Research evaluation

FINAL SUMMARY OF THE EVALUATION ON THE RESEARCH UNIT:

Institut of Earth Sciences (ISTerre)

UNDER THE SUPERVISION OF THE FOLLOWING INSTITUTIONS AND RESEARCH BODIES:

Centre National de la Recherche Scientifique - CNRS
Université Grenoble Alpes - UGA
Université Savoie Mont Blanc
Institut de Recherche pour le Développement-IRD
Institut français des sciences et technologies des transports, de l'aménagement et des réseaux - Ifsttar

EVALUATION CAMPAIGN 2019-2020

GROUP A

Report published on September, 29 2020

High Council for evaluation of research and higher education

In the name of Hcéres[1]:	In the name of the experts committee[2]:
Nelly Dupin, Presidente par intérim	Jean-Philippe Avouac, Chairman of the committee

Under the decree No.2014-1365 dated 14 November 2014,

[1] The president of Hcéres "countersigns the evaluation reports set up by the experts committees and signed by their chairman." (Article 8, paragraph 5);

[2] The evaluation reports "are signed by the chairman of the experts committee". (Article 11, paragraph 2).

Tables in this document were filled with data submitted by the supervising body on behalf the unit.

UNIT PRESENTATION

Unit name:	Institut of Earth Sciences
Unit acronym:	ISTerre
Current label and N°:	UMR 5275
ID RNSR:	201119454C
Application type:	Renewal
Head of the unit (2019-2020):	Mr Stéphane Guillot
Project leader (2021-2025):	Mr Philippe Roux
Number of teams and/or themes:	9 teams

EXPERTS COMMITTEE MEMBERS

Chair:	Mr Jean-Philippe AVOUAC, California Institute of Technology, United States of America
Experts:	Mr Pierre-Yves ARNOULD, CNRS, Nancy
	Mr Etienne BALAN, Sorbonne université, Paris
	Mr Pascal BERNARD, Institut de Physique du Globe, Paris.
	Ms Juliet BIGGS, University of Bristol, United Kingdom
	Mr François GUILLOCHEAU, Université de Rennes 1, Rennes
	Mr Benoit LANGLAIS, CNRS, Nantes
	Mr François MARTIN, Université Toulouse Paul Sabatier, Toulouse
	Ms Oona SCOTTI, Institut de Radioprotection et de Sûreté Nucléaire, Antony
	Mr Renaud TOUSSAINT, CNRS, Strasbourg

HCÉRES REPRESENTATIVE

Mr Jean-Mathieu NOCQUET

REPRESENTATIVES OF SUPERVISING INSTITUTIONS AND BODIES

Mr Philippe CHARVIS, Institut de Recherche pour le Développement (IRD)

Ms Anne-Catherine FAVRE, Université Grenoble Alpes (UGA)

Mr Eric GAUME, Institut Français des Sciences et Technologies des Transports, de l'Aménagement et des Réseaux (IFSTTAR)

Mr Eric HUMLER, Centre National de la Recherche Scientifique (CNRS)

Mr Roman KOSSAKOWSKI, Université Savoie-Mt-Blanc (USMB)

INTRODUCTION

HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

ISTerre resulted from the fusion in 2011 of two laboratories: LGIT (Laboratoire de Géophysique Interne et Tectonophysique) and LGCA (Laboratoire de Géodynamique des Chaînes Alpines). Since its creation the institute has nearly doubled its size. As a whole, ISTerre (Institut des Sciences de la Terre) includes about 250 scientists, students and support staff studying Solid Earth, the Environmental and Planets. They are located for the most part at the University Grenoble Alpes (UGA) and, for smaller fraction, at the University of Savoie Mont-Blanc (USMB). Supervising institutions include, in addition to the local universities UGA and USMB, CNRS, IRD and IFSTTAR. ISTerre is part of the pole PAGE (Pôle Physique des particules, Astrophysique, Géosciences, Environnement et écologie) of UGA, and of the Observatoire des Sciences de l'Univers de Grenoble. So ISTerre is well integrated in local structures and is benefiting from the Idex status of UGA and the Labex status of OSUG (Observatoire des Sciences de l'Univers de Grenoble). It is involved in two Equipex. The Eco-X equipex, is a consortium project of University Grenoble Alpes managed by ISTerre in collaboration with CNRS-INSU and the European Synchrotron Radiation Facility (ESRF). ISTerre is involved heavily in the RESIF Equipex, which is a major part of the French Participation in EPOS (European Plate Observing System), a research infrastructure at the European level part. ISTerre manages several key components of the RESIF Consortium, which has 18 institutional partners (nine universities, and nine other organizations; e.g., the French Spatial Agency, the CEA, and the French Geological Services). The ecosystem of ISTerre also includes spatial agencies, CNES in the first place but also ESA, NASA and JAXA. These connections are related to ISTerre activities in active tectonics, which develop methods and make intensive use of remote sensing and GNSS data, geomagnetisme, and planetology.

MANAGEMENT TEAM

The management team consists of a director (Stéphane Guillot for the period of evaluation) and four deputy directors. The executive board consists of the director, co-directors and team leaders.

HCÉRES NOMENCLATURE

ST3 – Sciences de la Terre et de l'Univers (STU).

THEMATICS

ISTerre research spans broadly Solid Earth sciences from the core to the surface and planetary sciences. The disciplines represented at ISTerre include, in no particular order: seismology, geodesy, remote sensing, volcanology, geochronology, geomorphology, sedimentology, petrology, mineralogy, and geochemistry.

UNIT WORKFORCE

Institut of Earth Sciences (ISTerre)		
Active staff	**Number 06/30/2019**	**Number 01/01/2021**
Full professors and similar positions	23	24
Assistant professors and similar positions	27	27
Full time research directors (Directeurs de recherche) and similar positions	22	24
Full time research associates (Chargés de recherche) and similar positions	29	29
Other scientists ("Conservateurs, cadres scientifiques des EPIC, fondations, industries, etc.")	1	0

High school teachers	2	2
Supporting personnel (ITAs, BIATSSs and others, notably of EPICs)	42	44
Permanent staff	**146**	**150**
Non-permanent professors and associate professors, including emeritus	3	NA
Non-permanent full time scientists, including emeritus, post-docs (except PhD students)	23	NA
PhD Students	60	NA
Non-permanent supporting personnel	14	NA
Non-permanent staff	**100**	NA
Total	**246**	**150**

GLOBAL ASSESSMENT OF THE UNIT

ISTerre is an outstanding institution in the French academic landscape in Earth Sciences. In less than 10 years since its creation through the merging of the geophysics (LGIT) and geology (LGCA) components of UGA, ISTerre has established itself as a leading institution in Earth Sciences worldwide. The institute hosts a large number of scientists with outstanding scientific output, recognition from peers through prestigious awards, and leading roles in national and international organizations. The organization and management seem remarkably efficient and collegial. This has probably contributed to a great collective dynamics. The gender balance is not satisfying though. ISTerre should be pro-active to facilitate the recruitment and promotion of female scientists in the future. The atmosphere among the students and Postdoctoral fellows is very good despite a clear shortage of office space that needs to be addressed. The students are productive and seem well supervised in general. ISTerre is organized efficiently and has been very well managed. The centralization of the technical support in services and platforms has been most beneficial. This organization insures an optimal use of the available technical and administrative support. Despite this organization, and a similar optimization of support at the OSUG level, the technical team is overloaded. The ratio of permanent technical staff to research scientist of 0.41 (42 ITA / 102 EC-C) is below the national average (0.48, with units providing national technical services excluded), so the case for additional permanent positions could be made. An additional strength of ISTerre is its interaction with the non-academic world thanks in particular to the SEISCOPE consortium, research contracts with a number of industrial partners, and the connections provided by IRD in the area of natural hazards, georesources, environment and health. Some teams, and more importantly the students in those teams, are not exposed much to interactions with the non-academic world though. ISTerre has been extremely successful at raising funds from the European Research Council (ERC), the Agence Nationale de la Recherche (ANR) and industrial partners. There will in particular be 8 ERC projects active in the next few years. The workforce is expected to increase by about 20%. This success will increase very significantly the pressure on administrative and technical support and on space, with a need for office space and laboratory space. Dealing with these needs must be addressed in the short-term. The need for technical support should be met with staff not only on temporary contract so that the technical knowledge and expertise that will result from these new projects is retained. Another implication of the success of ISTerre scientists at obtaining ERC grants and IUF positions is that a number of faculty members will be discharged from teaching. The teaching load of the other teaching faculty, in particular those of rang B, who are doing the bulk of the undergraduate teaching, will therefore increase. Attention must be paid to a fair distribution of the teaching duties. A better integration of teaching and research is recommended. It would help dealing with this issue but also would better connect ISTerre to the broader population of students at UGA. The policy of ISTerre to collectively use the funds collected from ERC grants to foster cross-team collaboration is an excellent strategy. This redistribution of funding allows pump-priming inter-disciplinary projects. A coordinated effort making use of the broad range of expertise at ISTerre focused on important science questions could accelerate the impact and create new areas of excellence where ISterre could play a visible role in the future. It would probably be best to select a small number of projects, possibly only one, with significant funding for the incentive to be attractive. ISTerre is well placed to be a major actor of the initiative of UGA in Artificial Intelligence.

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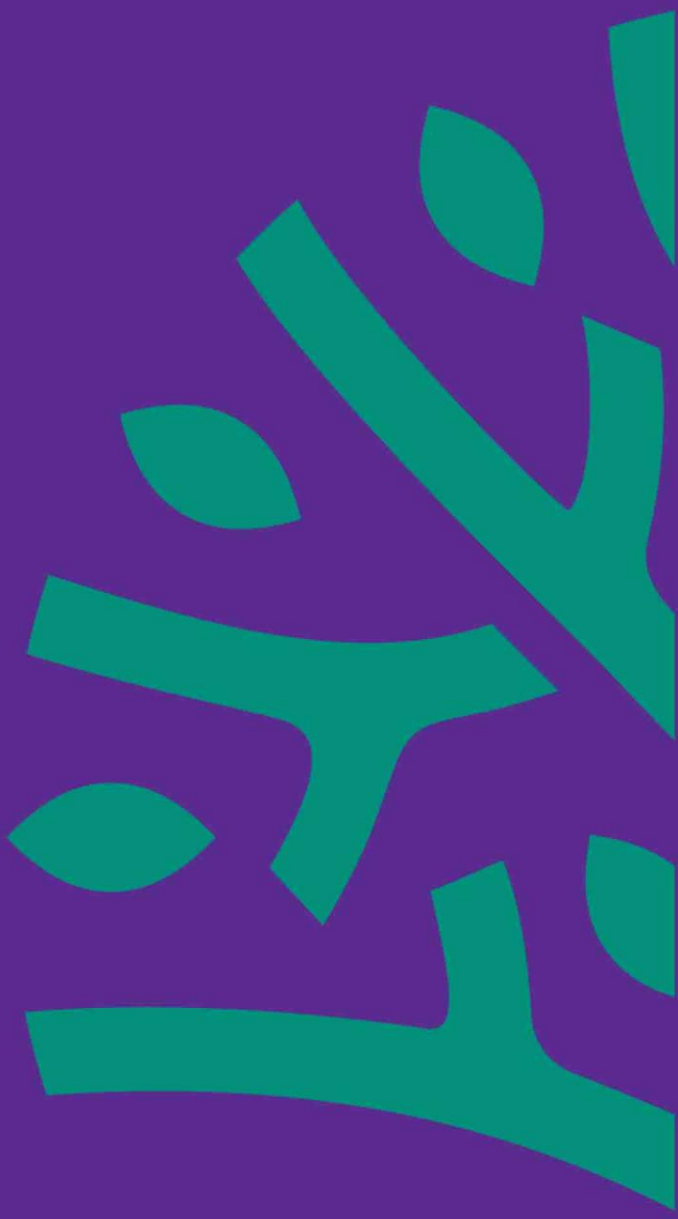

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