

International Cooperation is NASA Heritage



- National Aeronautics and Space Act of 1958
 - The aeronautical and space activities of the United States shall be conducted so as to contribute materially to one or more of the following objectives: *[of 9]*
 - (1) The expansion of human knowledge of the Earth and of phenomena in the atmosphere and space;
 - (7) Cooperation by the United States with other nations and groups of nations in work done pursuant to this Act and in the peaceful application of the results thereof.
- National Space Policy of June 2010
 - Expand international cooperation on mutually beneficial space activities to: broaden and extend the benefits of space; further the peaceful use of space; and enhance collection and partnership in sharing of space-derived information.
 - Improve space-based Earth and solar observation capabilities needed to conduct science, forecast terrestrial and near-Earth space weather, monitor climate and global change, manage natural resources, and support disaster response and recovery.



- International cooperation at NASA:
 - Has been a cornerstone of NASA's activities throughout its history
 - Since 1958, NASA has concluded over 4000 agreements with over 100 nations and international organizations
 - Nearly 500 active international agreements
 - Cooperation now established with every region in the world
 - 8 partners account for 50% of the agreements
 - ESA, France, Germany, UK, Italy, Canada, Japan, Russia
 - Every Mission Directorate has international partnerships
 - Of the approximately 56 SMD missions in operation, well over half have international contributions
 - By mission area: 2/3 are in the NASA science missions

Early NASA Principles for Cooperation



- NASA policy foundations are unchanged after 50 years
 - Designation by each participating government of a central agency for the negotiation and supervision of joint efforts
 - Agreement upon specific projects rather than generalized programs
 - Acceptance of financial responsibility by each participating country for its own contributions to joint projects [*no exchange of funds*]
 - Projects of mutual scientific interest
 - General publication of scientific results

* Cited from *International Programs*, NASA Office of International Programs, 1962; In place by September 1959 per Homer Newell's book, *Beyond the Atmosphere* (p. 306)



- **NASA international partners are generally government agencies due to the significant level of investment and legal requirements**
- Each Partner funds its respective contributions, but contributions need not be equivalent
- Cooperation must be consistent with foreign policy objectives of each Partner
- **Projects/Partnerships:**
 - Must have scientific and technical merit and meet NASA program objectives
 - Must be mutually beneficial (demonstrate specific benefit to each Partner)
 - Are structured to protect against unwarranted technology transfer
 - Are structured to establish clearly defined managerial and technical interfaces to minimize complexity
 - Are documented in a written, binding agreement, closely coordinated with the U.S. Department of State and other U.S. government agencies

Why Do We Need International Agreements?



- International Agreements are tools that:
 - Clarify responsibilities of the partners
 - Confirm commitments and terms
 - Document the quid pro quo and benefits of the cooperation
 - Protect investment and interests, such as:
 - Technical data rights
 - Intellectual property rights
 - Allocation of risk -- cross-waiver of liability
 - Allow import/export of technical data and goods
 - Confirm arrangements to meet international obligations, such as UN Registration Convention, if necessary

When Do We Draft International Agreements?



- International Agreements are not required for proposals.
- EVI-4 guidelines and requirements for non-US participation are covered in the AO.
- If AO proposal is from a foreign entity – or if U.S. AO proposal includes foreign participation – a strong letter of endorsement is needed from the foreign partner’s government agency or funding institution, acknowledging the activity and preferably indicating sufficient funds will be made available.
- International Agreements are drafted after final selections are made.
- ***Note : International Agreements will likely take several months to put into place!***

Challenges to International Cooperation



- Management complexity
 - Decision-making is more complex
 - Communications difficulties
 - Differing specifications, standards and assumptions
- Technical and programmatic risk
 - Interdependence – the “critical path” issue
 - Interfaces are difficult to manage at a distance; it’s harder to monitor progress and get early warning of problems
 - Multiple partners with multiple interfaces adds complexity
- Political risk
 - Budgetary and bureaucratic uncertainties
 - Potential linkage to political activities unrelated to the cooperation

Why International Cooperation?



- Benefits of international cooperation:
 - Leverage resources (financial, technological, scientific, etc)
 - Access to foreign capabilities or geography
 - Adds unique capability and/or expertise
 - Increases mission flight opportunities
 - Enhances the scientific return
 - Promote U.S. foreign policy interests
 - NASA follows foreign policy guidance from the Department of State



- NASA's International Agreements do **NOT** trump export control laws & regulations

An International Agreement does not replace a contractor's need for a Technical Assistance Agreement



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