

Challenges in International Cooperation: South Perspective

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HEALTHY EARTH HEALTHY FOOD HEALTHY PEOPLE



Who We are



**The Global
Connectivity**



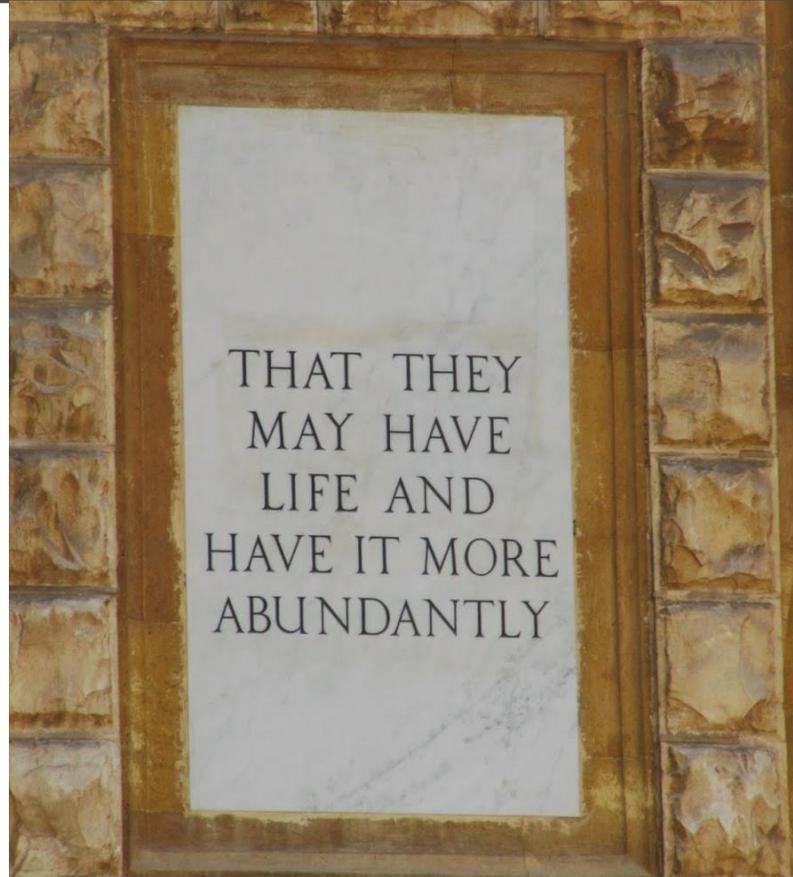
**Existing
Opportunities**



**Challenges and
Shortcoming**



Recommendations



Who Are We?

FAFS LEADING THE WAY TO FOOD AND WATER SECURITY IN ARID AND SEMI-ARID REGIONS

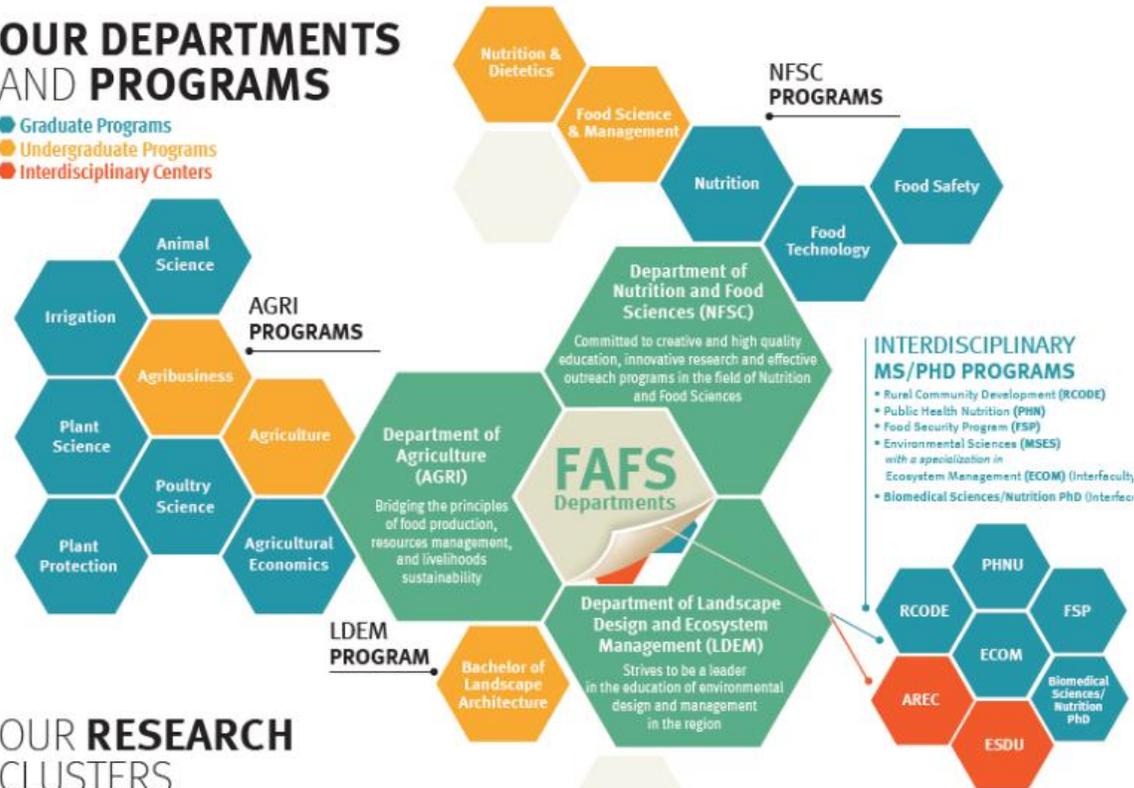
Our Strategic Themes:

- Establishing a culture of interdisciplinary thinking and acting
- Enriching our students' educational experience through service learning
- Encouraging and facilitating engagement with stakeholders and communities in Lebanon and the region.



OUR DEPARTMENTS AND PROGRAMS

- Graduate Programs
- Undergraduate Programs
- Interdisciplinary Centers



OUR RESEARCH CLUSTERS

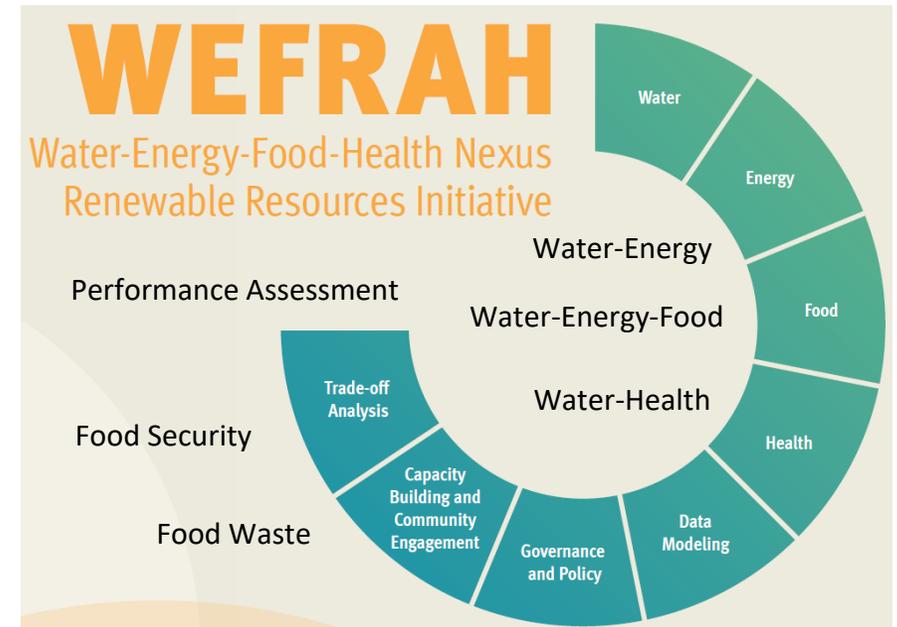
- Plant Science (AGRI)
- Animal Science (AGRI)
- Landscape for Culture and Socio-Ecological Health (LDEM)
- Diet, Obesity and Non-Communicable Diseases (NFSC)
- Water, Agriculture, Ecosystem and Remote Sensing (AGRI and LDEM)
- Sustainable Food Systems (NFSC and AGRI)
- Food Applications and Consumer Research (NFSC and AGRI)



64 participants
from all faculties and
IT, EHSRM, PPD, IFI, K2P

63 total applicants
>50% from MSFEA & FAFS
17 PIs, 44 Co-PIs and 22
Co-Is

+ 2 educational & capacity building
projects



Goals:

Texas A&M Water-Energy-Food Resource Initiative

(Launched Oct. 2015: 250 researchers from TAMU and 300 globally)

- 1. Expand intellectual capacity and scope of TAMU's Water-Energy-Food Nexus Community by **developing analytics, policy, and governance best practices;*****
- 2. Establish a Nexus **Community of Science and Practice;*****
- 3. Identify **opportunities and gaps in current WEF Nexus related research.*****

Global Activities and Partners




NRT

RCN

National Activities



The Virtual Water Trade (VWT)

Why global networks are needed:

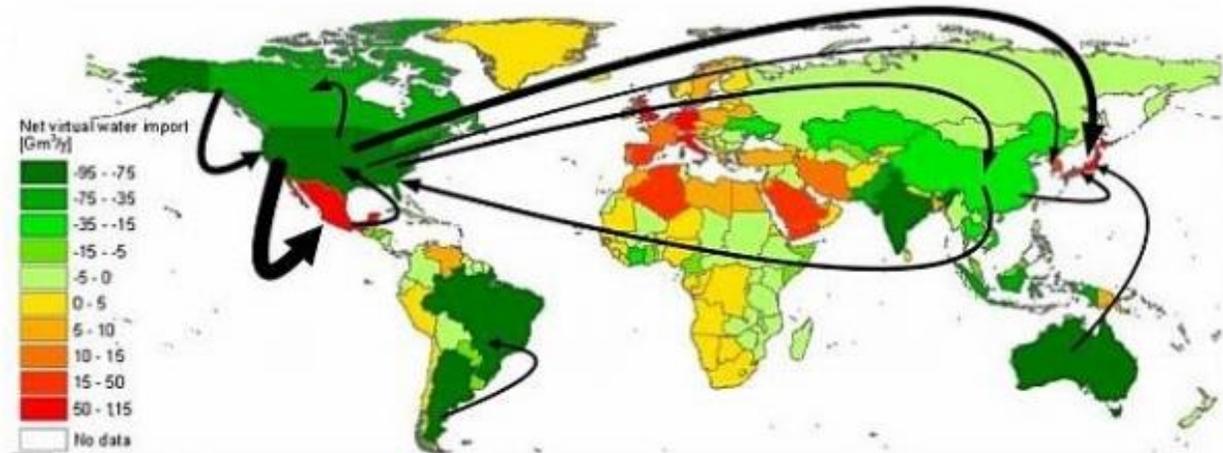
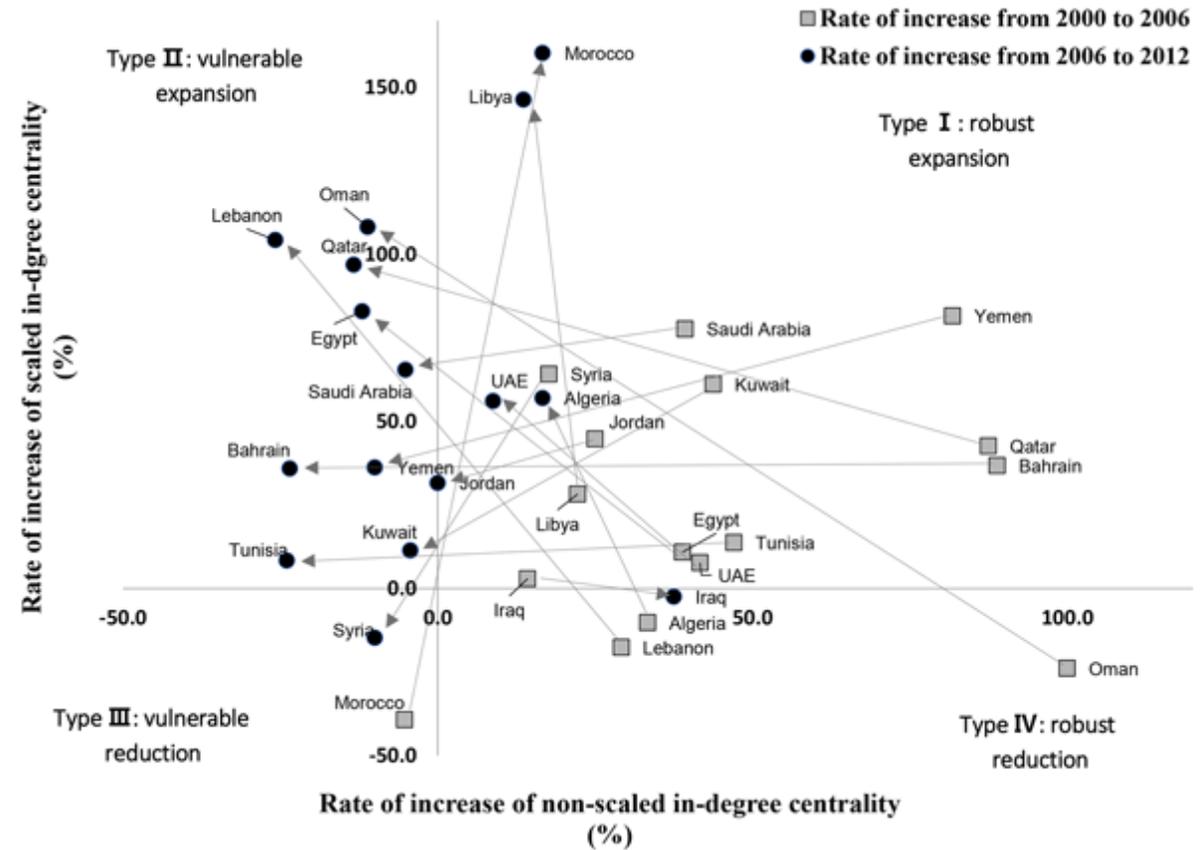


Fig. 2. Virtual water balance per country and direction of gross virtual water flows related to trade in agricultural and industrial products over the period 1996–2005. Only the biggest gross flows (>15 Gm³/y) are shown.

(Water Footprint Network, 2012)



Sang-Hyun Lee, Rabi H. Mohtar, and Seung-Hwan Yoo (2019) **Assessment of Food trade impacts on water, food, and land security in the MENA region**. *Hydrology and Earth Systems Science (HESS)*, 23, 557-572. Copernicus Publications EGU. doi.org/10.5194/hess-23-557-2019

OCP Phosphate Trade: Implications & Tradeoffs

Local Water Competition and Global Food Security

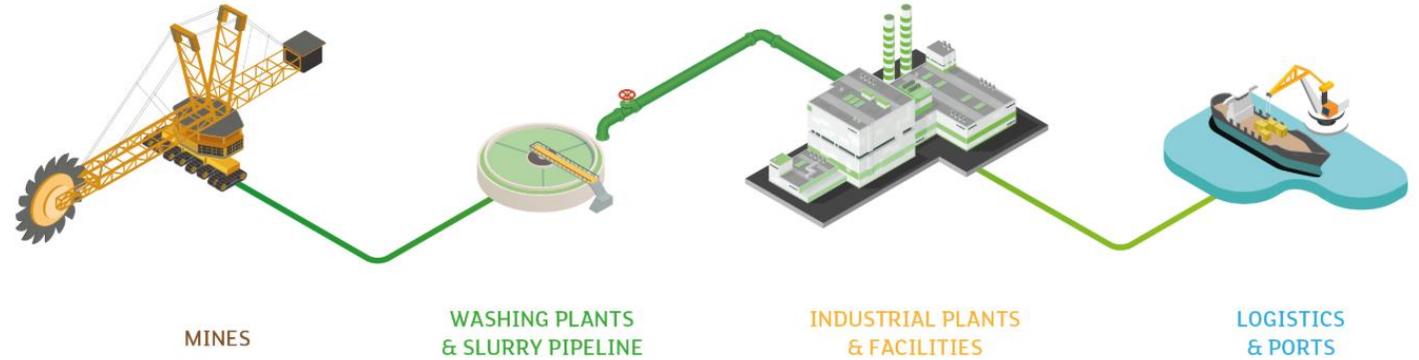
OCP Group, a global leader in the phosphate industry

THE WORLD'S FIRST EXPORTER OF PHOSPHATE BASED PRODUCTS

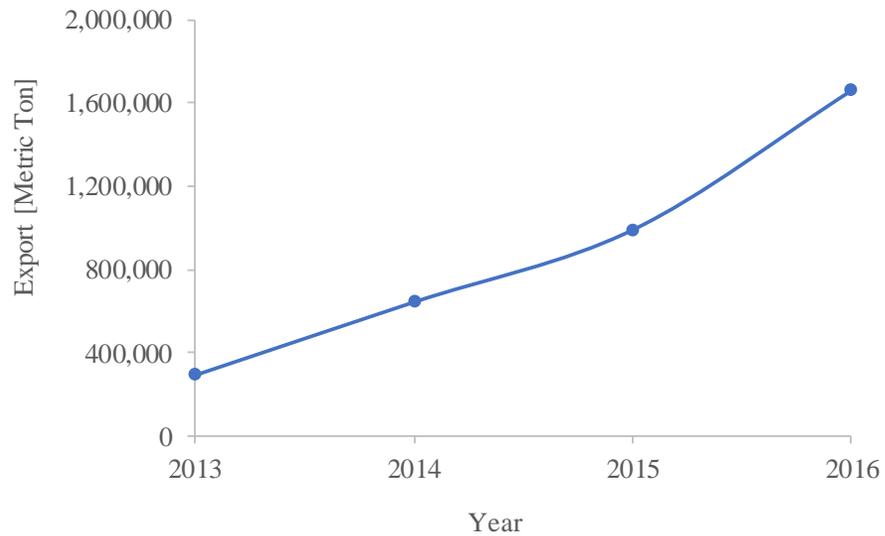
1 FIRST
EXPORTER OF PHOSPHATE IN ALL ITS FORMS WORLDWIDE

28%
OF MARKET SHARE IN ALL FORMS OF EXPORTED PHOSPHATE
Source OCP & IFA, 2013

A UNIQUE STRATEGIC PRESENCE THROUGHOUT THE ENTIRE PHOSPHATE VALUE CHAIN



Fertilizer Export to Africa: 2013-2016

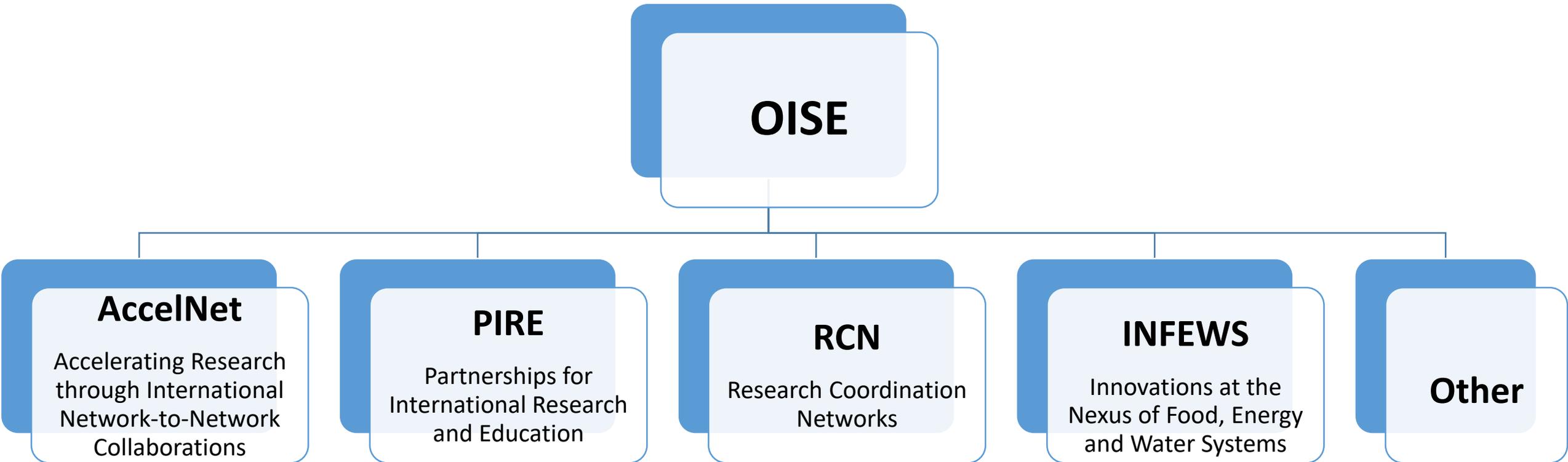


Role of the Office of International Science & Engineering (OISE)

Focuses on international activities to promote innovation among the U.S. research community through access to international knowledge, infrastructure, and capabilities.



Programs within Office of International Science & Engineering (OISE)



Goals

- Strategic linkages ***among U.S. research networks and complementary networks abroad*** .
- Foster high-impact science and engineering by providing opportunities to create new collaborations and new combinations of resources and ideas **among linked global networks**.

https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505584

Limitations

- Predominantly supports U.S. participants
- Network participants from *institutions outside the U.S.* are encouraged to seek support from their respective funding organizations.
- ***NSF funds may not be used*** to support the expenses of the international scientists and students at their home institution.
- ***NSF funds may be used*** for AccelNet-related expenses for international partners to participate in networking activities *while in the U.S.*



Goals

- Supporting investigators to communicate & coordinate their research, training & educational activities ***across disciplinary, organizational, geographic and international boundaries.***
- Provide opportunities to foster new collaborations, *including international partnerships.*

Limitations

- Network participants from ***outside the US are encouraged to seek support from their respective organizations***

NSF funds limited to:

- **Travel expenses for US scientists & students** participating in visits integral to RCN project
- RCN-related expenses for inter'l partners to participate in **activities while in the US.**
- RCN-related ***expenses for US participants*** to conduct networking activities in the international partner's home laboratory.

Goals

- NSF /NIFA promote int'l cooperation that links scientists & engineers from a range of disciplines and organizations to ***solve significant global challenges at the nexus of FEW systems.***
- International collaboration ***are encouraged (but not required)*** when those efforts enhance the merit of the proposed work by incorporating unique resources, expertise, facilities or sites of international partners.

Limitations

Research may involve any country/countries, but the international counterparts should have support or obtain funding through non-NSF sources, and the proposal should state how they will pursue research funding support or what relevant support they already have.

Funding opportunities relevant to researchers outside the US who would like to cooperate with US researchers on INFEWS proposals

Examples:

General Opportunities for support of international research partners:
**USAID Partnerships for Enhanced Engagement in Research (PEER) -
National Academies**

Country-specific, independent funding opportunities:

US-Egypt Joint Fund – National Academies

BELMONT

F O R U M

- **The Belmont Challenge :**

To support international transdisciplinary research providing knowledge for understanding, mitigating and adapting to global environmental change.

- **Collaborative Research Actions (CRAs) themes = Forum's call for proposals**

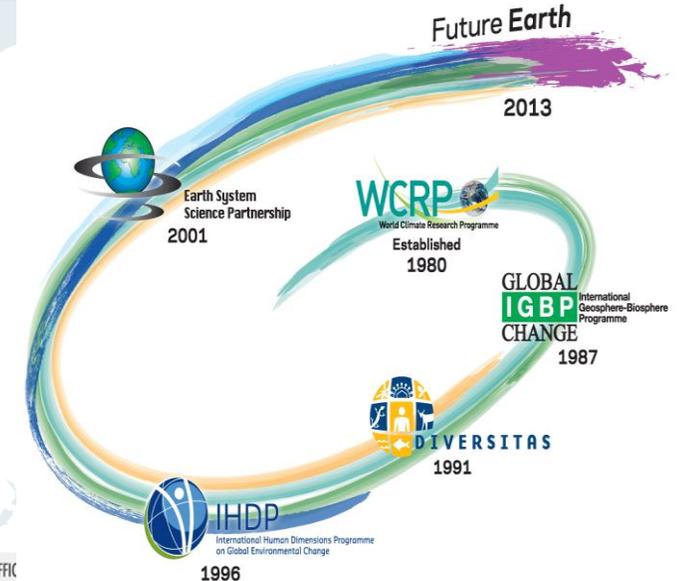


- The research consortia must be supported by **at least 3 funding organizations**.
- Cooperation partners **not** covered by participating funding agencies are eligible to join consortia **at their own expense**.



MISSION

Accelerate transformations to global sustainability through research and innovation



GOVERNING COUNCIL

UNITED NATIONS UNIVERSITY

BELMONT FORUM

International Science Council

STS forum

UN environment
United Nations Environment Programme

WORLD METEOROLOGICAL ORGANIZATION

UNITED NATIONS
Educational, Scientific, Cultural Organization

STRATEGIES

- Facilitate, Focus, & Amplify Research and Innovation
- Shape Sustainability Narratives
- Build the Field of Sustainability and Innovation

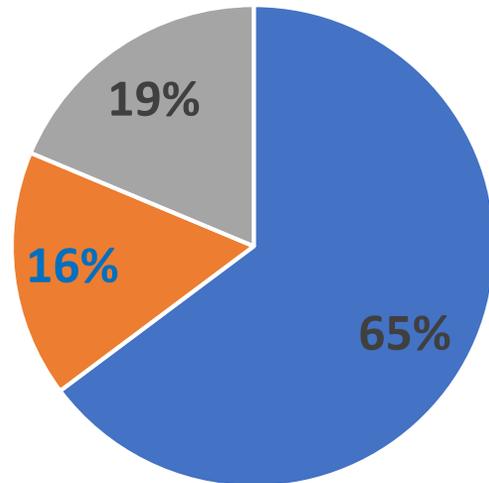


The Cyprus Institute as the MENA Regional Hub for “Future Earth”



The Cyprus Institute has been selected to manage the MENA Regional Hub, covering the Middle East and North Africa including the Eastern Mediterranean and the Gulf States.

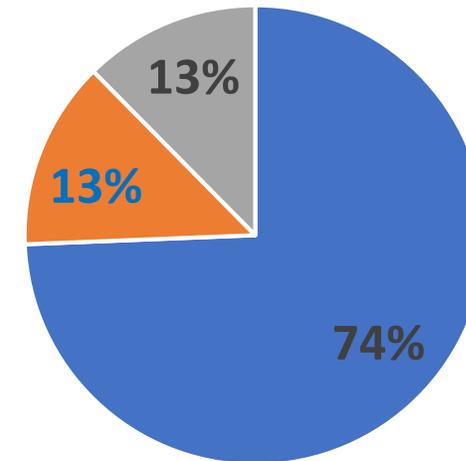
PRIMA Call 2018 (S1 & S2)
Project Participating Entities
Accepted Projects



- EU COUNTRIES
- SOUTH COUNTRIES (Non Associated)
- ASSOCIATED COUNTRIES



PRIMA Call 2018 (S1 & S2)
Project Budget Distribution
Accepted Projects



- EU COUNTRIES

SOUTH COUNTRIES (Non-Associated): Egypt, Lebanon, Morocco, Algeria & Jordan;
No South Coordination of Any Project (S1 & S2)

Institutions are encouraged to seek support from their respective local / national funding organizations



**International Research and Educational activities
Predominantly support
“non-international” participants**

Establish a **deliberate** plan to **engage & support** “**South**” partnerships following the “**Affirmative Action**” model:

1. Develop knowledge jointly

2. Transfer & dissemination of knowledge through local expertise

3. Build capacity through training young promising leaders

4. Support aging and non-existing local research infrastructure



Thank you!

BOLDLYAUB

The Campaign to **Lead, Innovate, and Serve**