Water

International Cooperation

Future Cooperation in Research and Innovation with countries beyond Europe

Lisbon (Portugal)

4 December 2019

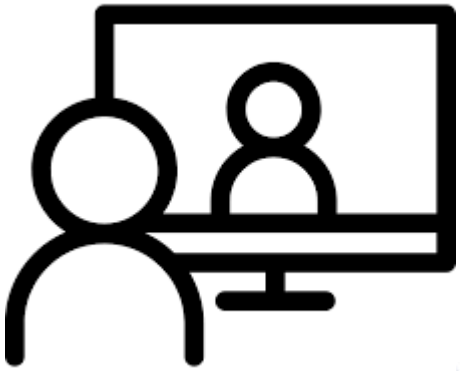
WELCOME AND AIM OF THE WORKSHOP

Dominique Darmendrail

Water JPI coordinator and IC4Water Coordinator

Water International Cooperation

Preliminary messages



Tour de Table

Recalling names & faces

Introduction of national delegates and meeting attendants

Water JPI

Aim of the Workshop

- Exchanging with peer international institutions interested in joint initiatives on a voluntary basis in order to increase the value of relevant R&D funding through joint planning, implementation and evaluation of national research programmes,
- Contributing to elaborate the overall strategy for developing the Water JPI international network, building on the connections already / to be achieved.

2015 Mapping Beyond Europe

- Mapping of RDI activities in 7 targeted countries and first contacts with research funding organisations to invite them to participate in the ERA-NET
  - ✓ Brazil
  - ✓ Canada
  - ✓ China
  - ✓ India
  - ✓ South Africa
  - ✓ USA
  - ✓ Vietnam

Criteria: Scientific excellence, development and market

Discussion with

Chile | China | India | USA

Mediterranean countries (PRIMA)

Israel
Moldova
Norway
Turkey

South Africa

Canada
Taiwan
Egypt
Tunisia

Brazil
Argentina
Thailand
Vietnam

2014

Non EU Water JPI Members

H2020 Associated Countries or Eligible for funding

Third countries

2019

Coordination and Support Action
International Cooperation on Water

Strategy Activities

- Strategy for enlarging Water JPI network and the dialogue platform
- Building the Public – Private Partnership for developing & implementing research and innovation programme

Implementation Activities

- Knowledge Hub development
- Joint activities on a shared topic for the achievement of UN sustainable development goals related to water (UN SDGs) – including Joint call without top-up

The approach

Internal Discussion
- Mapping 2015 and….
- Defining scenarios for International Cooperation development

State of Play
- Workshop Africa and Mediterranean area
- Workshop America

Identify target initiatives
- Having international cooperation
- With whom we would like to cooperate

Workshops
- With all initiatives
- Collecting barriers, needs, possible solutions

Strategy
- Feedbacks to contacted initiatives
- Exchanges at JPI level
- Decision by JPI Governing Board

Cooperation scenarios

- Science excellence and Technology – oriented
- Innovation – oriented
- Market – oriented
- Policy – oriented
- Development and cooperation – oriented
- Other, mixed scenarios, …

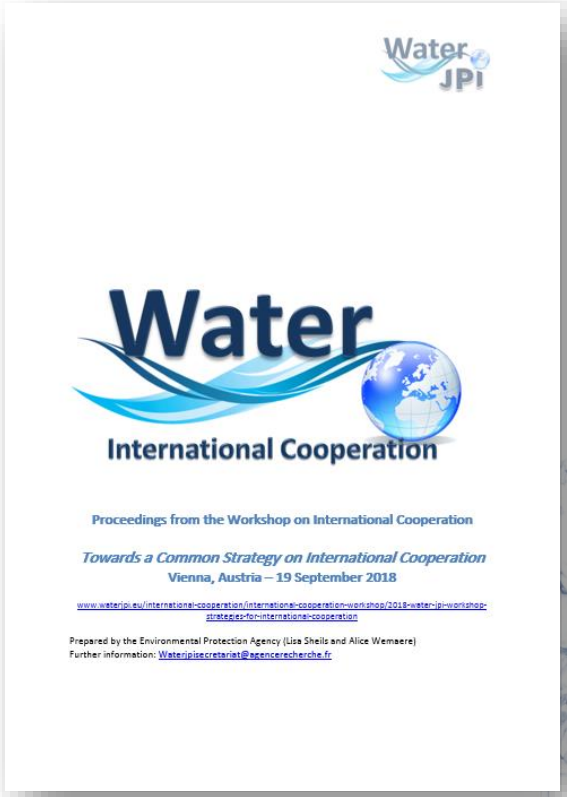
Scenarios (purpose of collaboration)	Very Likely	Likely	Possibly	Unlikely	Very unlikely
Science & Technology	6	3			
Innovation/solutions	2	6	1		
Policy making		2	4	2	
Market and Business		2	1	4	1
Cooperation and Development	2	4	2		

2018 Water JPI Workshop (Vienna)

Learning from others – Working together

40 attendees from 15 initiatives

- What are the benefits?’
- How best to go about it?
- What to do different?
- What are the pitfalls to avoid?



Vienna – Countries targeted by EU initiatives

Conclusions of the 4 workshops

- Sharing Global objectives and means to achieve them (shared Global Research & Innovation Agenda, Mapping the existing knowledge, Co-defining the priorities, Plan the activities over the long-term, …)
- Research and Innovation Funding (trust and respect, Co-construct the joint RDI action, complementary mechanisms, Align and simplify procedures for evaluation / review and grant preparation)
- Specificities of International Cooperation (Identifying the right partners, innovative funding solutions, Management of Risks / Contingencies, handling IPR)
- "defining best "business models"….

First discussions with Water Economic Sector

- Get the business on board during the whole JPI cycle
- Co-work with experienced partners /end-users on critical phases
- Discuss and take into account the economic sector's vision and priorities in the development of Water JPI activities in order to cover their interest and enhance uptake of research products
- Water JPI process adjustments: designing calls and ranking criteria of project proposals keeping in mind end-users involvement from the start
- Participation of the economic sector/end-users in Water JPI calls and activities
  - Investigate the pros and cons of different models and instruments to go further and beyond. Also the involvement of end users in the mid-term review of funded projects could be improved
- Dissemination through ICT, to link to end users worldwide
- Dissemination of best practices
- Mentoring useful especially to developing regions or countries
- Translation of projects outputs in training, policy briefs, documents (like series), other documents or initiatives

Specific Objectives of Workshop 5

- Collecting views from International / non-European initiatives and better understanding the difficulties faced to join multi-lateral activities as developed by JPIs
- Connecting to needs already identified
- Identifying possible solutions for overcoming barriers of international cooperation in Research and Innovation programming.

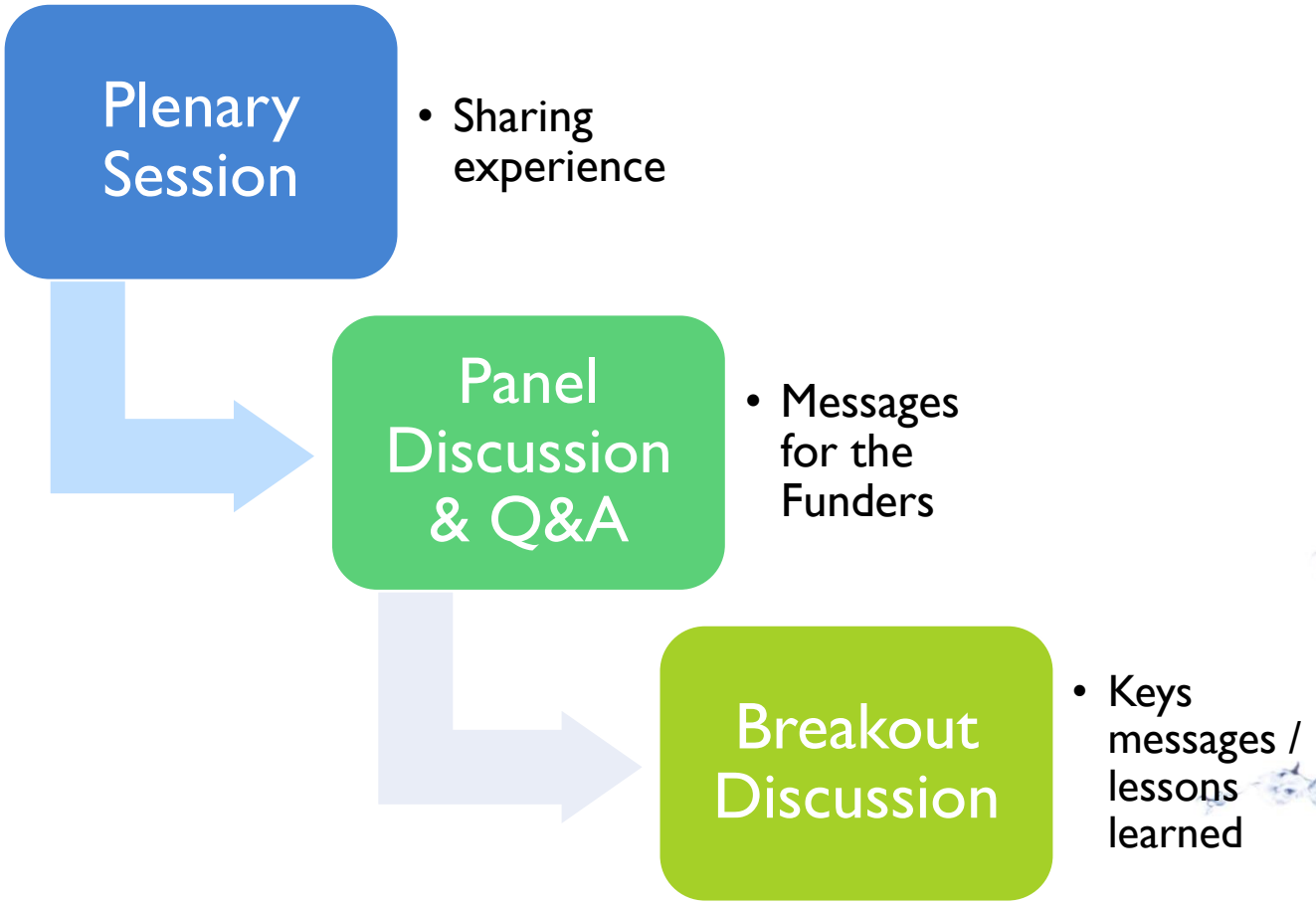
Contributions:

- *State of the Play Survey*
- *« Successfull » and « Unsuccessfull » partners*
- *Highlighted by needs of economic sectors and researchers*

Breakout Groups:

- Specific needs for innovation / connection to economic sector
- Possible Models for Cooperation

Workshop Format



Discussion / inputs / suggestions

State of International Cooperation within the Water JPI, with feedbacks on meeting questionnaire

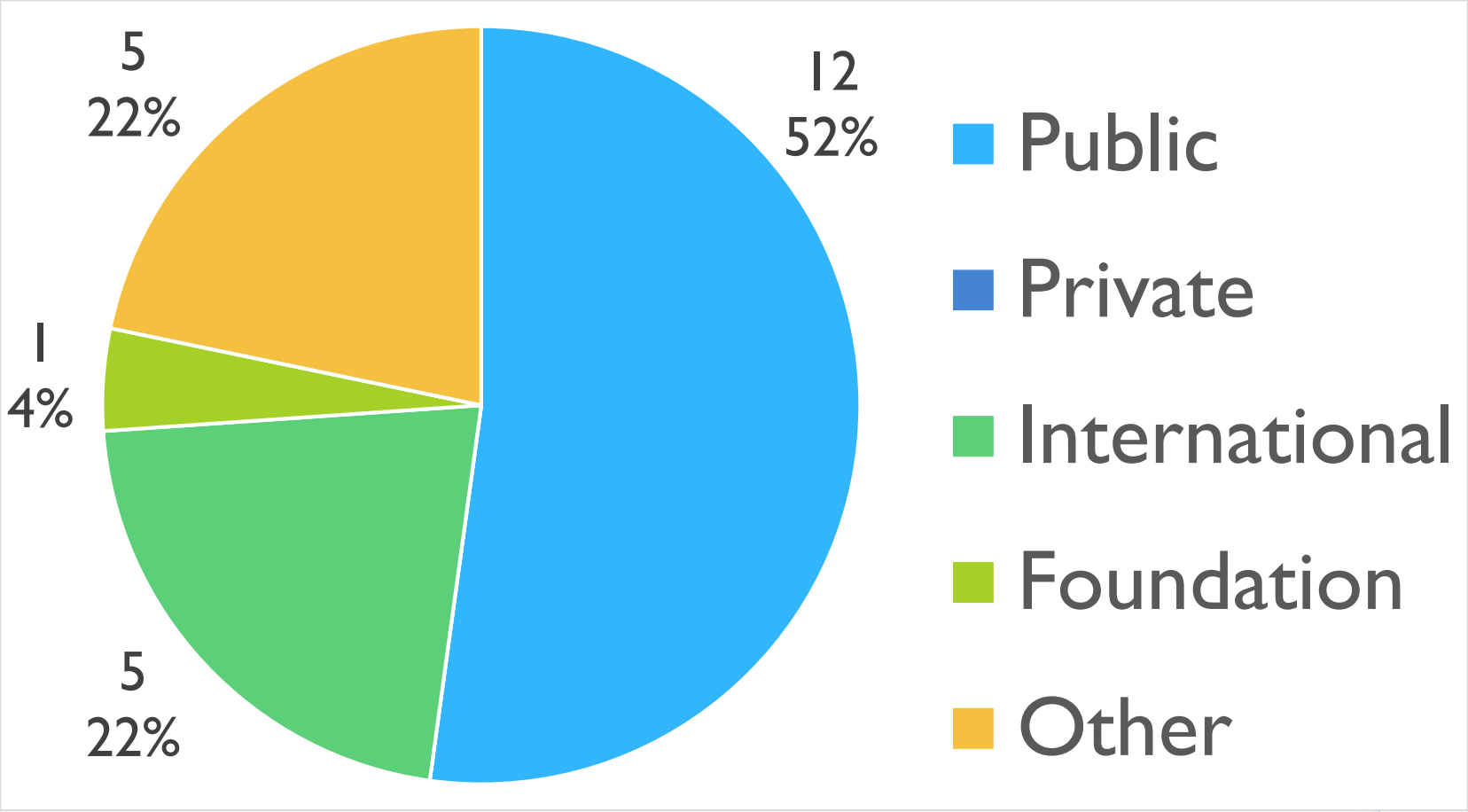
Claire TREIGNIER, ANR
IC4Water project manager

Survey

The online survey performed in the frame of the Water JPI Workshop on Future Cooperation in Research and Innovation with countries beyond Europe has been sent to:

- Public Research funders / networks of Public Research funders / Public – Public Partnerships
- Private Research funders / Networks of Private Research funders
- International initiatives / institutions
- Foundations
- Public – Private Partnerships

Survey - Responses



Survey – Funded activity types

Funded activities	Public	Internat.	Others
Funding for own national representatives	9	3	
Funding for other countries	5	3	
Common SRIA	9	3	2
Knowledge transfer	9	2	2
Mapping	8	2	1
Mobility of researchers	8	2	1
Exchanges	6	2	1
Good practices	6	2	1
Summer schools	3	2	1
Research infrastructures	6	3	1
Pilot sites	4	2	1
Research data	4	3	1
Workshops	9	3	2
Others (scholarships and fellowship)		1	

European countries with which you are involved in IC

Countries EU	Bilateral	Multilateral
Austria	X	
Belgium	X	
Switzerland	X	
Germany	X	X
Spain		X
France	X	X
Italy		X
Luxemburg	X	
United Kingdom	X	

Plus collaborations within Water JPI, JPI Climate, BiodivERsA

Beyond EU countries with which you are involved in IC

Beyond EU	Bilateral	Multilateral
South Africa	X	X (Water JPI)
USA	X	
CA		X
Russia	X	
Brazil	X	X
Chile	X	
China	X	
Vietnam	X	
Indonesia	X	
India	X	
Taiwan	X	X
Japan	X	
South Korea	X	
Singapore		X
Tajikistan		X
Kyrgyzstan		X
Kazakhstan		X
Turkmenistan		X
Uzbekistan		X
Afghanistan		X

Countries targeted for discussion

- US (cited x2)
- India
- China
- Vietnam
- UK (targeted by Canada)

Motivations for developing international cooperation

Funded activities	Public	Internat	Others	Total (%)
Accessing to existing knowledge…	9	2		**14**
Joining national resources	8	1	1	**13**
Setting a common agenda	6	2	2	**13**
Knowledge transfer to public policies	5	2	1	**10**
Knowledge transfer to other stakeholders	6	1	1	**10**
Ensuring an international agenda	5	1	1	9
Allowing alignment of national activities	5	1	1	9
Taking a leadership worldwide	5	2		9
Establishing activities (flexible manner)	5	1		8
Market opportunities	4	1		6

Barriers to international cooperation

Funded activities	Public	Internat.	Others	Total (%)
Lack of national financial resources	5	2	2	**22**
Lack of Human resources	5			**12**
Complexity of rules	4		1	**12**
Absence of alignment	4	1		**12**
Non-continuity in the RDI value chain	3			7
Difficulties to coordinate	2			5
Lack of openness	2			5
Absence of national strategies	2			5
Intellectual Property Rights to be addressed	1	1		5
Cultural barriers	2			5
Distribution of tasks for implementing joint actions		1		2
Managing International vs. national	1			2

Barriers to international cooperation

- Other reasons
  - Lack of outside funding
  - Capacity of international partners is sometimes an issue (not only technical but administrative)

Main added-values from international cooperation

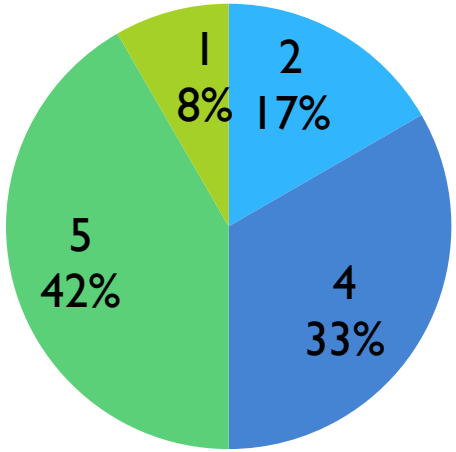
Funded activities	Public	Internat.	Found.	Others	Total (%)
Creating larger and impactful opportunities for national researchers to partner	7	2		1	**20**
Increased impact of national funding programmes	**6**	**2**		**1**	**18**
Co-production of inter-transdisciplinary R&I	4	1		2	**14**
Leverage effect of research funding	4	1			**10**
Enhancing strategic positions	5				**10**
Having access to different conditions	3	1		1	**10**
Larger portfolio of activities	3	1			8
Mutualizing efforts	3				6
More exhaustive panorama of the existing research& innovation	3				6

Key lessons learned from your organisation

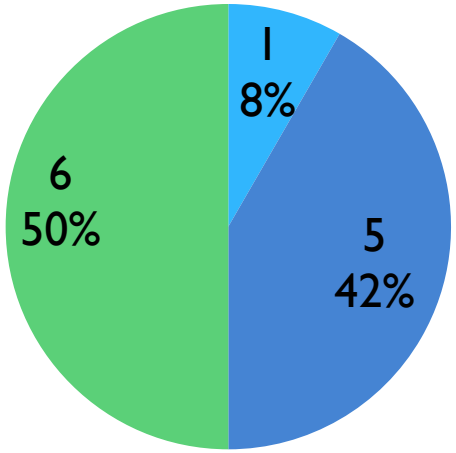
- **Trust is required for building such cooperation**
- **Complexity (and time) required to set it up**
- Importance of approaching the most appropriate funders
- Essential to clarify mutual goals
- Understanding cultural settings
- Knowledge generation achieved through international cooperation
- Willingness is required to contribute and to align
- Essential to overcome the "development aid" approach (vs. co-designing projects)
- National research strengths and competitiveness when participating in multilateral
- Helps to see own R&I issues in different light, gives new inputs to own R&I efforts
- Difficult to align different political agendas in terms of research and innovation priorities

How easy is it to

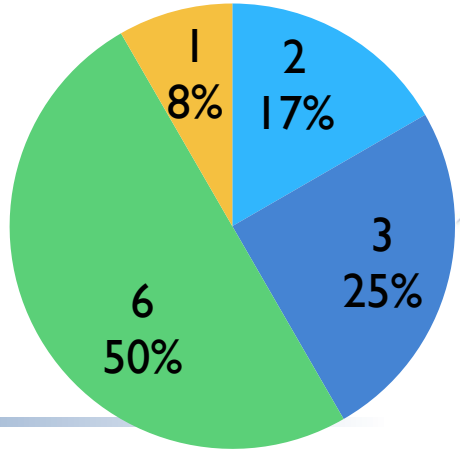
Initiate Joint Actions involving International Cooperation (from concept to start)

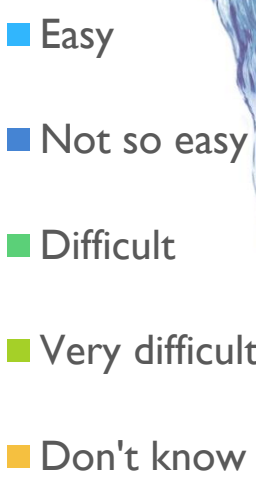


Implement Joint Actions involving International Cooperation (from start to Action completion)



Monitor / Assess Joint Actions involving International Cooperation (after Action completion)





Possible Joint Actions you would like to develop in cooperation with other initiatives

- **Joint Calls**
- Networking activities
- Mobility Actions
- Sharing of research infrastructures
- Activities with Water JPI, JPI Oceans, JPI Climate as well as other regional seas' R&I initiatives
- Actions for allowing participation in different conditions
- Augment local funding with international resources

- Develop further the linkages with other initiatives at European level (like existing international cooperation activities e.g China and India)
- Multilateral research collaborations CA-EU
- Joint research projects between researchers in Central Asian countries and EU colleagues on topics of joint interest

Key Organisations / Initiatives you would like to share your experience in international Cooperation with

- BONUS for Russia
- NSERC for Canada
- Afri-Alliance (known to Water JPI)
- DUPC programme with Dutch Ministry of Foreign Affairs (research component)

⇒ National development programmes

Discussion / inputs / suggestions

Plenary Session: Perspectives from International partners' point of view

Moderated by Antonella Autino

PRIMA Foundation

Water International Cooperation

Perspectives from the Belmont Forum

Maria Uhle
Co-Chair, Belmont Forum
US National Science Foundation
E-mail: muhle@nsf.gov

BELMONT FORUM

Water International Cooperation

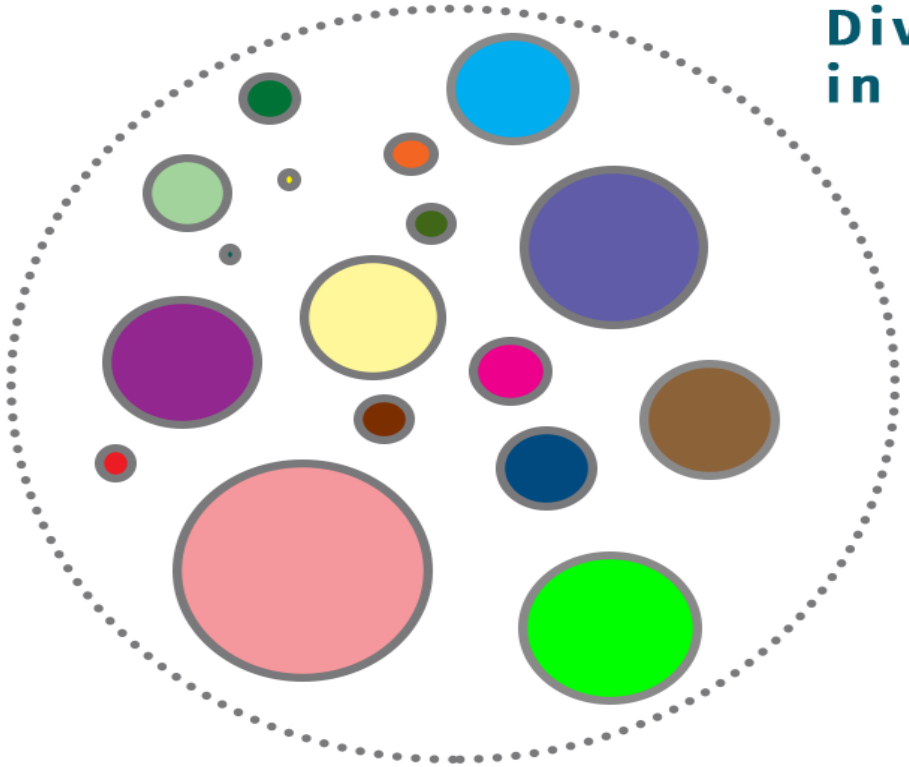
31 members representing over 55 countries

The Belmont Challenge: Understand, mitigate, and adapt to global environmental change

Developing opportunities with more than 125 resource organizations

GEO iap — International Science Council — International Institute for Applied Systems Analysis — United States Global Change Research Program — START

BELMONT FORUM MODEL:



BELMONT FORUM

Diversifying support in a virtual pot

Every award leverages resources

Small investments may be returned 20x's over

Large investments can be synced with planned programs

Pledged support can come at any governance level

Annexes align awards with programmatic needs

Low administrative overhead

Mechanisms to date

- ERA-Net
- Joint call with JPI's
- Individual Agencies

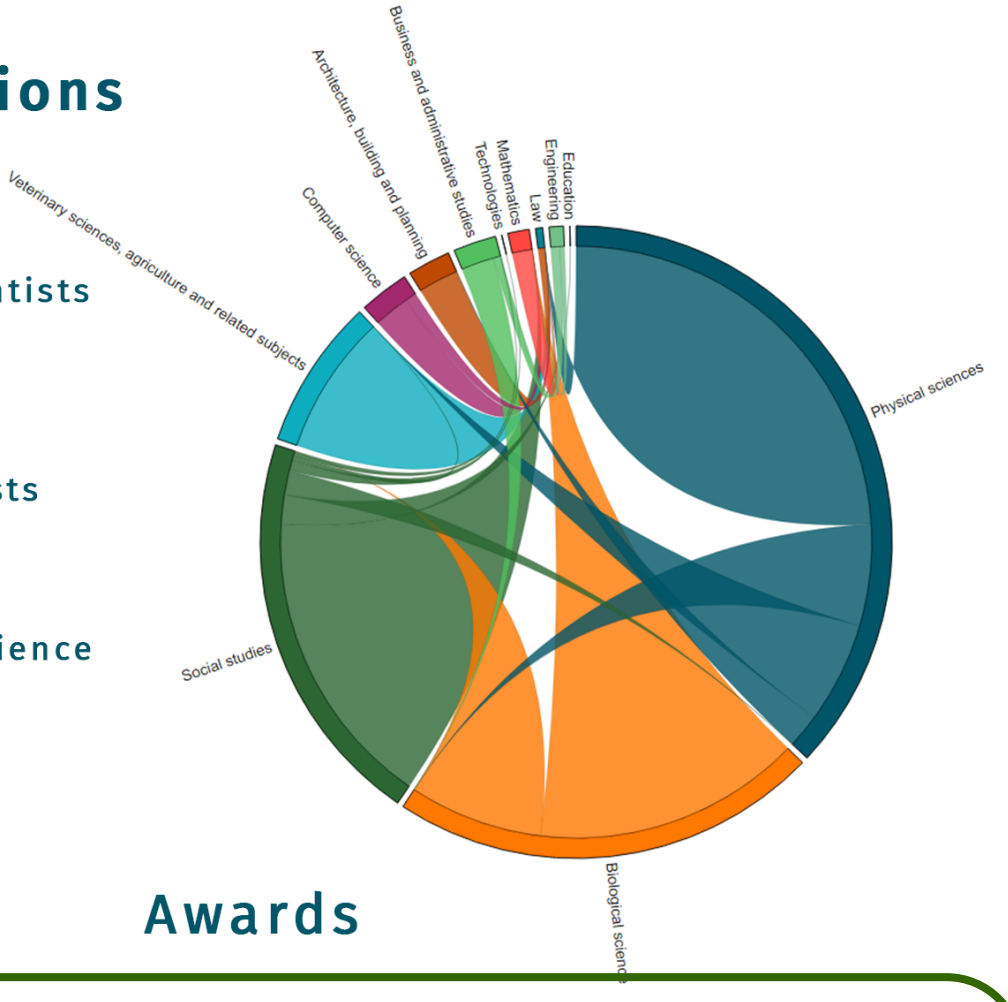
Challenges

- Timing
- Seed grants
- Left over funds?
- Transdisciplinary is mandatory
- Panel ranking

Supported collaborations

primary interaction is among physical, social, and biological scientists

- growing representation from planning and management sector
- education and technology specialists are scarcely represented in awards
- targeted calls are fostering collaborations with other domain science
- review process often eliminates collaborations with humanities
- challenge with reporting as many participants don't self-identify



Awards

Targets and Pathways to Sustainability

Networking – focus for the first phase – designed to establish earth system targets for sustainable development pathways using a systems approach to understand trade-offs and balances

Restoration & Resilience of Soils & Groundwater

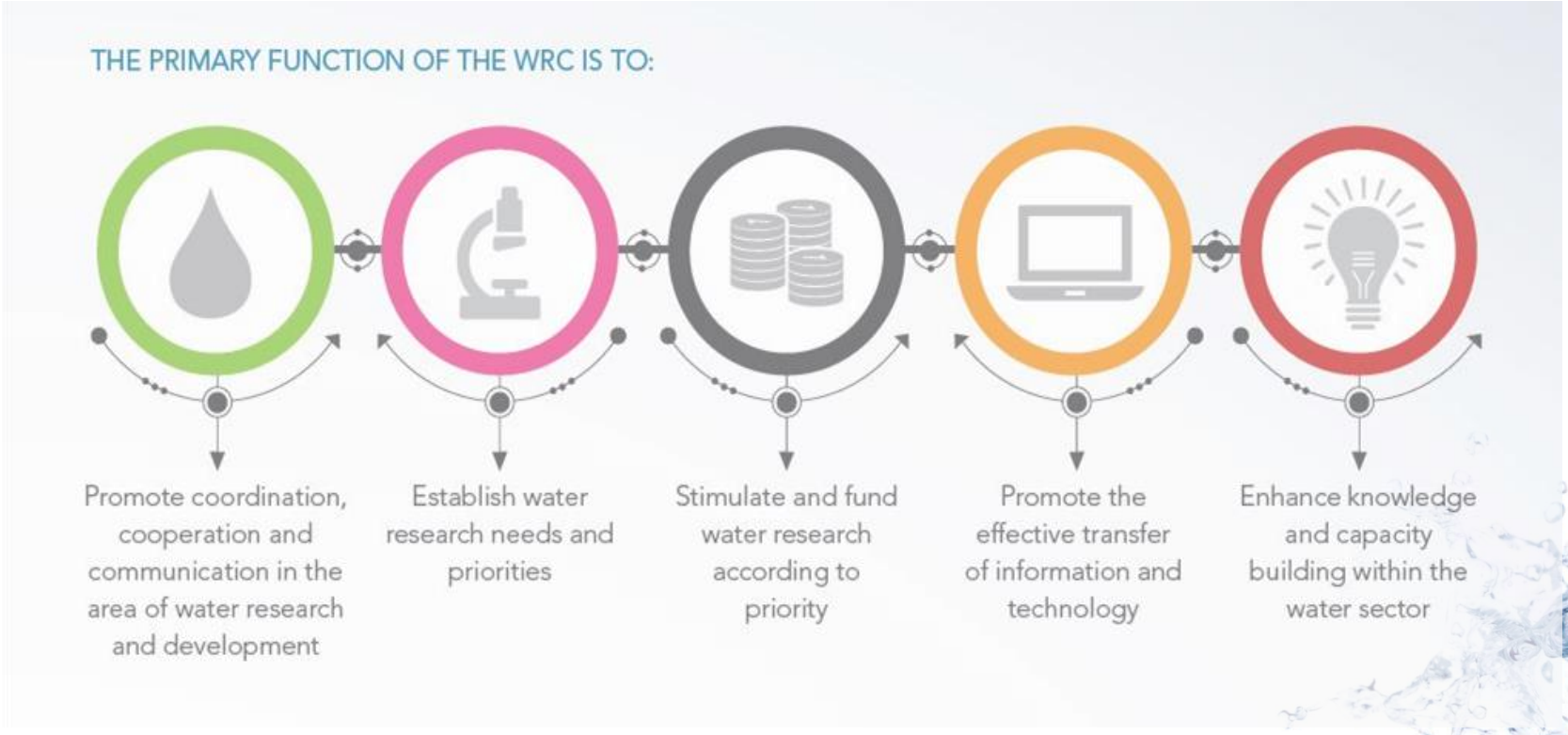
Research projects that focus on the interaction of critical zone elements (soils, groundwater, atmosphere, biogeochemical cycling) for sustainable land management

PERSPECTIVE FROM SOUTH AFRICA: WRC A PARTNER OF THE WATER JPI

John DINI

Water Research Commission South Africa

About the Water Research Commission



Experience in international cooperation

- Bilateral partnerships with EU member states
  - e.g. Research Institutes of Sweden, Institute de Recherche Pour le Developpement, Deutsche Gesellschaft für Internationale Zusammenarbeit, implementation of inter-Ministerial agreements (e.g. Netherlands, Denmark, Italy)
- Multilateral partnerships
  - e.g. Watershare, Water JPI, Global Water Research Coalition, AfriAlliance, Indian Ocean Rim Association (Academic Group and Water and Sanitation STI), OECD Water Governance Initiative
- Modalities
  - Joint funding of R&I projects
  - Technology sharing
  - Joint research agenda setting
  - Market access
  - Capacity building and knowledge exchange (dialogues, workshops, exchange programmes)

Key challenges

- Asymmetries in research agenda setting
  - "European leadership", "valorising European know-how" vs. "mutual benefit and equal footing", "co-construct joint RDI action"
- Misalignment of systems, procedures between SA and JPI
  - Timeframes, evaluation procedures, contracting, reporting, travel plan approval
- SA is not seeing full potential benefits of projects it co-funds
  - Locally funded components vs. full projects
- Limited financial resources to allocate to Joint Calls
  - SA gross expenditure on R&D in 2018 was 0,68% of GDP vs target of 1,5%. Global average was 1,4%.
  - WRC joint project funding is limited and spread across several partnerships

Cooperation with economic sector

- Joint agenda setting based on their RDI needs
- Co-funding research projects
- Co-creation of relevant solutions
- Targeted knowledge products
- Involvement of sector expertise in reviewing proposals, participating project reference groups
- Convening and supporting communities of practice

Recommendations

- Broaden WJPI membership and cooperation,
  - Especially developing countries
  - Align with other water related EU platforms
- Identify sufficiently overlapping areas of mutual benefit
  - More focus on co-creation
- Better coordination between co-funding partners
  - Especially on individual projects, to maximise benefits for all partners
  - Mechanisms for bringing new potential partners together
- More streamlined administrative processes
  - Reducing transaction costs and synchronisation problems
- Use technology optimally to support collaboration
  - Improving communication, information sharing, team working
  - Remote connections for all key meetings


Ngiyabonga
Dankie
Thank you
Ke a leboga
Inkomu
Enkosi
Ke a leboha
Ndo livhuwa

Perspective from the Chinese Europe Water Platform

Diana CARLOS and Ana MENDES

CEWP secretariat (Portugal)

Cooperation with China –

CHINA EUROPE Water Platform
www.cewp.org

Diana Carlos/ Ana Mendes

Portuguese Ministry for Environment and Climate Action / University of Évora

Water International Cooperation

REPÚBLICA PORTUGUESA
ENVIRONMENT AND CLIMATE ACTION

UNIVERSIDADE DE ÉVORA

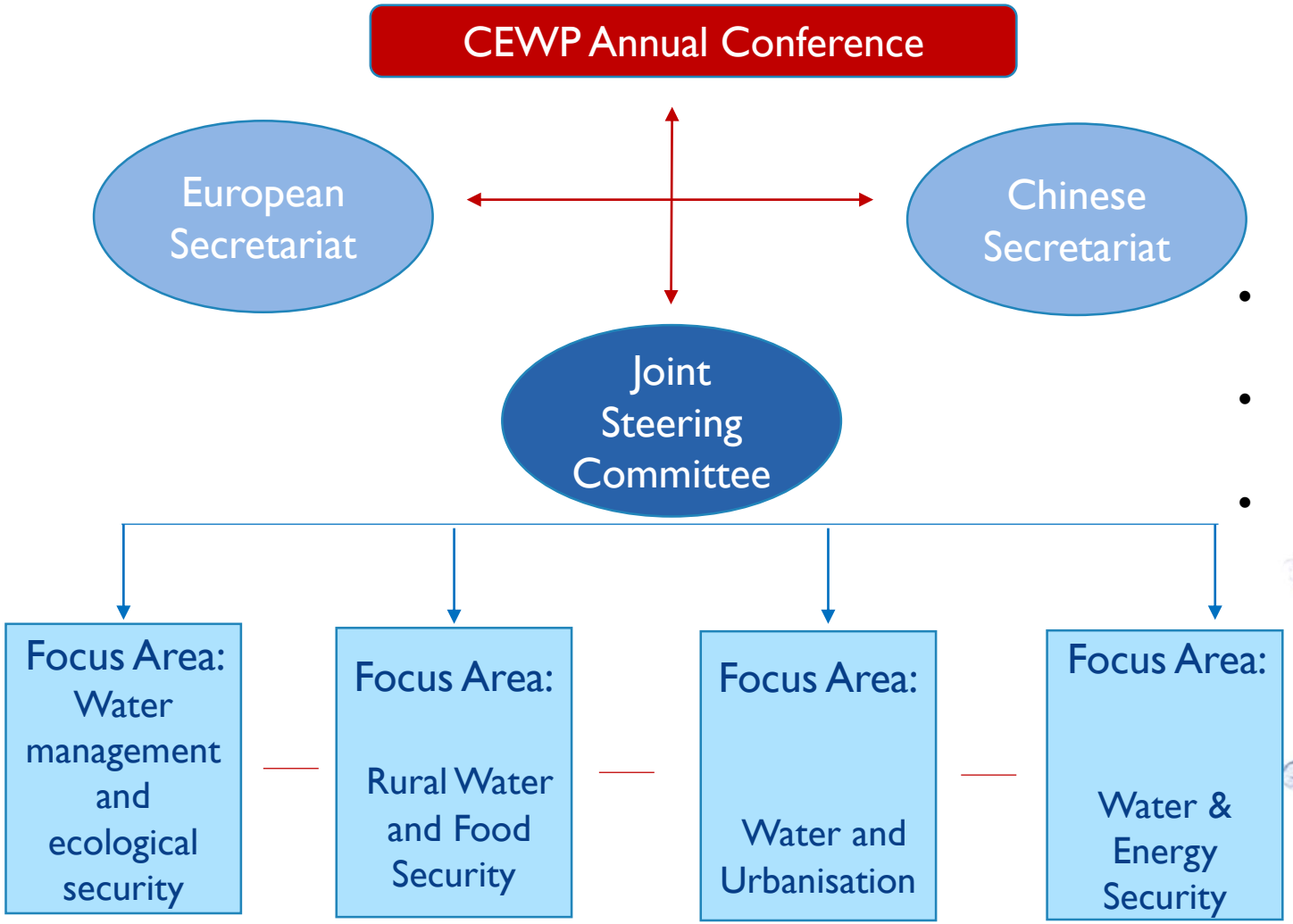
Co-funded by the European Union

China Europe Water Platform

- Was established in 2012 in Marseille between the Danish Presidency of the EU and the Ministry of Water Resources of China – Joint Statement
- The objective of China Europe Water Platform (CEWP) is to promote water policy dialogues, collaborative research and business development based on mutual interests and joint funding.

Co-funded by the European Union

CEWP Structure



- Policy Dialogue
- Research and innovation
- Business Cooperation

CEWP European Countries

Co-funded by the European Union

Finland – currently assumes the European secretariat

Portugal – will assume the secretariat between 2020 and 2021

Denmark, Netherlands, France, Sweden, Italy - lead of focus areas

Malta, Estonia, Spain, Austria and Hungary - participants in CEWP activities

EU FUNDING

Co-funded by the European Union

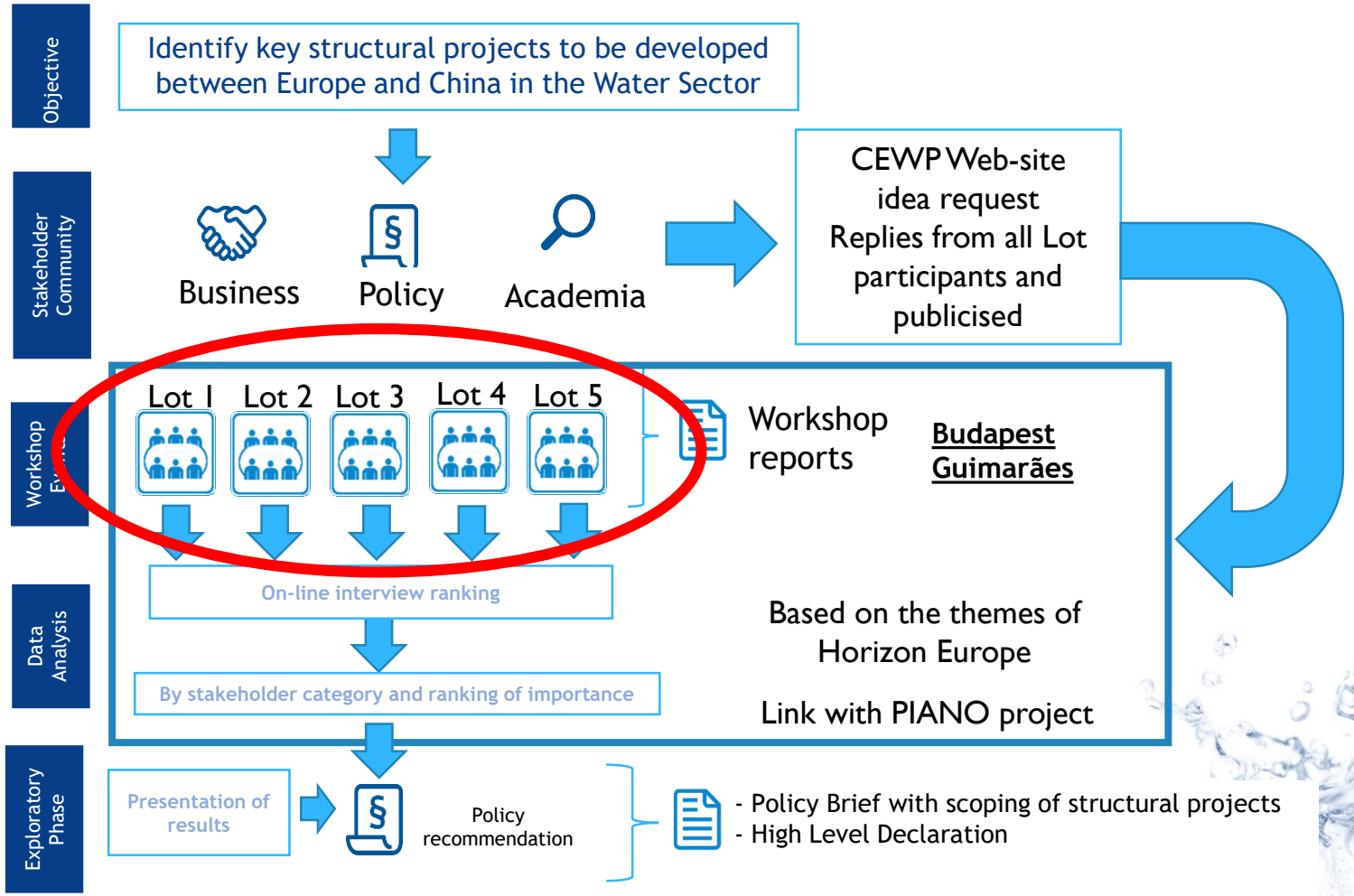
- Partnership Instrument support launched in June 2018 in Quingdao.
- Funding from the EU between 2018-2021: 6 Million Euros
- Managed by the EU Delegation in Beijing
- **Organized in 4 vertical Lots + 1 horizontal Lot**
  - Lot 1: Water management and ecological security
  - Lot 2: Rural Water and Food Security
  - Lot 3: Water and Urbanization
  - Lot 4: Water and Energy Security
  - Lot 5: Coordination, Support to the EU Secretariat, Business & Innovation, Cross-cutting issues (SDG, Circular economy, Source2Sea)


Opportunities for cooperation with Water JPI

- Portugal will assume the secretariat of the Platform in 2020-2021
- One of our goals will be to sthrengten cooperation with International Organizations and programes
- Possibility for a joint action with Water JPI – contribution for definition of key priority areas of cooperation between Europe and China

CEWP methodology – priority areas of cooperation

Concept Overview



Budapest stakeholder workshop

- Held on 24th of April 2019, between 14h and 18h in Budapest, Hungary, Europe.
- The overall objective of the event was to identify potential EU-China water research strutural projects projects.
- Over 35 experts from both China and Europe from 4 focus areas: Water Managment and Ecological Security, Water and Energy, Water and Urbanisation, Water and Food Security

Budapest stakeholder Workshop

- Part I - Oral communication session of the Chinese and European funding mechanisms of science and technology potentialy available to support R&D
- Part II - parallell workshop sessions in the 4 focus areas to identify potential EU-China water research flagship projects.
  - These parallell workshops then reported their main conclusions to the plenarium.

Budapest main findings

- The most frequently links between the project ideas and Horizon Europe program and global challenges indicated by all focus areas were:
  - Environmental observation;
  - Biodiversity and Natural Capital;
  - Sustainable management and efficient use of natural resources;
  - Business relevance.

Budapest main findings

- Other links to Horizon Europe global Challenges pointed out were (by order of relevance – number of times they were pointed by focus areas):
  - Digital and industry (Big data);
  - Seas and oceans;
  - Agriculture, forestry and rural areas;
  - Circular use of water resources;
  - Climate sciences and solutions;
  - Health.

Guimarães stakeholder Workshop

- Same Structure:
  - Part I - Oral communication session
  - Part II - parallell workshop sessions in the 4 focus areas to identify potential EU-China water research flagship projects.
  - Part III - conclusions presented to the plenarium

Guimarães stakeholder workshop

- Held on 8th of November 2019, between 14h and 18h in Guimarães, Portugal, Europe.

- Over 70 experts from both China and Europe from 4 focus areas: Water Managment and Ecological Security, Water and Energy, Water and Urbanisation, Water and Food Security

Water Management and Ecological Security

- Innovative Monitoring of biological parameters - IoT
- Development of new comprehensive multiscale ecological status assessment criteria for waters
- Development of new modes of cost-effectiveness analysis of restoration or management systems including: 1) Management and control of blue green algae in lakes; 2) Restoration standards in rural areas; 3) NBS; 4) Ecological flow; 5) Watershed scale

Rural Water and Food Security

- Sustainable and digitalized manure management for mitigating water pollution
- Groundwater overexploitation as a consequence of increased water scarcity in a climate change context
- Managed Aquifer Recharge of reclaimed wastewater and storm water for saving and reuse of water for irrigation or drinking water
- Setting standards on regulation of water scarcity due to prolonged droughts caused by climate change

Water and Energy

- Understanding the balancing role of hydropower for excelerating clean energy transition
- Holistic and coordinated water- and marine environmental management from Source to Sea
- The strategic restoration, planning and assessment of for greening and upgrating of small hydropower
- Food-water-energy-ecosystem nexus and high quality development in the yellow river basin under climate change.
- Water saving and sustainable water consumption

Water and Urbanisation

- Efficient operation and maintenance of Sponge city systems (improved asset management)
  - Application of smart technologies for online monitoring as smart sensors and IOT (internet of things)
- 2. Possibilities for standardization and certification of sponge city systems.
  - Standards for evaluation of existing systems
  - Standards/certificates for different devices to improve decision making under planning stage.

CEWP 2019 High Level Conference

Co-funded by the European Union

- Took place in Guimaraes, on the 8th of November 2019 the 7th Conference of the High Level Dialogue of the CEWP
- **Guimaraes Declaration** express willingness to:
  - Push for the attainment of Agenda 2030 Water-Related Goals;
  - Promote High-Level Mutual visits and expert exchanges
  - Improve water governance policy
  - **Explore initiatives to enhance joint research**
  - Priority areas: water saving, smart water conservation, sustainable hydropower, ecological protection, source to sea management,

CEWP open call for Emerging Issues

- CEWP launches an open call to presentation of emerging issues to be supported under the Frame of CEWP Partnership Instrument – Horizontal Activities (Lot 5) to support activities of Cooperation Between Europe and China on Emerging Issues of mutual interest related to WATER.

- **Timing of the call:** from the 11th of November until the 11th of January

- **Eligible area of activities:** EU and China

- **Type of Support:** Maximum and minimum amount to be funded per activity: 2 500€ - 10 000€ (overall envelop of 20 000€).

Activities to be supported

- Desk studies
- Workshops and/or round table discussions
  - on emerging issues for new water policy issues which are of mutual interest for China and EU.
  - Funding can be given to recovery of costs related to venues, travels, international experts but not own costs for human resources.

Application process

- **Eligible Entities:** Public bodies, Public law bodies (bodies governed by public law) and provate non-profit bodies from EU Member States. The involvement of Chinese partners is made through the European Institution presenting the application. Chinese institution involvement is mandatory.

- **Application process:** All interest parties from all EU Member States may present their questions or application by sending an e-mail with the template (in annex) to aimendes@uevora.pt.

- Further information at cewp.eu

Discussion / inputs / suggestions

BOLDLY
THE CAMPAIGN TO LEAD, INNOVATE & SERVE

1866 AUB American University of Beirut الجامعة الأميركية في بيروت

Faculty of Agricultural and Food Sciences

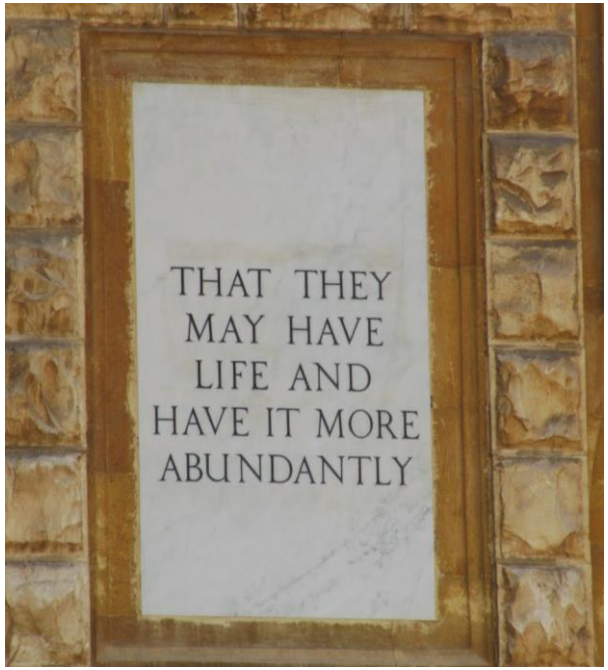
Challenges in International Cooperation: South Perspective

Rabi H. Mohtar
Professor and Dean, FAFS

HEALTHY EARTH HEALTHY FOOD HEALTHY PEOPLE

Outline

- Who We Are
- The Global Connectivity
- Existing Opportunities
- Challenges and Shortcoming
- Recommendations



Who Are We?

1866 AUB
American University of Beirut
الجامعة الأميركية في بيروت

Faculty of Agricultural and Food Sciences (FAFS)

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 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)

HEALTHY EARTH HEALTHY FOOD HEALTHY PEOPLE

WEFRAH

WEFRAH Call for Proposals
December 2018

WEFRAH Workshop
January 24, 2019

17 concept notes submitted

11 invited for full proposal submission

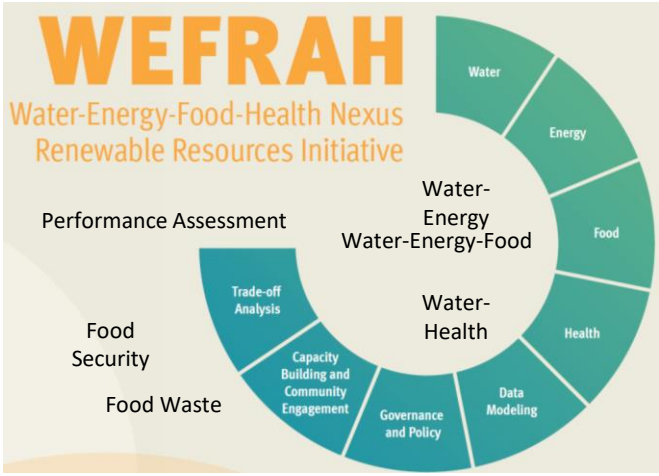
9 proposals selected for seed funding: 3 clustered & 3 independent

+ **2** educational & capacity building projects

Stakeholders Engagement Workshop & **Design Thinking Workshop**

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



Technology
Business
Policy
Health Care
Agriculture

The WEFRAH Community

Engineering
Social Sciences
Natural Sciences
Arts & Design
Others
Nutrition
Public Health
Nature and Ecosystem

AREC: AUB Research Farm

VISION

AREC as a

Climate and Sustainability Center

Learning, Innovation and Engagement Center

for Renewable Resources and Health

at the American University of Beirut

GOALS

1. Regional Hub for **Water-Energy-Food-Health (WEFH) Nexus**
2. Hub for Participatory **Student Learning Experience**
3. Regional **Community Engagement** Center
4. Center of Excellence for **Emergency Environments**
5. **Value Creation and Entrepreneurship** Hub

TEXAS A&M UNIVERSITY

TEXAS A&M UNIVERSITY WEF NEXUS INITIATIVE

TEXAS A&M UNIVERSITY
Texas A&M
Energy Institute

TEES
TEXAS A&M ENGINEERING EXPERIMENT STATION

NSF

1866 AUB
American University of Beirut
Faculty of Agricultural and Food Sciences

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 Partners

Global Activities and Partners

SIWI WORLD WATER WEEK

DRESDEN NEXUS CONFERENCE

UN HABITAT

XVI World Water Congress

WORLD ECONOMIC FORUM

WATERSHED

Global Water Partnership

OCP POLICY CENTER

WORLD WATER COUNCIL

IWMI International Water Management Institute

WWF

IUCN

WATER FOUNDRY

SEI STOCKHOLM ENVIRONMENT INSTITUTE

circle of blue

gef

THE WORLD BANK

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

ADB ASIAN DEVELOPMENT BANK

NRT

RCN

National Activities

National Science Foundation WHERE DISCOVERIES BEGIN

AAAS

COLUMBIA UNIVERSITY

USDA NIFA

United States Department of Agriculture National Institute of Food and Agriculture

gef GLOBAL ENVIRONMENT FACILITY INVESTING IN OUR PLANET

ICSD 2017

CURRENT SUSTAINABLE/ RENEWABLE ENERGY REPORTS

EARTH DAY TX 2017

ASABE

ACS Chemistry for Life®

AMERICAN CHEMICAL SOCIETY

AGU FALL MEETING

The Virtual Water Trade (VWT)

Why global networks are needed:

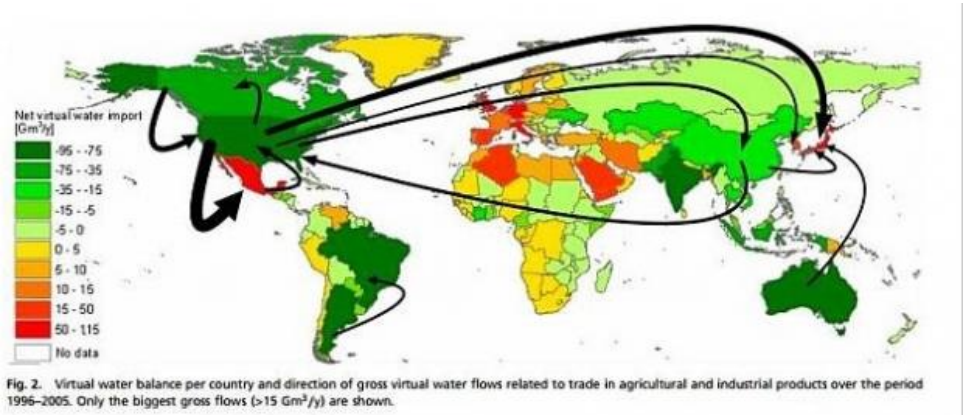
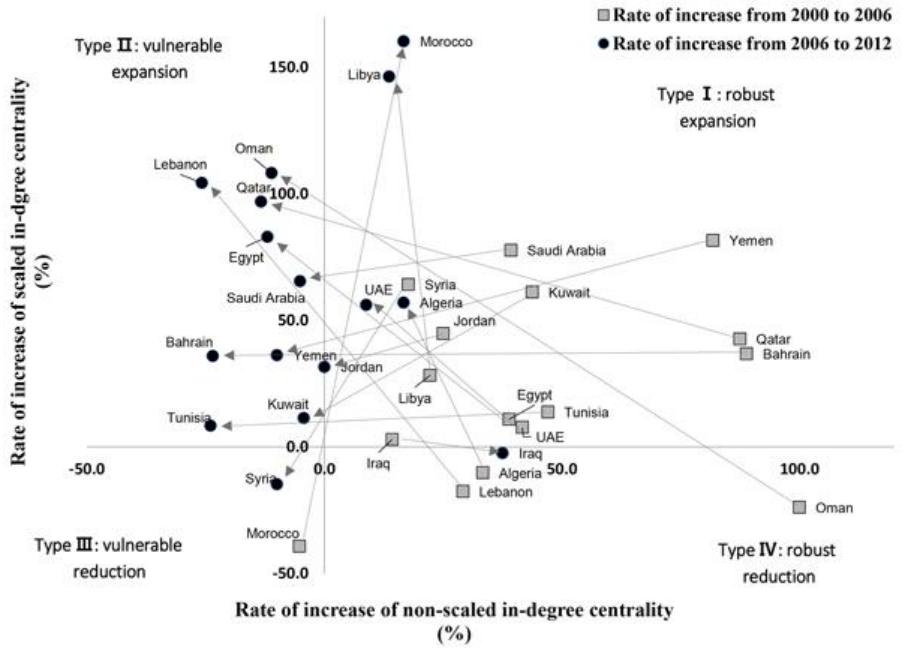


Fig. 2. Virtual water balance per country and direction of gross virtual water flows related to trade in agricultural and industrial products over the period 1996–2005. Only the biggest gross flows (>15 Gm³/y) are shown.

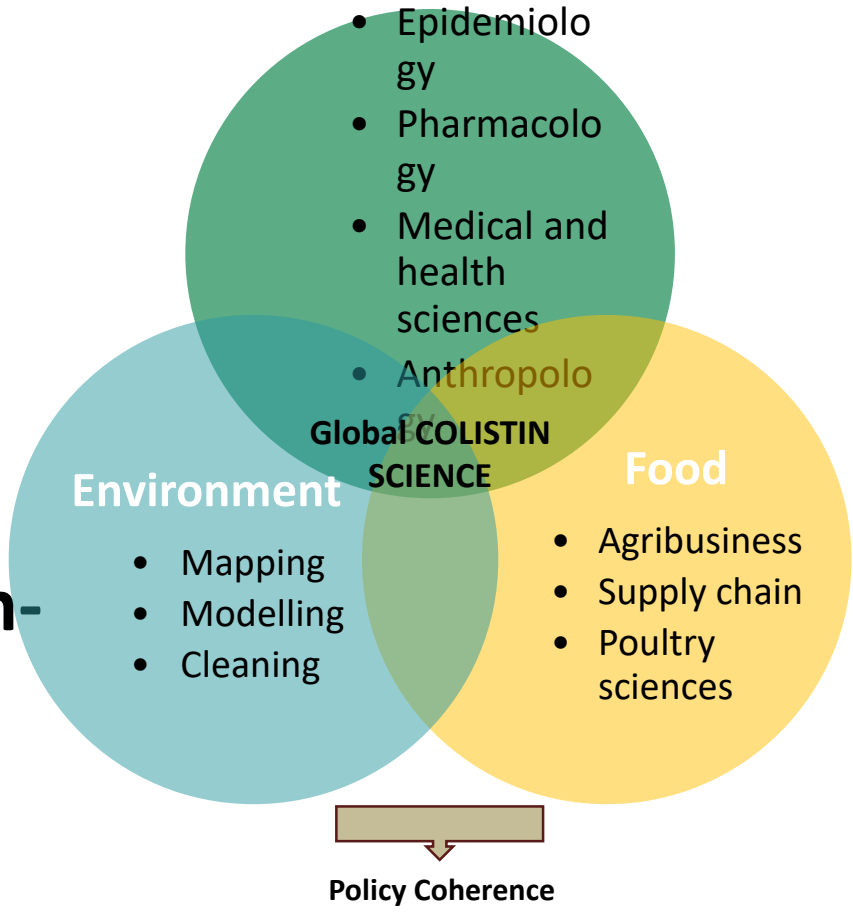
(Water Footprint Network, 2012)



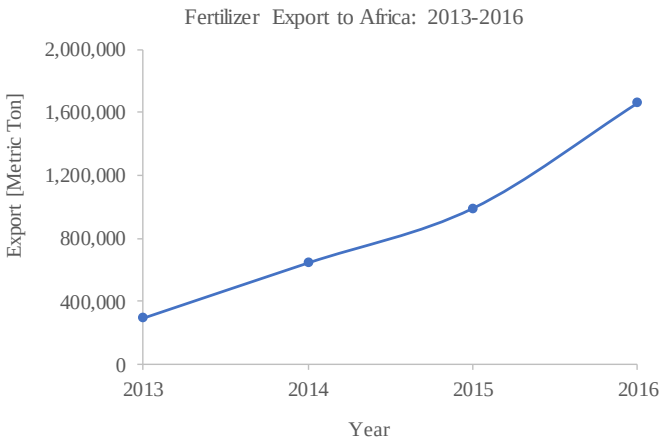
Sang-Hyun Lee, Rabi H. Mohtar, and Seung-Hwan Yoo (2019) **Assessment of Food trade impacts on water, food, and land security in the MENA region**. Hydrology and Earth Systems Science (HESS), 23, 557-572. Copernicus Publications EGU. doi.org/10.5194/hess-23-557-2019

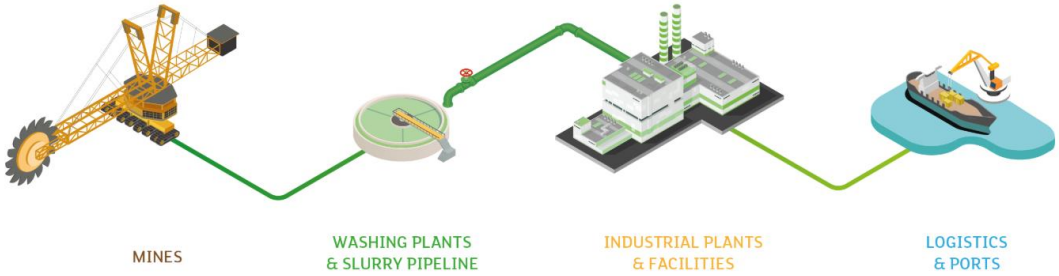
Colistin

- Last-resort antibiotics active against most Gram-negative bacterial pathogens, but increasing **resistance** is reported **worldwide**
- **Global Emergence of Colistin-Resistant *Escherichia coli* in Food Chains** (Barlaam et al. J Food Prot. 2019)



OCP Phosphate Trade: Implications & Tradeoffs
Local Water Competition and Global Food Security



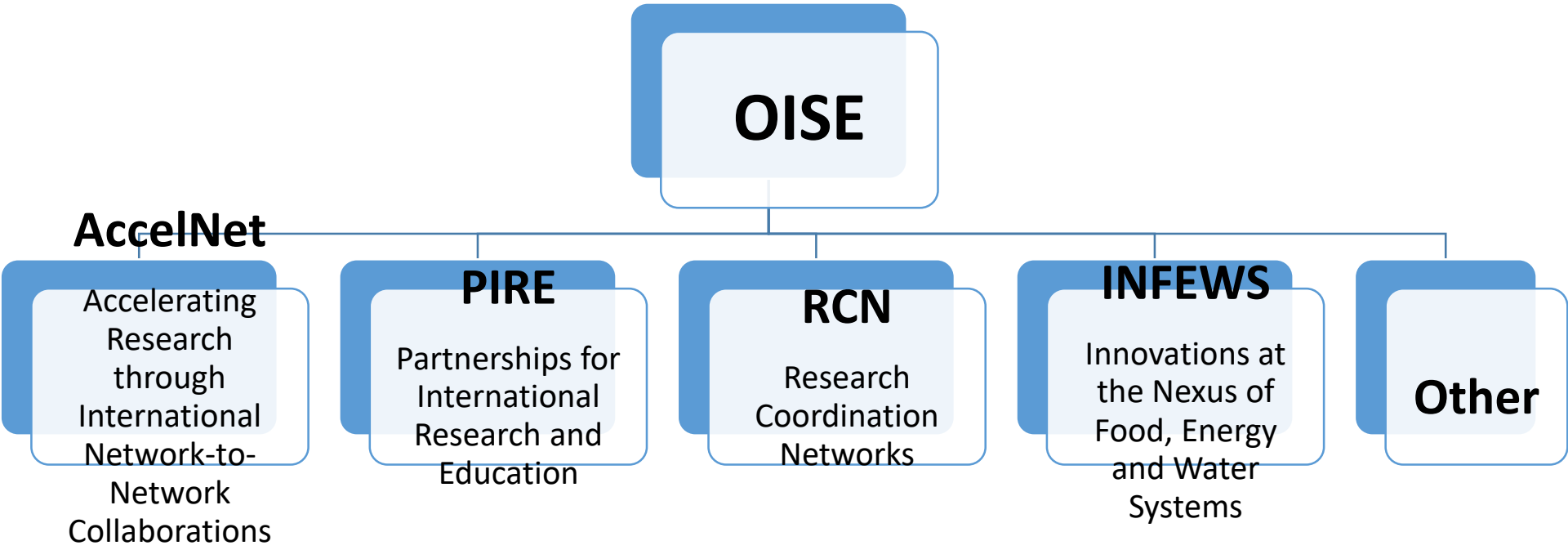


Role of the Office of International Science & Engineering (OISE)

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

https://www.nsf.gov/od/oise/about.jsp

Programs within Office of International Science & Engineering (OISE)



https://www.nsf.gov/funding/programs.jsp?org=OISE

Accelerating Research through International Network-to-Network Collaborations (AccelNet) (NSF 19-501)

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 & new ideas **among linked global networks.**

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

Limitations

- Mainly supports U.S. participants
- Non-US participants to seek support from their funding organizations.
- ***Funds not used*** for expenses of inter'l participants at their home institution.
- ***Funds used*** for AccelNet-related expenses for inter'l participation in networking activities *while in the U.S*.

Research Coordination Networks (RCN) (NSF 17-594)

Goals

- Support investigators to communicate & coordinate their research, training & educational activities ***across disciplinary, organizational, geographic & inter'l boundaries***.
- Provide opportunities to foster new collaborations, *including* ***inter'l partnerships***.

Limitations

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

NSF funds limited to:

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

https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=11691

Innovations at the Nexus of Food, Energy and Water Systems (INFEWS) (NSF 18-545)

Goals

- NSF/NIFA promote int'l cooperation that links multi disciplines scientists & engineers to ***solve global challenges at the nexus of FEW systems***.
- Inter'l collaboration ***are encouraged*** to enhance the proposed work by incorporating unique resources, expertise, facilities or sites of inter'l partners.

Limitations

Research may involve **any country** but inter'l partners should 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*.

https://www.nsf.gov/pubs/2018/nsf18545/nsf18545.pdf

INFEWS International Opportunities

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

https://www.nsf.gov/od/oise/INFEWS/the_international_partnerships.jsp

Partnerships for International Research and Education (PIRE)

Countries for co-funding opportunities with external agencies

https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505038

BELMONT FORUM

- The **Belmont Challenge** :

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

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

Belmont Forum
Limitations for International Cooperation

- 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**.

futureearth
research for global sustainability

MISSION

Accelerate transformations to global sustainability through research & innovation

Global Hubs **5**

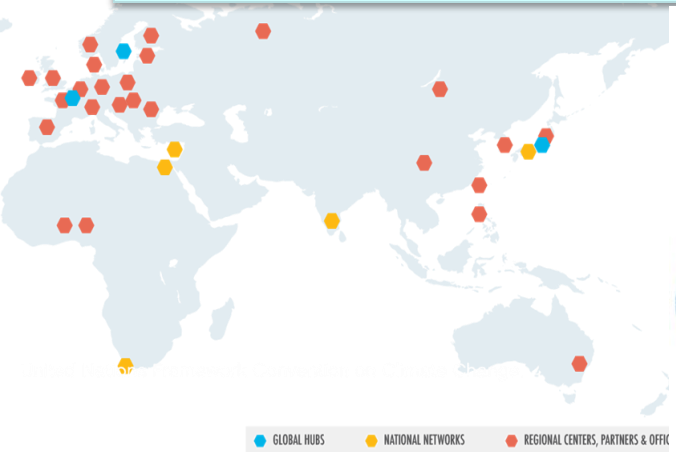
Global Research Projects **20**

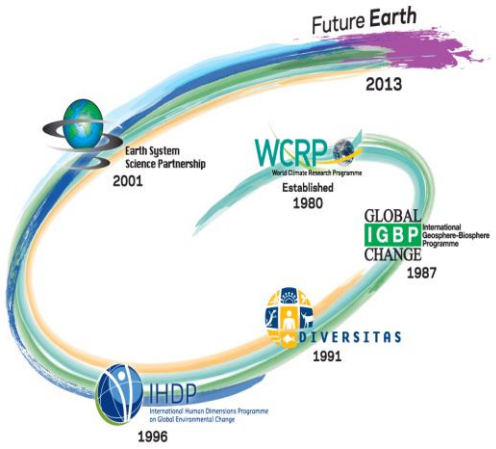
9 Knowledge-Action Networks

5 Regional Centres and Offices

National Networks ca. **20**

International Partnerships **10+**





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

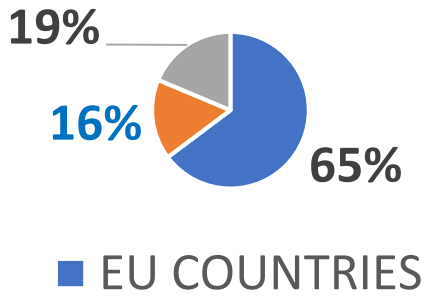
The Cyprus Institute

The Cyprus Institute as the MENA Regional Hub for "Future Earth"

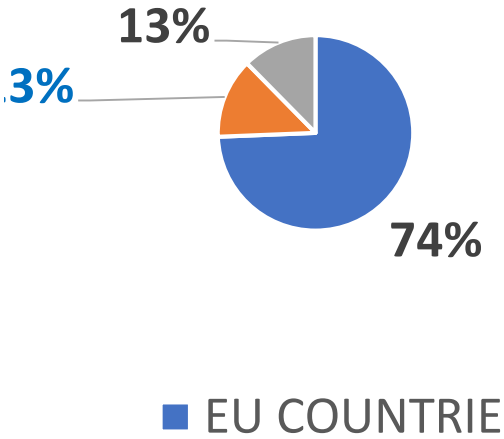
The Cyprus Institute has been selected to manage the MENA Regional Hub, covering the Middle East and North Africa including the Eastern Mediterranean and the Gulf States.

PRIMA

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



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



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

PRIIMA Booklet; Funded Projects 2018

Global Partnership Challenges

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

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

Recommendations

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

Thank you!

Europe's drinking water and waste water service operators

PERSPECTIVE FROM THE ECONOMIC SECTOR SIDE

Bertrand VALLET

EUREAU - European federation of national associations of water services

EurEau - Who we are

EurEau is the European federation of water services

We represent both **public** and **private** sector

We represent **32** national associations of **drinking and waste water operators** from **29** European countries

With 470,000 direct jobs, we make a significant contribution to the European economy.

EurEau - What we do

- Our experts exchange knowledge
- We establish positions
- We engage with EU policy makers.

Involvment to date

- Not a regular task to collect this information but…
- We collected some information from our members (or members' members) from the survey but few answers so far – to be developped
- Individual companies or national associations are involved in projects
  - Generally at international – EU level
  - Sometimes with non-EU countries

Reason for non-participation in IC

- Lack of national resources to allocate for joint action and networking
- Difficulties to coordinate paticipation nationally
- Absence of national strategies/priorities or of alignment of these national priorities with international agenda

- Still they see added value for enhancing strategic positions of the involved partners

For the ones that participate

- Activities that are not coming back:
  - Mobility of researchers
  - Summer schools / young researcher seminar
  - But, I was a Marie-Curie ITN for a waste water operator
- Otherwise all the other activities are covered
  - Joint calls
  - Development of RIA
  - Knowledge transfer
  - Mapping
  - Short-term exchanges
  - Good practices
  - RI/pilot/living labs sharing
  - Data/Platform sharing
  - Workshops

Types of projects

- Mostly INTERREG but also H2020
- Cooperation with various countries even for the same company
- Depend on opportunities and network

Motivations

- **Common motivations:**
  - Accessing to existing knowledge, good practices and experiences to progress more rapidely
  - Contributing to increased and faster knowledge transfer from research results to public policies/policy-makers
  - Extension of market opportunities in a shorter time line
- **For associations**:
  - Joining national resources at international level fro creating a critical mass necessary to tackle global challenges
  - Allowing alignment between national activities and processes
  - Contributing to increased and faster knowledge transfer to other stakeholders

Motivations

- **For companies**:
  - Setting a common and shared R&I agenda on areas of global challenges
  - Ensuring an International agenda that is also of national importance
  - Taking leadership worldwide in a given societal challenge

Barriers and bottlenecks

- **For associations:**
  - Lack of national financial resources to allocate for Joint Actions and networking / follow-up of activities of interest
  - Absence of alignment of funding programmes and processes
  - Con: continuity in the RDI value chain
- **For companies**:
  - Lack of human resources for joining international cooperation
  - Complexity of rules of engagement
  - Intellectual Property Rights to be addressed and implemented in a proper and fair way

Added-Values

- Larger portfolio of activities
- Co-design and co-production of inter-transdisciplinary R&I
- Creating larger and impactful opportunities for national researchers to partner on a global scale
- Mutualizing efforts, in particular for activities with no immediate and large return on funding investments
- Providing a more exhaustive panorama fo the existing R&I outputs treasure and of the research in progress
  - Leverage effect of research funding and trigger greater cost-efficiency
  - Enhancing strategic positions of the involved partners
  - Increasing impact of national programmes and outputs dur to the international cooperations
  - Preparing the future by having access to different conditions

Key lessons learned

- Legal difficulties in establishing collaboration agreements
- Sharing information is important before, during and after the project and from other projects (innovation is everywhere)
- Benchmarking is important to improve
- Enlarge contacts, competences, knowledge sharing
- Results usually better than expected

Joint Actions

- Initiate is difficult
- Implement is difficult
- Monitor is not so easy or very difficult (but very important)

Conclusion

- Motivation seems to be slightly different from companies and associations
- International cooperation is highly valued in R&I
- Barriers are different from companies or associations: to be confirmed
- Unexpected value of outcomes, improved networking and shared knowledge, being pro-active to improve are the key lessons learned of engagement in international cooperations
- To be continued…

Discussion / inputs / suggestions

INPUTS FROM OTHER INITIATIVES

INPUTS FROM FUTURE EARTH

Alessandra NAUDITT

Sustainable Water Futures Programme

waterfuture
Sustainable Water Future Programme

futureearth
Research. Innovation. Sustainability.

Water JPI

Water

International Cooperation

Water Future: Sustainable Water Futures Programme

Alexandra Nauditt, Lisbon (Portugal)

4 December 2019

waterfuture
Sustainable Water Future Programme

futureearth
Research. Innovation. Sustainability.

Alexandra Nauditt, Institute for Technology and Resources Management in the Tropics and Subtropics (ITT) - Technical University Cologne

Research and Postgraduate Education on:

- **Novel data and information for water resources management**
- **Management of Natural Resources at the regional scale**
- **Water-Energy-Food/Land Security Nexus**
- **Geoinformatics, Information Management**

***PhD program* DNRD - Doctoral Program on Natural Resources and Development; 32 PhD students;**

Master programs

- IWRM
- Renewable Energy Management
- Natural Resources Management
- 100 graduates per year
- Joint programs with mit Mexico, Vietnam, Costa Rica and Jordan
- Student Exchange with >20 university partners per year

Water Future: The Water Programme of Future Earth

Vision:

To support the implementation of freshwater related sustainable development through the integration of research, innovation and capacity building.

waterfuture
Sustainable Water Future Programme

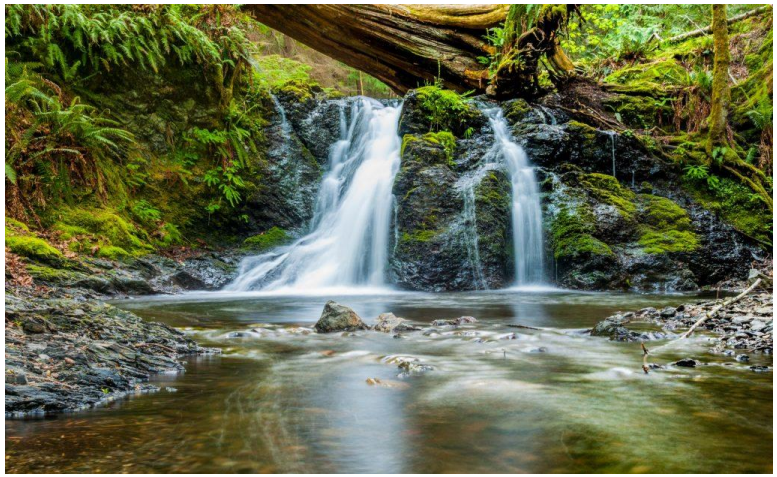
KEY FACTS

13 International Working Groups

202 Organisations

550 Core Researchers

5650 Network of Scientists, Policy Makers



A Scientific, Policy Relevant, and Solution Oriented Global Water Research Programme for Sustainable Development

International Partners

IWMI International Water Management Institute

IIASA International Institute for Applied Systems Analysis

UNITED NATIONS UNIVERSITY

UNESCO United Nations Educational, Scientific and Cultural Organization

World Water Assessment Programme

UNESCO United Nations Educational, Scientific and Cultural Organization

Intergovernmental Hydrological Programme

Australian node partners

Griffith UNIVERSITY

THE UNIVERSITY OF MELBOURNE

THE UNIVERSITY OF QUEENSLAND AUSTRALIA

CSIRO

Australian National University

Canadian node partners

GWF GLOBAL WATER FUTURES
SOLUTIONS TO WATER THREATS IN AN ERA OF GLOBAL CHANGE

COMPASS - Navigating the water challenges of the 21st Century

A comprehensive assessment system for global water resources for

1) **infrastructure planning (domestic, industrial, & agric. water use);**
2) **monitoring the progress on the achievement SDGs and**
3) **identifying business opportunities and risks**

An Earth Observation-based Water Resources Assessment system working with

THE WORLD BANK

to pilot COMPASS in 4 countries: Peru, Columbia, Argentina, Brazil, to establish national level water risk indicators that can be used around the world.

Bengaluru
Water Solutions Lab

The Water Solutions Lab works on solutions to address the emerging water challenges in the city of Bengaluru:

- Develops comprehensive water system diagnostic approaches

- brings forward custom-made innovative solutions based on novel scientific knowledge, multi-stakeholder involvement and digital information technology

Waterfuture Conference

Partners


Ministry of Earth Sciences
Government of India
DEPARTMENT OF
SCIENCE & TECHNOLOGY
United Nations
Educational, Scientific and
Cultural Organization
World Water
Assessment
Programme
United Nations
Educational, Scientific and
Cultural Organization
International
Hydrological
Programme
Griffith
UNIVERSITY
Australian Rivers Institute
IIASA
GWF
GLOBAL WATER FUTURES
teri school of
advanced studies
the
water
story.
Griffith
UNIVERSITY
Queensland, Australia
School of Humanities,
Languages and Social Science
UN
environment
IWA
the international
water association
6th
IWW
2019

Action Plan Water Future

- The *International Conference Towards a Sustainable Water Future* was held in Bengaluru, India, 24 -27 September, 2019.
- *Budapest Water Summit* (BWS) 2019, Budapest, Hungary, 15-17 October, 2019.
- The Bengaluru Water Future Conference and Budapest Water Summit 2019 submit the following action plan:

Creating a digital environment

- **Capacity building measures** to establish an interdisciplinary team of natural scientists, humanists, policy specialists and digital technologists to develop an **architecture for the integrated digital water management framework across scales**.
- Enable the fast and effective **transfer** of modern data science, modelling and other novel water management tools to **developing countries**, particularly Africa, South- and Southeast Asia.
- **Include citizen scientists to amplify data capture** and provide verification of these important new information streams.
- Capitalize on the most recent advances in **space technology for the benefit of sustainable water resources management**, seamlessly enabling up- and downscaling.

Novel data and tools to create the digital architecture

- Using novel tools based on deep learning, advanced neural networks, artificial intelligence, machine learning to map out static (e.g., engineered infrastructure) and time-varying (e.g., watershed state and natural capital) elements of and linked to water systems and develop meaningful and traceable indicators for policy planning.
- Implement greater access, openness and transparency in data heritage and governance and design ethics-based cyber information systems
- Refine modelling of coupled social and environmental processes, including detection of potential water-related in-country and transboundary conflicts and migration.
- Develop machine learning tools that appropriately consider the accelerating hydrological cycle under climate change and invoke non-stationarity for an improved estimation of relevant design values. The impacts of non-stationarity will result in higher occurrence probabilities of extremes, for which the research, technology and policy community will need to develop adequate responses, including social ones.

Developing capacity to deliver digital transformation in the water sector

- Establish Gender-sensitive capacity building approaches targeting emerging digital technologies
- Advance data literacy of all stakeholders engaged in water security,
- Stimulate and foster innovations in water institutions, governance through innovative, cyber based applications.

The water science community that convened in Bengaluru is committed to work with all stakeholders to realize the action plan outlined above.

Moving forward

- A blueprint on the architecture for the integrated digital water management framework during the next year (2020)
- The architecture will identify key elements needed to make it operational and custom made of real time usage in different sectors.
- Requires engagement of a broad community of stakeholders, to understand specific needs and considerations related to develop integrated digital water management framework with data needs- Consultation with key international partners, counties and inter-governmental agencies

WATER JPI –Nice opportunity to reach out multilaterally to different stakeholders.

Future Earth/Water Future-can help to identify specific research needs in developing the integrated digital water management framework .

Waterfuture Conference

The Bengaluru - Budapest Science Action Plan towards Sustainable Water Futures

Anik BHADURI, Alexandra Nauditt
Sustainable Water Futures Programme,
Technical University Cologne, Germany

Water International Cooperation

Background

- The *International Conference Towards a Sustainable Water Future* was held in Bengaluru, India, 24 -27 September, 2019. *The Conference was jointly convened by the international Sustainable Water Futures Programme, an associated Programme of ICSU's Future Earth initiative, and the Divecha Center for Climate Change, Indian Institute of Science, Bengaluru, India. More than 700 participants attended the meeting from varios fields of science.*
- *Budapest Water Summit* (BWS) 2019, Budapest, Hungary, 15-17 October, 2019.
- The Bengaluru Water Future Conference and Budapest Water Summit 2019 submit the following recommendations for general consideration:

Creating a digital environment and architecture

- Through appropriate capacity development activities facilitate the work of an interdisciplinary team of scientists, humanists, policy specialists and digital technologists to develop the architecture for the integrated digital water management framework across scales.
- Develop partnerships with non-water actors who pioneered integrating disruptive technologies and adopt appropriate good practices.
- Enable the fast and effective transfer of modern data science, modelling and other relevant new water management tools for the benefit of developing countries, particularly in Africa and South and Southeast Asia.
- Facilitate the inclusion of citizen scientists to amplify data capture and provide verification of these important new information streams.
- Capitalize on the most recent advances in space technology for the benefit of sustainable water resources management, seamlessly enabling up and downscaling.

Promote novel data and tools in a digital architecture

- Use new design tools based on deep learning, advanced neural networks, artificial intelligence, machine learning to map out static (e.g., engineered infrastructure) and time-varying (e.g., watershed state and natural capital) elements of and linked to water systems and develop meaningful and traceable indicators for policy planning.
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- Advance data literacy of all stakeholders engaged in water security,
- Stimulate and foster innovations in water institutions, governance through innovative, cyber based applications.

The water science community that convened in Bengaluru is committed to working with all stakeholders to realize the action plan outlined above.

Moving forward

- A blueprint on the architecture architecture for the integrated digital water management framework over the next one year
- The architecture will identify key elements needed to make it operational and custom made of real time usage in different sectors.
- Requires engagement of a broad community of stakeholders, to understand specific needs and considerations related to develop integrated digital water management framework with data needs- Consultation with key international partners, counties, Inter governmental agencies

WATER JPI –Nice opportunity to reach out multilaterally to different stakeholders.

Future Earth/Water Future - Can help to identify specific research needs in developing the integrated digital water management framework .

Any other volunteer for sharing experiences?

Discussion / inputs / suggestions

Global Discussion – Common Barriers

Moderated by Maria UHLE

NSF / Belmont Forum

Water International Cooperation

Discussion / inputs / suggestions

European Commission

Commission proposal for

Horizon Europe

THE NEXT EU RESEARCH & INNOVATION PROGRAMME (2021 – 2027)

Horizon Europe, Water R&I, International Cooperation

#HorizonEU

Panagiotis Balabanis

DG Research & Innovation

Water JPI Workshop, Lisbon, 4 December 2019

Research and Innovation

Horizon Europe

is the Commission proposal for a **€ 100 billion** research and innovation funding programme for seven years (2021-2027)

to strengthen the EU's scientific and technological bases

to boost Europe's innovation capacity, competitiveness and jobs

to deliver on citizens' priorities and sustain our socio-economic model and values

€ 4.1 billion are proposed to be allocated for defence research, in a separate proposal for a European Defence Fund

European Commission

Horizon Europe: Preliminary structure

Pillar 1
Excellent Science

- European Research Council
- Marie Skłodowska-Curie Actions
- Research Infrastructures

Pillar 2
Global Challenges and European Industrial Competitiveness

Clusters
- Health
- Culture, Creativity and Inclusive Society
- Civil Security for Society
- Digital, Industry and Space
- Climate, Energy and Mobility
- Food, Bioeconomy, Natural Resources, Agriculture and Environment

- Joint Research Centre

Pillar 3
Innovative Europe

- European Innovation Council
- European innovation ecosystems
- European Institute of Innovation and Technology

Widening Participation and Strengthening the European Research Area

- Widening participation and spreading excellence
- Reforming and Enhancing the European R&I system

European Commission

International Cooperation

International Cooperation

Tackling together global societal challenges; access to the world's best talents, expertise and resources; enhanced supply and demand of innovative solutions

Extended openness to association

- Third countries with good capacity in science, technology and innovation
- Taking into account objective of driving economic growth in Europe through innovation

- General opening for international participation
- Intensified targeted actions
  (flagship initiatives, joint calls, etc.)

European Commission

Strategic planning to define multiannual work programmes and calls for proposals

- Transparency and stakeholder involvement
- Prioritisation and flexibility to align to political priorities
- Internal programme coherence & synergies with other programmes

Multiannual Strategic R&I Plan

* Multiannual orientations and priorities in one document
* Areas for partnerships and missions

Strategic discussions with Member States and European Parliament

Consultation with stakeholders

Work Programmes

European Commission

International Cooperation priorities in the 1st Strategic Plan for Horizon Europe

- ✓ Strengthened scientific and technological links with key partners
- ✓ Multilateral alliances to address key objectives
- ✓ An international level playing field and reciprocity
- ✓ Common ethical approaches to the development of technologies and scientific knowledge

International Cooperation priorities in the 1st Strategic Plan for Horizon Europe

Feedback from web-based consultation and on the European Research and Innovation Days

- ✓ Overall policy objectives confirmed

- ✓ Issues stressed:
  - the importance of strengthening international cooperation to effectively address global challenges such as those related to climate change
  - The need to further support and facilitate the mobility of researchers and international knowledge production and exchange
  - Support to industrial leadership and achieving sovereignty in key technologies
  - Science diplomacy
  - The need to promote shared values and principles in our scientific and technological relations with other countries

International Cooperation priorities in the 1st Strategic Plan for Horizon Europe

Cluster 6 "Food, Bioeconomy, Natural resources, Agriculture and Environment"

- ✓ Support the work of the IPCC and IPBES
- ✓ Strengthening access to environmental observation data and information through the Global Earth Observation System of Systems (GEOSS)
- ✓ International cooperation will be stepped up through strategic alliances in areas, such as food and nutrition security, animal health, soil, climate change, water management, ecosystem restoration or forest management
- ✓ Support the EU-African Union Research and Innovation Partnership (food and nutrition security, sustainable agriculture, climate resilience)
- ✓ International cooperation with China (Food, Agriculture and Biotechnology), Brazil and the wider CELAC region (nature-based solutions, ecosystem restoration and natural capital)
- ✓ Promote leading international cooperation activities in the field of water
- ✓ Continue to work with international partners to step up science, research and innovation on seas and oceans (all-European sea basins, all-Atlantic cooperation, BLUEMED, Black Sea)

Ongoing international cooperation in the field of water

- ✓ International cooperation is an essential element of our water R&I activities (SDGs, climate agenda, Council conclusions on water diplomacy)
- ✓ In the context of H2020 we have promoted dedicated water cooperation activities with Africa, including non-EU Mediterranean countries, China (support of the research component of the China European Water Partnership), India (flagship initiative in 2018), Brazil (sector dialogue for possible further R&I cooperation) Central Asia EU – CA Network for Water Science and Technology)
- ✓ Since 2018, PRIMA is our key policy initiative to support R&I cooperation on water and food in the Mediterranean area.
- ✓ International cooperation is a key component of the JPI Water
- ✓ International cooperation is also a key component of the European Partnership Water4All proposed under Horizon Europe

Some issues for your discussion

- ✓ How to balance the sectorial/geographical policy perspectives?
- ✓ How to align with the new Commission's priorities and international commitments?
- ✓ What type of collaborative projects and funding mechanisms for international cooperation (e.g. joint calls, co-funding mechanisms,...)?
- ✓ How can we concretely 'step-up' our actions with respect to business as usual?
- ✓ What synergies should we seek between Horizon Europe and other EU programmes

Thank you!

Follow us and keep up to date via:

#HorizonEU

@Moedas *@EUScienceInnov* *@EU_H2020* *@HorizonMagEU*

https://www.facebook.com/EUScienceInnov/
https://www.facebook.com/cmoedas/

Horizon Europe dedicated website
http://ec.europa.eu/horizon-europe

European Innovation Council
http://ec.europa.eu/research/eic

EU budget for the future
http://ec.europa.eu/budget/mff/index_en.cfm

European Commission

Discussion / inputs / suggestions

LUNCH

Water JPI

Introduction to Afternoon Group discussions

Progressing on Issues

- Identified during previous events and exchanges with international partners
- And which were not treated in the other workshops

- WORKING BREAKOUT SESSIONS!

Possible Models for Multilateral Cooperation

- Background document: Synthesis note of the four past workshops

- Do you agree with the statements? The proposals of further actions?
- Is something important missing?
  - E.g. connection research funding and development funds?
- What to prioritise for progressing?
- What to do different?

Specific needs for innovation / connection to economic sectors

- Background: table document and your own experiences

- Connecting current activities / programmes to Innovation for enhanced development and uptake?
- Identifying and prioritising activities
- Which activities could be developed jointly between public funding agencies and companies?

Two Groups

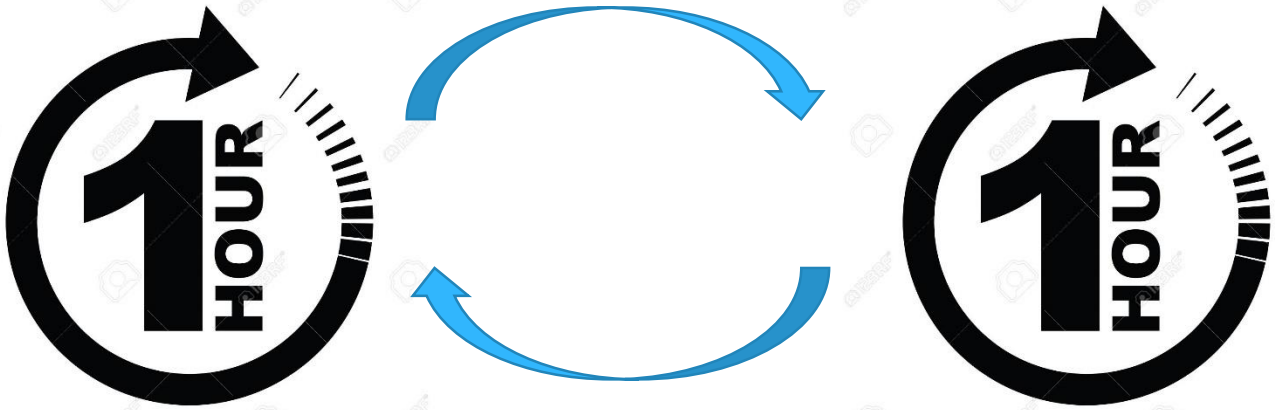
- Awatef
- Alexandra
- Diana
- Alice
- Germana
- Kata-Riina
- Miguel-Angel
- Osman
- Alessandra
- Fernando?
- Moderator: Maurice
- Rapporteur: Richard

- Antonella
- Maria
- Rabi
- Ana
- Bjorn
- Rui
- Maria-Chiara
- John
- Lisa
- Kevin?
- Moderator: Dominique
- Rapporteur: Simon

Time to work!

- *Specific needs for innovation / connection to economic sectors*

- *Possible Models for Multilateral Cooperation*



AFTERNOON GROUP DISCUSSIONS

Water JPI

RECAP OF GROUP DISCUSSIONS

Rapporteurs of
parallel sessions

Water JPI

Discussion / inputs / suggestions

CONCLUSIONS AND INTRODUCTION TO NEXT STEPS

Dominique DARMENDRAIL

Next Steps

Workshop
- Finalising workshop proceedings

2020
- Workshops (next slide)
- Continuing exchanges with some potential partners
- Drafting a common strategy for international cooperation

2020 - 2021
- Inputs from other tasks and WP of IC4Water
- Considering progress in bilateral – multilateral cooperation agreements
- Considering development in Horizon Europe

2021
- Workshop bringing all actors together for discussing draft strategy
- Approval by JPI Governing Board

Dates of future workshops

- 22 April 2020 – Public Private Partnerships Business models (Brussels, Belgium) – organised by IenM & IFD
- 26 May 2020 - European initiatives for sharing draft strategy (JPIs, Art 185) – organised by EPA
- October 2020 - Workshop IC strategy
- December 2020 - Regional cooperation workshop (Danube river basin?)
- September 2021 – Workshop IC strategy / final discussion

A.O.B.???

Group Photo

Contact

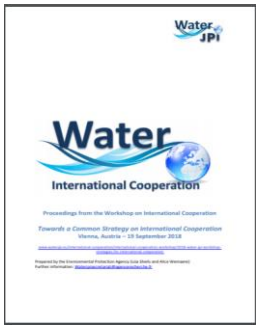
ic4watersecretariat@agencerecherche.fr

Thanks to all!

See you…

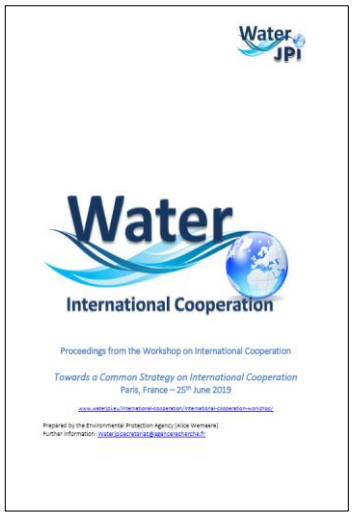
Work completed

1. Identification of the relevant initiatives
2. 'State of Play' completed (Survey)



3. Workshop-1 (19/09/2018, Vienna)
   - ✓ Proceedings of the 2018 Water JPI on International Cooperation (19/09/2018, Vienna) completed
   - ✓ Presentation and information **available** on the Water JPI Website: http://www.waterjpi.eu/international-cooperation/international-cooperation-workshops/2018-water-jpi-workshop-strategies-for-international-cooperation

Work completed



4. Workshop-2 (25/06/2019, Paris)
   - ✓ Proceedings of the 2019 Water JPI on International Cooperation Researchers completed
   - ✓ 2nd workshop presentations and information **all available** on the Water JPI Website: http://www.waterjpi.eu/international-cooperation/international-cooperation-workshops/strategies-for-international-cooperation-workshop-2019

Work in progress

- Contact with the BELMONT Forum (WeBEX on 04/09/2019)
  - Mapping of relevant projects
  - Procedures/Governance for collaboration
  - Collate feedback from other JPIs on collaboration
  - Joint Research Calls
  - Networking Actions

Next Steps

- Drafting draft Common Strategy Principles (by end April 2020) based
  - Outputs from previous stages
  - Outputs from other related IC4Water tasks

- Preparing Workshop-3 (January – June 2020)
  - Aims: To discuss and progress draft Common Strategy
  - Audience: RDI Funders, relevant EU initiatives, GPC & Researchers (EU/AC and Third Countries)

- Progressing discussions with BELMONT Forum investigating possible ways / mechanisms for cooperation (on-going)

- Meeting with WP2 Partners in Lisbon (December 2019) to discuss
  - Next Steps
  - Scheduling Workshop-3 - EPA Request:
    - Timing: c. June / July 2020
    - Venue: Central Location
    - Save the Date to be sent in January 2020 @ the latest

Discussion / inputs / suggestions