



**JOINT COMMUNIQUÉ
Of the
Triennial Conference**

**International Human Frontier Science Program Organization
Members**

Tokyo, 9th July 2019

Representatives from the Members of the International Human Frontier Science Program Organization (HFSP), Australia, Canada, France, Germany, India, Italy, Japan, the Republic of Korea, New Zealand, Norway, Singapore, Switzerland, the United Kingdom of Great Britain and Northern Ireland, the United States of America and of the European Commission met at a Triennial Conference of HFSP Members on 9th July 2019 in Tokyo, Japan to review progress since the 2016 London Intergovernmental Conference and to discuss the future of the Human Frontier Science Program (HFSP).

1. Mission and added benefit

- a) Representatives recognise that the ever-growing complexity and interdisciplinarity of science makes international collaboration more imperative than ever.
- b) An independent review commissioned by the Board of Trustees in 2018 shows that HFSP has an impressive track record in stimulating world-class excellence in high-risk/high-impact science and in supporting outstanding frontier life scientists, especially early career scientists. HFSP's approach of small-scale, bottom-up, high-risk, interdisciplinary, intercontinental collaborative research adds significant value to other international and national funding schemes.
- c) Representatives recognize that as a result of the investment made up to now, HFSP is uniquely positioned as a global cooperation in supporting frontier life-sciences research. Representatives acknowledge the role of Japan as the initiator of HFSP, its largest contributor and the cornerstone of its success and sustainability to date.

2. Continuation of the Human Frontier Science Program

- a) Representatives renew their commitment to HFSP.
- b) Representatives confirm the mission given to HFSP to promote and fund basic research focused on the elucidation of the sophisticated and complex mechanisms of living organisms for the benefit of all humankind, through international cooperation.
- c) Representatives confirm their aim to maintain the uniqueness of HFSP in supporting innovative, frontier research in the life sciences, encouraging high risk research and promoting international collaboration in the spirit of science without borders.
- d) Representatives support the strategy of the Board of Trustees for the forthcoming triennium as set out in Annex 3, including the decision no longer to support the Career Development Award and the need to adjust the value of the Research Grant and Fellowship awards. Representatives request the Board of Trustees to continue to reflect upon and consider the awards to ensure they continue to serve HFSP's mission.
- e) Representatives acknowledge the need to ensure a sustained budget to maintain the value of the HFSP to frontier researchers, improve awarding capacity and be inclusive of fields as they emerge on the frontiers of the life sciences.

3. Finances

- a) Representatives acknowledge and commend the leading role of Japan in supporting HFSP for over 30 years and commit to ensuring that their contributions share support equitably so that HFSP continues to make profound contributions to extending scientific frontiers.
- b) Representatives appreciate the new GDP-based formula for calculating the financial contributions and support that every effort should be undertaken to fully implement it in 2020-2022.
- c) Representatives note the request of the HFSP Board of Trustees that those countries currently contributing below their calculated amounts be encouraged to increase their contribution progressively over time while those countries contributing more than the GDP formula be encouraged to maintain their level of contribution for solidarity among HFSP Members and for the benefit of HFSP.
- d) Representatives accept the financial framework for their indicative contributions to HFSP for the period 2020-2022 (Annex 1).
- e) Representatives encourage the Board of Trustees to seek resources additional to the contributions from HFSP Members.

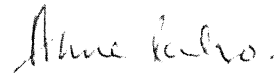
4. New members

- a) Representatives encourage the Board to promote membership in HFSP and reconfirm its view that HFSP is open to new members, which enable the Program to better fulfil its mission. New members are a source of scientific enrichment and an indicator of the health and excellence of HFSP.

Signatories, 9th July, 2019

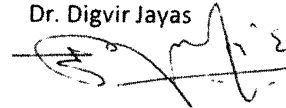
Member
Australia
Management Supporting Party
National Health and Medical Research Council

Signatory
Dr. Anne Kelso



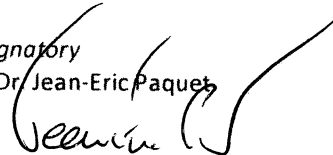
Member
Canada
Management Supporting Parties
Canadian Institutes of Health Research
Natural Sciences and Engineering Research Council

Signatory
Dr. Digvir Jayas



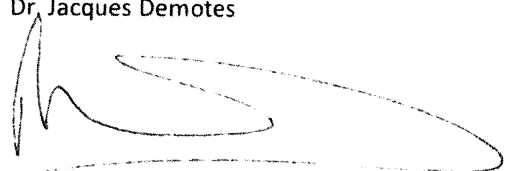
Member
European Commission
Management Supporting Party
Directorate General Research & Innovation

Signatory
Dr. Jean-Eric Paquet



Member
France
Management Supporting Parties
Ministry of Higher Education and Research
Strasbourg Eurometropole
Region Alsace

Signatory
Dr. Jacques Demotes




Member
Germany
Management Supporting Party
Federal Ministry of Education and Research

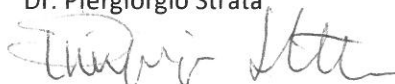
Signatory
Dr. Klaus Vietze




Member
India
Management Supporting Party
Dept. of Biotechnology, Ministry of Science and Technology

Signatory
Dr. Apurva Sarin



Member
Italy
Management Supporting Party
Ministry of Education, University and Research

Signatory
Dr. Piergiorgio Strata



Member
Japan
Management Supporting Parties
Japan Agency for Medical Research and Development
Ministry for Economy Trade and Industry
Ministry of Education, Culture, Sports, Science and Technology

Signatory
Mr. Hiroshi Masuko


Member
Korea, Republic of
Management Supporting Party
Ministry of Science and ICT

Signatory
Mr. Do Hyoung Kim


Member
New Zealand
Management Supporting Party
Royal Society of New Zealand

Signatory
Dr. Andrew Mercer


Member
Norway
Management Supporting Party

Signatory
Dr. Rein Aasland

Member
Singapore
Management Supporting Party
National Research Foundation of Singapore

Signatory
Dr. Teck Seng Low



Member
Switzerland
Management Supporting Party
State Secretariat for Education, Research and Innovation

Signatory
Dr. Isabella Beretta



Member
United Kingdom
Management Supporting Parties
Biotechnology and Biological Sciences Research Council
Medical Research Council

Signatory
Dr. Melanie Welham



Member
United States of America
Management Supporting Parties
National Institutes of Health
National Science Foundation

Signatory
Dr. Roger Glass



Annex 1. Voluntary Contributions 2020-2022

HFSPo Member	Currency of contribution	FY 2020	FY 2021	FY 2022
Australia	AUD	1 686	1 686	1 686
Canada	CAD	2 137	2 180	2 223
European Commission	EUR	5 261	5 261	5 261
France	EUR	2 463	2 463	2 463
Germany	EUR	2 836	2 836	2 836
India	INR	144 240	147 125	150 067
Italy	EUR	500	500	500
Japan	JPY	2 271 314	2 271 314	2 271 314
Korea, Republic of	KRW	988 288	988 288	988 288
New Zealand	NZD	253	253	253
Norway	NOK			
Singapore	SGD	776	776	776
Switzerland	CHF	610	610	610
United Kingdom	GBP	1 657	1 690	1 724
United States of America	USD	12 000	12 000	12 000

All voluntary contributions are shown in thousands (k) local currencies.

Contributions are voluntary and subject to annual budgeting and other decisions of individual HFSPo Members.

Note that the European Commission contributions are subject to adoption of the future relevant Work Programmes under Horizon 2020 (for the year 2020) and under Horizon Europe (the proposed EU Framework Programme for Research and Innovation 2021-2027).

Annex 4 contains a Table of HFSPo Member commitments and variance from Toronto formula calculation.

Annex 2.



PROGRAM ACTIVITY PLAN

2020-2022

IMPLEMENTING HFSPO STRATEGIC PLAN

The HFSPO Program Activity Plan is a description of the activities that will be undertaken to implement the Board's Strategic Plan and decisions, in accord with the requirements of the HFSPO Statutes. It will be updated annually in accord with Board decisions.

Contents:

Funding frontier life science research and fellows

Research Grants

Long-Term and Cross-Disciplinary Fellowships

Termination of the Career Development Award

Peer review processes

Council of Scientists' advice

Fostering international collaboration in life science research

Awardees Meetings

Scientific Workshops - Frontier Issues in Life Science Research outreach activities

Regulatory and administrative matters

Statutory requirements

HFSPO website

Implementation of the EU regulation on data privacy (GDPR)

Improving the database for award management and implementation of ORCID

Secretariat development

Funding frontier life science research and fellows

HFSPO will undertake annual funding rounds in 2020, 2021 and 2022, funding awards that will commence from April in 2021, 2022 and 2023.

The number of awards each year will be decided by the Board of Trustees based on recommendations of the Recommendations Committee and on the funding available as advised by the Treasurer.

Research Grants

Applications for Letters of Intent will be called for near the beginning of each calendar year.

The grants review committee will work to identify around 300 of the best of these. They will then be reviewed by a peer review Selection Committee and invitations to submit a full application will be issued to approximately 80-100 applicants. These applications then will undergo rigorous review by the grants review committee in January/February, each with up to six written external reviews.

The awards' amount for Research Grants will be increased from 2020.

Postdoctoral Fellowships

Applications for Long-Term and Cross-Disciplinary Fellowships will close in August each year. The Fellowships peer review committee will identify the top applications (around 150) and they will be discussed at the face to face meeting of the review committee in January/February each year.

The awards' amount for fellowships will be increased from 2020

To ensure that outstanding non-biologists apply, HFSPo will consider whether to extend Cross-Disciplinary Fellowships to four years.

The Secretariat will work to further increase the visibility of Cross-Disciplinary Fellowships internationally.

Career Development Award

This award has been terminated. Applications will not be called for the Career Development award in the future. The final funding round for CDAs will have been conducted for the last time in 2018, for funding beginning in 2019.

Review processes

HFSPo will continue to recruit outstanding, highly active scientists to its review committees, with assistance from the Council of Scientists. This takes careful, thorough and ongoing diligence by the Directors of Research Grants and Fellowships, supported by the Secretary-General and the whole Secretariat.

The peer review committees will meet in Strasbourg in January and early February each year and in July for the research grants Selection Committee. The review committees will have a non-reviewing chair, well briefed in HFSPo guidelines and ethos.

The results of the review committees' meetings will be provided to the Recommendation Committee, which will submit its recommendations to the Board.

Council of Scientists

The Council of Scientists will meet at least once each year to provide the Board of Trustees with recommendations and with its independent view on the Program. The Council will judge applications for the Nakasone Award and provide its recommendation to the Board.

Fostering international collaboration in life science research

Awardees Meeting

A meeting to which all current award holders are invited will be held annually to further foster HFSPo's aim to increase interdisciplinary and intercontinental research collaboration.

This meeting, to which Board and Council members are also invited, affords awardees a means of testing their ideas on a top science audience and of forming new scientific collaborations. It assists fellows in their future career paths and allows awardees to provide direct feedback to the Secretariat, Council of Scientists and Board members in attendance.

The meeting will be held in collaboration with HFSPo members, with the aim that it be held in each HFSPo member over time. Organisational aspects of the meetings will be tendered to professional organisers.

Scientific Workshops - Frontier Issues in Life Science Research

The organisation of scientific workshops is one means by which HFSPo achieves its objective of "promoting and funding" basic life science research.

Life science is changing rapidly and HFSPo will conduct workshops each year on issues of the most importance to the "the promotion and funding of basic research in the life sciences".

HFSPo will continue to offer assistance to the establishment of a Global Biodata Coalition, an international cooperative initiative that grew from a HFSPo workshop, through end of 2020.

Outreach activities

HFSPo's website will continue to feature articles by HFSP awardees and other articles related to frontier science. Links with communications officers in the HFSPo Members will be enhanced, to increase bi- and multi-lateral communication activities.

Scientific Directors will develop stronger links with HFSPo Member research funding organisations to share views and increase mutual interactions.

At the request of HFSPo Members, HFSPo Scientific Directors will undertake visits to research institutions in HFSPo Members to promote HFSPo opportunities to top frontier scientists at leading institutions, with a particular emphasis on HFSPo Members from which application numbers are low, and to ensure that other disciplines are more aware of HFSPo's interdisciplinarity.

Regulatory and administrative matters

Statutory requirements

Each year, the Board will receive, for approval and publication, the Statutory Auditors report, and an Annual Report.

The Program Activity Plan will be presented for approval annually to the Board of Trustees

HFSPo website

The redevelopment of the HFSPo website will be completed.

Implementation of the EU regulation on data privacy (GDPR)

HFSPo will continue its work to ensure compliance with this Regulation by the beginning of the 2020-2022 triennium, based on professional advice. Throughout the triennium, HFSPo will continue to work with its Data Protection Officer to ensure that we provide the protection required, within an ethos of continuous improvement.

Improving the database for award management and implementation of ORCID

The HFSPo database will undergo a renewal process to include important aspects of the measures for protecting private data within the HFSP database network and award processing and integration of ORCID identification

Secretariat development

The Secretariat will continue to modernise and professionalise its administrative practices and processes as agreed by the Board of Trustees, incorporating advice of the Internal Audit Committee.

The next Secretary-General will be recruited during the triennium 2020-2022.



STRATEGIC PLAN 2020 – 2022
OF THE
INTERNATIONAL HUMAN FRONTIER SCIENCE PROGRAM ORGANIZATION

The International Human Frontier Science Program Organization (HFSPPO) is an international collaboration promoting global cooperation in frontier life science research. It was established in 1989 to implement the Human Frontier Science Program (HFSP, “The Program”).

The Strategic Plan 2020 - 2022 describes HFSPPO’s strategic direction for the next three-year period.

The accompanying Program Activity Plan describes how this strategy is planned to be implemented.

HFSP's statutory objectives

HFSP's objective is to promote and fund basic research focused on the elucidation of the sophisticated and complex mechanisms of living organisms for the benefit of all humankind, through international cooperation. Statutes, Article 2.2.

The Human Frontier Science Program funds high-risk, interdisciplinary, intercontinental, collaborative, fundamental life science research, with a philosophy of "science without borders". It encourages innovative and novel thinking to support transformative and paradigm shifting research.

Fundamental research benefits all humankind by advancing understanding of the complex mechanisms of life which provides the germination for developments in industry, health and human well-being.

HFSP aims to complement and not duplicate the life science research programs of individual countries.

Strategies 2020 - 2022

HFSP's strategies for 2020 - 2022 are built upon the achievements of the Program over the last 30 years. They take into account the findings of an International Scientific Review Committee (ISRC) which reported in 2018.

HFSP's key strategies are to:

1. Continue to support the Program of frontier life science research and international collaboration through the Research Grants (Program and Emerging Investigators) and Fellowships (Long Term and Cross-Disciplinary) schemes.
2. Increase the amount awarded to successful Research Grant and Fellowship applicants, in recognition of the growth in complexity, breadth and interdisciplinarity in the last three decades.
3. Discontinue the Career Development Award, now that similar schemes are available in many HFSP Members.
4. Consider extending the Cross-Disciplinary Fellowships, which are unique to HFSP, to four years.
5. Continue to use international peer review of the highest quality as the sole method of deciding which applications to recommend for funding.
6. Expand HFSP membership to other leading life science research countries, encouraging all countries with excellence in basic life science research to apply for membership.
7. Promote international life science collaboration by working with others to promote growth and collaboration in life science research.

8. Establish the HFSP Foundation¹.

9. Communicate the achievements of the Program.

10. Continually seek to provide efficient and effective service to the HFSP Members and the life science research community through professional, internationally-connected administration.

Explanation of strategy

The Board of Trustees believes that stimulating new scientific collaboration across disciplines and across the world remains as important to the future of the life sciences and to fostering international cooperation as ever.

Research Grants are available to international teams working across continents, using interdisciplinary approaches, with each team member working with their collaborator(s) for the first-time and on a new topic. Both **Program Grants** and **Emerging Investigator Grants** (previously Young Investigator Grants) will be offered. The Research Grant amounts have not been increased since 2002. HFSP will consider an increase following issue of the Joint Communiqué at the Triennial Conference of HFSP Members.

Postdoctoral Fellowships provide future leaders in frontier research from anywhere in the world with the opportunity to work in new fields carrying out high-risk and potentially transformative research in the most stimulating laboratories in a new country. By funding researchers who will be leaders in transformative frontier science in their own careers, the Fellowships represent HFSP's investment in the future. A recent comparison provided to the International Scientific Review Committee showed that the amounts of each Fellowship, last set in 2010, were no longer comparable to other highly prestigious awards. HFSP will consider this following the Triennial Conference of HFSP Members.

HFSP's **Cross-Disciplinary Fellowship** for non-biologists is a unique HFSP award. The Board will consider extending the duration of the Cross-Disciplinary Fellowship to 4 years. This is in recognition of the effects of a major change in direction for these scientists as they move into biology. Understandably, they risk experiencing a lag before they achieve publications and outcomes compared to competitors with a Ph.D. in a biological field. This can be a handicap when competing for subsequent positions.

The decision to terminate the **Career Development Award** (CDA) was taken by the Board after consideration over recent years and upon the recommendation of both the Council of Scientists and the International Scientific Review Committee. Current CDA holders will of course be supported until the end of their award. The final application round will be that of 2019 (i.e. for applicants who applied before the Board's decision).

¹Board of Trustees decision out of session, 12 April 2018

Achievements

The portfolio of research and fellowship awards

HFSPO has supported 1090 international collaborative teams conducting interdisciplinary research since 1990 and 3157 young scientists through postdoctoral Fellowships. More than 100 Cross-Disciplinary Fellowships have now been awarded to scientists from fields other than biology – physicists, chemists, mathematicians, IT scientists and more – who have thereby brought a diversity of expertise, scientific approaches and perspectives to research into the complex mechanisms of life.

Success of awardees

Many of the scientists who have been supported by HFSPO have received great acclaim in their subsequent careers. This includes membership of National Academies and prestigious international science prizes² (listed in [HFSPO's Annual Reports](#)).

Twenty-eight scientists who have received HFSP awards have gone on to win a Nobel Prize, including Nobel Prizes for Physiology or Medicine, for Physics or for Chemistry. Nobel Prizes in Physics and Chemistry attest to the success of HFSPO's interdisciplinary approaches.

Many of these highly successful scientists ascribe their later success to the support for innovative higher risk research that the Program provided (see examples of [awardees' articles](#) on the HFSP website).

HFSP Nakasone Awards

The HFSP Nakasone Award is made to scientists who have undertaken frontier-moving research in biology, encompassing conceptual, experimental or technological breakthroughs. The award recognizes the vision of former Prime Minister Nakasone of Japan in the creation of HFSP.

Promoting international life sciences

HFSPO provides additional intellectual leadership by bringing expertise from around the world to address issues that face the life sciences now and might impede the advance of the frontier.

HFSPO holds annual meetings of those who have recently been awarded Research Grants and Fellowships to stimulate additional collaborations, transformative ideas and the ambitions of these outstanding scientists.

Additionally, HFSPO holds small, targeted workshops of international leaders on specific issues of global interest in basic life sciences. For example, the Secretary-General and staff of HFSPO have been working with other leading organizations around the world on the value and sustainability of the key life science data resources³, on discussions of implementation of the Declaration on Research Assessment (DORA) principles in peer review in basic research, and on the physical sciences/life sciences interface. All of these are areas of importance to HFSPO's mission of the "promotion and funding of research into the sophisticated and complex mechanisms of life."

³In 2019 and 2020, this work will continue as a cost-neutral and time-limited activity.

HFSP Nakasone Award winners

2010 - **Karl Deisseroth** for his work on the application of microbial opsins as "optogenetic" tools in neurobiology.

2011 - **Michael Elowitz** for studies on gene expression noise.

2012 - **Gina Turrigiano** for introducing the concept of homeostatic synaptic plasticity.

2013 - **Stephen Quake** for his work in advancing biological measurement techniques.

2014 - **Uri Alon** for his work on network motifs.

2015 - **James Collins** for his work on synthetic gene networks and programmable cells.

2016 - **Emmanuelle Charpentier** and **Jennifer Doudna** for their work on the CRISPR-Cas 9 system.

2017 - **David Julius** for his discovery of the molecular mechanism of thermal sensing in animals.

2018 - **Svante Pääbo** for his discovery of the extent to which hybridization with Neanderthals and Denisovans has shaped the evolution of modern humans, and his development of techniques for sequencing DNA from fossils.

²Breakthrough Prize in the Life Sciences, CNRS Gold and Silver Medals, Daiwa Adrian Prize, Leibniz Award, EMBO Gold Medal, European Inventor Award, Brain Prize, Balzan Prize, Japan Academy Prize, Albert Lasker Basic Medical Research Award, Louis Jeantet Prize, National Medal of Science, NIH Director's New Innovator Award, NIH Director's Pioneer Award, Kavli Prize in Neuroscience, Robert Koch Prize, Heineken Prize, Shaw Prize, Gairdner Foundation International Prize.

Delivering on the mission to "benefit all humankind"

The founders of HFSPO were prescient when they stipulated that research in the Program should be fundamental research, but added that it should also be "for the benefit of all humankind."

HFSPO's funding of basic research through the Program has resulted in changes in research paradigms. The Program has built stronger foundations for future research and opened up new important areas for research.

It has launched and boosted the careers of numerous scientists who continue to undertake innovative, riskier frontier research throughout the world.

It has provided new tools and methodologies for global life science researchers.

There have also been many practical gains. Basic research is the germination point from which grows the later development of valuable products, policies and practices. Examples of where basic frontier research supported by HFSPO has led to practical benefits can be found in the following table.

A recently commissioned report found that HFSP Long-Term Fellows produce three times more patents than the international norm⁴.

We highlight the benefits through reports written by HFSP supported scientists published each month on the HFSP

website (see the [Awardees Articles section](#)). These provide many more examples of where the original basic ideas have led to often surprising new beneficial developments.

⁴Science Metrix 'Review of the Human Frontier Science Program' Final Report, 7 September 2018, Executive Summary.

Examples where basic research later led to significant applied benefits

New tools to improve vaccinations

HFSP funded a research project by Jean-Luc Popot and international collaborators Edward A. Berry and Catherine Vénien-Bryan (2000) to develop synthetic polymers with the basic aim "to advance basic cell membrane research."

These tools called "amphipols" have now found myriads of purposes, including in vaccination where they stabilize biochemically and physically the membrane proteins used as immunogens.

[Read more](#)

Novel new adhesives

In 2012, Duncan J. Irschick and Alfred Crosby from UMass Amherst, USA, together with Walter Federle, University of Cambridge, UK, were awarded an HFSP Research Grant to investigate which kind of adhesive mechanisms animals, such as geckos, use when climbing smooth surfaces.

This team is now developing new and better adhesives based on the principles learned from this research; for example, small patch-like adhesives that can hold amazing loads and stick to even smooth surfaces.

[Read more](#)

Treating basal cell carcinoma

In 1993, HFSP supported a basic science project by Andrew McMahon, Clifford Tabin and Philip Ingham to investigate fundamental mechanisms that regulate the development of the early mid-hindbrain region in vertebrate, studying zebrafish, chick and mouse. The initial aim of these researchers was to unravel the regulation of gene expression

patterns during vertebrate brain development, particularly whether the signaling molecule hedgehog found in the fruit-fly was also important in vertebrates. The unexpected findings of that project have led to a new treatment of the common skin cancer basal cell carcinoma in patients.

[Read more](#)

Living antibiotics

In 2005, Elizabeth Sockett led an HFSP funded Research Grant team to investigate *Bdellovibrio* bacteria as tiny predators due to their secretive way of growing inside other bacteria. The project not only illuminated new ways in how bacteria grow and divide, but also how *Bdellovibrio* consume prey

bacterial contents and act as an anti-pathogen. This work laid the foundation for current studies using *Bdellovibrio* as a promising strategy for antibacterial therapy in an immunological context.

[Read more](#)

Expanding the membership of HFSP

Membership of HFSP is recognition of the excellence of basic life sciences in the member country or union of countries (HFSP Members).

Countries and unions of countries that are currently members include the original G7 countries (Canada, France, Germany, Italy, Japan, UK and USA) together with the European Commission (1989), Switzerland (1990), the Republic of Korea (2004), Australia (2004), New Zealand (2006), India (2006), Norway (2008) and Singapore (2014).

HFSP has recently welcomed Israel's application for membership.

Acknowledgments

HFSP depends on the voluntary financial contributions provided by the 15 HFSP Members. Further support in kind is provided by HFSP Members through their Management Supporting Parties and especially by the Japanese government agency AMED which seconded an administrative officer to the Secretariat in Strasbourg. In 2019-2020, AMED has also seconded a scientific officer.

The 2019 Triennial Conference of HFSP Members in Tokyo in 2019 will agree the triennial funding to be provided by each HFSP Member.

HFSP particularly acknowledges the commitments of the numerous leading scientists from HFSP Members who provide peer review each year.

Note: An HFSP Program Activity Plan is published annually and describes how the Strategic Plan will be implemented.

Legal status

The International Human Frontier Science Program Organization ("HFSP") is an Association with international membership, governed by the local law on Associations applicable in the Haut-Rhin, Bas-Rhin and Moselle (Articles 21 to 79 IV of the Local Civil Code [Code Civil Local]), France (<http://www.hfsp.org/about-us/governance/statutes>).

Annex 4. Formula calculated contributions

A new formula for calculation of HFSPo Members' triennial commitments was adopted by the Board of Trustees in Toronto, July 2018. This Table shows this formula-calculated amount in USD and the conversion of that amount into local currencies. For the currency conversion, exchange rates of the 3rd April 2019 were used. The Table also shows actual commitments as in Annex 1.

	1a	1b			2	3	3a
HFSPo Member	Target Contribution Toronto formula	Target Contribution Toronto formula		Joint Communiqué currency of commitment	Joint Communiqué Commitment 2020	Joint Communiqué Commitment 2021	Joint Communiqué Commitment 2022
	k USD	k local currency			k local currency	k local currency	k local currency
Australia	1,200	1,686		AUD	1,686	1,686	1,686
Canada	1,425	1,897		CAD	2,137	2,180	2,223
EC	5,560	4,945		EUR	5,261	5,261	5,261
France	2,207	1,963		EUR	2,463	2,463	2,463
Germany	3,188	2,836		EUR	2,836	2,836	2,836
India	2,108	144,240		INR	144,240	147,125	150,067
Italy	1,703	1,515		EUR	500	500	500
Japan				JPY	2,271,314	2,271,314	2,271,314
Korea, Republic of	1,306	1,481,461		KRW	988,288	988,288	988,288
New-Zealand	172	253		NZD	253	253	253
Norway	349	2,987		NOK			
Singapore	283	383		SGD	776	776	776
Switzerland	612	610		CHF	610	610	610
United Kingdom	2,471	1,877		GBP	1,657	1,690	1,724
United States of America	17,016	17,016		USD	12,000	12,000	12,000

Legend:

Column 1a - the calculated commitment of each HFSPo Member in k USD, using the formula adopted by the Board of Trustees in Toronto, July 2018. Commitments on HFSP Awards are all in USD.

Column 1b - column 1 converted to local currencies on 3-4-19. Note that in some cases, the exchange rates further changed by the time that the HFSPo Member made its formal commitment.

Columns 2, 3 and 4 - HFSPo Member commitments as signed in this Joint Communiqué (in local currencies, see also note above).