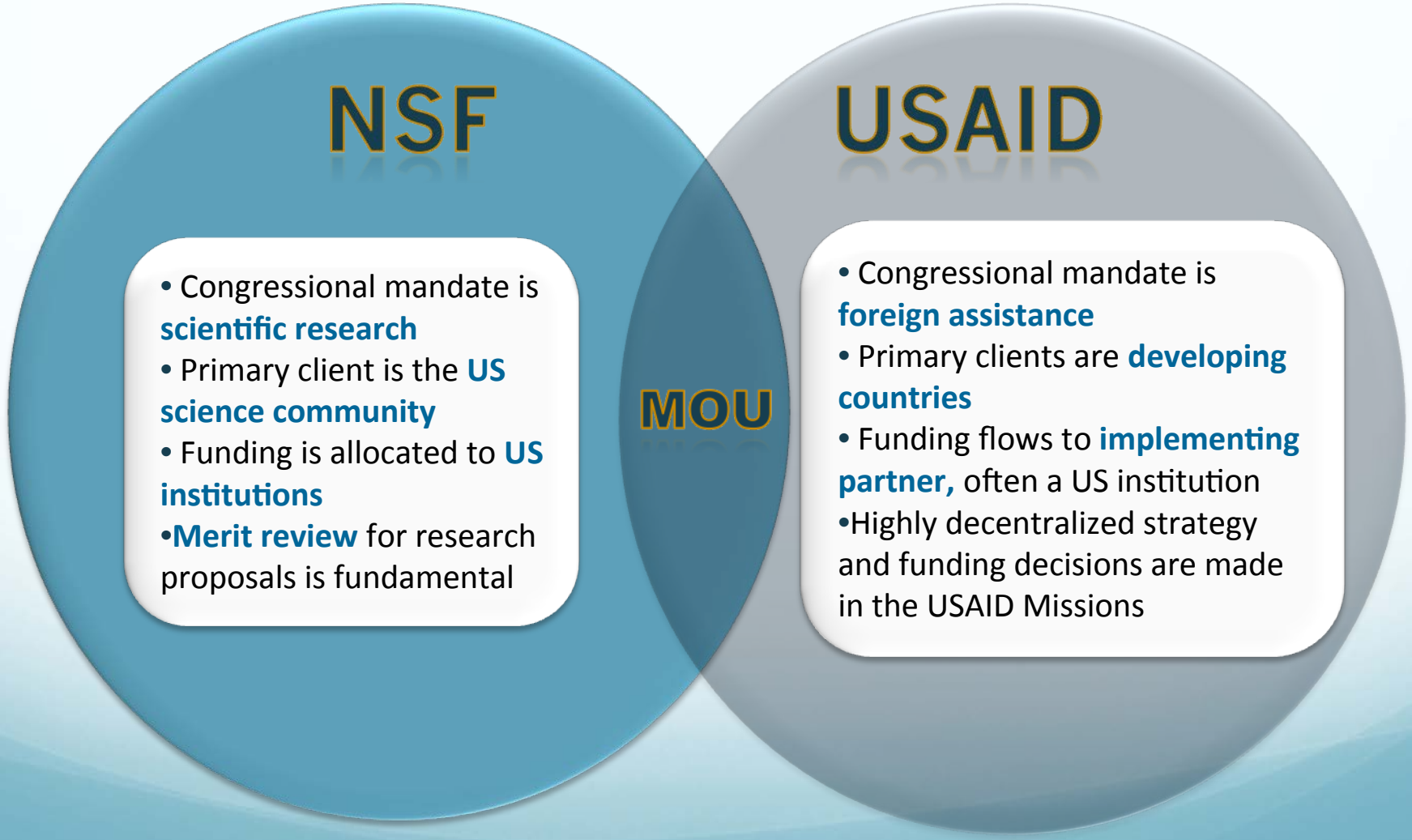
- **Climate Change**
- **Food Security**
- **Global Health**
- **Renewable Energy**
- **Water**
- **Biodiversity**
- **Conflicts and Disasters**
- **Education**

National Science Foundation



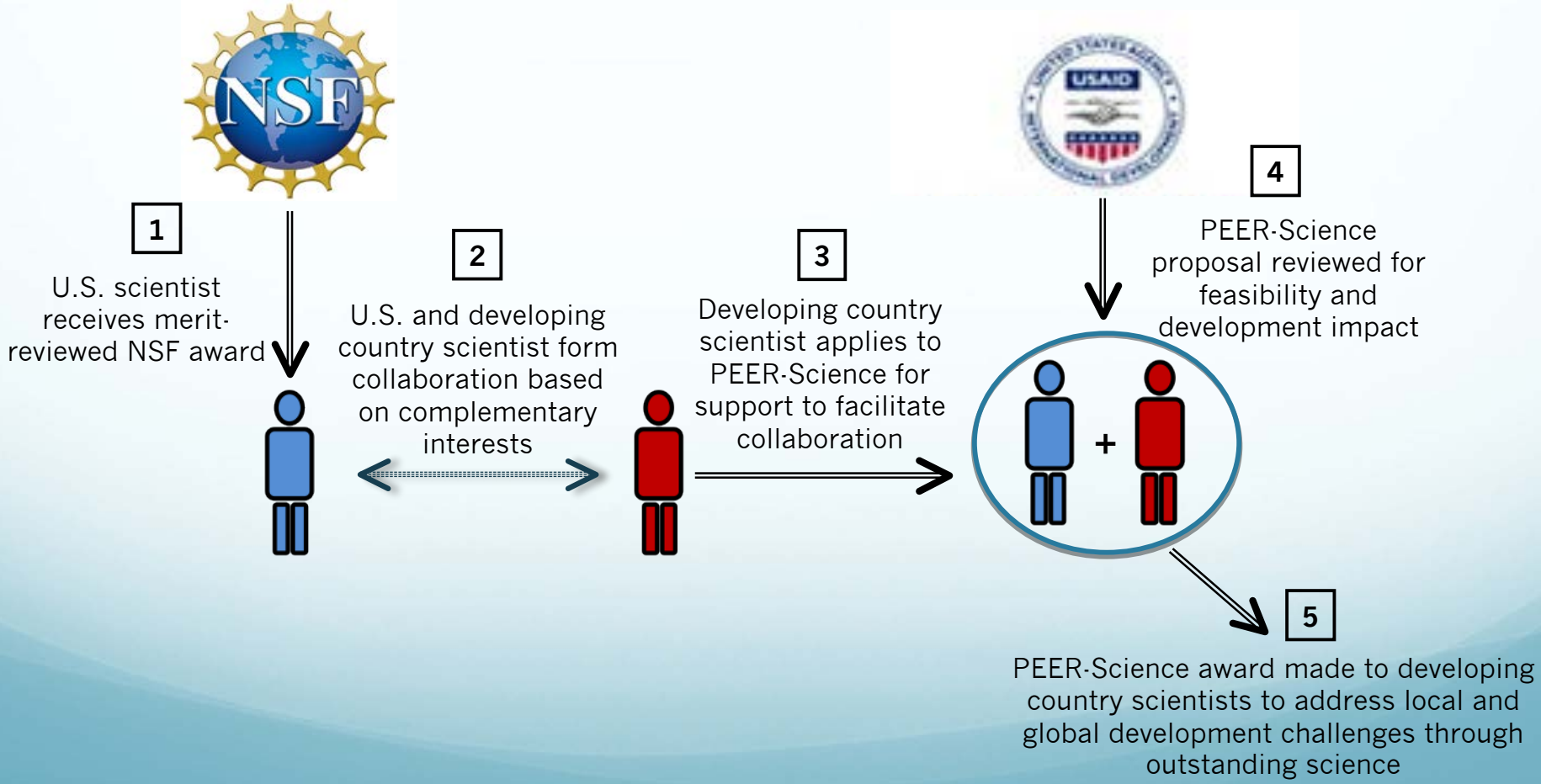
The National Science Foundation (NSF) is an independent federal agency created by Congress in 1950 "*to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense…*"

Different Mandates with Mutual Areas of Interest



Partnerships for Enhanced Engagement in Research (PEER)

PEER-Science is a USAID-funded competitive grants program to support research and capacity-building activities for developing country scientists who are working in partnership with their NSF-funded collaborators on topics of importance to USAID (e.g., water, climate, biodiversity, disaster mitigation, renewable energy).



Key features of awards

- PEER-Science: Up to $150K for 3 years to focus on development-related research

- Support research, students, equipment, travel, training, field work, etc.

- Awards made directly to developing country scientists' institution

PEER-Science Review Process

1. STEP 1: Eligible PEER-Science proposal is reviewed by panel of scientist experts with development experience. Development impact is important:
   - Student engagement/involvement
   - Strength of Partnership
   - Institution building
   - Dissemination of project outcomes
2. STEP 2: Highly Competitive (HC) and Competitive (C) proposals advance to USAID Missions for assessment of specific country relevance of development topic proposed
3. With above information and consideration of program portfolio, the steering committee makes final PEER-Science award decisions

Broader Impacts

For Developing Country:

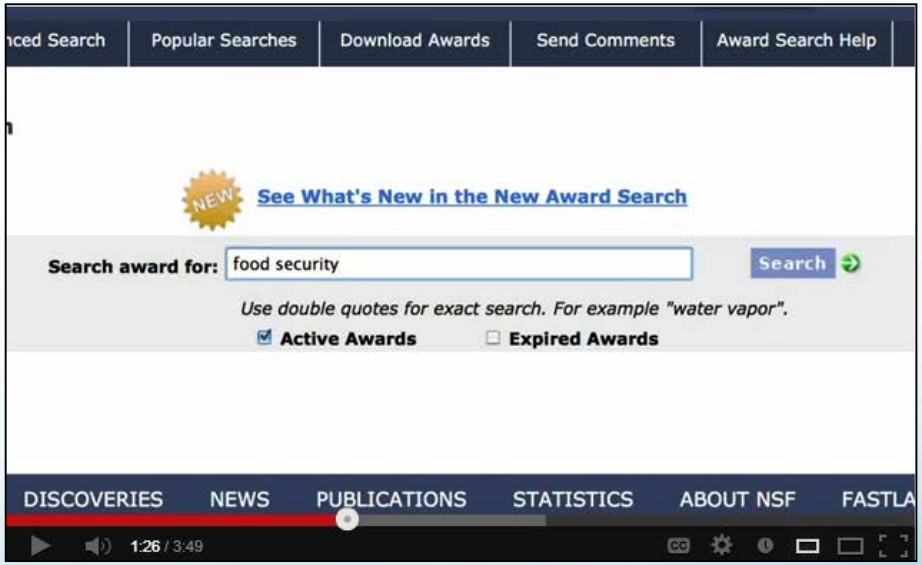
- Build research capacity
- Develop new curriculum
- Enhance merit-review standards
- Links to international research community
- Inform policy & practice
- Training in United States
- Provide data for evidence-based decisions
- Incorporate and adopt new technologies
- Advance Development

For United States:

- Increase global scope & foster international collaborations
- Bolster research effectiveness
- Access local knowledge and partners
- Access resources and (e.g. Facilities, Unique ecosystems, etc.)
- Establish new institutional linkages
- Advance Development

Application Modules

Module 1: Overview
Module 2: FAQ and Eligibility Requirements
Module 3: Identifying an NSF Partner
Module 4: Application Basics
Module 5: Voices from the Field



http://sites.nationalacademies.org/PGA/dsc/PEERscience/index.htm

PEER Workshops

Merit Review (for scientists)

- Importance of Peer and Merit Review
- Grants vs. Publications
- International Standards
- Evaluating Significance, Investigator, Approach, Budget etc.
- Blind, Transparent, Open Review, etc.
- Levels of Review
- Providing Feedback to Applicants
- Reviewer Ethics
- Qualifications
- Identifying and Resolving Conflicts of Interest
- Sample Exercise

Financial Training (for staff)

- U.S. government cost principles
- Maintaining financial records and documentation
- Financial Reporting
- Procurement policies
- Marking & Branding
- Travel policies and procedures
- Preparing for audits
- Fraud prevention
- Strengthening internal controls
- Time charging

2013 AWARDS

Citizen science solutions for national biodiversity data needs: developing a plant checklist for West Kalimantan, Indonesia
I Made Wiryana, Universitas Gunadarma
Campbell Webb, Harvard University

Connecting Science and Management through Biodiversity Research and Collaboration
Made Pharmawati, Universitas Udayana
Forest Rohwer, UC Los Angeles

Tree Isotope Records of Past Rainfall Variability in the Indonesian Maritime Region
Sri Yudawati Cahyarini, Indonesian Institute of Sciences
Mike Evans, University of Maryland - College Park

Improving process-skills of STEM undergraduate students in Indonesia through Problem-Based Learning (PBL): faculty member development, student assessment, and curriculum adjustment
Kamarza Mulia, Universitas Indonesia
Lisa Hunter, UC Santa Cruz

Combating Seagrass Decline: Developing a Restoration Manual for Indonesia and the Coral Triangle
Rohani Ambo-Rappe, Universitas Hasanuddin
Partner: John J. Stachowicz, UC Davis

Exploring the dynamic of extreme weather events in Indonesia using large scale meteorological pattern as the forecast guidance (pilot study: Indramayu, West Java)
Heri Kuswanto, Institut Teknologi Sepuluh Nopember (ITS)
Richard Grotjahn, UC Davis

2012 AWARDS

Incorporating Bali's Subak heritage into primary and secondary education: curriculum development, teacher training, and action research
Sang Putu Kaler Surata, Mahasaraswati University
John Stephen Lansing, University of Arizona

Strengthening research and teaching capacity of Andalas University in climate change and natural resources management
Rudi Febriamansyah, Andalas University
Brendan Buckley, Columbia University

Building Indonesian research capacity through genetic assessment of commercial fish species
IGNK Mahardika, Universitas Udayana
Kent Carpenter, Old Dominion University

Enhancements of research for adaptation of wetlands in Indonesia to projected impacts of sea level rise
Frida Sidik, Ministry of Marine Affairs and Fisheries
Ilka Feller, Smithsonian Institution

Marine biodiversity of Raja Ampat Islands: the ARMS, morphology, and genetic approaches for inventorying and monitoring patterns of marine biodiversity
Abdul-Hamid Toha, State University of Papua
Kent Carpenter, Old Dominion University

Assessing degradation of tropical peat domes and dissolved organic carbon (DOC) export from the Belait, Mempawah, and Lower Kapuas rivers in Borneo
Gusti Z. Anshari, Universitas Tanjungpura
Charles F. Harvey, Massachusetts Institute of Technology

Coral health surveys in COREMAP: building resilience in climate-impacted coral reefs of Indonesia
Jamaluddin Jompa, Hasanuddin University
C. Drew Harvell, Cornell University

USAID Peer Review Workshop

US-Indonesia Frontiers of Science

July 11, 2012

Have you ever been asked to participate in the review of a research *publication* or *proposal*?

8% No to both
34% Yes to both
50% Only publications
8% Only proposals

How many times have you participated in peer review during your career?

11% Never
46% 1-2 times
20% 2-10 times
23% >10 times

Was this workshop helpful to your knowledge of this topic?

96% Yes
0% No
4% Not sure

Would you recommend this workshop to a colleague?

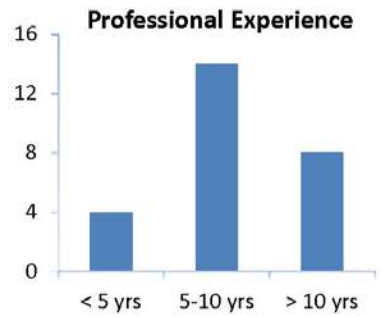
96% Yes
0% No
4% Maybe

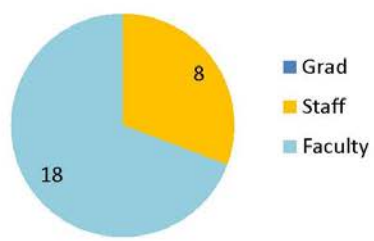
Was the instructor knowledgeable about this topic?

100% Yes
0% No
0% Don't know

Material Science&Eng
Chemistry & Materials
Paleoseismology
Marine/Ocean Science
Agriculture
Taxonomy, Biodiversity
Pharmacology
Chemistry
Biochemisty/Biophysics
Oceanography
Agriculture
Anthropology
Material Chemistry
Chemical Engineering
Mathematics
Nanomedicine
Food engineering

Fields represented





26 Participants

Top suggestions for future workshops

1. International Grant Writing
2. Science Communication
3. Publication Writing

Linking awards

<u>USAID PEER</u>: Building Indonesian research capacity through genetic assessment of commercial fish species
Universitas Udayana
University of California Los Angeles

<u>USAID PEER</u>: Marine biodiversity of Raja Ampat Islands: The ARMS, morphology, and genetic approaches for inventorying and monitoring patterns of marine biodiversity
State University of Papua
Old Dominion University

<u>NSF PIRE</u>: Origins of high marine biodiversity in the Indo-Malay-Philippine Archipelago: transforming a biodiversity hotspot into a research and education hotspot
UCLA, Old Dominion University

<u>USAID UP</u>: Augmenting Scientific Research and Educational through Biodiversity Research
UCLA; Universitas Udayana, Universitas Diponegoro, Universitas Negeri Papua

www.ibcraja4.org/

http://sci.odu.edu/impa/ctpire.h

The New York Times

January 29, 2013

Scientist at Work

Notes From the Field

January 29, 2013, 9:00 am | 1 Comment

Diving Into the Coral Triangle

By C. DREW HARVELL

Courtney Couch

The coral reefs of Sikka, Indonesia, are bastions of biodiversity.

Drew Harvell is associate director for environment at the Atkinson Center for a Sustainable Future at Cornell University. She is studying the health of coral reefs and marine ecosystems in Indonesia.

Drew Harvell

Students from Hasanuddin University, Sulawesi, taking water samples near a village in the Spermonde Archipelago.

The "we" was me and the students and faculty members working with Professor Jompa, who is the director of Coremap, the largest effort in the Coral Triangle to develop community-based marine protected areas.

There are many waterborne diseases that move downstream into the ocean through human sewage, even some that cause deadly coral diseases, and our goal is to investigate the twin problem of sewage pollution for human health and coral health, particularly inside marine protected areas. This focus on how human health is often intertwined with wildlife and the health of the environment is called One Health.

The argument we are making is that sewage pollution at the level we are seeing is not only a threat to the coral reefs, but also to the humans who are dependent on them and live in the same waters. It feels like a scientific barrier because as the world finally shifts attention to the large-scale effects of climate and wrestles with adapting to

Andy Hooten

Drew Harvell and Jamaluddin Jompa examining coral health in Biak, Papua.