INTEGRITY AND SECURITY IN THE GLOBAL RESEARCH ECOSYSTEM POLICY REPORT

Yoshiaki Tamura, OECD/GSF





- Created in 1992 as the « Mega-Science Forum », transformed into the GSF in 1999. It is a Working Party of the Committee for Science and Technology Policy (CSTP)
- GSF activities lead to concrete outcomes:
 - Early work on neutron sources led to critical decisions in Japan, US and Europe (J-PARC, ESS)
 - International research collaborations developed within the GSF









Scientific Collections International



- The overall objective of the Global Science Forum (GSF) is to support countries to improve their science policies and share in the benefits of international collaboration.
- GSF provides a venue for consultations and mutual learning among senior science policy officials.
- 31 OECD member countries, key partner countries, and the European Union.



<u>Goal:</u> To provide countries with practical information and recommendations to protect research integrity and security.

<u>Participating countries</u>: AUS, CAN, CHE, DEU, FRA, GBR, JPN, KOR, NLD, NOR, PRT, USA, ZAF

<u>Secretariat</u>: Y. Tamura, C. Smith

Key events and milestones:

- Start: January 2021
- International workshops: July 2021 and November 2021
- Final report: June 2022

Expert Group members

Country	Name	Affiliation	Organisation
Australia	Freya Kaine	Director, National Security Engagement	Department of Education, Skills and Employment
Canada	Sinead Tuite	Senior Director, Digital Research Infrastructure	Innovation, Science and Economic Development Canada / Government of Canada
Canada	Martha Crago	Vice-Principal (Research and Innovation)	McGill University
France	Fabien Laurençon		Ministry of Economy and Finance, the Department of Economic Security
Germany	Andra-Maria Popa	Scientific Researcher	DLR project management agency
Japan	Kimikazu Iwase	Principal Fellow	Center for Research and Development Strategy (CRDS), Japan Science and Technology Agency (JST)
Japan	Eriko Yamazaki	Deputy Director for International Affairs	Bureau of Science, Technology and Innovation, Cabinet Office
Korea	Inkyoung Sun	Head of Office of Development Cooperation Research	Science and Technology Policy Institute (STEPI)
Korea	Sun Kun Oh	Emeritus Professor of Physics	Konkuk University
Netherlands	P.P.C.C. (Peter-Paul) Verbeek	Professor of Philosophy of Technology	University of Twente
Norway	Helene Ingierd	General Director	The Norwegian National Research Ethics Committees
Portugal	Bruno Béu		Foundation for Science and Technology
South Africa	Liapeng Matsau	Deputy Director	Research, South African Qualifications Authority
South Africa	Pradish Rampersadh	Chief Executive Officer	South African Council for Natural Scientific Professions (SACNASP)
Switzerland	Edwin Charles Constable	Professor	University of Basel
UK	Ben Sharman	Senior Global Policy Manager	UK Research and Innovation
UK	Sion Griffiths		International Research and Innovation Team BEIS
USA	Michael Imperiale	Associate Vice President for Research - Policy and Compliance	University of Michigan
USA	Bridget M. Turaga	Program Director	Office of International Science and Engineering, National Science Foundation



• Mitigate national and economic security risks while maintaining freedom of scientific research and international collaboration.

Freedom of scientific research & international collaboration

National and economic security



- 1. Executive summary
- 2. Policy recommendations and options for action
- 3. Introduction
 - Glossary
- 4. International collaboration
 - Multilateral framework for international scientific exchange and collaboration
- 5. Foreign interference in research process
 - Detrimental research practices and case studies
- 6. Policy initiatives and actions
 - Governments, funding agencies, public research institutions, universities, international research projects, and academic associations

Foreign interference in research process

Research

- Theft or misuse of data, sample, or know-how
- Deceptive practices
 - Hiding military affiliation, foreign funding (double-dipping), or satellite laboratories
- Coercive practices
 - Damage to freedom of inquiry
 - Foreign pressure to provide confidential information

Evaluation

- Breaches of confidentiality
- Distorted decisions

Cybersecurity

- Cyber-attacks
- Data theft



- Policies and regulations
 - Agency-specific policies
 - Standardisation of disclosure processes, definitions and forms across funding agencies
 - Digital reporting tools that facilitate easy compliance
 - Appropriate and effective consequences for violation of disclosure requirements
- Guidance
 - Web portal, checklist, and training tools
- Sharing information between departments
 - Intelligence outreach
 - Consultation with universities
 - Contact point for universities and research institutions



C

Examples: research security online course, Canada



Policy initiatives at funding agencies

- Appoint chief of research security
- COI and COC reporting policy
 Researchers and reviewers
- Guidance
 - Interests to declare
 - Risk assessment questionnaires
 - Misuse
- Referring to national security agencies
- Annual monitoring





- Financial interest disclosure
- Training and awareness building
- Checklist for international partnership
- COI committee
- Due diligence
 - Risk informed decisions (web searches, professional firms, etc.)
 - Support staff
- Prohibition of participation in certain foreign talent programs

Example: Commonwealth Scientific and Industrial Research Organisation, Australia





- Working group with national funding agencies and national intelligence
- Advice to national governments
 - Recognition of threats (theft, misuse, societal damage, etc.)
 - Minimisation of administrative barriers
- Advice to universities and research institutions
 - Workshops, case studies, and contact points
- Sharing of effective practices



• Underscore the importance of freedom of scientific research and international collaboration as a key element of the global research ecosystem

International scientific collaboration on COVID-19 biomedical research





• Integrate research security considerations into national and institutional frameworks for research integrity





• Promote a proportionate and systematic approach to risk management in research



Example: National Security Guidelines for Research Partnerships, Canada

The following is a non-exhaustive list of research areas that may be considered sensitive or dual-use:

- Advanced Materials and Manufacturing
- Advanced Ocean Technologies
- Advanced Sensing and Surveillance
- Advanced Weapons
- Aerospace
- Artificial Intelligence
- Biotechnology
- Energy Generation, Storage and Transmission
- Medical Technology
- Neurotechnology and Human-Machine Integration
- Next Generation Computing and Digital Infrastructure
- Position, Navigation, and Timing
- Quantum Science
- Robotics and Autonomous Systems
- Space Technology

Policy recommendations and options for action

• Promote openness and transparency in relation to conflicts of interest or commitment

Interests to be declared

- Professional positions
- Membership of committees of other organisations
- Consultancies
- Foreign financial support (cash or in-kind) for research-related activities
- Current or past associations or affiliations with a foreign-sponsored talent programme (for the last 10 years)
- Current associations or affiliations with a foreign government, foreign political party, foreign state-owned enterprise, foreign military and/or foreign police organisations
- Boards of directors
- Advisory groups
- Professional relationships
- Family and personal relationships
- Financial interests, including receiving recompense in the form of cash, services or equipment from other parties to support research activities

Policy recommendations and options for action

• Develop clear guidelines, streamline procedures, and limit unnecessary bureaucracy

Trusted Research Checklist for Academia, UK



Risk assessment process, National Security Guidelines for Research Partnerships, Canada





• Work across sectors and institutions to develop more integrated and effective policy





• Enhance international information exchange on research integrity and security







Asia-Pacific Economic Cooperation

APEC Guiding Principles for Research Integrity



- Progress review workshop in 2024
- STIP Compass





THANK YOU FOR YOUR ATTENTION