

**Launching a Nuclear Power Programme in a Developing Country -
Technical and Scientific Support Organisations (TSO) in Capacity
Building**

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Abstract

The need for involvement of Technical and scientific support organisations(TSO) in developing countries intending to launch a nuclear power programme(NPP) cannot be overemphasised.

In an International Conference on Topical Issues in Nuclear Installation Safety held in 2008, Mumbai, India I presented a paper entitled “Launching a Nuclear Power Programme – a third world country’s perspective” - IAEA-CN-158/9. [1]. I pointed out some real constraints encountered by a developing country while trying to introduce a nuclear power programme. This were inadequate base infrastructure, financial incapability and lack of skilled manpower.

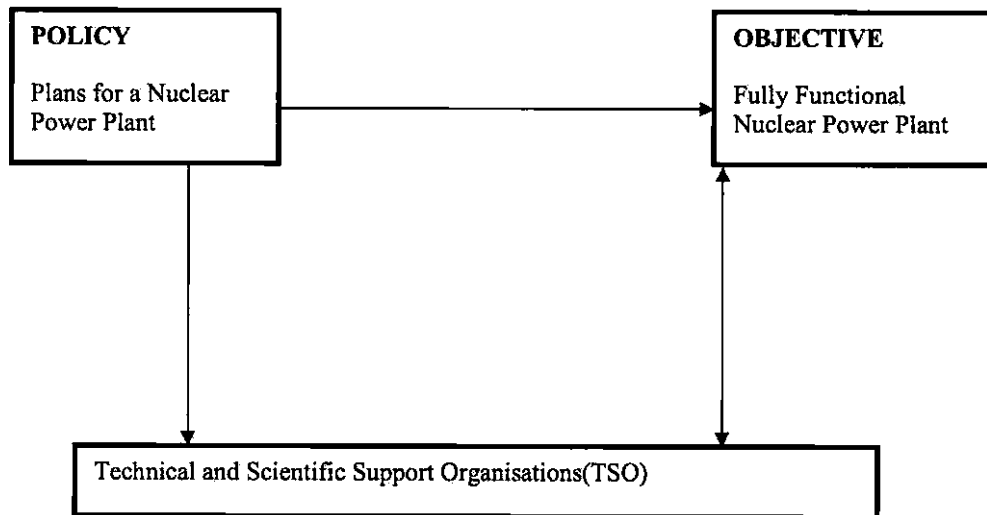
Granted there are areas where the role of TSOs is minimal like in carrying the actual cost of infrastructure but their input in areas of technology, evaluation, assessment and skills development cannot be gainsaid.

1.0 Introduction

There is no denying the fact that capacity building in any activity is a process driven methodology. This is to say that despite a country like Kenya being a developing country, capacity building should not be attempted in an informal way. Different regions will have different needs. So before any capacity enhancing measures are put in place, a proper assessment of the present capacity needs to be done and that’s where the methodology starts.

A strategic framework of a developing country’s vision of having a nuclear power plant can be simply illustrated as below:

Fig 1. Simple illustration of where TSOs fall in a developing country's intention to have a NPP



2.0 TSOs in developing countries

Several developing countries especially in Africa including Kenya have drafted policies on their intention of constructing nuclear power plants with several of them actually in talks with commercial vendors of the same. But this is not to say it is a simple process. For countries which are members of the IAEA, the international body has played an impressive part as the principal adviser to developing countries with nuclear power ambitions. However developing countries with these intentions should realize the enormous potential in capacity building that can be derived from local TSO having parallel and similar scientific and technical roles as those to be envisaged in a nuclear power programme. The list of local TSOs would include universities (nowadays more established hence availability of knowledge), radiation protection bodies, scientific councils where existing, standards bodies, professional associations and research institutes. This cooperation can be extended bilaterally with neighbouring countries resulting in regional pacts on nuclear power programmes.

3.0 Challenges faced by TSO

Challenges faced by TSOs include political factors, legal status, communication barriers, closed door policy of sensitive programmes like nuclear ambitions, poor rewarding system and of course financial problems. However it should be said that if real attempts were made to overcome these challenges the potential for developing capacity in countries with nuclear power ambitions would be greatly increased.

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