

IAEA Cooperation with SESAME Members

SPECIAL INFORMATION SESSION ON SESAME

*Organized by the Department of Technical Cooperation
In conjunction with the 22nd Meeting of the SESAME Council*

29 May 2013

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IAEA

International Atomic Energy Agency

IAEA technical cooperation and SESAME



2007–2010, INT/1/055: ‘Support for Human Capacity Building in the Utilization and Operation of the Synchrotron-light for Experimental Science and Applications for the Middle East (SESAME)’

To strengthen international cooperation among Member States participating in SESAME through the use of accelerator physics and synchrotron radiation applications.

2012–2015, INT/0/086: ‘Building Human Capacity for the Construction, Operation and Use of SESAME’

To support the human capacity development for the installation, commissioning, safe operation and utilization of the SESAME facility as an international center of excellence for research and applications in the Middle East.

Ongoing IAEA technical cooperation and SESAME

‘Building Human Capacity for the Construction, Operation and Use of SESAME’ INT/0/086 (2012-2015)

Euro 757,461

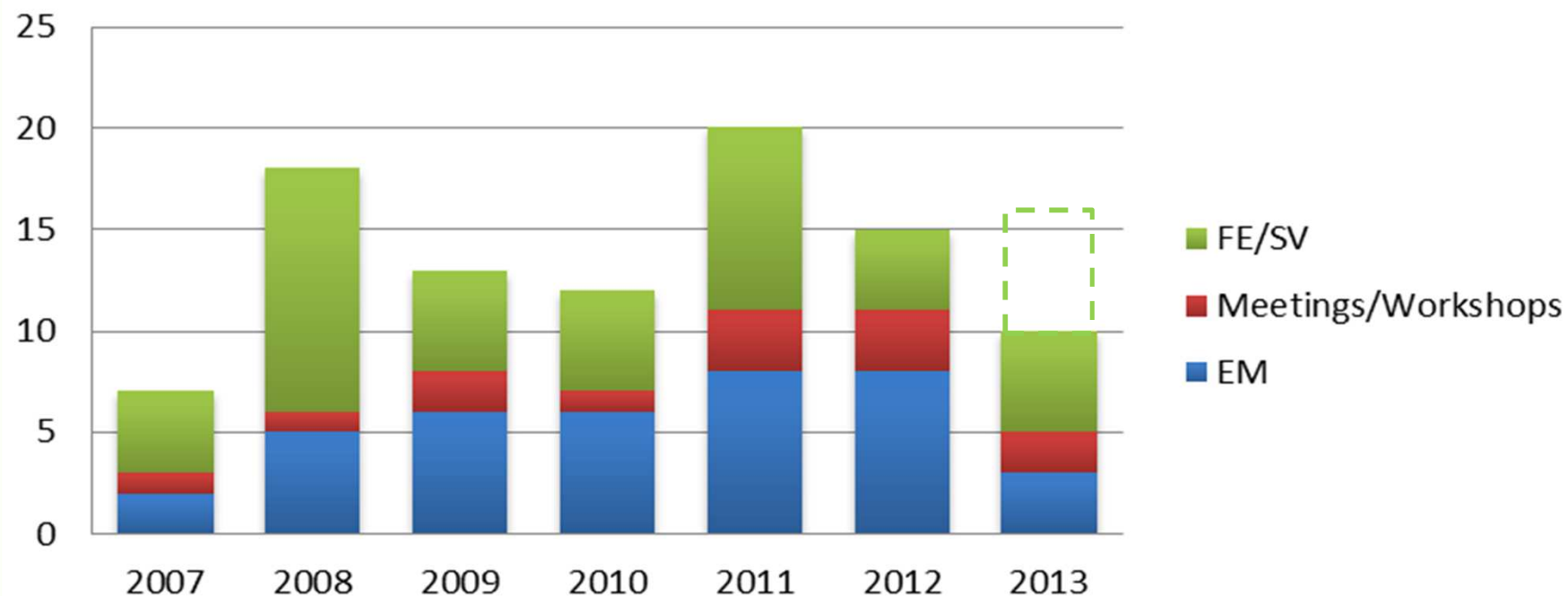
Expected Outcomes:

- Strengthened capacity for the installation, commissioning and safe operations of SESAME microtron, booster and the main ring and its beamlines.
- Strengthened capacity for the sustainable utilization of SESAME facilities for quality research and application programmes.

IAEA technical cooperation and SESAME

The IAEA's support through the training of SESAME users and operators under interregional technical cooperation projects contributes to ensuring that all relevant capabilities will be in place once the Centre is commissioned.

Support to HR Development to SESAME Members



IAEA technical cooperation and SESAME

Expertise for:

- Support to the installation of the Booster
- Site acceptance tests of the Booster power supplies
- Review of vacuum system of the SESAME storage ring

Fellowships:

- Personnel safety
- Performing measurements on synchrotron facilities
- IT infrastructure for the accelerator computer network
- Design and analysis of girder-magnets support system
- Theoretical and experimental training on accelerator physics
- RF electronics
- Extended X-ray absorption



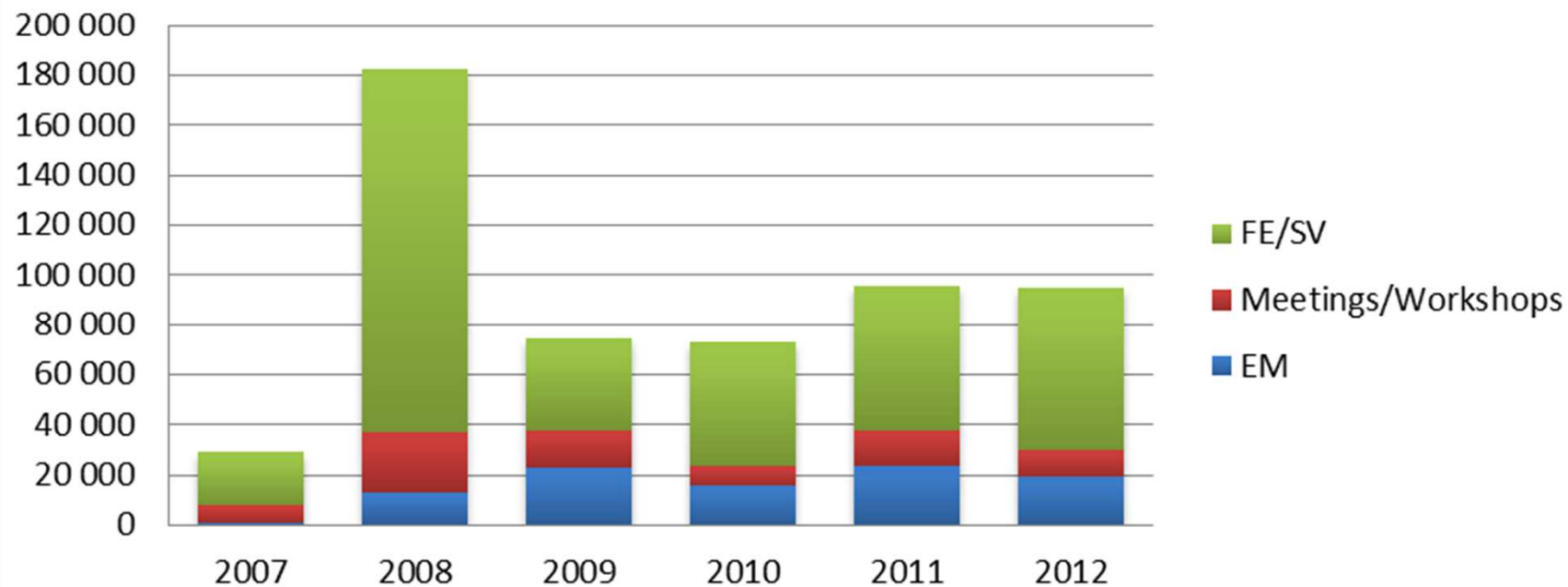
IAEA technical cooperation and SESAME

Results to date:

- SESAME facility users were trained in accelerator physics and synchrotron radiation applications
- SESAME facility operators were trained in operation and maintenance of the synchrotron
- Support to the efforts for the safe commissioning and operation of the SESAME facilities

IAEA technical cooperation and SESAME

Support to HR development to SESAME Members -in Euro-



IAEA coordinated research activities related to SESAME

2012–2015 Coordinated Research Project: ‘Applications of
Synchrotron Radiation for Environmental Sciences and Materials
Research for Development of Environmentally Friendly
Resources’

SESAME participates in the CRP with an environmental project
on heavy metals in the vicinity of the Jordan and Yarmouk rivers

2013–2017 new Coordinated Research Project ‘Experiments
with Synchrotron Radiation for Modern Environmental and
Industrial Applications’

IAEA coordinated research activities related to SESAME

- IAEA XRF beamline at Elettra, Trieste, currently under construction, commissioning autumn 2013
- Beamline will offer access to a first-rate synchrotron research facility through a variety of mechanisms
- **SESAME scientists to participate in the commissioning of the beamline**
- IAEA workshops on synchrotron radiation topics at ICTP, in cooperation with ICTP and/or Elettra



Next Steps for Cooperation

- **Capacity building** - Continued support through the TC project
- **Support to ensuring safety** according to international standards-
Focus on licensing and safety of the facility
- **Expanding Partnerships** – UNESCO, Elettra, ICTP, CERN, other organizations
- **Outreach** - Building interest to support human capacity building for regional and interregional cooperation in the peaceful uses of nuclear science.



Thank you for
your attention!