



# **European Space Sciences Committee (ESSC-ESF)**

## **Briefing to SSB Washington, DC, 23 April 2015**

# ESF Member Organisations



ESF is an independent association of 66 Member Organisations

- research funding organisations
- research performing organisations
- academies and learned societies

in 29 countries



## ESF situation



- **ESF will stop its science networking activities at the end of 2015**
- The consulting company carrying out the **viability check** of the ESF successor and associated business plan has just delivered its report on Monday. **The outcome is positive.**
- Provided this report is approved by governance in May-June 2015, **ESF will be evolving into a science services based organisation as of 2016** (peer-review, evaluation, joint programming support, coordination support to the community, etc.)
- The final go-ahead would then be ratified at the 2015 ESF Annual Assembly
- **ESF was given the mandate by its governance** to continue to host Expert Boards (CRAF, EMB, **ESSC**, MatSEEC, NuPECC) and provide it with adequate support (accounting, legal, communications/media) until 2015
- **The ESF successor** would become the hosting platform for these five Expert Boards and Committees



# ESF Successor Organisation



**Why choose us?**

We are a thriving forum for innovative European research, connecting academic providers of plant, animal, environmental and social project management services to research funders, business and industry. We have a strong track record of providing an excellent service to research organisations, and our dedicated research management, evaluation and peer review, and project management services, are well regarded in research communities, and are being used including in areas accomplished during 40 years of highly successful involvement in major cross-border and other interdisciplinary scientific programmes. We are actively seeking expanded internationalisation to acquire additional skills and ensure that our modern world leadership position in the generation of these services.

We have extensive evaluation and project management skills that cover the highest international standards for award development and management of evidence-based science. This, combined with in-depth knowledge of the research networks across Europe and European Commission programmes, including implementation of Horizon 2020, means that we are uniquely placed to help public and private research funding organisations achieve their objectives.

We have a strong brand, are independent, and are internationally recognised for our significant scientific knowledge and skills. Research funding organisations have, for several years, purchased our external expert, independent and international peer review, evaluation, expert hosting and project management services. We will continue to develop our systems and ensure that they meet all client requirements.

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**January 2014**

**European Science Foundation**  
ESSC

**Serving and Strengthening Science**

**Peer review**  
**Evaluation**  
**Project management**  
**Hosting experts**

European Science Foundation  
European and International  
Evaluation and Project Management  
Scientific Capacity  
Research and Innovation  
Science and Innovation



# Expert Boards and Committees

## Voices for European science



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Committee on Radio Astronomy Frequencies

**CRAF**

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European Marine Board

**MARINE  
BOARD**

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European Space Sciences Committee

The logo of the European Space Sciences Committee (ESSC), featuring a stylized globe icon and the acronym 'ESSC' in white text.

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Materials Science and Engineering Expert Committee

**MatSEEC**

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Nuclear Physics European Collaboration Committee

The logo of the Nuclear Physics European Collaboration Committee (NuPECC), featuring the acronym 'NuPECC' in white text on a dark background.



# ESSC

## Voice for European space science



Committee on Radio Astronomy Frequencies

CRAF

European Marine Board

MARINE  
BOARD

European Space Sciences Committee



Materials Science and Engineering Expert Committee

MatSEEC

Nuclear Physics European Collaboration Committee

NuPECC

## ESSC Mission Statement

*“ The mission of the ESSC is to provide an **independent** European voice on European space research and policy. It is the ESF’s expert body on space research ”*

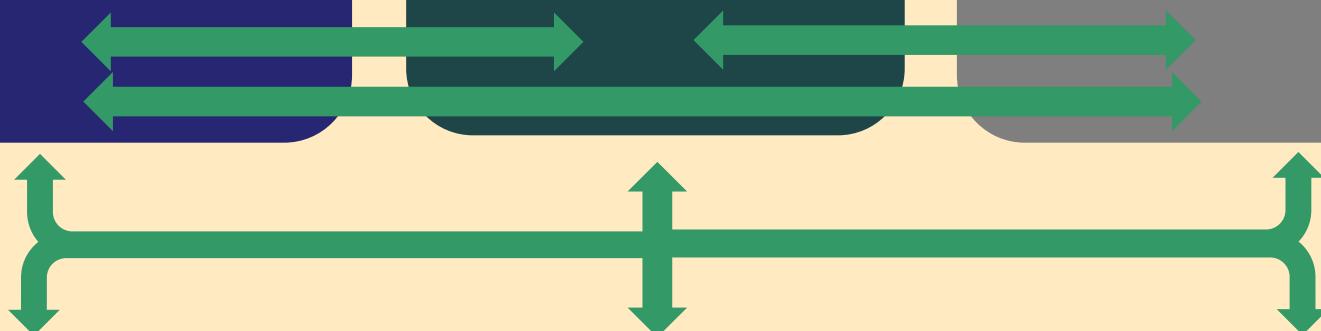
# European Space Sciences Context

## International Environment

**European  
Union  
28 Member  
States**

**National Space  
Agencies  
(and/or equivalent)**

**ESA  
21 Member  
States**



**Space Research Institutes/Labs**

**Scientific Community**



# European Space Sciences Committee



- **ESSC is funded by 18 organisations (space agencies, research councils) from 14 European Countries, plus ESA**
- **ESSC is supported by a secretariat of four staff**
- **ESSC is composed of 25 experts across four panels**
  - *Nominated ad-personam*
  - *Large turn-over since last meeting*
- **Two plenary meetings/year**

# Interdisciplinarity

- The four ESSC panels allow cutting across all/most domains of space sciences
- Members' interests declared
- Consensual positions and recommendations from ESSC are endorsed by representatives from various disciplines
  - *No bias*
  - *Stronger positioning*



## Solar System and Exploration

- **Hermann Opgenoorth**, Earth sciences and space physics (Panel Chair)
- **Athena Coustenis**, outer planets
- **Franck Montmessin**, terrestrial planets
- **Mahesh Anand**, Moon
- **Gerhard Paar**, robotics
- **Kari Muinonen**, small bodies
- **Ester Antonucci**, solar physics
- **Petra Rettberg**: astro/exobiology, biology

## Astronomy and Fundamental physics

- **Stéphane Udry**, exoplanets, (Panel Chair)
- **Conny Aerts**, asteroseismology
- **NN**, high-energy physics
- **Pierre Binetruy**, fundamental physics
- **Paolo de Bernardis**, Ir/sub-mm astronomy
- **Jordi Torra**, galactic astronomy & astrometry

## Research in Weightlessness

- **Dominique Langevin**, fluid physics and foams (Panel Chair)
- **NN**, neurology
- **Alexander Chouker**, integrated physiology
- **Berndt Feuerbacher**, solid state physics
- **Hubertus Thomas**, complex plasmas
- **Helen Jane Fraser**, ices & physical sciences
- **NN**, biology
- **Peter Preu**, materials
- **Roberto Piazza**, colloids

## Earth Sciences

- **Ian Brown**, glaciology (Panel Chair)
- **Heiko Balzter**, land-atmosphere interface
- **Andreas Kääb**, EO and satellite based glaciology
- **NN**, space law
- **NN**, climate
- **Pepijn Veefkind**, Sentinel algorithms and climate
- **Maarten Krol**, atmos. Phys. & chemistry, climate
- **Laurence Eymard**, ocean/atmosphere

# ESSC Representation

## International Environment

### European Union

- FP7 Space Advisory Group (individuals)
- FP7/H2020 stakeholder consultations
- Direct interactions with programme executives

### National Space Agencies

- Annual meeting with ESSC Funding Organisations
- UKSA's SPAC
- Swedish national committee

### ESA

- Council at Ministerial level
- High-level Science Policy Advisory Committee (ex-Officio)
- Scientific advisory committees at programme level (ex-Officio)
- Meetings with programme executives

- COSPAR Science Advisory Committee (ex-officio)
- UN Office of Outer Space Affairs ( exchange of observers and NEO Action Team 14)

- US National Academies Space Studies Board (ex-officio)



# Overarching Science Policy Advice



- **High level policy recommendations to the science policy council at ministerial level**
- **High level policy recommendations to the space science community**
- **Pro-Active space science communication and recommendations to institutions**



# Specific Scientific Advice

- When specialist targeted independent advice is required
- Setting up of *ad-hoc* committees and panels
- Commissioned Studies
  - *Evaluation of ESA Microgravity Programme*
  - *Strategic advice on planetary protection*
- Pro-Active disciplinary foresight - Roadmaps
  - *Astrobiology and life in extreme environments*
  - *Human space exploration*
  - *Nuclear propulsion*
  - *Technology development*





# Cooperation and collaboration in space discussed between SSB & ESF since 1976



9 joint reports over 32 years





***[www.esf.org/space](http://www.esf.org/space)***