

Southern Regional Model United Nations XXI  
*The Global Paradigm: Enhancing Peace through Security Initiatives*  
November 18-20, 2010  
Atlanta, GA  
Email: [escap@srmun.org](mailto:escap@srmun.org)



Dear Delegates,

Welcome to the Southern Regional Model United Nations Conference (SRMUN) XXI and the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP). We are very eager to meet and work with you in November. My name is Fawn Apgar, and I will be serving as Director of ESCAP. This is my second year on the SRMUN staff and my first year as a Director. Joining me on the ESCAP staff is Stephanie Aaronson, who will be serving as Assistant Director of the Committee. Stephanie has attended SRMUN as a delegate and this is her first time on staff.

The United Nations Economic and Social Commission for Asia and the Pacific was established in 1947 (originally as the United Nations Economic Commission for Asia and the Far East) as a regional body focused on economic integration. In 1974 its name was changed as a better reflection of the social dimension of its work. As this year's theme of SRMUN is *The Global Paradigm: Enhancing Peace through Security Initiatives*, we have selected three topics for you to discuss at this year's conference.

- I. Increasing Economic Security and Development through Innovation and Production of Alternative Sources
- II. Promoting the Standard of Living Throughout Pacific Island Countries and Territories Through Sustainable Urban Development
- III. Expanding the Objectives of the Tsunami Regional Trust Fund

Although this background guide will supply you with a background for your research, it is not to be used as your only source of information. You are fully expected to conduct a great deal of research to be fully prepared for the committee's work in November.

Each delegation is required to submit a position paper for consideration. It should be no longer than two pages in length (single-spaced) and demonstrate your country's position, policies, and recommendations on each of the three topics. For more information regarding the position papers, please visit the SRMUN website at <http://www.srmun.org>. **Position papers MUST be submitted by October 22, 2010 at 11:59pmEST. Please visit the SRMUN website for upload instructions.**

Stephanie and I send you the best regards as you prepare for the 2010 SRMUN Conference.

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## The History of the Economic and Social Commission for Asia and the Pacific

The United Nations Economic Commission for Asia and the Far East (ECAFE) was created in March 1947 by the Economic and Social Council as one of the first regional economic commissions established to give aid to countries devastated by World War II.<sup>1</sup> The Economic and Social Council, considering recommendations from the General Assembly, adopted resolution 36 (IV) on 28 March 1947, which established ECAFE as a regional commission in Shanghai, China.<sup>2</sup> In January 1949, the ECAFE headquarters was moved to Bangkok, Thailand, where it presently remains.<sup>3</sup> ECAFE formally changed its name to the Economic and Social Commission for Asia and the Pacific (ESCAP) in 1974 in order to fully recognize both the economic and social responsibilities of the body, as well as to fully recognize the geographic location of its members.<sup>4</sup> The mandate of the commission was broadened by the General Assembly with the adoption of resolution GA 32/197 on 20 December 1977, which named the commission as the main economic and social development center within Asia and the Pacific.<sup>5</sup>

The over-arching objective of ESCAP is to promote regional cooperation for the economic and social development of countries in the Asia-Pacific region. The priorities of the Commission are determined by the Member States, as well as from directives of the General Assembly and the UN Economic and Social Council, with great emphasis on issues related to the Millennium Development Goals (MDGs).<sup>6</sup> ESCAP works to fulfill its mandate by strengthening institutional capacities, which support the rights and needs of individuals, communities, and economies.<sup>7</sup> Initially, regional bodies were created by ESCAP to focus on specific areas of interest to the commission. These five Regional Institutions include: the Asian and Pacific Training Centre for Information and Communication Technology for Development (APCICT); Asian and Pacific Centre for Transfer of Technology (APCTT); Centre for Alleviation of Poverty through Secondary Crops' Development in Asia and the Pacific (CAPSA); Statistical Institute for Asia and the Pacific; and the United Nations Asian and Pacific Centre for Agricultural Engineering and Machinery (UNAPCAEM).<sup>8</sup> In May of 2002, the Commission began reviewing the conference structure in order to better focus on the mandate of the Commission as well as effectively obtaining the MDGs by 2015.<sup>9</sup> Eight committees were created in April 2008 through Resolution 64/1, which carry out the core functions and overall goals related to the MDGs. These eight committees include: Committee on Macroeconomic Policy; Poverty Reduction and Inclusive Development; Committee on Trade and Investment; Committee on Transport; Committee on Environment and Development; Committee on Information and Communications Technology; Committee on Disaster Risk Reduction; Committee on Social Development; and the Committee on Statistics. Each of these committees meets biennially and works to review and promote a regionally collaborative approach to the challenging developmental issues that are affecting the region.<sup>10</sup>

Since inception, ESCAP, as a regional body, has proved to be a beneficial force within the Asian-Pacific region. The establishment by ESCAP of inter-governmental organizations, as well as regional commissions and institutions, have aided in the support and development of social and economic programs within the Asian-Pacific region. Specifically, the Asian Development Bank was established in 1966 by 31 Member States in order to promote the socio-economic development of the region through loans, technical assistance, and the promotion of investment in developmental projects.<sup>11</sup> Shortly after the inception of ECAFE, Member States began taking an interest in the development of the Lower Mekong River area and made recommendation to the UN for the creation of a

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<sup>1</sup> "History: Inception." United Nations Economic Commission for Europe. <http://www.unece.org/oes/history/history.htm>

<sup>2</sup> Ibid.

<sup>3</sup> "History of UN ESCAP." United Nations Economic and Social Commission for Asia and the Pacific. [http://www.unescap.org/unis/sub\\_unis/history\\_unescap.asp](http://www.unescap.org/unis/sub_unis/history_unescap.asp)

<sup>4</sup> Ibid.

<sup>5</sup> "ESCAP at a Glance." United Nations Development Group. [www.undg.org/docs/7971/ESCAP-at-a-Glance-25.05.09.pdf](http://www.undg.org/docs/7971/ESCAP-at-a-Glance-25.05.09.pdf)

<sup>6</sup> "Programme Management: ESCAP vision." United Nations ESCAP. [www.unescap.org/pmd/](http://www.unescap.org/pmd/)

<sup>7</sup> "About Us: Programme." United Nations ESCAP. [www.unescap.org/about/subprog.asp](http://www.unescap.org/about/subprog.asp)

<sup>8</sup> "Programme Management at ESCAP: Programme Structure" United Nations ESCAP [www.unescap.org/pmd/prog-structure.asp](http://www.unescap.org/pmd/prog-structure.asp)

<sup>9</sup> ESCAP Resolution 64/1 Restructuring of the conference structure of the Commission. 30 April 2008

<sup>10</sup> "About Us: Committees" United Nations ESCAP. [www.unescap.org/about/committees.asp](http://www.unescap.org/about/committees.asp)

<sup>11</sup> "Ministerial Conference on Environment and Development in Asia and the Pacific 2000: Pacific Island Regional Organizations." United Nations ESCAP. 31 August – 5 September 2000.

commission dedicated to the protection and development of the region.<sup>12</sup> On 17 September 1957, the UN endorsed a statute which established the Committee for the Coordination of Investigations of the Lower Mekong Basin which worked under the umbrella of ESCAP.<sup>13</sup> In 1995, the Committee was released from the umbrella of ESCAP through the Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin, which changed the name of the committee to the Mekong River Commission for Sustainable Development.<sup>14</sup> As it stands today, the Commission works as an intergovernmental organization dedicated to the development of technology and protection of the water quality, as well as the quality of life surrounding the Mekong River. The Mekong Committee stands as a model for international cooperation in the struggle for natural resource management and development and is one of the many milestone accomplishments of ESCAP.<sup>15</sup>

ESCAP reports to the United Nations Economic and Social Council (ECOSOC) and makes recommendations and suggestions for resolutions.<sup>16</sup> Annual meetings are held at the ministerial level to discuss issues related to sustainable economic and social development, inclusive to the Asian-Pacific region. The annual meetings are used as a forum for governments to debate issues that all or a group of countries in the region face in which countries can learn from each other, benefit from a multi-state solution, or are a sensitive or new issue to the individuals affected. Recommendations for policy and change are delivered from the eight core committees of the Commission to the Executive Secretary, who is appointed by the Secretary-General of the United Nations to lead the Commission and subsidiary bodies. It is also the position of the Executive Secretary to maintain a continued focus on issues and programmes of work by the committees and to make adjustments of recommendations and work to align with the mandate of the Commission prior to presenting to ECOSOC.<sup>17</sup> Decisions and recommendations are made by a simple majority of the Member States who are present, with each member of the Commission allowed one vote.<sup>18</sup> The implementation of policies and recommendations of the body are carried out through five Regional Institutions that work to support the eight committees that create the strategic framework of ESCAP. ESCAP receives its annual budget as a portion of the total UN regular budget. ESCAP also receives a portion of extra budgetary contributions which are voluntary contributions from countries, specialized agencies, and other donors. These voluntary funds are used to finance technical cooperation projects, which focus on increasing the productivity and cooperation of member countries in obtaining the Millennium Development Goals.<sup>19</sup>

ESCAP is comprised of 62 members including 53 permanent members and 9 associate members. The 53 permanent members of the United Nations Economic and Social Commission for Asia and the Pacific include:

AFGHANISTAN, ARMENIA, AUSTRALIA, AZERBAIJAN, BANGLADESH, BHUTAN, BRUNEI DARUSSALAM, CAMBODIA, CHINA, DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA, FIJI, FRANCE, GEORGIA, INDIA, INDONESIA, IRAN, JAPAN, KAZAKHSTAN, KIRIBATI, KYRGYZSTAN, LAO PEOPLE'S DEMOCRATIC REPUBLIC, MALAYSIA, MALDIVES, MARSHALL ISLANDS, MICRONESIA, MONGOLIA, MYANMAR, NAURU, NEPAL, NETHERLANDS, NEW ZEALAND, PAKISTAN, PALAU, PAPUA NEW GUINEA, PHILIPPINES, RUSSIAN FEDERATION, SAMOA, SINGAPORE, SOLOMON ISLANDS, SRI LANKA, TAJIKISTAN, THAILAND, REPUBLIC OF KOREA, (TIMOR-LESTE, TONGA, TURKEY, TURKMENISTAN, TUVALU, UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND, UNITED STATES OF AMERICA, UZBEKISTAN, VANUATU, and VIET NAM.

The nine Associate members of the UN Economic and Social Commission to Asia and the Pacific are:

AMERICAN SAMOA, COOK ISLANDS, FRENCH POLYNESIA, GUAM, HONG KONG, MACAO, NEW CALEDONIA, NIUE, NORTHERN MARIANA ISLANDS.<sup>20</sup>

<sup>12</sup> "The Story of Mekong cooperation" Mekong River Commission for Sustainable Development.

[http://www.mrcmekong.org/about\\_mrc.htm#Story](http://www.mrcmekong.org/about_mrc.htm#Story)

<sup>13</sup> *Agreement on the cooperation for the sustainable development of the Mekong River Basin*. Mekong River Commission for Sustainable Development. 15 April 1995

<sup>14</sup> Ibid.

<sup>15</sup> "The Story of Mekong cooperation" Mekong River Commission for Sustainable Development.

[http://www.mrcmekong.org/about\\_mrc.htm#Story](http://www.mrcmekong.org/about_mrc.htm#Story)

<sup>16</sup> Ibid.

<sup>17</sup> "About Us: Commission" United Nations ESCAP. <http://www.unescap.org/about/commission.asp>

<sup>18</sup> *Economic Commission for Asia and the Far East Annual Report to the Sixth Session of the Economic and Social Council Part III. Economic and Social Commission for Asia and the Pacific*. 6 December 1947

<sup>19</sup> "Programme Management at ESCAP: ESCAP Resources." United Nations ESCAP. [www.unescap.org/pmd/resources.asp](http://www.unescap.org/pmd/resources.asp)

<sup>20</sup> "About Us: Members." United Nations ESCAP. [www.unescap.org/about/member.asp](http://www.unescap.org/about/member.asp)

## Topic I: Increasing Economic Security and Development Through Innovation and Production of Alternative Energy Sources

### *Introduction*

The World Commission on Environment and Development first met in 1984 with the goal of serving a notice to the world that in order for sustainable development to remain sustainable for future generations, governments must take action to ensure ecological resources are in place to maintain and further such development. 900 days later, in April of 1987, the Commission published the “Report of the World Commission on Environment and Development: Our Common Future”, also known as ‘The Brundtland Report’.<sup>21</sup> This milestone report served as a notice to governments of the world encouraging the implementation of policies that would promote sustainable development which grows in harmony with the environment. In 1992, the first earth summit was held in Rio de Janeiro, Brazil. This conference led to the signing of the Convention on Climate Change and the creation of the Commission on Sustainable Development.<sup>22</sup> The importance of implementing policies that allowed development to occur in accordance with environmental standards was reaffirmed by countries of the world in Johannesburg, South Africa in 2002 at the World Summit on Sustainable Development.<sup>23</sup> The Johannesburg Plan of Implementation, which urged national governments to begin putting such policies in place by 2005, served as a major inspiration to countries of Asia and the Pacific as governments began to realize the stresses of their recent, rapid growth on the environment.<sup>24</sup>

In March 2005, the Ministerial Conference on Environment and Development held its 5<sup>th</sup> conference in Seoul, Republic of Korea where they discussed a strategy and policy focus regarding economic growth and the impact on the environment.<sup>25</sup> The conference also focused on encouraging policy development which would work to simultaneously achieve Millennium Development Goal 1, eradicating extreme poverty, in harmony with Millennium Development Goal 7, ensure environmental sustainability. Resulting from the conference were three key documents, which included the ‘Regional Implementation Plan 2006-2010’, the ‘Ministerial Declaration’, and the ‘Seoul Initiative on Green Growth’.<sup>26</sup> The “Green Growth” approach is a mandate for ESCAP Member States to work to implement national policies which encourage sustainable growth and development in the Asia-Pacific region while working to preserve the natural resources within.<sup>27</sup> The initiative of Green Growth was endorsed by Commission Resolution 61/9 on the 61<sup>st</sup> session and later reaffirmed at the 62<sup>nd</sup> session.

The ideas and policy recommendations stemming from these conferences are significant steps toward a larger world-wide initiative. The continuation of the issue arises from the lack of implementation of cohesive policies by national governments which in turn reflect the lack of commitment to environmentally efficient sustainable growth. Recently, Thailand, Viet Nam, the Philippines and Cambodia have requested the assistance of ESCAP to implement the recommendations of ‘Green Growth’ into their development plans.<sup>28</sup> These countries, as well as many others, have been plagued with fast growth in population, which has ultimately lead to a rise in demand for food, water, and shelter. The slowed development of infrastructure due to the recent global economic crisis has caused these governments to set aside their planned policies in reference to environmental preservation.<sup>29</sup> Slowly, these countries are now beginning to understand that it is possible to utilize the initiatives of programs such as the Green Growth initiative to positively impact their economies. The leaders of the countries within the Asia-Pacific are beginning to view their recent economic downturns as an opportunity to move forward from the Western world’s economic development pattern which pushes them into an age of industrialization. Instead, the Member States of ESCAP are

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<sup>21</sup> A/42/427. Our Common Future: Report of the World Commission on Environment and Development. United Nations General Assembly. 1987 June.

<sup>22</sup> “Earth Summit + 5.” United Nations. <http://www.un.org/esa/earthsummit/>

<sup>23</sup> Ibid.

<sup>24</sup> *Green Growth at a Glance: The Way Forward for Asia and the Pacific*. Economic and Social Commission for Asia and the Pacific. March 2006. <http://www.unescap.org/esd/water/publications/sd/GGBrochure.pdf>

<sup>25</sup> “Green Growth: Mandate” UNESCAP. <http://www.greengrowth.org/mandate.asp>

<sup>26</sup> Ibid.

<sup>27</sup> “Environment and Development Division: Green Growth” UNESCAP. [www.unescap.org/esd/environment/greengrowth/](http://www.unescap.org/esd/environment/greengrowth/)

<sup>28</sup> “Green Growth: Mandate” UNESCAP. <http://www.greengrowth.org/mandate.asp>

<sup>29</sup> “Environment and Development: Challenges for the 21<sup>st</sup> Century” UNESCAP. [www.unescap.org/esd/environment](http://www.unescap.org/esd/environment)

exploring ways to utilize natural resources and alternative energy sources to stimulate their economies and eco-friendly sustainable development.<sup>30</sup>

### ***The “Green Growth Initiative”***

The Seoul Initiative on Environmentally Sustainable Economic Growth, also referred to as the “Green Growth” Initiative, is the policy framework for countries of the Asia-Pacific region and members of ESCAP to achieve the goals of the Regional Implementation Plan for Sustainable Development in Asia and the Pacific, 2006-2010.<sup>31</sup> These goals include the improvement of environmental sustainability, positively exploiting environmental protection to achieve sustainable growth, and improve environmental performance.<sup>32</sup> The “Green Growth Initiative” highlights the issues that come out of the Regional Implementation Plan for Sustainable Development in Asia and the Pacific and targets three main platforms in which participating Member States can utilize as a framework for national policies.<sup>33</sup> The first target of the “Green Growth Initiative” is improving eco-efficiency for environmental sustainability namely in regards to pollution and exploitation of resources. Second, the initiative focuses on enhancing the performance of the environment through regulations and standards set by national governments. The final platform is a direct focus from the Regional implementation Plan to promote the environment as an opportunity for sustainable economic growth and development.<sup>34</sup>

Historically, the efforts of governments to implement eco-friendly business policies have centered on habitat preservation, recycling programs, and the reduction of pollution. The “Green Growth” approach is to combine these ideas of preservation and conservation in a way to stimulate the economies and developmental planning of the Member States of ESCAP.<sup>35</sup> Environmental protection has been viewed as a an inhibitor to economic growth which has fueled the attitude of “grow now, clean up later” as mentioned by Kim Has-Su, the Executive Secretary of ESCAP in the forward of the report of the Ministerial Conference on Environment and Development in Asia and the Pacific (MCED), 2005.<sup>36</sup> The “Green Growth” approach to governmental policies aims to put this concept and way of planning aside and look to take the ideas of preservation and conservation as a driver of economic growth and sustainable development. The “Green Growth” approach looks to stimulate development and the economies of the Member States of ESCAP through eco-efficient economic planning which integrates economic theory and environmental regulation.<sup>37</sup> Governments have the opportunity to utilize incentives to drive the market to increase demand for eco-efficient goods and services.

The ‘Green Growth’ Initiative promotes core approaches to policy development which national governments can use as a platform when creating and adopting greener national policies. Green Tax and budget reform is a policy instrument which the ‘Green Growth’ Initiative promotes a ‘Green Tax’ levied on products and processes which are eco-inefficient. Companies which produce large amounts of pollution or use a large amount of natural resources would be available for such taxation. The idea, of course, would be to drive the market to develop more efficient consumption of natural resources and the innovation of eco-efficient production processes as companies work to become exempt from such taxation.<sup>38</sup> The ‘Green Growth’ Initiative also supports budget reform which redirects

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<sup>30</sup>*Green Growth at a Glance: The Way Forward for Asia and the Pacific*. Economic and Social Commission for Asia and the Pacific. March 2006. <http://www.unescap.org/esd/water/publications/sd/GGBrochure.pdf>

<sup>31</sup>*Achieving Environmentally Sustainable Economic Growth*”.The Fifth Ministerial Conference on Environment and Development in Asia and the Pacific, 2005. Economic and Social Commission for Asia and the Pacific, September 2005. <http://www.unescap.org/esd/water/publications/sd/MCED-final2/pdf>

<sup>32</sup> Ibid.

<sup>33</sup>*Achieving Environmentally Sustainable Economic Growth*”.The Fifth Ministerial Conference on Environment and Development in Asia and the Pacific, 2005. Economic and Social Commission for Asia and the Pacific, September 2005. <http://www.unescap.org/esd/water/publications/sd/MCED-final2/pdf>

<sup>34</sup> Ibid.

<sup>35</sup>*Green Growth at a Glance: The Way Forward for Asia and the Pacific*. Economic and Social Commission for Asia and the Pacific. March 2006. <http://www.unescap.org/esd/water/publications/sd/GGBrochure.pdf>

<sup>36</sup>*Achieving Environmentally Sustainable Economic Growth*”.The Fifth Ministerial Conference on Environment and Development in Asia and the Pacific, 2005. Economic and Social Commission for Asia and the Pacific, September 2005. <http://www.unescap.org/esd/water/publications/sd/MCED-final2/pdf>

<sup>37</sup>*Green Growth at a Glance: The Way Forward for Asia and the Pacific*. Economic and Social Commission for Asia and the Pacific. March 2006. <http://www.unescap.org/esd/water/publications/sd/GGBrochure.pdf>

<sup>38</sup>‘Green Growth Paths’. UNESCAP: Green Growth. [www.greengrowth.org/ggtracks.asp](http://www.greengrowth.org/ggtracks.asp)

funds from inefficient development and programs into programs which encourage eco-efficient sustainable development. The coupling of Green Tax and Budget Reform is aimed to correct unbalanced tax structures and budgets which have historically favored unsustainable development.<sup>39</sup> The development of sustainable infrastructure is key to the growth of the economies of the countries within the Asia-Pacific region. The implementation of higher quality housing, transport, water and sanitation services, and especially energy consumption all while working to lessen the destruction of natural resources is the foundation of creating an eco-friendly economy.<sup>40</sup> Another approach to implementing the 'Green Growth' Initiative is through the promotion of 'Green' business and using the environment as a business opportunity. This track could be the result of proper implementation of 'Green Tax' as the markets of participating countries shift to the innovation and development of eco-efficient products and processes in response to the price signal provided by the increased taxes.<sup>41</sup> Finally, the development of eco-efficient indicators in order to measure how the environment is used for economic activity as well as how the economy is affected by the policy and regulation changes.<sup>42</sup> In 2004, China began to attempt to develop a measure of the effect of pollution on their economy. The result was the creation of the 'Green GDP' standard which is an adjustment of traditional GDP by subtracting the cost of resources and environmental degradation in economic activities.<sup>43</sup> This standard has become an important tool of the 'Green Growth' Initiative and along with the other core 'tracks' to 'Green Growth' provides a platform that can be used to stimulate the economy while simultaneously working to reverse the damage that rapid economic growth has had on the environment within the region.<sup>44</sup>

Currently, few Member States of ESCAP have worked to fully embrace or implement the ideas and "Green Growth" paths to policies and developmental planning. Countries such as China, Republic of Korea, Cambodia, Kazakhstan, and Thailand have begun to implement strategies and policies which reflect the principles of eco-efficient sustainable economic growth. Thirty-one out of the 62 members of ESCAP have published Environmental Protection Indexes which center on reducing environmental stresses and protecting ecosystem validity.<sup>45</sup> In October 2007, Cambodia hosted the "Capacity Building Seminar on Integration of Green Growth Policy Tools in Decision Making Processes for Sustainable Development" for 49 members of various branches of the Cambodian government. This seminar provided training to the participants in the 'Five Tracks' to achieving Green Growth.<sup>46</sup> During the May 2007 annual high-level ESCAP meeting the Secretary General of the United Nations, Ban Ki-Moon, noted that "with Asia-Pacific now home to two-thirds of the world's population, the level of progress achieved in [the] region will be a critical factor in determining whether our global efforts to reach the Millennium Development Goals will succeed or fail...the ESCAP region has achieved a great deal...and yet there is much that remains to be completed".<sup>47</sup>

Countries have agreed at the Ministerial level that enacting policies and regulations that stimulate eco-efficient economic growth and development is the only way to guarantee that the development made will be sustainable in the future and allow future growth.<sup>48</sup> Countries also collectively agree that the answer to alleviating the severe poverty that affects 1 out of every 3 people within the Asia-Pacific region is through sustainable development and economic growth. The question remains as to why 'Green Growth' is not becoming a part of government policy at a faster rate. According to a recent publication of ESCAP many governments believe that Green Growth is too expensive to implement and therefore inhibits instead of stimulates sustainable development and economic growth. Other governments believe that Green Growth is not relevant to developing countries because they do not have the

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<sup>39</sup>'Green Growth Paths'. UNESCAP: Green Growth. [www.greengrowth.org/ggtracks.asp](http://www.greengrowth.org/ggtracks.asp)

<sup>40</sup> Ibid.

<sup>41</sup> Ibid.

<sup>42</sup> Ibid.

<sup>43</sup> Ni Xiaoqiang. "The Way to Green GDP". China.org.cn. June 2004. <http://www.china.org.cn/english/2004/Jun/96974.htm>

<sup>44</sup> *Green Growth at a Glance: The Way Forward for Asia and the Pacific*. Economic and Social Commission for Asia and the Pacific. March 2006. <http://www.unescap.org/esd/water/publications/sd/GGBrochure.pdf>

<sup>45</sup> Ibid.

<sup>46</sup> "Development and Application of Green Growth Policy Tools Country Training Workshops Sihanoukville, Cambodia: 1-4 October 2007". UNESCAP <http://www.greengrowth.org/events2.asp>

<sup>47</sup> Almaty 17-22 May 2007 – (United Nations Information Services, Bangkok) – Despite impressive economic growth, Asia-Pacific region still faces daunting challenges in achieving the Millennium Development Goals (MDGs). UNESCAP: Events and Announcements. <http://www.greengrowth.org/events3.asp>

<sup>48</sup> *Green Growth at a Glance: The Way Forward for Asia and the Pacific*. Economic and Social Commission for Asia and the Pacific. March 2006. <http://www.unescap.org/esd/water/publications/sd/GGBrochure.pdf>

resources of developed countries such as the United States and Japan to allocate to eco-efficient development.<sup>49</sup> These ideas have been intensified by the recent global economic crisis which has led governments to focus efforts on short-term economic growth and circumvent the policies of eco-efficient sustainable development and growth.<sup>50</sup>

### ***Innovation***

The innovation and invention of 'Green' technology and products are the key to the sustainable growth of the economies of Member States of ESCAP. Long-term economic development and growth can be maintained through the ownership of both tangible and intellectual properties that can help the world achieve a new level of "Green Growth". For human capital, in the form of ideas and innovation, to make a measurable impact on the economy of a nation, a large portion of the population must be literate with, at the very least, a primary education.<sup>51</sup> An educated population has the ability and access to read newspapers and books which opens their minds to new ideas and thoughts. It is ideas of an educated population and workforce that lead to innovation of processes, products, and programs which stimulate an economy through either increased funds due to the export of a new product or the reduction of costs through more efficient processes.<sup>52</sup> The movement of the nations within the Asia-Pacific region past the environmentally degrading industrialized phase of economic development into a new age of "Green Growth" depends on an educated population leading the way through the innovation of 'Green' processes, products, and programs.

Achieving the over-arching goal of sustainable economic growth and development requires that policies include programs which encourage innovation by and the education of the vast amount of poor people within the region. As mentioned in a previous section, extreme poverty affects 1 out of every 3 people within the Asia-Pacific region. Educating the masses on alternative energy and the benefit of 'green' technology reinforces the goals of eco-efficient sustainable development while eradicating the spread of the "grow now, clean up later" concept to development. Education of the poor increases the amount of choices a person has and allows access to the creation and development of small-scale green businesses. The establishment and development of these small-scale businesses adds an immediate benefit to the nation's economy.<sup>53</sup> Programs which educate the population in alternative energy and green technology stimulate ideas and innovations which can not only optimize processes that are currently in place, but can also reduce costs and thereby strengthen the national economy within the bounds of "Green Growth". In 1992, the Russian Federation and Norway established the Russian-Norwegian Cleaner Production Programme.<sup>54</sup> Since 1992, 1,700 people have been trained by the program to develop and implement projects which focus on resource saving for green development. Many projects have been developed and implemented and include waste management processes and the innovation of ways to mass-produce and utilize alternative energy resources. The annual financial benefits of the initiation of such programs have been 5-7 times the amount of the resources that were put into their development.<sup>55</sup> Beginning in 2001, the Himalayan Light Foundation implemented the Lekhani Paper and Power Project in Lekhani, Nepal. The program works to provide villagers with 'Solar Home Systems' to light and heat their homes. The organization also provides trainings to the villagers in using natural resources in the area to produce paper products which they can sell to provide additional income for the community.<sup>56</sup> Since inception, 92 families have received Solar Home Systems to light their homes.<sup>57</sup> Immediately, the use of inefficient and polluting kerosene lamps were eliminated from the solar powered homes and students gained more time to read, write, and educate themselves.<sup>58</sup> The income gained by the Lekhani villagers has

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<sup>49</sup> *Green Growth at a Glance: The Way Forward for Asia and the Pacific*. Economic and Social Commission for Asia and the Pacific. March 2006. <http://www.unescap.org/esd/water/publications/sd/GGBrochure.pdf>

<sup>50</sup> "Environment and Development: Challenges for the 21<sup>st</sup> Century." UNESCAP. <http://www.unescap.org/esd/environment/>

<sup>51</sup> M. Aynul Hasan. "Development Planning in a Market Economy: Role of Human Capital in Economic Development: Some Myths and Realities". Poverty and Development Division. UNESCAP. 2001.

<sup>52</sup> Ibid.

<sup>53</sup> *Green Growth at a Glance: The Way Forward for Asia and the Pacific*. Economic and Social Commission for Asia and the Pacific. March 2006. <http://www.unescap.org/esd/water/publications/sd/GGBrochure.pdf>

<sup>54</sup> Ibid.

<sup>55</sup> Ibid.

<sup>56</sup> "Home Employment Lighting Program: Lekhani Paper and Power". Himalayan Light Foundation. <http://hlf.org.np/programpage.php?id=4>

<sup>57</sup> Ibid.

<sup>58</sup> Ibid.

not only completely paid for the systems but has become a further source of income to the village.<sup>59</sup> It is critical to the long-term economic and social sustainability of the Asia-Pacific region for national governments to focus on programs which simultaneously maintains eco-efficiency and a self-sufficient economy.

Many Member States within ESCAP have begun to develop programs to educate the population in alternative energy and green technology. Malaysia established a program in 1980 which trains participants on practices for agriculture, poverty alleviation, investment promotion, information and communication technology, multimedia, and banking. Currently, the Malaysia Technical Cooperation Programme (MTCP) is working within 140 countries and is looking to provide further training in green growth, energy security, water management, and achievement of the MDGs. The problem is, of course, funding and the MTCP is working with the Association of Southeast Asian Nations (ASEAN) to provide funding for these new eco-efficient training programs.<sup>60</sup> While this is a positive move towards making a sound investment in the people within the realm of 'green' education, more must be done to help the countries with large amounts of extreme poverty to benefit from the education of its people. A study performed by the Least Developed Countries Section, Development Research and Policy Analysis Division of ESCAP compared the literacy rates of three regions of countries with their GDPs and the amount of capital invested into education programs from 1960 to 2000.<sup>61</sup> The study concluded that the countries which invested the most in human capital and education grew their economies as an exponential rate compared to the countries that did not make such an investment in human capital.<sup>62</sup> Specifically, countries in the East Asian region who made a commitment to human capital and to the education of its people saw their economies grow and develop much faster than the South Asian countries.<sup>63</sup> Today, it is these same East Asian countries: Malaysia, Thailand, and Republic of Korea who are at the forefront of implementing and benefiting from eco-efficient growth and development.

In order to work towards eradicating extreme poverty within the Asia-Pacific region and work towards MDG 1 through an eco-efficient approach to sustainable development, more investment must be made to educate and train the people of developing nations. Through not only the primary education of the population but programs which foster the development of ideas and processes to improve and optimize 'Green Growth' approaches will developing nations find their stronghold on the new 'green' global economy. The current placement of programs which encourage and develop the ideas which will lead ESCAP Member States in the path to 'Green Growth' seem to be within the developed nations and is widening the gap between the developed and developing nations of the Asia-Pacific region. In order for the MDGs to be completed in accordance with one another, specifically MDG 1 (alleviation of Poverty) and MDG 7 (environmental sustainability), more must be done within developing nations to develop and make use of the talent and ideas of the population. Human capital development is a long term investment which results in continuous prosperity and contrasts from investments made wholly into infrastructure which can degrade and depreciate over time..<sup>64</sup>

## **Conclusion**

The attitude of many of the developed countries within the Asia-Pacific region is reflected in the adage 'grow now, clean up later'. This thought process is a westernized approach to development and will eventually stunt the economic growth of the region as the global economy moves to a more 'Green' approach to economic development. Recently, Member States of ESCAP have realized and affirmed their dedication to alleviating poverty and increasing economic security through the production of sustainable development. In the world we live in today, ESCAP Member States have also realized that the only way for growth and development to remain secure and sustainable is to use resources efficiently and respect their environment in order to ensure it will be available to support current development and allow future generations the promise of further growth. This understanding and affirmation as led to the 'Green Growth' Initiative which was established in 2005.

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<sup>59</sup> *Green Growth at a Glance: The Way Forward for Asia and the Pacific*. Economic and Social Commission for Asia and the Pacific. March 2006. <http://www.unescap.org/esd/water/publications/sd/GGBrochure.pdf>

<sup>60</sup> "UN to Help Deepen Malaysia's Connectivity with ASEAN and other Asia-Pacific Countries". UNESCO. <https://www.unescap.org/unis/press/2010/mar/g09.asp>

<sup>61</sup> M. Aynul Hasan. "Development Planning in a Market Economy: Role of Human Capital in Economic Development: Some Myths and Realities". Poverty and Development Division. UNESCO. 2001.

<sup>62</sup> Ibid

<sup>63</sup> Ibid

<sup>64</sup> Ibid.

The concept of Green Growth is to create a harmony between economic growth and environmental sustainability.<sup>65</sup> Green Growth can be achieved by improving eco-efficiency of the production and consumption patterns of society as well as through the use of initiatives and basic demand-based economic theory to drive markets to a 'greener' focus on products. The only way to achieve true eco-efficient growth and development of the economy will be through the innovation of product, programs and ideas which will solidify the region's place in the global 'green' economy. Innovation and production will be achieved through the education of the population within the region in order to open their minds to new opportunities and ways of thinking. Eco-efficient policies and programs are not a burden of national governments but should be seen as a new opportunity to create a place in the world as a leader in a new 'greener' global market. It will be the fiscal and time investment of Member States of ESCAP in both governmental policies and its people that will allow the new 'Green Growth' approach to secure the economy and launch the region into a new era.

### ***Committee Directive***

The 'Green Growth' Initiative is central to ESCAP Member State's approach to fostering sustainable economic development and growth in the coming decades. Delegates should become familiar with the Seoul Initiative on Environmentally Sustainable Economic Growth which has been shortened to 'Green Growth' and learn why it was such an important step for the Asia-Pacific region towards secure and sustainable economic growth. Within the bounds of this topic, economic growth is not narrowed to GDP. Delegates should feel free to broaden their definition of economic growth and sustainable development to not only fiscal growth of the economies of Member States but also in the realm of infrastructure, production of 'green' products and technology, waste management, and disaster prevention.

Delegates should become aware of the state of Millennium Development Goal 1 (alleviation of poverty) and Millennium Development Goal 7 (environmental sustainability) and how they relate to the 'Green Growth' Initiative. Understanding the importance of the achievement of the MDGs to the mandate of ESCAP, what obstacles have been present within the past 5 years facing Member States which has prevented the implementation of eco-efficient government policies? What can be done to encourage more countries to join in embrace the initiative and change their current policies on development and economic growth? Why are there not more programs in place to educate and provide an incentive to the population to create new technologies and processes that can help the economies move to the forefront of green growth?

## **Topic II: Promoting the Standard of Living Throughout Pacific Island Countries and Territories Through Sustainable Urban Development**

### ***Introduction***

Sustainable development has become a very popular and important topic on the world's main stage in the past decade. With countries becoming more populous and resources beginning to become scarce, every nation wants to be able to use the land and resources they have to their greatest potential. Smaller, less developed nations are becoming increasingly concerned with sustainable social and economic development. Sustainable development allows for smaller countries that have limited resources and capital to use it to their highest potential. Sustainable urban development encompasses many aspects of development such as city size, socioeconomic impact of environmental changes, current development and planning practices, as well as addressing the lack of water and sewer connections and pollution.<sup>66</sup> Since 2000 following the adoption of the Millennium Development Goals (MDGs), countries within the Pacific Island region began to truly look into the state of poverty in their respective nations. MDG 1 plans to eradicate extreme poverty by the year 2015 however data shows that poverty in many Pacific Island Countries has actually be on the rise.<sup>67</sup> A majority of the population of the Pacific Islands rely on

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<sup>65</sup>*Green Growth at a Glance: The Way Forward for Asia and the Pacific*. Economic and Social Commission for Asia and the Pacific. March 2006. <http://www.unescap.org/esd/water/publications/sd/GGBrochure.pdf>

<sup>66</sup>"Sustainable Urban Development: A Regional Perspective on Good Urban Governance" Economic and Social Commission for West Asia. <http://www.escwa.un.org/information/publications/edit/upload/hs-01-7-e.pdf>

<sup>67</sup>"Beyond 'Subsistence Affluence' Poverty in Pacific Island Countries". UNESCAP. [http://www.unescap.org/pdd/publications/bulletin03-04/bulletin03-04\\_ch3.pdf](http://www.unescap.org/pdd/publications/bulletin03-04/bulletin03-04_ch3.pdf)

agriculture as a main source of income which creates extreme poverty as many economies in the region are cash-based and rapid urbanization has created new forms of employment.<sup>68</sup> Countries have tried to build economies off agriculture however these nations are highly susceptible to natural disasters and many islands do not have enough land to support its own population, much less export products to gain income.<sup>69</sup> High emigration rates have caused a brain drain within the countries and ultimately starved local economies from innovation and business development. Few nations have attempted to develop a tourism industry however this is proving to be difficult for many nations as a lack of infrastructure for transport services and accommodations hinder the growth of this market.<sup>70</sup>

In April 1994, The Global Conference on the Sustainable Development of Small Island Developing States was held in Barbados and resulted in the Barbados Programme of Action for the Sustainable Development of Small Island Developing States. The Barbados Programme of Action declared that sustainable development must be supported at the national, regional, and international level in order for these nations to come out of their widespread extreme poverty.<sup>71</sup> National Governments of the Pacific Islands are encouraged use the Barbados Programme of Action as well as the Regional Action Programme, which is re-evaluated every 5 years to prioritize national, international, and regional policies and programs in order to active widespread sustainable development in the Asian region, as a framework for developmental policies and planning.<sup>72</sup> Partnerships with strategic organizations, NGOs, and the private sector are also channels in which governments of Pacific Island nations have worked towards sustainable urban development and the eradication of poverty. Organizations such as the Asian Development Bank, the World Bank, and United Nations agencies are currently assisting island nations in addressing poverty and standard of living issues.<sup>73</sup>

### ***Low-Income Housing***

Following a return from a mission to the Marshall Islands and Palau, United Nations Human Settlements Programme (UN-HABITAT) Pacific Programme Manager Sarah Mecartney declared that “Governments need to give urban planning greater attention”.<sup>74</sup> Her declaration highlights a growing sentiment within the Asia-Pacific region to the lack of attention given to urban planning by governments. Within the past 20 years, many resolutions and agendas dealing with the topic specifically mention local government involvement as the key to the success of sustainable urban development. One such resolution simply referred to as Agenda 21, was adopted by more than 178 governments in 1992 at the United Nations Conference on Environment and Development (UNCED) as a call upon local governments to create a local ‘agenda’ for urban planning.<sup>75</sup> “Agenda 21 is a comprehensive plan of action to be taken globally, nationally, and locally by the United Nation Systems, Local Governments and Major Groups,” such as non-governmental organizations (NGOs) and intergovernmental organizations (IGOs).<sup>76</sup> Agenda 21 is far-reaching, encompassing many different facets of sustainable development. One key part can be found in section III, Chapter 28 of Agenda 21 lays out the responsibilities of local governments in the process of creating a plan for their nation’s urban cities.<sup>77</sup> It encourages officials to speak to their citizens in order to gain knowledge about what the city needs and also to raise awareness about the importance of creating a local urban plan.<sup>78</sup> The role of the government in urban development is extremely important, as Agenda 21 states it is the local authorities that

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<sup>68</sup> Ibid.

<sup>69</sup> Ibid.

<sup>70</sup> Ibid.

<sup>71</sup> “Barbados Programme of Action for the Sustainable Development of Small Island Developing States”. United Nations Environment Programme, Regional Seas Programme. <http://www.unep.ch/regionalseas/partners/sids.htm>

<sup>72</sup> “MCED and the Pacific”. Ministerial Conference on Environment and Development in Asia and the Pacific 2000. <http://www.unescap.org/mced2000/pacific/index.htm>

<sup>73</sup> “Beyond ‘Subsistence Affluence’ Poverty in Pacific Island Countries”. UNESCAP. [http://www.unescap.org/pdd/publications/bulletin03-04/bulletin03-04\\_ch3.pdf](http://www.unescap.org/pdd/publications/bulletin03-04/bulletin03-04_ch3.pdf)

<sup>74</sup> “UN Agencies Worried at Poor Urban Planning, Pollution in Pacific Countries” UN Habitat.

<http://www.unhabitat.org/content.asp?cid=7648&catid=58&typeid=6&subMenuId=0>

<sup>75</sup> “Agenda 21” UN Department for Economic and Social Affairs, Division for Sustainable Development, <http://www.un.org/esa/dsd/agenda21/index.shtml>

<sup>76</sup> Ibid.

<sup>77</sup> “Agenda 21” UN Department for Economic and Social Affairs, Division for Sustainable Development. [http://www.un.org/esa/dsd/agenda21/res\\_agenda21\\_28.shtml](http://www.un.org/esa/dsd/agenda21/res_agenda21_28.shtml)

<sup>78</sup> Ibid

“instruct, operate and maintain economic, social and environmental infrastructure, oversee planning processes, establish local environmental policies and regulations, and assist in implementing national and subnational environmental policies.”<sup>79</sup>

Urban areas within Southeast Asian countries are extremely sensitive to sustainable urban development in order to support its growing population. Cities within the region are home to millions of poor families who rely on urban planning and development for survival.<sup>80</sup> The economies of the cities within Southeast Asia and specifically in the Island countries are key to the development and growth of their respective nations as a whole. 44 million people are added to city population in Asia each year and in order to support these additional people, many of which live in severe poverty, effective urban planning is essential.<sup>81</sup> It is easy for cities to become overwhelmed with the poor population in urban areas which can lead to poor planning of infrastructure and services that actually hinder the improvement of the local economy. Local and National Governments must focus on effective sustainable urban development and infrastructure as well as creating strategic partnerships in order to become an engine of growth.<sup>82</sup>

It is estimated that by 2030, 2 billion people will be living in areas within cities that will be classified as ‘the slums’. 60 per cent of this subset of the population is predicted to live in Asian cities.<sup>83</sup> Historically, slums have been viewed as a burden on the economy of urban areas and planning committees have tried to ignore the growing population of poor coming into the cities. They can, in fact, be used as a source for economic development of the city if efficient planning is in place. Slums can provide low income housing for large numbers of the poor population and simultaneously provide low-cost labor.<sup>84</sup> With effective planning of infrastructure and services, low-cost products and services can be developed out of these areas which add to not only the socio-economic upgrade of the area itself but add to the overall local economy. An example of effective urban planning and development of poor areas can be found in the Oranji Township, a slum community outside Karachi, Pakistan.<sup>85</sup> The local government of Karachi has developed a programme referred to as “Notification”. This is a process where residents of Oranji receive titles to their homes following a process of upgrades and a demonstration of self-sufficiency.<sup>86</sup> Due to the partnership of NGO’s and the local government to make the Oranji a self-sufficient community 700 private schools, 600 health clinics, 90,000 latrines, and 40,000 microenterprise units have been successfully built.<sup>87</sup> The upgrade to the area was done in a low-cost manner as local residents were recruited to do the manual labor. For example, when it was time to install sewer lines, the government provided the trunk sewers and the people of Oranji laid the lines themselves.<sup>88</sup> The combination of effective planning and strategic partnerships is what has made the upgrade of Oranji to a low-cost self-sufficient community is a great example of how low-income housing can be a catalyst for the economy. Citizens of areas such as Oranji can gain a sense of ownership over the community, which leads to further growth and development of both infrastructure and the local economy. Local governments of the Pacific island countries and territories can use this example as a framework while developing plans for their own over-populated cities and slum areas.

### ***Urban Infrastructure***

In June 2007, an Expert Group Meeting on Sustainable Infrastructure Development in Asia and the Pacific was held in Bangkok, Thailand.<sup>89</sup> The purpose of this forum was to gather as much information as possible from experts in the field of sustainable urban infrastructure. Specific experts included senior government officials and those specializing in the fields of “energy, transport, water and disasters, urban planners, representatives from the private sector, universities, research centers, and international organizations such as UNEP and the World Bank.”<sup>90</sup> This

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<sup>79</sup> Ibid.

<sup>80</sup> *Regional Technical Assistance Report: Sustainable Urban Development in Asia*. Asian Development Bank. November 2007.

<sup>81</sup> Ibid.

<sup>82</sup> *Regional Technical Assistance Report: Sustainable Urban Development in Asia*. Asian Development Bank. November 2007.

<sup>83</sup> Bronwyn Curran. “The Cruel Utility of Slums”. Development Asia. January-March 2010.

<sup>84</sup> Ibid.

<sup>85</sup> Ibid.

<sup>86</sup> Ibid.

<sup>87</sup> Ibid.

<sup>88</sup> Ibid.

<sup>89</sup> “Expert Group Meeting on Sustainable Infrastructure Development in Asia and the Pacific Bangkok, Thailand, 11-13 June 2007. UNESCAP. <http://www.unescap.org/esd/environment/infra/egm.asp>

<sup>90</sup> Ibid.

Expert Group Meeting identified a wide array of limitations and issues in the ability for a strong urban infrastructure to successfully be built in the members of ESCAP. Specifically, issues identified included the capacity for governments to spend upfront, lack of performance assessments, no consideration for operating costs, and public-private partnerships still being in their infancy stages.<sup>91</sup> Additionally, various plans of action and recommendations were included within the final report to address the performance of urban infrastructure moving forward. There must be an integrated framework moving forward “that includes all elements of urban infrastructure: roads, pipes, drainage, electricity, etc.”<sup>92</sup> Secondly, there must be an incentive for greater private sector participation. Ultimately, the investment made in infrastructure must have both a “lower risk and a better performance” than other potential investments.<sup>93</sup> Further, a special emphasis was made on “sustained political support” for urban infrastructure projects, such as a re-election timeframe, which would result in a greater investment from elected officials.<sup>94</sup>

## ***Social Development***

As urban growth increases at such a rapid rate, one of the main concerns in the social realm of urban development is the level of health of the citizens. As populations in urban areas continue to rise, so does the scarcity of power and water supplies, sanitation efforts and access to primary healthcare. Access to clean drinking water is a primary concern in the realm of health. Historically, lack of access to clean drinking water cancels out economic stability.<sup>95</sup> While a person can be well off, if they do not have access to clean drinking water it is nearly impossible for them to become healthy.<sup>96</sup> Pacific Island nations have a unique lack of water resources due to vulnerability to natural disasters, limited space for water storage and purification, and small size.<sup>97</sup> In 2006, based on recommendations from UNESCAP’s 61st Commission Session, a new section, The Water Security Section (WSS) was established to focus on sustainable development and water resources.<sup>98</sup> The purpose of WSS is to help policy makers achieve sustainable economic growth, while also providing advice and capacity building assistance in order to promote integrated water resource management.<sup>99</sup> WSS’s mission states that they are “working to promote regional co-operation and to strengthen regional capacity on water resources management towards inclusive and sustainable socio-economic development for all in Asia and the Pacific”.<sup>100</sup> Water sanitation and quality as well as demand management are the two largest obstacles in providing clean water to the populations of the Pacific Island Countries. While public awareness has been raised on the issue of access to clean water, the problem lies in the fact that implementation is difficult due to lack of funding and initiative of local governments.<sup>101</sup>

The Pacific Island Waste Management Initiative was established in 2002 under the Division for Sustainable Development in the United Nations Department of Economic and Social Affairs. This program calls upon countries, UN bodies, and other IGOs to cooperate in order “to minimize environmental and health impacts from solid and hazardous waste generation and disposal in the Pacific region.”<sup>102</sup> Goals and objectives of the Pacific Island Waste Management Initiative include: achieving reductions in the current amount of waste sent to landfills, upgrade waste collection and disposal systems, assess financial, social, and institutional barriers to effective waste management,

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<sup>91</sup>“Expert Group Meeting on Sustainable Infrastructure Development in Asia and the Pacific.” ESCAP. 13 June 2007.

[http://www.unescap.org/esd/environment/infra/documents/egm/2007-09-20%20EGM%20Report%20final\\_.pdf](http://www.unescap.org/esd/environment/infra/documents/egm/2007-09-20%20EGM%20Report%20final_.pdf)

<sup>92</sup> Ibid.

<sup>93</sup> Ibid.

<sup>94</sup> Ibid.

<sup>95</sup> “Water Security, Development, and Cooperation in the Age of Scarcity,” UNESCAP,

[http://www.unescap.org/esd/water/WaterSecurity/Socio-economic%20policy%20brief\\_draft\\_2%20format2\\_.pdf](http://www.unescap.org/esd/water/WaterSecurity/Socio-economic%20policy%20brief_draft_2%20format2_.pdf)

<sup>96</sup> Ibid.

<sup>97</sup>“Pacific Island Water Quality in the Spotlight this World Water Day”. SOPAC. [http://www.sopac.org/tiki-read\\_article.php?articleId=197](http://www.sopac.org/tiki-read_article.php?articleId=197)

<sup>98</sup> Water Security Section, Environment and Development Division, UNESCAP,

<http://www.unescap.org/esd/water/>

<sup>99</sup>About Water Security Section (WSS), UNESCAP, 18 February 2009,

<http://www.unescap.org/esd/water/about/>

<sup>100</sup> Water Security Section, Environment and Development Division, UNESCAP,

<http://www.unescap.org/esd/water/>

<sup>101</sup>“Beyond ‘Subsistence Affluence’ Poverty in Pacific Island

Countries”. UNESCAP. [http://www.unescap.org/pdd/publications/bulletin03-04/bulletin03-04\\_ch3.pdf](http://www.unescap.org/pdd/publications/bulletin03-04/bulletin03-04_ch3.pdf)

<sup>102</sup> Pacific Island Waste Management Initiative, United Nations Department of Economic and Social Affairs, Division for Sustainable Development, 7 January 2005. <http://webapps01.un.org/dsd/partnerships/public/partnerships/1193.html>

establish permanent waste management positions in government agencies, and promote community awareness.<sup>103</sup> Of these goals, promoting community awareness is highly important; having its citizens aware and involved in these goals is the only way that they can be fully achieved. While progress has been slow in the implementation of these goals, some progress has been made in some areas such as: waste minimization programmes, upgrades in waste collection and disposal systems, and regional clean-up programmes.<sup>104</sup> 22 Member States have signed onto the Pacific Island Waste Management Initiative, many of these countries being small and less developed states.<sup>105</sup> Progress has been made in raising awareness through national programmes and awareness workshops.<sup>106</sup> On Tongapatu, Tonga's main island, waste management has historically been poor and has had a significant effect on the population living on the island.<sup>107</sup> Through the work of Tongan Environmental Planning and Management Strengthening Project (TEMPP) and Solid Waste Management Plan (SWMP), Tonga has been able to dispose of its waste more effectively and in a more sanitary manner by the creation of a new landfill.<sup>108</sup> While TEMPP and SWMP still do not fix the entirety of the situation, it is a good start for the country and has begun to significantly reduce the amount of waste that is not properly disposed of.<sup>109</sup>

Another important factor concerning a country's sanitation and social development is the carbon dioxide (CO<sub>2</sub>) emissions a country produces. Target B of MDG 7 calls for the "significant reduction in CO<sub>2</sub> emissions and the reduction in the consumption of ozone depleting substances" (ODS).<sup>110</sup> In 1990, the world produced 21.9 billion metric tons of CO<sub>2</sub> emissions.<sup>111</sup> In 2007, the world produced 29.6 billion metric tons of CO<sub>2</sub> emissions.<sup>112</sup> From 1990 to 2007 the CO<sub>2</sub> emissions rose 35%.<sup>113</sup> While these numbers may seem dismal, by 2009 The Montreal Protocol on Substances that Deplete the Ozone Layer was ratified by 196 countries making it the first treaty of any kind to receive universal ratification.<sup>114</sup> The Montreal Protocol addresses the issue of ODS. 2010 marks the beginning of a world that is virtually free of ODS, showing that great strides can be made in environmental sustainability on a global level.<sup>115</sup> A few of the Pacific island countries are on their way to achieving MDG 7, including Samoa and Niue by implementing recommendations from the Montreal Protocol while others however have shown no progress in reducing the amount of CO<sub>2</sub> emissions.<sup>116</sup>

### ***Sustainable Tourism Development***

Tourism is a large source of revenue for many countries. For Pacific island countries, tourism can make up anywhere from 11 percent to 57 percent of a state's gross domestic product (GDP).<sup>117</sup> According to the World Tourism Organization, international tourism rose by 7.4 percent from 1999 to 2002, with the Pacific being one of the fastest developing tourism regions having a growth rate of 14.7 percent, or 14 million more tourists in 2000 than in 1999.<sup>118</sup> Because of the high level of capital tourism brings to Pacific Island countries, tourism is a catalyst for

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<sup>103</sup> Ibid.

<sup>104</sup> Ibid.

<sup>105</sup> Ibid.

<sup>106</sup> Ibid.

<sup>107</sup> Solid Waste Management Challenges in Pacific Island Countries, The Global research Development Research Center <http://www.gdrc.org/uem/waste/island/SolidWasteManagement.pdf>

<sup>108</sup> Solid Waste Management Challenges in Pacific Island Countries, The Global research Development Research Center <http://www.gdrc.org/uem/waste/island/SolidWasteManagement.pdf>

<sup>109</sup> Ibid.

<sup>110</sup> Tracking the Millennium Development Goals, MDG Tracker, <http://www.mdgmonitor.org/goal7.cfm>

<sup>111</sup> UN Millennium Development Goals. <http://www.un.org/millenniumgoals/pdf/MDG%20Report%202010%20En%20r15%20-low%20res%2020100615%20-.pdf#page=54>

<sup>112</sup> Ibid.

<sup>113</sup> Ibid.

<sup>114</sup> Ibid.

<sup>115</sup> Ibid.

<sup>116</sup> *Achieving the Millennium Development Goals in an Era of Uncertainty*, Millennium Development Goals in Asia and the Pacific. [http://www.mdgasiapacific.org/files/shared\\_folder/documents/Regional\\_MDG\\_Report\\_2009-10.pdf](http://www.mdgasiapacific.org/files/shared_folder/documents/Regional_MDG_Report_2009-10.pdf)

<sup>117</sup> Tourism, Statistical Yearbook for Asia and the Pacific 2009, UNESCAP <http://www.unescap.org/stat/data/syb2009/25-Tourism.asp>

<sup>118</sup> E/ESCAP/SB/PIDC(7)/2, *Sustainable Tourism Development Issues in Pacific Island Countries*, United Nations Economic and Social Council. 29 March 2002. [www.unescap.org/LDCCU/SBPIC7\\_Item%205-2E.doc](http://www.unescap.org/LDCCU/SBPIC7_Item%205-2E.doc)

development and governments must pursue sustainable developments for tourism in a comprehensive and planned manner.<sup>119</sup>

In 1999, ESCAP launched the Plan of Action for Sustainable Tourism Development in the Asia and Pacific Region, 1999-2005.<sup>120</sup> This Plan of Action “aims to provide a mandate through action at the national level and supporting action at the regional level in the following six theme areas: human resources development in the tourism sector, the economic impact of tourism, the environmental management of tourism, infrastructure development and investment for the tourism sector, facilitation of travel, and regional and sub-regional cooperation in tourism development.”<sup>121</sup> When the countries involved in the Plan of Action for Sustainable Tourism Development in the Asia and Pacific Region met in 2006 to compose the Plan of Action for Sustainable Tourism Development in the Asia and Pacific Region Phase II (PASTA 2006-2012), they discussed the accomplishments achieved under the original Plan of Action. It was noted that the revenue received from tourism was used to improve infrastructure in the island countries. It was also noted that the effective way countries were cooperating and promoting tourism was in effect leading to a better understanding of other cultures and therefore “contributing to world peace.”<sup>122</sup> PASTA reiterates the goals that Plan of Action set out originally and is highly focused on seeing results from the implementation of the goals by 2012.<sup>123</sup> Being able to successfully implement the goals set out by the Plan of Action and PASTA, countries enable themselves to become wealthier and therefore are able to put money back into their own economy and are able to invest in sustainable development in order to better the lives of their citizens.

When Beijing was selected to host the 2008 Olympic Summer Games, it was chosen with the understanding that the city of Beijing and the country of China would have a lot of work to do in order for the city to be ready to host an event of this magnitude. One of main concerns for the International Olympic Committee (IOC) was the city’s air quality and the effect it would have on the athletes when it came time to compete. The IOC wanted Beijing to limit the amount of pollutants that the city of 22 million people emitted into the atmosphere.<sup>124</sup> While the city was able to cut down on the amount of pollutants emitted, that was not the only change that has greatly benefited the city. The 2008 Olympics caused Beijing to develop and update its healthcare system.<sup>125</sup> The city of Beijing was able to improve responses to public health emergencies, enforced health inspections, and improve health care services.<sup>126</sup> In the seven years leading up to the games, Beijing was able to improve its health care system along with improving the health of its citizens.<sup>127</sup> Beijing’s improved health system was also able to reduce the likelihood of spreading communicable diseases.<sup>128</sup> The reduction of communicable diseases is attributed to the fact that the food safety measures that were taken, the regulation of catering businesses by the Beijing Municipal government, and the overall improved health and lifestyle of Beijing’s citizens.<sup>129</sup> Beijing was also able to improve its water security and cleanliness. Beijing officials took extreme precaution in order to ensure that water sources would not become contaminated. Weekly reports were required in the months leading up to the games in order to ensure clean drinking water, this practice not only ensured clean drinking water during the games to the athletes and the tourists, but also ensured that Beijing’s citizens would benefit from the cleaner drinking water.<sup>130</sup> This has shown that while Beijing set out to improve its healthcare system and water security for the Olympic Games it also greatly benefited its citizens.

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<sup>119</sup> Ibid.

<sup>120</sup> Ibid.

<sup>121</sup> Ibid.

<sup>122</sup> The Plan of Action for Sustainable Tourism Development in Asia and the Pacific Phase II (PASTA 2006-2012) and Regional Action Programme. UNESCAP. <http://www.unescap.org/ttdw/common/TPT/Tourism/PASTA/E1369e.pdf>

<sup>123</sup> Ibid.

<sup>124</sup> “Beijing’s Population Exceeds 22 Million” National Population and Family Planning Commission of China. <http://www.npfpc.gov.cn/en/detail.aspx?articleid=100302125224937535>

<sup>125</sup> “The Health Legacy of the 2008 Beijing Olympic Games” The World Health Organization, 2008, [http://www.olympic.org/Documents/Commissions\\_PDFfiles/Medical\\_commission/The\\_Health\\_Legacy\\_of\\_the\\_2008\\_Beijing\\_Olympic\\_Games.pdf](http://www.olympic.org/Documents/Commissions_PDFfiles/Medical_commission/The_Health_Legacy_of_the_2008_Beijing_Olympic_Games.pdf)

<sup>126</sup> Ibid.

<sup>127</sup> Ibid.

<sup>128</sup> Ibid.

<sup>129</sup> Ibid.

<sup>130</sup> Ibid.

By becoming a more sustainable city, Beijing's citizens have become healthier and now Beijing has been recognized by the world for having improved its city's infrastructure. The success of Beijing to improve its healthcare system is an excellent example of what cities, countries, and governments are able to accomplish when they work hard in order to promote and accomplish sustainable development goals. Pacific island countries can look at what Beijing was able to accomplish and set national goals for their own countries in order to successfully implement sustainable development practices.

### ***Conclusion***

A government's focus on sustainable development is a fundamental way that a country is giving its citizens the ability to become healthier and in some cases more economically stable. Sustainable development has been declared to be the key to success when discussing improving the standard of living for Pacific Islanders. Pacific island countries have small economies due to the fact that they have tried to base their economies on agriculture and having their crops destroyed by natural disasters as well as other factors. In order to achieve MDG 1 some sort of sustainable development must be made. In order to eradicate the extreme poverty that seems to be present in the Pacific Island region more should be done to improve housing and access to school and an education. Essentials of daily life such as access to clean drinking water and access to an area that practices clean sanitation and waste management are detrimental to meeting MDG 1 and improving conditions for the millions of poor within these countries. We have seen that tourism is a large source of capital in these small island nations and that the revenue received from tourism can be invested in sustainable development and improve the lives of citizens. The problem is still present, however, that lack of accommodations and infrastructure are hindering this industry to maximize its potential. Now that governments are beginning to understand the gravity of their poverty issue, Pacific island nations will have a future ahead of them that will look brighter than their present.

### ***Committee Directive***

This topic allows the ESCAP to address a variety of economic and social issues related to sustainable urban development. There are multiple Member States within ESCAP whose cities face a number of development challenges due to poor, or non-existent, urban planning. This topic seeks to address this problem from an environmental, economic, and social standpoint. Debate will also focus on lost revenue for these urban sectors due to pollution, natural disasters, and poor planning. Delegates should work to understand the problems of Pacific Island Countries (PIC) in regards to standard of living and why goals are not currently being met. The world has recently begun paying close attention to the Pacific Island countries and many countries including Australia and New Zealand have provided much financial support. Delegates should research what programs are currently in place to support the PICs and how they can be improved. Delegates can also work to devise new agreements, policies and programs but must keep in mind that many are already in place but are not reaching the appropriate people. Delegates should focus on expanding program access to rural and extremely poverty-stricken areas. Financial support for new and existing programs must also be considered as promised payments have not been made lately especially following the global economic crisis.

## **Topic III. Expanding the Objectives of the Tsunami Regional Trust Fund**

### ***Introduction***

Early on December 26, 2004, disaster struck the Asia-Pacific region in an unprecedented way. An earthquake with a score of 9.0 on the Richter scale followed by 67 aftershocks originated in the Indian Ocean off the coast of Indonesia.<sup>131</sup> This earthquake and the following aftershocks created a series of tsunamis which devastated the coasts of 17 countries within Southeast Asia.<sup>132</sup> 300,000 people were either killed or missing as a result of the tsunami with several thousand others displaced from their homes.<sup>133</sup> This number accounted for 75 percent of the total number of deaths by natural disaster during the entire decade between 1993 and 2003.<sup>134</sup> In response to the disaster,

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<sup>131</sup>E/ESCAP/1333.Policy Issues for the ESCAP Region: Emerging Issues in Response to Tsunamis and Other Natural Disasters. Economic and Social Commission for Asia and the Pacific.21 March 2005.

<sup>132</sup>Ibid.

<sup>133</sup>Ibid.

<sup>134</sup>Ibid.

the Ministry of Foreign Affairs and the Ministry of Information and Communication Technology of Thailand hosted a meeting on Regional Cooperation on Tsunami Early Warning Arrangements in January 2005.<sup>135</sup> Attending this meeting were 43 countries as well as 16 international organizations including Ministers from ASEAN countries as well as Ministers representing the 17 countries affected by the December, 2004 tsunami.<sup>136</sup> Delegates at this meeting agreed on the importance of the implementation of a Regional Tsunami Early Warning System as a top priority of the United Nations based on the Hyogo Framework for Action.<sup>137</sup> The Hyogo Framework for Action was established at the World Conference on Disaster Reduction which was held 10 days prior in Kobe, Japan.<sup>138</sup> The Framework outlined priorities for action in national and community-based response to a natural disaster in the Asia-Pacific Region.<sup>139</sup> Disaster risk reduction was declared to be a priority of both national and local governments with an emphasis in identifying, assessing, and monitoring disaster risks in an effort to enhance the early warning of such disasters. Education of risk as well as disaster preparedness was also a strategic focus of the framework and governments were encouraged to quickly establish effective responses to disasters at all levels<sup>140</sup>

### ***Tsunami Relief Fund***

On 26 September 2005, eight months following the Regional Cooperation on Tsunami Early Warning Arrangements meeting, MemberStates of ESCAP in accordance with the United Nations, established The Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and Southeast Asia. Today, The Voluntary Trust Fund on Tsunami Early Warning Arrangements is more commonly referred to as “The Fund”.<sup>141</sup> Upon inception, UNESCAP was directed to be the administrator of ‘The Fund’ and initial investments were made totaling US\$ 12.5 million by the countries of Thailand and Sweden.<sup>142</sup> The main objective of The Fund was declared to be an effort to narrow the capacity gaps with the Asia-Pacific region in regard to early-warning, response, and education of natural disasters and their effects.<sup>143</sup> The original focus of The Fund as an initial step in obtaining the objective was on the development of a tsunami early-warning system using a multi-faceted approach.<sup>144</sup> An effective tsunami early warning system was recognized to not only require advanced technology but also the establishment of supportive infrastructure as well as effective communication channels.<sup>145</sup> Capacity gaps were found in areas with minimal amounts infrastructure, technical, and communication resources. In order to work towards the narrowing of these gaps, The Fund aimed to establish a comprehensive early-warning system utilizing a network of regional and sub-regional centres of communication and resources which link to national and other existing centres outside the region.<sup>146</sup> The centres serve as focal points within the region for maintaining technological and organizational expertise and data sharing.<sup>147</sup> It is through the coordination of these centres that governments will have the ability to coordinate approaches to recourse mobilization depending on the needs of the region during a tsunami or other natural disaster.<sup>148</sup>

<sup>135</sup> *Opening Statement by Mr. Sue Lo-Utai, Deputy Permanent Secretary, Ministry of Information and Communication Technology Thailand.* ITU/ESCAP Joint Regional Workshop on Disaster Communications for Asia Pacific. UN Conference Centre, Bangkok. 12 December 2006.

<sup>136</sup> “Tsunami Disaster Rehabilitation and Reconstruction”. UNESCAP. <http://www.unescap.org/esd/water/projects/tsunami/tsunami.asp>

<sup>137</sup> Ibid.

<sup>138</sup> Ibid.

<sup>139</sup> *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters.* World Conference on Disaster Reduction. Kobe, Hyogo, Japan. 18-22 January 2005.

<sup>140</sup> Ibid.

<sup>141</sup> *Opening Statement by Mr. Sue Lo-Utai, Deputy Permanent Secretary, Ministry of Information and Communication Technology Thailand.* ITU/ESCAP Joint Regional Workshop on Disaster Communications for Asia Pacific. UN Conference Centre, Bangkok. 12 December 2006.

<sup>142</sup> *Multi-Donor Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and SouthEast Asia.* ESCAP Technical Cooperation.

<sup>143</sup> Ibid.

<sup>144</sup> *ESCAP Trust Fund for Tsunami, Disaster, and Climate Preparedness: Strategic Plan.* Bangkok, Thailand. UNESCAP. 16 June 2009.

<sup>145</sup> *Government of Japan. South Asia: Phuket ministerial declaration on regional cooperation on tsunami early warning arrangements.* 2 February 2005.

<sup>146</sup> “Objectives of the Trust Fund.” UNESCAP. [http://www.unescap.org/pmd/tsunami/tsunami\\_02\\_obj.asp](http://www.unescap.org/pmd/tsunami/tsunami_02_obj.asp)

<sup>147</sup> Ibid.

<sup>148</sup> Ibid.

Although ESCAP is the administrator of The Fund, activities and projects are developed and implemented by other international organizations, non-governmental organizations, and national governments.<sup>149</sup> Progress is considered to be achieved through the coordination and completion of projects. These projects can be regional endeavors, implemented by National Governments, or non-governmental organizations (NGO). The projects are centered on four identified components of an effective early warning system. First, risk knowledge analyzes the hazards and vulnerabilities as well as trends and patterns in weather and risk maps in order to increase the timing of early warnings.<sup>150</sup> Next, monitoring and warning service works to develop parameters that can be used in effective and accurate forecasting of tsunamis and other coastal disasters. Communication of risk and the warnings are a very important aspect of the warning system. Effective and clear communication to all of those at risk during a disaster is extremely important in preventing the extreme loss of life that occurred on the December, 2004 tsunami. Finally, building an effective national and community response to both the warning and aftermath is a key piece and focal point of the funded projects and an effective end-to-end early warning system.<sup>151</sup> Projects are chosen from a pool of applications that are sent in annually as proposals from organizations and governments for funding and grants.<sup>152</sup> Priority for the delegation of funds is highest for projects that encapsulate the four key objectives of an effective early warning system. Special focus is placed on communication and access to critical information especially in the areas of Southeast Asia with high levels of poverty and very limited access to media or other communication channels.<sup>153</sup> Policy and funding decisions are made by the Fund's Advisory Council. The Council includes the Executive Secretary of UNESCAP as well as representatives of donors with a minimum of a 20 per cent share which is currently held by the initial investors of the Governments of Thailand and Sweden.<sup>154</sup> Since 2005, 51 projects have been proposed from various sources and fourteen projects have been implemented in coordination with the strategic plan of setting up an effective early warning system.<sup>155</sup> These projects include using scientific risk maps for planning, the establishment of Standard Operating Procedures for evacuation and rescue, a depository of education and awareness materials and the development of monitoring and warning serves dedicated to countries with a large rural or poor population.<sup>156</sup>

The Fund works within the framework of the Indian Ocean Tsunami Warning System (IOTWS) which is coordinated by the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (IOC-UNESCO).<sup>157</sup> In total, 5 UN entities partner with UNESCAP in order to assist in the technical appraisal of proposed projects, attend Advisory Council meetings and participate in the development of a mapping study which identifies geographic gaps and needs in regional tsunami early warning systems.<sup>158</sup> These organizations include the IOC-UNESCO, the Inter-Agency Secretariat of the International Strategy for Disaster Reduction (UN/ISDR), the Office for the Coordination of Humanitarian Affairs (OCHA), the United Nations Development Programme (UNDP), and the World Meteorological Organization (WMO).<sup>159</sup> These partners do not

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<sup>149</sup>E/ESCAP/CDR/INF/6. *Activities Of Escap Cooperative Mechanisms on Disaster Risk Reduction: Status of the ESCAP Multi-Donor Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and Southeast Asia*. Committee on Disaster Risk Reduction. UNESCAP. 26 January 2009.

<sup>150</sup> *ESCAP Trust Fund for Tsunami, Disaster, and Climate Preparedness: Strategic Plan*. Bangkok, Thailand. UNESCAP. 16 June 2009.

<sup>151</sup> Ibid.

<sup>152</sup> Ibid.

<sup>153</sup> *2009 Annual Report: Multi-donor Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and Southeast Asia*. UNESCAP. 31 March 2010.

<sup>154</sup>E/ESCAP/CDR/INF/6. *Activities Of Escap Cooperative Mechanisms on Disaster Risk Reduction: Status of the ESCAP Multi-Donor Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and Southeast Asia*. Committee on Disaster Risk Reduction. UNESCAP. 26 January 2009.

<sup>155</sup> Ibid.

<sup>156</sup> *ESCAP Trust Fund for Tsunami, Disaster, and Climate Preparedness: Strategic Plan*. Bangkok, Thailand. UNESCAP. 16 June 2009.

<sup>157</sup> *Multi-Donor Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and SouthEast Asia*. ESCAP Technical Cooperation.

<sup>158</sup>E/ESCAP/CDR/INF/6. *Activities Of Escap Cooperative Mechanisms on Disaster Risk Reduction: Status of the ESCAP Multi-Donor Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and Southeast Asia*. Committee on Disaster Risk Reduction. UNESCAP. 26 January 2009.

<sup>159</sup> Ibid.

have voting rights as to the final policy and funding decisions, however their technical expertise and recommendations are considered.<sup>160</sup>

### ***Indian Ocean Tsunami Early Warning System***

Prior to 2004, sea-level monitoring of earthquakes, which could potentially cause a tsunami, was not available in the Indian Ocean. Within the 5 years following the devastating December, 2004 Tsunami projects, supported by The Fund and implemented by organizations such as ICO-UNESCO have worked to establish and expand regional centres from which data is received from seismic and sea level stations.<sup>161</sup> Following the December, 2004 Tsunami, countries along the Indian Ocean such as India, Malaysia, Indonesia, and Thailand quickly established networks of seismological stations and tide gauges.<sup>162</sup> Two categories of seismic stations exist within the Tsunami Early Warning System (TEWS), most stations are part of a core network which was coordinated by IOC-UNESCO and financially supported by The Fund. The remaining stations are part of national initiatives and while most share data with the core centers, some only provide support to its respective national government.<sup>163</sup> The core stations are built to specific qualifications to provide seismic data which is used to measure the probability of an under-water earthquake creating a tsunami.<sup>164</sup> Sea-level data stations such as coastal sea level tide gauges and deep ocean stations are another part of the TEWS network.<sup>165</sup> Coastal sea level stations are used to monitor long-term sea level change, storm surge monitoring and port operations. They are typically installed within harbors or on piers. 120 coastal stations are active within the Indian Ocean region and The Fund has supported the implementation of a total of 9 stations since 2005 in countries such as Myanmar, Philippines and Vietnam.<sup>166</sup> Deep ocean stations, also known as “tsunameters”, are installed near known tsunamigenic areas and measure ocean-floor pressure as an indicator of a possible tsunami. Currently, 19 tsunameters are actively transmitting data and 13 additional stations are planned for development.<sup>167</sup>

When an earthquake is detected from one of the core seismic stations or a connected national seismic station, data is transmitted to two regional tsunami warning centres in the Indian Ocean. The Pacific Tsunami Warning Centre (PWTWC) in Honolulu, Hawaii and the Japan Meteorological Agency (JMA) in Tokyo, Japan receive this data and if warranted, send out tsunami warnings and watches to national agencies.<sup>168</sup> Watches are issued when conditions are favorable for a tsunami and a warning is issued when the possibility of a tsunami is highly-likely or eminent. Upon receiving the earthquake data from the seismic centres it takes roughly 15-20 minutes to decipher whether or not an earthquake has the ability to produce a tsunami. In general, inland earthquakes do not produce tsunamis although their range of shock may be detected by the seismic centres and depending on location and intensity, not all underwater earthquakes will produce tsunamis.<sup>169</sup> Once a warning is received by a national agency, it is the responsibility of the agency/governmental body to distribute the warning to its population. Currently, 26 out of 28 countries along the Indian Ocean have established agencies/governmental organizations that are responsible for receiving and distributing tsunami warnings.<sup>170</sup>

Warnings are distributed to the public through different channels of communication including radio, television, text messaging, email, and in poorer countries, bells, megaphones or loud speakers within villages. Many challenges are present in proper and effective communication of these warnings. The effectiveness of the communication of

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<sup>160</sup> Ibid.

<sup>161</sup> “How the Indian Ocean Tsunami warning System works.” Thomson Reuters Foundation. 29 October 2009.  
<http://www.alertnet.org/db/art/59567/2009/09/28-122125-1.htm>

<sup>162</sup> *Tsunami Early Warning Systems in the Indian Ocean and Southeast Asia: Regional Report on Unmet Needs*. Bangkok, Thailand. UNESCAP. April 2009.

<sup>163</sup> Ibid.

<sup>164</sup> Ibid.

<sup>165</sup> Ibid.

<sup>166</sup> Ibid.

<sup>167</sup> Ibid.

<sup>168</sup> “How the Indian Ocean Tsunami warning System works.” Thomson Reuters Foundation. 29 October 2009.  
<http://www.alertnet.org/db/art/59567/2009/09/28-122125-1.htm>

<sup>169</sup> Ibid.

<sup>170</sup> Ibid.

tsunami warnings seems to correlate with the over-all wealth of the nation as poorer and more rural-based countries seem to struggle to be prepared when warnings are declared.<sup>171</sup>

## **RIMES**

The initial project of The Fund was the establishment of a regional multi-hazard early warning center (REWC) which would work in connection with the two already established tsunami early warning centers in Hawaii and Japan.<sup>172</sup> The REWC was designed and developed under the framework of the TEWS and the IOC-UNESCO.<sup>173</sup> 26 countries participated in the REWC project with the Asian Disaster Preparedness Center (ADPC) as the facilitator of the collaborative efforts of all countries involved.<sup>174</sup> The REWS project has worked to establish a regionally-supported tsunami early warning system and since 2005 has worked as a project supported by the Tsunami Relief Fund.<sup>175</sup> The REWC was successfully established in 2008 on the campus of the Asian Institute of Technology in Bangkok, Thailand and was quickly approved as capable of providing early-warnings for tsunamis and other hydro-meteorological hazards.<sup>176</sup> In January 2008 at the first regional meeting of the ADPC and the 26 supporting countries, concerns were raised that if REWS remained supported at a project level it would not survive.<sup>177</sup> In response to this announcement, 5 countries including Lao PDR, Cambodia, Comoros, Maldives and Seychelles signed an agreement of International Cooperation to continue the initiatives of REWS and create a fully-funded organization outside of the umbrella of The Fund.<sup>178</sup> This agreement established the Regional Integrated Multi-hazard Early Warning System for Africa and Asia (RIMES) as an official inter-governmental entity as of 1 July 2009.<sup>179</sup> Since inception, three more countries, Bangladesh, Philippines, and Timor-Leste, have signed the RIMES Cooperation Agreement and have committed to maintain and manage the effort of RIMES as well as work to continuously exchange observation and monitoring data.<sup>180</sup> The organization is built on the foundation of three bodies led by a Council which includes heads of a National Meteorological and hydrological services and national agencies which generate the warning when necessary. The Secretariat provides administrative services to the Council and provides funding and support to the Program Unit. The Program Unit works to complete the day-to-day tasks of the organization.<sup>181</sup>

The system builds upon existing tsunami-warning systems and creates a centralized system which benefits national governments in the Southeast Asian and Indian Ocean region in communicating an effective warning program to the affected citizens specifically those in poor and rural areas in Southeast Asia where communication gaps are the largest.<sup>182</sup> The early warning center will be completely operational under the qualifications of TEWS and fully managed and supported by the RIMES organization within 2010.<sup>183</sup> RIMES is a great example of the success of the Tsunami Relief Fund's programs and has worked to establish regional cooperation in the implementation of the centres of technology and communication and the creation of an effective multi-hazard early-warning program.

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<sup>171</sup> "How the Indian Ocean Tsunami warning System works." Thomson Reuters Foundation. 29 October 2009.

<http://www.alertnet.org/db/art/59567/2009/09/28-122125-1.htm>

<sup>172</sup> "ADPC Completes Regional Multi-Hazard Early Warning System." Asian Disaster Preparedness Center. <http://www.adpc.net/v2007/announcement/2010/RIMES/RIMES.asp>

<sup>173</sup> Ibid.

<sup>174</sup> "Summary and Progress Report: Towards sustaining the Indian Ocean and Southeast Asia End-to-End Multi-Hazard Early Warning System." Maldives Meteorological Service. 2010.

<sup>175</sup> Ibid.

<sup>176</sup> "ADPC Completes Regional Multi-Hazard Early Warning System." Asian Disaster Preparedness Center. <http://www.adpc.net/v2007/announcement/2010/RIMES/RIMES.asp>

<sup>177</sup> Ibid.

<sup>178</sup> Ibid.

<sup>179</sup> Ibid.

<sup>180</sup> "Countries of the Indian Ocean and Southeast Asia Agree to Work Together for Disaster Early Warning".

UNESCAP. [http://www.unescap.org/pmd/tsunami/tsunami\\_press66cs.asp](http://www.unescap.org/pmd/tsunami/tsunami_press66cs.asp)

<sup>181</sup> "DHM: An Introduction". Department of Hydrology and Meteorology Hydrology Division, Ministry of Environment, Government of Nepal. <http://www.hydrology.gov.np/downloads/RIMES-Inception%20Workshop.pdf>

<sup>182</sup> Mr. Ali Shareef, "The Region Integrated Multi-Hazard Early Warning System for Africa and Asia." [www.unescap.org/.../tsunami/.../11%20Mr%20Abdul%20Muhsin%20Ramiz%20-%20RIMES.ppt](http://www.unescap.org/.../tsunami/.../11%20Mr%20Abdul%20Muhsin%20Ramiz%20-%20RIMES.ppt)

<sup>183</sup> 2009 Annual Report: Multi-donor Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and Southeast Asia. UNESCAP. 31 March 2010.

### ***The Future of the Fund***

As evidence increases for the argument that climate change is altering the intensity and occurrence of natural disasters ESCAP Member States have begun to understand the need for expansion of The Fund to include the detection and response to a multitude of hazards. These hazards, including tsunamis, cyclones, flooding, and storm surges are becoming more frequent with the gradual changes in weather patterns over the course of time. The Intergovernmental Panel on Climate Change lists deltas within the Asia-Pacific region as one of the top four areas of the world which are most vulnerable to disaster directly related to changes in weather due to climate change.<sup>184</sup> The understanding and effective response to climate change as a whole is becoming a new focus of The Fund as the original focus of a tsunami early warning system is being maintained through the IOC-UNESCO and RIMES.<sup>185</sup>

In 2007, The Fund's Advisory Council adopted a Monitoring and Evaluation Framework which calls for an annual evaluation of the Fund as well as supported projects. In October 2008, the first report was published and recommended changes to the scope and focus of The Fund in order for the programme to survive.<sup>186</sup> Two major conclusions came from this review: The Fund has a severe lack of strategic direction and The Fund suffers from the absence of a stakeholder engagement strategy.<sup>187</sup> These findings support recent perceptions that The Fund is too narrow in scope and outdated now that the TEWS and RIMES are well under way. The Evaluative review concludes that The Fund must be treated similar to a business in management and in order for The Fund to survive, the scope should be broadened to include other hydro-meteorological hazards such as flooding, storm surges, and cyclones.<sup>188</sup> If the fund remains a "Tsunami Relief Fund" there is a strong chance that further funding will be extremely difficult to obtain as the work for tsunami-specific warning systems is waning. If the Fund were to expand its scope, early warning systems could be developed for other hazards which would attract not only funding but the innovation of more advanced technology and communication systems that could improve current early warning systems.<sup>189</sup> This broadening was recommended to come with a change in the name of The Fund to "ESCAP Multi-Donor Trust Fund on Tsunami, Disaster and Climate Preparedness".<sup>190</sup>

Another recommendation for The Fund was to have a more strategic direction toward funded projects including the majorly lacking areas of communication and "community resilience". Risk knowledge has been identified as a major area of work that needs to be increased to include the efforts related to climate change. UNDP studies have shown that low-intensity, high-frequency hazards such as flash flooding have had higher long-term impacts on infrastructure and economic assets than more major hazards such as cyclones or tsunamis.<sup>191</sup> Communication of risks and warnings as well as the capacity to respond is another challenge which could be expanded under a new focus of all natural disasters and overall climate change. The large population of the Asia-Pacific region coupled with the strong disparities of wealth and remoteness of many villages cause a problem for effective warning communication today.<sup>192</sup>

On 17-18 September 2009, members of Governmental and non-governmental organizations as well as environmental and disaster risk reduction officials met for the "Consultation Meeting on Coastal and Climate Hazards: Priorities for the Indian Ocean and Southeast Asia" in Thailand. The meeting focused on four areas of disaster risk reduction that could ultimately become an expansion to the current priorities of The Fund<sup>193</sup>. Communication of disaster and climate information, disaster and climate risk knowledge, education and awareness of disaster and climate, and preparedness of communities to disasters and climate change were identified as expansions to the current four key

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<sup>184</sup>2009 Annual Report: Multi-donor Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and Southeast Asia. UNESCO. 31 March 2010.

<sup>185</sup> Ibid.

<sup>186</sup>Multi-donor Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and Southeast Asia: Evaluative Review 2008 Final Report. ESCAP Programme and Management Division. 31 October 2008. UNESCO.

<sup>187</sup> Ibid.

<sup>188</sup> Ibid.

<sup>189</sup> Ibid.

<sup>190</sup> Ibid.

<sup>191</sup>ESCAP Trust Fund for Tsunami, Disaster, and Climate Preparedness: Strategic Plan. Bangkok, Thailand. UNESCO. 16 June 2009.

<sup>192</sup> Ibid.

<sup>193</sup>2009 Annual Report: Multi-donor Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and Southeast Asia. UNESCO. 31 March 2010.

areas of focus for The Fund.<sup>194</sup> These expanded key areas of focus work to further the recommendations made by the 2008 Evaluative Review of The Fund. With the help of donors and the partners of The Fund, ESCAP can strengthen the capacity of the fund to incorporate these new points of focus and expand the reach of newly proposed and current projects to include the affects of not only tsunamis but other hazards of climate change.<sup>195</sup>

### ***Financial Needs***

The Fund is a voluntary, demand-driven initiative and is led by the organizations who propose projects to fill the resource gaps in response to the 2004 Tsunami as well as other natural disasters. As reported in the 2009 annual report of the status of The Fund, five rounds of funding were conducted.<sup>196</sup> The governments of Thailand, Sweden, Turkey and Nepal have all contributed financially to The Fund and the Government of Netherlands has contributed an Associate Expert for research and development.<sup>197</sup> In order to support further projects into a successful organization, such as the case with RIMES, further funding is needed from the Member States of ESCAP. With less than 4 million remaining in The Fund and no contributions made in 2009, the viability of the capacity of The Fund to expand to climate change and further hazards could be in jeopardy.<sup>198</sup>

Under the direction of The Fund, seismic and sea level stations have been installed in several countries within the region in order to detect the possibility of an earthquake creating another devastating tsunami within the region. A few countries within the region including Viet Nam and Philippines have made efforts to assume financial responsibility for maintenance and operation of these detectors.<sup>199</sup> The long-term financial and technical support must be secured by national governments in order for The Fund to expand grants to projects focused on multi-hazard purposes.<sup>200</sup> The continued support and development of Standard Operating Procedures (SOP) must also be met in order for The Fund to expand to include climate change and subsequent hazards. National Governments must provide support through policy implementations and laws which reflect the procedures recently created by The Fund.<sup>201</sup> Further funding and attention is needed to strengthen the effectiveness and span of warning messages. As mentioned previously, the large gap between wealth in areas as well as the remoteness of many villages makes it difficult for communication of warning messages and education to reach many of the population of Southeast Asia. Funding for future programs and projects must be expanded and developed to allow remote regions the access to this information especially at crucial times of eminent danger.<sup>202</sup> Risk knowledge and communication are especially lacking in small, rural countries that have a difficult time devoting resources to the lengthy project application process. A focus on smaller projects that can benefit these smaller, lower-capacity countries could aid The Fund in the long term as countries that benefit from the projects are more likely to feel like stakeholders and contribute in the future.<sup>203</sup> Current partnerships and the cultivation of new partnerships with outlets such as the media and volunteer organizations can also aid in the communication of warnings and education.<sup>204</sup>

### ***Conclusion***

Strategic partnerships with strong, dedicated organizations, the success of projects such as RIMES, and the implementation of a network of centres of technology and data have allowed The Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and Southeast Asia to make a significant impact on the Asia-Pacific region and countries along the Indian Ocean. The Fund was originally created in response to the December

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<sup>194</sup> Ibid.

<sup>195</sup> *ESCAP Trust Fund for Tsunami, Disaster, and Climate Preparedness: Strategic Plan*. Bangkok, Thailand. UNESCAP. 16 June 2009.

<sup>196</sup> *2009 Annual Report: Multi-donor Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and Southeast Asia*. UNESCAP. 31 March 2010.

<sup>197</sup> Ibid.

<sup>198</sup> Ibid.

<sup>199</sup> Ibid.

<sup>200</sup> *Tsunami Early Warning Systems in the Indian Ocean and Southeast Asia: Regional Report on Unmet Needs*. Bangkok, Thailand. UNESCAP. April 2009.

<sup>201</sup> Ibid.

<sup>202</sup> Ibid.

<sup>203</sup> Ibid.

<sup>204</sup> *ESCAP Trust Fund for Tsunami, Disaster, and Climate Preparedness: Strategic Plan*. Bangkok, Thailand. ESCAP. 16 June 2009.

2004 tsunami which devastated 17 countries in an unprecedented way. Over the past 5 and a half years following the tsunami, Member States of ESCAP are beginning to understand the impact of climate change on the region's weather patterns and believe that an expansion of The Fund could decrease the impact of resulting hazards. A multi-hazard approach to effective early warning systems can only be fully achieved with additional funding, a formal expansion of The Fund, and through the cooperation of National Governments and Non-Governmental Organizations within the region.

### ***Committee Directive***

Effective disaster risk reduction and an end-to-end warning system using a multi-hazard approach cannot be achieved without the partnership of organizations and National Governments. Delegates should consider the current strategic plan of The Fund as it works to decrease the negative impact of tsunamis through an early warning system and effective responsiveness to such disasters. With the understanding of the future effects of climate change on weather patterns and a focus on the expanded four key areas of focus proposed in the "Consultation Meeting on Coastal and Climate Hazards: Priorities for the Indian Ocean and Southeast Asia" delegates should design policies and programs which can meet the needs outlined. Should The Fund remain focused on perfecting the TEWS and supporting "tsunami-only" projects? Should the name be changed to reflect a broadened scope? What can the Member States of ESCAP do to encourage multi-donor funding? Could the private sector be utilized as a source of funding for future projects? How can ESCAP encourage the expansion of current programs and projects to include other hazards resulting from climate change?

In addition to contributing funding, how can ESCAP Member States facilitate the contribution of human resources in the fields of research, scientific development, infrastructure and education? Is it important to focus on smaller projects that affect smaller lower-capacity countries in regards to risk assessment and effective communication of warnings? Delegates should keep in mind that ESCAP is only the administrator of the funds and does not carry out the specific projects or activities. ESCAP does, however, have the ability through approval of projects and the delegation of funds to strategically focus the scope of The Fund. Delegates should maintain a focus of a multi-hazard approach as well as an understanding that the affects of climate change will be increasing in the coming decades and an effective warning and response system is vital to saving lives within the region.

## Technical Appendix Guide

### ***Topic I: Increasing Economic Security and Development Through Innovation and Production of Alternative Energy Sources***

Thomas L. Friedman. Hot, Flat, and Crowded: Why We Need a Green Revolution and How It Can Renew America. Farrar, Straus & Giroux. 2008.

This book gives a lot of background as to the state of environmental standards and policies in regards to economic and social development of many countries within the Asia-Pacific region. Although the second half of this book attempts to lead America into the 21<sup>st</sup> century utilizing alternative energy sources and ‘green technology’, many of the recommendations can be utilized as a basis for policy and programme ideas for ESCAP Member States. Delegates can also build ideas from the many examples Friedman pulls from more developed Asian countries such as India and China in regards to forward thinking ‘green’ technology changing the industry and market.

Environment and Sustainable Development News, Volume 5, Number 4. UNESCAP. September 2005.  
<http://www.unescap.org/publications/detail.asp?id=1131>

This publication, which is released throughout the year provides information for activities of the ESCAP secretariat relating to environmental protection, management, and development of resources as well as regional follow-ups. Outcomes of meetings and summit of an environmental manner are reviewed within the publication as well. Delegates can use this publication to gain further insight into programs and activities referenced within the back ground guides as well as become versed on other programmes active within the region.

Green Business.UNESCAP. Bangkok, Thailand. 2007  
[http://www.greengrowth.org/picture\\_library/3gg\\_pub/gg-pub2.html](http://www.greengrowth.org/picture_library/3gg_pub/gg-pub2.html)

This publication gives a detailed account of the state of green business within the Asia-Pacific region. This publication has been released by ESCAP and provides an abundance of information to delegates, not only to more detail into ‘Green Growth’, but how Member States have begun to implement policies to encourage green businesses and the outcomes of these projects. Further policies and recommendations on how Member States can further their nation’s own ‘Green Growth’ are also mentioned within the publication.

The State of the Environment Report in Asia and the Pacific.UNESCAP. Bangkok, Thailand.  
2005<http://www.unescap.org/esd/environment/soe/2005/>

This publication is a major review of sustainable development issues and the environment specifically within the Asia-Pacific Region. The publication is published every five years and is a major source of topics for annual ministerial meetings. Delegates can use this publication to more completely understand the long-term perspective of eco-efficiency in regards to sustainable development, innovation, and production of alternative resources. This publication also emphasizes the necessity of implementing a ‘green growth’ framework into programmes and policies in order to collectively achieve Millennium Development Goal (MDG 7).

### ***Topic II: Promoting the Standard of Living Throughout Pacific Island Countries and Territories Through Sustainable Urban Development***

Asian Development Bank. Development Effectiveness Brief Papua New Guinea Building Solid Physical and Social Infrastructure. Asian Development Bank. Asian Development Bank.  
<http://www.adb.org/documents/brochures/development-effectiveness-country-briefs/decb-png.pdf>

This article discuss how the Asian Development Bank and the nation of Papua New Guinea have worked together in order to improve Papua New Guinea’s infrastructure, such as roads, airports, and water transport. This shows how

agencies and countries working together can accomplish tasks and goals that are beneficial to a country. This is a prime example for other Pacific island countries to use in order to better their countries infrastructure.

Connell, John, and John P. Lea. *Urbanisation in the Island Pacific: towards Sustainable Development*. London: Routledge, 2002.

In this book, the authors look at what has shaped the context of urbanization in the Pacific such as the colonial heritage. It also discusses urban issues such as housing and managing urbanization. This book is an excellent resource in order to gain a full understanding of the relationship between urban development and the Pacific islands.

Guidelines for Localizing the Habitat Agenda in Asia and the Pacific. New York: United Nations, 2001.  
<http://www.unescap.org/huset/publications/localizing.pdf>

This book discusses the ideas from the United Nations Conference on Human Settlement (Habitat II) and how they relate to Pacific island countries. It lays out how to hold an urban forum to give people, agencies, and governments a place to discuss urban issues in an arena that promotes compromise and consensus between all parties involved. This type of forum is something delegates could use in order to promote capacity building in countries to improve sustainable development.

"Korean Waste Management Network." GrassRoots Recycling Network Home. 24 July 2010.  
<http://www.grn.org/zerowaste/kwmn.html>

Korea Waste Management Network is working to reduce the amount of trash in Korea. They promote zero-waste management by reducing the amount of plastic bags used in the country. They have also started a campaign to reduce the amount of disposables used by fast food restaurants. This is a good example of the type of programs that can be started in island countries in order to lessen the amount of waste produced and how to better dispose of the waste that is created.

Storey, Donovan. "The Politics of Managing Urban Development in Pacific Island States The Case of Samoa and Tonga." *Journal of Pacific Studies* 22 (1998): 61-80. Managing Urban Development. <http://www.usp.ac.fj/jps/storey.pdf>

This article discusses the problems governments face when trying to implement urban development. It shows why some governments place priority on other projects rather than implementing strong sustainable development ideas. This article uses Samoa and Tonga as example, but can be useful to all delegates in order for them to see how promote effective urban management.

"Sustainable Development: A Pacific Islands Perspective: UNESCO." United Nations Educational, Scientific and Cultural Organization. 24 July 2010. [http://portal.unesco.org/fr/ev.php-URL\\_ID=32981&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.unesco.org/fr/ev.php-URL_ID=32981&URL_DO=DO_TOPIC&URL_SECTION=201.html)

This website is an excellent source for delegates to see how process of UNESCO implementing the Mauritius Strategy is coming along. It has individual summaries for all the areas discussed in the Mauritius Strategy and the projects that are available and taking place.

"UN-EPOC Focus Area - Pacific Urban Agenda." United Nations Economic and Social Commission for Asia and the Pacific. [http://www.unescap.org/epoc/R3\\_PacificUrbanAgenda.asp](http://www.unescap.org/epoc/R3_PacificUrbanAgenda.asp)

This website shows the great partnership of UNHABITAT and UNESCAP. It discusses what the two agencies have done together to improve lives in the Pacific region. It also discusses plans and agendas that have been developed in order to improve development in the region. This site gives delegates a very good resource when they are trying to find what has already been adopted by UNESCAP through resolutions.

"UN-HABITAT.:Pipeline Projects | Pipeline Projects | Pacific Cities in Climate Change Initiative." UN-HABITAT. <http://www.unhabitat.org/content.asp?cid=8249&catid=632&typeid=61&subMenuId=0&AllContent=1>

UNHABITAT's pipeline project in the Pacific deals with climate change in Pacific island cities. This project aims to improve the ways local governments react, respond, and adapt to the challenges of climate change by improving government structures, promoting civil society participation, and by implementing strategies plans. The information provided by this project should give delegates ideas on how to improve sustainable urban development issues such as pro-poor housing in their respective countries.

### ***Topic III: Expanding the Objectives of the Tsunami Regional Trust Fund***

Marc Proksch. "UNESCAP Papers: Special Focus on the Tsunami".

UNESCAP. [http://www.unescap.org/tid/publication/aptir2362\\_mechanism.pdf](http://www.unescap.org/tid/publication/aptir2362_mechanism.pdf)

This paper discusses the long-term effects of tsunamis on countries within the Asia-Pacific Region. Special focus is given to the December 2004 tsunami which became the stimulus for the Tsunami Relief Fund. This paper argues that aid given to the affected populations of the region is helpful in the immediate-term however more projects should be put into place which creates sustained trade and economic growth in affected areas. These projects can aid the affected populations in the long-term and potentially provide the ability for the area to recover faster, should another natural disaster hit the area. This paper is helpful in discussing possible expansion of 'The Fund' in regards to other natural disasters as well as help delegates in creating new and highly effective programs and policies regarding the usage of The Fund.

SuthadSetboonsarng. "Regional Economic Cooperation in Trade and Investment for the Rehabilitation of Tsunami-Affected Countries: a Private Sector Approach".

UNESCAP. [http://www.unescap.org/tid/publication/aptir2362\\_rec.pdf](http://www.unescap.org/tid/publication/aptir2362_rec.pdf).

This paper discusses partnerships with the private sector in regards to the recovery and rehabilitation of countries affected by the December 2004 Tsunami. The paper argues that The Fund does not provide enough assistance to the rehabilitation effort which lasts years beyond a natural disaster. Partnership with the private sector is mentioned as another source for funds for these areas. Delegates could use this article to gain information on the consideration of partnership with the private sector as a channel in which to receive additional funds for rehabilitation-directed projects.

"The Tsunami Warning System". University of Washington Department of Earth and Space Sciences. <http://www.ess.washington.edu/tsunami/general/warning/warning.html>

This webpage from the University of Washington gives further detail into the Tsunami Early Warning System (TEWS) as outlined in the background guide. Delegates can use this webpage and associated links for further detail when researching the warning system and how it can be expanded to include other natural disasters.

"End-to-End Early Warning of Tsunamis and Other Natural-hazards for disaster preparedness and mitigation in the Indian Ocean and Southeast Asia Phase 2" Asian Disaster Preparedness Center  
[http://www.unescap.org/pmd/tsunami/documents/tsunami/ProgressReport\\_TTF-07Jun2010.pdf](http://www.unescap.org/pmd/tsunami/documents/tsunami/ProgressReport_TTF-07Jun2010.pdf)

This is a summary and progress report for the End-to-end early warning of tsunamis and other natural hazards project which is currently supported by The Fund and managed by UNESCAP. Delegates can review this and all other summary and progress reports on the website to gain insight and stay informed as to the current status and progress of the various projects which are currently active in the Asia-Pacific region and supported by The Fund. Information on the cost of each project is available as well as specific details into the activities performed under the framework of the referenced project.