

The Quest for Nuclear Technology and the Challenges of Knowledge Management in Nigeria

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The setting up of the Federal Radiation panel in early sixties signified the awareness in Nigeria of the application and dangers of nuclear radiation. This initiative was further reinforced with the establishment of the Federal Radiation Protection Service in 1964, that same year Nigeria joined the IAEA thus opening a window for technical assistance in nuclear application for national development.

The enactment of the Nigeria Atomic Energy Commission Act in 1976, the launching of National Nuclear Programme and the designation of Obafemi Awolowo University and Ahmadu Bello University (ABU) Zaria as centers of excellence in nuclear research in 1977 marked the beginning of a systematic development of manpower and physical infrastructure for the peaceful application of nuclear science and technology in Nigeria.

Within the first ten years, the centers trained over 60 Nigerians up to PhD level in different areas of nuclear science and engineering in institutions in Europe and America. Now the pioneering scientists train Doctorate and masters degree students locally at the centres.

Currently, research, training and application of nuclear science and technology are carried out in 36 Federal and State Universities in departments such as physics, chemistry, geology and agriculture. In 2003, the center at ABU produced 8 MSc, 6 PhD thesis and published 15 research papers.

We also have 27 specialized research institutes in areas of agriculture, health, water resources, petroleum and environment, a number of health institutions where some form of ionizing radiation are used; with thousands of diagnostic X-ray units and five radiotherapy centres in operation.

The progress made so far in the last 40 years is quite modest, nuclear science and technology are now widely used in research, development and practical application for national development. It is worthy of note here that IAEA has been involved and played significant role in our quest for nuclear technology.

A major challenge arising from this development, is the collection, harvest and disseminating of the widest possible information and knowledge accumulated over the years.

The resolution on nuclear knowledge by the IAEA General Conference in 2002 and 2003 and the recommendations and new guidelines by an INIS external evaluation panel, has given us the impetus to evaluate our activities and reposition the INIS center toward responding to this challenge and the emerging trend in knowledge management.

In doing so we refocus our mind on two key areas of INIS operation in our Centre;

Collection of relevant material and preparation of input; Our membership obliged us to make contribution commensurate with the level of activities within our borders. INIS has developed over the years as the World's leading information system in nuclear science and technology through the coordination of IAEA and the cooperation of member states.

Promotional Activities are fashioned out to facilitate the attainment of the goals set for nuclear energy in the national energy policy within the framework of our National Development Objectives, through the establishment of an information resource capable of meeting the needs of our scientists and engineers. A necessary step toward this end is to build a network of universities and research institutes in nuclear science, that will be used to pool, analyze and share national nuclear knowledge and experience, address preservation and promotion of knowledge, maintain competence and avoid duplication wherever necessary.

Target sets for 2004 on the two key areas are;

- Contribute 0.5-1.0% of the total input to INIS as against 0.0159% in 2003
- Reach out to 5000 potential users.
- Digitization of Environmental Impact Assessment Report on Energy Project (1995–2003)

Steps taken so far;

- Assignment of 4 staff, 3 workstations and a scanner with OCR capability for the INIS center
- Capacity building for input preparation using available resources from INIS secretariat such as INIS CBT
- A survey covering larger percentage of academic departments especially physics has been instituted to bring the staff and students into INIS fold. In addition information flyers on INIS incorporating a survey instrument were developed for distribution to participants at seminars, workshop and conferences with some relevance to the subject scope of INIS.
- Avenues to cover renewable energy activities in the country are under consideration through the development and publication of a Newsletter, focussing on the objectives of INIS.

Funding is required in all of our activities options we are considering include;

- development of products and services that can attract funding from such institutions as Petroleum Technology Development Fund, Education Tax Fund
- development and sales of INIS marketable products.
- the support of IAEA in areas such as expert mission, scientific visit, and fellowship.