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Case Study: Integrated Technologies for Inclusive Green Growth in Cambodia

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I. Introduction

International Investment Management Consulting (IIMC) and International Institute for Scientific Research (IISR) in close cooperation and partnership with National Bank of Cambodia, Ministry of Environment, Ministry of Planning and the Office of the Council of Ministers, as well as all international, regional, national and local development partners have a duty and obligation to implement Cambodia National Green Growth Roadmap 2010, National Policy on Green Growth, National Strategic Plan on Green Growth 2013-2030, Angkor Declaration on the Future Green Sustainability in the Asia Pacific Region 2016, and all international sustainable development principles and agreements, including the Rio and Rio+20 outcomes and the Sustainable Development Goals (SDGs).

Inclusive green growth is a key to Cambodia's preservation of natural resources and achievement of its national sustainable development goals. Significantly, inclusive green growth in Cambodia is focused on coherently integrating **economic growth** into comprehensive development of the country with the right balance to **environmental sustainability**, **social progress**, **poverty alleviation and cultural heritage conservation**. 'Inclusive Green Growth is to ensure the accelerated achievement of sustainable development and poverty eradication of the country,' emphasizes H.E. Prof. Emeritus Dr. CHHUN Vannak, Initiator and Pioneer of Green Growth in Cambodia.

It is widely recognized that Green Growth in Cambodia takes environment as the core of the development and sound management of natural resources as well as enhancement of natural capital productivity in line with Article 58 & 59 of Constitution and Law on Environmental Protection (1996), and other relevant laws (Water Resources, Forestry, Bio-safety) to assure sustainability and safety of ecology and environment for the achievement of Sustainable Development Goals and in the pursuit of poverty eradication and the end of hunger and malnutrition.

Adding to this, inclusive green growth for sustainable economic green growth of Cambodia assists in ensuring Environmental sustainability. Such environmental sustainability is illustrated and reflected in the overall development of Cambodia highlighting the protection, preservation and conservation of the 23 protected areas, national parks, forestry communities, fishery communities, watershed management, biodiversity conservation, water preservation and underground water conservation. Also, the inclusive green growth ensures the inclusion of environmental impacts assessment reports into the comprehensive investment and development of the country, pollution

control, carbon credit, low carbon growth, climate change mitigation and adaptation, greening activities.

Following green growth policies and strategies, as well as sustainability principles of Cambodia, the IIMC Enterprise in cooperation and partnership with the Royal Government of Cambodia and the Ministry of Environment does its best to encourage public participation from the people, public institutions, non-governmental organizations, international organizations, the civil society, the United Nations agencies and the private sector, regarding the mobilization of financial resources, building up knowledge and raising awareness of inclusive green growth, sustainability, resource efficiency, green business and investment operations, in the context of Sustainable Development Goals (SDGs) and Sustainable Consumption and Production (SCP).

II. Implementing Measures and Actions on Inclusive Green Growth in Cambodia

The IIMC Enterprise and the IISR organization have coordinated with the relevant corporations, small-medium enterprises, banks, non-banks, financial firms and microfinance institutions in Cambodia to conduct their operations and business activities friendly to environment, and be fully engaged in the environmental protection, sound natural resources management, biodiversity conservation and sustainable livelihood, the four dimensions of Cambodia National Environmental Policy as defined in the government's sub-decree No.135 dated on 5 July 2016, Law on Natural Resources and Environmental Protection in 1996 and Cambodia Constitution under Article 58 and Article 59, as well as other relevant laws, regulations, policies and strategies, i.e. Draft Environmental Code and Draft National Environmental Strategic and Action Plan 2016-2023.

The fulfillment of the green miracle mission and green vision, 'Great Green Growth' of the International Investment Management Consulting (IIMC) through public-private partnership, investments, public engagement and cooperation with all the stakeholders does contribute significantly to national poverty reduction, green jobs, environmental health, ecological safety, sound natural resources management, better environmental quality, and green economic growth. This is identified and specified in National Policy on Green Growth, Rectangular Strategy III of the Royal Government of Cambodia, National Strategic Plan on Green Growth 2013-2030, National Strategic Development Plan 2014-2018, Cambodia Sustainable Development Goals (SDGs) and the Angkor Declaration on Future Green Sustainability in the Asia Pacific Region in July 2016. The implementation of these policies and strategies definitely stimulates all kinds of financial, economic and business activities and transactions to go green, thus shifting a contemporary brown economy model to the real inclusive green growth until Cambodia can reach a stage of **Advanced Green Civilization** in 2030.

In contributing to solving environmental issues and challenges in Cambodia, such as forestry loss and degradation, biodiversity decline and loss, drought, flood, loss of clean water sources, fishery stock decline, arid land and climate changes impacts, especially global warming and infrequent rainfalls, the IIMC Enterprise in partnership with the IISR organization have organized various green growth awareness campaigns and events to encourage children of the Elementary school, students of all levels, and all stakeholders to start to think about environmental issues and solutions through their imagination, observations and experiences as reflected and illustrated in the objectives and activities of the IIMC.

- Promote public awareness of green growth, sustainability, green economy, sustainable consumption and production, resource efficiency and environment by means of capacity building programs, environmental information dissemination and environmental education;
- Change habits and converts attitudes and behaviors destroying natural resources towards affection for nature, engagement in preserving and protecting natural resources for the Green Future the Cambodian People Want;
- Encourage and promote inclusive green growth actions by children for better livelihoods and environment areas, i.e. environmental protection, biodiversity conservation, rational use of natural resources with sustainability, and sustainable livelihood;
- Increase public awareness to children of environmental protection, biodiversity conservation, rational use of natural resources with sustainability in the pursuit of Sustainable Development Goals;
- Enhance and increase environmental conscience and loves for environment and natural resources for Cambodia to achieve its **Green Civilization Goals**.

The green growth vision and missions of Cambodia have been defined in its National Green Growth Roadmap, Green Growth Policy 2013 and National Strategic Plan on Green Growth 2013-2030. The Green Growth Roadmap stresses the seven accesses for the overall development of an economy with environmental sustainability. The Green Growth policy emphasizes the balanced development processes by coherent integration of the four pillars, i.e. economy, culture, society and environment. The Green Growth strategy ensures the balanced development and achievement of green growth vision and missions in the pursuit of harmony with nature and green prosperity and better welfare for the Nations as defined as 'Real Inclusive Green Civilization 2030.' The priorities of the green growth roadmap, policy and strategy are indicated as follows:

A) Green Growth Roadmap of Cambodia 2010

- 1. Access to water resources management and sanitation;
- 2. Access to food security (agriculture) and non-chemical products;
- 3. Access to sustainable land-use;
- 4. Access to renewable energy and energy efficiency;
- 5. Access to information and knowledge;

- 6. Access to means for better mobility and
- 7. Access to finance and investments.

B) Green Growth Policy of Cambodia

The National Green Growth Policy of Cambodia aims at achieving the balanced development and integration of the four dimensions, i.e. economy, culture, society and environment, recognized as 'Great Green Golden Growth.' The primary goals of the policy are highlighted as below:

- To strike balance of economic development with environment, society, culture and sustainable use of national resources through integration, matching and adaptation, as well as harmonization between a green growth principle and national policy.
- To enhancice the well-being and livelihood of all people in harmonization with ecological safety through green growth, basing on green economy, blue economy, environment protection, social safety nets system and uphold of national cultural identity.

C) Green Growth Strategic Plan of Cambodia 2013-2030

The National Green Growth Strategy of Cambodia lays down 9 grand strategies for the inclusive green growth goals of the country as below:

- 1-Green Investment and Green Jobs Creation
- 2-Green Economy Management in balance with Environment
- 3-Blue Economy Development with Sustainability
- 4-Green Environment and Natural Resources Management
- 5-Human Resources Development and Green Education
- 6-Effective Green Technology Management
- 7-Promotion of a Green Social Safety System
- 8-Uphold and Protection of Green Cultural Heritage and National Identity
- 9-Good Governance on Green Growth

Once again, the IIMC Enterprise in close collaboration and partnership with the International Institute for Scientific Research (The IISR), as independent environmental and green research entities, has had a very good friendly cooperation and partnership with the Ministry of Environment since 2011. Importantly, the IIMC has contributed to the development of Cambodia green growth policy and strategy, national Rio+20 report on sustainable development, the working paper of the Organization for Economic Cooperation and Development (OECD) on 'Making Growth Green and Inclusive of

Cambodia 2013,' National Capacity Building Programme on Sustainable Consumption and Production, and Cambodia-UNEP Sustainable Product Innovation (SPIN) project.

In a very recent showcase, the IIMC management team, experts, consultants along with the IISR as a good environmental citizen organization, have co-organized with the Ministry of Environment of the Kingdom of Cambodia the 12th Asia Pacific Conference under the theme, 'Acting Together for Our Future Sustainability' in close partnership with the UNEP, the Asia Pacific Organization, i.e. APRSCP, the European Union and other key development partners in Siem Reap City, Siem Reap on 11-14 July 2016. For that conference from the regional and national preparatory meetings to the actual organization, we have coordinated with H.E. Prof. Emeritus Dr. CHHUN Vannak, a Chair of the 12th Asia Conference and Chairperson of the National Organizing Committee, Vice-President of the APRSCP and the APRSCP Board of Trustees Member, internationally recognized and noted, to successfully develop a Joint Press Release and the ANGKOR Declaration on Future Green Sustainability in the Asia Pacific Region adopted with consensus on the 13th July of the Plenary Session of the 12th Asia Pacific Conference.

Through our continued great fruitful collaboration and coordination with the Ministry of Environment, and H.E. Prof. Emeritus Dr. CHHUN Vannak on environmental education, capacity building, trainings, environmental impacts assessment research and inclusive Cambodia Advanced Green Civilization in 2030, we still keep our valuable cooperation and relationship for the sole purpose of Cambodian's green mentality, environmental protection, sound management of natural resources, environmental safeguard, sustainable livelihood with a top quality of life and ecological safety along the line of the inclusive green growth, as well as green and clean sustainable city initiated.

The IIMC entity with the IISR and all relevant partners does its best to meet a common need for the realization of the World and Asian Green Civilization, and Cambodia National Green Civilization. The green direction has been reflected in the Universal Sustainable Development Goals 2030 (SDGs) adopted by the United Nations General Assembly in September 2015, the Rio+20 Outcome adopted by the United Nations General Assembly on 24th July 2012, the United Nations 10 Year Framework of Programme on Sustainable Consumption and Production (10YFP on SCP), the Asia Pacific Angkor Declaration on Future Green Sustainability, adopted by the 12th Asia Pacific Conference on 13th July 2016, Cambodia National Green Growth Roadmap 2010, Cambodia National Policy on Green Growth, and Cambodia National Strategic Plan on Green Growth 2013-2030.

To contribute to the implementation of Cambodia's National green growth policy, strategy and the Angkor Declaration 2016, the International Investment Management Consulting (IIMC), coupled with the International Institute for Scientific Research Co-Authors of the Case Study: H.E.Prof. Emeritus **Dr. Chhun Vannak**, CEO & President of International Investment Management Consulting (IIMC), the Seoul Peace Prize Nominator and Vice-President of APRSCP Board of Trustees Organization and **Mr. Pagna Chea**, Chief Strategy Officer of IIMC and Director of SCP Department of International Institute of Scientific Research

(IISR), and all relevant public and private institutions have been introducing and have been practicing green technologies for climate change mitigation and adaptation to address the environmental issues and challenges, while developing a national green economy. The applied green technologies cover solar cookers in the rural areas, i.e. Takeo province, and other provinces in Cambodia, efficient-energy cooking stoves, biomass technology, wastewater treatment facilities, clean water sterilizers and filters, safe food processors, green services providers and distributors, i.e. online payment systems, electronic data storage and digital medical treatment and diagnosis. The technologies also encompass dry fish processor, green spacing management, eco-industry parks, and green gardens. In a nutshell, mobilizing domestic financial resources and green human capital for climate and green technology uptake and upscale throughout Cambodia, propelled and driven by the right green investments and businesses do orient Cambodia's development towards Sustainable Development Goals and Inclusive Green Civilization in 2030.

In a Joint Press Release of the IIMC, IISR, the EU, the APRSCP and UNEP on the 12th Asia Pacific Conference in Siem Reap, Cambodia, in July 2016 on Acting Together for Our Future Sustainability, "As one of the countries in the region that is experiencing rapid development, it is an honor for Cambodia to host the 12thAPRSCP. This is an opportunity for Cambodia to demonstrate its commitment to managing a transition towards sustainable development goals and inclusive green growth goals. The country remains highly committed to effective environmental governance for sustainability and to the execution of Cambodia's green growth policy and strategy for poverty eradication and the advanced inclusive and equitable green civilization and prosperity. Resource efficiency is fundamental to the Asia-Pacific region's development and future green sustainability," Chairman of the 12thAPRSCP and the Seoul Peace Prize Nominator, H.E. Prof. Emeritus Dr. Chhun Vannak stresses.

The IIMC Enterprise in close partnership with the IISR has been conducting joint research and resilient green development measures and actions as necessary for the protection and sustainability of the Planet Earth, the inclusively balanced integrated growth of a blue economy, green economy and green growth in the context of resilient sustainable development, and the increasing harmony of socio-economic prosperity with nature, for the primary purpose of an inclusive people-centered-oriented and shared-value ASEAN community in two-way dynamic collaborative relationships and partnerships between The Republic of Korea-ASEAN and South Korea-Cambodia,

It is key to note that the Royal Government of Cambodia is highly committed to the inclusive green growth for the achievement of its green civilization, as indicated by its relevant national policies and strategies coherence and integration, in particular the Government's Rectangular Strategy III 2013-2018 and National Strategic Development 2014-2018, obliging all stakeholders to go green in compliance with inclusive green growth and sustainability principles.

Recognizing the necessity to reinforce implementation of the global green growth policies and strategies, the IIMC finds the current introduction of green technologies, such as solar cookers, biomass, brick efficient-producing, organic fertilizers and clean water filtering and purification in Cambodia in the populated areas and the cities as the right technologies for the sustainable development of the country. As part of the paperless society, technologies for the payment system through mobile banking and financial operation have been currently used throughout Cambodia, attributed to the most liberalized financial and capital accounts of the country.

The transfer of green technologies and capacity buildings regarding the green technology climates for Cambodia, businesses and investments in Cambodia is a necessity for the achievement of the Sustainable Development Goals, in particular 'Doing more with Less', 'Cleaning up while Developing an Economy' principle. The knowledge in green technologies and its implementation do raise resource efficiency and decouple economic growth from environmental degradation. This really mainstreams the concepts of the World Green Civilization, blue economy, the SDGs, the Rio+20 Outcome, SCP, inclusive green growth, green economy, resource efficiency and sustainable development, the Angkor Declaration on Future Green Sustainability into the relevant development sectors of Cambodia.

The mobilization of international, regional and national financial and human resources for the green economy, and inclusive green growth is essential for the achievement of the national priorities on making growth being green, inclusive, equitable, and sustainable. The sufficient financial resources and human capital along with green technologies do assist in the practices of sustainable development principles, sustainable consumption and production patterns (SCP), thereby promoting sustainable clean and green lifestyles, green innovations and initiatives. As a result, it helps to decouple economic growth from environmental degradation, and increase effective environmental governance and natural capital productivity. This finally makes production and consumption in Cambodia's economy and lifestyles be more sustainable and quickly reach sustainable development goals by 2030.

Key activities for inclusive green growth in Cambodia are shown below: Following the Community-Based Management of Natural Resources, there are different sets of communities such as:

- Communities Legislation: Fishery Communities; Forestry Communities; Community Protected Areas,
- Protected Areas Management: the integrated national report on climate change,
- Equitable and Social Inclusiveness from overall economic growth,
- Green Human Capital Enrichment,
- Green infrastructure development/rehabilitation,
- Sustainable or Green Cities,
- OECD-Cambodia Cooperation: Inclusive green growth/green economy; Cambodia Inclusive Green Growth Case Study by OECD, MOE, the IIMC and the IISR

- OECD: Putting green growth at the heart of development 2013,
- Changing Business Paradigm towards a Real Green New Deal, through rethinking economic growth, driven by inclusive green growth/green economy & based on the existing mechanisms, policies and strategies,
- Law Enforcement: the inclusion of SCP into the holistic development, i.e. food, public health, environmental health, transports, education, technology transfers.

III. Conclusion

Inclusive GREEN GROWTH in Cambodia from institution to policy to strategy stresses the importance, values of engagement, participation and actions for sustainability, decoupling demand, especially green growth miracle and prosperity. It is necessary for the sustainable development and growth of Cambodia's economy by following the national inclusive green growth pathway and approach. In this way, sustainable development of Cambodia with four key pillars, i.e. economy, environment, society to culture can be achieved with the right balance and coherent integration, among the four dimensions and it finally evolves through a win-win approach.

The harmonization of the four dimensions either in green growth or sustainable development of Cambodia really orients the economy towards green goals, increase the wellbeing of the Cambodians along with healthy ecology and environment, as well as green social safety net and national 'GREEN CIVILIZATION' Prestige. This does enhance implementation of national policy, strategy and programs, following an Inclusive Green Growth approach. Here, green growth principles have been mainstreamed in the National Strategic Development Plan NSDP 2014-2018 and in all developmental sectors. Therefore, increasing the greening of economic activities definitely promotes green monetary policy and fiscal policy, the enhanced green financing, investment, green industrialization, eco-industry, green innovation and competitiveness.

In line with Cambodia's green civilization goal, Sustainable Consumption and Production (SCP) framework of Cambodia having been already mainstreamed in the National Policy on Green Growth, National Strategic Plan on Green Growth 2013-2030 for the sound management of natural resources, places top priorities on resource efficiency, recycle, reuse and reduce principle (3Rs), decoupling and life cycle analysis for production. This requires the exchange of best sustainability practices, green technology transfers, education, green research and development activities. The green growth performance of Cambodia is measured by the Sustainable Development Goals Indicators of the country for the Development Agenda 2030, including natural resource data, baseline data, and statistical data reliability. Moreover, Cambodia does need to well prepare itself for the SDGs transition management to reach the resilient economy targets and with the Small-Medium Enterprises (SMEs) and communities as key drivers of inclusive green growth.

It is important to note that the realization of the green technologies capacity buildings, environmental and green growth education and skills for the young leaders and the youth in the Kingdom of Cambodia definitely contributes to a change in mentality and attitude,

and transformation of the Cambodian people's behaviors from childhood towards love for nature and natural resources. This really illustrates full engagement of the Cambodian Youth and the people in environmental protection, and seeks solutions to emerging environmental issues and challenges at the present and future time, oriented and driven by green technologies use and replication across Cambodia. Importantly, all of kinds of green measures and activities addressing environmental problems, green growth issues, green civilization, biodiversity conservation and sound sustainable natural resources management are actively engaged in turning environmental knowledge into environmental friendly operations and good green practices.

It is obvious that the inclusive green growth actions help assure a country's development, driven by inclusive green growth with effective environmental governance, accountability and transparency, as well as equity and fairness in society. It follows a principle of the balanced development, 'Conservation for Development; Development for Conservation,' necessary for the Cambodian people's quality of life, better livelihood, wellbeing and dignity.

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