

2. Country profiles

AUSTRIA



Population ⁸²⁷	8.35 million
GDP ⁸²⁸	280 billion euros
Responsibility ⁸²⁹	The Austrian Space Program is funded by the Federal Ministry for Transport, Innovation and Technology and managed by the Agency for Aeronautics and Space of the Austrian Research Promotion Agency.
Activities ⁸²⁹	In addition to ESA programmes, two main national programmes: the Austrian Space Applications Programme and the Austrian Radionavigation Technology and Integrated Satnav Services and Products Testbed.
Budget	In 2009, 60.73 million euros (ESA 43.35, national space programs 7.5, Austrian Academy of Sciences 4.02, Eumetsat 4.05, FFG 1.81)
Staff ⁸²⁹	ALR – 11
Direct employment in space manufacturing industry ⁸³⁰	318

BELGIUM



Population ⁸²⁷	10.75 million
GDP ⁸²⁸	349 billion euros
Responsibility ⁸³¹	The Belgian Federal Science Policy Office manages Belgian space activities and the Belgian participation in national and international programmes through its Department for Space Research and Applications.
Activities ⁸³¹	In addition to ESA programmes, there are bilateral cooperation projects with Argentina on SOACOM, France on COROT, SPOT and Pleiades, the U.S. on STEREO and with RUSSIA on MIRAS and SPICAM.
Budget	In 2009, approximately 200 million (ESA 161, EUMETSAT 5, national approximately 34)
Staff	Department for space research and applications: about 20
Direct employment in space manufacturing industry ⁸³⁰	1,523



CZECH REPUBLIC

Population ⁸²⁷	10.51 million
GDP ⁸²⁸	145 billion euros
Responsibility ⁸³²	The Ministry of Education, Youth and Sports supervises space activities and cooperation with ESA. The Czech Space Office, a non-profit association, coordinates space activities.
Activities ⁸³²	In addition to the ESA PECS programme, the Czech space activities focus on astronomy, magnetospheric, ionospheric and atmospheric research, microgravity research experiments, scientific instruments and micro-satellites.
Budget	In 2009, 10.4 million euros (national 4.3, ESA 5.5, Other 0.9)
Staff ⁸³²	CSO:13

DENMARK

DTU Space
Institut for Rumforskning og-teknologi

Population ⁸²⁷	5.54 million
GDP ⁸²⁸	229 billion euros
Responsibility ⁸³³	The Ministry of Science, Technology and Innovation is responsible for the national space policy and space activities.
Activities ⁸³³	In addition to ESA programmes, bilateral cooperation is undertaken with the U.S., Sweden, Russia and France.
Budget	In 2009, 38.9 million euros (national 7.9, ESA 27.8, EUMETSAT 3.5)
Staff ⁸³³	DTU:136
Direct employment in space manufacturing industry ⁸³⁰	216

FINLAND

Population ⁸²⁷	5.35 million
GDP ⁸²⁸	176 billion euros
Responsibility ⁸³⁴	The Ministry of Trade and Industry, the Funding Agency for Technology and Innovation, and the Academy of Finland are funding space activities in Finland. The Finnish Space Committee consists of representatives of all stakeholders and coordinates all of the activities. Telespazio is the executive body for space activities and, together with the Academy of Finland for basic research, manages the Finnish participation within ESA programmes and other international projects.
Activities ⁸³⁴	In addition to ESA programmes, Finland has bilateral activities with the USA (TWINS, Mars Science Laboratory, Phoenix, ISS) France (Pleiades), Germany (TanDEM-X and TerraSAR-X) and Japan (ISS), as well as a national space technology programme.
Budget	In 2009, 51.66 million euros (national 34, ESA 15, EUMETSAT 2.66)
Staff ⁸³⁴	Telespazio – Environmental Data and Space Applications: 14
Direct employment in space manufacturing industry ⁸³⁰	172

FRANCE

Population ⁸²⁷	64.7 million
GDP ⁸²⁸	1947 billion euros
Responsibility ⁸³⁵	The Centre National d'Études Spatiales (CNES) is responsible for the French space activities. It is under the shared responsibility of the Ministry of Education and Research and of the Ministry of Defense. The Office Nationale d'Études et de Recherches Aérospatiales (ONERA) is also responsible for space related research.
Activities ⁸³⁵	In addition to ESA programmes, civil, military and science programmes are undertaken (Pleiades, Helios, Essaim, e-Gorce), as well as bilateral cooperation with the U.S. (CALIPSO, Jason 2 and 3) and India (Saral, Oceansat 3, Altika-Argos, Megha Tropiques).
Budget	In 2009, CNES had a budget of 1.997 billion euros (including the ESA contribution of 685 million, and a EUMETSAT contribution of 29 million). ONERA had a budget of 210 million euros, of which only a sizable fraction was spent on space-related research.
Staff ⁸³⁵	CNES: app. 2,400
Direct employment in space manufacturing industry ⁸³⁰	11,225

GERMANY

Population ⁸²⁷	81.8 million
GDP ⁸²⁸	2432 billion euros
Responsibility ⁸³⁶	The German Space Agency within the German Aerospace Center (DLR) is responsible for German space activities. It is under the responsibility of the Ministry of Economics and Technology.
Activities ⁸³⁶	In addition to ESA programmes, Germany has national civil and commercial programmes in Earth observation (RapidEye, TerraSAR-X, TanDEM, EnMAP), Human space flight (ISS, Microgravity experiments), launch services (Eurokot, OHB-Cosmos), associated ground systems and space technologies (such as intersatellite links). Germany is involved in bilateral cooperation with the U.S. (GRACE, Dawn, Sofia) and its military programs include remote sensing satellites (SAR-Lupe radar satellites) and satcoms (Satcom BW).
Budget	In 2009, roughly 920 million euros. DLR contributed 680 million euros to ESA, and 38 million to EUMETSAT.
Staff ⁸³⁶	DLR for space activities: app. 2,000
Direct employment in space manufacturing industry ⁸³⁰	5,270

GREECE

Population ⁸²⁷	11.3 million
GDP ⁸²⁸	237 billion euros
Responsibility ⁸³⁷	The General Secretariat for Research and Technology (GSRT) of the Ministry of Education is responsible for Greek space activities.
Activities ⁸³⁷	The Greek space activities cover mainly the fields of space physics, ionospheric physics, Earth observation and telecommunications.
Budget	In 2009, 14.5 million to ESA, and 3.2 million to EUMETSAT.
Staff ⁸³⁷	For space: <5



HUNGARY

Population ⁸²⁷	10 million
GDP ⁸²⁸	96 billion euros
Responsibility ⁸³⁸	The Hungarian Space Office, under the responsibility of the Ministry of Environment and Water, manages Hungarian space activities.
Activities ⁸³⁸	Participation in microgravity, Earth observation, life and material sciences and GSTP programs of ESA.
Budget	In 2009, Hungary spent about 2 million euros to satisfy its PECS agreements with ESA and contributed 1.3 million euros to EUMETSAT.
Staff ⁸³⁸	Total space activities: 250

IRELAND



Population ⁸²⁷	4.5 million
GDP ⁸²⁸	159 billion euros
Responsibility ⁸³⁹	Enterprise Ireland, in association with the Office of Science and Technology of the Department of Enterprise, Trade and Employment, manages and coordinates space activities in Ireland.
Activities ⁸³⁹	Irish space activities are in the fields of software systems and services, precision mechanical components, advanced materials, electronics/ microelectronics and telecommunications systems and service engineering.
Budget	In 2009, Ireland contributed 13.3 million euros to ESA, and 2.3 million euros to EUMETSAT.
Staff ⁸³⁹	For space: <5
Direct employment in space manufacturing industry ⁸³⁰	30

ITALY

Population ⁸²⁷	60.3 million
GDP ⁸²⁸	1553 billion euros
Responsibility ⁸⁴⁰	The Italian Space Agency (ASI), under the Ministry of University and Research, manages Italian space activities.
Activities ⁸⁴⁰	Italian civil space activities include ESA programmes and a national programme. National activities include scientific missions (AGILE, PRISMA, MIOSAT), dual-use Earth observation satellites (Cosmos-Skymed) and military satcoms (Sicral). Italy conducts bilateral cooperation with France (Athena, Fidus) and Argentina (SIASGE).
Budget	In 2010, the Italian Space Agency's budget was app. 700 million euros (ESA 369.5 million, EUMETSAT 23.7 million, national app. 307 million)
Staff ⁸⁴⁰	ASI: app. 200
Direct employment in space manufacturing industry ⁸³⁰	4,490

LUXEMBOURG

Population ⁸²⁷	0.502 million
GDP ⁸²⁸	39.5 billion euros
Responsibility ⁸⁴¹	Luxinnovation, the National Agency for Innovation and Research, under the responsibility for the Ministry of Culture, Higher Education and Research, coordinates space activities.
Activities ⁸⁴¹	Luxembourg focuses mainly on telecommunications, through SES Astra commercial satellite services provider.
Budget	In 2009, Luxinnovation contributed 12.8 million euros to ESA, and 0.42 million euros to EUMETSAT.
Staff	Luxinnovation has a total of 21 staff members only a few of which are directly involved in space activities.
Direct employment in space manufacturing industry ⁸³⁰	31



NETHERLANDS

Population ⁸²⁷	16.6 million
GDP ⁸²⁸	585 billion euros
Responsibility ⁸⁴²	The new Netherlands Space Office (2009) is responsible for coordinating international space activities with ESA, NASA and JAXA, as well as for the development of the Dutch national space programme. The Dutch Space Research Organization (SRON) is responsible for national and multilateral space science programmes.
Activities ⁸⁴²	In addition to its contributions to ESA programmes, such as Gaia, Exo-Mars, and GMES, NSO conducts bilateral activities with Japan (SPICA-SAFARI) and is responsible for planning the Dutch National Space Programme. SRON conducts space research in the fields of Earth observation, microgravity and planetary exploration.
Budget	In 2009, 133.6 million euros (ESA 99 million, national 25 million, EUMETSAT 8.6 million)
Staff ⁸⁴²	NSO: 35, SRON: 215
Direct employment in space manufacturing industry ⁸³⁰	610



NORWAY

Population ⁸²⁷	4.86 million
GDP ⁸²⁸	312 billion euros
Responsibility ⁸⁴³	The Norwegian Space Centre (NSC), under the Ministry of Trade and Industry, manages Norwegian space activities.
Activities ⁸⁴³	In addition to ESA programmes (in particular Earth observation, telecommunications and launchers), Norway has national support programmes and commercial activities (Telenor). Moreover, Norway operates the Andøya rocket range and the Svalbard ground station. Norway has also a bilateral agreement with Canada on the use of Radarsat 2 data.
Budget	In 2009, Norway contributed 44.6 million euros to ESA, 4 million euros to EUMETSAT and 8 million euros on national space activities.
Staff ⁸⁴³	NSC: 28
Direct employment in space manufacturing industry ⁸³⁰	101



POLAND

Population ⁸²⁷	38.2 million
GDP ⁸²⁸	348 billion euros
Responsibility ^{18,19}	Polish space activities are under the joint responsibility of the Ministry for Scientific Research and Information Technology and the Ministry of Economics Affairs and Labour. Within the Academy of Sciences, the Space Research Centre coordinates space activities and hosts the Polish Space Office (PSO).
Activities ^{18,19}	Polish space activities focus on the fields of space science, navigation and Earth observation applications. Poland is participating in several ESA missions, such as Herschel, Planck, Rosetta, ExoMars and Bepi Colombo.
Budget	In 2009, app. 4 million euros (ESA PECS 1.2 million, national 3 million)
Staff ⁸⁴⁴	Space Research Centre: 88

FCT *Space Office*



PORTUGAL

Population ⁸²⁷	10.6 million
GDP ⁸²⁸	170 billion euros
Responsibility ⁸⁴⁶	Portuguese space activities are coordinated by the Portuguese Space Office within the Foundation for Science and Technology (FCT), which is accountable to the Ministry of Science, Technology and Higher Education (GRICES).
Activities ⁸⁴⁶	Mainly participation in ESA programs (telecommunications systems, technology developments, Earth observation, exploration), as well as space outreach programmes.
Budget	In 2009, Portugal contributed 15.67 million euros to ESA and 2.4 million euros to EUMETSAT.
Staff	App. 10
Direct employment in space manufacturing industry ⁸³⁰	101



ROMANIA

Population ⁸²⁷	21.5 million
GDP ⁸²⁸	123 billion euros
Responsibility ⁸⁴⁷	The Romanian Space Agency (ROSA), under the responsibility of the Ministry of Education and Research, is managing Romanian space activities.
Activities ⁸⁴⁷	Romania has a PECS agreement with ESA. In addition, Romania has national activities covering space science (space physics and astronomy), space systems (construction of nanosatellites and microgravity experiments) and space applications (telemedicine, Earth observation and navigation space-based services).
Budget	In 2009, app.2 million euros was spent to satisfy Romania's PECS agreement with ESA. Romania also spent about 12 million for the "Space and Security" programme within Romania's "National Plan for R&D and Innovation".
Staff ⁸⁴⁷	ROSA: 36



SPAIN

Population ⁸²⁷	46 million
GDP ⁸²⁸	1052 billion euros
Responsibility ⁸⁴⁸	The Centre for the Development of Industrial Technology (CDTI), under the Ministry of Science and Innovation, is funding and coordinating Spanish space activities.
Activities ⁸⁴⁸	In addition to ESA programmes, Spain has a national space programme including governmental and commercial programmes, especially in civil and military telecommunications (Hispasat, Spainsat), and Earth observation (SEOSAT/INGENIO, SEOSAR/PAZ, INTAuSAT 1) and it is involved in bilateral cooperation projects with France, Canada, the U.S. and Russia. Also, Spain manages national, ESA and NASA ground facilities.
Budget	In 2009, Spain contributed 184 million euros to ESA and 14.9 million euros to EUMETSAT, while 300 million euros were allocated to national space activities.
Staff ⁸⁴⁸	CDTI: app. 150
Direct employment in space manufacturing industry ⁸³⁰	2,231

SWEDEN

Population ⁸²⁷	9.34 million
GDP ⁸²⁸	337 billion euros
Responsibility ⁸⁴⁹	The Swedish National Space Board (SNSB), under the Ministry of Industry, Employment and Communication, is responsible for space activities in Sweden. Basic research is funded via the Ministry of Education and Research.
Activities ⁸⁴⁹	In addition to ESA programmes, Sweden has national programmes (subsystems, satellites and sounding rockets), and bilateral cooperation mainly with France (Proteus, Pleiades, Spot, Vulcain), and Germany. Both countries are partners in the technology demonstration project Prisma. Sweden also operates the test range of Kiruna and the satellite ground station at Esrange.
Budget	In 2009, 83.9 million euros (ESA 56 million, EUMETSAT 5 million, national 22.9 million euros).
Staff ²³	SNSB: 16
Direct employment in space manufacturing industry ⁸³⁰	664



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziur svizra

SWITZERLAND

Population ⁸²⁷	7.78 million
GDP ⁸²⁸	391 billion euros
Responsibility ⁸⁵⁰	The Swiss Space Office of the State Secretariat for Education and Research of the Federal Department of Home Affairs is responsible for Swiss space activities and cooperates closely with the Swiss Department of Foreign Affairs on that topic. The Federal Commission for Space Affairs (CFAS) is currently preparing a new Swiss space policy. The interdepartmental coordination committee for space (IKAR) is responsible for coordinating activities.
Activities ⁸⁵⁰	Most of the Swiss activities are undertaken within ESA programmes (space science, human spaceflight, launchers, Earth observation, Prodex and navigation).
Budget	In 2009 Switzerland contributed 94.4 million euros to ESA, and 5.4 million euros to EUMETSAT.
Staff ⁸⁵⁰	SNSB: 16
Direct employment in space manufacturing industry ⁸³⁰	783



UNITED KINGDOM

Population ⁸²⁷	62 million
GDP ⁸²⁸	1703 billion euros
Responsibility ⁸⁵¹	The UK Space Agency is responsible for all strategic decisions on the UK civil space programme and is responsible for supporting academic research into space technology, as well as raising awareness of UK space activities.
Activities ⁸⁵¹	UK space activities include bilateral cooperation with JAXA, India and the U.S. and within ESA in EO and space exploration (Cassini-Huygens, James Webb Space Telescope, Herschel, and Planck missions).
Budget	In 2010, 312 million euros (ESA 243.4 million, EUMETSAT 27.53 million, national 41.77 million)
Staff ⁸⁵¹	UKSA: 16
Direct employment in space manufacturing industry ⁸³⁰	3,429

⁸²⁷ Eurostat – EU Population 501 million at 1 January 2010. http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/3-27072010-AP/EN/3-27072010-AP-EN.PDF.

⁸²⁸ Eurostat – Gross Domestic Product at Market Prices. <http://epp.eurostat.ec.europa.eu/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=tec00001&language=en> Accessed 31 Aug. 2010.

⁸²⁹ FFG Website. <http://www.ffg.at/content.php?version=2> Accessed 31 Aug. 2010.

⁸³⁰ Eurospace – Facts and Figures: The European Space Industry in 2009. <http://eurospace.pagesperso-orange.fr/F&F2009/FFdata2009issue2.pdf>.

⁸³¹ Belgian Federal Science Policy Office Website. http://www.belspo.be/belspo/res/rech/spatres/bilcoop_en.stm Accessed 31 Aug. 2010.

⁸³² Czech Space Office Website. www.czechspace.cz. Accessed 31 Aug. 2010.

⁸³³ National Space Institute Website. <http://www.space.dtu.dk/English.aspx> Accessed 31 Aug. 2010.

⁸³⁴ ESD: European Space Directory 2009 (references in 2008/2009 yearbook on space policy).

⁸³⁵ CNES website. www.cnes.fr. Accessed 2 Sept. 2010.

⁸³⁶ DLR website. www.dlr.de Accessed 2 Sept. 2010.

⁸³⁷ GRST website. www.grst.gr Accessed 2 Sept. 2010.

⁸³⁸ HSO website. www.hso.hu Accessed 2 Sept. 2010.

⁸³⁹ Enterprise Ireland website. www.enterprise-ireland.com Accessed 2 Sept. 2010.

⁸⁴⁰ ASI – Italian Space Activities 2009. <http://www.asi.it/files/COPUOS%202009.pdf> Accessed 2 Sept. 2010.

- ⁸⁴¹ Luxinnovation website. <http://www.luxinnovation.lu/site/index.jsp#> Accessed 2 Sept. 2010.
- ⁸⁴² Netherlands Space Office website. www.spaceoffice.nl Accessed 3 Sept. 2010.
- ⁸⁴³ Norwegian Space Centre website. www.spacecentre.no Accessed 3 Sept. 2010.
- ⁸⁴⁴ Space Research Centre website. <http://www2.cbk.waw.pl/> Accessed 3 Sept. 2010.
- ⁸⁴⁵ Polish Space Office Website. <http://www.kosmos.gov.pl/> Accessed 3 Sept. 2010.
- ⁸⁴⁶ FCT Space Office Website. <http://alfa.fct.mctes.pt/apoios/cooptrans/espaco/> Accessed 16 Sept. 2010.
- ⁸⁴⁷ Romanian Space Agency Website. www.rosa.ro Accessed 16 Sept. 2010.
- ⁸⁴⁸ CDTI Website. <http://www.cdti.es/index.asp?MP=15&MS=192&MN=3> Accessed 16 Sept. 2010.
- ⁸⁴⁹ Swedish National Space Board Website. <http://www.snsb.se/en/Home/Home/> Accessed 16 Sept. 2010.
- ⁸⁵⁰ Swiss Space Office website. http://www.sbf.admin.ch/hm/themen/weltraum_de.html Accessed 16 Sept. 2010.
- ⁸⁵¹ United Kingdom Space Agency website. <http://www.ukspaceagency.bis.gov.uk/default.aspx> Accessed 25 Sept. 2010.