

How to Reflect Contributions Beyond Parties' Commitments? The Taiwan Experience

Dr. Kuo-Yen Wei

Minister, Environmental Protection Administration
Executive Yuan, R.O.C. (Taiwan)



Nov 4, 2015

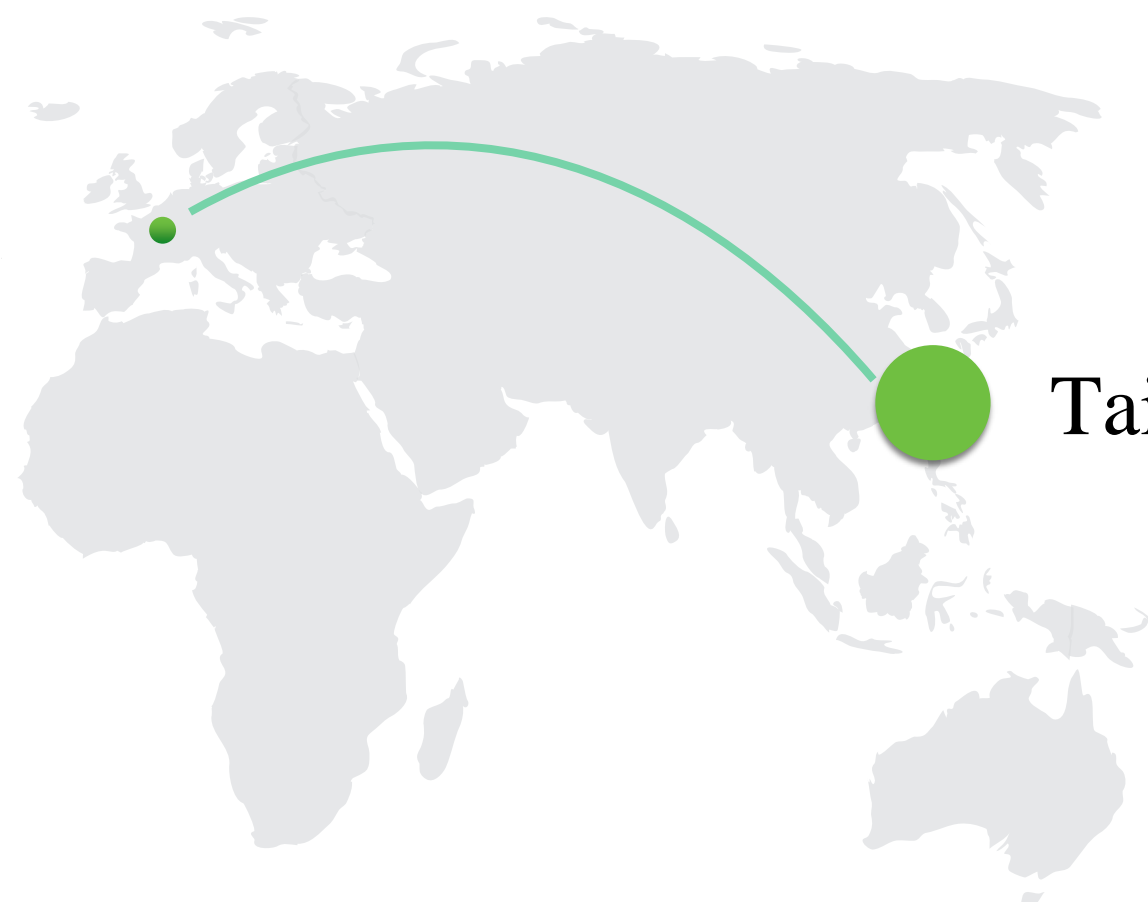
What a non-party member can do?



Outlines

- Taiwan
Geography, Vulnerability, and Emissions
- INDC
Intended Nationally Determined Contribution
- Law and Policy
GHG Reduction and Management Act
- Being a Part of Gaia
Cooperation & Participation





Taiwan

Geography Vulnerability Emissions



Taiwan



Area **36,000 km²** (4/7 of France)

Population: 22 million (1/3 of France)

Average population density is **642/km²**

Steep topography:
36,000 km² with Jade Mountain close to 4,000 m.a.s.l. straddling the tropical and subtropical zones

Rich biodiversity:
50,000 species, 1.5% of the world. One-third is endemic.





Taiwan enjoys great natural gifts but is also vulnerable

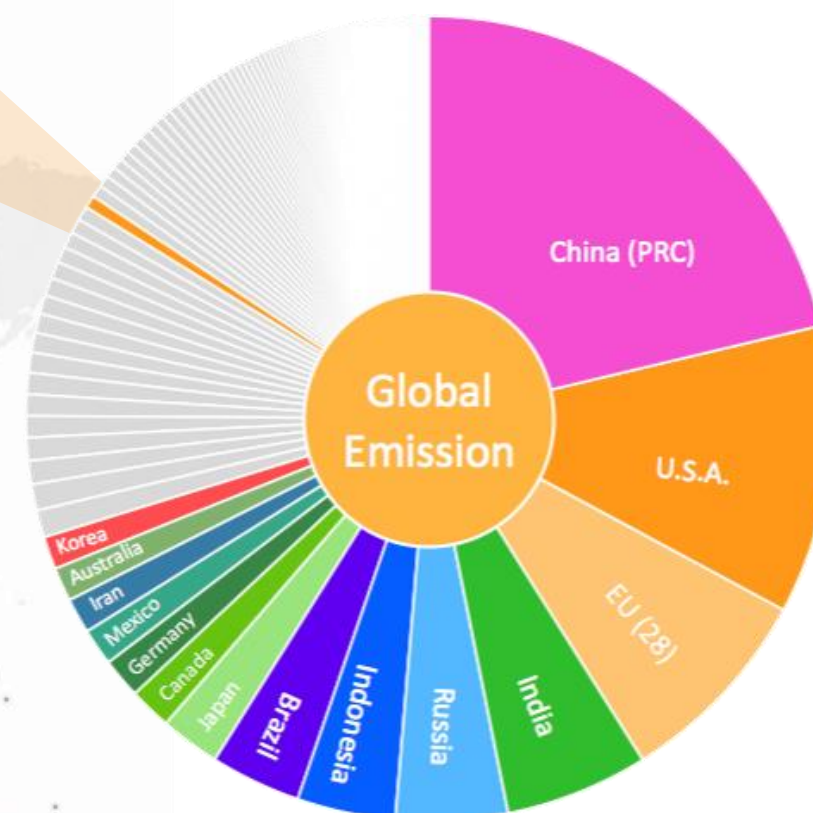


Taiwan's share in global emission

Rank: 32th
of Global Share

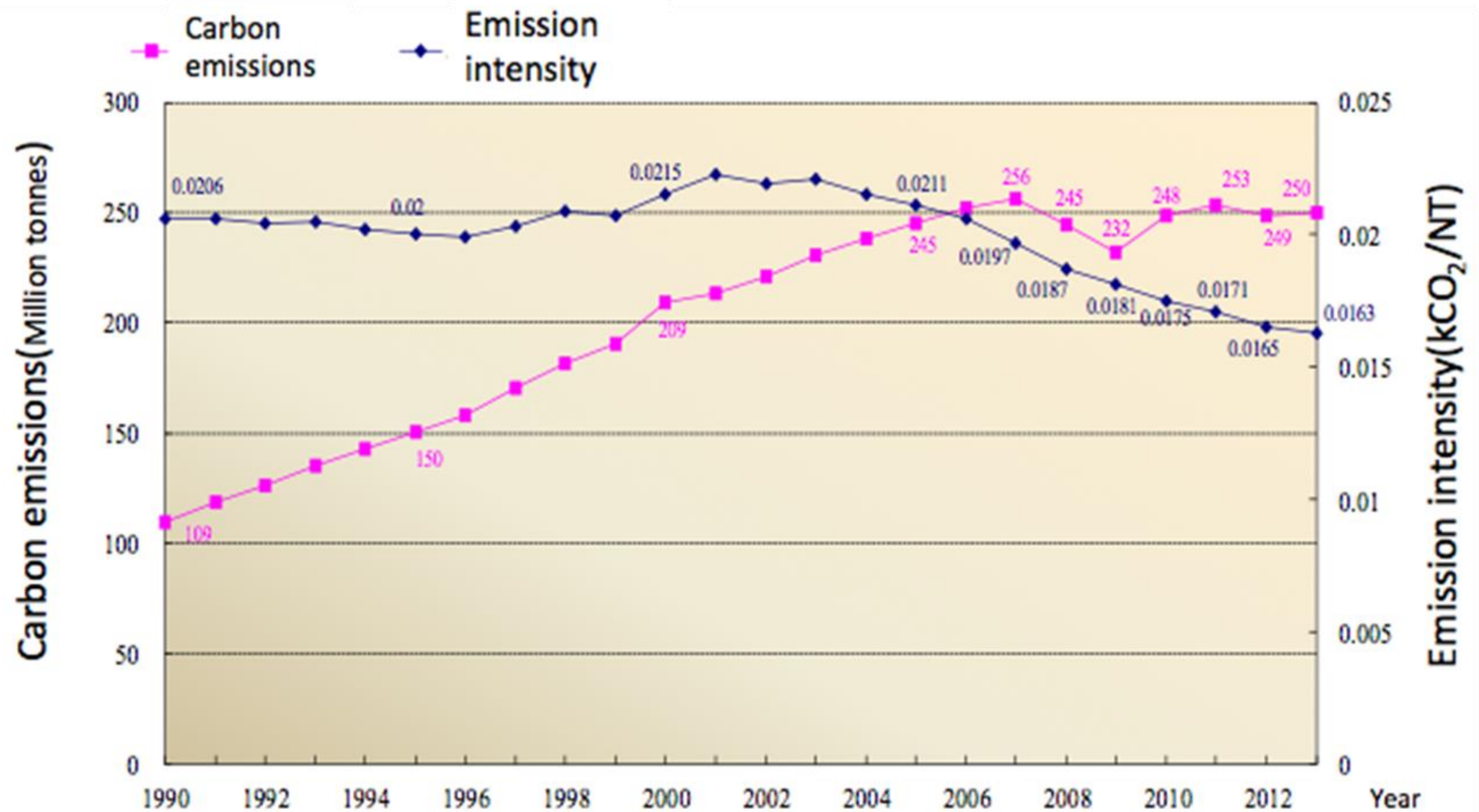
0.55%

Economy depends upon international trade, mainly composed of Small and Medium Enterprises.



An island with an independent electricity grid. Imported energy making up over 98% of energy demand.

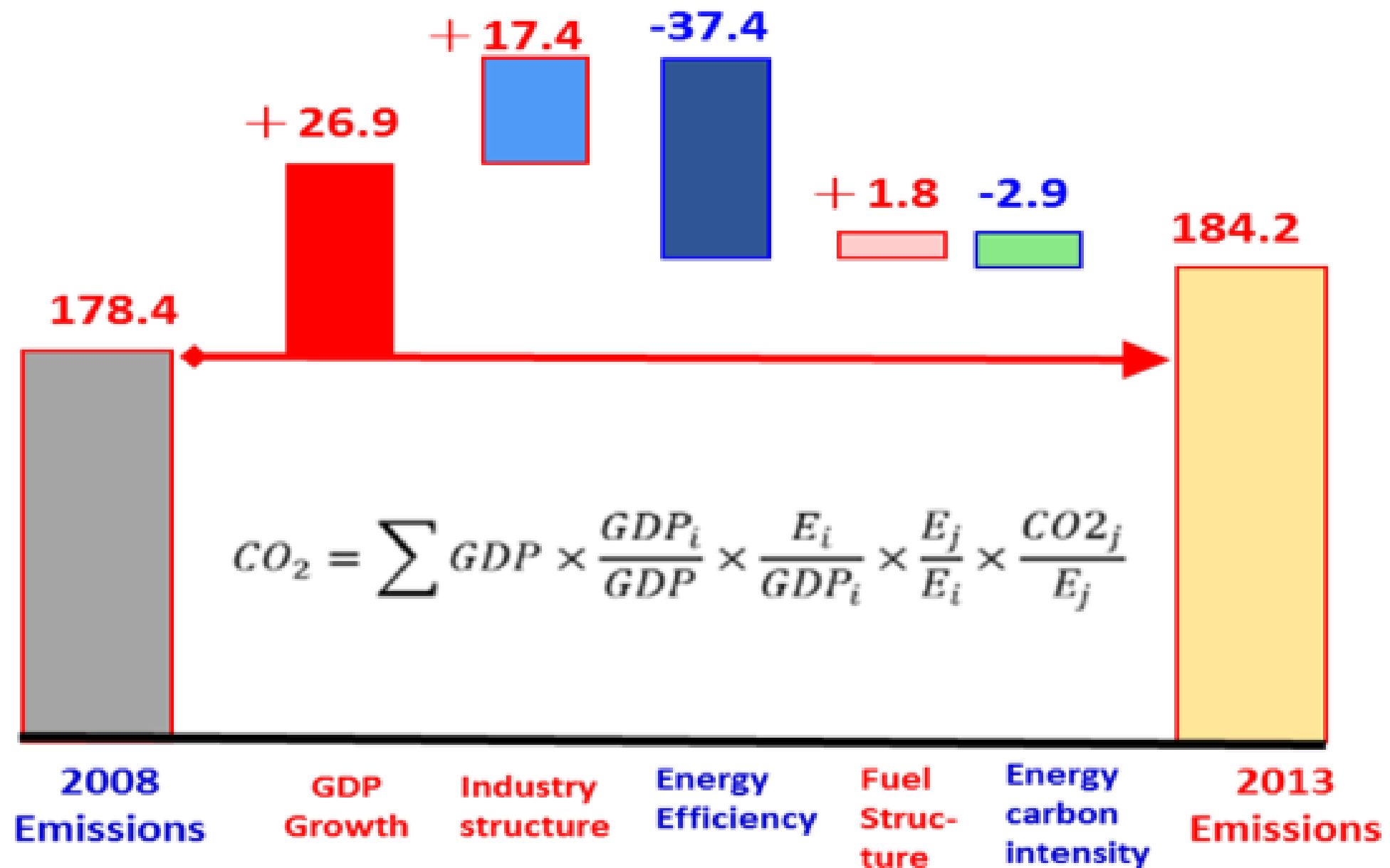
Carbon Emission and Intensity (1990-2013)

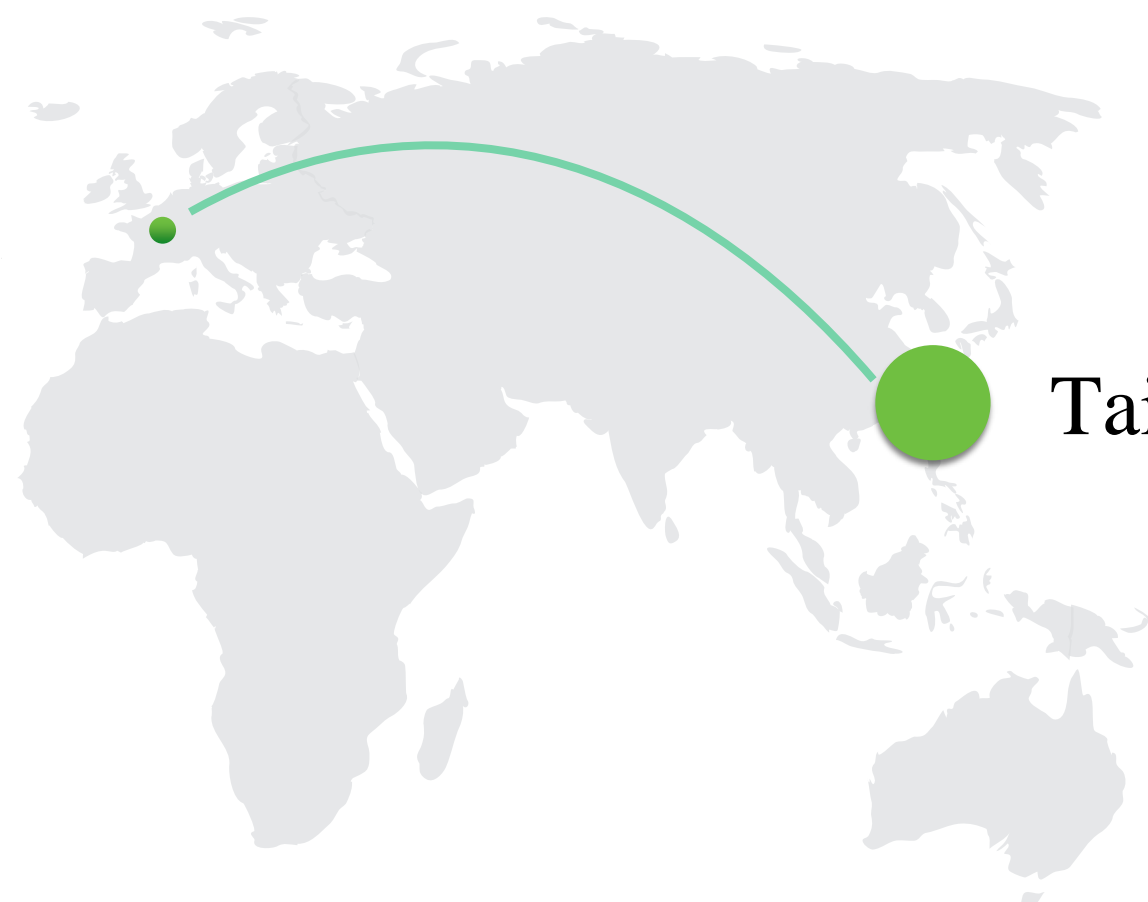




Components of Taiwan CO₂ Reduction (2008-2013)

Fuel Combusted CO₂ Emissions in 2008-2013 (MT CO₂e) (Factor analysis)





Taiwan

INDC

Intended
Nationally
Determined
Contribution

Deputy Minister Annick Girardin publishes an opinion article on Newspaper in Taipei, Nov. 4, 2015

英法外交部聯名投書／對抗氣候變遷 減碳人人有責

巴黎會議分水嶺 綠色經濟新時代

Joyce Anelay／英
國外交部副部長
Annick Girardin／
法國外交部發展和
法語國家事務部長

上周法、英兩國在倫敦聯合主辦晚宴，邀請小島國家代表在會中說明他們所面臨的危機嚴重性。全球其他地方面臨的地球暖化威脅會不比小島國家嚴重。為了讓氣候維持可供人類繼續健康繁榮的生活，我們須將全球暖化幅度控制在攝氏一·五或二度以下。

巴黎氣候會議預定通過的國際氣候協議雛形愈來愈清晰。全球已有一百五十餘國公開承諾減碳，英國制定法律，規定以一九九〇年二氧化碳排放量為基準，在二〇五〇年前達成減碳八十%；目前正順利朝此目標邁進，將先在二〇三〇年達成減碳五十%。法國除了同樣以一九九〇年為基準，預定在二〇三〇年達成減碳四十%的目標外，還通過新的能源過渡法案（Energy Transition Act），規定提供再生能源資金的機制。

兩國也承諾支持開發中國家做好氣候變遷的風險管理。英國首相卡麥隆日前宣布，將在二〇一六年四月至二〇二一年三月間提供五十八億英鎊經費。法國總統歐蘭德也宣布，將把對抗氣候變遷的年度經費從目前承諾的三十億歐元，在二〇二〇年前增至五十億歐元。

我們應將前述承諾視為基本底線，起碼要履行這些諾言。即將在巴黎舉行的聯合國氣候變遷綱要公約第二十一次締約國會議（COP21

）須建立更宏大的目標。

情勢已出現明顯的改變。根據資誠（PwC）會計師事務所公布的證據顯示，全球二〇一四年的經濟成長率為三·三%，但碳排放量只增加〇·五%。這顯示經濟成長和溫室效應氣體排放量已逐漸脫鉤。

而且前述改變的速率愈來愈快。目前已有三十七國為碳訂價（put a price on carbon），中國也將在兩年後加入。全世界新增的再生能源裝置容量，已超越煤、天然氣和石油的新增總和。太陽能電池的成本自二〇〇八年迄今已下降約八十%，投入潔淨能源科技的投資也持續增加中。

光是二〇一五年前三季，中國就新增九百九〇萬瓦（99GW）太陽能發電量，相當於英國全國總發電量的十分之一以上。許多小島國家也在去年採行遠大的再生能源目標。

此一轉變趨勢所帶來的經濟利益並不單只是降低氣候變遷的風險而已，例如英、法兩國目前共有約五十萬人從事低碳經濟及相關供應鏈的工作。該產業對英國GDP的貢獻比率已超越汽車業，前者所帶來的商機隨時間演進愈來愈清晰，善加利用其商機的誘因也愈來愈強烈。

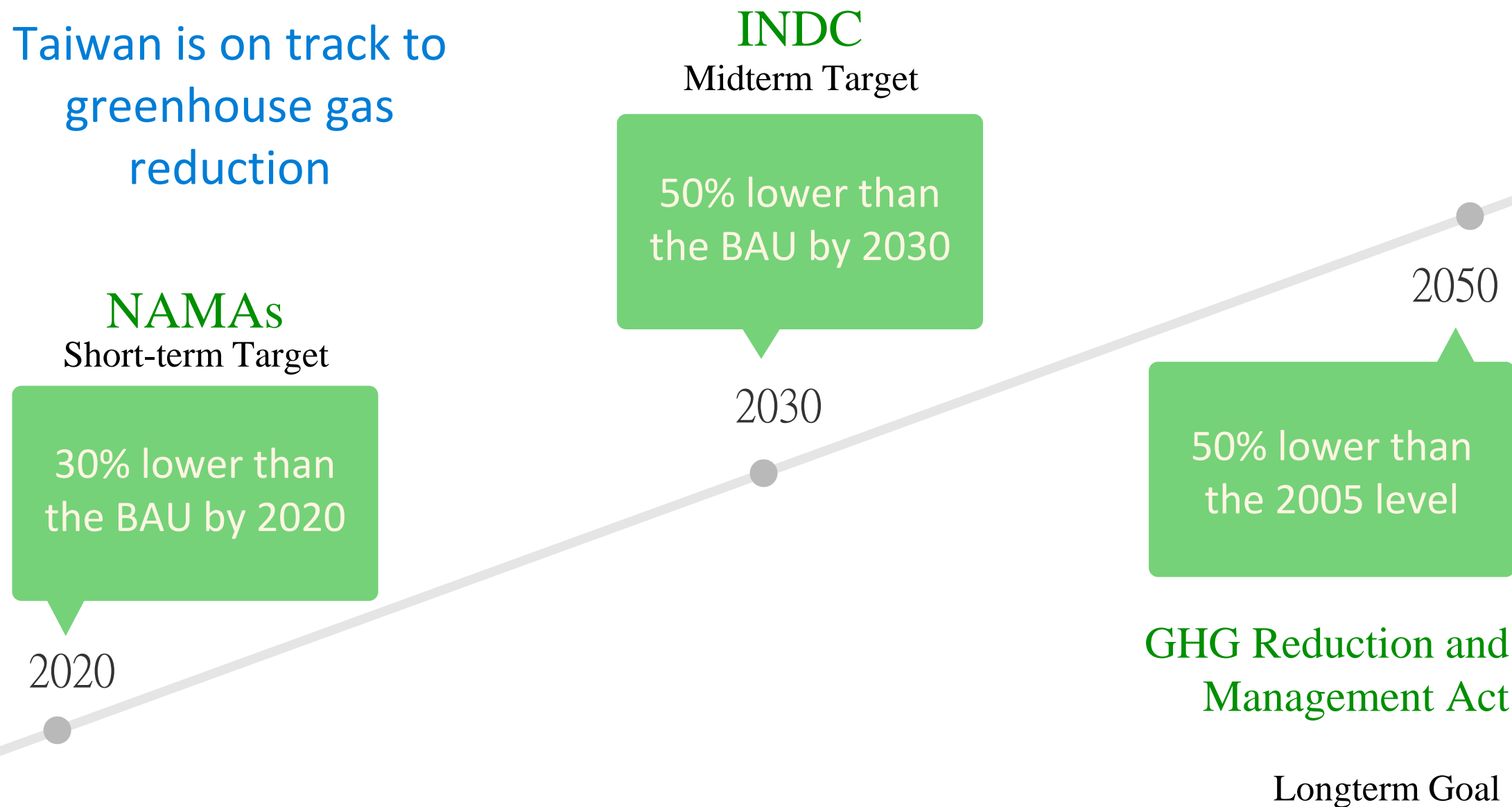
人類正面臨非常確實的氣候變遷威脅，即使我們所面臨的風險不像小島國家居民那麼明顯，每個人仍應負起對抗氣候變遷的責任。

巴黎氣候會議必定是一個分水嶺，帶領我們踏入綠色經濟發展與商機的時代。面對人類文明史上的最大挑戰，我們有信心，人類將會透過巧思、創新和決心，找到有效的因應方式。



Low Carbon pathway

Taiwan is on track to
greenhouse gas
reduction



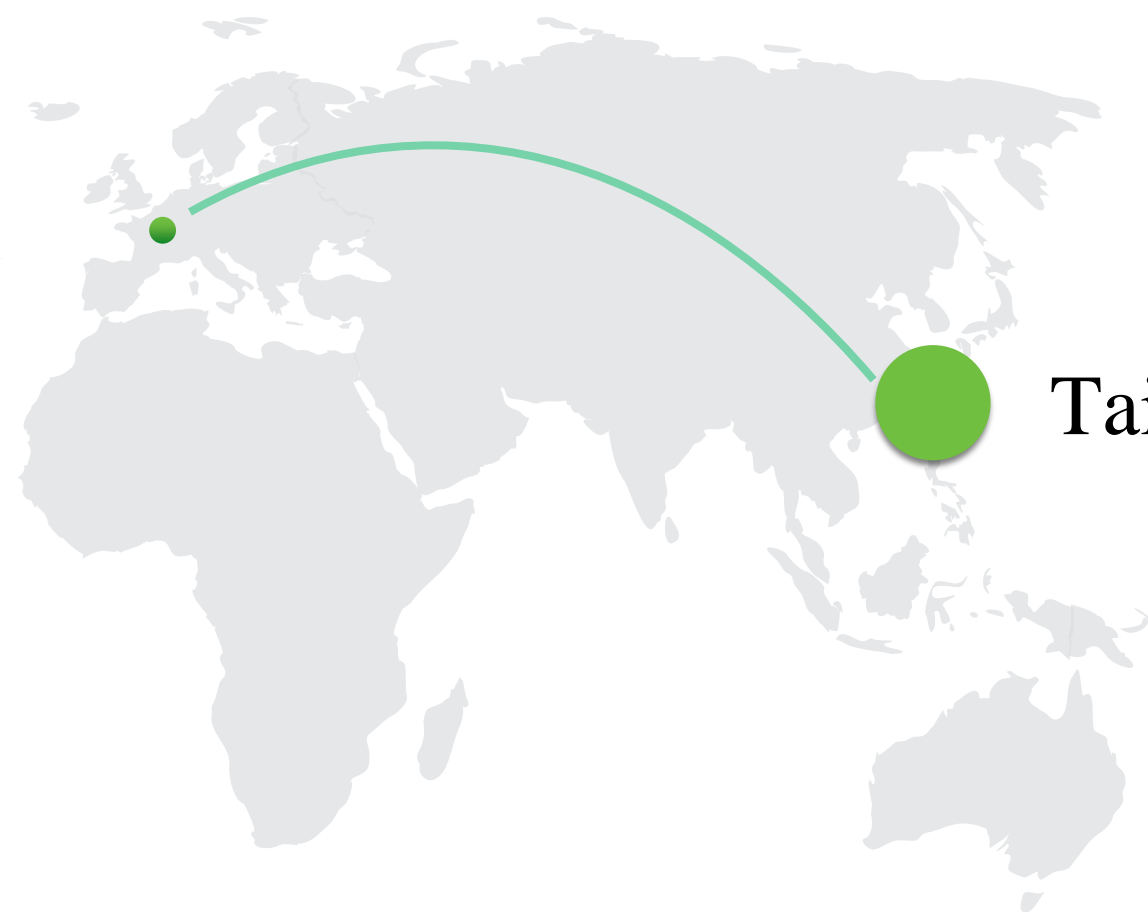
Taiwan has followed the UNFCCC as well as her domestic Basic Environment Act and Greenhouse Gas Reduction and Management Act in proposing an INDC unilaterally.



Taiwan's INDC

An economy-wide target to reduce its GHGs emissions by 50% from the business-as-usual level by 2030.

Emission Target	Greenhouse gas emission reduction (214 MtCO ₂ eq) by 50% from the business-as-usual level (428 MtCO ₂ eq) by 2030
Scope	Economy-wide
Gases covered	CO ₂ , CH ₄ , N ₂ O, HFCs, PFCs, SF ₆ , NF ₃
Sectors covered	Energy; Industrial processes and product use; Agriculture; Land-use, Land-use change and forestry; Waste
Assumptions and Methodological Approaches	2006 IPCC Guidelines for National Greenhouse Gas Inventories Global Warming Potential used in IPCC AR4
Credits from International Market Mechanisms	The emissions reduction target is committed to the domestic measures mostly. Future reduction potential can benefit from being involved in the international market mechanism.



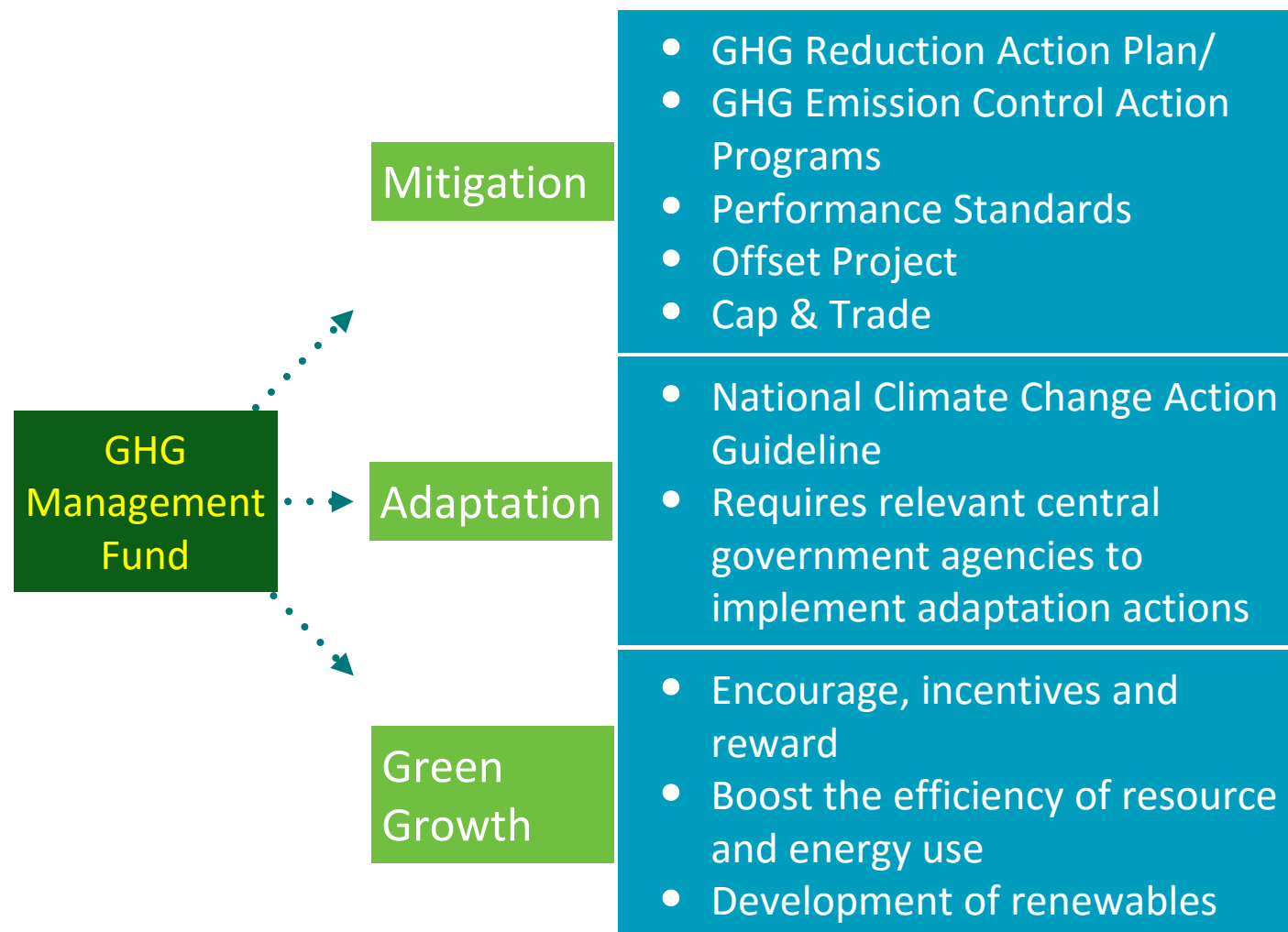
Taiwan

GHG Reduction and Management Act



The GHG Reduction and Management Act

Key features



Reduction Goals

Long- term goal

- cut emissions by 50% below 2005 level by 2050
- The goal is subject to adjust according to international and domestic circumstances.

Periodic five-year regulatory targets

- Determined by the the regulations for the goals and regulatory approaches.
- Convening a Advisory Committee consisting of scholars, experts, and non-governmental organizations, to advise government to set the regulations.



Transition btw/ two acts

Before GHG Act

- **Early Action**, reward operator's emissions intensity that is lower than EPA's Designated Emission Intensities with reduction credits.
- **Offset Project**, Project designed using a approval methodology, published by CDM or approved by EPA. Once the project has been verified, the operator will receive the reduction credits.

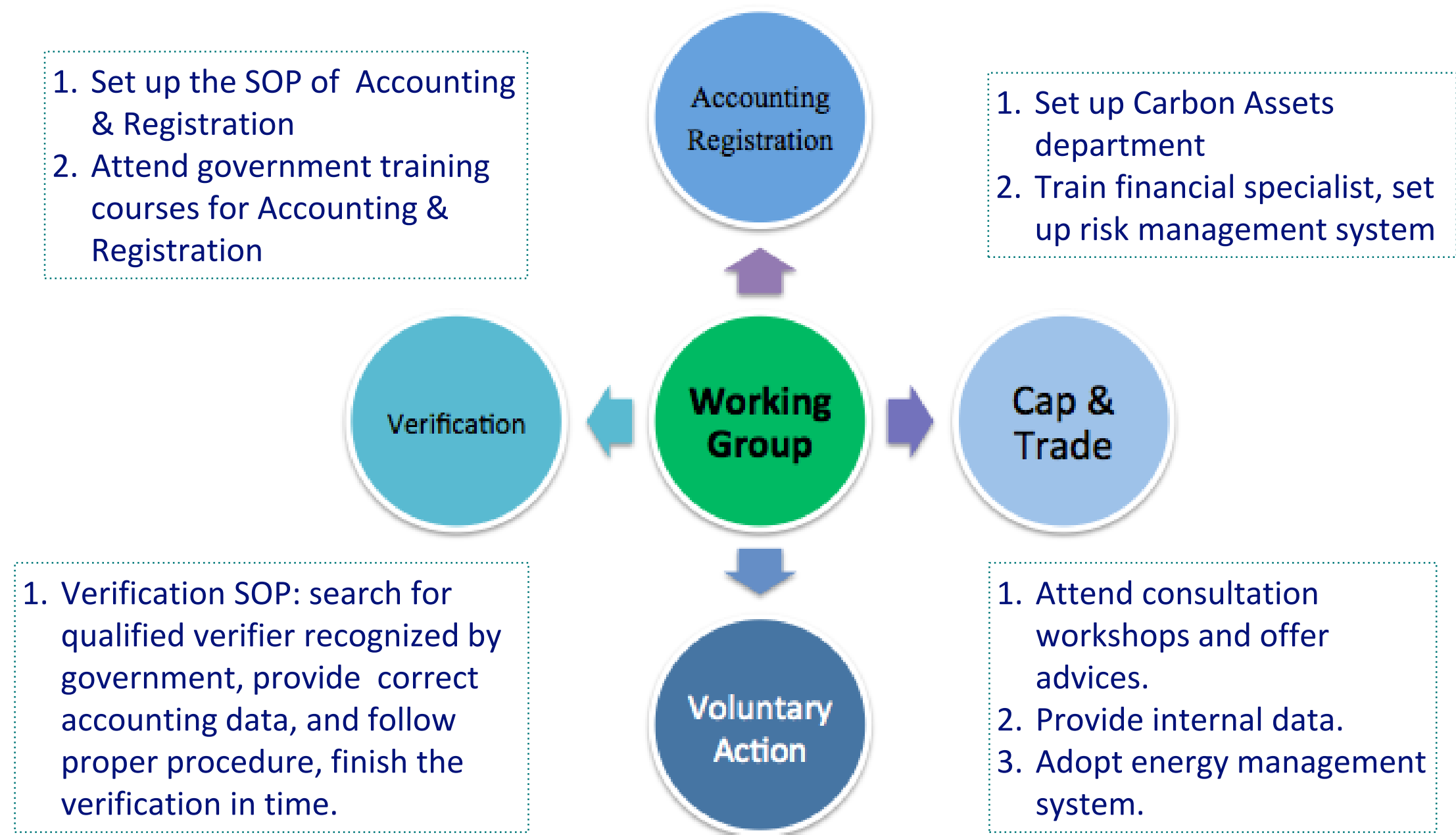
After GHG Act

- No longer accept Early Action application, **Offset Project** will continue.
- **Performance Standards** will be based on operator's size, production volume and process complexity, EPA will reward voluntary enterprise with reduction credits.
- If the operator's emissions exceed than the allocation amount, it may offset the exceeded amount using credits from performance standard, emissions trading, etc.



Implementation according to the Act

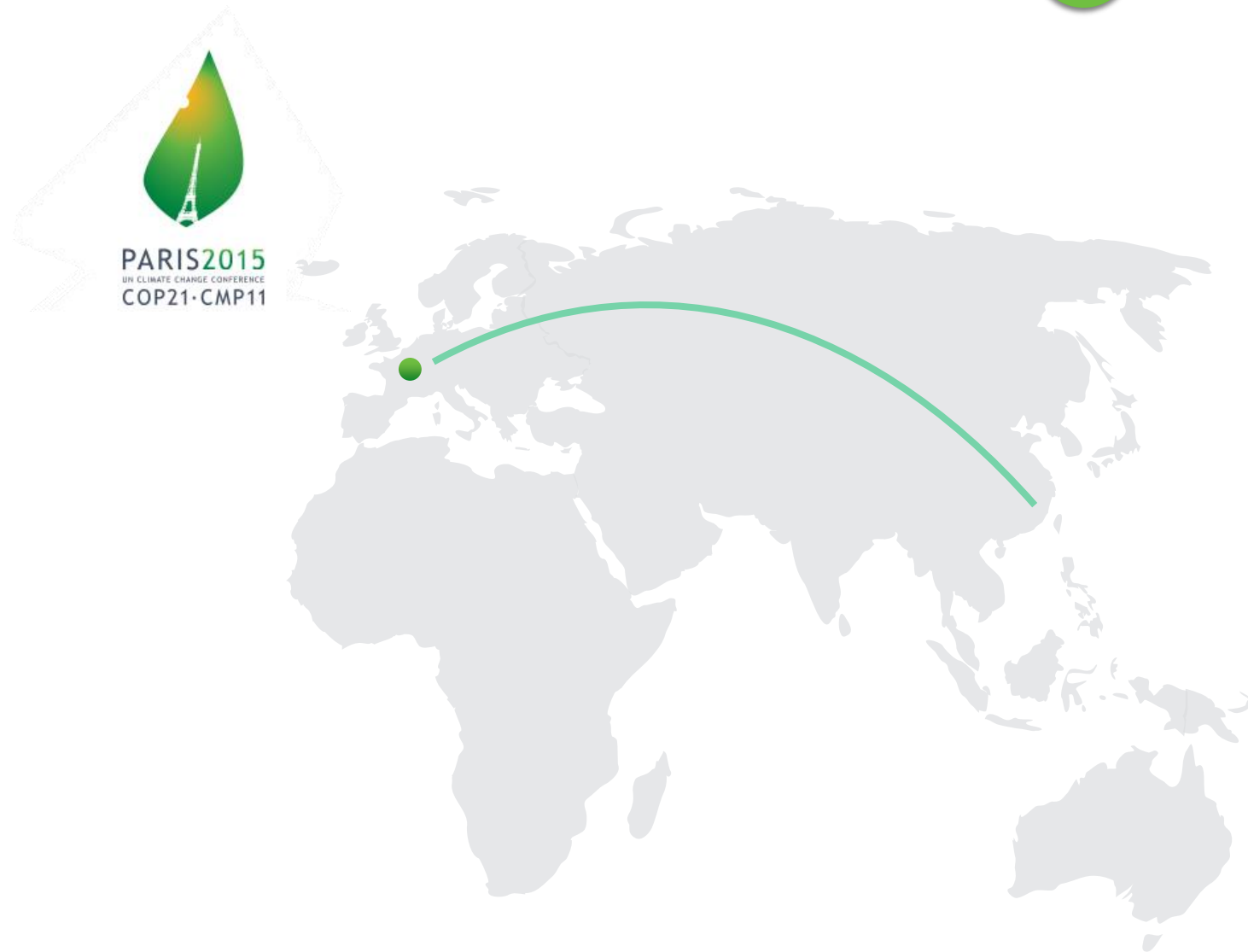
Enterprise could form working groups for accounting, registration, verification, voluntary reduction and Cap & Trade, set up the SOP in every field and manage carbon assets.





Being a Citizen of the World

Cooperation
and Participation





Being a Citizen of the World and International Cooperation

Possible international cooperation area :

1. Cap and Trade
(emission trading scheme, ETS)
2. Performance Standards
3. Climate Fund
4. Regional Partnership for Climate Change
5. Low Carbon Technology Development
6. Intended Nationally Determined Contributions
7. More Engagements in the Compliance Mechanism
under UNFCCC





The Gaia Hypothesis

**The earth is more
than just a home,
it's a living system
and we are part of it.**

- James Lovelock -



Life maintains

Taiwan is a part
of Gaia

its own homeostasis



Concluding Remarks

- **Every movement has its moment!** For the people and the planet, it is time for a global action in 2015, more engagements from every perspectives are necessary.
- Taiwan is developing programs and implementation rules under **the GHG Reduction and Management Act**, with inter-agency and stakeholder consultation.
- Taiwan's INDC is based on **legislation, adaptation and mitigation**, and it represents Taiwan's reduction ambition, in line with the new "agreement" to be adopted at the COP21 Meeting.
- Working with the international **partners to mitigate climate change and adapt to its adverse effects**.
- With more meaningful cooperation among all around the world, we will continue assisting the domestic private sectors to **build up low carbon technologies** in Taiwan, **join the low carbon society** to communicate with upcoming new agreements, **and to share experience** with interested countries.
- **Taiwan is an indispensable part of the Mother Earth “Gaia”.**



Goals of Taiwan's GHG Reduction

● **2030's GHG emission will be 50% of the BAU.**

~ about 2000's level , = 20% off 2005's level.

