

# Working Paper

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Analysis of projects funded by  
the CAPES-SIU Programme for  
Brazil-Norway Cooperation

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# 1 Summary

This report presents an analysis of eight projects that were awarded funding through the CAPES-SIU programme in 2013. It provides a summary of the activities that the programme helped to implement, the challenges the projects experienced, and the results that are expected to last after the projects have ended. The study is based on the final reports and telephone interviews with the project coordinators on the Norwegian side.

The analysed projects are believed to have contributed to strengthening cooperation between Brazilian and Norwegian higher education institutions and to linking education to research collaboration. This was achieved through student and academic staff mobility, joint development of educational content where scientific results were integrated, student supervision and teaching at the partner institutions, and involvement of students in research and development activities and in field work.

## Results:

- The cooperation between the partners is characterised by complementarity in expertise, knowledge, facilities and equipment
- All projects were based on already established research collaboration between partners, where education was introduced as a new component
- Student and staff mobility (both ways) included about 100 trips with a total duration of approximately 103 months
- Eight new joint courses qualifying for study credits in Norway were developed
- Supervision of students from partner institutions was included in the six of the projects and formalised in four of them.

## Lessons learned:

- Participants underline the importance of funding to continue with the educational activities
- Several projects experienced difficulties with recruiting Norwegian students to travel to Brazil
- Several projects experienced administrative and communication challenges
- The importance of cooperation at individual level was stressed by several of the project coordinators.

# 2 Introduction

The CAPES-SIU programme was administered jointly by the Brazilian national agency CAPES (Coordination for the Improvement of Higher Education Personnel) and the Norwegian Centre for International Cooperation in Education (SIU). The programme was related to the Norwegian Government's strategy for cooperation between Norway and Brazil (2011), where the need for increased cooperation in research and higher education is stressed, and to the bilateral agreement with Brazilian authorities on technical and scientific cooperation (2008). From the Norwegian side, the programme was funded by the Ministry of Education and Research, while Brazilian participants received their funding from CAPES.

The call for applications was launched in 2012. A total of NOK 4 million was available from SIU in the call, where the maximum support from SIU was NOK 700 000 per project. The



maximum support from CAPES amounted to USD 116 000 per project. A new call was published in 2016, when the programme was placed under the umbrella of the UTFORSK Partnership Programme and was renamed to UTFORSK:Brazil.

The main objective of the first call for applications was to develop and strengthen academic collaboration between Brazil and Norway. The objectives of the call included supporting collaborative activities between higher education and research institutions in Brazil and Norway, promoting mobility of students and academic staff, encouraging exchange of teaching methodologies and cooperation in provision of education, and stimulating development of innovative technologies. The applicants were encouraged to contribute to a broader collaboration leading to high-level research results and innovation. Cooperation with business and industry was also encouraged.

CAPES and SIU cooperated on the development of the call and met to select the projects to be awarded funding. Each project had two project coordinators, one on the Norwegian side and one on the Brazilian side, and both applied for funding and reported separately to their respective national offices. Since CAPES and SIU are national agencies, they are governed by different national policies. From the Norwegian side, Master and PhD students were the main target group for scholarships, with the option to include Bachelor students. From the Brazilian side, PhD students and postdocs were the target group for scholarships.

See next page for project overview.



## 2.1 Project overview

The overview of the eight projects is given in Table 1. The projects were coordinated by the main partners from Norway (NO) and Brazil (BR).

**Tabell 1. The projects**

Project number	Main partners	Project title	Disciplines
CAPES-SIU-2013/10046	<b>NO:</b> Norwegian University of Science and Technology (NTNU) <b>BR:</b> Pontifical Catholic University of Rio de Janeiro (PUC-Rio)	Complex Fluids in Confined Environments	Physical sciences; Mechanical engineering; Other natural sciences; Material technology
CAPES-SIU-2013/10057	<b>NO:</b> University of Oslo (UiO) <b>BR:</b> Federal University of Pernambuco (UFPE)	Diversity of fungi in Brazilian forest ecosystems	Biological sciences; Ecology, Environmental Sciences
CAPES-SIU-2013/10063	<b>NO:</b> University of Bergen (UiB) <b>BR:</b> University Nove Julho São Paulo (Uninove)	Norbras laser phototherapy	Health sciences; Clinical dentistry; Basic and veterinary medicine and basal odontology; Physical education, Sports Science
CAPES-SIU-2013/10073	<b>NO:</b> University of Agder (UiA) <b>BR:</b> Federal University of Santa Catarina (UFSC)	Meteorological forecasts for renewable energy system operation	Other engineering and technology; Other natural sciences
CAPES-SIU-2013/10076	<b>NO:</b> Norwegian University of Life Sciences (NMBU) <b>BR:</b> Federal University of Rio de Janeiro (UFRJ)	Advanced Robotics	Mechanical engineering; Electronics and electrical engineering; Information, computer and communication technology
CAPES-SIU-2013/10078	<b>NO:</b> University of Bergen (UiB) <b>BR:</b> University of São Paulo (USP)	Molecular pathogenic mechanisms during Leishmania-host interaction: approach for disease control	Health sciences; Clinical medicine; Biotechnology; Biological sciences
CAPES-SIU-2013/10080	<b>NO:</b> University of Bergen (UiB) <b>BR:</b> University of São Paulo (USP)	Integrated orogen-sedimentary basin studies	Earth sciences; Physical sciences
CAPES-SIU-2013/10081	<b>NO:</b> University of Oslo (UiO) <b>BR:</b> University Campinas (UNICAMP)	Education, Academic exchange and Research within the area of Petroleum Geophysics/Image analysis	Earth sciences; Mathematical sciences



## 3 Results

### 3.1 Project implementation

The eight projects were awarded a total of NOK 3 978 000 from SIU, of which approximately 85 % were used during the project period (2013-2015). The funds were used on the activities/costs listed in Table 2, with the respective percentage of the allocation used for each activity. The largest part of the funds was used for mobility of staff, who were responsible for organizing and implementation of the educational activities for students.

**Tabell 2. Reported allocation of funds for activities**

Activity	Share, %
Staff mobility	39
PhD student mobility	19
Other operating costs <sup>1</sup>	17
Networking/conferences/seminars/workshops	7
Project administration	7
Project management	5
Master student mobility	4
Promotion and dissemination	2

<sup>1</sup> Consumables, laboratory experiments, advanced technologies, international experts and lecturers, housing, online tools development.

On average, the eight projects carried out approximately 85 % of their planned activities, but there was a certain variation between the projects. Five projects completed all or almost all of the planned activities, two projects achieved notably less and one project could not deliver a full report due to illness of the project coordinator. Four of the eight projects have received funding from CAPES and SIU to continue cooperation for an additional two-year period.

### 3.2 Development of joint educational initiatives and exchange of teaching methodology

The projects developed 8 new joint credit-yielding courses for students at Master and PhD level. However, three of them were not completely independent, as they covered the same topic but with a somewhat different curriculum. In addition, 8 existing courses and 2 study programs were revised. Altogether 127 students attended the joint courses. Other developments include 7 digital learning resources and the translation of a textbook into Portuguese; 68 guest lectures were held and 43 workshops and seminars were organised for 566 participants in total. Supervision of students from partner institutions was included in six projects and formalised in four of them, which can contribute to building a more lasting relationship.

The study finds that the development of joint educational initiatives in virtually all cases was based on implementation of new knowledge generated by research activities into the courses and programmes. All the projects were linked to ongoing research to some extent, and four of them report high scientific activity. In several projects, academic staff contributed with



their scientific expertise and results when teaching at partner institution and developing content of the courses.

Transfer of knowledge and expertise seems to be well balanced between the Norwegian and the Brazilian sides. The impression is otherwise that very few of the projects had teaching methods in focus. There is one good example, in which the Norwegian side learned from the Brazilian side where involvement of students in research was exemplary.

### 3.3 Mobility of academic staff and students

Mobility of staff and students went both ways. There were 29 trips of students from Norway to Brazil with a total duration of 64 weeks and 39 trips of academic staff with a total duration of 56 weeks. From Brazil to Norway there were 15 trips of students with a total duration of 278 weeks and 18 trips of academic staff with a total duration of 40 weeks. The Norwegian side had mostly short (1–2 weeks) stays in Brazil, while some students from Brazil had stays of up to one year in Norway. Staff mobility was mainly carried out as planned, but several Norwegian academic groups reported difficulties recruiting Norwegian Master students to study in Brazil. Thus fewer Norwegian students travelled to Brazil than originally planned.

The purposes of the student mobility were to study, to participate in research projects, seminars/workshops and field work, to receive (and sometimes give) supervision at the partner institution and to work with advanced equipment and technology. The academic staff travelled to organise seminars, workshops and project meetings, supervise students, network, perform field work, hold courses and guest lectures, develop course content, discuss and plan joint research projects (including those of PhD students and postdocs).

### 3.4 Development of partnerships

The study finds that the programme has added an educational dimension to established research relationships. In addition, some new research networks emerged from the cooperation. As a result of the activities implemented jointly by the partners, networks were reinforced in most projects (six out of eight), and are planned to be used in the future. Half of the projects expanded their network to include more participants and institutions. Several projects mention complementarity of the expertise brought in by the partners. In half of the projects, the cooperation is anchored at the institutional level through a Memorandum of Understanding or intention/cooperation agreements between the respective institutions or faculties. The importance of good relations at a personal level was, however, stressed by several project coordinators.

Development of joint courses is one of the means to strengthen cooperation and contribute to its sustainability. In three of the projects, the newly developed or revised courses continued after the project was finished. This includes all the 8 new courses and 2 of the 8 revised courses.

### 3.5 Technological innovation

It is difficult to conclude from the final reports as to whether the projects have contributed to technological innovation, but seven of the projects reported on having some form of it. For example, two projects reported that their results might be of interest or are already used by





industry. Another project reported that known technology was used to help answering scientific questions in an innovative way. One project had robotics as its main focus and a few publications coming out during the project indicate the possibility of technological innovation.

### 3.6 Challenges

The project participants from the Norwegian side report that they experienced some of the rules and procedures in the Brazilian system, which were unfamiliar to them, as a challenge. Another difficulty was related to somewhat limited English language skills among Brazilian Bachelor and Master students who travelled to Norway. The lack of courses taught in English in Brazil was also reported as a challenge.

It appears that some challenges were caused by the fact that CAPES and SIU have different rules and procedures concerning funding, applications and information required. It would therefore have been an advantage for the projects if CAPES and SIU had more information about each other's administrative procedures.

Recruiting Norwegian students to travel to Brazil was another challenge that most of the projects experienced. The lack of courses taught in English may be the main reason for this, but the security situation in Brazil may also be a relevant factor. At the same time, the study finds that there is room for improvement in terms of the methods used to recruit students. In one project, the possibility to study in Brazil was only announced on a webpage, whereas another project had a much more proactive approach to this and even recruited more students than planned. This project had a very active and participating project coordinator.

Other factors that constituted challenges were also mentioned: changes in a study programme, differences in methodology and level at Norwegian and Brazilian universities, lack of communication, moving of coordinators and other key personnel, pregnancies and illness.

It should be added that, in general, it takes time to get a visa to Norway for a Brazilian citizen, and it may be challenging to find accommodation for visiting doctoral candidates.

## 4 Recommendations

We would strongly recommend retaining the model of funding from two countries. Firstly, it provides a balance, a signal of equality which is very important when a new cooperation is to be developed.

Secondly, it allows for a completely different understanding at SIU of how colleagues' work is governed by a context with different rules from the Norwegian ones. Even a small programme like the CAPES-SIU programme can contribute to learning at all levels.

Thirdly, collaboration with CAPES also provides a visibility in Brazil for Norwegian higher education institutions, something a purely Norwegian funded programme would never have been able to achieve. Several of the applications for this programme were initiated by the Brazilian side. A bilaterally funded programme can contribute directly to the promotion of Norway as a relevant partner for Brazilian researchers.



It appears to be a good model to build cooperation in education on already existing research collaboration.

Active efforts are necessary for recruiting Norwegian students to travel to Brazil in order to reach the goals of increased mobility (PANORAMA: the Norwegian Government's strategy for higher education and research cooperation with Brazil, India, Japan, China, Russia and South Africa, 2016-2020).

SIU should consider getting in place a more systematic overview of how the administration of partnership projects works from the Brazilian side (CAPES). This may be useful for the development of the programme rules and for guidance of the project coordinators.

SIU should develop the design of the project proposal and project report forms so that it allows collecting more precise and unambiguous information about educational cooperation. This includes more precise definitions of the indicators used for reports, as well as a clear separation between planned and implemented activities.

The CAPES-SIU programme is a modest contribution to cooperation between Norwegian and Brazilian partners. However, it is believed that all participants have found cooperation to be interesting and meaningful. Cooperation with Brazilian universities appears attractive, and within disciplines such as biology, medicine and petroleum, the Brazilian partners are particularly relevant.