

AN OVERVIEW OF INAF'S COOPERATION WITH SOUTH AFRICA: CONTEXT, PROGRAMMES AND OPPORTUNITIES

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1. WHY AM I HERE?

March 2015 – March 2023: Science and technology attaché
Embassy of Italy in South Africa (Pretoria)

Researcher (geodesist)

2000-2005 CNR

2005-2015 and from March 2023: researcher @ IRA-INAf

From September 2023: supporting the Scientific Direction
with a focus on projects and activities in South Africa

2. CONTEXT AND STAKEHOLDERS

- **Ministry of Foreign Affairs and International Cooperation**

- Directorate General for Country Promotion
 - Office IX – Bilateral Scientific Cooperation
 - Office X – Multilateral Scientific Cooperation and IP
- The network of Embassies and Consulates

- **Ministry of University and Research**

- DG for Internationalization and Communication
 - Office I – General Affairs and coordination (S&T and Space attaché)
 - Ufficio III – Internationalization of Research
- Universities and Public Research Institutions

2.1 COUNTRY PROMOTION: THE STAKEHOLDERS

- Government Representatives
- Ministries
- Regions and Public Entities and Institutions
- Regional Technology districts
- Local and regional agencies for the promotion of the territory
- International Relation Office of Public Institutions, Research Institutes and Universities
- National Technology Clusters
- High Tech companies
- Entrepreneurs Organizations
- NGOs
- Schools, Museums
- ...

3. SUPPORTING INTERNATIONALIZATION: THE TOOLS

- Bilateral Cooperation Agreements (IT-SA signed in 1998; into force since 2000) and Executive Programmes
- Trieste Scientific Hub:
 - International Centre for Theoretical Physics (ICTP)
 - International Centre for Genetic Engineering and Biotechnology (ICGEB)
 - The World Academy of Science (TWAS)
- Participation in large projects (e.g. SKA)
- The Science and Technology attachés network

3.1 NETWORK OF SCIENCE AND TECHNOLOGY ATTACHÉS



45 SS.AA. + 4 Space attachés

3.2 THE ITALY-SOUTH AFRICA EXECUTIVE PROGRAMME: FUNDING RADIO ASTRONOMY

- 2014-2016
 - Pis: Prandoni-Vaccari (**Research**)
 - Mapping the Universe on the pathway to SKA. From black holes to large cosmic structures: a multi-scale approach to next-generation radio surveys
 - Pis: Venturi-Bernardi (**Mobility**)
 - Synergy between Italy and South Africa: Galaxy Clusters: a pivotal case for SKA precursor
- 2018-2020 (co-funded)
 - Pis: Venturi-Vaccari (**Research**)
 - RADIO SKY 2020 - Fostering cooperation between Italy and South Africa through radio astronomy
- 2021-2023
 - Delays and postponement due to Covid-19 pandemic
- 2023-2025 (co-funded)
 - Pis: Umana-Vaccari (**Research**)
 - RADIOMAP- Science & technology pathways to MeerKAT+: the Italian and South African synergy

4. INAF ONGOING AND FUTURE INITIATIVES IN SOUTH AFRICA

- Participation into SKAO
- MeerKAT+ contribution
- MoA INAF-SARAO on Band 5b receivers (PI: Umana)
- ISMoS: IT-SA Mobility Scheme (INAF-SARAO)
 - Funded by INAF SD
 - Sector: SKA and precursors - technology and science
 - Mobility Programme over 5 years (2024-2028) for IT and SA Mentors (IT visiting professorships) and African PhD and Post-Doc
 - Sign by end of 2023
 - Start 1st Jan 2024

Open	Close	Decision by	Travel begins after
1st January	31 st March	End of April	1 st July
1st April	30 th June	End of July	1 st October
1st July	30 th September	End of October	1 st January
1st October	31 st December	End of January	1 st April

5. TAKE-HOME MESSAGE

- Scientific International Relations are:
 - Composed by a large cohort of stakeholders
 - Rooted in and tightly connected to Science diplomacy
 - **Diplomacy for science** – the use of diplomatic action to facilitate international scientific collaboration, e.g. by negotiating R&D agreements and exchange programmes or enabling the establishment of international research infrastructures;
 - **Science for diplomacy** – the use of science as a soft power to advance diplomatic objectives, e.g. for building bridges between nations and creating good will on which diplomatic relations can be built;
 - **Science in diplomacy** – the direct support of diplomatic processes through science, e.g. by providing scientific advice and evidence to inform and support decision-making in foreign and security policies.
 - Optimally managed (**not determined**) by International Relation Offices
 - Are **mandatory** institutional activities for any Research Entity interested in Internationalization
 - **Serve** and **support** the work of every research scientist