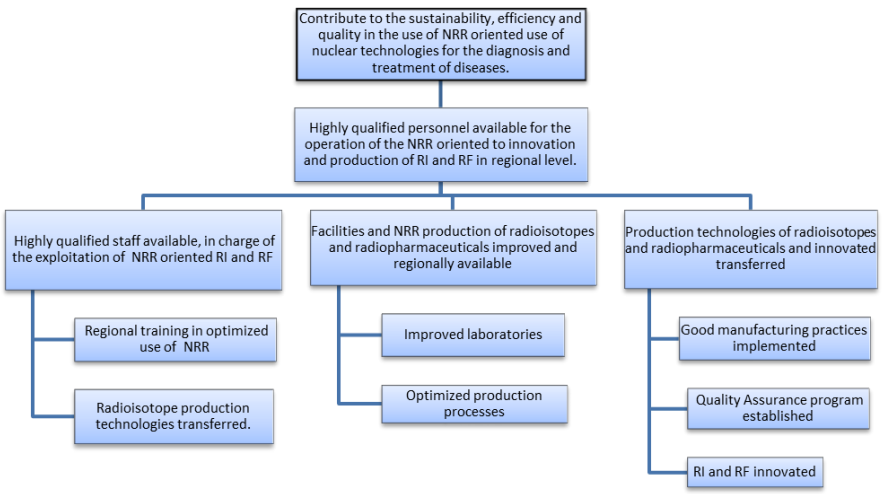
Regional Project Concept Template (Category A)

The information contained in this template should be uploaded to the PCMF IT platform by the Chair of the relevant regional cooperative agreement or the NLO of the Member State submitting the concept by **31 May 2014** at the latest. Based on this information the IAEA will assess whether this project concept is in line with the TC quality criteria and requirements. Concepts positively appraised will be further developed into full project documents during the design phase.

Region:	South America		
Regional/Cooperative agreement (if applicable)	ARCAL	**Priority no. given by regional/cooperative agreement** (for concepts proposed under the auspices of regional cooperative agreements)	E6
Title	Capacity building for the NRRs exploitation by highly qualified personnel, seeking sustainable operation oriented to innovation in the production of radioisotopes and radiopharmaceuticals for the Latin American Region.		
Field of activity			
Regional project category[1]	*X Transnational* *Regional standard setting* *X Capacity building for developing countries* *Joint TC activities with a regional or international entity*		
Names and contact details of project counterparts and counterpart institutions (starting with the main counterpart)	1. Agustin Ricardo Zuñiga Gamarra, Instituto Peruano de Energía Nuclear (IPEN). Av. Canadá, Av. Canadá N° 1470. San Borja, Lima. Perú. Telf.: (511)4885050. http://www.ipen.gob.pe, azuniga@ipen.gob.pe, 2. Brazil 3. Argentina 4. Colombia 5. México 6. Jamaica		
Analysis of regional Gap/problems/needs	*Give an in-depth analysis of the major problems/needs to be addressed by the project, as well as of their causes and effects; and explain how these are linked to regional development plans or frameworks (or equivalent). Refer to past efforts made in addressing these problems/needs, if any, and explain how the current project proposal builds upon them.* *Attach any supporting documents (e.g. texts of regional development plans).* In Latin America only five countries have Nuclear Research Reactors (NRR), used to produce radioisotopes (RI) and radiopharmaceuticals (RF); these countries are: Argentina, Brazil, Chile, Mexico and Peru. Most of these NRR were put to work around the 80´s, and the personnel trained for the operation of the NRR and facilities today total up more than 30 working years of experience in specialized areas such as: calculation, operation, maintenance and management. These personnel in average are 55 years old, many of them are going to retire in the next 10 years, while some already retired, leaving their institutions without transferring the know how they acquired through the years to younger technicians and professionals. In these countries, with the exception of Argentina, today there are not many technical or professional options to specialize in NRR operation, maintenance and management as well as in the production and use of RI or RF. This situation is challenging the		

[1] See the document entitled "Policy and Procedures for TC Regional Projects" at: http://pcmf.iaea.org/DesktopModules/PCMF/docs/2014_15_Docs/notes/Regional_TC_Project_Policy.pdf.

	future operation of the NRR, their sustainability and the production of RI and RF for the region. We known that the training of professionals and technicians for nuclear reactors takes several years, so we must start now building new human resources to preserve the nuclear knowledge achieved in the last 30 years, minimizing the risks of: 1) increasing the underuse of the NRRs and, 2) lessen the supply of RF for diagnostic and medical therapy, industry and demand of technological services involving the use of radiotracers. We believe that strengthening the integration and cooperation between the countries in the region is essential to introduce innovation in RI and RF, to improve their production, as well as to promote the transfer of RI, RF technology to the countries that still don´t have access to the benefits of its use. **We can summarize the problem of several countries in the region as: Limited availability of human resources for NRR operation, maintenance and use, due to poor access to training courses in the region, causes underuse of facilities and lack of diversification and innovation in the production of RI and RF products.** Based on the increase in the use of NRR it will be possible to make a technological transfer from trainers having nuclear knowledge, to trainees to deal with the problems and difficulties in using nuclear technology in solving social needs in our countries. The transfer of knowledge through theory and practical training will increase both the quantity and quality of trained professionals and researchers in nuclear technology and its applications, allowing sustainability and innovation to products obtained in NRR.
Why should it be a regional project?	*Indicate why it is better to address these problems/needs through a regional project (as opposed to a national one).* In the region, the development of scientific and technological advances involving NRR, their use and exploitation, for example in the production of radioisotopes used in medicine and industry, have not been uniform in all the countries. Countries like Brazil, Mexico and Argentina have made substantial progress in relation to other countries like Peru and Chile, as well as the Caribbean countries. In the region there are some NRRs available, but the age of the staff is around 55 years old in average, therefore there is a high risk of insufficient or inappropriate relieve of staff in the future.

	Therefore the Region needs to strength the regional synergy that allows the transfer of knowledge and technology in reactor operating (operation and production of RI and RF) and its impact on the health benefit of Latin American society through the strengthening of human talent and the innovation and development of radioisotopes and radiopharmaceuticals.
Stakeholder analysis and partnerships	*Describe the stakeholder analysis conducted, specifying all the interested or affected parties, end users, beneficiaries, sponsors and partners identified, with clearly defined roles for each entity.* The stakeholders are: the countries that have NRR in the region: Peru, Chile, Argentina, Jamaica, Brazil, Mexico and others, whose through this project going to share experiences, facilities and technologies in order to promote the continuous improvement and regional synergy to facilitate to find solutions related to: reactor operation, health, industry, etc., benefiting the end user in the improving the quality of life, competitiveness and governance of the country and the region.
Overall objective (or developmental objective)	*State the objective to which the project will contribute, and demonstrate its linkage with any regional or broader development goal or priority. It has to be in line with the problems/needs identified.* To have highly qualified personnel for the operation of the NRR, performing the activities related to the development of innovation in the production and use of RI and RF in the Latin America and the Caribbean Region
Analysis of objectives	*Draw up an objective tree to highlight the hierarchy of objectives as well as the cause–effect logic that this project is expected to achieve.* 

Role of nuclear technology and the IAEA	*Indicate the nuclear technique that would be used and outline why it is suitable for addressing the problems/needs in question. Is this the only available technique? Does it have a comparative advantage over non-nuclear techniques?* The operation, maintenance, operation and renewal of NRR and related facilities as well as the use of the nuclear products and techniques is nuclear technology. Radioisotopes and radiopharmaceuticals are basic goods, difficult or even impossible to replace with other substances, materials and procedures, as is the case in nuclear medicine and therapy using RI and RF produced in NRRs. *What specific role is the IAEA expected to play in the project?* IAEA will play two roles in this project: 1) As a promoter of the integration of the countries in the region, especially those with NRRs, seeking regional synergies and exchange in the optimal operation of NRRs aimed to the peaceful applications in the region, including nuclear medicine. 2) Providing scientific, economic and technological support in order to improve the knowledge, technology and equipment at the regional level.
Project duration	*Indicate a realistic starting date and the number of years required to complete the project. (In the case of projects expected to exceed four years, an assessment will be conducted before the end of the fourth year to decide on the validity of an additional year.)* Number of years required to complete the project: 4 years Starting in: April - 2016.
Requirements for participation	*Indicate the minimum requirements that counterpart institutions in Member States would need to meet in order to participate in this project, and how the fulfilment of these requirements will be verified.* The requirement would be: that the participating countries have nuclear research reactors (NRR) in operation and/or capacity for producing radioisotopes as well as plans to innovate processes and products using radioisotopes by exchanging technologies and knowledge.
Participating Member States	*List the Member States expected to participate in this project that meet the requirements established above. Indicate the role of each Member State in the project.* *Country: __PERU__Role: Head of the project providing expertise, academic support and the NRR and other facilities.* *XResource (providing expertise)* *XTarget (receiving expertise)* *__BRASIL___ Role:* *XResource (providing expertise)* *XTarget (receiving expertise)* *__ARGENTINA_Role:* *XResource (providing expertise)*

	XTarget (receiving expertise) *__JAMAICA___ Role:* *XResource (providing expertise)* *XTarget (receiving expertise)* *__MEXICO____ Role:* *XResource (providing expertise)* *XTarget (receiving expertise)* *__COLOMBIA__ Role:* *XTarget (receiving expertise)*			
Funding and project budget	*Provide an estimate of the total project costs and the funding expected from each stakeholder:*			
			Euro	Comment
	Government cost-sharing			(to be sent to the IAEA)
	Counterpart institution(s)			
	Other partners			Who?:
	IAEA Technical Cooperation Fund (TCF):	*Fellowships / Scientific visits / Training courses/ Workshops*	75600 42000 49000 42000	
		Experts	*70000*	
		Equipment	*350000*	
		TOTAL	*678600*	