



IAEA
International Atomic Energy Agency

INTERNATIONAL ATOMIC ENERGY AGENCY

**Regional Workshop on
Siting and Site Evaluation for Nuclear Installations**

Hosted by:
Eskom and the Department of Energy of South Africa

**Port Elizabeth
South Africa**

2–6 September 2013

INFORMATION SHEET

1. BACKGROUND

Recent extreme natural events have had an impact on a number of nuclear power plants (NPPs) in many parts of the world. Some strong earthquakes have surpassed the original seismic design or evaluation levels and affected operating NPPs. Such events have led to growing international concerns regarding site safety and the protection of nuclear installations against external hazards, including multiple hazards. These concerns are shared by Member States of the International Atomic Energy Agency (IAEA) in the Africa region with existing or planned nuclear power programmes, and they have heightened the interest of these countries in implementing state-of-the-art safety measures against external events.

The associated safety measures cover a very broad range of areas, such as site selection, site evaluation, engineering design, instrumentation, re-evaluation of existing installations and response to real event occurrences. In view of nuclear safety infrastructure development, the IAEA strongly recommends that the site selection process be guided by a clearly established set of criteria or regulatory requirements from the very beginning, as certain aspects can lead to sites being excluded due to unacceptable conditions. Moreover, as part of periodic safety reviews, new nuclear installation sites need to be evaluated in detail and the site related safety of existing installations also needs to be re-evaluated.

An integrated approach is necessary in order to address such challenges as the continuous development of codes and standards with new requirements; the evidence from external hazards that exceeded the original design basis; the need to properly consider design and engineering aspects associated with the protection of nuclear installations against external natural and human induced events; the identification of new technical findings on the basis of recent experience related to extreme natural phenomena; and the increasing trend towards the application of probabilistic methodologies.

The IAEA's International Seismic Safety Centre (ISSC) conducts site related safety evaluations covering all of the above-mentioned aspects in order to develop and update relevant IAEA safety standards and to assist Member States in the design of nuclear installations to ensure that these are protected against all external and internal hazards that may occur during their lifetime.

The latest scientific and technological developments underlying nuclear installation safety measures, and also recent advances that have been made in the field of accident analysis, are having a major impact on the existing and planned nuclear power programmes and nuclear safety regulations of Member States. In particular, owners and operators need to demonstrate that their nuclear installations are capable of withstanding threats from natural and human induced events.

The workshop is targeted at experts in safety assessment issues related to nuclear installations from Member States in the Africa region and aims to provide them with the opportunity to receive updated information on the subjects covered and to learn how to define the required actions to address the relevant challenges. It is carried out with funding by the European Union and organized in cooperation with Eskom and the Department of Energy of South Africa.

2. OBJECTIVES OF THE WORKSHOP

The objectives of the workshop are: (a) to introduce participants from countries in the region embarking or having expressed their interest in embarking on their first nuclear programme to the current suite of IAEA safety standards related to site selection and evaluation; (b) to disseminate the lessons learned from recent extreme natural events and discuss their impact on the revision of the relevant safety standards; and (c) to assist participating Member States in the identification of actions to be undertaken at the start of a nuclear programme.

3. PROPOSED TOPICS

- IAEA safety standards that address site safety aspects in relation to external hazards
- Site selection and evaluation criteria which are in line with the latest technical developments in the methods used to assess meteorological, geological, seismic, geotechnical, hydrological and human induced hazards
- Siting of back-end radioactive waste management facilities (centralized interim fuel storage facilities, deep geological repositories, etc.)
- Monitoring systems for external events
- Periodic safety reviews
- Communication with the public
- Guidelines and arrangements for Site and External Events Design (SEED) review missions

4. PARTICIPATION

The workshop is targeted at participants from Member States in the Africa region who are working at institutions dealing with the planning and/or implementation of nuclear power programmes, specifically at representatives from (a) high level planning management and (b) the specific groups dealing with site selection and evaluation tasks, from the managerial to specialized technical levels. To ensure maximum effectiveness in the exchange of information, participants should be persons actively involved in the subject of the workshop.

Participants officially nominated by their relevant governmental authority (Ministry of Foreign Affairs or National Atomic Energy Authority) should send by fax or email the attached Participation Form (Form A) to the Workshop Coordinator, Ms Maria Laura Videla (contact details indicated in Section 5 below), to arrive no later than **28 June 2013**. The nomination of a participant will be accepted only if forwarded by the Government of an IAEA Member State.

The participants will present country-specific case studies and discuss the status of their NPP projects in relation to the site selection process and the protection of nuclear installations against external hazards. The IAEA encourages participants to send abstracts for presentations as indicated in the Participation Form.

5. ORGANIZATION OF THE WORKSHOP

Workshop Contact Persons

Host Organization:

Workshop Organizers: **Mr Katse Maphoto**
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6. VISAS

Designated participants who require a visa to enter South Africa should submit the necessary application to the nearest diplomatic or consular representative of South Africa as soon as possible.

7. EXPENDITURE

The costs of the workshop are borne by the IAEA; no registration fee is charged to participants.

Travel and subsistence expenses for a limited number of participants can be borne by the IAEA. Such assistance may be offered upon specific request to normally one participant per country provided that, in the IAEA's view, the participant on whose behalf assistance is requested will make an important contribution to the workshop. The application for financial support should be made at the time of nominating the participant.

8. WORKING LANGUAGE

The working language of the workshop will be English.

9. LOCAL ARRANGEMENTS

- The workshop will be held at Nelson Mandela Metropolitan University (NMMU) in Port Elizabeth, South Africa.
- It will start on Monday, 2 September 2013, at 9.00 a.m. and end in the afternoon on Friday, 6 September 2013, at 3.30 p.m. The programme will include a day's visit to the Thyspunt site. The organizers will arrange transport from participants' hotels to the site.
- Airport transfers and transportation to and from hotels is the responsibility of participants. The workshop agenda, together with information on local arrangements, will be sent to designated participants when the completed Participation Forms have been received.

10. WORKSHOP WEB PAGE

Please visit the following web page regularly for new information regarding this workshop:
<http://www-pub.iaea.org/iaeameetings/>