Southern Regional Model United Nations, Atlanta 2013 Beyond 2015: Reshaping the Millennium Development Goals for an Empowered Future Sustainability

November 21-23, 2013 - Atlanta, GA Email: unido atlanta@srmun.org



Dear Delegates,

It is my pleasure to welcome you to the United Nations Industrial Development Organization (UNIDO) committee and to Southern Regional Model United Nations (SRMUN) Conference in Atlanta, Georgia. My name is Matt Smither and I will serve as your director during the conference. I am currently working on my Master's at American University in Washington DC, I have been a part of SRMUN for many years in addition to competing in MUN conferences regionally, nationally and internationally. Our dais will also include my invaluable Assistant Directors: Brittany Davis and Hannah Cho. My Assistant Directors are incredibly hard-working and driven individuals who are also veterans of SRMUN. We have been working throughout the spring and summer to make this an excellent committee in terms of substance, preparing this background guide and subsequent materials. This is the first time that SRMUN has undertaken UNIDO and I have complete faith in all of your that this will be a great committee with all of your hard work and energy.

UNIDO is currently a specialized agency within the United Nations system, but has been present in the system since 1966. During its tenure within the United Nations, UNIDO has encountered both great setbacks and achievements. UNIDO represents a highly technical body which functions throughout much of the developing world. Specifically, UNIDO works to implement projects which will even the gaps and inequality in industrialization in Member States of the South. Central to this focus is UNIDO's core principles of poverty reduction, equitable globalization, and environmental sustainability which serve as a guiding force to the agency's work. These principles have been given special consideration for our topics and we anticipate these principles to come out in your work as delegates. The topics we have chosen represent to central areas of focus for UNIDO in the coming decades.

Our topics for SRMUN Atlanta 2013 are:

I: Increasing Rural and Inland Development Through Financial and Technical Investments; and

II: Mitigating Effects of Energy Policy on Climate Change

Our committee touches upon the notion that lack of development, poverty reduction, and the existential threat of climate change and environmental disaster threaten every human on the planet. UNIDO plays a crucial role in assisting South-South partnerships which imagine a future of prosperity and sustainability not only in the short term, but for generations yet to come. It is important that you, as both delegates of UNIDO at the conference and as citizens of globe, understand the importance of these issues in building a future without a blind eye to concerns of the earth, the poor, and principled globalization. We as a dais very much believe in this ethos and look forward to seeing how you all incorporate this while balancing the demands of individual Member States.

Every delegation must submit a position paper which addresses each of the topics listed above and only those listed above. These papers should adhere to SRMUN's guidelines on position paper format and style. The objective of the position paper is to concisely lay out your delegation's plan for approaching the topics, provide a brief insight into your Member State's history on the topic, its goals and actions desired to be taken. This will be the first work my staff and I will see from you; we expect that each delegation to have well developed and researched papers that will serve as the foundation for our discussions and debate. For specific details of formatting or if you need help in crafting a position paper, please visit the SRMUN website. All position papers MUST be submitted by November 1st, 11:59pm EST via the on-line submission system at http://www.srmun.org.

Brittany, Hannah and I are very excited about the possibilities that this committee has in crafting a more equitable world. We are also equally anxious to see your ideas, energy and research set into motion during our time in Atlanta. Should you have any questions about the topics, structure of the committee, or position paper, please do not hesitate to contact me. I am truly looking forward to a great conference and some incredible work out of what I am sure will be the best committee at SRMUN Atlanta 2013!

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History of the United Nations Industrial Development Organization (UNIDO)

The evolution of the United Nations Industrial Development Organization (UNIDO) has been both a product and a process of shifting international norms, attitudes toward business and the private sector, and most recently, the impact and threat of global, anthropogenic climate change. UNIDO is a long-standing specialized agency that promotes industrial development in developing countries and countries with economies in transition. Through a complex history of the agency, UNIDO has achieved specialized agency status within the United Nations (UN) system, and shifted from an institution which promoted the Washington view of development and is a major source of South-South cooperation. Its role is to promote industrial development for poverty reduction, equitable globalization, and environmental sustainability.

At its core, UNIDO has two main functions: a global forum and a provider of technical cooperation. As a global forum, UNIDO generates knowledge on industrial development through work programs and the work of experts and practitioners. Additionally, UNIDO disseminates this knowledge, providing an integral source of industry knowledge of best practices. As a provider of technical cooperation, UNIDO affords technological support for developing economies and implements projects throughout the globe to build more stable and equitable industrial development. In this light, cooperative expertise and practices can be shared in order to benefit economies throughout the globe regardless of political or social divisions. Broadly speaking, the vision of UNIDO is to ensure that economic development is sustainable and for economic progress to be equitable. To summarize the role and goals of UNIDO, a motto of the agency is "Growth with Quality," emphasizing the utility of growth while also noting that growth comes with a responsibility for people and the environment.

In November of 1966, the General Assembly of the UN passed Resolution 2152 which established the United Nations Industrial Development Organization (UNIDO) within the UN. Its goal was to quicken the expansion of economies throughout the world. The first Executive Director, Ibrahim Helmi Abdel-Rahman of Egypt was elected. The first major shift in UNIDO history came in 1979 when the conference on the "Establishment of UNIDO as a specialized agency" adopted the current UNIDO Constitution. ⁵ The Preamble of the Constitution reads,

It is necessary to establish a just and equitable economic and social order to be achieved through the elimination of economic inequalities, the establishment of rational and equitable international relations, implementation of dynamic social and economic changes and the encouragement of necessary structural changes in the development of the world economy. ⁶

The most recent phase of change within UNIDO came in the early 1990's. With the collapse of the Soviet Union and the purported success of market-capitalism, the world seemed poised to allow for a new system of economic development without the need of the UNIDO. Several Western states, including the United States pulled out of UNIDO, leaving it virtually bankrupt and without much of its leadership. However, out of this crisis, as a phoenix, UNIDO rose to re-emphasize equitable economic systems and re-focused its efforts on the global South without dominance from states of the global North. Since then, UNIDO has expanded its role in around the world and is becoming increasingly a leader in the post-financial crisis. As Kandeh Yumkella, the Executive Director of UNIDO,

¹ UNIDO Brussels Office, "United Nations Industrial Development Organization (UNIDO): What is UNIDO?," United Nations Brussels, http://www.unbrussels.org/agencies/unido.html (accessed of March 1, 2013).

² UNIDO, "UNIDO: In brief," United Nations Industrial Development Organization, http://www.unido.org/who-we-are/unido-in-brief.html (accessed on March 1, 2013).

³ UNIS, "United Nations Industrial Development Organization (UNIDO): Providing a Platform for Agents of Progress," United Nations Information Service, http://www.unis.unvienna.org/unis/en/unvienna/unido.html (accessed on March 1, 2013).

⁴ UNIDO, "Mission Statement: partner for prosperity," United Nations Industrial Development Organization, http://www.unido.org/who-we-are/mission.html (accessed on March 3, 2013).

⁵ UNIDO, "A brief history," United Nations Industrial Development Organization, http://www.unido.org/who-we-are/history.html (accessed on March 3, 2013).

⁶ Constitution of the United Nations Industrial Development Organization, Signed at Vienna, Austria 8 April 1979, United Nations Treaty Series.

⁷ Thalif Deen, "UNITED NATIONS: Industrial Agency Suffers U.S. Cuts, Chops Staff," Inter Press Service News Agency, http://www.ipsnews.net/1996/02/united-nations-industrial-agency-suffers-us-cuts-chops-staff/ (accessed on March 6, 2013).

emphasized, "volatilities in the global fuel, food and financial markets, have sharpened the focus on the economic and social vulnerability of people of all nations."

The structure of UNIDO is simpler compared to the organizational components of many other UN agencies. Essentially, UNIDO consists of three unique operating bodies. The General Conference (GC) is the largest and governing body of UNIDO, and includes all Member States that are a party to the Constitution of UNIDO. This is the body that is going to be represented at SRMUN Atlanta. The GC meets every two years for the dual purpose of approving the budget and work programme and electing Member States' representation to the Industrial Development Board (IDB) and the Programme and Budget Committee (PBC). Fifty-three Member State representatives are elected to the Industrial Development Board (IDB) which meets annually. In its annual meetings, the IDB reviews and recommends a budget to the GC as well as the work programmes. The Programme and Budget Committee (PBC), a full subsidiary body of the IDB, is comprised of twenty-seven members that are elected out of the IDB. It is the PBC which prepares the budget and examines the work programmes that UNIDO will incorporate throughout its efforts in global development. For the 2008-2009 cycles, the value of UNIDO operations in global work programmes and budgetary expenses was 382 million Euros. Overning UNIDO is the secretariat of the agency, led by Kandeh Yumkella, the Executive Director of UNIDO. Kandeh Yumkella was elected to a second four-year term in December 2009.

UNIDO has ranked as one of the most effective and efficient agencies within the UN.¹² That feat is even more notable when considering that UNIDO directly employs some 700 staff members at its headquarters in Vienna, Austria and in regional staff offices throughout the world. Additionally, UNIDO includes and makes use of the work from 2,500 experts in industrial development. And, of these experts, over 60 percent are from developing countries, reiterating the commitment of UNIDO to emphasize the role of members of the global South.¹³

UNIDO focuses on three main thematic areas: (1) poverty reduction, (2) trade capacity building, and (3) energy and the environment. Together these three areas represent the influence and role of UNIDO offices, staff and experts in various UNIDO-sponsored programs. The first thematic area, poverty reduction, is tied to the UN work within the Millennium Development Goals and halving the world's proportion of people living in extreme poverty, or those who exist on less than one US dollar a day. UNIDO links the issue of poverty alleviation to development by insisting that industrial and economic development are the only means in which the world's poor can be brought out of the scourge of poverty. Particularly, UNIDO emphasizes the role of the private sector in achieving these aims. "Industry provides a seedbed for entrepreneurship, promotes business investment, fosters technological upgrading and dynamism, improves human skills and creates skilled jobs, and through intersectoral linkages establishes the foundations for both agriculture and services to expand." It is only through this expansion that poverty can be effectively combated. However, UNIDO also points out that governments play a key role in ensuring that development benefits and helps the poor of their respective populations through a pro-poor market outcomes system.

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⁸ Dr. Kandeh K. Yumkella, speech entitled, "Partner for Prosperity." In UNIDO, "Together we can make a difference," United Nations Industrial Development Organization, http://www.unido.org/who-we-are/structure/director-general.html#pp1[g1]/0/ (accessed on March 3, 2013).

⁹ UNIDO, "Who we are: Structure," United Nations Industrial Development Organization, http://www.unido.org/who-we-are/structure.html (accessed on March 3, 2013).

¹⁰ UNIS, "United Nations Industrial Development Organization (UNIDO): Providing a Platform for Agents of Progress," United Nations Information Service, http://www.unis.unvienna.org/unis/en/unvienna/unido.html (accessed on March 1, 2013).

¹¹ UNIDO, "Who we are: Structure," United Nations Industrial Development Organization, http://www.unido.org/who-we-are/structure.html (accessed on March 3, 2013).

Thalif Deen, "UNITED NATIONS: Industrial Agency Suffers U.S. Cuts, Chops Staff," Inter Press Service News Agency, http://www.ipsnews.net/1996/02/united-nations-industrial-agency-suffers-us-cuts-chops-staff/ (accessed on March 6, 2013).

¹³ UNIDO, "Who we are: Structure," United Nations Industrial Development Organization, http://www.unido.org/who-we-are/structure.html (accessed on March 3, 2013).

¹⁴ UNIDO, "UNIDO: In brief," United Nations Industrial Development Organization, http://www.unido.org/who-we-are/unido-in-brief.html (accessed on March 1, 2013).

UNIDO, "Poverty reduction through productive activities," United Nations Industrial Development Organization, http://www.unido.org/what-we-do/poverty-reduction-through-productive-activities.html (accessed on March 3, 2013).

Of note, UNIDO cites the building and sustaining of Small and Medium Enterprises (SMEs) as critical to a vibrant private sector. ¹⁷

The second thematic focus is on trade capacity building. The ability of Member States to engage in international trade depends on entering global value chains set-up by transnational corporations. UNIDO resources and efforts are mobilized to assist developing countries and countries with economies in transition enter these markets through both supply-side work and conformity with international market standards. On the supply end, UNIDO directs states on identifying competitive markets and sectors, ways of transporting competitive materials to markets, and developing national and regional cooperative frameworks that will cultivate large-scale trade networks. In assisting in conformity, one of the most important roles of UNIDO is supporting new Member States of the World Trade Organization (WTO) in compliance of the body's many protocol and policies. Secondarily, UNIDO helps states to develop internationally recognized product testing and issues surrounding corporate social responsibility. The issue of corporate social responsibility is growing in importance with the anticipation of the forthcoming "International Standard on Social Responsibility." ¹⁸

The final thematic area, Energy and the Environment, ensures that UNIDO programs and global economic development do not come at the expense of the environment. UNIDO cites economic growth and urbanization as costly efforts, not only in terms of financial obligations, but also the price tag paid by the environment. Much of the cause of this price is due to inadequate or lack of environmental and urban services. Additionally, new attention must be given to global climate change – its effects, threats, and unequal distribution of these across the globe, particularly in reference to the global South. The heightened effects of climate change in Least Developed Countries (LDCs) is augmented by crippling deficiencies in industrial development which contributes to states' limited capacity to mitigate against the harm of climate change upon its citizens. UNIDO's role is to enhance proper development which can help diminish the costs of growth and urbanization on an increasingly threatened environment. Furthermore, energy policies that focus on efficiency and renewable resources lower the carbon residue and consider both economic value and environmental sustainability. "Resource efficiency and low-carbon economic development can thus lesson the pressures and help to avert some important root causes of social conflict."

UNIDO is more relevant than ever considering the 2008 global financial crisis and its impact on the level of economic development felt throughout the world. Coupling this with the devastating effects of global climate change on the capacity of developing countries to mitigate against its harms, a synergy of anti-development has pervaded the international community. To this effect, the Executive Director of UNIDO, Kandeh Yumkella, stated that, "economic growth and the fight against climate change should not just proceed hand in hand; they are two parts of the same whole." UNIDO is a dynamic and effective agency which will become more relevant in a world which is increasingly led from multiple centers of power. In a multi-polar world, UNIDO provides a way for Member States to build industrial and economic development without abandoning the principles of sustainability and environmental protection, fight poverty and create a more equitable process of globalization. As this committee considers the issues on its agenda, it is important to again recognize the wisdom of Kandeh Yumkella when he declared: "I continue to firmly believe that, together, we can make a difference, as long as we remember that it is always about people and never about abstract concepts." ²¹

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¹⁷ Kai Bethke, "The Global Compact and the United Nations Industrial Development Organization (UNIDO)," United Nations Global Compact,

http://www.unglobalcompact.org/ParticipantsAndStakeholders/un_agencies/United_Nations_Industrial_Development_Organization.html (accessed on March 1, 2013).

¹⁸ UNIDO, "Trade capacity-building," United Nations Industrial Development Organization, http://www.unido.org/what-we-do/trade-capacity-building.html (accessed on March 3, 2013).

¹⁹ UNIDO, "Energy and environment," United Nations Industrial Development Organization, http://www.unido.org/what-we-do/energy-and-environment.html (accessed on March 3, 2013).

²⁰ Dr. Kandeh K. Yumkella, speech entitled, "Partner for Prosperity." In UNIDO, "Together we can make a difference," United Nations Industrial Development Organization, http://www.unido.org/who-we-are/structure/director-general.html#pp1[g1]/0/ (accessed on March 3, 2013).

²¹ Ibid.

Member States of the General Conference of UNIDO are:

AFGHANISTAN, ALBANIA, ALGERIA, ANGOLA, ARGENTINA, ARMENIA, AUSTRIA, AZERBAIJAN, BAHAMAS, BAHRAIN, BANGLADESH, BARBADOS, BELARUS, BELGIUM, BELIZE, BENIN, BHUTAN, BOLIVIA, BOSNIA AND HERZEGOVINA, BOTSWANA, BRAZIL, BULGARIA, BURKINA FASO, BURUNDI, CAMBODIA, CAMEROON, CAPE VERDE, CENTRAL AFRICAN REPUBLIC, CHAD, CHILE, CHINA, COLOMBIA, COMOROS, CONGO, COSTA RICA, CÔTE D'IVOIRE, CROATIA, CUBA, CYPRUS, CZECH REPUBLIC, DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA, DEMOCRATIC REPUBLIC OF THE CONGO, DENMARK, DJIBOUTI, DOMINICA, DOMINICAN REPUBLIC, ECUADOR, EGYPT, EL SALVADOR, EQUATORIAL GUINEA, ERITREA, ETHIOPIA, FIJI, FINLAND, FRANCE, GABON, GAMBIA, GEORGIA, GERMANY, GHANA, GREECE, GRENADA, GUATEMALA, GUINEA, GUINEA-BISSAU, GUYANA, HAITI, HONDURAS, HUNGARY, INDIA, INDONESIA, IRAN, IRAQ, IRELAND, ISRAEL, ITALY, JAMAICA, JAPAN, JORDAN, KAZAKHSTAN, KENYA, KUWAIT, KYRGYZSTAN, LAO PEOPLE'S DEMOCRATIC REPUBLIC, LEBANON, LESOTHO, LIBERIA, LIBYA, LUXEMBOURG, MADAGASCAR, MALAWI, MALAYSIA, MALDIVES, MALI, MALTA, MAURITANIA, MAURITIUS, MEXICO, MONACO, MONGOLIA, MONTENEGRO, MOROCCO, MOZAMBIQUE, MYANMAR, NAMIBIA, NEPAL, NETHERLANDS, NEW ZEALAND, NICARAGUA, NIGER, NIGERIA, NORWAY, OMAN, PAKISTAN, PANAMA, PAPUA NEW GUINEA, PARAGUAY, PERU, PHILIPPINES, POLAND, PORTUGAL, QATAR, REPUBLIC OF KOREA, REPUBLIC OF MOLDOVA, ROMANIA, RUSSIAN FEDERATION, RWANDA, SAINT KITTS AND NEVIS, SAINT LUCIA, SAINT VINCENT AND THE GRENADINES, SAMOA, SAO TOME AND PRINCIPE, SAUDI ARABIA, SENEGAL, SERBIA, SEYCHELLES, SIERRA LEONE, SLOVAKIA, SLOVENIA, SOMALIA, SOUTH AFRICA, SPAIN, SRI LANKA, SUDAN, SURINAME, SWAZILAND, SWEDEN, SWITZERLAND, SYRIAN ARAB REPUBLIC, TAJIKISTAN, THAILAND, THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA, TIMOR-LESTE, TOGO, TONGA, TRINIDAD AND TOBAGO, TUNISIA, TURKEY, TURKMENISTAN, TUVALU, UGANDA, UKRAINE, UNITED ARAB EMIRATES, TANZANIA, URUGUAY, UZBEKISTAN, VANUATU, VENEZUELA, VIET NAM, YEMEN, ZAMBIA, and ZIMBABWE.²²

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²² UNIDO, "Who we are: Structure," United Nations Industrial Development Organization, http://www.unido.org/who-we-are/structure.html (accessed on March 3, 2013).

I. Increasing Rural and Inland Development through Financial and Technical Investments

Social Protection directly reduces poverty and helps make growth more pro-poor.
- Organization for Economic Cooperation and Development, 2010

Introduction

The proliferation of Member States have emerged from colonial rule into a global economy based on technology, efficiency and innovation. The rise of the nation-state system has brought with it mass migration of inhabitants to pursue prosperity in urban cities, leaving areas of economic underdevelopment. Between 1950 and 2011, the world urban population grew at an average rate of 2.6 per cent per year and increased nearly fivefold over the period, passing from 0.75 billion to 3.6 billion.²³ Migration worsens rural-urban structural imbalances by giving a disproportionate increase in growth rate of urban job seekers relative to urban population growth and depleting the country of valuable human capital.²⁴ Rural areas are primary production areas with traditional agriculture and preindustrial labor processes; however, such resources are necessary for the sustainability of urban areas. Over a decade ago, advances in the internet and other telecommunications technologies have opened new frontiers in communication, commerce, medicine, politics, and almost every aspect of private and public life.²⁵ Due to its diffused infrastructure and population density, rural areas have difficulty adopting efficient IT technologies, another sign of the increasing disparity of rural and urban economic development.

Inhabitants of rural and inland areas often observe per capita lower levels in education and output productivity as compared to their urban counterparts. Inland areas have volatile economic ecosystems dependent upon capital and infrastructure development. Lack of territorial access to the sea, remoteness and isolation from world markets, and high transit costs continue to impose serious constraints on the socio-economic development of landlocked developing Member States. The United Nations Human Development Index (HDI) shows a strong correlation between landlocked Member States and human development in contrast to maritime Member States. The average Gross Domestic Product (GDP) per capita of landlocked Member States is approximately 57 percent of that of their maritime neighbors. These Member States also export less per capita than the average regional maritime Member States. While poor infrastructure accounts for 40 percent of transport costs for regional Member States it is as high as up to 60 percent for landlocked Member States.

United Nations Industrial Development Organization (UNIDO) has prepared technical assistance programs to prepare and adapt Member States to the context of globalization in the information and communications technology (ICT) era. UNIDO's International Conference on Sharing Innovative Agribusiness Solutions in Cairo Egypt, a collaboration of the SEKEM Initiative and the Food and Agriculture Organization (FAO), highlighted innovative and best practices utilized in developing Member States that have proven to be successful. The conference provided information to help small-scale farmers and producers enter into the domestic and international food value chains. UNIDO's trade capacity building branch outlined the strategy for the conference, focusing on UNIDO's Investment and Technology Promotion Network methodology. This allowed for business matchmaking to give private businesses, farmers, and farmers associations, technical and financial institutions, international organizations, NGOs, government institutions and academics the opportunity to discuss concrete business and cooperation

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World Urbanization Prospects: The 2011 Revision, Highlights, (United Nations publication, ESA/P/WP/224). http://esa.un.org/unup/pdf/WUP2011 Highlights.pdf (accessed May 1, 2013)

²⁴ Todaro Michael P and Smith Steven C. Urbanization and Rural-Urban Migration: Theory and Policy in Economic Development (Pearson Education Limited 2011) 334-336

²⁵ Leatherman John. Information Technologies and Rural Competitiveness. Center for Community Economic Development; Community, Natural Resource and Economic Development Programs. University of Wisconsin Community Economics Newsletter No 293 (retrieved May 22, 2013) http://www.aae.wisc.edu/pubs/cenews/docs/ce293.txt

²⁶ UN Office of the High Representative for Least Developed Countries, Landlocked Developing Countries and Small Island Developing Countries, (retrieved May 22, 2013) http://www.un.org/special-rep/ohrlls/lldc/default.htm

²⁷ Faye Michael L, Mcarthur, John W. Sachs, Jeffrey D. And Thomas Snow, Challenges Facing Landlocked Developing Countries: United Nations Journal of Human Development (Vol. 5, No. 1 March 2004) pp. 33.

Nuno Limão and Anthony J. Venables. Infrastructure, Geographical Disadvantages Transport Costs and Trade: The World Bank and Economic Review (Vol.15 No.3) pp.452 http://www.jstor.org/stable/3990110?seq=7 (accessed May 1, 2013)

opportunities and forge new partnerships.²⁹ One of the themes of the conferences focused on technology and value addition, by improving product development, quality and productivity, upgrading enterprises by introducing management and sustainable technological solutions, research and development that is relevant for developing Member States, as well as introducing more ecologically sustainable means of production with regard to the use of water, energy, chemicals, and other inputs.³⁰ Since 1968, the United Nations has paid special attention the Least Developed Member States. Characteristics of Least Developed Member States include high levels of poverty, structural and resource weaknesses and acute susceptibility to external economic factors.³¹ Rural and landlocked Member States provide special focal points for UNIDO's thematic targets of: (1) poverty reduction, (2) trade capacity building, and (3) energy and the environment.³² These areas consist of the very restrictions characterized by rural and landlocked Member States. At the fourth UN conference for Least Developed Member States, the path to sustainable development was focused on placing productive capacity building at the heart of efforts to reduce poverty and foster economic inclusion. UNIDO is committed to responding to the needs of Least Developed Member States for strategic advice and policy support towards structural change and economic diversification.

Landlocked Member States

Landlocked Developing Member States (LLDMS) are countries entirely enclosed by land, or whose only coastlines lie on closed seas. 33 Many LLDMS cannot benefit from economies of scale in production and consumption because of small population size, which is caused either by the country's small geographic size or by low population density.³⁴ LLDMS have to cope with many challenges that prohibit their economic development, such as fishing and direct access to international trade.³⁵ The dependence on transit infrastructure, political relations with neighbors and peace and stability poses economic volatility, causing many to migrate to neighboring Member States where economic conditions are more favorable. Over the last decade, LLDMS have grown at an average of 25 percent less than their maritime transit neighbors, despite beginning the decade with a per capita income of only 55 percent.³⁶ Where LLDMS only has access to routes of poor quality, the cost of overland trade is significantly higher than they would otherwise be. Hence the cost of trade of a LLDMS is heavily determined by the infrastructure levels, and, indirectly by the level of development of its transit neighbors. In spite of technological improvements in transport, LLDMS continue to face structural challenges to accessing world markets. ³⁷ On average, LLDMS export 60 percent less value per person than maritime transit nations. 38 Besides reliance on passage through sovereign Member States, LLDMS' transport costs are a major determining factor in the level of competition on the world market. However, the use of international agreements has long been a successful instrument in promoting efficient and reliable transit transport systems.39

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²⁹United Nations Industrial Development Organization. Report of the International Conference on Sharing Innovative Agribusiness Solutions from Farm to Market: Providing Know How and Finance. http://www.unido.org/fileadmin/user_media/Services/Industrial_Competitiveness/Trade_Capacity_Building/CairoConference2008/agribusinessreport_s.pdf (accessed May 1, 2013)

³⁰Ibid 7

³¹United Nations Industrial Development Organization. Report on the Impact of the Global Economic Crisis on LDC's Productive Capacities and Trade Prospects: Threats and Opportunities https://www.unido.org/fileadmin/user_media/Services/LDC_SSC/1054875_Ebook.pdf (accessed May 1, 2013)

³² United Nations Industrial Development Organization, "UNIDO: In brief," http://www.unido.org/who-we-are/unido-in-brief.html (accessed May 1, 2013)

³³ Faye Michael L, Mcarthur, John W. Sachs, Jeffrey D. And Thomas Snow, Challenges Facing Landlocked Developing Countries: United Nations Journal of Human Development (Vol. 5, No. 1 March 2004)

³⁴ Ibid, 12.

³⁵ Faye Michael L, Mcarthur, John W. Sachs, Jeffrey D. And Thomas Snow, Challenges Facing Landlocked Developing Countries: United Nations Journal of Human Development (Vol. 5, No. 1 March 2004) pp. 33.

³⁶ United Nations Development Program, Human Development Report Office Occasional Paper background paper for HDR 2003: Case Studies for Challenges Facing Landlocked Developing Countries http://hdr.undp.org/en/reports/global/hdr2003/papers/Landlocked Countries 2003.pdf (accessed May 1, 2013)

³⁷Ibid. 12.

³⁸Ibid, 14.

³⁹Global Framework For Transit Transport Cooperation Between Land-Locked And Transit Developing Countries and the Donor Community. Annex I (TD/B/42(1)/11TD/B/LDC/AC.1/7) page 19 http://www.un.org/specialrep/ohrlls/lldc/Pages%20from%20G9552680.pdf (accessed May 1, 2013)

Other challenges include border delays, cartels in the trucking industry, multiple clearance processes and bribetaking - all of which keep transport costs artificially high. 40 LLDMS climatic conditions make economic development particularly difficult and risky as a single prolonged drought can destroy long-term investment in economic activities. Most, if not all LLDMS are commodity exporters and the economic and financial role LLDMS play in the global market and attractiveness to investment opportunities depends on these geographical patterns. Economic partnerships and regional cooperation among neighboring Member States become pivotal in economic survival. Almost all of the world's landlocked Member States have low Human Development Index scores with the exception of Western and Central Europe. The European Member States have the advantage of integration of regional European markets and therefore are able to trade at a low cost. The difference in the average HDI between Western African landlocked and maritime Member States in terms of life expectancy and educations is a sizeable difference of 0.12 (.035 versus 0.47). The landlocked Member States in Latin America and South East Asia are doing slightly better relative to their neighbors with a HDI difference of 0.11.

Case Study: Central Asia and Transport Capacity

UNIDO and its partner, the Global Facilitation Partnership for Transportation and Trade (GFPTT), launched the New Eurasian Land Transport Initiative (NELTI) to develop freight transport infrastructure across the states of Central Asia, the Russian Federation, Iran and Eastern Europe. NELTI was a pilot program that focused development of old trade routes on the historical Silk Road. NELTI's program focused on (1) socio-economic progress and trade relations, linking business and communities in the Euro-Asian space; (2) disadvantages of the land-locked nature of Central Asian states and ways to improve access to export and import markets and a centralized trading location; and (3) obstacles to trade and transport efficiency. The pilot program began in 2008 between small commercial freight train and trucking companies in partnership with both local and international businesses. This system, in combination with efforts by UNIDO, GFPTT and other partners will be the beginning of a highly developed rail network on the old Silk Road routes as an effort to support inland development.

In 2009, the program participants met in Almaty, Kazakhstan to assess progress on the quality of existing and developed infrastructure along the Silk Road. Three transport routes were developed: (1) the Northern Route that passes through the Ural Mountains in Russia, (2) the Central Route which traverses the Kazakh Urals near the Caspian and (3) the Southern Route that passes through Iran south of the Caspian. Each route passes through a number of small cities and trade posts, some on the Caspian Sea and end at major ports or trade hubs in Ukraine and Turkey, specifically Istanbul. By 2009, the participants were confident that the program was integrating these areas into a wider global economy that boosted regional trade in Central Asia.⁴⁴

This program was part of the larger Asian highway systems that has been approved by UN Economic and Social Council for Asia and the Pacific (UNESCAP). One of the major obstacles, other than infrastructure, was procedural and legal barriers to trade. The participants, local businesses, trade groups, international agencies and states organized a number of regional and international conferences with UNESCAP, GFPTT, and partners to address customs procedures and trading privileges between them. Pilot caravans and agency inspectors were used to assess these obstacles and were the primary means of assessing the development of NELTI between them. ⁴⁵ For example, the caravans and inspectors looked at conditions on the northern route and concluded that the impediments to trade were poor road sections and long waiting times at the borders between Kazakhstan and Russia. ⁴⁶ Other analysis of the trade routes revealed similar results, though the 2010 Report indicated improvements from NELTI's founding in 2008.

⁴⁰The World Bank "Landlocked Countries: Higher Transport Costs Delays Less Trade" News & Broadcast Retrieved May 28, 2013).

http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:21805006~pagePK:64257043~piPK:437376~theSitePK:4607,00.html (accessed May 1, 2013)

⁴¹Faye Michael L, Mcarthur, John W. Sachs, Jeffrey D. And Thomas Snow, Challenges Facing Landlocked Developing Countries: United Nations Journal of Human Development (Vol. 5, No. 1 March 2004) pp. 33.

⁴² Ibid, 19.

⁴³ GFPTT. http://www.gfptt.org/node/2290 (accessed May 1, 2013)

^{44 &}quot;New Eurasian Land Transport Initiative (NELTI) Final Report" NEA. 2010, 7

⁴⁵ Ibid, 7.

⁴⁶ Ibid, 12.

This program offers a major example of a large regional, intergovernmental and multi-organization effort to promote stronger trade capacity which will prove to be vital to the success of any UNIDO program. As of 2010, the problems outlined have been addressed or being addressed through the governmental cooperation and the technical data delivered by the partner organizations. In the next decade, barring no major regional disturbances, we should see continued growth in the regional transportation networks in roads and railroads and greater goods exchanges between regional and international markets. It is projected the majority of these goods transactions will take place between Central Asia and Europe, further connecting the Eurasian bloc with its EU neighbors.

Rural Areas

A rural area is an open swath of land that has few homes or structures, and a low population density. Many developing Member States and economies in transition, particularly those with vast rural communities, suffer from inadequate access to food and lack of employment. Rural areas are often areas where technological innovations are outdated or inefficient, leading to slower productivity and economic growth. Infrastructure necessary to provide information and communications technology ICTs is associated with high start-up costs which would not be affordable for rural areas. For developing Member States, the digital divide is considerably greater than that of developed Member States. ICT infrastructure is virtually non-existent and the accessibility to these technologies provides socioeconomic opportunities such as growth, equality, and innovation. In response to the decrease in employment among agricultural labor, recent EU policy developments have attempted to help rural areas diversify their economy. Such diversity includes tourism, allowing for the exploitation of the rural environment in ways which connect small regions with the demand of the international market place. Rural areas with access to ICT infrastructure often face problems of aging copper-based telephone lines or local monopolies of Telecommunication Corporation's inability to allow competition.

For the 70 percent of the world's poor that live in rural areas, agriculture is the main source of income and employment.⁵⁰ However depletion and degradation of land and water pose serious challenges to producing enough food and other agricultural products to sustain livelihoods here. This is a dual problem when considering these areas are also becoming increasingly unable to meet the needs of urban populations.⁵¹ Rapid population growth exerts pressure on agricultural land in these areas subjugating the ground to forced cultivation. Increasing leisure time and mobility have acted to increase the marginal value of rural goods with respect to marginal value of food.⁵² Increasing problems such as pollution andover-exploitation of resources will not leave a sustainable world for generations to come. The 14th Session of UNIDO General Conference took place on November 28, 2011 and concluded with the thematic goal "the new revolution, making it sustainable". The conference focused on strengthening economic diversification strategies, prosperity, inclusive development, "Green" industrial development, promotion of innovative industries and technologies for sustainable future.

With UNIDO's trade capacity building and technical assistance in agriculture, rural areas become primary sources for research and development technologies. The development of proper ICT infrastructure and UNIDO's investments in agribusiness and value chain development can strengthen its primary economic resource. The EU to date has placed considerable emphasis on examining how ICTs might facilitate rural development strategies.⁵³ A best strategy solution uses a combination of both ICT infrastructure and a well thought out promotional enterprise to raise levels of competence and competitiveness in all branches in the local economy. Since agriculture is the primary

⁵²Hodge, Ian. Beyond Agri-Environmental Policy: Towards an Alternative Model of Rural Environmental Governance.
Department of Land Economy-Land Policy Use (University of Cambridge) Vol. 18 Issue 2 (April 2001) 99-111.

⁴⁷ Faye Michael L, Mcarthur, John W. Sachs, Jeffrey D. And Thomas Snow, Challenges Facing Landlocked Developing Countries: United Nations Journal of Human Development (Vol. 5, No. 1 March 2004) pp. 33.

⁴⁸ "Agribusiness and rural entrepreneurship development." United Nations Industrial Development Organization. http://www.unido.org/agro.html (accessed May 1, 2013)

⁴⁹Seamus Grimes, "Rural areas in the information society: diminishing distance or increasing learning capacity?" Rural Studies (January 2000): 13-21.

⁵⁰The World Bank. Agriculture and Rural Development retrieved (May 22, 2013) http://data.worldbank.org/topic/agriculture-and-rural-development (accessed May 1, 2013)

⁵¹ Ibid 28

⁵³ Seamus Grimes, "Rural areas in the information society: diminishing distance or increasing learning capacity?" Rural Studies (January 2000): 13-21.

production resource in rural areas, UNIDO can be on the cornerstone of finding sustainable solutions to the world's food supply fostering competition and Green industrial development.

Case Study: Trade-Capacity Building in Ghana (Rural)

In cooperation with the State Secretariat for Economic Affairs (SECO), UNIDO has assisted Ghana's farmers and government to develop trade capacity for international exports. Although Ghana has made great strides in economic development programs, agriculture in rural areas has suffered in shipping products abroad.⁵⁴ Since independence, Ghana has endured much political instability under a series of dictatorships, the last under Jerry Johns Rawlins from 1981 until 1992. Democracy in Ghana since 1992 saw an economic uplift due to many structural adjustment policies beginning in 1986. Agriculture has consistently suffered due to lack of national infrastructure, certification process for traded goods and education in proper agricultural techniques an area in which UNIDO has chosen to focus.

UNIDO and SECO worked to create that national certification process that allows goods to be exported abroad under current trade agreements. Trade capacity processes include the ability to comply with regulations and for farmers to react to international trade markets. ⁵⁵ Ghana's road system and ports allow for goods to be transported, but lacked the labs and facilities to certify their readiness to ship. As a prime exporter of cocoa, rice, shea nuts, peanuts and timber, Ghana relies on agricultural shipments in absence of an industrialized economy. The establishment of these labs in Ghana allowed for farmers to ship more goods on export markets. These labs allow scientists and researchers to analyze agricultural good quality and chemical compositions. The certification takes into account the data from the labs and then compares them to international trade standards. The process promotes smarter agricultural practices because farmers have to apply their work to international standards. This demonstrates UNIDO's commitment to develop microeconomic standards that create local and regional growth as a precursor to sustained macro-growth. ⁵⁶

The greatest success of the Ghana project was the use of technology to integrate Ghana more strongly with international markets. Despite the effects of globalization, the organization holds that technological infusion and education are still the most important factors in economic development. The labs provide examples of how technology and education integrated the agricultural sector with local and regional shipping centers. It has allowed farmers to gain better understanding of standards for farming while leading to scientific education of the state's scientific professionals.

Committee Directive

Rural and Inland Areas must become the focus for sustainability, development, and focus of industry. Agriculture-based industrial products account for half of all exports from developing countries, yet only 30 per cent of those exports involve processed goods compared to a figure of 98 per cent in the developed world.⁵⁷ Given this and the previous sections, delegates must consider how could changes in the rural and landlocked Member States along with UNIDO's technical assistance provide economic stability and better socio-economic conditions? Looking at the optimal inputs of resources of infrastructure and trade capacity building what efforts can UNIDO continue to develop to promote poverty reduction all the while conserving resources for future generations?

When assessing the needs of inland and rural areas delegates should focus on creating new, sustainable ways of development with respect to financial and technical assistance – some of the primary functions of this body. Delegates should also deliberate if there are ways to attract investment of technological corporations in these areas in order to make rural and inland areas sustainable economic entities. Proper consideration must also be given to the issue of continued research and development into making these areas more efficient, reducing costs and overhead and thus improving overall development. One of the major problems which afflict rural and landlocked Member States that UNIDO cannot alter is population density and low economic opportunity. However, delegates may

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⁵⁴ "Trade Capacity Building in Ghana." UNIDO http://www.unido.org/media-centre/press-releases/news/article/date/2013/05/30/trade-capacity-building-in-ghana.html (accessed May 1, 2013)

^{55 &}quot;Developing Industry: Productivity Enhancement for Social Advance." UNIDO. 2003. 18-19

⁵⁶ Ibid, 18-19.

⁵⁷ Ibid.

encourage ways in which these regions can diversify themselves to become attractive to investments, utilize their large landmasses, and operationalize sparse populations.

Conclusions

Due to the economics of both rural areas and LLDMS investment opportunities depends greatly on being able to compete in the global market. Transportation and the environment become limiting factors of such areas for modes of survival. Border delays, cartels in the trucking industry, multiple clearance processes are some of the issues that rural areas and LLDMS face in competing in the global market. Educational seminars and conferences like UNIDO's International Conference on Sharing Innovative Agribusiness Solutions can reduce some of the challenges faced by these areas. Climatic conditions and geography make economic development particularly difficult especially when dealing with agriculture and pre-industrial labor processes. Introducing management and sustainable technological solutions, research and development enhances the necessary economic conditions to compete on the global market.

II. Mitigating Effects of Energy Policy on Climate Change

Introduction

The importance of environmental issues, particularly energy related components, has been at the forefront of concern for both developing and developed Member States. Accordingly, the weight of these issues has resulted in the United Nation's construction of Millennium Development Goal 7: "Ensuring Environmental Sustainability." UNIDO has acted accordingly by tackling a variety of energy issues to make the achievement of MDG 7 a reality. UNIDO has directed policy efforts towards a variety of different variables. The most prominent being the intersection of industry, the environment, climate change within all Member States, and climate change within in the global network

The connected relationship between industry and the environment is one that has always existed. However, recently, this relationship has become more intricate and complex as can be seen by massive and detrimental effect of the industrial sector on the continuous increase of anthropogenic greenhouse gases. This is a great concern as these gases contribute to stimulating harmful effects of climate change. According to UNIDO reports, industry accounts for almost a third of the total global final energy use and nearly half of total energy-related CO_2 emissions.⁵⁹ This is on account of the exponential growth of industrial production in recent decades and thus total industrial energy consumption and CO_2 emissions have continued to rise.⁶⁰ In essence, as development increases and as industry grows in developed and developing states, both the supply and demand of energy resources concurrently also increases.

A core tenant of UNIDO is that cleaner production methodologies must be promoted at all levels of industrial development – local, state, and systemic. Energy efficiency and the usage of renewable resources are both viable sources of reduction of pollutants that cause climate change. All of these avenues must be addressed by UNIDO in a way that includes various economic variables in the context of environmental sustainability. This is due to the fact that energy impacts all aspects of development and industry, which of course is directly linked to the overall economy and economic factors in various networks. Some of these economic factors include food security, corporate investment in Least Developing Countries (LDC) and Developing Countries (DC), women and youth employment, and resource depletion. UNIDO's strategic approach to combating the mitigating effects of energy policies is a comprehensive and multifaceted as it involves the principle of clean energy access for production and capacity building in order for the implementation of multilateral environmental agreements, especially regarding energy policy.

The International Climate Change Regime and UNIDO

According to the United Nations Framework Convention on Climate Change (UNFCCC), a product of the 1992 Rio Earth Summit which endeavors to mitigate the harmful impact of humans on the climate system, the term "climate change" refers to "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods." 63

http://www.unido.org/fileadmin/user media/Services/Energy and Climate Change/Energy Efficiency/CCS/CCS%20 Flyer.pdf. (accessed May 30, 2013)

⁵⁸ United Nations Millennium Development Goals. Goal 7. http://www.un.org/millenniumgoals/environ.shtml. (accessed May 30, 2013)

⁵⁹ UNIDO. Carbon Capture and Storage in Industrial Applications: Technology Synthesis Report. November 2010.
http://www.unido.org/fileadmin/user_media/Services/Energy_and_Climate_Change/Energy_Efficiency/CCS_%20industry_%20synthesis_final.pdf (accessed June 1, 2013)

⁶⁰ UNIDO. Carbon Capture and Storage Industrial Sector Roadmap.

⁶¹ UNIDO. Energy and Environment. http://www.unido.org/environment.html. (accessed June 1, 2013)

⁶² United Nations ECOSOC. Achieving Sustainable Development and Promoting Development Cooperation. http://www.un.org/en/ecosoc/docs/pdfs/fina_08-45773.pdf. (accessed May 30, 2013)

⁶³ United Nations Framework Convention on Climate Change. Article 1, Clause 3. http://unfccc.int/essential_background/convention/background/items/2536.php (accessed May 15, 2013)

The first international meeting on climate change took place in February 1979 in Geneva. Sponsored by the World Meteorological Organization (WMO) and its partners, the First World Climate Conference provided a framework for future UN system action on climate change. He is 1988, WMO partnered with the United Nations Environment Programme (UNEP) to establish the Intergovernmental Panel on Climate Change (IPCC). The IPCC prepares periodic environmental assessments and objective policy recommendations for UN agencies based on rigorously reviewed scientific data. In 1997, the UNFCCC Conference of the Parties (COP) adopted the Kyoto Protocol, which outlined binding commitments to reduce greenhouse gas emissions. The Kyoto Protocol entered into force in 2005 and stands as a testament to the international climate regime.

In 2007, the thirteenth meeting of the COP produced the Bali Action Plan, a "comprehensive process to enable the full, effective, and sustained implementation of the Convention through long-term cooperative action" through 2012. COP 15 produced the Copenhagen Accord, a nonbinding agreement which encouraged states to voluntarily set non-binding targets for greenhouse gas emissions in order to prevent global temperatures from increasing by more than 2 degrees Celsius. In 2010, the Conference of the Parties drafted the Cancun Agreements, which establish a clear time schedule and formal agreements for realizing existing climate change mitigation goals. The Cancun Agreements are especially relevant to the work of developing countries in climate change mitigation and capacity building. In 2011, the United Nations Climate Change Conference in Durban produced the Durban Platform for Enhanced Action a series of commitments towards realizing a comprehensive plan to fully implement the UNFCCC. Building upon objectives outlined in the Kyoto Protocol, Bali Action Plan, Copenhagen Accord, and Cancun Agreements, the Durban Platform includes a commitment to produce a universal instrument on climate change by 2015.

UNIDO plays a vital role in mitigation, a core element of the UN System's climate change regime which involves "policies and measures designed to reduce greenhouse gas emissions."⁷⁵ In accordance with its mandate, UNIDO addresses climate change with respect to industrial policies and the concerns of developing countries, with special emphasis on Least Developed Countries. UNIDO implements environmental concerns through three thematic focuses: (1) resource efficiency and low-carbon industrial production, (2) enhancing access to clean energy supplies, and (3) capacity building for the implementation of multilateral environmental agreements.⁷⁷ In addition to the

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<sup>64</sup> WMO. World Climate Conferences.
          https://www.wmo.int/pages/themes/climate/international_wcc.php (accessed May 22, 2013)
<sup>65</sup> IPCC, History.
http://www.ipcc.ch/organization/organization_history.shtml#.Ubz3IOeZ2jM (accessed May 15, 2013)
66 Ibid.
<sup>67</sup> Kyoto Protocol to the United Nations Framework Convention on Climate Change.
          http://unfccc.int/essential_background/kyoto_protocol/items/1678.php (accessed May 15, 2013)
68 UNFCCC. "Essential Background."
http://unfccc.int/essential_background/items/6031.php (accessed May 22, 2013)
<sup>69</sup> UNFCCC. "Now, up to and beyond 2012: The Bali Road Map"
          http://unfccc.int/key_steps/bali_road_map/items/6072.php (accessed May 22, 2013)
<sup>70</sup> UNFCCC. Copenhagen Accord.
          http://unfccc.int/documentation/documents/advanced_search/items/6911.php?priref=600005735#beg (accessed May
          15, 2013)
<sup>71</sup> UNFCCC. Cancun Agreements.
          http://unfccc.int/key_steps/cancun_agreements/items/6132.php (accessed May 15, 2013)
<sup>72</sup> UNFCCC. Cancun Agreements.
          http://unfccc.int/key_steps/cancun_agreements/items/6132.php (accessed May 15, 2013)
<sup>73</sup> UNFCCC. Durban Outcomes.
          http://unfccc.int/key_steps/durban_outcomes/items/6825.php (accessed May 22, 2013)
<sup>74</sup> UNFCCC. Durban Outcomes.
          http://unfccc.int/key_steps/durban_outcomes/items/6825.php (accessed May 22, 2013)
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http://www.un.org/wcm/content/site/climatechange/pages/gateway/mitigation (accessed May 15, 2013)

⁷⁵ United Nations Climate Change Portal, Mitigation.

⁷⁶ UNIDO. "What we Do: Energy and Environment."

77 Ibid.

http://www.unido.org/environment.html (accessed May 15, 2013)

documents outlined above, UNIDO is guided by the Montreal Protocol, which outlines strategies to phase out the use of ozone-depleting chemicals, and the Stockholm Convention on Persistent Organic Pollutants.⁷⁸

UNIDO has partnered with the International Atomic Energy Agency to coordinate energy efficiency recommendations through UN-Energy, with special emphasis on capacity building. ⁷⁹ UN Energy is an inter-agency partnership created to develop consistent energy policy responses within the UN System. ⁸⁰ UNIDO also participates in the UN Secretary-General's Advisory Group on Energy and Climate Change (AGECC). ⁸¹ Beyond the UN System, UNIDO works with the Global Environment Facility (GEF), National Cleaner Production Centers (NCPCs), and The Energy and Resource Institute (TERI). ⁸²

Energy Efficiency

The energy consumption and usage by industry on a global network is increasing at an alarming rate. In 2007, the manufacturing industry accounted for a total energy use of 127 Exajoules (EJ). This is roughly a third of the total final energy consumption of the entire global economy. 83 Moreover, developing countries and economies in transition accounted for more than 60 percent of final industrial energy consumption tabulations. In recent decades, there have been some improvements with energy efficiency; however, since demand has continued to rise at an exponential rate, total industrial energy usage has grown at a parallel rate to keep up with the volume of production.⁸⁴ Furthermore, experts have predicted that industrial energy will increase at an annual rate between 1.8-3.1 percent over the next 25 years. In LDCs and developing countries, the energy supply amount needed can be up to 50 percent, which is a significant percentage given that LDC often times do not have the resources and supplies to execute that amount. Hence, this inevitably results in multifaceted issues regarding economic development goals and constrained energy supply. 85 Existing energy efficiency policies have been categorized as not being substantial to adequately handle or decrease industry's energy demand on a comprehensive level. However, there is a technical potential for energy consumption to be decreased up to 26-32 percent. This is quite significant as this would yield a decrease of 8.0-12.4 percent in total global energy use as well as CO₂ emissions. Thus, significant changes need to be implemented in order for proper utilization of energy efficient policies in industry. This would effectively assist supply-constrained LDCs and developing countries meet the increasing energy demand and facilitate economic growth but not at the cost of the environment.⁸⁶

UNIDO has taken steps to take on the challenge of energy efficiency by implementing a comprehensive and multifaceted approach to finding innovative ways to improve industrial energy efficiency, especially in LDCs and emerging economies. UNIDO currently offers services in the field of policy support, capacity-building and technology transfer, and can also serve as a global platform to discuss issues. Furthermore, the UNIDO Industrial Energy Efficiency Programme (IEEP) was formed from UN principles regarding sustainable industrial development

http://www.unido.org/montreal-protocol.html (accessed May 22, 2013)

UNIDO, Energy and environment, Capacity Building for the implementation of multilateral environmental agreements,

Stockholm Convention. http://www.unido.org/what-we-do/environment/capacity-building-for-the-implementation-of-multilateral-environmental-agreements/the-stockholm-convention.html (accessed May 15, 2013)

http://www.unido.org/fileadmin/user_media/Publications/download/AGECCsummaryreport.pdf (accessed May 22, 2013)

http://www.unido.org/fileadmin/user_media/Services/Energy_and_Climate_Change/Energy_Efficiency/Benchmarking_%20Energy_%20Policy_Tool.pdf. (accessed June 1, 2013)

http://www.unido.org/fileadmin/user_media/Publications/Pub_free/UNIDO and energy efficiency.pdf. (accessed May 30, 2013)

⁷⁸ UNIDO. "Montreal Protocol".

⁷⁹ UN Energy, Energy Efficiency Activities. http://www.un-energy.org/activities/energy efficiency (accessed May 22, 2013)

⁸⁰ UN Energy, About UN-Energy. http://www.un-energy.org/ (accessed May 15, 2013)

⁸¹ Secretary-General's Advisory Group on Energy and Climate Change (AGECC), *Summary Report and Recommendations:* Energy for a Sustainable Future, 2010.

⁸²UNIDO, What We Do, Energy and Environment, Resource-efficient and low-carbon industrial production, Green Industry, Partnerships. http://www.unido.org/what-we-do/environment/resource-efficient-and-low-carbon-industrial-production/greenindustry/partnerships.html (accessed May 22, 2013)

⁸³ UNIDO. Global Industrial Energy Efficiency Benchmarking.

⁸⁴ Ibid

⁸⁵ UNIDO. UNIDO and Energy Efficiency.

⁸⁶ Ibid.

and in order to assist with continual energy efficiency improvement in order to shift various markets to achieve global industrial energy efficiency. The UNDIO IEEP is comprised of two parts: industrial energy system optimization and energy management standards.⁸⁷

Industrial energy system optimization studies performed within UNIDO's IEEP look to understand and expand upon current energy efficient practices that are being used by current industry stakeholders. This stems from the fact that industrial energy usage and consumption is more about the operation and practice of machinery and appliances and not necessarily the physical machine/appliance itself. **In other words, an energy yielding mechanism could be energy efficient, but true energy optimization more so comes from how the mechanism is utilized. Energy efficient appliances in the residential and commercial sector are more prone to produce higher levels of benefits as these appliances are mostly used for the same purpose in the same manner unless under extraordinary circumstances. In contrast, industrial usage of appliances consists of many different changes in production volume or scheduling, and often times the actual product being manufactured can change within the lifespan of an industrial appliance. Thus, while the initial policy and production method may have been optimal, this status does not consistently maintain as production patterns vary and change, sometimes at quick rates.

Accordingly, while the utilization of energy-efficient equipment is imperative, it does not guarantee true industrial energy optimization. This utilization does not always warrant that total energy efficiency will be attained because the system in which these mechanisms are used must be optimally designed and operated in order for comprehensive energy saving to occur. UNIDO IEEP studies have shown that utilizing efficient machinery yields gains in the 2-5 percent range, but industrial energy system optimization can yield gains in the 20-30 percent range in a timeframe of less than 2 years. ⁸⁹ Consequently, UNIDO IEEP strives to empower and inform stakeholders with the necessarily knowledge, training, and tools to develop energy system optimization beyond just providing energy efficient equipment and hardware.

Beyond designing systems for energy efficiency, UNIDO IEEP focuses on energy management standards, which link personnel and management of various firms to the industrial network as a whole. Energy Management Standards consist of the rules and regulations that must be in achieved and in place in order to obtain resource conservation, climate protection, all the while being cost-effective. Essentially, UNIDO IEEP works to use energy management standards as a policy tool and economic initiative to bring about sustainable energy efficiency in the industrial sector. There are various obstacles that hinder Member States in adhering and implementing energy management standards that principally stem from top management focus on production volume rather than energy-efficiency. Often times there is a dichotomy between capital projects and operating expenses. Thus, while firms in the industry could initially meet energy management standards, the continual maintenance of these standards often do not sustain for extended periods of time.

While it may be tedious and difficult to uphold energy management standards, they are imperative and crucial to achieving energy efficiency in the industrial sector. Energy management standards provide structured and comprehensive guidance on how to incorporate energy efficiency and system optimization into daily production and management. Furthermore, energy management standards facilitate stronger linkages between business practices for energy management and cost efficiency, increase in production volume, adherence to environmentally sound practices, and global economic industrialism. UNIDO IEEP gives particular focus in assisting LDCs and emerging economies by providing policy and regulatory technical assistance, institutional capacity building support in order to integrate UNIDO IEEP energy management standards into the respective markets.

UNIDO IEEP efforts have manifested into integral and instrumental standards for energy including the International Organization for Standardization (ISO) 50001, which was established in 2008, through the ISO's Project Committee 242 Energy Management, to develop an international management system standard for energy. UNIDO maintains the status of organization-in-liaison with ISO Project Committee 242 and has supported ISO 50001 by contributing

88 Ibid.

⁸⁷ Ibid.

⁸⁹ Ibid.

⁹⁰ Ibid.

⁹¹ Ibid.

⁹² Ibid.

technical studies and inputs for the new standard and incorporating the specialized needs and circumstances of LDCs and emerging economies through various studies, conferences, and regional workshops. 93

Renewable Energy and Resources

United Nations Climate Chief Christiana Figueres, at the 2013 Carbon Expo in Barcelona, Spain expressed her concerns about climate change caused by pollutants, by calling for all worldwide governments, both developed and developing, to commit to implementing sustainable practices in order to save the planet. "There's nothing that humanity has ever attempted that is of greater impact than what we're trying to do right now," Figueres said. "This is a full transformation of the economic structure, of the energy system and of the economic logic that underpins growth. It's a full transformation of social values and behaviors."

The great level of concern of Figueres's comments is valid as this year, for the first time, atmospheric carbon dioxide exceeded 400 parts per million. This is a tragic milestone as emissions from burning fossil fuels are warming the planet at a pace that could lead to more devastating consequences of climate change. Devastating possibilities include heat waves, storms, and floods worldwide all which can lead to massive loss of life, property, and environmental destruction. ⁹⁵

UNIDO core principles and mission encompass this very idea of a call to action. The agency has allocated many projects and resources to finding sustainable practices that would facilitate economic growth of all countries while simultaneously shifting practices from carbon-based, high pollution residue sources of energy to alternatives that do not have such costly and negative impacts to the environment. In essence, UNIDO strives to promote sustainable practices in the industrial sector in order to de-link economic growth processes and environmental degradation. Furthermore, UNIDO allocates many resources into finding affordable access to sustainable practices as the agency works with many developing countries and economies in transition.

Currently, the manufacturing industry accounts for almost 30 percent of total energy usage on a global scale. Additionally, 75 percent of this portion is from the production of energy-intensive commodities such as iron and non-iron metals, chemicals and petrochemical, non-metallic mineral materials, and pulp and paper. Managerial stakeholders in energy-intensive sectors utilize energy-efficient methods to drive down costs. However, in less energy-intensive sectors such as the transportation and building industries, managers do not make energy efficiency a priority. This is inhibiting total potential for energy efficiency including the affected areas of carbon dioxide reductions as well as greenhouse-gas emission reductions.

Renewable energy is only a small factor in industry today with biomass being the most significant renewable energy contribution, providing almost 8 percent of the final energy usage in 2007. This is alarming as manufacturing is projected to quadruple by 2050. However, studies conducted by UNIDO convey that the potential for long-term renewable energy in the industrial sector can be of renewable origin for up to 21 percent of all final energy use and feedstock operations in 2050 if changes occur in current operations. UNIDO findings have also indicated that an increase in renewable energy in industry has the potential to facilitate reductions in about 10 percent of greenhouse gas emissions, which is almost 2 gigatons of carbon dioxide, and nearly 25 percent of the total expected emission reductions of the industry sector. This is equivalent to the combined aggregate total of carbon dioxide emissions of France, Germany, Italy, and Spain.

UNIDO has taken on promoting renewable energy methods and practices for all members of the agency. Current services include: technology demonstrations, policy support, capacity-building, global forum activities, and

⁹³ Ibid.

⁹⁴ Krukowska, Ewa, & Vitelli, Alessandro. "UN Urges Deeper Pollution Cuts in Biggest Challenge for Humanity." *Bloomberg*, May 30, 2013, http://www.bloomberg.com/news/2013-05-30 (accessed June 1, 2013)

⁹⁵ Ibid.

⁹⁶ UNIDO. "Renewable Energy in Industrial Applications- an Assessment of the 2050 Potential."

⁹⁷ Ibid.

⁹⁸ Ibid.

⁹⁹ Ibid.

¹⁰⁰ Ibid.

information dissemination. ¹⁰¹ Additionally, special attention has been placed on small and medium enterprises (SME) in rural areas and in developing countries and economies in transition. UNIDO's focus areas for the above mentioned have been in bioenergy, small hydropower, solar energy, and wind energy as UNIDO and other UN agencies have found that these areas provided the most optimal productive activities and increase in competitiveness for developing countries and economies in transition. ¹⁰²

These strategies and areas also incorporated into UNIDO's commitment and implementation of MDG 1- Eradicate Extreme Poverty and Hunger, 3- Promote Gender Equality and Empower Women, 7-Ensure Environmental Protection, and 8-Develop a Global Partnership for Development. In particular, UNIDO's utilization of SMEs foster an environment to incorporate women's employment within UNIDO as well as other UN agencies. The UN as a whole has actively sought to provide women opportunities for entrepreneurship and development. UNIDO's projects in SMEs concentrated on renewable energy have given women, especially in rural areas, the necessary skills to succeed in business in growing industrial sectors. This can be seen in successful projects worldwide including the Moroccan Women Entrepreneurship Programme in conjunction with the Spanish Cooperation Agency. This program, in its pilot year resulted in hundreds of women becoming entrepreneur and generating incomes to improve their standards of living, provide stable employment for themselves and others, as well as reduce the harmful outputs of industry. ¹⁰⁴

The Case of Isla de la Juventud, Cuba

Isla de la Juventud is a small island off of the west coast of the main island of Cuba. Owing much of its energy and required industrial heat to the burning of diesel fuel and other oil-based liquids, Isla de la Juventud contributed to much pollution and development lags stemming from its lack of feasible energy infrastructure. In a jointly-implemented venture by UNIDO and UNEP (United Nations Environmental Programme) the island was targeted for a massive energy overhaul, focusing on biomass production, biomass power generation, wind energy and process heat for industry. Additionally, the project calls for the construction of national capacity for renewable energy technologies and the establishment of a Risk and Replication Management Fund (RRMF) to promote these types of technologies throughout Cuba. 106

Through technical assistance and targeted finance UNIDO and UNEP hope to dually tackle the problem of industrial development and sustainability, particularly in terms of renewable energy resources for the developing island nation. The two essential renewable energy resources for the project, wind power and biomass gasification, will be able to provide a vision of industrial development that is exportable not only to the rest of Cuba, but many developing countries around the globe. Specifically, the joint project will project will install a large biomass gasifier plant (3.5 MW) for power generation, four gasifier applications (about 6 MW thermal) to be placed at four industrial sites for heat production and a wind farm to produce 1.5 MW of electricity to augment supply. The energy infrastructure and development project is aimed at providing amiable conditions for renewable energy technology markets by building national capacity, sound project development, and sustainable energy networks. To sustain and further these market conditions the Risk and Replication Management Fund (RRMF) will provide a financial mechanism to continue the development of renewable resources in the region. The RRMF will also capitalize on innovative

¹⁰¹ UNIDO. "UNIDO and Renewable Energy- Greening the Industrial Agenda." 2009.

¹⁰² Ibid

¹⁰³ UNIDO. "UNIDO and the Millennium Development Goals." 2009.

http://www.unido.org/fileadmin/user_media/MDGs/mdgbrochure2.pdf (accessed June 1, 2013)

¹⁰⁴ Ibid.

¹⁰⁵ UNIDO and Renewable Energy: Greening the Industrial Agenda.

http://www.unido.org/fileadmin/user_media/Publications/Pub_free/UNIDO_and_renewable_energy.pdf (accessed May 30, 2013)

¹⁰⁶ UNIDO/UNEP/GEF Project.

http://www.unido.org/fileadmin/media/documents/pdf/Energy Environment/rre Cuba factsheet.pdf (accessed June 1, 2013)

¹⁰⁷ UNIDO and Renewable Energy: Greening the Industrial Agenda.

http://www.unido.org/fileadmin/user_media/Publications/Pub_free/UNIDO and renewable_energy.pdf (accessed May 30, 2013)

financial instruments and institutional structures to boost private enterprises in renewable expansion. ¹⁰⁸ The project is co-funded by UNEP and UNIDO, in addition to over 5 million USD grant from Global Environmental Facility (GEF). The entire project is expected to cost just over 16 million USD and will be the largest overhaul of the island energy network in its history. ¹⁰⁹

However, the project has suffered many set-backs that may provide useful as a learning tool for future projects and broad UNIDO plans. First of all, the infrastructure took a battering under successive hurricanes which not only limited the physical progress, but also required an increase in budgetary allocation. Cuba has yet to develop a national Renewable Energy Policy which has been a critical flaw in the project's design and implementation. Without such a policy, the Cuban state stems the ability to advance national capacity for renewable energy production while also effectively cutting off national funding to the project. In this dual regard, the project now must shift focus to foreign investment as the costs of the project continue to increase. ¹¹⁰

The project could not have been feasible without organization partnerships, financial seed grants, and support for national capacity and infrastructure improvement in an effort to expand sustainable industrial development. Though many challenges face the project, many summaries of the activities continue to laud the project as feasible and embryonic; setting the project up to be a local, national, and region success for sustainable development and green energy markets. Additionally, the consideration of local and national culture weighed heavily on the plan's development – without doing so, no project can be a success.

Committee Directive

Delegates must first consider the ways in which UNIDO and the climate regime has grown closer aligned. This intersection of industry, environment, the global economy, and both local and global effects of climate change is the largest task set before UNIDO. Only in tying these areas together will delegates be successful in their pursuit of UNIDO's goals. UNIDO strives to promote and provide sustainable practices in the industrial sector in an effort to change the detrimental relationship that environmental corruption and increased economic and industrial growth have. Furthermore, delegates in UNIDO must provide a mechanism that will allow Member States to generate affordable sustainable energy practices for many developing countries and economies in transition. UNIDO is dedicated to fostering new inlets and developments for the use of renewable resources for energy such as bioenergy, hydropower, and wind power that before now have been underdeveloped or only available to industries in upper echelons of the private sector.

Some specific areas of consideration within the topic for delegates of UNIDO are: (1) joint operations between small and medium enterprises (SME) and in bio-energy, small hydropower, solar energy, and wind energy; (2) the correlation between a continuously growing world population and the demands that such growth has on industry and ways in which to incentivize and assist public and private sector corporations to utilize alternative energy resources; (3) the development of new technology, machinery, and other resources and equipment which are constantly changing the standards and face of industrial production around the world and what may be required of new standards, protocols, or strategies to be suggested or developed to ensure technologies are energy efficient and maintain standards of energy efficiency over time; (4) requiring Member States to consider what practices industry must take in order to grow towards ever-increasing efficiency; and finally, (5) how can the case Isla de la Juventud be used as an example to learn best practices, cautions, solutions, and methods to be used in future projects of UNIDO.

The purpose of this committee is to provide resources and alternatives for more sustainable practices concerning resource allocation, alternative energy sources, and other sustainable industrial practices. Part of the struggle is not

¹⁰⁸ UNIDO/UNEP/GEF Project.

http://www.unido.org/fileadmin/media/documents/pdf/Energy Environment/rre Cuba factsheet.pdf (accessed June 1, 2013)

¹⁰⁹ Ibid

¹¹⁰ Generation and Delivery of Renewable Energy Based Modern Energy Services in Cuba: The Case of Isla de la Juventud.

http://www.unido.org/fileadmin/user_media/About_UNIDO/Evaluation/Project_reports/Cuba%20Isla%20Juventud%2

OFinal%20MTE%20Report%20120810x.pdf (accessed June 1, 2013)

¹¹¹ Ibid.

only recognizing what concepts need to be implemented, but how they need to be implemented. By committing themselves vigorously and ceaselessly to attaining not only one, but four of the United Nations Millennium Goals, delegates of UNIDO must find ways to improve economic, environmental, social, and political stability for men, women, and future generations in the global environment.

Conclusions

The evidence of a global energy crisis as a result of increased human population and industrial growth can no longer be denied. Global temperature increases, erratic and unexplainable weather patterns, rising sea levels, temperatures, and acidity are only a few of the numerous environmental impacts. The growth of industry in developed and developing nations is only making the parallel relationship between industry and the environment more detrimental and maleficent to the entire globe. The industrial sector and policymaking have a long history as discussed earlier. From the first meetings in Geneva in 1979 with the World Meteorological Organization to the Kyoto Protocol in 2005 and even more importantly The Durban Platform for Enhanced Action most recently in 2011, the relationship and need for policy to assist with industrial environmental impact is well documented. Yet, further change must still be made especially within Developing and Less Developed Member States across the globe. These Member States are the most in need of beneficial practices and maximization of the utility of resources for the sake of their own economic and political stability as well as future growth.

Yet, with all the action that has been completed successful for the benefit of both the global population and the environment there is still many improvements to be made. With every success that has come of UNIDO's work there have been set-backs, and while strides are being made towards achieving the Millennium Goals there are still areas that remain unaffected by these improvements. The complex problems that arise in the relationship between human development and environmental existence will never cease to exist. The development of new technology that makes things cheaper, faster, and easier without awareness of consequences will continue to flourish unless held in check by organizations such as UNIDO and their constant efforts. These problems that we have unleashed upon the environment are not subtle and many do not have solutions, thus we must preserve and maintain what we have left so that future generations can have a chance at succeeding.

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¹¹²Aldy, Joseph E. and Robert N. Stavins. "Climate Negotiations Open a Window: Key Implications of the Durban Platform for Enhanced Action." Cambridge, Mass.: Harvard Project on Climate Agreements. September 2012. http://belfercenter.ksg.harvard.edu/files/durban-brief digital5.pdf (accessed June 1, 2013)

Technical Appendix Guide

I. Increasing Rural and Inland Development through Financial and Technical Investments:

Unitd Nations Industrial Development Organization. *Developing Industry: Productivity Enhancement for Social Advance: UNIDO's Corporate Strategy.* Prepared by Carlos Magariños et.al. Vienna, 2003.

The report outlines UNIDO's new "Needs-Based" approach to industrial development. Acknowledging the lack of presence the organization has on the international scene, this report outlines the strategy to make UNIDO relevant as partner in global economic development. Provides wide overview of economic development issues and concepts in working industrialized states, transition economies and stagnant to declining developing states. Finally, it provides an account of evolutionary thinking within UNIDO.

United Nations, Office of the High Commissioner for Human Rights. "International Covenant of Economic, Social and Cultural Rights." 16th December, 1996.

http://www.ohchr.org/EN/ProfessionalInterest/Pages/CESCR.aspx

The Covenant was designed, a part from the Universal Declaration on Human Rights, to guarantee the principles of economic rights and liberties to all Member States. Such rights form part of UNIDO's mission to promote sustainable industrial development and improve the economic livelihood of those affected.

United Nations Industrial Development Organization. *Capability Building for Catching-up: Historical, Empirical and Policy Dimensions*. Prepared by Carlos Magariños. Vienna, 2005

http://www.unido.org/fileadmin/user_media/Publications/Pub_free/Industrial_development_report_2005.pd
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Addressing the wisdom, experiences and insights of historically successful developed states, the report offers insights into capability-building policies useful for developing states. It presents data and historical challenges that confront transitional economies and developed states and how a developing state can use these lessons to effect better policymaking. It presents "knowledge" as the key for any developing state and its economic policymaking.

United Nations Industrial Development Organization. *Pro-Poor Value Chain Development: 25 Guiding Questions for Designing and Implementing Agro-industry Projects*. Prepared by Frank Hatwich and Patrick Kormawa. Vienna, 2011.

 $\underline{http://www.3adi.org/tl\ files/3ADIDocuments/Resources\%20page/practitioner\%20guide\%20Propoor\%20value\%20chain\%20development_2011.pdf}$

Presents agencies, program developers and government leaders with guide to address implementing improvements to value chains in agriculture. Takes individual parts, farmers, distributers, facilities and capital, economic policies et cetera, and places them in the overall context of economic development. The guide attempts to unify these parts and present the reader with potential approach to improving agriculture and agro-businesses.

II. Mitigating Effects of Energy Policy on Climate Change

Chambalu, Barbel. "Integration of Women in Industrial Development – the Fate of the Issue in the United Nations Industrial Development Organisation, UNIDO". In Forum for Development Studies, 36(1) 2009:137-154. http://www.un-ngls.org/IMG/pdf FDS1-09 Chambalu UNIDO.pdf

UNIDO has traditionally afforded women incentives and assistance on how to mainstream themselves into global industry sectors. This paper examines how women's role have changed and shifted with the development of UNIDO. Finally, this piece looks at the future of women in UNIDO and how to move towards a future of equitability.

United Nations Industrial Development Organization. "Sustainable Energy for All: The Gender Dimensions." 2012. http://www.unido.org/fileadmin/user_media_upgrade/What_we_do/Topics/Women_and_Youth/GUIDAN CENOTE FINAL WEB.pdf

The question and issues surrounding sustainability rarely incorporate a gendered perspective. This article ties together the often disparate threads of gender equality, women's empowerment and sustainable energy into a plan of action that can be taken by Member States and regional bodies. The document traces ways in which the incorporation and empowerment of women can be achieved in relation to the growing demands for sustainable and conscientious energy allocation.

United Nations Industrial Development Organization. "UNIDO and the Millennium Development Goals," 6-7. 2009. http://www.unido.org/fileadmin/user_media/MDGs/mdgbrochure2.pdf

As a reflection upon the theme in this year's SRMUN Atlanta 2013, this article looks at the ways in which the Millennium Development Goals intersect with the work and projects of UNIDO. Rather than a position of contention, this note draws out the ways in which UNIDO can assist, through technical means and expertise, Member States achieve the goals set for 2015 in the Millennium Development Goals.

United Nations Industrial Development Organization. "Barriers to Energy Efficiency: International Case Studies on Successful Barrier Removal." 2011.

http://www.unido.org/Data1/Statistics/Utilities/docnew.cfm?id=165&i=1

This is a powerful article which first identifies industry's barriers to efficiency then lays out a roadmap by which these barriers can be removed. In plain speak, the article presents a series of challenges and new methods of thinking and acting by which industry must commit itself. The article examines many practices and case studies in gross detail which will allow delegates to utilize these issues in a contextual manner.

United Nations Industrial Development Organization. "South-South Cooperation, Economic and Industrial Development of Developing Countries: Dynamics, Opportunities and Challenges." 2009.

<a href="http://www.unido.org/fileadmin/user-media/Publications/Research_and_statistics/Branch_publ

A primary focus of UNIDO, South-South cooperation is an essential element to the ways in which technical assistance is implemented throughout the globe by UNIDO. The note examines the ways in which such South-South dialogue can occur, the possible benefits, and lessons learned from previous cooperative structures. With note to specific areas of focus, this article may provide delegates with a niche focus to bring to the committee.