

Norwegian Research Landscape

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Outline

- Research policy and priorieties
- Research Council of Norway
- R&D sector
- Potential partners

NORWEGIAN RESEARCH POLICY AND PRIORITIES





National priorities in research policies 2008 White Paper



National priorities 2008 White Paper

- global challenges
 - environment,
 - climate change
 - oceans,

Forskningsrådet

- food safety
- energy
- research
- industry oriented research:
 - food, marine, maritime, tourism,
 - energy, environment,
 - biotechnology, ICT
 - new materials/nanotechnology





From national priorities to RCN programmes



Important funding instrument: Large-scale programmes

- Strategic, long-term knowledge development to meet national research-policy priorities
- Strategic and dynamic arena for communication and cooperation



The Research Council

of Norway

BIOTEK2012 Biotechnology for Innovation



PETROMAKS

Optimal Management of Petroleum Resources



NANO2012 Nanotechnology and New Materials



NORKLIMA Climate Change and

its Impacts in Norway



AQUACULTURE An Industry in Growth



VERDIKT Core Competence and Growth in ICT



RENERGI Clean Energy for the Future Large-scale Programmes

The RCN initiative to meet national research priorities

THE RESEARCH COUNCIL OF NORWAY





- Adviser to the government
- Research funding

Forskningsrådet

- Support basic research
- Implement national thematic priorities
- Support private R&D
- Networking and dissemination
- Internationalization



The Research Council canalises nearly 30 % of public funding of Norwegian R&D





Several funding schemes





R&D SECTOR IN NORWAY



Three different research sectors ...





.... With different roles!





Development in total Norwegian R&D expenditure (1970-2008)





R&D institutions in Norway

Higher education institutions

- univeristies and university colleges
- Universities combine their responsibility for basic research and researcher training
- Research institutes
 - research in cooperation with trade and industry
- Regional health authorities
 - University hospitals
- Public institutions
 - Museums, libraries and archives
- Business sector
 - Large companies
 - SME







Infrastructure A roadmap for investment

- National Financing Initiative for Research Infrastructure
- 40 projects funded so far
- Promote cooperation with best international research groups
- Secure equal access to infrastructure
- Examples of implemented large-scale facilities:
- Biobank Norway (NTNU, UiT, UiO, UiB, FHI, 4 Regional Health Authorities)
- NorFab Norwegian Micro- and Nano-fabrication Facilities (NTNU, SINTEF, UiO, Vestfold University College)







More information on Norwegian Research

- Science and technology indicators for Norway
 - Research Council publishes a yearly report on science and technology indicators for Norway (www.rcn.no)
- Evaluations
 - Institute Evaluations
 - Subject-specific evaluations
 - <u>Basic Research in ICT</u> (2012) <u>Mathematical Sciences</u> (2011) <u>Earth Sciences</u> (2011) <u>Biology, Clinical Medicine and Health Science</u> (2011) <u>Geography Research</u> (2011)
 - Policy Evaluations
 - Evaluations of the Research Council's own activities



C. Norwegian participation in EU FP7 (as per January 2012)



- Norway participates in over 6 % of all FP7 projects
- 933 Norwegian projects retained
- ¹/₄ of those projects are coordinated from Norway
- EU-contribution 3,4 billion NOK
- about 4000 researchers from Norwegian institutions involved
- Collaborative relationships with 111 countries





POTENTIAL PARTNERS

Who are the potential Norwegian partners?

- A. Higher education institutions
 - 8 universities

Forskningsrådet

- 9 specialised university institutions
- 20 state university colleges
- **B.** 51 research institutes
 - Technology and industry
 - Environment
 - Society
 - Regional
 - Primary sector
- C. Institutions with international orientation
- D. Centres of excellence or special priority



C. R&D institutions with the highest number of EU FP7 participations

- 1. Sintef (95 participations, 60,4 mill EUR)
- 2. University of Oslo

Forskningsrådet

- 3. University of Bergen
- 4. Norwegian University of Science and Technology
- 5. Research Council of Norway
- 6. Norwegian Institute for Air Research
- 7. National Institute of Technology
- 8. University of Tromsø
- 9. Institute of Marine Research
- 10. Norwegian Meteorological Institute
- 11. Nansen Center (NERSC)
- 12. Oslo University Hospital



D. Norwegian Centers of Excellence

Theoretical chemistry Theoretical linguistics

Communication systems — Ships and ocean structures Biology of memory —

Geo- biosphere Climate research Medieval studies Petroleum research

Economics Mind in Nature Ecology Cancer biomedicine Immune regulation **Biomedicine and IT** Neuroscience **Mathematics** Civil wars Physics/Geology Geohazards Aquaculture protein



technology

D. Centres for Research-based Innovation

Petroleum operations Concrete Medical imaging Aquaculture technology Future manufacturing Structural impact Arctic marine technology Measurement technology Service innovation-Sustainable fish capture Salmon louse Drilling and well

Telemedicine Marine bioactives

Search engines Natural gas Multiphase flow Statistics for innovation Stem cells Cardiology Software systems



D. Centres for Environment-friendly Energy Research

Climate, energy and industry

CO₂ capture and storage

Offshore wind technology

Offshore _____ wind energy CO₂ storage / Renewable energy systems

> Zero emission buildings

International politics and energy systems National energy policy Solar cell technology

Bioenergy



Finding a partner in Norway

- 1. Register in the partner search database
- 2. Look up who is looking for partners in Czech Republic
- Use lists, evalutions, publications to find suitable partners
- 4. Take contact directly

Norwegians interested in cooperation with Czech partners:

- Universities of Bergen, Tromsø, Trondheim (NTNU)
- University colleges in Volda, Vestfold, Stord&Haugesund, Oslo&Akershus, Molde

- Research institutes:
 - Agderforskning
 - Center for International Climate and Environment Research – Oslo (CICERO)
 - Fridtjof Nansen Institute
 - Hogskulen for Landbruk og Bygdeutvikling (HLB)
 - Norwegian Institute for Air Research (NILU)
 - Norwegian Institute for urban and regional research (NIBR)
 - SINTEF Energy Research
 - Stord/Haugesund University College
 - Uni Research, Bergen



www.rcn.no/eea

The Research Co of Norway	ouncil				Search				
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INTERNATIONAL				Useful information					
The Nordic region		Partn	er search	Evaluations of Norwegian scientific disciplines					
Europe EU Research		Tools an	d advice for finding pa	e Norwegian research system					
 European Research A (ERA) 	rea	and Pola	way Grants research nd, Hungary, Romani	Other websites					
> EEA Grants - Norway	2	Estonia.		Catalogue of research institutes in Norway					
Grants The role of RCN		How to fin	d a partner in Norway- s	List of accredited higher education institutions in					
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Partner Search Database (excel)

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Successful partnerships and applications

- Understand each others potential and challenges
- Norway funding based on results
 - Publications in good international journals
 - Participation in EU framwork programmes
 - HEIs student credits
 - Research institutes a very small «basis budget»

- Negotiate the common project
 - Activities
 - Modes of cooperation
 - Budget
- Attention
 - Ensure institutional support
 - Register the application in good time before deadline



Thank you for your attention

www.rcn.no/eea awh@rcn.no



A. Higher education institutions part 1

- Universities
 - Norwegian University of Life Sciences (UMB)
 - Norwegian University of Science and Technology (NTNU)
 - University of Agder (UiA)
 - University of Bergen (UiB)
 - University of Nordland (UiN)
 - University of Oslo (UiO)
 - University of Stavanger (UiS)
 - University of Tromsø (UiT)
- 2 university centres:
 - University Centre in Svalbard (UNIS)
 - University Graduate Center at Kjeller (UNIK)



A. Higher education institutions part 2

- Specialised university institutions
 - BI Norwegian Business School
 - Molde University College, Specialized University in Logistics (HiMolde)
 - NHH Norwegian School of Economics
 - Norwegian Academy of Music (NMH)
 - Norwegian School of Sport Sciences (NIH)
 - Norwegian School of Veterinary Science
 - MF Norwegian School of Theology
 - Oslo School of Architecture and Design (AHO)
 - School of Mission and Theology



- Environment
 - CICERO
 - NIBR
 - NIKU
 - NILU
 - NINA
 - NIVA
 - TØI
 - NERSC

Primary sector

- Bioforsk
- Nofima
- NILF
- Norwegian Forest and Landscape Institute
- Bygdeforsk
- SINTEF Fiskeri og havbruk
- Veterinærinstituttet



Society

- AFI
- FAFO
- FNI
- PRIO
- ISF
- NOVA
- NIFU

- NUPI
- SFN
- SINTEF Teknologi og samfunn
- CMI
- Frischsenteret
- NTNU Samfunnsforskning AS
- Uni Research AS



Technology and industry

Christian Michelsen
 Research AS (CMR)

IFE

- IRIS
- NGI
- NORSAR
- MARINTEK

- Norwegian Computing Center
- NORUT Tromsø
- NORUT Narvik
- SINTEF Energiforskning AS
- SINTEF, Stiftelse
- SINTEF Petroleumsforskning AS
- Stiftelsen Tel-Tek



Regional

- Agderforskning
- Møreforsking
- Nordlandsforskning
- NORUT Alta
- Telemarksforskning
 Bø

- Telemarksforskning
 Notodden
- Trøndelag forskning og utvikling
- Vestlandsforsking
- Østfoldforskning AS
- Østlandsforskning