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2011 – Research funding in figures

In 2011, the Swiss National Science Foundation (SNSF) granted funding to the total value of CHF 713 million, 1.8% less than in 2010 (CHF 726 million). This financing was used to support over 3,400 research projects.

The statistics include all applications processed and approved during the financial year as well as contributions paid out in the area of National Centres of Competence in Research in 2011. Additional grants are not treated as separate applications but are included in the approved amounts.

Since 2011, the SNSF has distinguished between five groups of funding schemes and reported figures for them in its statistics: projects, careers, programmes, infrastructures and science communication. The gender statistics refer to the share of responsible applicants.

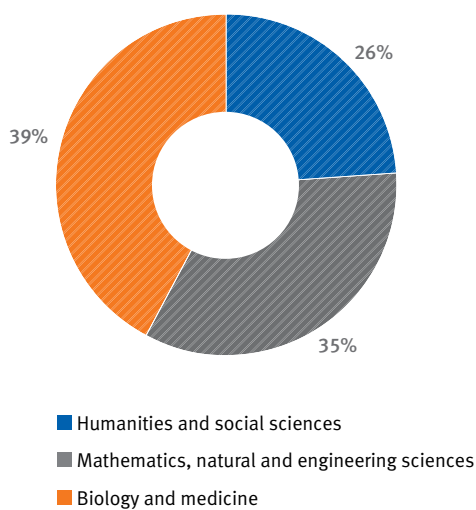
The data in the statistical part of the annual report are not comparable with the figures in the annual statement.

1. Funding in overview

1.1 Funding by research area

Amounts in CHF millions

Distribution of the approved amounts

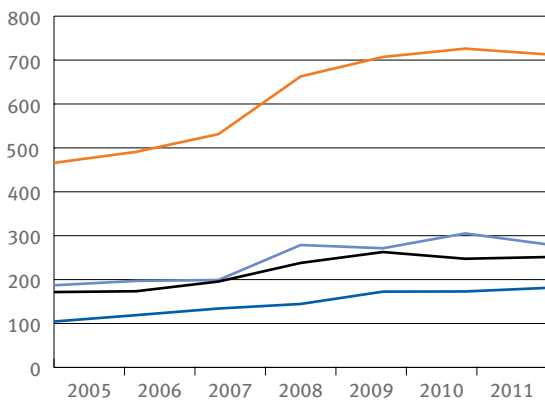


	Amount	Women Men	
Humanities and social sciences	181.2	31%	69%
Mathematics, natural and engineering sciences	251.4	13%	87%
Biology and medicine	280.1	18%	82%
Unapportionable	0.2		
Total	712.9	19%	81%

The allocation to the research areas has changed slightly year-on-year. The share of the humanities and social sciences has risen by two percent.

Approved amounts since 2005

CHF millions



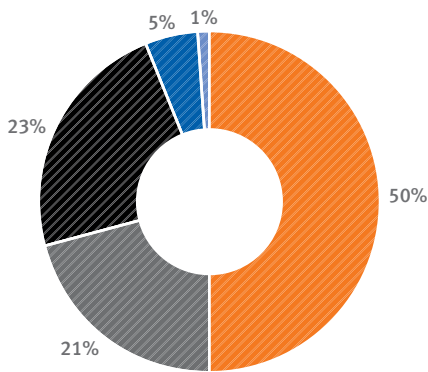
- Total
- Biology and medicine
- Mathematics, natural and engineering sciences
- Humanities and social sciences

The distribution of funds across the three research areas is based largely on demand.

1.2 Funding by scheme

Amounts in CHF millions

Distribution of the approved amounts



- Projects
- Careers
- Programmes
- Infrastructures
- Science communication

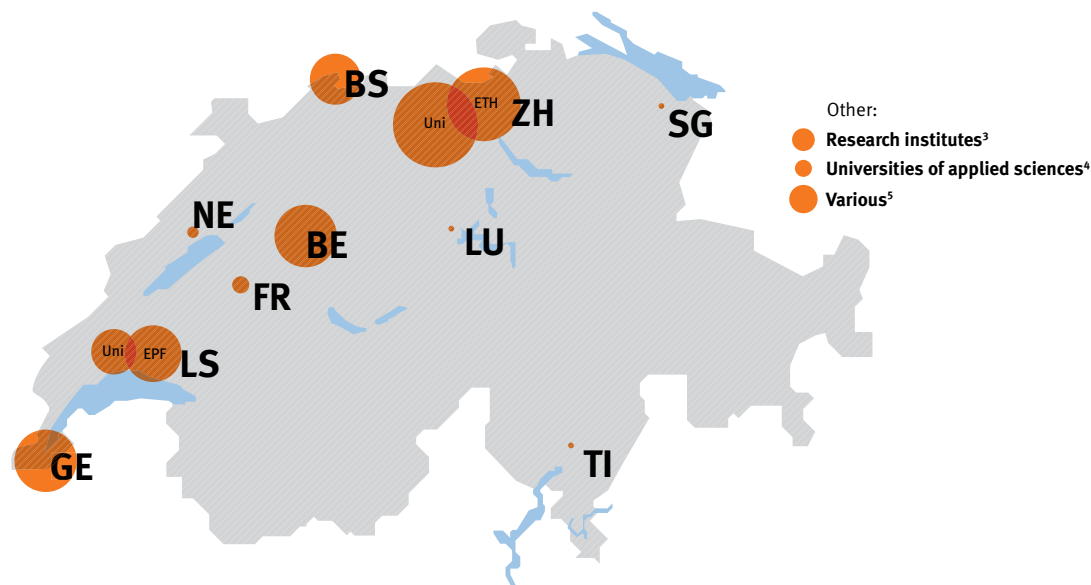
	Number	Amount
Projects	1,229	359.0
Careers	1,108	150.1
Programmes	650	164.4
Infrastructures	83	35.3
Science communication	410	4.1
Total	3,480	712.9

In 2011, the SNSF allocated half of its funds to its main instrument, project funding.

1.3 Funding by institution and research area

Amounts in CHF millions

Distribution of the approved amounts (incl. overhead)¹



Institution	Humanities and social sciences	Mathem., natural and engineering sciences	Biology and medicine	Unassignable	Total in CHF millions	Total in %	Overhead ²	Total incl. overhead
Universities	131.5	107.2	210.2		448.9	63%	55.5	504.4
Berne (BE)	21.4	28.2	37.9		87.5	12%	7.8	95.3
Basel (BS)	20.2	11.5	34.2		65.9	9%	8.6	74.5
Fribourg (FR)	6.7	8.8	8.5		24.0	3%	4.3	28.3
Geneva (GE)	16.3	28.4	34.1		78.8	11%	11.2	90.0
Lucerne (LU)	4.6	–	–		4.6	1%	0.5	5.1
Lausanne (LS)	13.7	1.9	40.4		56.0	8%	7.2	63.2
Neuchâtel (NE)	6.8	2.6	3.3		12.7	2%	1.4	14.1
St. Gallen (SG)	6.1	0.0	–		6.1	1%	0.4	6.5
Ticino (TI)	3.7	4.3	–		8.0	1%	1.2	9.2
Zurich (ZH)	32.0	21.5	51.8		105.3	15%	12.9	118.2
ETH Domain	9.5	132.7	47.3		189.5	27%	23.1	212.6
EPF Lausanne	2.6	49.9	19.7		72.2	10%	8.5	80.7
ETH Zurich	6.8	63.9	22.6		93.3	13%	11.7	105.0
Research institutes ³	0.1	18.9	5.0		24.0	4%	2.9	26.9
Universities of applied sciences⁴	16.7	4.1	0.7		21.5	3%	1.8	23.3
Various⁵	17.3	4.4	13.6		35.3	5%	2.1	37.4
Unassignable⁶	6.2	3.0	8.3	0.2	17.7	2%	–	17.7
Total	181.2	251.4	280.1	0.2	712.9	100%	82.5	795.4

¹ If no application was presented by the respective institution, this is denoted by a dash. Amounts lower than CHF 0.05 million are shown as zero.

² Entitlement to overhead in accordance with overhead regulations

³ Research institutes in the ETH Domain (EMPA, EAWAG, PSI, WSL)

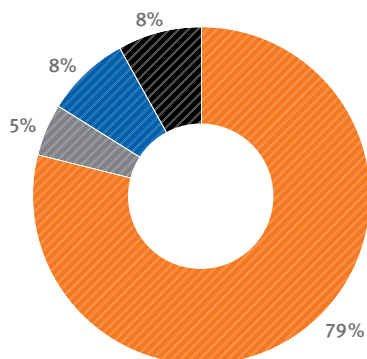
⁴ BFH, FHNW, FHO, HES-SO, HSLU, SUPSI, ZFH, Kalaidos and universities of teacher education. You will find the breakdown by institution in the Web version.

⁵ Research centres, museums, libraries, individuals, companies, non-profit organisations, etc.

⁶ Not assignable to an institution and/or discipline (e.g. advanced fellowships, conferences, publications)

1.4 Use of approved amounts

Total amount: CHF 712.9 millions



As in previous years, the approved funds were used by the researchers mainly to cover personnel costs, whether for the financing of individual salaries/fellowships in the context of career funding or for the appointment of personnel in research projects.

- Salaries and fellowships (incl. social security contributions)
- Materials of enduring value
- Consumables
- Other (travel and field expenses)

1.5 Personnel in research projects

Around 4,900 persons were employed in research projects in 2011. In addition, approx. 850 were supported in the context of career funding and 2,700 were employed through the National Research Programmes and Centres of Competence in Research.

	Total	Women Men	
Scientists ¹	35%	44%	56%
Personnel at doctoral level	52%	42%	58%
Technicians, support staff	13%	66%	34%
Total	100%	46%	54%

¹ Senior researchers and postdocs

Funding for research projects primarily benefits the promotion of young scientists in Switzerland. Thus 77% of the collaborators are 35 years old or younger (95% in the case of personnel at doctoral level, 55% for other scientists).

1.6 Success rates

Amounts in CHF millions

	Success rate ¹			Number of applications submitted			Number of applications approved			Approved amount
	Total	Women	Men	Total	Women	Men	Total	Women	Men	
Projects	51%	43%	53%	2,407	495	1,912	1,229	213	1,016	359.0
Humanities and social sciences	42%	38%	43%	768	219	549	321	84	237	73.2
Mathematics, natural and engineering sciences	66%	57%	67%	785	86	699	516	49	467	131.0
Biology and medicine	47%	43%	48%	764	167	597	359	71	288	142.9
Interdisciplinary research	37%	39%	36%	90	23	67	33	9	24	11.9
Careers										
Fellowships (prospective)	65%	66%	65%	762	333	429	497	220	277	28.6
Fellowships (advanced)	52%	44%	58%	208	78	130	109	34	75	11.2
Marie Heim-Vögtlin grants (MHV)	31%	31%	–	104	104	–	32	32	–	5.9
Ambizione ²	22%	25%	20%	232	79	153	51	20	31	28.5
SNSF professorships	24%	22%	24%	177	45	132	42	10	32	73.2
Programmes										
National Research Programmes ³	41%	27%	44%	68	11	57	28	3	25	12.4
International programmes	55%	58%	54%	147	31	116	81	18	63	6.6
Sinergia	38%	39%	38%	90	18	72	34	7	27	49.0
Special programmes biology and medicine ⁴	100%	100%	100%	6	1	5	6	1	5	5.1
ProDoc	61%	65%	59%	154	48	106	94	31	63	26.1
Infrastructures	85%	88%	84%	98	8	90	83	7	76	35.3
Science communication	87%	91%	85%	470	157	313	410	143	267	4.1

¹ Ratio of the number of applications approved to the number of applications submitted

² Incl. Ambizione-PROSPER and Ambizione-SCORE

³ Number of approved/submitted pre-proposals NRP 66

⁴ Extensions of long-term projects

The SNSF analyses the differences between the success rates of female and male applicants every year. For this purpose, it has introduced a gender equality monitoring system that examines the differences and attempts to identify the determining factors.

If the differences are very pronounced, appropriate measures are taken.

Submitted applications by gender

	Women	Men
Fellowships (prospective)	44%	56%
Fellowships (advanced)	38%	62%
Marie Heim-Vögtlin grants (MHV) ¹	100%	
Ambizione	34%	66%
SNSF professorships	25%	75%
Projects	21%	79%

¹ The proportion of female applicants is 100% as MHV is a programme for women scientists.

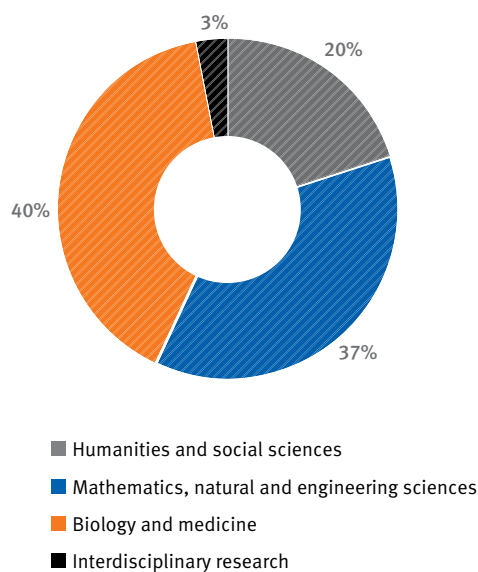
2. Projects

The SNSF supports research projects of high quality across all disciplines. The topics are selected by the researchers. Grants include contributions towards personnel costs, equipment, consumables and travel expenses.

2.1 Funding by research area

Amounts in CHF millions

Distribution of the approved amounts



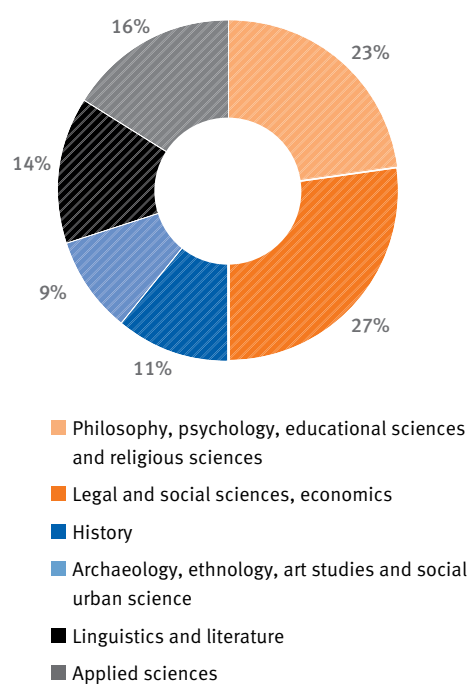
	Amount
Humanities and social sciences	73.2
Mathematics, natural and engineering sciences	131.0
Biology and medicine	142.9
Interdisciplinary research	11.9
Total	359.0

2.2 Funding by group of disciplines

Amounts in CHF millions

Division I: Humanities and Social Sciences

Distribution of the approved amounts



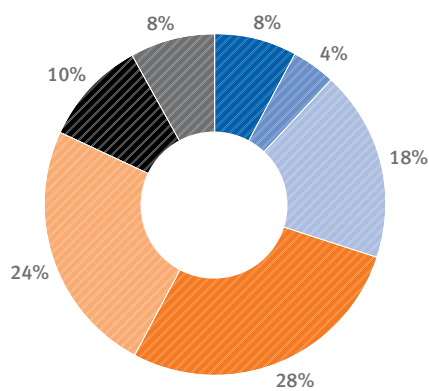
	Number	Amount
Philosophy, psychology, educational sciences and religious sciences	70	16.6
Legal and social sciences, economics	95	19.7
History	33	7.9
Archaeology, ethnology, art studies and social urban science	28	6.9
Linguistics and literature	35	10.6
Applied sciences ¹	60	11.5
Total	321	73.2

¹ DORE projects (51 grants; CHF 9.3 million)

The distribution of the approved grants across the groups of disciplines changed only slightly year-on-year. The largest increases were recorded in the educational science, communication and media studies, linguistics and literature and economic fields.

Division II: Mathematics, Natural and Engineering Sciences

Distribution of the approved amounts



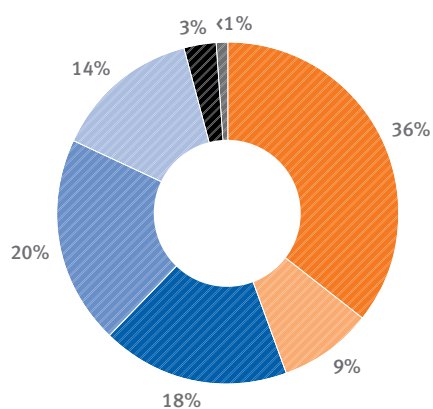
- Mathematics
- Astronomy, astrophysics and space sciences
- Chemistry
- Physics
- Engineering sciences
- Environmental sciences
- Earth sciences

	Number	Amount
Mathematics	54	11.2
Astronomy, astrophysics and space sciences	12	5.1
Chemistry	81	24.2
Physics	106	36.1
Engineering sciences	161	30.9
Environmental sciences	50	13.0
Earth sciences	52	10.5
Total	516	131.0

The distribution of the approved grants across the groups of disciplines has changed marginally. This is partially attributable to the exclusion of infrastructure applications (R'Equip).

Division III: Biology and Medicine

Distribution of the approved amounts



- Basic biological research
- General biology
- Basic medical research
- Experimental medicine
- Clinical medicine
- Preventive medicine
- Social medicine

	Number	Amount
Basic biological research	108	50.9
General biology	30	12.4
Basic medical research	68	25.2
Experimental medicine	70	28.4
Clinical medicine	64	20.8
Preventive medicine (epidemiology/early diagnosis/prevention)	18	4.7
Social medicine	1	0.5
Total	359	142.9

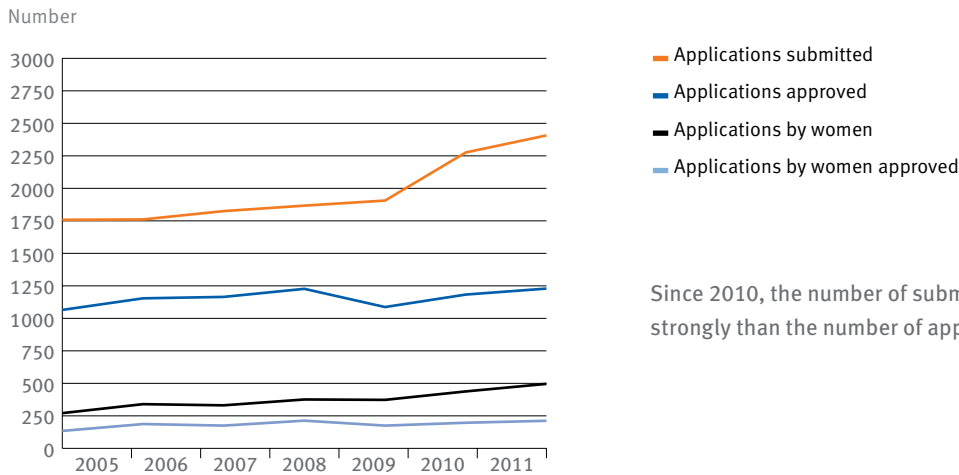
In 2011, the SNSF again supported international consortia in biology and medicine. The Joint Programming on Neurodegenerative Diseases JPND and the ERA-Net Euronanomedicine opened up new avenues for highly specialised Swiss research groups to engage in Europe-wide co-operation.

2.3 Grants, reductions and rejections

Amounts in CHF millions

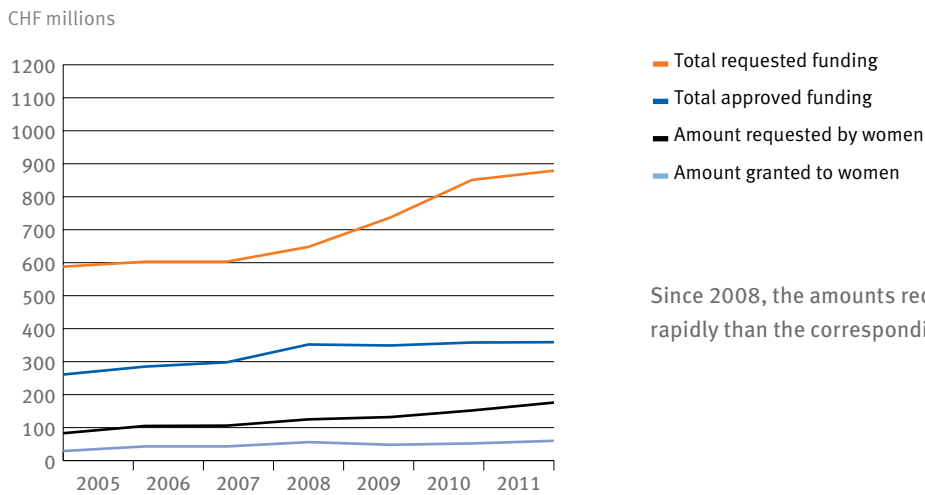
	Number	Amount	Grants	Reductions	Rejections, withdrawals
Humanities and social sciences					
Applications submitted	768		42%		58%
Requested amount		218.6	33%	8%	59%
Grants	321	73.2			
Reductions in approved applications	(225)	17.4			
Rejections, withdrawals	447	128.0			
Mathematics, natural and engineering sciences					
Applications submitted	785		66%		34%
Requested amount		272.4	48%	23%	29%
Grants	516	131.0			
Reductions in approved applications	(443)	62.8			
Rejections, withdrawals	269	78.6			
Biology and medicine					
Applications submitted	764		47%		53%
Requested amount		345.4	41%	12%	47%
Grants	359	142.9			
Reductions in approved applications	(265)	41.6			
Rejections, withdrawals	405	160.9			
Interdisciplinary research					
Applications submitted	90		37%		63%
Requested amount		41.8	28%	6%	66%
Grants	33	11.9			
Reductions in approved applications	(27)	2.5			
Rejections, withdrawals	57	27.4			
Total					
Applications submitted	2,407		51%		49%
Requested amount		878.2	41%	14%	45%
Grants	1,229	359.0			
Reductions in approved applications	(960)	124.3			
Rejections, withdrawals	1,178	394.9			

2.4 Number of applications and grants since 2005



Since 2010, the number of submitted applications has risen much more strongly than the number of approved applications.

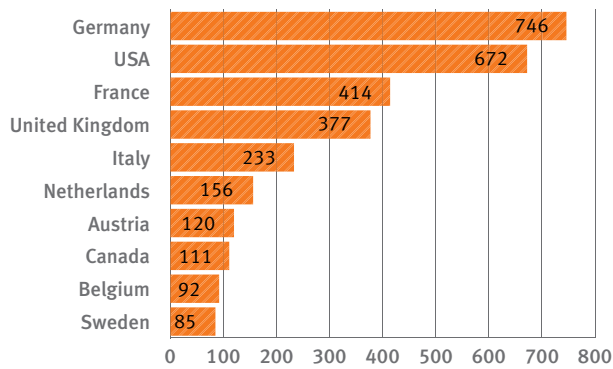
2.5 Requested and approved amounts since 2005



Since 2008, the amounts requested in project funding have risen more rapidly than the corresponding budget of the SNSF.

2.6 International networking

Number of international collaborations



In total, nearly 3,900 instances of international collaboration have taken place in the context of projects supported by the SNSF. The table shows the ten countries collaborated with most frequently.

3. Careers

The SNSF has a wide range of funding options in place to promote the careers of young researchers.

3.1 Funding by scheme

Amounts in CHF millions

	Number of applications submitted					Number of applications approved					Approved amount
	New applications			Follow-up applications		New applications			Follow-up applications		
	Total	Women	Men	Women	Men	Total	Women	Men	Women	Men	
Fellowships (prospective)	762	333	429	44	60	497	220	277	28	37	28.6
Fellowships (advanced)	208	78	130	5	12	109	34	75	4	6	11.2
Marie Heim-Vögtlin grants (MHV)	104	104	–	7	–	32	32	–	4	–	5.9
Ambizione ¹	232	79	153	6	11	51	20	31	6	11	28.5
SNSF professorships	177	45	132	4	17	42	10	32	4	17	73.2
DORE: young researchers	4	1	3	–	–	3	1	2	–	–	0.1
MD-PhD fellowships	7	1	6	–	–	7	1	6	–	–	1.3
Graduate courses	7	1	6	–	–	7	1	6	–	–	0.2
Summer courses	151	90	61	–	–	146	88	58	–	–	0.4
International short visits	108	32	76	–	–	97	30	67	–	–	0.7
Total	1,760	764	996	66	100	991	437	554	46	71	150.1

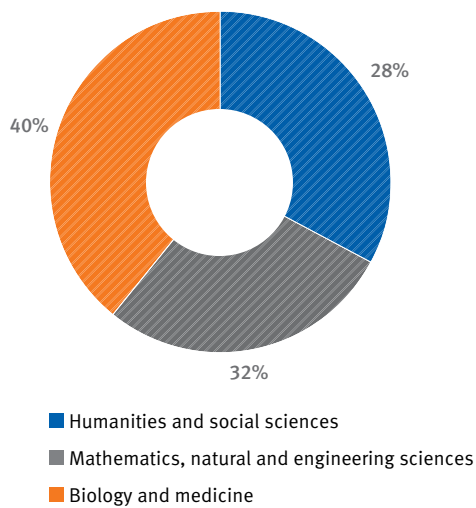
¹ incl. Ambizione-PROSPER and Ambizione-SCORE (2 grants; CHF 0.8 million)

With the exception of SNSF professorships, demand for the main career funding schemes rose again in 2011. While the number of new applications to Marie Heim-Vögtlin, the programme for the promotion of women, rose only slightly, fellowships and Ambizione registered increases of 10% and 20% respectively. Since the introduction of Ambizione in 2008, the demand for this funding scheme has risen markedly every year. In spite of this, the overall budget for career funding remained practically unchanged year-on-year.

3.2 Funding by research area

Amounts in CHF millions

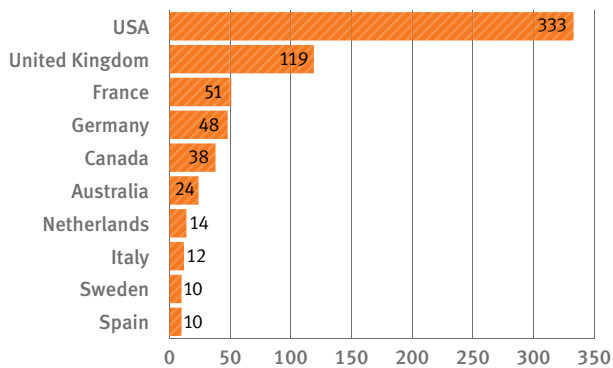
Distribution of the approved amounts



	Amount
Humanities and social sciences	41.8
Mathematics, natural and engineering sciences	48.8
Biology and medicine	59.5
Total	150.1

3.3 Fellowships by host country

Number of fellowships



With 681 fellowships for prospective and advanced researchers, the SNSF supported a total of 726 research stays abroad. The graph shows the ten most frequent host countries.

4. Programmes

Programmes are funding instruments with pre-defined thematic and conceptual/organisational parameters. Some of the SNSF's programmes were suggested by researchers or their home institutions, while others were established by political actors.

4.1 Funding by scheme

Amounts in CHF millions

	Number	Amount
National Research Programmes (NRPs)	30	12.4
National Centres of Competence in Research (NCCRs) ¹	405	65.2
International programmes	81	6.6
SCOPES/ESTROM programme	63	4.7
Programme of research partnerships with developing countries	–	0.2
Multilateral collaborations	18	1.7
Sinergia	34	49.0
Special programmes biology and medicine	6	5.1
Cohort studies	3	3.5
Clinical Trial Units (CTUs)	3	1.6
Doctoral programmes (ProDoc)	94	26.1
Total	650	164.4

¹ Sub-projects

4.2 National Research Programmes

Amounts in CHF millions¹

The National Research Programmes (NRPs) generate scientific knowledge aimed at solving Switzerland's most pressing problems. The topics are prescribed by the Federal Council.

	Approved amount 2011 ²	Overall budget	Overall amount approved up to 2011 ³	Duration
	Total		Total	
Current NRPs				
NRP 54 Sustainable Development of the Built Environment	–	13.0	11.1	2004–2011
NRP 57 Non-Ionising Radiation – Health and Environment	0.0	5.0	4.6	2006–2011
NRP 58 Religions, the State and Society	0.5	10.0	10.0	2006–2011
NRP 59 Benefits and Risks of the Deliberate Release of Genetically Modified	0.1	15.0	13.0	2007–2012
NRP 60 Gender Equality	0.4	8.0	6.6	2010–2013
NRP 61 Sustainable Water Management	0.2	12.0	9.7	2010–2013
NRP 62 Smart Materials	0.0	11.0	6.6	2010–2014
NRP 63 Stem Cells and Regenerative Medicine	–	10.0	5.6	2010–2014
NRP 64 Opportunities and Risks of Nanomaterials	–	12.0	7.2	2010–2015
NRP 65 New Urban Quality	0.0	5.0	3.5	2010–2013
NRP 66 Resource Wood	11.1	15.0	11.1	2012–2017
NRP 67 End of Life	–	12.0	0.4	2012–2018
New NRPs				
NRP 68 Sustainable Use of Soil as a Resource	–	13.0	–	2013–2017
NRP 69 Healthy Nutrition and Sustainable Food Production	–	13.0	–	2013–2017
Total	12.3	154.0	89.4	

¹ Amounts under CHF 0.05 million are shown as zero

² Excluding grants for formally terminated programmes (CHF 0.1 million)

³ These amounts do not take account of repayments, third-party funds, etc.

The SNSF launched two new programmes in 2011, NRP 68 “Sustainable Use of Soil as a Resource” and NRP 69 “Healthy Nutrition and Sustainable Food Production”. Research work in both NRPs will start in 2013.

The share of women in the ongoing NRPs has remained largely unchanged (women 20%, men 80%).

4.3 Ongoing National Centres of Competence in Research

Amounts in CHF millions

Through the National Centres of Competence in Research (NCCRs), the SNSF promotes long-term research networks in areas of strategic significance for the future of science, the economy and society in Switzerland.

Series 2001	SNSF contribution 2011 ¹	SNSF contribution for 12 years	Total budget for 12 years	Start	Home institution
Financial Valuation and Risk Management (FINRISK)	2.1	28.2	56.5	2001	University of Zurich
Computer Aided and Image Guided Medical Interventions (CO-ME)	1.5	42.7	112.7	2001	ETH Zurich
Frontiers in Genetics (Genetics)	2.0	43.0	125.5	2001	University of Geneva
Interactive Multimodal Information Management (IM2)	1.0	32.8	84.5	2002	Idiap, Martigny
Climate	1.6	26.6	130.7	2001	University of Berne
Materials with Novel Electronic Properties (MaNEP)	2.5	49.6	203.8	2001	University of Geneva
Mobile Information and Communication Systems (MICS)	1.2	37.5	91.5	2001	EPF Lausanne
Molecular Oncology	1.4	43.6	115.1	2001	EPF Lausanne
Nanoscale Science	1.7	49.3	185.1	2001	University of Basel
North-South	1.8	36.4	99.0	2001	University of Berne
Neural Plasticity and Repair (NEURO)	1.7	42.7	237.8	2001	University of Zurich
Quantum Photonics	1.7	44.8	122.2	2001	EPF Lausanne
Structural Biology – Molecular Life Sciences	1.5	36.7	108.6	2001	University of Zurich
Plant Survival	1.6	33.4	81.6	2001	University of Neuchâtel
Total	23.3	547.3	1,754.6		

Series 2005	SNSF contribution 2011 ¹	SNSF contribution for 8 years	Total budget for 8 years	Start	Home institution
Affective Sciences – Emotion in Individual Behaviour and Social Processes	2.5	20.0	49.6	2005	University of Geneva
Democracy – Challenges to Democracy in the 21 st Century	1.9	14.6	30.1	2005	University of Zurich
Iconic Criticism – The Analysis of Image Processes	1.9	14.6	33.3	2005	University of Basel
Mediality – Historical Perspectives	1.5	11.7	20.9	2005	University of Zurich
International Trade Regulation – From Fragmentation to Coherence	2.3	19.8	26.6	2005	University of Berne
Total	10.1	80.7	160.5		

Series 2010	SNSF contribution 2010 ¹	SNSF contribution for 4 years	Total budget for 4 years	Start	Home institution
Chemical Biology — Visualisation and Control of Biological Processes Using Chemistry	4.2	13.4	28.6	2010	University of Geneva EPF Lausanne
Kidney.CH — Kidney Control of Homeostasis	4.5	16.5	28.0	2010	University of Zurich
LIVES — Overcoming Vulnerability: Life Course Perspectives	3.6	14.5	29.6	2011	University of Lausanne University of Geneva
MUST — Molecular Ultrafast Sciences and Technology	4.0	17.3	37.6	2010	ETH Zurich University of Berne
QSIT — Quantum Science and Technology	3.6	17.1	56.0	2011	ETH Zurich University of Basel
Robotics — Intelligent Robots for Improving the Quality of Life	3.7	13.3	30.7	2010	EPF Lausanne
SYNAPSY — The Synaptic Bases of Mental Diseases	4.5	17.5	43.2	2010	EPF Lausanne University of Lausanne University of Geneva
TransCure — From Transport Physiology to Identification of Therapeutic Targets	3.7	14.1	27.0	2010	University of Berne
Total	31.8	123.7	280.7		
All NCCRS	65.2	751.7	2,195.8		

¹ Also contains contributions for management, knowledge and technology transfer, promotion of young scientists, etc.

In 2011, the SNSF issued calls for proposals for another series of NCCRs. The available funds are sufficient to support approximately five to six new programmes.

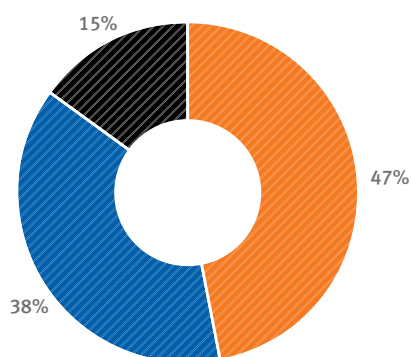
5. Infrastructures

In individual cases, the SNSF provides direct funding for research infrastructures that are indispensable for research projects. This is complemented by specific funding programmes.

5.1 Funding by scheme

Amounts in CHF millions

Distribution of the approved amounts



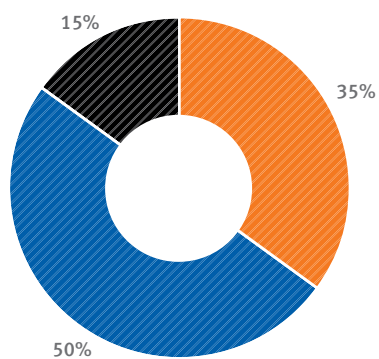
- Research infrastructures
- R'Equip
- FORCE/FINES

	Number	Amount
Research infrastructures	15	16.7
R'Equip	52	13.3
FORCE/FINES	16	5.3
Total	83	35.3

5.1 Funding by research area

Amounts in CHF millions

Distribution of the approved amounts



- Humanities and social sciences
- Mathematics, natural and engineering sciences
- Biology and medicine

	Amount
Humanities and social sciences	12.5
Mathematics, natural and engineering sciences	17.5
Biology and medicine	5.3
Total	35.3

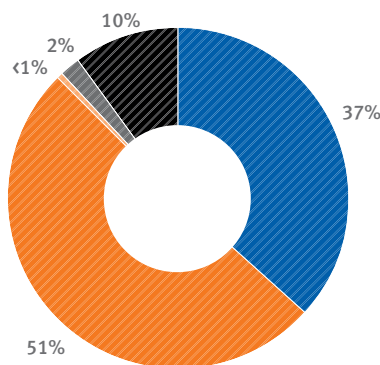
6. Science communication

The SNSF promotes communication between researchers as well as between science and society.

6.1 Funding by scheme

Amounts in CHF millions

Distribution of the approved amounts



- Scientific conferences
- Publications
- DORE: Publications
- DORE: Conferences
- International exploratory workshops

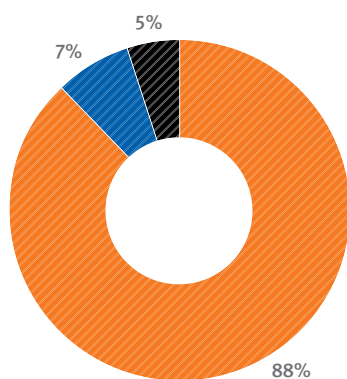
	Number	Amount ¹
Scientific conferences	202	1.5
Publications	149	2.1
DORE: Publications	3	0.0
DORE: Conferences	26	0.1
International exploratory workshops	30	0.4
Total	410	4.1

¹ Amounts under CHF 0.05 million are shown as zero

6.2 Funding by research area

Amounts in CHF millions

Distribution of the approved amounts



- Humanities and social sciences
- Mathematics, natural and engineering sciences
- Biology and medicine

	Amount
Humanities and social sciences	3.6
Mathematics, natural and engineering sciences	0.3
Biology and medicine	0.2
Total	4.1