

## 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.

<b>Region:</b>	Latin America an Caribbean region		
<b>Regional/Cooperative agreement (if applicable)</b>	ARCAL	<b>Priority no. given by regional/cooperative agreement (for concepts proposed under the auspices of regional cooperative agreements)</b>	
<b>Title</b>	Presence of Persistent Organic Pollutants (POPs) in human milk (HM) as an indicator of environmental pollution. Association with environmental, social, employment and residence factors.		
<b>Field of activity</b>	M2 "Insufficient evaluation of the impact of pollution from pesticides, persistent organic pollutants, heavy metals and other pollutants of anthropogenic and natural origin in water and soil "		
<b>Regional project category<sup>1</sup></b>	<input type="checkbox"/> <i>Transnational</i> <input checked="" type="checkbox"/> <i>Regional standard setting</i> <input type="checkbox"/> <i>Capacity building for developing countries</i> <input type="checkbox"/> <i>Joint TC activities with a regional or international entity</i>		
<b>Names and contact details of project counterparts and counterpart institutions (starting with the main counterpart)</b>	<ul style="list-style-type: none"> <li>• Instituto Nacional de Tecnología Industrial (INTI) Argentina, Lic Patricia Gatti ( Project Coordinator)</li> <li>• Universidad de la República Facultad de Química de Montevideo Uruguay, <i>Dr Horacio Heinzen</i></li> <li>• Laboratorio de Bromatología Servicio de Regulación Alimentaria Intendencia de Montevideo Uruguay, Bqco Eduardo Egaña Černi</li> <li>• Laboratorio de Análisis de Residuos de Plaguicidas. LARP, Departamento de Química. Universidad Nacional de Colombia Bogota, Colombia <i>Dr Jairo Arturo Guerrero Dallos.</i></li> <li>• CEMIT-UNA (Centro Multidisciplinario de Investigaciones Tecnológicas de la Universidad Nacional de Asunción)Paraguay Dra Inocencia Peralta</li> <li>• Centro de Investigación en Contaminación Ambiental (CICA), Universidad de Costa Rica Dra. Elizabeth Carazo y Laboratorio de Análisis de Plaguicidas, Dres Mario Masís Mora y Greivin Pérez Rojas</li> <li>• Departamento de Laboratorios y Estaciones Cuarentenarias Agrícola y Pecuaria – S.A.G Laboratorio Química Ambiental y Alimentaria Bqco Pedro Enriquez Alfaro</li> <li>• Ministerio de Agricultura. Instituto de Investigaciones de Sanidad Vegetal (INISAV).Laboratorio de Residuos de Plaguicidas y Contaminación Ambiental (LARCA) Dr Armando Rafael Romeu Carballo. Cuba</li> </ul>		
<b>Analysis of regional Gap/problems/needs</b>	<p><i>In the past two decades , the interest on the toxicity of organochlorines in humans has been the subject of study of many researchers , associating them with industry , labour, environmental and dietary exposure.</i></p> <p><i>The organochlorine pesticides are part of compounds currently known as COPs ( Persistent Organic Contaminants ) or Persistent Organic Pollutants (POPs) for its presence across the planet , their biostability and slow biodegradation, their accumulation in fatty tissues and its long half- life. The origin of these compounds is around the 30s , many of which are currently banned also in Latin American countries, but still present in the environment</i></p>		

<sup>1</sup> 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](http://pcmf.iaea.org/DesktopModules/PCMF/docs/2014_15_Docs/notes/Regional_TC_Project_Policy.pdf).

	<p><i>in the Latin American region</i></p> <p><i>Its toxicity has been confirmed by different studies : enzyme activity induced by free radicals affect reproductive processes , altered lipid metabolism, altered immune response , transport of vitamins and glucose ( Floria et al , 2009. ) . Some are considered mutagenic, teratogenic or carcinogenic (Ward et al. , 2009) , not only in humans but also in biotic communities with different levels of sensitivity. Organochlorine toxicity is variable , depending on their chemical configuration , this gives it a greater or lesser lipid solubility and stability. Once absorbed by the body, are concentrated in the central nerve ganglia , adrenals and adipose tissue in general nervous system.</i></p> <p><i>In lactation , milk is a major route of elimination of organochlorine pesticides , but is also an important route of exposure for infants. They consume large quantities of milk (870 ml / day) may reach or exceed the acceptable daily intake levels .</i></p> <p><i>In Latin America, there are large geographic areas where it conducts agricultural and industrial activity, while nearby there are residential and recreational areas. The populations are established in areas where these activities coexist.</i></p> <p><i>At the moment there are no regional assessments of exposure of POPs in different population groups (exposed and not-exposed)</i></p>
<p><b>Why should it be a regional project?</b></p>	<p><i>Due to its production profile in agriculture and livestock, the population of the region of Latin America and Caribbean is exposed to these pollutants. Institutions Counterparts of the countries of the Latin American and Caribbean region expressed their needs and interest to integrate a regional study.</i></p> <p><i>In addition to that, carry out projects with national scope could not solve totally the problem. The use of pesticides affects the environment as a whole affecting the natural resources of the region and thus the factors of exposure of the population.</i></p>
<p><b>Stakeholder analysis and partnerships</b></p>	<p><i>It is expected through this study manage secondary hypotheses for future monitoring. The results obtained allow us to position the subject in local agendas, start a Specific Epidemiological Surveillance; Optimizing control pollutant sources and start a program of prevention and environmental education</i></p> <p><i>The beneficiaries of the project would be the population of the region, mainly the most vulnerable sector (babies, children).</i></p> <p><i>The stakeholders of the project would be : health authorities, regulators, decision makers.</i></p> <p><i>Users of pesticides should be included in the project, to integrate actions of prevention, awareness and consciousness</i></p> <p><i>The information provided from this project, we expect to disseminate the results to the different stakeholders in order to integrate policies of protection</i></p> <p><i>There are other initiatives related with this project that can be associated:.</i></p> <ul style="list-style-type: none"> <li><i>• UNEP (United Nations for the Environmet Protection) Stockholm Convention Global Monitoring Plan for Persistent Organic Pollulants.</i></li> <li><i>• Basel Regional Centre South America ( Project Update National Implementation Plan Argentina)</i></li> </ul>

<b>Overall objective (or developmental objective)</b>	<ul style="list-style-type: none"> <li>• Study the degree of exposure to POPs of different population groups in Latin America, using the presence of these contaminants in human milk, as an indicator of these exposure.</li> <li>• Link the level of contamination with environmental, social, employment and residence factors, to establish criteria that can be used by different stakeholders related to this subject</li> <li>• Identify key risk groups and establish policies to protect their exposure</li> </ul>		
<b>Analysis of objectives</b>			
<b>Role of nuclear technology and the IAEA</b>	<p><i>IAEA could give support for training IAEA have capabilities and work history in the Food and Environmental Protection Laboratory (FEPL) with different associated projects: Control of residues and contaminants in food, Pesticide residues in food and Environment, Methods for the control of contaminants in foods. etc</i></p>		
<b>Project duration</b>	<p><i>2 years</i> <i>The realistic starting depends on the approval of the project</i></p>		
<b>Requirements for participation</b>	<p><i>The minimum requirements that counterpart institutions in Member States would need to meet in order to participate in this project, is the background knowledge in pesticide residue analysis and laboratories capabilities for determining COPs.</i></p>		
<b>Participating Member States</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Instituto Nacional de Tecnologia Industrial (INTI) Argentina, Lic Patricia Gatti ( Project Coordinator)</li> <li><input type="checkbox"/> Universidad de la República Facultad de Química de Montevideo Uruguay, Dr Horacio Heinzen</li> <li><input type="checkbox"/> Laboratorio de Bromatología Servicio de Regulación Alimentaria Intendencia de Montevideo Uruguay, Bqco Eduardo Egaña Černi</li> <li><input type="checkbox"/> Laboratorio de Análisis de Residuos de Plaguicidas. LARP, Departamento de Química. Universidad Nacional de Colombia Bogota, Colombia Dr Jairo Arturo Guerrero Dallos.</li> <li><input type="checkbox"/> CEMIT-UNA (Centro Multidisciplinario de Investigaciones Tecnológicas de la Universidad Nacional de Asunción)Paraguay Dra Inocencia Peralta</li> <li><input type="checkbox"/> Centro de Investigación en Contaminación Ambiental (CICA), Universidad de Costa Rica Dra. Elizabeth Carazo y Laboratorio de Análisis de Plaguicidas, Dres Mario Masís Mora y Greivin Pérez Rojas</li> <li><input type="checkbox"/> Departamento de Laboratorios y Estaciones Cuarentenarias Agrícola y Pecuaria – S.A.G Laboratorio Química Ambiental y Alimentaria Bqco Pedro Enriquez Alfaro</li> <li><input type="checkbox"/> Ministerio de Agricultura. Instituto de Investigaciones de Sanidad Vegetal (INISAV).Laboratorio de Residuos de Plaguicidas y Contaminación Ambiental (LARCA) Dr Armando Rafael Romeu Carballo. Cuba</li> </ul> <p style="text-align: right;"><input type="checkbox"/></p>		
<b>Funding and project budget</b>	<p><i>Provide an estimate of the total project costs and the funding expected from each stakeholder:</i></p>		
		Euro	Comment
	<i>Government cost-sharing</i>		<i>(to be sent to the IAEA)</i>
	<i>Counterpart institution(s)</i>		
	<i>Other partners</i>		Who?:
	<i>IAEA Technical Cooperation Fund (TCF):</i>	<i>Fellowships / Scientific visits / Training courses/ Workshops</i>	
		<i>Experts</i>	

		<i>Equipment</i>		
	<i>TOTAL</i>		euros 400.000	