

# FORTEES

The background of the cover is a deep blue color. It features a stylized globe with a grid of latitude and longitude lines. Overlaid on the globe are several large, semi-transparent circles. In the foreground, there are several interlocking gears of varying sizes, also in shades of blue, creating a mechanical and interconnected visual theme.

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# PORTES

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***Projects and potentialities  
for Scientific and Technological  
Cooperation between Mexico  
and Thailand under  
the European Union's Seventh  
Framework Program  
(FP7: 2007-2013)***

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***Abstract***

The European Union and Mexico have been cooperating in the field of R&D since the partnership treaty between the EU and Mexico took effect in 2000. With the Lisbon Strategy put into operation that same year, Europe acknowledged the central role which will be played by knowledge in the economy and society of the future. Accordingly, innovation was emphasized in order to advance mutual efforts to establish innovative research and development projects with Third Countries such as Mexico and Thailand through diverse multilateral framework programs such as the Seventh Framework Program (FP7). A brief

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evaluation of the existing projects in FP7 reveal disposition for intraregional cooperation in spite of the disparities regarding the quantity and extension of projects. Moreover, studied participants share a similar lack of know-how for coordinating projects which is at times crucial for benefiting completely from the program. Potential exists for establishing the necessary links and coordinating points amongst Mexico and Thailand under the given cooperation regional and bilateral mechanisms and the extensive research areas that the program covers. It is these specific potentialities enabled by the FP7 in both regions that intend to be further researched for their development into multiple and successful projects.

**Key words:** scientific cooperation, European Union, Mexico, Thailand, FP7.

### **Resumen**

La Unión Europea y México han cooperado en el campo de I&D desde que el tratado de amistad entre ambas regiones entró en vigor en el 2000. Con la puesta en práctica de la “Estrategia de Lisboa” ese mismo año, Europa reconoció el papel central que la investigación jugará en el conocimiento de la economía y la sociedad del futuro. De esta manera, se da la innovación para avanzar en esfuerzos mutuos y establecer proyectos de investigación y desarrollo innovadores con terceros países como México y Tailandia a través de diversos programas multilaterales como el Séptimo Programa Marco (7<sup>PM</sup>). Una breve evaluación de los proyectos existentes en el 7<sup>PM</sup>, revela una disposición para la cooperación interregional a pesar de las disparidades en la cantidad y extensión de los proyectos. Además, los participantes desconocen los procedimientos para coordinar proyectos que en ocasiones pudieran ser cruciales para obtener beneficios del programa. El potencial existe para establecer los vínculos necesarios y coordinar puntos entre México y Tailandia, bajo ciertos mecanismos de cooperación regional y bilateral, y las áreas de investigación que el programa cubre. Son estas potencialidades específicas habilitadas por el 7<sup>PM</sup> en ambas regiones, que se estudian para su desarrollo en múltiples y exitosos proyectos.

**Palabras clave:** cooperación científica, Unión Europea, México, Tailandia, 7PM.

## **Introduction**

The European Union (EU) and Mexico have been cooperating in the field of R&D since the partnership treaty between the EU and Mexico took effect in 2000. With the Lisbon Strategy put into operation that same year, Europe “acknowledged the central role which will be played by knowledge in the economy and society of the future” (Muldur, Corvers, Delanghe, Dratwa, Heimberger, Sloan, Vanslebrouck, 2006, p.62). Accordingly, innovation was emphasized in order to advance mutual efforts for establishing innovative research and development projects with Third Countries<sup>3</sup> through diverse multilateral framework programs such as the Seventh Framework Program (FP7) with a budget of €50 billion from 2007 to 2013.<sup>4</sup> As currently the world’s largest global-scale program promoting research and development with an international focus, FP7 represents an opportunity for Third Countries to participate in global research and innovation projects, even more so under the financial possibilities conceded to “target countries”.

A brief evaluation of the existing projects in South East Asia reveal disposition for intraregional cooperation<sup>5</sup> in spite of the disparities regarding the quantity and extension of projects. Moreover, South East Asian participants share with Mexico a similar lack of know-how for coordinating projects, as none of the projects either completed or under current execution were originally coordinated by South East Asian instances. Rather, the organizations that responded to FP7 calls are located almost

<sup>3</sup> Refers to the participation of organizations or individuals established in countries that are not Member States, candidates or associated countries. European Commission CORDIS (2011). Participate in FP7 retrieved June 20, 2011 from : [http://cordis.europa.eu/fp7/who\\_en.html](http://cordis.europa.eu/fp7/who_en.html)

<sup>4</sup> European Commission CORDIS Seventh Framework Program: Funding Retrieved June 20, 2011 from: [http://cordis.europa.eu/fp7/home\\_en.html](http://cordis.europa.eu/fp7/home_en.html)

<sup>5</sup> European Commission CORDIS Seventh Framework Program: Find a Project Recuperated 20 June 2011 from: [http://cordis.europa.eu/fp7/home\\_en.html](http://cordis.europa.eu/fp7/home_en.html). Vietnam’s participation in 24 projects, Thailand’s participation in 21 projects, Indonesia’s participation in 16 projects, Malaysia 17, Singapore 16, Philippines 14, Cambodia 6, Lao 2 Brunei 1, Myanmar 1.

entirely in Europe, even the projects whose participants are exclusively located in South East Asia.<sup>6</sup>

Empirical research in Mexico has also pointed out this disadvantage concerning the absence of adequate instruments for project promotion and connecting academics with the EU's funding programs, due to often centralized coordination efforts. (Haberleithner, 2010).

Even though there is a tangible disadvantage at coordinating projects from a local or national perspective; strategic regional instruments like the existing Regional EU-ASEAN Dialogue Instrument (READI)<sup>7</sup> and the bi-regional dialogue on science, research, technology and innovation adopted by the Madrid Action Plan 2010-2012 for the EU-LAC process<sup>8</sup> (Council of the European Union, 2010), seek to give a level of coherence to the current processes in their respective regions.

Potential exists for establishing the necessary links and coordinating points amongst the European Union's frameworks for South East Asia such as the "SEA-EU NET"<sup>9</sup> project, which was created to "expand scientific collaboration between Europe and Southeast Asia in a more strategic and coherent manner"<sup>10</sup> or SEACOOP<sup>11</sup> which deals with information and communication technology at a regional level as a direct result from an FP7 project (European Commission, 2008) and the EU-LAC process's

<sup>6</sup> Seventh Framework Program Support to policy dialogues and strengthening of cooperation with Southeast Asia (SEALING) (Retrieved June 20 2011 from: [http://cordis.europa.eu/fetch?CALLER=FP7\\_PROJ\\_ES&ACTION=D&DOC=3&CAT=PROJ&QUERY=0130AA36CCB6:31b3:586dbdda&RCN=93729](http://cordis.europa.eu/fetch?CALLER=FP7_PROJ_ES&ACTION=D&DOC=3&CAT=PROJ&QUERY=0130AA36CCB6:31b3:586dbdda&RCN=93729))

<sup>7</sup> European Commission (2011) Research Ic: Policy Framework South East Asia Retrieved June 20 2011, from: <http://ec.europa.eu/research/iscp/index.cfm?lg=en&pg=asia>

<sup>8</sup> Strategic Partnership between the European Union (EU) and the countries of Latin America and the Caribbean (LAC). Commission of the European Communities The European Union and Latin America: Global Players in Partnership Retrieved June 20, 2011 from: [http://eeas.europa.eu/la/docs/com09\\_495\\_en.pdf](http://eeas.europa.eu/la/docs/com09_495_en.pdf)

<sup>9</sup> South East Asia (SEA) and European Union (EU) Network (NET), launched as a cooperating network for both regions in 2008, expected to run to 2012. Retrieved June 29, 2011 from: <http://www.sea-eu.net/>

<sup>10</sup> SEA-EU-NET (2011) Background Retrieved June 20 2011 from: <http://www.sea-eu.net/about.html>

<sup>11</sup> European Commission Scientific and Technological Cooperation between the Association of South East Asia Nations (ASEAN) and the European Union: Past Achievements and future prospects Retrieved June 20, 2011 from: [http://ec.europa.eu/research/iscp/pdf/978-92-79-09295-4\\_en.pdf](http://ec.europa.eu/research/iscp/pdf/978-92-79-09295-4_en.pdf)

ALCUE Knowledge Area.<sup>12</sup> Both regional dialogue instruments under the Fp7 have enabled a framework for cooperation through measures on scientific and technological policy dialogue, promotion and activities to improve coordination of international S&T cooperation of EU Member States (European Commission, 2008). Joint products of this framework where Mexico and Thailand have participated together with an important number of Asian and Latin-American members include the Network of Third Countries National Information Points (Icpc and countries with bilateral S&T agreements with the Ec)<sup>13</sup> and Reinforcing the network of National Contact Points (NCP) under the activities of International Cooperation by promoting trans-national cooperation<sup>14</sup> in the areas of Knowledge based Bio-economy and International Cooperation respectively. Both Mexico and Thailand have either completed or are currently participating in 44 (Mexico) and 21 (Thailand) Fp7 projects. The Fp7's 2011 thematic Work Programs (Cooperation, Ideas, People, Capacities) include and expect participation of Third Countries such as Thailand (e.g. Most of the Marie Curie Actions for the People Program are open to other third country researchers<sup>15</sup>) including the calls open for Third Countries in the EU-LAC area, and Mexico is likewise eligible for the same projects under its current S&T Agreement with the EU.<sup>16</sup> It is these specific potentialities enabled by the Fp7 framework in both regions that intend to be further researched for their development into multiple and successful projects.

<sup>12</sup> European Commission (2011) Research Ic: Policy Framework EU-LAC Retrieved June 20 2011, from: <http://ec.europa.eu/research/iscp/index.cfm?lg=en&pg=latin-america-carib-4>

<sup>13</sup> European Commission CORDIS (2011) Biocircle Retrieved June 20 2011 from: [http://cordis.europa.eu/fetch?CALLER=FP7\\_PROJ\\_EN&ACTION=D&DOC=1&CAT=PROJ&QUERY=0125c5b8de61:e30b:74eb449e&RCN=89798](http://cordis.europa.eu/fetch?CALLER=FP7_PROJ_EN&ACTION=D&DOC=1&CAT=PROJ&QUERY=0125c5b8de61:e30b:74eb449e&RCN=89798)

<sup>14</sup> European Commission CORDIS (2011) Retrieved June 20 2011 from: [http://cordis.europa.eu/fetch?CALLER=FP7\\_PROJ\\_EN&ACTION=D&DOC=58&CAT=PROJ&QUERY=012EB471D94d:752f:5a234e6d&RCN=93345](http://cordis.europa.eu/fetch?CALLER=FP7_PROJ_EN&ACTION=D&DOC=58&CAT=PROJ&QUERY=012EB471D94d:752f:5a234e6d&RCN=93345)

<sup>15</sup> European Commission (2010) 2011 Work Program People Retrieved June 20, 2011 from: [ftp://ftp.cordis.europa.eu/pub/fp7/docs/wp/people/m-wp-201101\\_en.pdf](ftp://ftp.cordis.europa.eu/pub/fp7/docs/wp/people/m-wp-201101_en.pdf)

<sup>16</sup> Official Journal of the European Union Agreement for the Scientific and Technological Cooperation between the European community and the United Mexican States Retrieved June 20, 2011 from: [http://eur-lex.europa.eu/LexUriServ/site/en/oj/2005/l\\_290/l\\_29020051104en00170024.pdf](http://eur-lex.europa.eu/LexUriServ/site/en/oj/2005/l_290/l_29020051104en00170024.pdf)

## Architecture of FP7

FP7 or the 7<sup>th</sup> Framework Program for Research and Technological Development is the main European Union (EU) funding program for research covering multiple geographic and thematic research areas in the European region and beyond.<sup>17</sup> As the successor of previous framework programs (e.g. FP6, FP5) FP7 was established to meet the public expectations on the role that science and technology (S&T) could have to address a wide range of European challenges that stretch from slow economic growth to environmental deterioration. (Muldur, *et al.*, 2006). This particular context would be the onset of the Lisbon Strategy put into operation in March 2000 in which Europe “acknowledged the central role which will be played by knowledge in the economy and society of the future” (Muldur, *et al.*, 2006, p. 62). The overall strategy put into action by the EU aimed at creating the bases for a knowledge driven economy using better R&D and information society policies, while completing the internal market and modernising the European social model by investing in people and social exclusion. According to this strategy, the EU would regain the conditions for full employment under continual investment in research, education and innovation.<sup>18</sup>

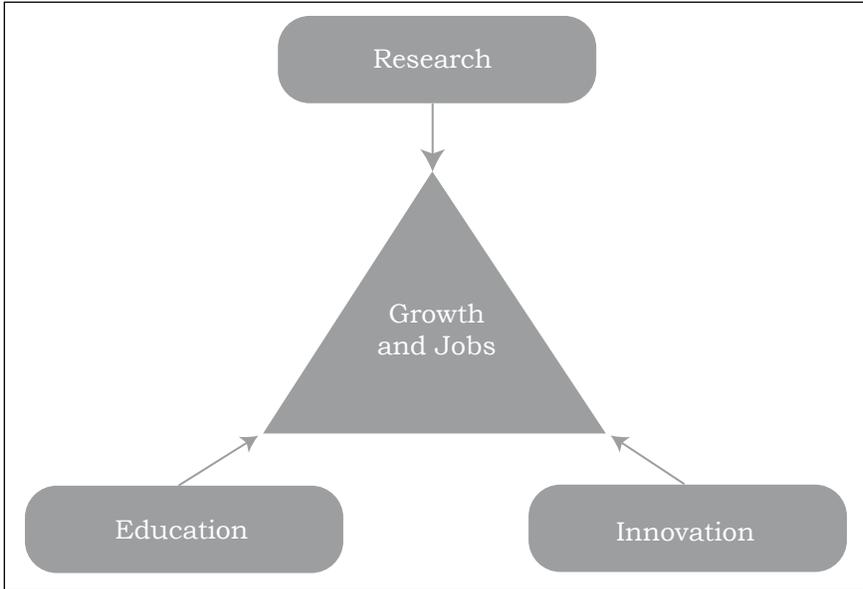
FP7 is expected to reinforce the existing links between these three knowledge angles by 1) strengthening the scientific and technological base of European industry and 2) encouraging its international competitiveness, while promoting research that supports the aforementioned policies.<sup>19</sup> Employment mobility among these interactions require that pluralism be considered an important asset, thus, strengthening the scientific technological base for industrial and international competitiveness means linking efforts and collaboration with a wider community such as universities and small and medium enterprises (SME).<sup>20</sup>

<sup>17</sup> European Commission (2011) What is FP7? The Basics Retrieved 10 July 2011 from: [http://ec.europa.eu/research/fp7/understanding/fp7inbrief/what-is\\_en.html](http://ec.europa.eu/research/fp7/understanding/fp7inbrief/what-is_en.html)

<sup>18</sup> Consilium (2011) Presidency Conclusions Lisbon European Council Retrieved 28 July 2011 from: [http://www.consilium.europa.eu/uedocs/cms\\_data/docs/pressdata/en/ec/00100-r1.en0.htm](http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/00100-r1.en0.htm)

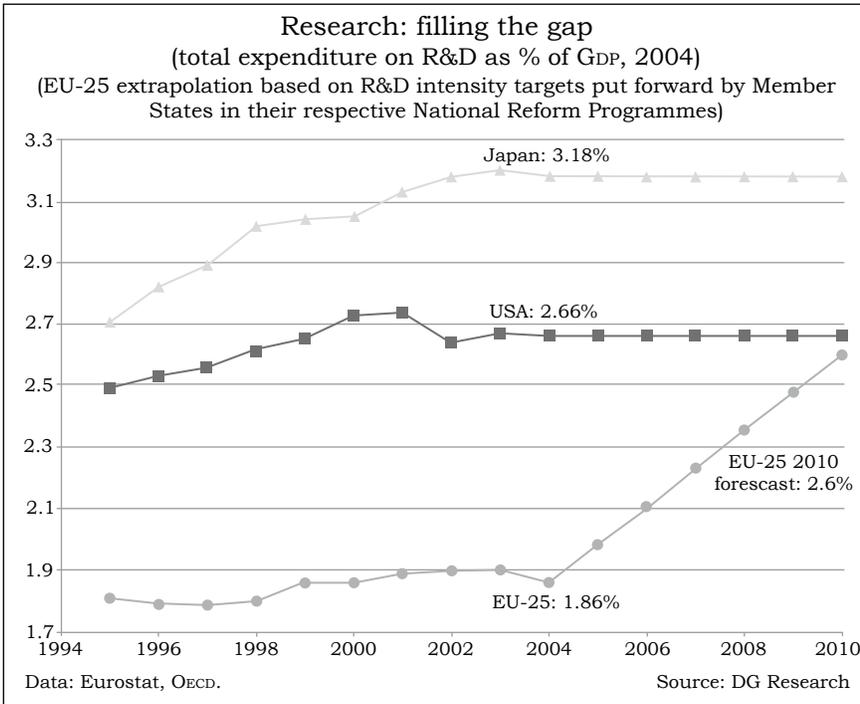
<sup>19</sup> European Commission (2011) Ibid. Retrieved 10 July 2011 from: [http://ec.europa.eu/research/fp7/understanding/fp7inbrief/what-is\\_en.html](http://ec.europa.eu/research/fp7/understanding/fp7inbrief/what-is_en.html)

<sup>20</sup> Swedish Presidency of the European Union (2011) The Knowledge Triangle Shaping the Future Europe Retrieved 28 July 2011 from: <http://www.hsv.se/download/18.211928b51239dbb43167ffe1820/ConferenceConclusions.pdf>



Source: European Commission (2010) [http://ec.europa.eu/euraxess/links/usa/newsletters/november\\_2010.htm](http://ec.europa.eu/euraxess/links/usa/newsletters/november_2010.htm). (In Cache)

Part of the EU's Lisbon strategy is to "catch up" with other nation's total expenditure in R&D as a percentage of its GDP. FP7 was assigned almost double the budget that FP6 executed. The current goal for European research is 3% of its GDP.



For research purposes, FP7 was organized into four thematic or specific Work Programs which include:

- a) Cooperation. Supporting all types of transnational research subdivided into ten distinct themes and aiming to consolidate leadership in key S&T areas.<sup>21</sup>
- b) Ideas. Dealing with “frontier” or “basic” research for knowledge generation and its translation into economic and social growth.<sup>22</sup>
- c) People. Divided into “Marie Curie Actions” and ranging from mobility fellowships to scientific career funding.<sup>23</sup>

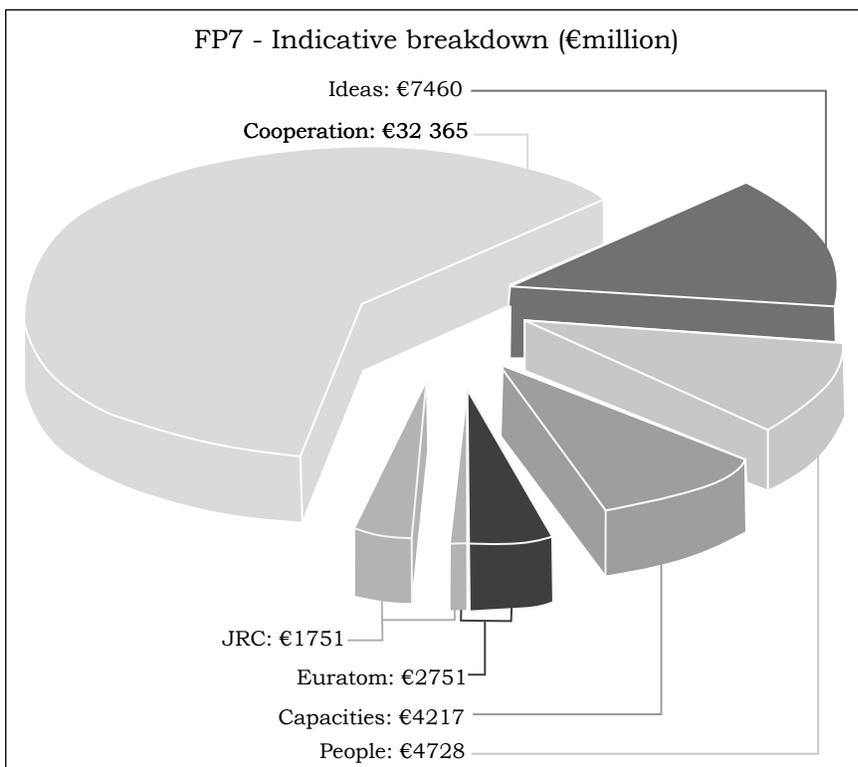
Capacities. Designed to obtain the most from research and innovation capacities and divided into seven broad areas.

<sup>21</sup> European Commission: CORDIS (2011) Cooperation Retrieved 11 July 2011 from: [http://cordis.europa.eu/fp7/cooperation/home\\_en.html](http://cordis.europa.eu/fp7/cooperation/home_en.html)

<sup>22</sup> European Commission: CORDIS (2011) Ideas Retrieved 11 July 2011 from: [http://cordis.europa.eu/fp7/ideas/home\\_en.html](http://cordis.europa.eu/fp7/ideas/home_en.html)

<sup>23</sup> European Commission: CORDIS (2011) Ideas Retrieved 11 July 2011 from: [http://cordis.europa.eu/fp7/ideas/home\\_en.html](http://cordis.europa.eu/fp7/ideas/home_en.html)

It also aims to support and contribute to the coherence of EU policies and initiatives through regional cooperation and training and complement the Cooperation program.



Source: European Commission (2010) [http://ec.europa.eu/euraxess/links/usa/newsletters/november\\_2010.htm](http://ec.europa.eu/euraxess/links/usa/newsletters/november_2010.htm). (In Cache)

Cooperation is the largest, most diverse, and most funded (over 60% of total funds) program in FP7 due to its importance for creating networks and international cooperation bases. It is also the project in which most Third countries participate. This budget assignment tends to work in a progressive manner so that a wide range of actors may participate in the program; these include private companies, public organizations, individual

researchers and countries outside the EU<sup>24</sup> that are the first line of actors for creating networks and participating in collaborative projects. The indicative breakdown shown in the graphic above includes the EURATOM program (for European nuclear research) and the Joint Research Center (JRC) budget which is an independent center assigned to evaluate and administrate non-nuclear research.<sup>25</sup>

The EU has implemented strategic regional instruments like the existing Regional EU-ASEAN Dialogue Instrument (READI)<sup>26</sup> which is a policy dialogue mechanism for promoting the ASEAN-EU dialogue relations in non-trade areas. READI has organised a number of experts consultations in trafficking in persons, Information and Communication Technologies, labour and employment, air transport, climate change, energy, and science and technology. And as of July of 2010 the EU had allocated 70 billion Euros to ASEAN regional programs.<sup>27</sup>

Another bi-regional dialogue on science, research, technology and innovation was adopted by the Madrid Action Plan 2010-2012 for the EU-LAC process<sup>28</sup> (Council of the European Union, 2010), with the main objective of creating the “EU-LAC knowledge Area” through improving cooperation and capacities for sustainable S&T research, including new and traditional knowledge and foster social inclusion.<sup>29</sup>

Both regional dialogues seek to give a level of coherence to the current processes in their respective regions.

Inside these regional dialogues FP7 has funded cooperation projects created in order to enhance regional cooperation

<sup>24</sup> European Commission: CORDIS (2011) People Retrieved 10 July 2011 from: [http://cordis.europa.eu/fp7/people/home\\_en.html](http://cordis.europa.eu/fp7/people/home_en.html)

<sup>25</sup> European Commission: CORDIS (2011) JRC Retrieved 10 July 2011 from: [http://cordis.europa.eu/fp7/jrc/home\\_en.html](http://cordis.europa.eu/fp7/jrc/home_en.html)

<sup>26</sup> European Commission (2011) Research Ic: Policy Framework South East Asia Retrieved June 20 2011, from: <http://ec.europa.eu/research/iscp/index.cfm?lg=en&pg=asia>

<sup>27</sup> ASEAN (2010) Overview of the ASEAN-EU Dialogue Relations Retrieved 25 July 2011 from: <http://www.asean.org/23216.htm>

<sup>28</sup> Strategic Partnership between the European Union (Eu) and the countries of Latin America and the Caribbean (Lac). Commission of the European Communities The European Union and Latin America: Global Players in Partnership Retrieved June 20, 2011 from: [http://eas.europa.eu/la/docs/com09\\_495\\_en.pdf](http://eas.europa.eu/la/docs/com09_495_en.pdf)

<sup>29</sup> Council of the European Union (2010) Towards a New Stage in Bi- Regional partnership: innovation and technology for sustainable development and social inclusion Retrieved 25 July 2011 from: [http://www.consilium.europa.eu/uedocs/cms\\_Data/docs/pressdata/en/er/114540.pdf](http://www.consilium.europa.eu/uedocs/cms_Data/docs/pressdata/en/er/114540.pdf)

capacities with South East Asia such as the “SEA-EU NET”<sup>30</sup> project, which was created to “expand scientific collaboration between Europe and Southeast Asia in a more strategic and coherent manner”<sup>31</sup> or SEACOOP<sup>32</sup> which deals with information and communication technology at a regional level as a direct result from an FP7 project (European Commission, 2008) and the aforementioned EU -LAC process’s ALCUE Knowledge Area<sup>33</sup> for Latin America. Both regional dialogue instruments under the FP7 have enabled a framework for cooperation through measures on scientific and technological policy dialogue, promotion and activities to improve coordination of international S&T cooperation of EU Member States (European Commission, 2008).

### *Scientific and Political Considerations about FP7*

Before analysing the participation of the selected countries for this paper, it is worthwhile to point out the case for FP7 and the Lisbon Strategy (soon to be updated to EU 2020 Strategy<sup>34</sup>) amidst the current international context.

First, academic participation in the international arena provides additional funding and access to supplementary and reliable resources that otherwise could not be available at a domestic level (Krige & Barth, 2006). While FP7 has assigned well over 32 billion Euros for the Cooperation program alone, the selected countries currently lag behind their own domestic goals and budget quotas for R&D as will be shown ahead.

Second, any academic field that progresses inwards (e.g. seeking to approach themes only relevant to scholars) limits its future capacity to share and ultimately apply knowledge. To

<sup>30</sup> South East Asia (SEA) and European Union (EU) Network (NET), launched as a cooperating network for both regions in 2008, expected to run to 2012. Retrieved June 29, 2011 from: <http://www.sea-eu.net/>

<sup>31</sup> SEA - EU - NET (2011) Background Retrieved June 20 2011 from: <http://www.sea-eu.net/about.html>

<sup>32</sup> European Commission Scientific and Technological Cooperation between the Association of South East Asia Nations (ASEAN) and the European Union: Past Achievements and future prospects Retrieved June 20, 2011 from: [http://ec.europa.eu/research/iscp/pdf/978-92-79-09295-4\\_en.pdf](http://ec.europa.eu/research/iscp/pdf/978-92-79-09295-4_en.pdf)

<sup>33</sup> European Commission (2011) Research IC: Policy Framework EU-LAC Retrieved June 20 2011, from: <http://ec.europa.eu/research/iscp/index.cfm?lg=en&pg=latin-america-carib-4>

<sup>34</sup> European Commission Europe 2020 (2011) Europe 2020 Retrieved 29 July 2011 from: [http://ec.europa.eu/europe2020/index\\_en.htm](http://ec.europa.eu/europe2020/index_en.htm)

sort out the situation, different fields must not only consider interdisciplinary projects, but at the same time connect to the public sphere (i.e. the broader public, policy makers...). FP7 is also a communication tool for the scientific community. This statement comes from nowhere else but the vast array of collaborative projects that have been completed under the framework and the projects that are expected to be executed in the future.

Finally science and technology have an international vocation but they are not exempt from a political dimension. In her address at the Conference on the Common Strategic Framework for EU research and Innovation in June 2011, the Member of the European Parliament (MEP) Marisa Matias pointed out when referring to the balance of results by her peers on FP7 so far, that:

“We cannot speak about excellence and results as empty significant, we need to give the meaning to these words considering the different participants we have to take into account”.<sup>35</sup>

While impossible to attain ourselves solely to specific definitions (especially those that intend to be taken literally) for such a large program, the MEP did signal a broader dimension to the scientific challenges and an important principle to any public policy or program: definitions that lack a broader context are prone to problems in the broader context. The need to reflect and contextualize the financial incentives in FP7 necessarily include the fact that, in any public program (national or international) with designated public funds, there are interest groups amidst the different sectors of participation. However, FP7 is not solely a financial mechanism, but also a political one. At its heart, the Lisbon Agenda sought out not only to create jobs and economic growth, but to create them in an ultimately different form. The pluralism shown through the inclusion of participants in the framework is not only the base for the program, but ultimately defines the manner in which knowledge is produced, applied and shared. Intellectual property indicators can show us how

<sup>35</sup> European Commission Directorate General for Interpretation (Director/Producer). (2011) Conference on the Common Strategic Framework for EU research and Innovation funding Opening Session: Address by Marisa Matias MEP [http://webcast.ec.europa.eu/eutv/portal/res/\\_v\\_fl\\_300\\_es/player/index\\_player.html?id=12146&pid=12143&userlocale=es](http://webcast.ec.europa.eu/eutv/portal/res/_v_fl_300_es/player/index_player.html?id=12146&pid=12143&userlocale=es)

knowledge can be appropriated at different levels and by different countries, as well as different sectors inside those countries as will be shown for the selected countries. FP7 offers an intellectual rights scheme for most projects that make the rights negotiable, transferable and/or available for all participants.

### *Participation in FP7 of selected countries*

Both Mexico and Thailand have either completed or are currently participating in 44 (Mexico<sup>36</sup>) and 21 (Thailand<sup>37</sup>) FP7 projects. According to the World Bank, the latest estimate for Mexico's research and development (R&D) expenditure (2007) was equivalent to 0.37% of its Gross National Product (GDP) which represented a decrease in relation to 2006 (0.39%).<sup>38</sup> The data reflects a deficit regarding the current Mexican Law of Science and Technology that requires 1% of the Nation's GDP as an expenditure for this area.<sup>39</sup> The latest data the World Bank displays for Thailand's R&D expenditure was 0.25% of its GDP in 2006.<sup>40</sup> In Thailand's National Science and Technology Development Agency Research and Innovation Report for 2011, it admits that the percentage has largely fluctuated between 0.2% and 0.25%.<sup>41</sup>

These two national levels of investment in R&D are indicating the enormous potential to support national efforts by participating in multilateral funding and projects.

The World Intellectual Property Organization (WIPO) observes in its 2010 report on intellectual property indicators that out of a total of 10,440 patents granted in Mexico, 10,243

<sup>36</sup> European Commission: CORDIS (2011) Find a Project Retrieved 11 July 2011 from: [http://cordis.europa.eu/fetch?CALLER=FP7\\_PROJ\\_EN&QZ\\_WEBSRCH=&QM\\_PJA=&QM\\_EN\\_OC\\_A=MEXICO&USR\\_SORT=EN\\_QVD+CHAR+DESC](http://cordis.europa.eu/fetch?CALLER=FP7_PROJ_EN&QZ_WEBSRCH=&QM_PJA=&QM_EN_OC_A=MEXICO&USR_SORT=EN_QVD+CHAR+DESC)

<sup>37</sup> European Commission: CORDIS (2011) Find a Project Retrieved 11 July 2011 from: [http://cordis.europa.eu/fetch?CALLER=FP7\\_PROJ\\_EN&QZ\\_WEBSRCH=&QM\\_PJA=&QM\\_EN\\_OC\\_A=THAILAND&USR\\_SORT=EN\\_QVD+CHAR+DESC](http://cordis.europa.eu/fetch?CALLER=FP7_PROJ_EN&QZ_WEBSRCH=&QM_PJA=&QM_EN_OC_A=THAILAND&USR_SORT=EN_QVD+CHAR+DESC)

<sup>38</sup> World Bank (2011) Research and Development expenditure (% of GDP) retrieved 27 July 2011 from: <http://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS/countries/1W?display=default>

<sup>39</sup> Cámara de Diputados (2011) Ley de Ciencia y Tecnología. Retrieved 28 July 2011 from: <http://www.diputados.gob.mx/LeyesBiblio/pdf/242.pd>

<sup>40</sup> World Bank (2011) Research and Development expenditure (% of GDP). Retrieved 27 July 2011 from: <http://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS/countries/1W?display=default>

<sup>41</sup> National Science and Technology Development Agency (2011) The Report: Thailand 2011. Retrieved from <http://www.nstda.or.th/eng/index.php/patents-a-publications/publications/others/item/188-the-report-thailand-2011>

were granted to non-resident (i.e. foreign) entities,<sup>42</sup> equivalent to a 98.1% of total patents granted for the year 2008.

According to the WIPO, Thailand granted a total of 966 patents in 2008 and 904 of them were granted to non-residents,<sup>43</sup> indicating a 93.5% of the total patents grants in that year.

Mexico currently has a bilateral agreement for scientific and technological cooperation with the EU that was put into practice in 2005.<sup>44</sup> Mexico and the EU have also established a mutual Science and Technology International Cooperation Fund (FONCYCIT, additional to Fp7) for financing networks and collaborative research with a total budget of 20 million Euro (10 million Euros each).<sup>45</sup> Each project and network consists of at least two Mexican and two EU entities, which include research centers, universities and SMES from both regions.<sup>46</sup>

During the Sixth Framework Program (FP6) Mexican participation was divided in 59 participants from 33 institutions in 48 projects.<sup>47</sup> A 2010 survey by Manfred Horvat and José Luis Briansó (2010) amongst Mexican participants in FP6 and FP7 showed that two-thirds of all projects were initiated from Europe, 16.7% were joint initiatives and only 7.4% were initiated by Mexico. Empirical research in Mexico has also pointed out this disadvantage concerning the absence of adequate instruments for project promotion and connecting academics with the EU's funding programs, due to often centralized coordination efforts. (Haberleithner, 2010). It is no wonder then that the Mexican National Board for Science and Technology (Consejo Nacional de Ciencia y Tecnología /CONACYT) is, apart from being an active participant in FP6 and FP7, the main Mexican institution that so

<sup>42</sup> WIPO (2010) World Intellectual Property Indicators. Retrieved 29 July 2011 from: [http://www.wipo.int/export/sites/www/ipstats/en/statistics/patents/pdf/941\\_2010.pdf](http://www.wipo.int/export/sites/www/ipstats/en/statistics/patents/pdf/941_2010.pdf)

<sup>43</sup> WIPO (2010) Ibid.

<sup>44</sup> EUR-Lex (2011) JOL\_2005\_290\_R\_0016\_01 Retrieved 28 July 2011 from: <http://eur-lex.europa.eu/Notice.do?val=414547:cs&lang=es&pos=1&phwords=Ciencia%20y%20tecnologia~Mexico~&checktexte=checkbox>

<sup>45</sup> PCTI (2011) ¿Qué es FONCYCIT? Retrieved 28 July 2011 from: <http://www.pcti.gob.mx/es-es/foncicyt/Paginas/queesfoncicyt.aspx>

<sup>46</sup> PCTI (2011) Project Catalogue of the Science and Technology International Cooperation Fund <http://www.pcti.gob.mx/es-es/foncicyt/DocumentosInteres/PUBLICACI%C3%93N/Catalogue-Foncicyt.pdf>

<sup>47</sup> Horvat, Manfred & Briansó, José Luis (2010). Review of the S&T Cooperation between the European Community and the United States of Mexico 2005-2010. Retrieved 27 July 2011 from: [http://www.pcti.gob.mx/es-es/Documents/100923\\_Horvat-Brianso%20Report\\_SC%20Meeting\\_Brussels.pdf](http://www.pcti.gob.mx/es-es/Documents/100923_Horvat-Brianso%20Report_SC%20Meeting_Brussels.pdf)

far in FP7 has organized proposals for FP7 calls on the Mexican end.<sup>48</sup>

A brief evaluation of the existing projects in South East Asia reveal disposition for intraregional cooperation<sup>49</sup> in spite of the disparities regarding the quantity and extension of projects. Moreover, South East Asian participants share with Mexico a similar lack of know-how for coordinating projects, as none of the projects either completed or under current execution were originally coordinated by South East Asian instances. Rather, the organizations that responded to FP7 calls are located almost entirely in Europe, even the projects whose participants are exclusively located in South East Asia.<sup>50</sup> As of April 2011, the Findings and Conclusions report of the SEA-EU-NET project found that Thailand had the highest participation rate amongst the ASEAN countries and has shown a broad range of interests inside the COOPERATION program from ENV (Environment) to ICT (Information and Communication Technologies), KBBE (Knowledge Based Bio-Economy), PEOPLE, SSH, SST and ENERGY.<sup>51</sup>

### *Mexico and Thailand together in FP7*

Joint products of this framework where Mexico and Thailand have participated together with an important number of Asian and Latin-American members include the *Creating a circle by extending the Bio NCP network to Third Country NIPs (Bio CIRCLE)*<sup>52</sup> in the area of Knowledge based Bio-economy (KBBE) and *Trans-*

<sup>48</sup> European Commission CORDIS (2011). Bureau for EU-Mexican science and technology cooperation step II (UEMEXCYT II) Retrieved 10 July 2011 from [http://cordis.europa.eu/fetch?CALLER=FP7\\_PROJ\\_EN&ACTION=D&DOC=1&CAT=PROJ&QUERY=013170cad6e4:2e6f:2545ab19&RCN=89060](http://cordis.europa.eu/fetch?CALLER=FP7_PROJ_EN&ACTION=D&DOC=1&CAT=PROJ&QUERY=013170cad6e4:2e6f:2545ab19&RCN=89060)

<sup>49</sup> European Commission CORDIS Seventh Framework Program: Find a Project Recuperated 20 June 2011 from: [http://cordis.europa.eu/fp7/projects\\_en.html](http://cordis.europa.eu/fp7/projects_en.html). Vietnam's participation in 24 projects, Thailand's participation in 21 projects, Indonesia's participation in 16 projects, Malaysia 17, Singapore 16, Philippines 14, Cambodia 6, Lao 2 Brunei 1, Myanmar 1.

<sup>50</sup> Seventh Framework Program Support to policy dialogues and strengthening of cooperation with Southeast Asia (SEALING) (Retrieved June 20 2011 de: [http://cordis.europa.eu/fetch?CALLER=FP7\\_PROJ\\_ES&ACTION=D&DOC=3&CAT=PROJ&QUERY=0130aa36ccb6:31b3:586dbdda&RCN=93729](http://cordis.europa.eu/fetch?CALLER=FP7_PROJ_ES&ACTION=D&DOC=3&CAT=PROJ&QUERY=0130aa36ccb6:31b3:586dbdda&RCN=93729))

<sup>51</sup> SEA-EU-NET (2011) ASEAN participation in FP7-Findings and Conclusions Retrieved 10 July 2011 from [http://www.sea-eu.net/attach/SEA-EU ParticipationFindings\\_April2011.pdf](http://www.sea-eu.net/attach/SEA-EU%20ParticipationFindings_April2011.pdf)

<sup>52</sup> European Commission CORDIS (2011) Biocircle Retrieved June 20 2011 from: [http://cordis.europa.eu/fetch?CALLER=FP7\\_PROJ\\_EN&ACTION=D&DOC=1&CAT=PROJ&QUERY=0125c5b8de61:e30b:74eb449e&RCN=89798](http://cordis.europa.eu/fetch?CALLER=FP7_PROJ_EN&ACTION=D&DOC=1&CAT=PROJ&QUERY=0125c5b8de61:e30b:74eb449e&RCN=89798)

*national co-operation among NCPS for International Cooperation (INCONTACT-ONE WORLD)*<sup>53</sup> in the International Cooperation (INCO) area. Both projects are subject to the aforementioned specific Cooperation Work Program.

As for the BIO CIRCLE project, defined as a Network of Third Countries National Information Points (ICPC and countries with bilateral S&T agreements with the Ec), was set up over a two year period (October 2008- January 2011) to identify, share and implement good practices between National Contact Points (NCP) and National Information Points (NIP)<sup>54</sup> for the FP7 Food, Agriculture and Fisheries and Biotechnology theme. The call for the project was organised by the Agency for the Promotion of European Research in Rome.<sup>55</sup> The Thai and Mexican actors put into contact were the National Science and Technology Development Agency of Thailand (NSTDA) and the National Autonomous University of Mexico (UNAM). The NSTDA was established in 1991 as a science park North of Bangkok and home to four national research centers.<sup>56</sup> The NSTDA's current research and development (R&D) program is dedicated to agriculture and food; energy and environment; health and medicine; bio resources, communities and the underprivileged; and manufacturing and service industries.<sup>57</sup> UNAM is Mexico's top public university and concentrates a high percentage of the country's research,<sup>58</sup> in the case of BIO CIRCLE, UNAM's Food Program (PUAL) participated and is currently a NCP for FP7. After BIO CIRCLE was completed in January of 2011, UNAM went on

<sup>53</sup> European Commission CORDIS (2011) IN CONTACT Retrieved June 20 2011 from: [http://cordis.europa.eu/fetch?CALLER=FP7\\_PROJ\\_EN&ACTION=D&DOC=58&CAT=PROJ&QUERY=012eb471d94d:752f:5a234e6d&RCN=93345](http://cordis.europa.eu/fetch?CALLER=FP7_PROJ_EN&ACTION=D&DOC=58&CAT=PROJ&QUERY=012eb471d94d:752f:5a234e6d&RCN=93345)

<sup>54</sup> NCP's are national structures designated nationally by competent authorities following. The type and level may vary from country to country since there is no fixed standard, only a series of Guiding Principles by FP7. NIP's are likewise national structures setup to promote updated information regarding FP7 opportunities.

<sup>55</sup> European Commission CORDIS (2011) Biocircle Retrieved June 20 2011 from: [http://cordis.europa.eu/fetch?CALLER=FP7\\_PROJ\\_EN&ACTION=D&DOC=1&CAT=PROJ&QUERY=0125c5b8de61:e30b:74eb449e&RCN=89798](http://cordis.europa.eu/fetch?CALLER=FP7_PROJ_EN&ACTION=D&DOC=1&CAT=PROJ&QUERY=0125c5b8de61:e30b:74eb449e&RCN=89798)

<sup>56</sup> The National Center for Genetic Engineering and Biotechnology, the National Metal and Materials Technology Center, the National Electronics and Computer Technology Center and the National Nanotechnology Center.

<sup>57</sup> National Science and Technology Development Agency (2011). NSTDA Profile Retrieved 27 July 2011 from: <http://www.nstda.or.th/eng/index.php/at-a-glance/vision-mission>

<sup>58</sup> Corsi, Cabrera Irma (n/d) ¿Dónde y quiénes realizan la investigación en la UNAM? Retrieved 25 July 2011 from: [http://www.cife.unam.mx/Programa/D14/Area\\_01A/14FM-T05.pdf](http://www.cife.unam.mx/Programa/D14/Area_01A/14FM-T05.pdf)

to participate in BIO CIRCLE 2<sup>59</sup> which is currently in execution. Thailand's NSTDA is currently not participating in this last project.

The second project with Mexican and Thai participation under FP7, INCONTACT-ONE WORLD, is currently under execution having started in January 2010 and organised by the Greek Foundation for Research and Technology (FORTH), similar to BIO CIRCLE, it seeks to stimulate closer cooperation among NCP's in the field of International Cooperation. Once again Thailand's NSTDA is a participant as well as Mexico's CONACYT.<sup>60</sup> A product of this project is INCONTACT'S INCO-Wiki web page designed to foster updated information regarding FP7 and where any participant may contribute.<sup>61</sup>

### ***Conclusions and current opportunities***

The study was made to shine light on the possibilities for research among participants in countries in and outside the EU under the largest R&D framework worldwide known as FP7. As a reliable source of funding over a period of time, FP7 could offer Mexico and Thailand the supplementary funds much necessary for research. The paper also hopes to have pointed out that for this multilateral effort to strive beyond its tangible financial attractiveness and create a scientific community engaged in collaborative research and knowledge diffusion, the bases for cooperation have to remain plural and redefined not only through past experiences but through updated information as well, and according to the study, FP7 calls are ready and available for collaborative projects among both countries or for their individual access as well. Ultimately for Mexico and Thailand, the opportunity that FP7 represents for their share of knowledge could also spawn further collaboration among both countries as further studies become interested.

Considering that both countries have similar research expenditures, resident and non-resident patent ratios (more foreign than domestic) and similar quantities of researchers per million people—in the case of Mexico 347, and Thailand

<sup>59</sup> European Commission CORDIS (2011) BIO CIRCLE 2 Retrieved 25 July 2011 from: [http://cordis.europa.eu/fetch?CALLER=FP7\\_PROJ\\_EN&ACTION=D&DOC=2&CAT=PROJ&QUERY=013170f498dc:ea32:26ffed7&RCN=98629](http://cordis.europa.eu/fetch?CALLER=FP7_PROJ_EN&ACTION=D&DOC=2&CAT=PROJ&QUERY=013170f498dc:ea32:26ffed7&RCN=98629)

<sup>60</sup> European Commission CORDIS (2011) IN CONTACT , Ibid.

<sup>61</sup> IncoWiki (2011) Main Page Retrieved 27 July 2011 from [http://www.ncp-incontact.eu/nkswiki/index.php?title=Main\\_Page](http://www.ncp-incontact.eu/nkswiki/index.php?title=Main_Page)

316 (World Bank, 2007a) as well as technicians per million people— Mexico, 183; Thailand, 140 (World Bank, 2007b), both actors might consider a future bilateral agreement in scientific and technological cooperation between both countries, also designed for future training programs for researchers and government staff to raise the competitiveness of national experts involved in research and development projects and policies in the international arena. Obviously this is a matter of additional effort whose strategic impact is mainly based on mid-term and long term effects. On a short term level the instruments already established to raise the participation of Mexico and Thailand in FP7 could be enough in a quantitative sense —budgets, calls, seminars— but lack the qualitative involvement of both parts, especially dealing with innovation within their own societies; this will also be a challenge for the European Union’s newest framework program —dubbed “Horizon 2020”— which will follow in FP7’s steps and that will have to take into account problems raised from within Third Countries outside the European Research Area.

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