



# IGCP Scientific Board :

## Earth resources

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Theme Leader

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### **9 team members**

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*Feng-Jun NIE*

Chinese Academy of Geological Science

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Czech Geological Survey, Prag

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# IGCP Project 637: Heritage Stone Designation

*On going: 2015-2019*

## Toward establishing a “Global Heritage Stone Resource” designation

Principal investigator: B J Cooper (Australia)



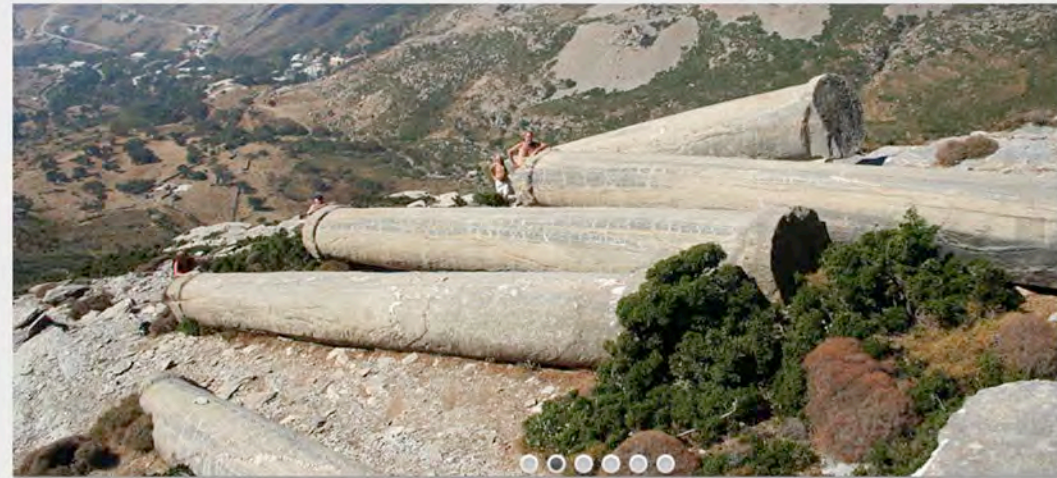
Network of 237 correspondents from 53 countries has been generated.

Heritage stone designation important for protecting stone resources and cultural heritage that may otherwise be destroyed.

Improved management of natural stone resources.

Global Heritage Stone

Reports And Documents Meetings Members GHSR Projects News Contact



**Modern and interactive website**



Latest Designation



Baltimore



Latest Newsletter



IGCP-637

<http://globalheritagestone.com>

Enhanced international cooperation for the research and new geological documentation of natural stone resources.



# IGCP Project 636: Characterization and sustainable exploitation of geothermal resources

## *New submitted project – 3 years*

Principal investigators -

2 developing & 3 developed countries:

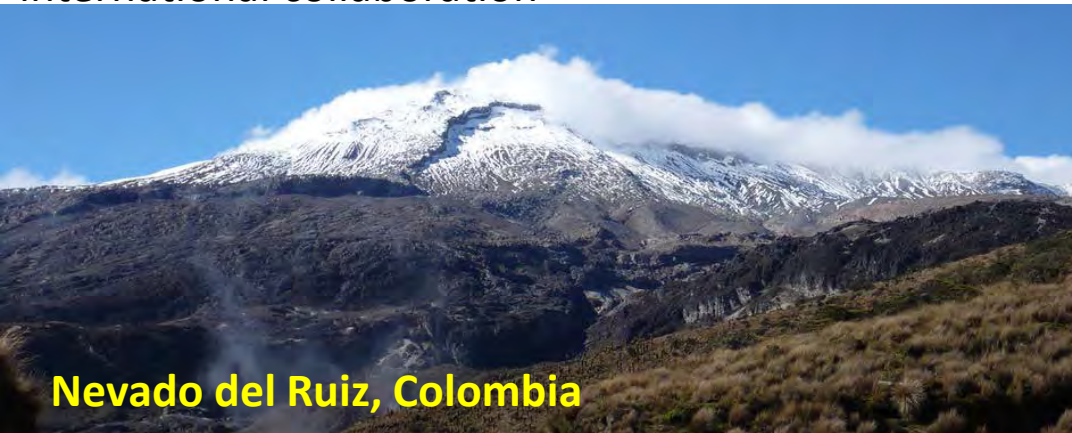
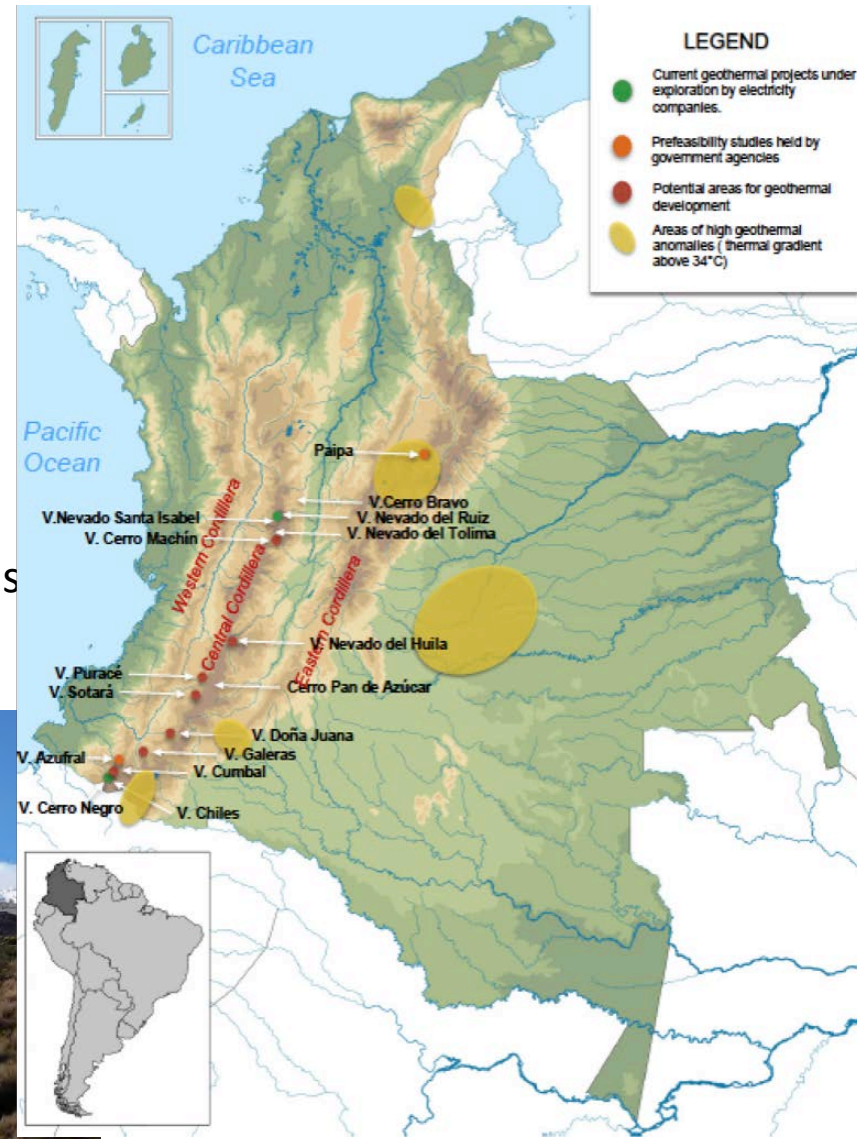
D Blessent (Colombia) – J Raymond (Canada)

P Goderniau (Belgium)- I J Lopez Sanchez (Colombia)

C Dezayes (France) – P Herreira (Chile) –

T Le Borgne (France) – M Malo (Canada)

Main objectives: propose new methodologies and techniques for the characterization and modeling of fractured geothermal reservoirs, ensure their sustainable exploitation and ensure acceptance of this kind of energy by local communities. Fostering international collaboration



**Nevado del Ruiz, Colombia**



# IGCP

## Project 638:

### Paleoproterozoic Birimian Geology for Sustainable Development

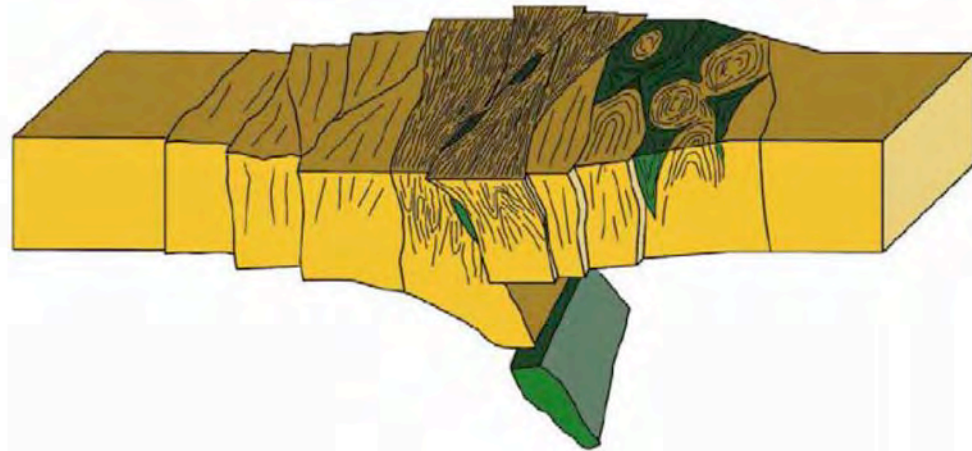
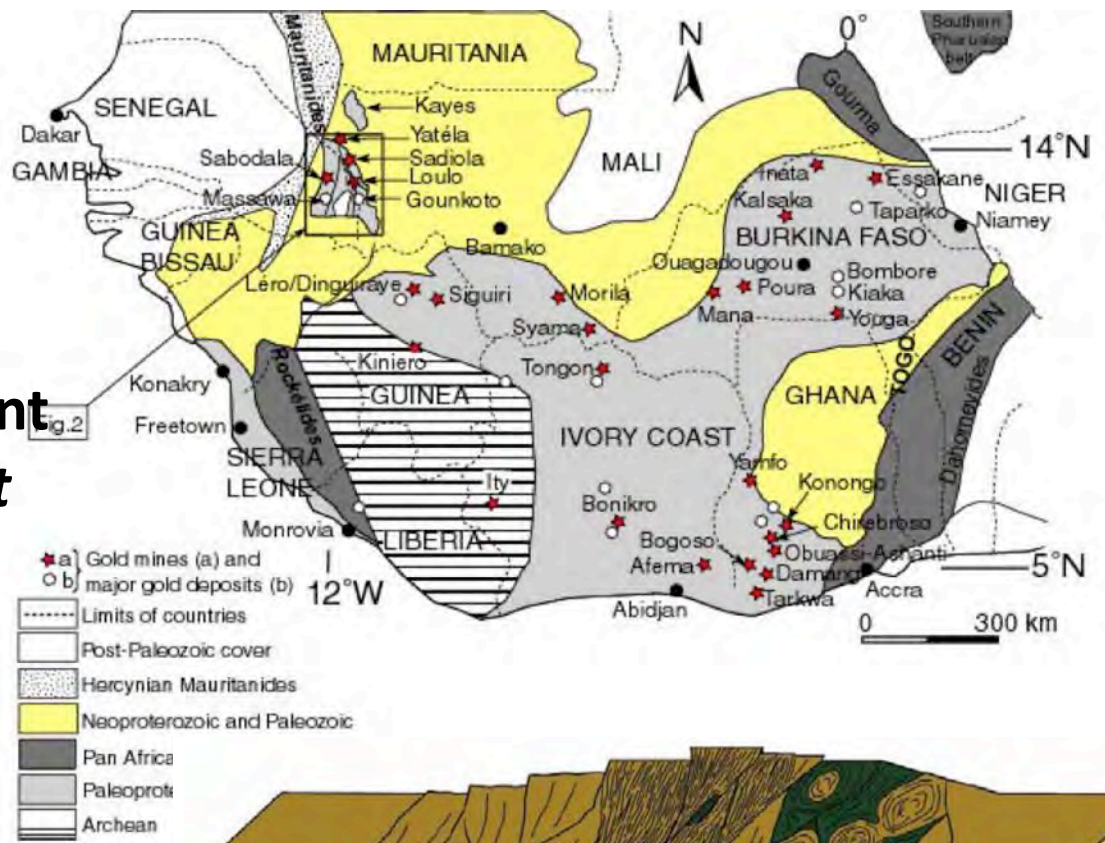
*New submitted project  
5 years*

Principal investigators:

M Dabo (Senegal) & T Haïfa (France)

Main objectives: improve the knowledge about the relationship of gold-related structures and the geodynamic evolution of Paleoproterozoic rocks (2300-2000 million years) in West Africa.

Industry: Improved knowledge will be useful for exploration companies for better targeting.  
Education: better knowledge about the geology will be shared in high school education, for better understanding the questions of sustainable development, and resourcing future generations.





**IGCP**

**Project SIDA 600:**

**Metallogenesis of  
Collisional Orogens in the  
East Tethyside Domain**

**2011-2016 – No further funding  
On extended terms**

Principal investigators:

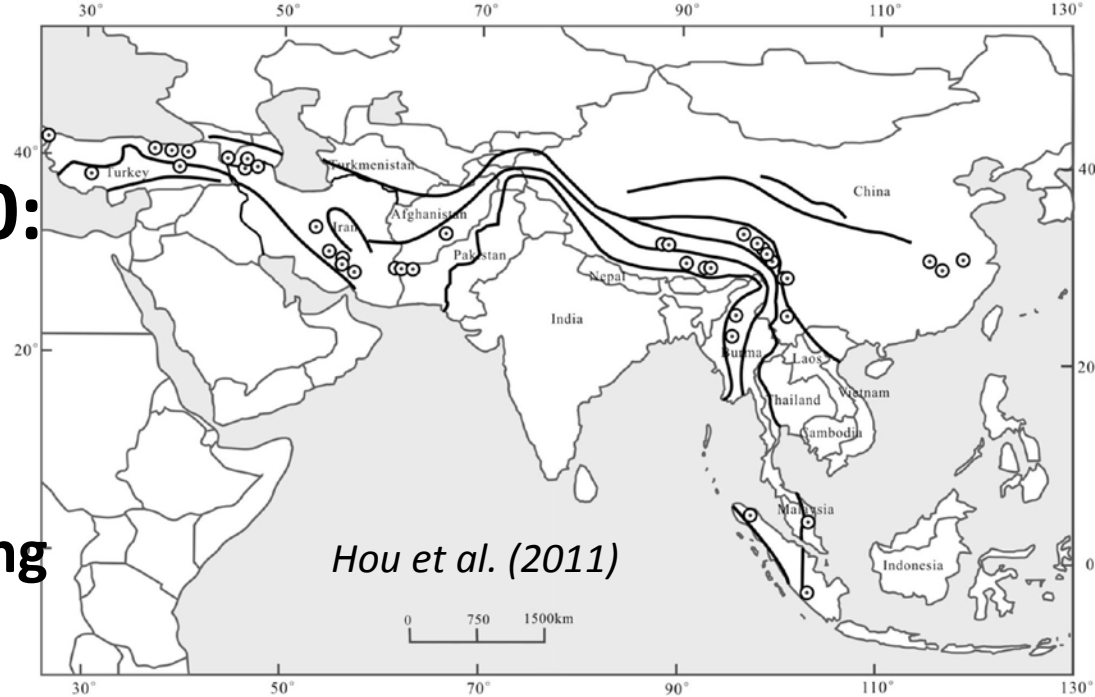
Z Hou (China) - D Leach (USA)

J Richards (Canada)- R Goldfarb (USA)

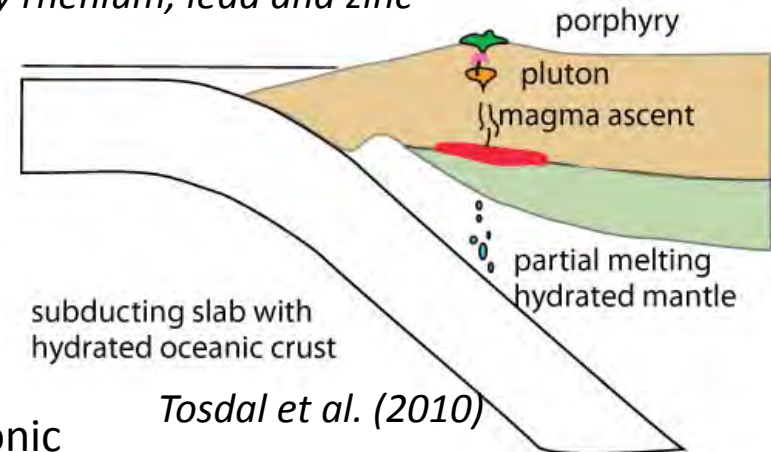
M Aghazadeh (Iran) - A Hussain (Pakistan)

5 developing & 5 developed countries: China, Iran,  
Pakistan, Georgia, Turkey, USA, Canada, Australia,  
Japan, & Spain

Main objectives: generate new knowledge about tectonic  
evolution of the Tethys belt, about collision of tectonic  
plates and the concentration of mineral resources in the  
Earth's crust useful for our society.



*Major copper, gold and molybdenum resources,  
subsidiary rhenium, lead and zinc*

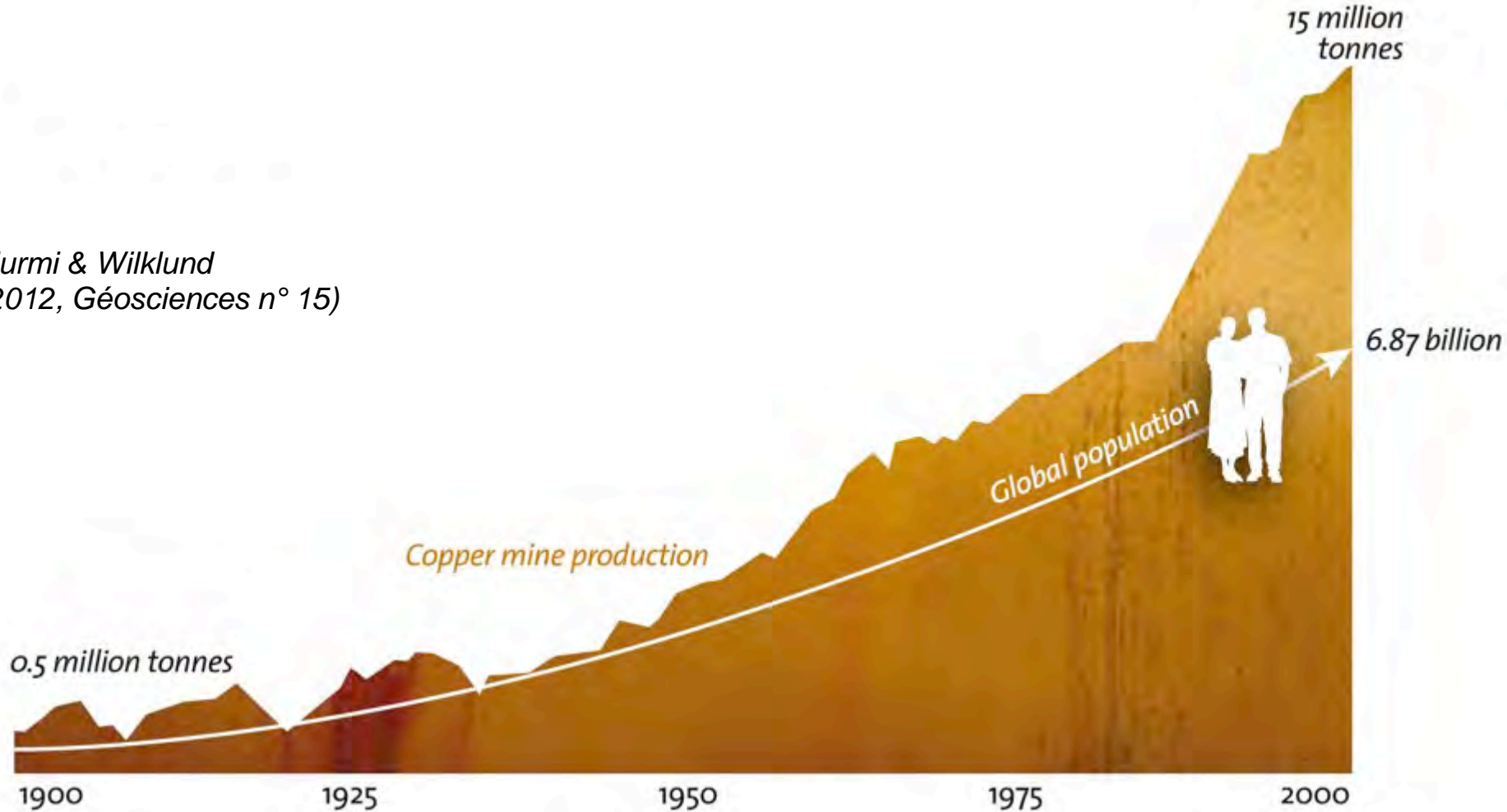


*Tosdal et al. (2010)*

Impressive publication list with  
papers of long-term impact

# Parallel increase of copper production and World population during the 20th century

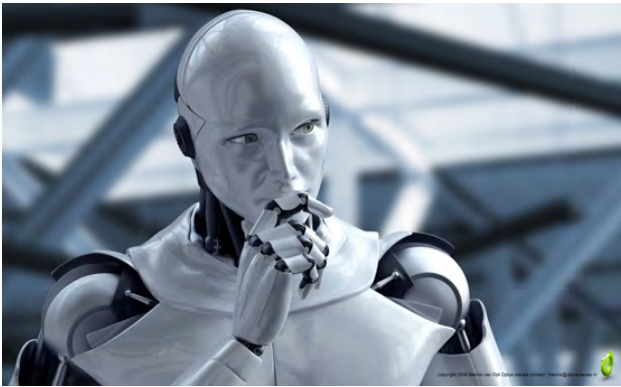
Nurmi & Wilklund  
(2012, Géosciences n° 15)



# Shanghai: Yesterday, today – Need of mineral resources



# New technologies – New sources of energy: Metals are important



## Main resources in a wind turbine

335 tons of steel

4,7 tons of copper

3 tons of aluminium

350 kg of Rare Earth Elements

... and zinc, molybdenum and

lots of concrete!







# IGCP Scientific Board :

## Earth resources

- IGCP projects are important to create scientific collaborations
- IGCP projects make a difference
- IGCP projects are important to find new mineral resources required for the needs of the future generations
- Your help is needed, we need more good quality IGCP submissions
- UNESCO country representatives should identify and motivate researchers to organize and submit IGCP grant applications