French National Committee of the International Geoscience Program
Société Géologique de France - Annual Report 2019

The role of the SGF-IGGP is to:

- Encourage submissions of new French-led proposals to the IGCP Scientific Board;
- identify amongst the approved IGCP projects those that are of potential interest to the French scientific community in order to encourage French colleagues to be involved and hopefully coordinate French activities with respect to those IGCPs;
- provide feedback on French geoscience issues and priorities to IGGP and UNESCO;
- be the official voice of France to the IGGP, as well as representing the latter to French geoscientists;
- allow French geoscience to be effective in interactions with UNESCO and other organizations worldwide.

The Vice-President for Foreign Affairs of the Société Géologique de France chairs the SGF-IGGP. Current membership is as follows:

- François Baudin (Chair)
- Taniel Danelian (in charge of IGCP Projects)
- Patrick De Wever (in charge of Geopark and Geoheritage Projects)

Activities report

French scientists have been particularly active in seven (7) IGCP projects, three of which are part of the "*Global Change and the Evolution of Life: Evidence from the geological record"* theme, two of the "*Geohazards: mitigating the risks*" theme and one of "*Geodynamic: control of our environment*".

(1) Project n° 636 "Characterization and sustainable exploitation of geothermal resources"

Although this project ended in 2019, a final gathering was held during the annual meeting of the Geological society of Canada (GAC-MAC at Québec, May 13-15, 2019). One French researcher from the BRGM (Bureau de Recherches Géologiques et Minières) was able to attend the meeting.

(2) Project n° 653 "The onset of the Great Ordovician Biodiversification Event"

Dr. Thomas Servais, Senior CNRS Research Fellow at the University of Lille, is the project leader of this IGCP launched in 2016. It brings together over 200 scientists worldwide, including a dozen of French researchers and PhD students; they come from the Universities of Lille, Lyon and Toulouse.

IGCP n° 653 organized its main annual meeting in August 2019 at Novosibirsk, Russia, jointly with the International Symposium on the Ordovician System, and together with the International Subcommission of Ordovician Stratigraphy (ISOS). Over 70 participants joined this meeting and the excursions to Siberia (www. http://isos13.ipgg.sbras.ru/en). The meeting was attended by three French scientists.

As in previous years, several IGCP n° 653 sessions were organized in 2019 at other international congresses.

A first special session was organized at the 11th North American Paleontological Convention (NAPC) in June 2019, at Riverside, California, regrettably with no French participants.

At the Geological Society of America (GSA) annual meeting in Phoenix, Arizona, the keynote in the IGCP n°653 session on September 22nd, 2019, was provided by the French team of climate modelers and presented by Alexandre Pohl (Université de Bourgogne, now at University of California, Riverside).

Finally, a small group of French participants (including CNRS research associates, and four PhD students from Lille and Lyon) attended the IGCP 653 workshop and dinner during the Annual Meeting of the Paleontological Association at Valencia, Spain, in December 2019.

(3) Project n° 655 "Toarcian Oceanic Anoxic Event: Impact on Marine Carbon Cycle and Ecosystems"

Nine (9) French researchers participate to this global project launched in 2017, bringing together over 110 scientists all over the world. French participants come from the Universities of Lyon, Paris, Dijon and Toulouse. Prof. Emanuela Mattioli (Lyon) is the French co-leader of the project.

One of the French participants was able to attend this IGCP's annual meeting organised in Erlangen (Germany) in September 2019 and hosted by the Geozentrum Nordbayern of the Friedrich-Alexander University. Training courses ("*3D imaging techniques and CT-scanning"* and *"molecular fossils"*) were offered during the first day of the meeting, while the second day was dedicated to oral and poster communications. It was followed by a field trip dedicated to the T-OAE record in southern Germany, with special focus on facies, geochemistry and fossil assemblages.

(4) Project n° 659 "Seismic risk assessment in Africa (SEISMOSHAF)"

The project leader of this IGCP is Prof. Mustapha Meghraoui from the Institut de Physique du Globe of the University of Strasbourg (France). For its second year, the working group met at the annual meeting of the project held during the 2nd Conference of the Arabian Journal of Geoscience in Tunisia (Sousse, 25 – 29 November 2019). Scientific and business sessions discussed the topics of regional seismic hazard evaluation and the database for the risk assessment, the feasibility of an early seismic warning system, and the launch of an earthquake center in Africa. Several young researchers and students of the IGCP-659 project have participated to the sessions and field trip (to the Kairouan earthquake zone). A one-day training school was organized on the integration of seismotectonic data into the seismic hazard and risk assessment.

(5) Project n° 667 “The World Map of the Orogens”

Dr. Manuel Pubellier, Senior CNRS Research Fellow at Ecole Normale Supérieure de Paris, is the project leader of this IGCP launched in 2018. Sixteen (16) french researchers participate to this project and come from the Commission for the Geological Map of the World, the ENS and Universities of Nice Sophia-Antipolis, Orléans, Cergy-Pontoise, Lille and Sorbonne-Paris, but also the companies IFP, Total and BRGM.

Seven (7) french scientists were able to participate to the annual meeting of this IGCP held in Tervuren (Belgium) on December 2019. This meeting included two days of talks focused on African and European orogens and old cratons, in collaboration with the Africa Museum in Brussels. After a first version of the world map already realized (including the main orogens of the different continents with their respective ages and a detailed legend), the main aim of this meeting was to focus, in particular on the design of the African continent and to present a sketch of the map in the other regions of the world. The meeting also included a one-day fieldtrip in the Meuse Valley, in the Belgian Brabant Massif, which displays a major unconformity between the Caledonian and Variscan orogens.

(6) Project n° 679 “Cretaceous Earth Dynamics and Climate in Asia”

Twelve (12) French researchers from Lyon and Paris participate officially to this new IGCP. Regrettably none of them was able to attend the first meeting organized in October 2019 in Qingdao (China).

(7) Project n° 692 “Geoheritage for Geohazard Resilience”

Benjamin van Wyk de Vries, Professor at the University of Clermont Auvergne, is the project leader of this IGCP, launched in 2019. It has attracted additional financial support from the Clermont Risk Center and the University Clermont Auvergne, as they have decided to fund two associated research projects with a PhD and several developing country master projects to study the impact and success of work related with geosites.

A splinter meting entitled “*Geodiversity and Geoheritage: whar are geosites useful for?*” was convened by Prof. van Wyk de Vries at the European Geophysical Union meeting in Vienna (April 2019), which gave the opportunity to display a booth on “*Geoheritage Virtual Reality models*” and a public event at the Vienna International School concerning a *3D presentation and printed 3D Geoheritage for Resiliance models*.

One new IGCP application involving a French co-leader was submitted for evaluation in 2019. It concerns the *"Identification of seismogenic faults in populated areas of Latin America and its incorporation into seismic hazard assessment”.*

A letter of endorsement and support of this proposal was provided by the SGF-IGCP.

François Baudin Taniel Danelian