

SEIIST meeting - Thessaloniki, Greece  
4 – 6 April 2022

# The role of IAEA in building capacity through Technical Cooperation Projects

Sotirios CHARISOPOULOS

Physics Section / NAPC / IAEA

an autonomous international organization within the United Nations system

IAEA HQ in Vienna, Austria



173 Member States

2500+ staff from over 100 Member States

- HQ in Vienna
- Labs in Seibersdorf, Vienna and Monaco
- Regional offices in Toronto and Tokyo
- Liaison offices in New York and Geneva

## The IAEA's mission is to

- assist its Member States, in planning and using nuclear science and technology for various peaceful purposes
- facilitate transfer of knowledge in a sustainable manner to developing Member States
- develop nuclear safety standards and promote high levels of safety in applications of nuclear energy, and the protection of human health and the environment against ionizing radiation;
- verify through its inspection system that States comply with their commitments to use nuclear material and facilities only for peaceful purposes.

**The IAEA's mission is guided by the interests and needs of its Member States**

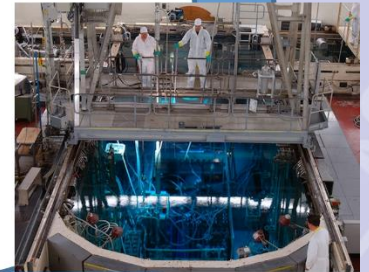
# IAEA : Structure & Main Areas of Work



## Science & Technology



Safeguards & Verification



Safety & Security

<https://www.iaea.org/newscenter/multimedia/videos/this-is-the-iaea-this-is-atoms-for-peace-and-development>

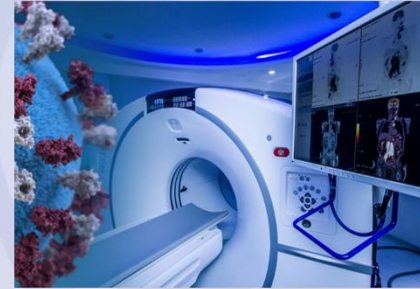
sustainable agricultural  
development



food security and  
nutrition



cancer diagnosis and  
treatment modalities



cleaner water  
for more people



protecting the  
environment



Providing expertise for  
industrial applications

The TC programme is the **primary mechanism for transferring nuclear technology** to Member States, helping **to address key development priorities** in areas such as health and nutrition, food & agriculture, water & the environment, industrial applications, and nuclear knowledge development & management.

It also helps Member States to identify and meet future energy needs, and assists in improving radiation safety and nuclear security worldwide, including also the provision of legislative assistance.

TC programmes are implemented through **National, Regional** or **Interregional** TC Projects

## Key Principles for TC Projects

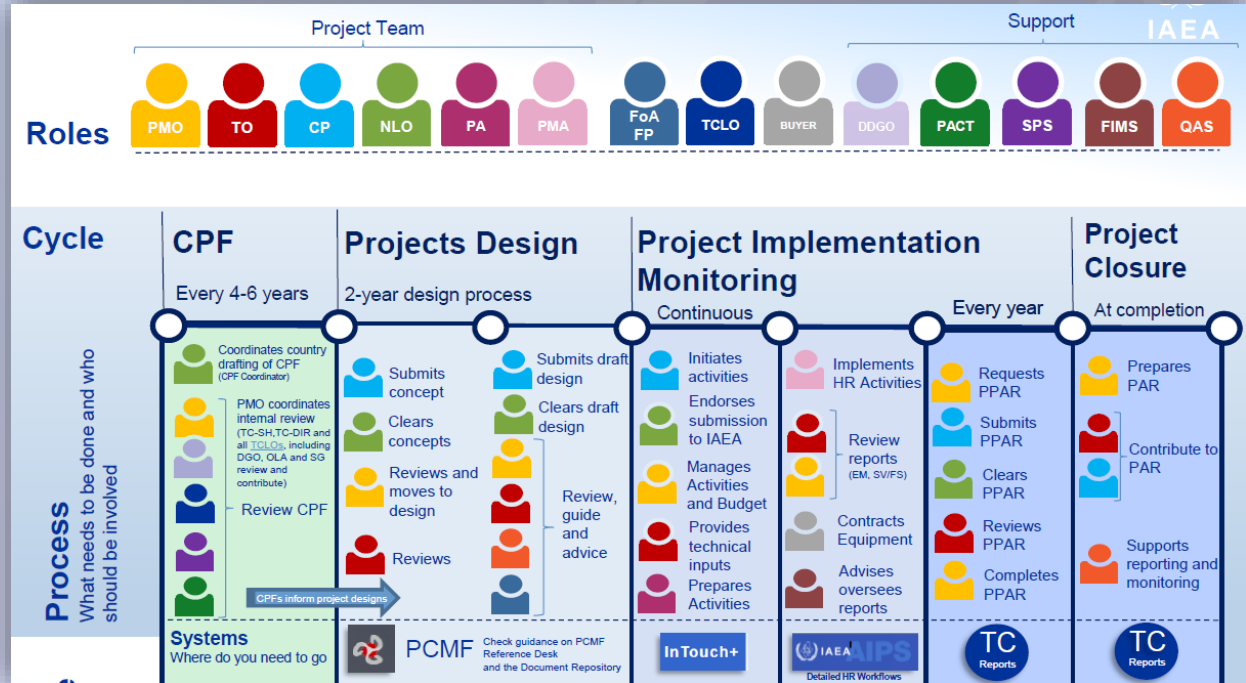
- Contribute to development goals
- Respond to Member States' needs
- Undertake peaceful use of nuclear technology
- Comply to IAEA safety and security rules
- Ensure Member State ownership and shared responsibility
- Ensure non-discrimination of stakeholders
- Ensure cooperation among Member States and with partners
- Transparency

# IAEA modalities in support to TC projects

- Capacity building
- Knowledge sharing
- Networking
- Partnership building

The TC Programme aims to support sustainable socioeconomic development in Member States

	<b>Expert assistance</b>
	
	



# RER2018009 / RER6039 : TC project for SEEIIST

“Developing Human Resources for Setting Up an Ion Beam Therapy Centre within the Joint South East European International Institute for Sustainable Technologies”

**FORUM on New International Research Facilities in South East Europe**

develop a research excellence nucleus in SEE  
benefit for science and technology, training, investment in young people,  
job creation, reverse of brain drain, knowledge based economy

Two options for the Institute:  
- 4th Generation Synchrotron Light Source  
- Facility for Tumour Therapy and Biomedical Research with protons and heavier ions

**SCIENCE FOR SOCIETY**

ICTP and Ministry of Science Montenegro

Organizing Committee:  
Herwig Soboyejo (Chairman, former DG of CEIRN)  
Fernando Borner (President of INFN)  
Christoph Quikman (Director of MAMU, Sweden)  
Nicholas Santouli (Deputy Dean, University of Malak)  
Hans-J. Stoeckl (Deutscher Beam, former DG of GSI)  
Baudouin Voss (President of EPS)

Local Organizers:  
Markus Bagnoli (ICTP)  
Sasa Pavlovic (MNS)

25 & 26 January 2018,  
ICTP, Trieste, Italy

Registration to the Forum is free. For a restricted number of participants from the region travel subsistence would be possible. Please register at <http://indico.ictp.it/event/8508/>



Start of RER6039: 2020-12-02

Duration: 4 years

Budget (€)	2020	2021	2022	2023	Total
<i>Footnote-a</i>	153,720	189,630	71,190	85,680	500,220

**Development Objective:** To build critical mass of human resources initially needed for the merits of the emerging hadron tumour therapy and research facility – SEEIIST.

# RER6039: Logical Framework Matrix

OUTCOME	Indicators	Means of verification	Assumptions
<p>Critical mass for construction &amp; operation of the hadron therapy facility established.</p>	<ul style="list-style-type: none"> <li>• Engineers and scientist trained and available to operate and function at hadron therapy facility</li> <li>• Number of staff trained in application of hadron therapy (HT) technology</li> <li>• Number of stakeholders increased their know-ledge on HT technology</li> <li>• Networking established to facilitate in receiving knowledge from other HT centres</li> </ul>	<ul style="list-style-type: none"> <li>• Annual Project Progress Assessment Report (PPAR).</li> <li>• Website of SEEIIST in which progress could be monitored.</li> <li>• Project Progress reports; Training course records;</li> <li>• Meeting reports with feedback from the stakeholders (through) questionnaire, evaluation of knowledge gained</li> </ul>	<ul style="list-style-type: none"> <li>• Political &amp; economical situation in SEE region assured for proper functioning of the health care system in participating MSs</li> <li>• Governments of participating MSs support national cancer control programs.</li> </ul>

## Target countries:

Albania, Bosnia and Herzegovina, Bulgaria, Montenegro, Serbia, Slovenia, North Macedonia



# RER6039: Logical Framework Matrix

OUTPUTS	Indicators	Means of verification	Assumptions
<ul style="list-style-type: none"> <li>• Qualified staff (medical physicists, engineers, technical staff) for construction and operation of hadron therapy(HT) facility.</li> <li>• Improved knowledge among stakeholders and awareness raised on HT among SEEIIST stakeholders.</li> <li>• Transfer of knowledge to SEE research community</li> </ul>	<ul style="list-style-type: none"> <li>• Number of scientists trained in a prominent EU Hadron Therapy institution.</li> <li>• Number of stakeholders increased their knowledge on HT technology.</li> <li>• Number scientific visits in prominent HT institutions in Europe Networking established to facilitate in receiving knowledge from other HT centres.</li> </ul>	<ul style="list-style-type: none"> <li>• Training Certificates, Project Progress reports.</li> <li>• Evaluation reports on level of knowledge gained</li> <li>• Visit and other reports.</li> </ul>	<ul style="list-style-type: none"> <li>• Interest &amp; commitment of the relevant stakeholders.</li> <li>• appropriate nominations to participate in training</li> <li>• trained staff stayed in the SEEIIST HT facility.</li> <li>• Availability of experts to participate in related events.</li> </ul>

# RER6039: Logical Framework Matrix

ACTIVITIES	Indicators	Means of verification	Assumptions
<ul style="list-style-type: none"> <li>• Training on the engineering and medical physics aspects of the HT facility</li> <li>• Training on knowledge of HT technologies and related applications for relevant stakeholders</li> <li>• Promoting networking among (SEEIIST) scientists</li> </ul>	<ul style="list-style-type: none"> <li>• Number of fellowships organized and implemented.</li> <li>• Number of workshops and events for knowledge dissemination organized and implemented.</li> <li>• Number of scientific visits organized and implemented</li> </ul>	<ul style="list-style-type: none"> <li>• Fellowship reports.</li> <li>• Meeting reports.</li> <li>• Scientific Visit reports.</li> </ul>	<p>Interest &amp; commitment of relevant stakeholders</p>

# RER6039: Input to Activities / Budget breakdown

ACTIVITIES	2020		2021		2022		2023	
	<ul style="list-style-type: none"> <li>• Training on the engineering and medical physics aspects of the HT facility</li> <li>• Training on knowledge of HT technologies and related applications for relevant stakeholders</li> <li>• Promoting networking among (SEEIIST) scientists</li> </ul>	FE 1	€ 68.040	FE 3	€ 68.040			
	FE 2	€ 68.040	(FE 4)	€ 68.040				
	SV 1	€ 17.640			SV 2	€ 17.640	SV 3	€ 17.640
							SV 4	€ 17.640
			Workshop 1	€ 53.550	Workshop 2	€ 53.550	Workshop 3	€ 53.550
Totals		€ 153.720		€ 189.630		€ 71.190		€ 85.880

# RER6039: Current Status on Fellowships

- FE on “Accelerator aspects” - Host institution: CERN, Switzerland

Topic 1: Training in *beam transport design in an accelerator for cancer therapy with ions*

Topic 2: Training in *magnet design for beam transport in the delivery system of an accelerator for cancer therapy with ions*

- FE on “R&D and Scientific Aspects” - Host institution: GSI, Germany

Topic 3: Training in *dedicated range modulators for fast irradiation of mobile targets*

Fellowships Applications received	IAEA Evaluation	Status	TO comment
1. Ms. Snezhina Ivelinova Dimitrova (Bulgaria) - Topic 3	FE application approved	Withdrawn by the applicant (covid-19 ?)	FE recommended to be announced ASAP by CP (Montenegro)
2. Mr. Niko Hyka (Albania) – Topic 2	FE application rejected	Not implemented	FE recommended to be announced ASAP by CP (Montenegro)
3. Mr. Miloš Manojlović, (Montenegro) – Topic 1	FE application approved	In implementation	

**Last communication with CP: A candidate from Bosnia & Herzegovina selected by SEEIST**



Next IAEA  
deadline  
May 2022

## ➤ Recent suggestions/requests for CHANGES

by Mara Scepanovic (Montenegro) and Mimoza Ristova (North Macedonia), member of the SC of SEEIIST.

Workshop	Status	Request to	New activities
Workshop 1	Not held in 2021	Use its budget for SEEIIST WG workshops	Workshops for
Workshop 2	Pending (2022)	Decrease budget to 20k€ to support 20 trainees to attend HITRI Plus School editions of 2022 and 2023;	1. WG1 Green Energy HUB for SEEIIST
Workshop 3	Pending (2023)	remaining total budget (€116.400) to be used for SEEIIST WG workshops	2. WG2 for formation of the IT HUB for SEEIIST 3. WG3 for formation of the Imaging HUB for SEEIIST

- ❖ **HITRI Plus:** Participation fees? What are the topics? Training programmes to review by IAEA? Profile of target audience? Who will select IAEA-funded participants and how?
- ❖ **WGs 1 and 2:** Do not focus on transfer of knowledge on nuclear technology. Moreover, TC funds cannot be used to organize workshops for the preparation of application of a HORIZON project.
- ❖ **WG3:** Topic has some relevance to the IAEA activities. We can explore possibilities to provide support in this area within the operational rules of TC, such as by arranging a group SVs or providing expert guidance.

IAEA  
reply

Ms. Mayumi Yamamoto, PMO of RER6039, is highly acknowledged for her input to this presentation

*Thank you!*

[S.Charisopoulos@iaea.org](mailto:S.Charisopoulos@iaea.org)

