

Group 1

PEER REVIEW OF NATIONAL SITUATIONS

Participating Country :

- **Argentina**
- **Malaysia**
- **Hungary**
- **Romania**

Group Members:

1. **Roberto ANASCO**
2. **Gabor TOTH**
3. **Ariff Shah ISMAIL**
4. **Ibrahim MUHAMAD**
5. **Lucian Leonida BIRO**
6. **Marin DINCA**
7. **Mitica DRAGUSIN**

Consultant : Mr Stefan Gerd THIERFELDT



IAEA

International Atomic Energy Agency

Argentina

ELEMENT	RESULT	REMARKS/RECOMMENDATIONS	LEGEND
Legal & Regulatory Infrastructure	1	Act, Regulations and other supporting legal documents already in place and sufficient enough for decommissioning activities. Regulatory body was placed under separate Ministry from operating organization.	<ol style="list-style-type: none"> 1. Fully Independent 2. Partly Independent 3. Not Independent
Decommissioning Plan	2	Decommissioning is an strategic subject . Deco Plans under preparation for each facilities. All critical assemblies and RR 's to be completed before 2012. For the NNP 's is expected to be completed by the end of 2018.	<ol style="list-style-type: none"> 1. In place 2. In progress 3. Not Started
Transition	3	Adoption and keep updated to international standards for decommissioning. Conducting training to the in-house staff	<ol style="list-style-type: none"> 1. Stop operation 2. Shutdown 3. Not applicable
Characterization	2	Routine environmental monitoring and dose rate assessment continuously performed – operations phase. Applicable to all the Deco plans. Collecting and updating historical operation records.	<ol style="list-style-type: none"> 1. Completely done 2. In progress 3. No need to do so
Cost Estimation	2	Funding from government, on yearly budgetary mechanism	<ol style="list-style-type: none"> 1. In place 2. In progress 3. Not started
Decommissioning Technologies	2	No urgency for the procurement of advance dismantling technologies , but information already in place and updated. Conventional Industrial Technology is in place .	<ol style="list-style-type: none"> 1. Advanced technology in place & under consideration 2. Conventional Industrial Technology in place
Waste Management	1	National Waste Management Policy in place but no final disposal radwaste available. Temporary low level waste available	<ol style="list-style-type: none"> 1. Policy / facility in place 2. Policy / facility in progress 3. No policy / facility

Malaysia

ELEMENT	RESULT	REMARKS/RECOMMENDATIONS	LEGEND
Legal & Regulatory Infrastructure	2	Act, Regulations and other supporting legal documents already in place and sufficient enough for decommissioning activities. Regulatory body was placed under same Ministry as operating organization. Initiatives in progress to separate the RB & OO	<ol style="list-style-type: none"> 1. Fully Independent 2. Partly Independent 3. Not Independent
Decommissioning Plan	2	Safety Analysis Report, SAR (Chapter for Decommissioning) was updated and approved. Separate decommissioning plan (detail) in progress.	<ol style="list-style-type: none"> 1. In place 2. In progress 3. Not Started
Transition	3	Established task force within facility to look after all issues related to decommissioning. Collecting all datas/informations in order to strengthen the DP Establish new regulations/standards and/or review existing in order to strengthen the legal framework.	<ol style="list-style-type: none"> 1. Stop operation 2. Shutdown 3. Not applicable
Characterization	3	Routine environmental monitoring and dose rate assessment continuously performed – operations phase Keep all historical operational records and maintain all necessary facility plan & layout	<ol style="list-style-type: none"> 1. Completely done 2. In progress 3. No need to do so
Cost Estimation	2	Funding from government, under 5 th Year National Plan. This estimation will be address in the detail decommissioning plan.	<ol style="list-style-type: none"> 1. In place 2. In progress 3. Not started
Decommissioning Technologies	2	No urgency for the procurement of advance dismantling technologies , but information already in place and updated	<ol style="list-style-type: none"> 1. Advanced technology in place & under consideration 2. Conventional Industrial Technology in place
Waste Management	1	National Waste Management Policy in final draft. No permanent waste repository available. Interim repository	<ol style="list-style-type: none"> 1. Policy / facility in place 2. Policy / facility in

Hungary

ELEMENT	RESULT	REMARKS/RECOMMENDATIONS	LEGEND
Legal & Regulatory Infrastructure	1	Act, Regulations and other supporting legal documents already in place and sufficient enough for decommissioning activities. Regulatory body was placed under separate Ministry from operating organization.	<ol style="list-style-type: none"> 1. Fully Independent 2. Partly Independent 3. Not Independent
Decommissioning Plan	1	Initial Decommissioning Plan already in place for each facilities. Being updated in 5 yearly basis.	<ol style="list-style-type: none"> 1. In place 2. In progress 3. Not Started
Transition	3	Conduct training to staff on matters related to decommissioning Analysis on the readiness to conduct decommissioning, formulating strategies and action plan to execute the strategy	<ol style="list-style-type: none"> 1. Stop operation 2. Shutdown 3. Not applicable
Characterization	3	Routine environmental monitoring and dose rate assessment continuously performed – operations phase Collect historical operational data and relevant drawings/layout plan	<ol style="list-style-type: none"> 1. Completely done 2. In progress 3. No need to do so
Cost Estimation	1	Available for VVR M10. Other facilities – in progress Funding from government.	<ol style="list-style-type: none"> 1. In place 2. In progress 3. Not started
Decommissioning Technologies	2	No urgency for the procurement of advance dismantling technologies, but information already in place and updated	<ol style="list-style-type: none"> 1. Advanced technology in place & under consideration 2. Conventional Industrial Technology in place
Waste Management	1	National Waste Management Policy in place Planning for construction of permanent high level radwaste repository.	<ol style="list-style-type: none"> 1. Policy / facility in place 2. Policy / facility in progress 3. No policy / facility

Romania

ELEMENT	RESULT	REMARKS/RECOMMENDATIONS	LEGEND
Legal & Regulatory Infrastructure	1	Law, Regulations and other supporting legal documents already in place and sufficient enough for decommissioning activities. Regulatory body was placed under Prime Minister's Office which separated from operating organization.	<ol style="list-style-type: none"> 1. Fully Independent 2. Partly Independent 3. Not Independent
Decommissioning Plan	1	TRIGA – Preliminary DP established in 2006 and subject for revision in 2011 VVR-S : under decommissioning, using approved DP (2008)	<ol style="list-style-type: none"> 1. In place 2. In progress 3. Not Started
Transition	2	VVR-S: under decommissioning stage (general clean-up) & refurbishment doors, floor, platforms and roads TRIGA unit still in operation.	<ol style="list-style-type: none"> 1. Stop operation 2. Shutdown 3. Not applicable
Characterization	1	VVR-S: Completed in 2007 and as part of Facility Characterization Survey Report submitted to RB, approved in the same year.	<ol style="list-style-type: none"> 1. Completely done 2. In progress 3. No need to do so
Cost Estimation	1	VVR-S: approved in 2009 and funding from Government budget for the whole period (11 yrs), on yearly budgetary mechanism. TRIGA: as part of DP next revision (2011)	<ol style="list-style-type: none"> 1. In place 2. In progress 3. Not started
Decommissioning Technologies	1	Already identified advance dismantling technologies , some already in place and others under procurement processes. Almost all activities will be carried out by in-house manpower.	<ol style="list-style-type: none"> 1. Advanced technology in place & under consideration 2. Conventional Industrial Technology in place
Waste Management	1	National Waste Management Policy in place LILW repository already in place. Radwaste Treatment Plants in operation and under refurbishment	<ol style="list-style-type: none"> 1. Policy / facility in place 2. Policy / facility in progress 3. No policy / facility

SUMMARY

ELEMENT	OBSERVATIONS
Legal & Regulatory Infrastructure	Encourage the regulatory body to be fully independent Need to strengthen (review/amend) the existing regulatory framework.
Decommissioning Plan	All participating countries are preparing / has making an effort to develop a DP, even though there is no intention for shutting down and decommission t (RR & NPP) in near future.
Transition	Only 1 over 4 country (Romania) has already shutdown 1 RR and in the process of receiving decommissioning license. The final DP for this facility has already approved. For other country, many efforts has been taken as the preparatory measures prior to actual decommissioning activity
Characterization	Most of the country has a knowledge on the important of characterization activity and how to perform it. But the actual work was yet to be done since there is no need to do it, except for VVR-S(Romania). Even then, measures connected to decommissioning has continuously conducted
Cost Estimation	Some facility have already estimate the cost. Some others has identified the criteria's to be considered for estimating the cost. There is still a need to develop a detailed cost estimation for each and every facility, even though in all cases, funding is coming from government.
Decommissioning Technologies	Most of the countries have a knowledge on the important of advance technologies to be applied in the decommissioning activities and taking into account the conventional industrial tools.
Waste Management	All the countries have a strong legal and financial support to establish a final disposal facility or temporary storage for the waste which nuclear facilities are producing.
Others	<ol style="list-style-type: none"> i. Establish Clearance Level & Release Limit – adoption of IAEA Standards would be a good initiating steps. ii. Become a parties to : <ul style="list-style-type: none"> • Convention on Nuclear Safety ; and • Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management.