



Norwegian Ministry
of Education and Research

Strategy

Panorama

Strategy for cooperation on higher education and research with
Brazil, China, India, Japan, Russia and South Africa (2016–2020)



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October 2015

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Preface

The world is investing in the production of new knowledge more than ever before. An increasing share of this knowledge production takes place outside of Europe and North America. Many populous countries in other parts of the world, especially in Asia, are investing systematically in education and research as part of their national growth strategies.

As a result of the changes occurring globally, cooperation with other countries on other continents will come to play a more important role for the further development of the Norwegian knowledge society.

This strategy will lay the foundation for more targeted higher education and research cooperation with Brazil, China, India, Japan, Russia and South Africa up to 2020.

These countries account for a major and increasing share of global knowledge production. Access to this knowledge is a prerequisite for strengthening Norway's competitiveness and innovation ability, finding effective solutions to global challenges and developing more world-leading research communities in Norway.

In my view, it is important that more Norwegian students and researchers look to these countries in the years to come. I am certain this will yield enormous personal benefits for those involved, and at the same time it will constitute a long-term investment in Norway's ongoing development as a knowledge society.

Large geographical distances, linguistic and cultural differences, and unfamiliar systems may present challenges when cooperation is being developed. Nonetheless, numerous Norwegian institutions and research groups have already established good contacts with partners in Brazil, China, India, Japan, Russia or South Africa. Others are planning to do the same.

The Government has drawn up this strategy in order to lay the foundation for more integrated, long-term cooperation with these six countries on higher education and research, with an eye to promoting more high-quality collaboration in areas that are of particular interest to Norway.

Achieving this will require commitment and involvement on the part of students, individual researchers, institutions and government authorities. I hope this strategy will serve as an inspiration in these efforts.



Photo: Marte Garmann

A handwritten signature in blue ink, appearing to read 'Torbjørn Røe Isaksen'.

Torbjørn Røe Isaksen
Minister of Education and Research

PART I



1. Purpose of this strategy

The six countries encompassed by the strategy are highly diverse, and the prerequisites for establishing long-term cooperation on higher education and research vary from country to country. The interests that underlie Norway's bilateral relations with each country differ as well. Common to all the countries is that their production of new knowledge is increasingly important for the world and for Norway.

China and India play a central role at the regional and global levels, and are becoming more important for Norway as well due to their size and impact. As a large, populous neighbouring country, Russia will always hold particular significance for Norway, in part for geopolitical reasons. Brazil and Japan are key actors both regionally and globally, and are closely linked with Norwegian foreign economy. South Africa plays a special role in Africa's development and future role internationally.

On the one hand, Norwegian interests in the knowledge area are related to increased internationalisation as an instrument for enhancing the quality and relevance of Norwegian education and research. On the other hand, cooperation on higher education and research is often linked to other political objectives, e.g. supporting

broader foreign policy, development policy and/or trade and industry policy interests. Consequently, a number of actors at governmental and institutional levels are involved.

Regardless of which interests form the point of departure for Norwegian cooperation with these countries, the objective is to view activities involving higher education and research within a more cohesive framework, with an eye to improving resource utilisation and exploiting potential synergies.

The strategy will help to achieve this by the following means:

- clarifying the overarching priorities for higher education and research cooperation with the countries encompassed by the strategy;
- introducing measures targeted towards special challenges related to higher education and research cooperation with these countries;
- providing a more cohesive picture of specific conditions, frameworks and issues of particular importance relating to higher education and research cooperation for each country encompassed by the strategy.



2. Overarching priorities

The overarching objectives and priorities for international cooperation on higher education and research are set out in several Government white papers, including the *Long-term plan for research and higher education (2015–2024)* (Meld. St. 7 (2014–2015)), the white paper on research *Long-term perspectives – Knowledge provides opportunity* (Meld. St. 18 (2012–2013)) and the *Internationalisation of Education in Norway* (Report No. 14 to the Storting (2008–2009)).

With this as a backdrop, higher education and research cooperation with Brazil, China, India, Japan, Russia and South Africa is to be based on established principles relating to long-term perspectives, strategic institutional focus areas and emphasis on quality, reciprocity and relevance. Furthermore, cooperation with these countries is to promote the following overarching priorities:

- **Constructive interaction between higher education cooperation and research cooperation**

The Government seeks strong links between international higher education cooperation and research cooperation in long-term, institutional partnerships. Links between higher education cooperation and other academic cooperation are critical for enhancing the quality of education. Early involvement in international research cooperation also helps students to learn the value of such cooperation and gives them the opportunity to establish an international network early in their research careers.

Cooperative activities in higher education and international cooperation involving academic staff are to be combined when possible, e.g. through guest lectures, joint supervision, cooperation on syllabi and educational programmes (joint degrees), and student and researcher mobility.

- **Productive connections to working life and trade and industry**

The Government considers it essential to relate higher education and research cooperation to trade and industry's international activities, competency needs and innovation initiatives.

Knowledge and expertise are important competitive factors for the Norwegian economy. For research-intensive/research-performing companies, cooperation with dynamic research groups in other countries is a means of enhancing internal expertise, competitiveness and market access. More extensive contact

with such groups is therefore vital for strengthening Norway's competitiveness and innovation ability. Cooperation on higher education and research may also serve as a door opener for Norwegian companies vis-à-vis knowledge environments in the host country. In other instances, private sector cooperation may facilitate access for Norwegian education and research environments.

For Norwegian trade and industry, several of the countries targeted by the strategy represent new markets for products and services. In a global labour market, there is tremendous value in more Norwegians choosing to study in these countries. It promotes the acquisition of country-specific knowledge and the establishment of international networks that may be highly valuable for Norwegian trade and industry.

- **Mutual student exchange as part of institutional cooperation**

The Government wishes to increase the number of Norwegian students studying in the countries encompassed by the strategy. Current financial support schemes are among the most generous in the world, and they provide an excellent opportunity for students to choose to study abroad. Students receive funding to cover their living expenses at the same rates as in Norway. In addition, grants and loans are provided for travel between a student's home and place of study, and tuition fees are covered wholly or partially through a combination of loans and grants. Funding for tuition fees reflects the Government's priority on degree studies at the master's level, as well as on exchange studies in which students complete a part of their Norwegian degree at an educational institution abroad.

Free higher education in Norway facilitates mobility of both degree students and exchange students to Norwegian higher education institutions. Norway receives a large number of students, primarily degree students, from several of the countries targeted by the strategy. The Government is seeking to lay the foundation for greater student mobility as part of a broader institutional cooperation.

Strategic partnerships between higher education and research institutions in Norway and the countries encompassed by the strategy promote mobility within broader academic cooperation in which higher education, research and innovation may be linked together productively. Therefore, there are financial benefits

available within the funding system for higher education when outgoing and incoming student mobility is an integral part of agreements with institutions abroad.

- **Constructive interaction between bilateral and multilateral cooperation**

The Government considers it important that the various arenas for international higher education and research cooperation are viewed within a cohesive framework and complement each other in an effective manner.

The Government's Strategy for Research and Innovation Cooperation with the EU from 2014 identifies active participation in the European Research Area (ERA) as a key measure. This also includes cooperation with countries outside of the EU/EEA. Norway takes part in EU activities to develop policies and strategies for cooperation with countries outside of the EU/EEA, as well as in strategic collaborative activities through the EU's Strategic Forum for International Scientific and Technological Cooperation (SFIC).

Norwegian institutions and companies are expected to use the European arena to further develop strategic alliances with partners from third countries in general and from priority countries for cooperation outside of the EU in particular. The EU programmes

Erasmus+ (education) and Horizon 2020 (research and innovation) pave the way for cooperation with Brazil, China, India, Japan, Russia and South Africa in the period 2014–2020. It is an objective for these programmes to be more widely utilised as a platform and funding source for cooperation with the countries targeted by this strategy, and for bilateral cooperation with relevant partners in those countries to result in more joint grant proposals and greater impact in the EU programmes. It is also an objective to ensure that the various arenas complement each other, e.g. that bilateral cooperation provides strong contact networks with relevant partners in those countries in areas that are not covered by the EU programmes, but that have high priority for Norway.

The Government also emphasises that bilateral cooperation must be viewed in connection with Norwegian participation and involvement in other multilateral arenas, especially the Bologna process, UNESCO, the OECD and the European Council.

The Government also emphasises that bilateral cooperation must be viewed in connection with Norwegian participation and involvement in other multilateral arenas, especially the Bologna process, UNESCO, the OECD and the Council of Europe.

The following principles provide the basis for the priorities established for higher education and research cooperation with Brazil, China, India, Japan, Russia and South Africa:

Quality. International cooperation is a key instrument for enhancing the quality of Norwegian higher education and research.

Relevance. International cooperative activities must be a natural extension of national priorities and support the plans and strategies of the institutions and research groups.

Reciprocity. Cooperation must be related to areas in which the partners have common interests and can complement and strengthen each other.

Long-term perspectives. Developing well-functioning international cooperation can take a long time. It is essential to have the most predictable, stable framework possible in order to establish long-term relations that can form the basis for further cooperation after single projects or time-limited activities are completed.

3. Measures

The Government seeks to promote more targeted bilateral cooperation on higher education and research with Brazil, China, India, Japan, Russia and South Africa in the period 2016–2020 by facilitating:

1. long-term cooperation between higher education and research institutions in Norway and partner institutions in the six countries targeted in the strategy;
2. more systematic contact and coordination in Norway across relevant ministries' sectoral responsibilities;
3. increased knowledge and more accessible information about conditions that may affect the potential to achieve effective cooperation on higher education and research.

The Government will:

1. ...develop flexible financial instruments for institutional cooperation and mobility

- The Government will promote cooperation on higher education with the countries encompassed by the strategy through a programme for institution-based cooperation with Brazil, China, India, Japan, Russia and South Africa, targeted primarily towards higher education institutions. The programme will expand on the UTFORSK Partnership Programme (2012–2015), a pilot programme established to support higher education cooperation linked to existing research cooperation with these six countries.

The new UTFORSK programme (2016–2020) will be a flexible collaborative programme comprised of several elements. A partnership programme supporting educational activities linked to existing research cooperation with the countries encompassed by the strategy will continue to comprise an essential part of the new programme. In addition, the UTFORSK programme will provide support to universities and university colleges in the form of project funding for activities that support the establishment of long-term institutional cooperation with an emphasis on higher education. This may include funding for information measures, establishment of meeting places, etc. The UTFORSK programme will target universities and university colleges in particular.

The UTFORSK programme can also be used to issue calls for proposals for partnership and project funding targeted towards individual countries, or joint calls with actors in the cooperating countries, when this is found to be beneficial.

The UTFORSK programme (2016–2020) will be administered by the Norwegian Centre for International Cooperation in Education (SIU) and the Research Council of Norway.

It is anticipated that the UTFORSK programme will have an annual budget ceiling of minimum NOK 17 million in the period 2016–2020, provided funding is allocated by the Storting in the national budget.

- The Government will promote long-term institutional cooperation with the countries targeted in the strategy by strengthening and further developing the International Partnerships for Excellent Education and Research (INTPART) programme. The INTPART programme targets research institutes and other relevant research environments, in addition to higher education institutions. The programme provides funding to establish or expand institutional higher education and research cooperation, networking activities and knowledge sharing.

The INTPART programme was developed through a joint effort between the Research Council of Norway and the Norwegian Centre for International Cooperation in Education (SIU) and issued its first call for proposals in 2015 with a budget framework of NOK 70 million. This call for proposals encompassed the six countries targeted in the strategy, as well as the US and Canada, and is part of the Government's effort to develop more world-leading research communities in Norway.

As from 2016, the INTPART programme will be strengthened and further developed by issuing designated calls for proposals specifically targeting the six strategy countries. The calls will support the overall objective set out in the long-term plan for research and higher education to develop more research communities of outstanding quality by supporting the further development of institutional higher education and research cooperation, networking activities and knowledge sharing. The INTPART programme will be administered by SIU and the Research Council of Norway.

It is anticipated that the INTPART programme will have an annual budget ceiling of minimum NOK 13 million in the period 2016–2020, provided funding is allocated by the Storting in the national budget. This funding will

be earmarked for calls for proposals targeted specifically towards Brazil, China, India, Japan, Russia and South Africa.

- The Government will facilitate greater student mobility from Norway to Brazil, China, Japan and Russia by creating better, more flexible schemes under the Norwegian State Educational Loan Fund for language training for students who wish to study in non-English speaking countries.

As from 2016, funding will be available for up to one year of language courses, larger language grants and the opportunity to combine a shorter language course with a student's main educational focus. These measures are designed to encourage more students to study in non-English speaking countries, even though they have little prior knowledge of the language.

It is anticipated that the measures will have an annual budget ceiling of minimum NOK 2 million in the period 2016–2020, provided funding is allocated by the Storting in the national budget.

2. ...facilitate better coordination between Norwegian stakeholders and stronger involvement on the part of the foreign service

- The Government will facilitate more systematic contact between Norwegian stakeholders with a view to promoting more coordinated development of cooperation on higher education and research with Brazil, China, India, Japan, Russia and South Africa, among others.

The Ministry of Education and Research will take the initiative to establish a permanent forum for relevant stakeholders at governmental and institutional levels, including the Ministry of Foreign Affairs, the Ministry of Trade, Industry and Fisheries and other relevant ministries, the Research Council of Norway, the Norwegian Centre for International Cooperation in Education (SIU), Innovation Norway, the Norwegian Agency for Quality Assurance in Education (NOKUT), the Association of Norwegian Research Institutes (FFA), the Norwegian Association of Higher Education Institutions (UHR), the Norwegian Network for Private Higher Education Institutions (NPH), the National Union of Students in Norway (NSO) and the Association of Norwegian Students Abroad (ANSA).

The purpose of this forum is to facilitate effective follow-up of the strategy through activities such

as mutual sharing of information and experience, advice on specific issues, and discussion of potential new initiatives that support the strategy's objective.

Annual meetings headed at the state secretary level are planned.

- The Government will strengthen involvement by the foreign service in order to facilitate more coordinated, long-term cooperation on higher education and research with Brazil, China, India, Japan, Russia and South Africa.

The Ministry of Foreign Affairs will expand the efforts to strengthen science diplomacy within the foreign service and establish the foreign service missions as even better, more qualified partners for Norwegian stakeholders at both institutional and governmental levels. This includes ongoing efforts to promote Norway as a knowledge society, including ensuring Norway's visibility as an attractive country in which to study and conduct research.

- The Government will promote further cooperation between the Norwegian Centre for International Cooperation in Education (SIU), the Research Council of Norway and Innovation Norway on higher education, research and trade and industry/innovation with Brazil, China, India, Japan, Russia and South Africa.

The Research Council of Norway, SIU and Innovation Norway have joint responsibility for operationalising measures and activities that link higher education, research and trade and industry as well as for assessing which measures and forms of cooperation are most relevant for each country. This collaboration may be realised differently in the various countries, and is to be adapted to local conditions.

3. ...facilitate increased knowledge and more accessible information for institutions, research groups and students

- The Government will make it easier for Norwegian higher education and research institutions to establish and expand their contact networks with Brazil, China, India, Japan, Russia and South Africa. This will require a sound framework of knowledge about various conditions that affect the opportunities to establish long-term scientific cooperation.

The Government will set aside funding to follow up the knowledge base that has been established in recent years on these countries' systems of higher education and research by means of studies and analyses related to, for example:

- the higher education and research systems in the countries encompassed by the strategy, including administrative, legal and practical conditions that may pose challenges to cooperation;
 - other elements that affect the framework conditions for establishing long-term cooperation on higher education and research with the individual countries, including cultural, political and economic factors;
 - what actions other countries take to strengthen their relations with these countries in the area of higher education and research;
 - the impact of various schemes and instruments that support bilateral cooperation with various countries, using experiences from Norway and other countries as a point of departure;
 - what can be done to facilitate more outgoing mobility among Norwegian students, researchers, administrative personnel, etc.
- The Government will make it easier for Norwegian students to obtain information about schools that offer high-quality education in countries such as Brazil, China, India, Japan, Russia and South Africa.

In autumn 2015, the Ministry of Education and Research established a working group to explore collaboration models for providing more coordinated information to students planning to study abroad. The working group includes government agencies responsible for providing students with

information about various conditions related to studying abroad. The aim is to give both degree students and exchange students a better basis on which to make good educational decisions and to select an educational programme of high quality. Norwegian higher education institutions are also a target group for the working group's efforts.

- The Government will make existing knowledge and information about higher education and research cooperation with Brazil, China, India, Japan, Russia and South Africa more accessible for various target groups.
 - The Ministry of Education and Research will ask relevant institutions and organisations to review the information available today, identify any overlap and/or knowledge gaps, and make specific proposals for how various institutions and organisations can cooperate more systematically to ensure that various target groups have the best possible access to relevant information.
 - The Ministry of Education and Research will ask the Research Council of Norway and the Norwegian Centre for International Cooperation in Education (SIU) to make relevant data and statistics from the programmes they administer more accessible to institutions and research groups through web-based solutions.
 - The Ministry of Education and Research will ask the Research Council of Norway, SIU and the Norwegian Agency for Quality Assurance in Education (NOKUT) to use relevant arenas for systematic dissemination of knowledge to various target groups, with a view to conveying and sharing information and knowledge.



4. Evaluation

The progress made in cooperation on higher education and research with Brazil, China, India, Japan, Russia and South Africa in the period 2016–2020 will be evaluated on the basis of selected indicators.

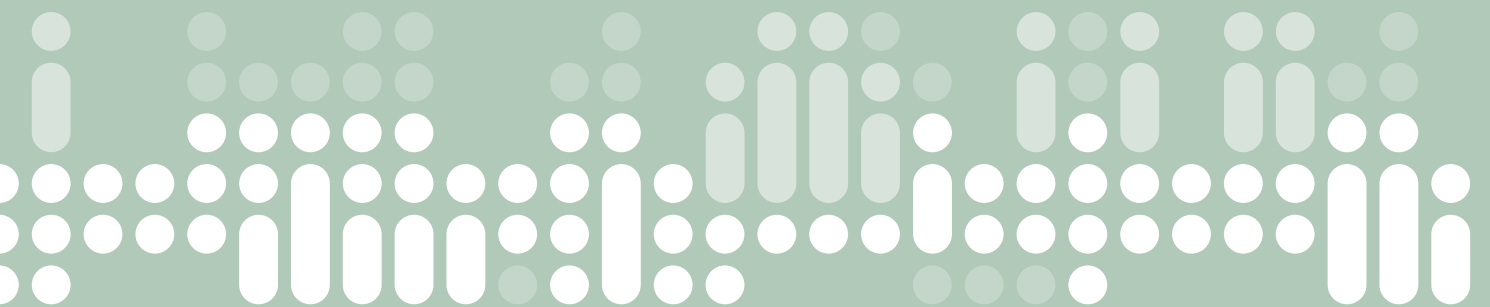
For higher education cooperation, the main indicators will be:

- Outgoing degree students (*Source: Norwegian State Educational Loan Fund*)
- Outgoing exchange students (*Source: Database for Statistics on Higher Education*)
- Incoming exchange students from the countries encompassed by the strategy (*Source: Database for Statistics on Higher Education*)
- Incoming exchange students from the countries encompassed by the strategy (*Source: Database for Statistics on Higher Education*)

Developments in research cooperation with the six countries will be evaluated on the basis of the following indicators:

- Research cooperation through the Research Council's programmes and schemes (*Source: Research Council of Norway*)
- Research cooperation through Horizon 2020 (*Source: Research Council of Norway*)
- Co-publications (*Source: Research Council of Norway and the Nordic Institute for Studies in Innovation, Research and Education*)

PART II



5. Brazil

Brazil is the fifth largest country in the world, in terms of both area and population, and is currently the world's seventh largest economy. As both a BRICS and a G20 country, Brazil is part of the group of influential global actors that is increasingly seeking to play a greater role in setting the international agenda.

Brazil is Norway's most important partner country in Latin America. Norway and Brazil have been trade partners for more than 175 years, and relations have expanded widely in the past 10–15 years. Brazil is currently Norway's largest export market for goods and services, after the EU and the US. Norwegian investments in Brazil are predominately targeted towards the oil and gas and maritime sectors. In recent years the country has also been one of the largest recipients of Norwegian development assistance. Norway's contribution to the Amazon Fund alone makes Brazil a primary recipient of Norwegian development assistance.

Brazil's knowledge sector is expanding rapidly. In the past decade the country has shown a positive trend in terms of research and development investments, the number of researchers and scientific publication. This is due in part to the country's ambitious plans for developing its oil and gas resources and trade and industry in general. Efforts to step up the level of research activity introduced by the Brazilian authorities include a requirement that one per cent of petroleum companies' sales revenues are to be used for research. One-half of this amount is to be used to procure services from academia, the other half may be used by the petroleum company itself or by its partner companies/suppliers. There is a stipulation that R&D activities must primarily be carried out in Brazil. This opens up opportunities for cooperation for Norwegian research institutes and R&D-intensive companies with activities in Brazil.

The Brazilian authorities have also invested systematically in strengthening the educational sector, including higher education. The ambitious Science without Borders (SwB) mobility programme is the most comprehensive, high-profile measure for increasing internationalisation in higher education.

Knowledge cooperation is a key component of the Norwegian strategy of 2011 for cooperation between Brazil and Norway. The strategy emphasises that cooperation in the areas of higher education and research is important both in and of itself and for advancing the other priority areas of the strategy: private sector

cooperation, trade and investment; climate and environmental issues, and sustainable development; and global challenges.

In 2008, Norway and Brazil signed a Memorandum of Understanding (MoU) on science and technology cooperation at the governmental level. This was renewed in 2012. In addition, MoUs on research cooperation in the areas of aquaculture (2009) and oil and gas (2013) have been signed. In the *Roadmap for Bilateral Research Cooperation with Brazil of 2014*, the Research Council of Norway identifies areas of particular relevance for expanding cooperation in the years to come.

In 2014, the Research Council of Norway signed separate cooperation agreements with the National Council for Scientific and Technological Development (*Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq)*) and the Brazilian Innovation Agency (*Financiadora de Estudos e Projectos (FINEP)*). Thus, a good structure is in place for establishing more formal, long-term bilateral research cooperation with Brazil.

In the area of higher education, Norway and Brazil signed an MoU at the governmental level in 2008, which was renewed in 2012. Also in 2012, the Norwegian Centre for International Cooperation in Education (SIU) signed an agreement with its Brazilian sister organisation, the Federal Agency for Support and Evaluation of Graduate Education (*Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES)*), to strengthen cooperation on higher education. The agreement has led to more cooperation at the institutional level, in the form of joint calls, among other things. In addition, the agreement has opened the door to cooperation under Brazil's SwB programme, which in turn has led to a marked increase in the number of Brazilian students in Norway since 2013.

The overarching priorities related to constructive interaction between higher education cooperation and research cooperation, productive connections to working life and trade and industry, mutual student exchange as part of institutional cooperation, and strong links between bilateral cooperation and multilateral cooperation apply to all international cooperation in the areas of higher education and research. In terms of enhancing further cooperation with Brazil in the period 2016–2020, it will be particularly important to:

- renew current MoUs with Brazil on higher education and research cooperation;

- establish effective channels for more regular, coordinated dialogue with the Brazilian authorities on follow-up of current MoUs on higher education and research cooperation;
- facilitate increased mutual student exchange between Norwegian and Brazilian institutions as a step in expanding institutional cooperation;
- foster better links between higher education on the one hand, and working life and the business sector on the other;
- further develop current research cooperation in areas of strategic interest to Norwegian research groups and institutions, with particular focus on the thematic areas set out in the Research Council of Norway's Roadmap for Bilateral Research Cooperation with Brazil (such as oil and gas, renewable energy, climate and the environment, marine research (fisheries and aquaculture), bioeconomy/food, and the humanities);
- explore possibilities for issuing joint calls with relevant funding bodies in Brazil (CAPES, CNPq and FINEP).

Agreements and strategies

Norway and Brazil have signed the following government-level agreements on higher education and research cooperation:

- *Memorandum of Understanding between the Ministry of Science and Technology of the Federative Republic of Brazil and the Ministry of Education and Research of the Kingdom of Norway (2008, fornyet i 2012).*

Annex: Collaboration between the Brazilian Ministry of Science, Technology and Innovation and the Royal Norwegian Ministry of Petroleum and Energy in the field of Oil and Gas Research and Technology and Exchange of Human Resources (2013).

- *Memorandum of Understanding between the Ministry of Education and Research of the Kingdom of Norway and the Ministry of Education of the Federative Republic of Brazil (2008, fornyet i 2012).*
- *Memorandum of Understanding between the Special Secretariat of Aquaculture and Fisheries of Brazil and the Ministry of Fisheries and Coastal Affairs of Norway for cooperation on aquaculture and other areas of common interest. (2009) Brasiliansk avtalepartner inngår i dag i Ministry of Fisheries and Aquaculture, norsk avtalepartner i Nærings- og fiskeridepartementet (NFD).*

In addition, an overarching government-level strategy for cooperation between Norway and Brazil has been drawn up that incorporates higher education and research as key components:

- *New perspectives on a long-standing relationship. The Norwegian Government's strategy for cooperation between Brazil and Norway.* Ministry of Foreign Affairs, 2011.

Instruments

The most important instruments for promoting research cooperation between Norway and other countries are national and international competitive arenas, primarily the Research Council of Norway's programmes and activities and the EU framework programme Horizon 2020. *The Research Council of Norway's Strategy for International Cooperation 2010–2020* states that all Research Council initiatives must include clearly-defined objectives and plans for international cooperation. The strategy also targets Brazil as one of the countries to be given special priority. In addition, Research Council programmes issue calls for proposals with funding earmarked for cooperation with selected countries.

Higher education in Norway is essentially fully financed, and thus few national competitive arenas have been established. International arenas, primarily EU programmes/Erasmus+, on the other hand, are

important tools for enhancing the internationalisation of Norwegian higher education and also provide a pathway for greater cooperation with Brazil. Support provided by the Norwegian State Educational Loan Fund is the most important measure for promoting outgoing student mobility.

In addition to these general measures, there are specific instruments targeting one or more of the priority countries. The following programmes are of special importance for promoting cooperation on higher education and research with Brazil:

- **Research Programme on Latin America (LATINAMERIKA).** The programme is funded by the Ministry of Foreign Affairs and administered by the Research Council of Norway. It encompasses several countries, but certain funding announcements are earmarked for Brazil.
- **UTFORSK programme.** The programme is funded by the Ministry of Education and Research and administered jointly by the Norwegian Centre for International Cooperation in Education (SIU) and the Research Council of Norway.
- **International Partnerships for Excellent Education and Research (INTPART).** The programme is funded by the Ministry of Education and Research and administered jointly by SIU and the Research Council of Norway.
- **Support for language studies in connection with study programmes abroad.** The scheme is funded by the Ministry of Education and Research and administered by the Norwegian State Educational Loan Fund.

A position as **Science and Technology Counsellor** has also been established at Innovation Norway's office in Rio de Janeiro. The position is co-financed by Innovation Norway and the Research Council of Norway.

6. China

Norway was one of the first countries to formally recognise the People's Republic of China in January 1950. Ever since the period of opening up and reform began in China at the end of the 1970s, wide-ranging bilateral cooperation between Norway and China has developed in a large number of areas, including higher education and research. The award of the Nobel Peace Prize to Liu Xiaobo in 2010 has affected bilateral relations between the two countries. Re-establishing a good political climate with China is a priority for the Norwegian Government.

China's knowledge sector is developing rapidly, and currently consists of 2 500 national universities and university colleges, over 100 research institutes affiliated with the Chinese Academy of Sciences (CAS), and a number of other research institutes affiliated with other academies and sectoral ministries. In addition, there is extensive research and funding activity in China's large provinces, which administer roughly one-half of all public funding for research, technology development and innovation activities. The provinces also have their own academies, institutes and research centres. China has led the country education rankings since 2004. Several of the large universities and research institutes have a top international standing.

Norway and China signed an agreement on science and technology cooperation in 2008. Priority areas of cooperation under the agreement are climate-friendly energy research, environmental research, climate/polar/ice research, and welfare research/the Nordic model. In the Roadmap for Bilateral Research Cooperation with China of 2014, the Research Council of Norway identifies areas of particular relevance for expanding cooperation in the years to come.

Norway and China also signed a Memorandum of Understanding (MoU) on higher education cooperation in 2008. Many existing collaborative relationships between Norwegian and Chinese institutions have research as their point of departure. Among other things, these relations have fostered considerable mobility of Chinese doctoral candidates to Norway. There is also well-established education cooperation, particularly on language studies.

In China, there is considerable interest in studying in Norway, and there are a large number of Chinese students at Norwegian institutions. Although China is generally considered an interesting country for Norwegian students, few Norwegians currently choose to study in China. Those who do tend to attend English-language programmes tailored to foreign students or are doing fieldwork. Some pursue degree programmes in Chinese.

The overarching priorities related to constructive interaction between higher education cooperation and research cooperation, productive connections to working life and trade and industry, mutual student exchange as part of institutional cooperation, and strong links between bilateral cooperation and multilateral cooperation apply to all international cooperation in the areas of higher education and research. In terms of continued cooperation with China in the period 2016–2020, it will be particularly important to:

- strengthen contact at the governmental level on follow-up of current agreements on higher education and research cooperation;
- further develop current research cooperation in areas of strategic interest to Norwegian research groups and institutions, with particular focus on the thematic areas identified in the Research Council of Norway's Roadmap for Bilateral Research Cooperation with China (such as climate, the environment and environmental technology, energy, aquaculture, agriculture, polar research, and humanities and the social sciences);
- facilitate increased mutual student exchange between Norwegian and Chinese institutions as part of an expanding scientific cooperation;
- utilise the potential for cooperation with relevant Chinese research groups and institutions through multilateral arenas, with special emphasis on the EU programmes Horizon 2020 and Erasmus+.

Agreements and strategies

Norway and China have signed the following government-level agreements on higher education and research cooperation:

- *Agreement between the Government of the Kingdom of Norway and the Government of the People's Republic of China on Cooperation in the Fields of Science and Technology (2008).*
- *Memorandum of Understanding on Cooperation in Education between the Ministry of Education of the People's Republic of China and the Ministry of Education and Research of the Kingdom of Norway (2008).*

Instruments

The most important instruments for promoting research cooperation between Norway and other countries are national and international competitive arenas, primarily Research Council of Norway programmes and activities and the EU framework programme Horizon 2020. The Research Council of Norway's Strategy for International Cooperation 2010–2020 states that all Research Council initiatives must include clearly-defined objectives and plans for international cooperation. The strategy also targets China as one of the countries to be given special priority. In addition, Research Council programmes issue calls for proposals with funding earmarked for cooperation with selected countries.

Higher education in Norway is essentially fully financed, and thus few national competitive arenas have been established. International arenas, primarily EU programmes/Erasmus+, on the other hand, are important tools for enhancing the internationalisation of Norwegian higher education and also provide a pathway for greater cooperation with China. Support provided by the Norwegian State Educational Loan Fund is the most important measure for promoting outgoing student mobility.

In addition to these general measures, there are specific instruments targeting one or more of the priority countries. The following programmes are of special importance for promoting cooperation on higher education and research with China:

- **Norwegian Programme for Research Cooperation with China (CHINOR).** The programme is funded by the Ministry of Foreign Affairs and administered by the Research Council of Norway.
- **Exchange programme.** The programme is a collaboration between the China Scholarship Council (CSC) and the Research Council of Norway.
- **Researcher exchange programme.** The programme is a collaboration between the National Natural Science Foundation of China (NSFC) and the Research Council of Norway.
- **High North Programme.** The programme is funded by the Ministry of Foreign Affairs and administered by the Norwegian Centre for International Cooperation in Education (SIU). China is one of the priority partner countries.
- **UTFORSK programme.** The programme is funded by the Ministry of Education and Research and administered jointly by SIU and the Research Council of Norway.
- **International Partnerships for Excellent Education and Research (INTPART).** The programme is funded by the Ministry of Education and Research and administered jointly by SIU and the Research Council of Norway.
- **Support for language studies in connection with study programmes abroad.** The scheme is funded by the Ministry of Education and Research and administered by the Norwegian State Educational Loan Fund.

A position as **Science, Higher Education and Research Counsellor** has also been established at the Royal Norwegian Embassy in Beijing. The position is financed by the Ministry of Education and Research.

7. India

Norway enjoys good, long-standing bilateral relations with India. India was one of Norway's main partners for development assistance until 1995. The traditional development cooperation was discontinued in 2003. Trade between Norway and India is not wide-ranging at present, but Norwegian import of Indian services is growing rapidly, making India an attractive scientific partner in many research fields and an interesting market for Norwegian knowledge-based industry.

India has a young and rapidly expanding population and a growing need for highly educated personnel. In its national strategies, the country attaches importance to entering into bilateral and multilateral strategic partnerships with other countries. More than 100 of the world's largest multinational corporations have established research and development departments in India.

India's knowledge sector is developing at a dramatic rate. The number of scientific papers published tripled in the period 2003–2012. Thus, India is the country with the highest rate of growth in this area, next to China. There are roughly 32 million students in higher education programmes in India, and the country has plans to increase recruitment. India has world-leading research groups in several fields.

Norway and India signed a bilateral agreement on science and technology cooperation in 2006. A Programme of Cooperation established under the agreement identifies areas of research cooperation. Norway's research cooperation with India is primarily targeted towards mathematics, natural science and technology disciplines, although areas of social science are addressed as well. In the Roadmap for Bilateral Research Cooperation with India of 2014, the Research Council of Norway identifies areas of particular relevance for expanding cooperation in the years to come.

Closer cooperation on industry-oriented research and innovation is a particularly promising area of Indo-Norwegian research cooperation. In light of this, a position as Counsellor for Science and Technology was established at Innovation Norway's office in New Delhi. The position will provide a basis for viewing the various activities involving research, higher education and industrial cooperation within a more cohesive framework.

Norway and India signed a Memorandum of Understanding (MoU) on education cooperation in 2008. It was revised in 2014, and now encompasses only higher

education cooperation. Cooperation between Norwegian and Indian higher education institutions has so far been limited, and few agreements have been signed at the institutional level. However, efforts are underway to expand cooperation. It is challenging to link together cooperation within higher education and research, as most research in India is conducted outside the higher education institutions.

In terms of student exchange, Norway mainly sends students to India for tailored academic programmes, internships or fieldwork, while the majority of Indian students travel to Norway to pursue a degree programme.

The overarching priorities related to constructive interaction between higher education cooperation and research cooperation, productive connections to working life and trade and industry, mutual student exchange as part of institutional cooperation, and strong links between bilateral cooperation and multilateral cooperation apply to all international cooperation in the areas of higher education and research. In terms of enhancing further cooperation with India in the period 2016–2020, it will be particularly important to:

- further develop current research cooperation in areas of strategic interest to Norwegian research groups and institutions, with particular focus on the thematic areas identified in the Research Council of Norway's Roadmap for Bilateral Research Cooperation with India (such as ICT, health, bioeconomy, marine research and aquaculture, polar research, agriculture, and energy) and in the Programme of Cooperation under the bilateral agreement on science and technology;
- expand the scope of higher education cooperation, primarily in connection with existing research cooperation;
- develop and maintain relevant arenas as a basis for further expanding cooperation on higher education and research between Indian and Norwegian institutions;
- facilitate coordinated follow-up of the science and technology agreement and the MoU on higher education cooperation between Norway and India;
- increase the relevance of knowledge cooperation and the links to trade and industry in keeping with national strategies;
- facilitate joint calls with funding bodies in India when this is considered appropriate.

Agreements and strategies

Norway and India have signed the following government-level agreements on higher education and research cooperation:

- *Agreement between the Government of the Republic of India and the Government of the Kingdom of Norway on Cooperation in the Fields of Science and Technology (2006)*. Successive three-year Programmes of Cooperation have been established under this agreement.
- *Memorandum of Understanding between the Ministry of Education and Research, Kingdom of Norway and the Ministry of Human Resource Development, Republic of India on Cooperation in the Field of Higher Education (2014)*.

In addition, an overarching government-level strategy for cooperation between Norway and India has been drawn up:

- Opportunities in diversity. The Norwegian Government's strategy for cooperation between Norway and India. Ministry of Foreign Affairs, 2009.

Instruments

The most important instruments for promoting research cooperation between Norway and other countries are national and international competitive arenas, primarily the Research Council of Norway's programmes and activities and the EU framework programme Horizon 2020. The Research Council of Norway's Strategy for International Cooperation 2010–2020 states that all Research Council initiatives must include clearly-defined objectives and plans for international cooperation. The strategy also targets India as one of the countries to be given special priority. In addition, Research Council programmes issue calls for proposals with funding earmarked for cooperation with selected countries.

Higher education in Norway is essentially fully financed, and thus few national competitive arenas have been established. International arenas, primarily EU programmes/Erasmus+, on the other hand, are important tools for enhancing the internationalisation of Norwegian higher education and also provide a pathway for greater cooperation with India. Support provided by the Norwegian State Educational Loan Fund is the most important measure for promoting outgoing student mobility.

In addition to these general measures, there are specific instruments targeting one or more of the priority countries. The following programmes are of special importance for promoting cooperation on higher education and research with India:

- **Norwegian Programme for Research Cooperation with India (INDNOR)**. The programme is funded by the Ministry of Foreign Affairs and administered by the Research Council of Norway.
- **Indo-Norwegian Cooperation Programme in Higher Education and Research (INCP)**. The programme is funded by the Ministry of Foreign Affairs and administered by the Norwegian Centre for International Cooperation in Education (SIU).
- **UTFORSK programme**. The programme is funded by the Ministry of Education and Research and administered jointly by SIU and the Research Council of Norway.
- **International Partnerships for Excellent Education and Research (INTPART)**. The programme is funded by the Ministry of Education and Research and administered jointly by SIU and the Research Council of Norway.

A position as **Science and Technology Counsellor** has also been established at Innovation Norway's office in New Delhi. The position is co-financed by Innovation Norway and the Research Council of Norway.

8. Japan

Japan is the world's third-largest economy and ranks behind only the US and China as a research nation in terms of scientific publication/production. Japan is a central political and economic actor regionally and globally, a significant development assistance actor and an active participant in international climate efforts and efforts to promote the transition to a low-carbon economy.

Norway and Japan enjoy excellent bilateral relations in the political, economic and trade spheres. Japan is a key trade partner for Norway in Asia, and an important market for Norwegian seafood. Japan is also one of the largest markets for Norwegian shipping services and an important market for the Norwegian tourism industry. Norwegian companies have a considerable presence in Japan, and there is major Norwegian investment in the country, particularly via the Government Pension Fund Global. Structural changes in the Japanese economy may pave the way for increased mutual trade and investment.

Japan is a well-established knowledge society and technology supplier with a high-quality research sector, and is one of the leading nations in terms of innovation and R&D investment in the business sector. The country's share of global scientific production has, however, declined in recent years.

The Japanese education and research system has not traditionally been targeted towards internationalisation to any great degree. In recent years, however, the government has launched a number of measures to promote internationalisation as a tool for achieving economic growth and helping to solve global challenges. Recent reforms of the higher education system attach great importance to internationalisation. This entails, among other things, that selected universities are given support to develop their international profile in order to recruit students and teachers from abroad and encourage outgoing student mobility.

Japan has traditionally been an introverted country when it comes to education, and international student mobility is generally not seen as a competence-building measure in Japanese trade and industry. In recent years, however, the authorities have introduced reforms to increase the mobility of Japanese students, and trade and industry is expressing greater interest in international competency to tackle global competition. The measures implemented include better English language

training in pre-schools, schools and higher education institutions and better support schemes for study abroad.

Knowledge cooperation comprises an important component of bilateral relations between Norway and Japan. The two countries signed a bilateral agreement on science and technology cooperation in 2003. Energy and the environment, nanotechnology and new materials, marine research, and polar and space research are priority areas of cooperation under the agreement. In the *Roadmap for Bilateral Research Cooperation with Japan* of 2014, the Research Council of Norway identifies areas of particular relevance for expanding cooperation in the years to come.

A wide range of seminars, workshops and conferences have been held in recent years to further develop existing cooperation and open the door to new partnerships in priority subject fields. These include Japan-Norway Science Week, which was organised for the third time in 2015. In the same period, the Research Council of Norway has strengthened dialogue with its sister organisations in Japan, particularly the Japan Science and Technology Agency (JST).

In Japan, Innovation Norway, the Research Council of Norway and the Norwegian Centre for International Cooperation in Education (SIU) have recently entered into cooperation in order to view the various activities involving research, higher education and business cooperation within a more cohesive framework. This collaboration is being led by the Science, Technology and Higher Education Counsellor at Innovation Norway's Tokyo office.

As it stands now, there is little higher education cooperation between Norway and Japan. Although several Norwegian institutions have signed collaboration agreements with Japanese institutions, few have introduced strategic initiatives targeting Japan in particular. Student mobility from Norway to Japan is limited, and is primarily linked to country-specific language, cultural and social science subjects. Nevertheless, a positive trend is emerging in the technology and natural science disciplines. Course offerings in English are still limited in Japan, but they are being developed. This applies in particular to the selected universities that have been given additional support for internationalisation. Student mobility from Japan to Norway is low as well.

The overarching priorities related to constructive interaction between higher education cooperation and research cooperation, productive connections to working life and trade and industry, mutual student exchange as part of institutional cooperation, and strong links between bilateral cooperation and multilateral cooperation apply to all international cooperation in the areas of higher education and research. In terms of enhancing further cooperation with Japan in the period 2016–2020, it will be particularly important to:

further develop current research cooperation in areas of strategic interest to Norwegian research groups and institutions, with particular focus on the thematic areas identified in the Research Council of Norway's Roadmap for Bilateral Research Cooperation with Japan (such as energy, materials and nanotechnology, safe seafood/marine biology, polar research and space research,

health and welfare research, as well as innovation, industrial development and commercialisation of R&D);

- further expand higher education cooperation, primarily based on existing research cooperation;
- facilitate increased mutual student exchange between Norwegian and Japanese institutions as part of an expanding scientific cooperation;
- foster better links between higher education, research, working life and trade and industry;
- facilitate increased internship mobility in order for students to gain relevant work experience and help trade and industry to benefit from market-relevant competence;
- develop and maintain relevant arenas as a basis for further expanding cooperation on higher education and research between Japanese and Norwegian institutions.

Agreements

Norway and Japan have signed the following government-level agreement on higher education and research cooperation:

- *Agreement between the Government of Norway and the Government of Japan on Co-operation in Science and Technology* (2003).

Instruments

The most important instruments for promoting research cooperation between Norway and other countries are national and international competitive arenas, primarily the Research Council of Norway's programmes and activities and the EU framework programme Horizon 2020. *The Research Council of Norway's Strategy for International Cooperation 2010–2020* states that all Research Council initiatives must include clearly-defined objectives and plans for international cooperation. The strategy also targets Japan as one of the countries to be given special priority. In addition, Research Council programmes issue calls for proposals with funding earmarked for cooperation with selected countries.

Higher education in Norway is essentially fully financed, and thus few national competitive arenas have been established. International arenas, particularly EU programmes/Erasmus+, on the other hand, are important tools for enhancing the internationalisation of Norwegian higher education and also provide a pathway for greater cooperation with Japan. Support provided by the Norwegian State Educational Loan Fund is the most important measure for promoting outgoing student mobility.

In addition to these general measures, there are specific instruments targeting one or more of the priority countries. The following programmes are of special importance for promoting cooperation on higher education and research with Japan:

- **Japan-Norway Researcher Mobility Programme.** The programme is jointly funded by Norway and Japan, and jointly administered by the Research Council of Norway and the Japan Society for the Promotion of Science (JSPS).
- **High North Programme.** The programme is funded by the Ministry of Foreign Affairs and administered by the Norwegian Centre for International Cooperation in Education (SIU). Japan is one of the priority partner countries.
- **Fellowship Programme for Studies in the High North.** The programme is funded by the Ministry of Foreign Affairs and administered by SIU.
- **UTFORSK programme.** The programme is funded by the Ministry of Education and Research and administered jointly by SIU and the Research Council of Norway.
- **International Partnerships for Excellent Education and Research (INTPART).** The programme is funded by the Ministry of Education and Research and administered jointly by SIU and the Research Council of Norway.
- **Support for language studies in connection with study programmes abroad.** The scheme is funded by the Ministry of Education and Research and administered by the Norwegian State Educational Loan Fund.

A position as **Science, Technology and Higher Education Counsellor** has also been established at Innovation Norway's office in Tokyo. The position is co-financed by Innovation Norway, the Research Council of Norway and SIU.

9. Russia

Many productive relationships have been established between Norwegian and Russian institutions in the area of higher education and research. Cooperative activities expanded rapidly during the 1990s, when Russia became increasingly more open to international cooperation. Russia's unlawful annexation of Crimea in 2014 and the country's protracted destabilisation of Eastern Ukraine has changed the relationship between Russia and other countries, including Norway. The consequences of Russia's breach of international law are restrictive measures and less political contact.

In spite of this, Norway's reaction to these events has not prevented bilateral cooperation from continuing in many areas of interest to Norway, such as the environment, nuclear security and fisheries management. In addition, international and regional cooperation is continuing as far as possible. Knowledge cooperation is one important aspect of cooperation in many different areas.

In general, Russia has great potential for knowledge cooperation based on high quality and relevance. However, political developments in Russia may hinder opportunities for productive cooperation on higher education and research. Freedom of expression is being reigned in, and barriers to unfettered academic cooperation with international actors are being erected. Still, it is in Norway's interest to pursue a continuation of knowledge cooperation with Russia, as a large and important neighbouring country, both to support dynamic higher education and research communities and to safeguard Norwegian interests in the area.

Norwegian interests in higher education and research are largely related to circumpolar Arctic cooperation and to industrial activity and resource and environmental management in the northern areas. There is also a general need for social science knowledge and other knowledge about Russia and activities that enhance people-to-people cooperation.

The Arctic and northern areas are of great strategic importance both to the world at large and to Norway. Higher education and research cooperation with Russia must be viewed in close connection with the Government's High North policy, which emphasises that Norway has both a need for and responsibility to acquire knowledge about the northern areas. This requires broad-based international cooperation. In this context, cooperation with Russia is essential.

The need for cooperation and joint solutions in areas such as natural resources and environmental protection requires a shared knowledge base, established contact networks, and a productive climate of cooperation. Such contacts also have transfer value to international knowledge cooperation on Antarctica.

Russia has longstanding traditions in science and education, many centres of excellence in research, and an outstanding reputation internationally in critical scientific areas. The country has especially strong research groups in marine research, climate and polar research, nuclear physics and space research. In addition, Russia holds a leading position in performing arts education, in areas such as music, ballet and theatre.

Russian researchers publish primarily in Russian. This makes their research less available globally and reduces Russia's international visibility as a science nation. However, the country takes active part in EU research cooperation, and is the most important international partner within research and development both for the EU and for the EU's associate members. Cooperation is established in a separate agreement between the EU and Russia, which was renewed in 2014.

Russia will soon implement a large-scale reorganisation of its national research system. This will include the establishment of new strategic research funds and increased focus on international cooperation. In a transition period, the reorganisation may make it difficult for Norwegian actors to find relevant partners, but over time it could facilitate more targeted, long-term scientific cooperation in areas of special interest to Norway.

Russia has participated in the Bologna process since 2001, and has introduced a number of measures in order to integrate Russian higher education in the European educational area. Major reforms have been implemented in recent years with a view to enhancing quality and developing more world-class institutions. International cooperation is emphasised as an important instrument for achieving these objectives. The reforms have resulted in mergers and the establishment of federal universities, known as research universities, with special authority and funding.

There is a longstanding tradition of Norwegian-Russian research cooperation on fisheries management in the Barents Sea, as well as on the environment, climate change and resource mapping in the northern ocean

areas. Cooperation is most highly developed in mathematics, natural science and technology, with special emphasis on marine, Arctic and Antarctic research. Russian researchers have a high level of specialisation and expertise in several areas of importance for Norway. Under the EU Seventh Framework Programme for Research and Technological Development Russia was the third country with which Norway cooperated most extensively.

As of autumn 2015, Norway and Russia were conducting discussions on a renewed agreement on bilateral cooperation on research and technology. This agreement will provide the basis for an expansion of cooperation in the future. In the Roadmap for Bilateral Research

Cooperation with Russia of 2014, the Research Council of Norway identifies areas of particular relevance for expanding cooperation in the years to come.

The Research Council of Norway has collaboration agreements and issues joint calls with two of the Russian research funds – the Russian Foundation for Basic Research (RFBR) and the Russian Foundation for Humanities (RFH).

With regard to higher education cooperation, Norway and Russia signed a Memorandum of Understanding at the governmental level in 2010. Today Norwegian and Russian institutions engage in relatively extensive cooperation on education. Although Russia participates in the



Bologna process, this cooperation has some structural challenges related to mutual recognition and incorporation of study programmes and degrees, especially at the doctoral level. In addition, Russian institutions offer very few study options in English.

Norway has established several instruments to promote bilateral cooperation on higher education with Russia. These are targeted primarily towards student mobility and cooperation between higher education institutions, and include multiple institutions in both Norway and Russia.

Many Russians come to Norway to study. However, only a small number of Norwegian students choose to study in Russia. Those who do study in Russia take courses primarily in Russian language, culture and society.

The overarching priorities related to constructive interaction between higher education cooperation and research cooperation, productive connections to working life and trade and industry, mutual student exchange as part of institutional cooperation, and strong links between bilateral cooperation and multilateral cooperation apply to all international cooperation in the areas of higher education and research. In terms of further

cooperation with Russia in the period 2016–2020, it will be particularly important to:

- continue the productive relationships established in higher education and research cooperation as part of Norway's long-term High North policy and in relation to Russia in general;
- further develop current research cooperation in areas of strategic interest to Norwegian research groups and institutions, with particular focus on the thematic areas set out in the Research Council of Norway's Roadmap for Bilateral Research Cooperation with Russia (such as polar research, marine research, petroleum, social sciences and humanities, health, nuclear physics, space research, nanotechnology, aquaculture and marine technology);
- facilitate the effective, mutual exchange of students, researchers and administrative staff as part of the scientific cooperation between Norwegian and Russian institutions;
- utilise the potential for cooperation with relevant Russian research groups and institutions through multilateral arenas, with special emphasis on Horizon 2020 and Erasmus+;
- use the Bologna process to improve the framework conditions for higher education cooperation with Russia.

Agreements, strategies and government white papers

Norway and Russia have signed the following government-level agreements on higher education and research cooperation:

- *Agreement between the Ministry of Education and Research of the Kingdom of Norway and the Ministry of Education and Science of the Russian Federation on Education Cooperation* (2010).
- In autumn 2015, Norway and Russia will finish drawing up a renewed agreement on bilateral cooperation on research and technology.

Overarching policy for cooperation with Russia in the High North is set out in the following Government white paper, which incorporates knowledge cooperation as a key component:

The High North. Visions and strategies (Meld. St. 7 (2011–2012)).

The Research Council of Norway has drawn up a separate strategy for research cooperation with Russia in the High North:

Norway–Russia. Research and cooperation in the High North (2012).

Instruments

The most important instruments for promoting research cooperation between Norway and other countries are national and international competitive arenas, primarily Research Council of Norway programmes and activities and the EU framework programme Horizon 2020. The Research Council of Norway's Strategy for International Cooperation 2010–2020 states that all Research Council initiatives must include clearly-defined objectives and plans for international cooperation. The strategy also targets Russia as one of the countries to be given special priority. In addition, Research Council programmes issue calls for proposals with funding earmarked for cooperation with selected countries.

Higher education in Norway is essentially fully financed, and thus few national competitive arenas have been established. International arenas, primarily EU programmes/Erasmus+, on the other hand, are important tools for enhancing the internationalisation of Norwegian higher education and also provide a pathway for greater cooperation with Russia. Support provided by the Norwegian State Educational Loan Fund is the most important measure for promoting outgoing student mobility.

In addition to these general measures, there are specific instruments targeting one or more of the priority countries. The following programmes are of special importance for promoting cooperation on higher education and research with Russia:

- **Research Programme on Russia and the High North/Arctic (NORRUSS).** The programme is funded by the Ministry of Foreign Affairs and administered by the Research Council of Norway.
- **Cooperation Programme with Russia.** The programme is funded by the Ministry of Foreign Affairs and administered by the Norwegian Centre for International Cooperation in Education (SIU).
- **Norwegian-Russian Scholarship Scheme.** This scheme is set out in the agreement between Norway and Russia on education cooperation and is funded by the Ministry of Education and Research and administered by SIU.
- **High North Programme.** The programme is funded by the Ministry of Foreign Affairs and administered by SIU. Russia is one of the priority partner countries.
- **Fellowship Programme for Studies in the High North.** The programme is funded by the Ministry of Foreign Affairs and administered by SIU.

- **Barents Plus Programme.** The programme is funded by the Ministry of Foreign Affairs and administered by UiT The Arctic University of Norway.
- **north2north programme.** The programme is funded by the Ministry of Education and Research and administered by the University of the Arctic.
- **UTFORSK programme.** The programme is funded by the Ministry of Education and Research and administered jointly by SIU and the Research Council of Norway.
- **International Partnerships for Excellent Education and Research (INTPART).** The programme is funded by the Ministry of Education and Research and administered jointly by SIU and the Research Council of Norway.
- **Support for language studies in connection with study programmes abroad.** The scheme is funded by the Ministry of Education and Research and administered by the Norwegian State Educational Loan Fund.

A position as Counsellor for Education, Science and Technology has also been established at the Royal Norwegian Embassy in Moscow. The position is co-financed by the Ministry of Education and Research and the Ministry of Trade, Industry and Fisheries.

10. South-Africa

South Africa is Norway's most important strategic partner in Africa. The country is one of the leading economies on the African continent, with strong, resource-based industries and a well-established service sector. South Africa also provides an important bridgehead to other countries in the region, making the country a relevant partner for Norwegian research groups and Norwegian trade and industry alike.

Relations between Norway and South Africa in the trade and industry sector remains modest in scope, despite certain similarities between the countries' economies. However, Norwegian companies are establishing an increasing presence in the country.

South Africa takes active part in EU research and innovation cooperation, and is one of the third countries whose participation will continue to be financed under Horizon 2020. In 2014, South Africa became a member of the European innovation network EUREKA. South African researchers collaborate more with international researchers and publish more co-authored papers with researchers from other countries than the global average. In recent years South Africa has also scored above the world average in terms of citation frequency.

The bulk of South Africa's research is conducted at the universities. Nearly all of the leading universities on the African continent are located in South Africa, and several have a top international standing.

Research cooperation between Norway and South Africa has been growing steadily, in particular during the past decade. The countries signed an agreement on science and technology cooperation in 2002. A programme for bilateral research cooperation was launched that same year, administered at the research council level in both countries and continued in a subsequent phase through 2011. Priority thematic areas under these two cooperation programmes included medicine and health, HIV/AIDS, ICT, the environment, communication and social change, education and energy. The programmes also opened up for cooperation in other areas, such as archaeology.

A new bilateral programme for research cooperation on climate change, the environment and clean energy was launched in 2013. The programme will run until 2017 and is jointly administered by the Research Council of Norway and South Africa's National Research Foundation.

In the Roadmap for Bilateral Research Cooperation with South Africa of 2014, the Research Council of Norway identifies areas of particular relevance for expanding cooperation in the years to come.

Cooperation with South Africa in the area of higher education has to a great extent been associated with programmes focusing on capacity-building in South Africa. The breadth and scope of existing research cooperation holds potential for increased mutual cooperation on higher education as well.

There is good student mobility from Norway to South Africa. Mobility from South Africa to Norway, on the other hand, is low. This is in part because South African institutions tend to be reluctant to send their best students abroad to complete an entire degree. There is, however, interest in increasing outgoing student exchange. There is also considerable interest in South Africa in developing joint study programmes at the master's and doctoral levels.

The overarching priorities related to constructive interaction between higher education cooperation and research cooperation, productive connections to working life and trade and industry, mutual student exchange as part of institutional cooperation, and strong links between bilateral cooperation and multilateral cooperation apply to all international cooperation in the areas of higher education and research. In terms of enhancing further cooperation with South Africa in the period 2016–2020, it will be particularly important to:

- further develop current research cooperation in areas of strategic interest to Norwegian research groups and institutions, with particular focus on the thematic areas identified in the Research Council of Norway's Roadmap for Bilateral Research Cooperation with South Africa (such as climate and the environment, medicine and health, marine and other aquatic research, the maritime sector, biotechnology, polar and space research, peace and conflict research, and development research);
- strengthen industry-oriented research cooperation;
- expand the scope of higher education cooperation, primarily in connection with existing research cooperation;
- foster better connections between higher education, working life and trade and industry;
- facilitate increased mutual student exchange between Norwegian and South African institutions as part of expanding institutional cooperation.

Agreements

Norway and South Africa have signed the following government-level agreements on higher education and research cooperation:

- *Agreement between the Government of the Kingdom of Norway and the Government of the Republic of South Africa on Scientific and Technological Co-operation* (2002).
- *South Africa – Norway Research Co-operation on Climate, the Environment and Clean Energy (SANCOOP)* (2013). Contracting party, Norway: Ministry of Foreign Affairs. Contracting party, South Africa: Department of Science and Technology.

Instruments

The most important instruments for promoting research cooperation between Norway and other countries are national and international competitive arenas, primarily the Research Council of Norway's programmes and activities and the EU framework programme Horizon 2020. The Research Council of Norway's Strategy for International Cooperation 2010–2020 states that all Research Council initiatives must include clearly-defined objectives and plans for international cooperation. The strategy also targets South Africa as one of the countries to be given special priority. In addition, Research Council programmes issue calls for proposals with funding earmarked for cooperation with selected countries.

Higher education in Norway is essentially fully financed, and thus few national competitive arenas have been established. International arenas, primarily EU programmes/Erasmus+, on the other hand, are important tools for enhancing the internationalisation of Norwegian higher education and also provide a pathway for greater cooperation with South Africa. Support provided by the Norwegian State Educational Loan Fund is the most important measure for promoting outgoing student mobility.

In addition to these general measures, there are specific instruments targeting one or more of the priority countries. The following programmes are of special importance for promoting cooperation on higher education and research with South Africa:

- **South Africa – Norway Research Co-operation on Climate Change, the Environment and Clean Energy (SANCOOP) programme.** The programme is funded by the Ministry of Foreign Affairs and administered by the Research Council of Norway.
- **UTFORSK programme.** The programme is funded by the Ministry of Education and Research and administered jointly by the Norwegian Centre for International Cooperation in Education (SIU) and the Research Council of Norway.
- **International Partnerships for Excellent Education and Research (INTPART).** The programme is funded by the Ministry of Education and Research and administered jointly by SIU and the Research Council of Norway.

A new position of Science and Technology Counsellor at Innovation Norway's office in Pretoria was announced in autumn 2015. The position will be co-financed by Innovation Norway and the Research Council of Norway.

Stakeholders

Cooperation on higher education and research involves a number of stakeholders at both institutional and governmental levels.

Higher education institutions. Norwegian universities and university colleges participate actively in international cooperation on higher education and research, and set their own strategic priorities for international cooperation in keeping with their profiles. Many have identified one or more of the countries encompassed by the strategy as focus areas, and have entered into agreements on higher education and/or research cooperation with partners in these countries.

Research institutes and research-performing companies. Norwegian research institutes and research-performing companies participate actively in international cooperation on higher education and research based on their own strategic priorities and scientific profile. For many of them, this includes cooperation with Brazil, China, India, Japan, Russia and South Africa.

Regional health authorities. The regional health authorities have a statutory responsibility to conduct research, and several health trusts take active part in international cooperation. This also includes research cooperation with research communities in the countries targeted by the strategy.

Norwegian Centre for International Cooperation in Education (SIU) is a resource centre for the internationalisation of education, and works to increase knowledge about the internationalisation of Norwegian education. SIU cooperates with and provides services and expertise to educational institutions and educational authorities.

SIU promotes internationalisation, intercultural dialogue, development cooperation and international mobility at all educational levels and coordinates activities at the national level in accordance with current policy within these fields. SIU is the national programme office for international educational cooperation and administers programmes and measures on behalf of the Ministry of Education and Research and other actors. In addition, SIU has the national mandate for enhancing Norway's profile as an attractive nation for cooperation and higher education vis-à-vis international institutions and students.

In recent years, SIU has developed broad-based expertise on Brazil, China, India, Japan, Russia and South

Africa, and has extensive experience with administering instruments for higher education cooperation with these countries. Information about the countries and relevant instruments is available on SIU's country web-pages. SIU has also established cooperation with actors in several of the countries. In addition, SIU owns and operates national websites targeted towards international and Norwegian students (studyinnorway.no and [studier i utlandet.no](http://studier.i.utlandet.no)).

The Research Council of Norway is a national body responsible for the advancement of basic and applied research and innovation, including the promotion of international research cooperation. The Research Council has entered into several agreements with partners in Brazil, China, India, Japan, Russia and South Africa, and administers a number of programmes and schemes which facilitate research cooperation with these countries in various ways. A main action point in the Research Council's Strategy for International Cooperation 2010–2020 is that all of the Research Council's own initiatives – programmes, the open competitive arenas, special initiatives, institution-oriented measures and other forms of support – are required to have specific objectives and plans for international cooperation. This is a critical measure for fostering greater internationalisation of Norwegian research, including more strategic cooperation with the six countries encompassed by this strategy.

At the same time, for collaborative projects to succeed in national (and international) competitive arenas, it is important that contact networks and cooperative relationships of a certain size have already been established between institutions in Norway and relevant partner countries. Consequently, dedicated instruments that encourage high-quality cooperation in strategically important areas are still needed for the six countries. The Research Council has developed roadmaps that identify thematic areas with special potential for cooperation with each of the six countries.

Innovation Norway has established offices in all six countries in order to assist Norwegian companies that conduct business internationally. Innovation Norway's facilities abroad play a vital role in linking Norwegian trade and industry with relevant institutions and knowledge communities. In cooperation with the Research Council of Norway, Innovation Norway has established positions as science and technology counsellors in several locations abroad, including in Brazil, India and

Japan. A similar position for South Africa was announced in autumn 2015. In Japan, this scheme was recently expanded to include higher education, in collaboration with SIU, to strengthen cooperation between higher education, research, and trade and industry.

Furthermore, Innovation Norway is a key actor in Team Norway, which was established to encourage information exchange, cooperation and coordinated efforts and initiatives between various private and public actors in trade and industry. This is also a relevant arena for expanding cooperation between knowledge environments, working life, and trade and industry in the six countries, with emphasis on close ties between higher education, research, and trade and industry.

The Norwegian State Educational Loan Fund provides support for higher education abroad. Norway has excellent financial support schemes for education abroad, which comprise the most important instruments for outgoing student mobility. Funding is provided both for completing an entire degree or for taking part of a degree abroad.

The Norwegian Agency for Quality Assurance in Education (NOKUT) is a national resource centre for higher education and vocational training, and is responsible for approving academic credit taken at higher education institutions abroad. NOKUT also provides information about the Norwegian educational system to institutions outside Norway. NOKUT has a large body of knowledge about educational systems in other countries, and can assist Norwegian institutions regarding placement level and accreditation status for education and research cooperation. These are highly relevant

issues for knowledge cooperation with Brazil, China, India, Japan, Russia and South Africa.

The ministries. Multiple bilateral agreements and Memorandums of Understanding have been signed with Brazil, China, India, Japan, Russia and South Africa at the governmental level as a means of strengthening cooperation on higher education and/or research. The agreements must be viewed as instruments for promoting scientific cooperation with relevant groups in strategically important countries. In many countries this type of agreement is a prerequisite for international cooperation with partners in other countries. Moreover, in some countries such agreements activate funding for cooperation at the institutional level. They also open up dialogue between authorities on the expansion of cooperation, and are normally followed up through dedicated working groups with participation of stakeholders in Norway and the partner country.

The Foreign Service. Norway's embassies and consulates play a critical role in the follow-up of agreements and cooperation in general, and provide practical assistance for both the institutions and the authorities. Norwegian knowledge environments still have a special need to expand their contact networks in the six countries. The diplomatic missions serve as door openers by creating arenas for professional contact and network-building, following up dialogue with relevant partners, and ensuring that Norway is known as an attractive knowledge nation. Positions as counsellors in the field of higher education and/or science and technology have been established at Norway's embassies in China (Beijing) and Russia (Moscow).

Key documents

Meld. St. 7 (2014–2015) *Long-term plan for research and higher education 2015 –2024*, white paper from the Ministry of Education and Research

Meld. St. 35 (2014–2015) *Working together: Private sector development in Norwegian development cooperation*, white paper from the Ministry of Foreign Affairs

Meld. St. 18 (2012–2013) *Long-term perspectives – knowledge provides opportunity*, white paper from the Ministry of Education and Research

Meld. St. 7 (2011–2012) *The High North. Visions and strategies*, white paper from the Ministry of Foreign Affairs

Report No. 14 (2008–2009) to the Storting *Internationalisation of Education in Norway*, white paper from the Ministry of Education and Research

Strategy for research and innovation cooperation with the EU (Horizon 2020 and ERA). Ministry of Education and Research, 2014.

Opportunities in diversity. The Norwegian Government's strategy for cooperation between Norway and India. Ministry of Foreign Affairs, 2009.

New perspectives on a long-standing relationship. The Norwegian Government's strategy on cooperation between Brazil and Norway. Ministry of Foreign Affairs, 2010.

The Research Council of Norway: Strategy for International Cooperation 2010–2020. Research Council of Norway, 2011.

Norge–Russland. Forskning og samarbeid i nordområdene ("Norway–Russia. Research and cooperation in the High North"). Research Council of Norway, 2012.

The various roadmaps for bilateral research cooperation with priority countries. Research Council of Norway, 2014.

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