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1 October B.E. 2558 (2015)

Dear Executive Secretary,

Subject: Thailand's Intended Nationally Determined Contribution (INDC)

The Office of Natural Resources and Environmental Policy and Planning (ONEP), in its capacity as Thailand's national focal point to the United Nations Framework Convention on Climate Change, is pleased to communicate Thailand's Intended Nationally Determined Contribution (INDC), as attached.

Please accept the assurances of my highest consideration.

Yours sincerely,

Raweewan Bhurdej
Secretary - General

Ms. Christiana Figueres
Executive Secretary
UNFCCC secretariat
P.O. Box 260124
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Germany

	<ul style="list-style-type: none"> - Power Development Plan B.E. 2558–2579 (2015-2036) - Thailand Smart Grid Development Master Plan B.E. 2558-2579 (2015-2036) - Energy Efficiency Plan B.E. 2558–2579 (2015-2036) - Alternative Energy Development Plan B.E. 2558–2579 (2015-2036) - Environmentally Sustainable Transport System Plan B.E. 2556–2573 (2013-2030) - National Industrial Development Master Plan B.E. 2555–2574 (2012-2031) - Waste Management Roadmap
International market mechanism	Thailand recognizes the important role of market-based mechanisms to enhance the cost effectiveness of mitigation actions, and therefore will continue to explore the potentials of bilateral, regional and international market mechanisms as well as various approaches that can facilitate, expedite and enhance technology development and transfer, capacity building and access to financial resources that support Thailand's efforts towards achieving sustainable, low-carbon and climate-resilient growth, as appropriate.
Review and adjustments	Thailand reserves the right to review and adjust its INDC as necessary upon finalizing the new global agreement under the UNFCCC.

Consideration of fairness and ambition, in light of national circumstances and contribution to the ultimate objective of the Convention (Article 2)

Thailand's national greenhouse gas (GHG) emissions represent only 0.84% of global emissions in 2012. The country's share of cumulative emissions from 1990-2012 is 0.75%. In 2012, per capita GHG emissions is at 5.63 tCO₂e and emissions per GDP (US\$ million) is 409.54 tCO₂e, which is lower than world average. In terms of emission profile, the Second National Communication indicates that 67% of total GHG emissions in Thailand in 2000 is from the energy sector. In 2012, CAIT data indicates 73% share is from energy. Consequently, Thailand's mitigation efforts have focused primarily on the energy, including transport sector.

At COP20 in Lima, Thailand pledged our pre-2020 contribution of 7-20% GHG emission reduction by 2020 below business-as-usual (BAU) in the energy and transport sectors. According to a preliminary analysis, Thailand has already achieved 4% of GHG emission reduction from the projected 2020 BAU and is well on track to achieving the 7% target pledged as voluntary domestic efforts by 2020. Our INDC will continue such efforts with ambitious plans in the relevant sectors while considering also our national circumstances and context, including:

share technology knowledge to enable technology transfer on a larger scale. International financial support mechanisms such as technical assistance and technology transfer funds for purchasing intellectual property rights for a free distribution of clean energy technologies would be very valuable to accelerate diffusion of renewable energy technologies for developing countries¹. Furthermore, efforts are needed to inform the public, through lessons-learned and experience sharing from other countries, as well as showcasing success stories from pilot or demonstration projects, for instance. It is therefore crucial that international cooperation through the UNFCCC focus on these cooperative attempts to unlock the potentials of developing countries in their contributions towards the global solutions to climate change by addressing these important identified barriers, making technological solutions more affordable for developing countries and strengthening the capacity of developing countries to implement these solutions more effectively and more sustainably. Successful implementation of these ambitious mitigation plans in Thailand, in addition to our domestic efforts, will be subject to adequate and predictable access to enhanced means of implementation agreed under the UNFCCC.

Adaptation Efforts

Thailand is a country located in a tropical Southeast Asian peninsula and has 2,420 kilometres of coastline on the Gulf of Thailand and the Andaman Sea. According to the Fifth Assessment Report by the Intergovernmental Panel on Climate Change (IPCC), Southeast Asia is one of the two most vulnerable regions in the world to coastal flooding. In addition, this region is predicted to face with increased annual mean precipitation and extreme precipitation. Geographically therefore, Thailand is a country highly vulnerable to adverse impacts of climate change, and is ranked as the eleventh country most affected by climate-related impacts from 1994–2013.

Thailand is also considered one of the sixteen countries in the "extreme risk" category that are most vulnerable to the future climate change impacts over the next thirty years. Statistically, from 1955 to 2005, Thailand experienced an increase of 0.95°C for mean temperature, 0.86°C for maximum temperature and 1.45°C for minimum temperature. From 1955-2014, number of rain days in Thailand has significantly decreased by 0.99 day per decade while daily rainfall intensity increased. National projections indicate heavier rainfalls are expected in areas with already high precipitation level, such as the southern peninsula, whereas for the arid, inland northeastern region, precipitation level is expected to decline even further. As a result, severe flooding and drought can be expected. Severe flooding in a similar magnitude to the 2011 flood in Thailand could cost as much as US\$40 billion to the economy, and led to an estimated 2.5% drop in global industrial production. The economic loss due to the recent drought can be estimated as equivalent to 0.52% of the country's GDP in 2015, with disproportionate impacts to the agricultural sector, and in particular to subsistent farmers .

Adaptation is therefore top priority in Thailand's national response to climate change. Thailand's adaptation efforts aim to enhance climate resilience through the guidance of the Philosophy of Sufficiency Economy, bestowed by His Majesty King Bhumibol Adulyadej. Sufficiency Economy stresses the middle path as an overriding principle for appropriate conduct by Thai people at all levels, from family to community to country. "Sufficiency" means moderation, reasonableness, and the need of self-immunity for sufficient protection from impact arising from internal and external changes. To achieve this, the application of knowledge with due consideration and prudence is essential. In particular, great care is needed at every step in the utilization of

¹ IEA (International Energy Agency) (2011), *Renewable Energy. Policy Considerations for Deploying Renewables*, OECD/IEA, Paris.

extremely important and can lead to improved outcomes and increased coping, thus enhancing adaptive capacity under various conditions of climate change. Thailand's Technology Needs Assessment (TNA) report formulated in 2012 has identified three highly impacted sectors in urgent need of adaptation technologies. These are:

- (1) Agriculture, in need of forecasting and early warning system technologies, crop improvement technologies, and precision farming technologies
- (2) Water Resource Management, in need of networking (via pipes and canals) and management of infrastructures (including zoning), seasonal climate prediction, and sensor web using observation and/or modeling data
- (3) Modeling, in need of an integrated national data center, national data transfer/management process and the advanced research, weather research and forecasting (WRF - ARW) model, and an integrated model to address the need of agricultural sector and water resource management sector

During 2009-2011, budget for adaptation actions in Thailand accounted for 68% of the total budget allocated to climate change. As climate change continues, the need for adaptation finance is expected to substantially increase in the future, consequently creating extra burden on an already scarce government fiscal budget of many developing countries including Thailand. To ensure that adaptation actions can be effectively enhanced to address the distress experienced in highly vulnerable developing countries, it will be necessary to secure adequate means of implementation including finance, technology development and transfer and capacity building for adaptation in the new global agreement under the UNFCCC. Adaptation undertakings of developing countries do not provide benefits only at the local and national scales, but also contribute to the resilience of global food production system, enable ecosystem and biodiversity protection, enhance the livelihood particularly of low-income population and contribute to the achievement of the global millennium and sustainable development goals, as well as the objective of the UNFCCC set forth in its Article 2.

Finally, recognizing that long-term and continuous effort is required to address climate change, Thailand has formulated the National Strategic Plan on Climate Change B.E. 2551-2555 (2008-2012) and the Climate Change Master Plan B.E. 2558-2593 (2015-2050), providing a continuous framework for measures and actions in the long-term. The Climate Change Master Plan has laid out a vision to achieve climate-resilient and low-carbon growth in line with sustainable development path by 2050, and has recently been approved by the Cabinet. Relevant agencies in various sectors are now in the process of formulating specific sectoral plans to address climate change, based on this framework plan. Therefore, it is expected that further concrete mitigation and adaptation actions will be proposed in respective sectors.

The information provided in this INDC aims to enhance clarity and understanding, and Thailand is willing to provide additional information to further enhance its clarity. Thailand encourages other Parties with similar or more advanced national circumstances to submit their INDCs as soon as possible. As a developing country, Thailand places great importance on the global efforts in addressing climate change, and will continue to play a constructive role in the UNFCCC process.