

# **Deployment of AIM approach of regional low carbon development to Asian region**

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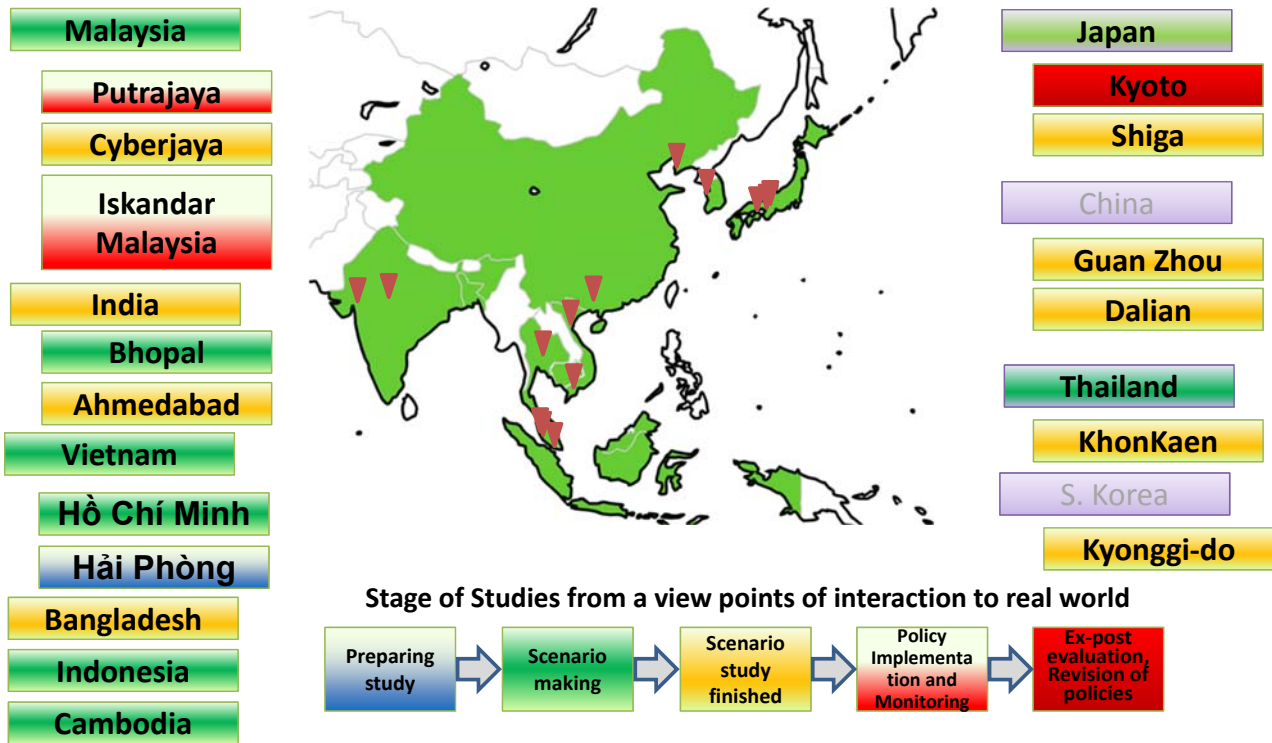
## **Several points of Asian Low Carbon Development (LCD) study**

- 1. Planning of Low Carbon Society and its realization cannot be conducted without multi-disciplinary, integrated and quantification methodologies.**
- 2. Establishing the methodologies and apply them to the target regions, taking account of regional distinctive diversified characteristics, is indispensable.**
- 3. Not only the planning of LCD Actions, but also the monitoring and improvement of the plans are crucial to realize LCSs. Integrated and quantification methodologies are also useful to these stages.**

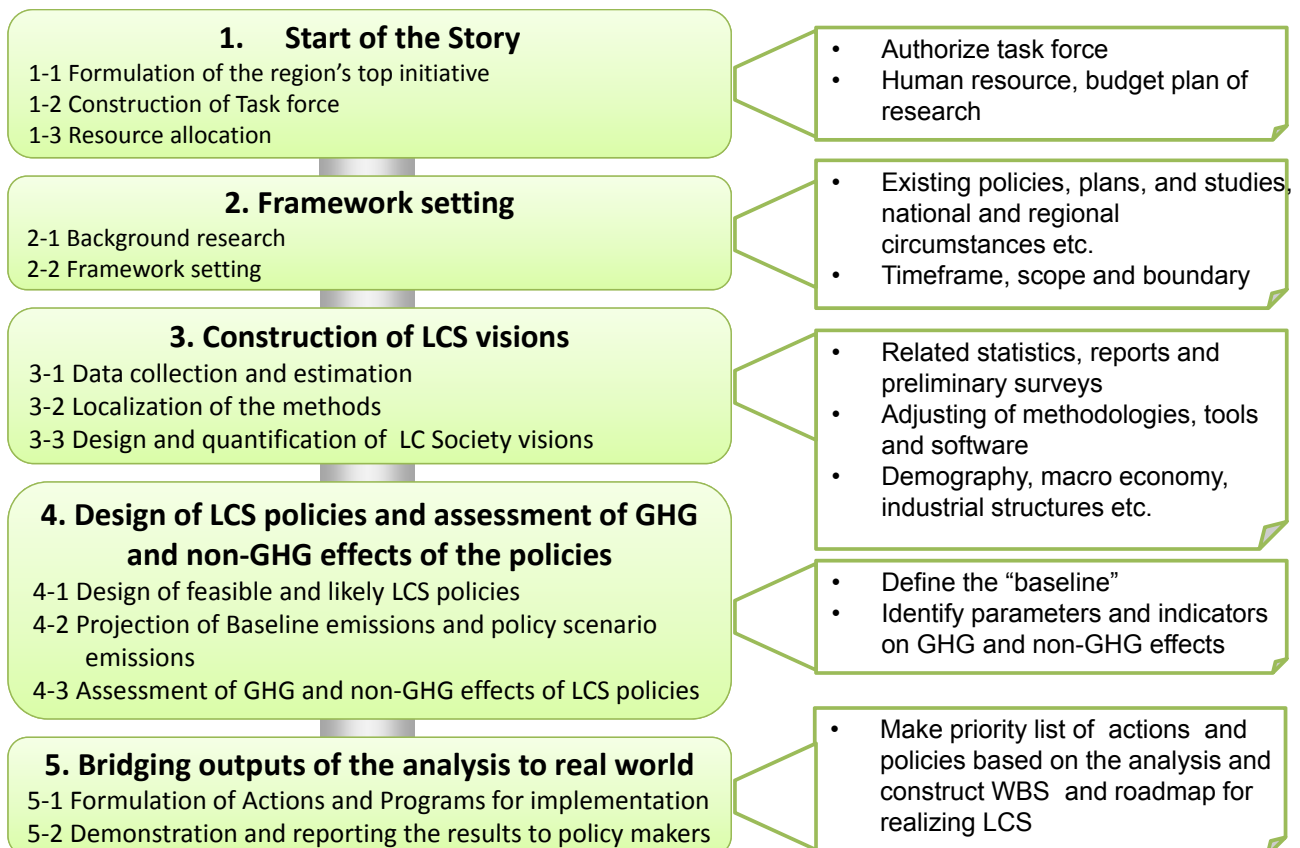
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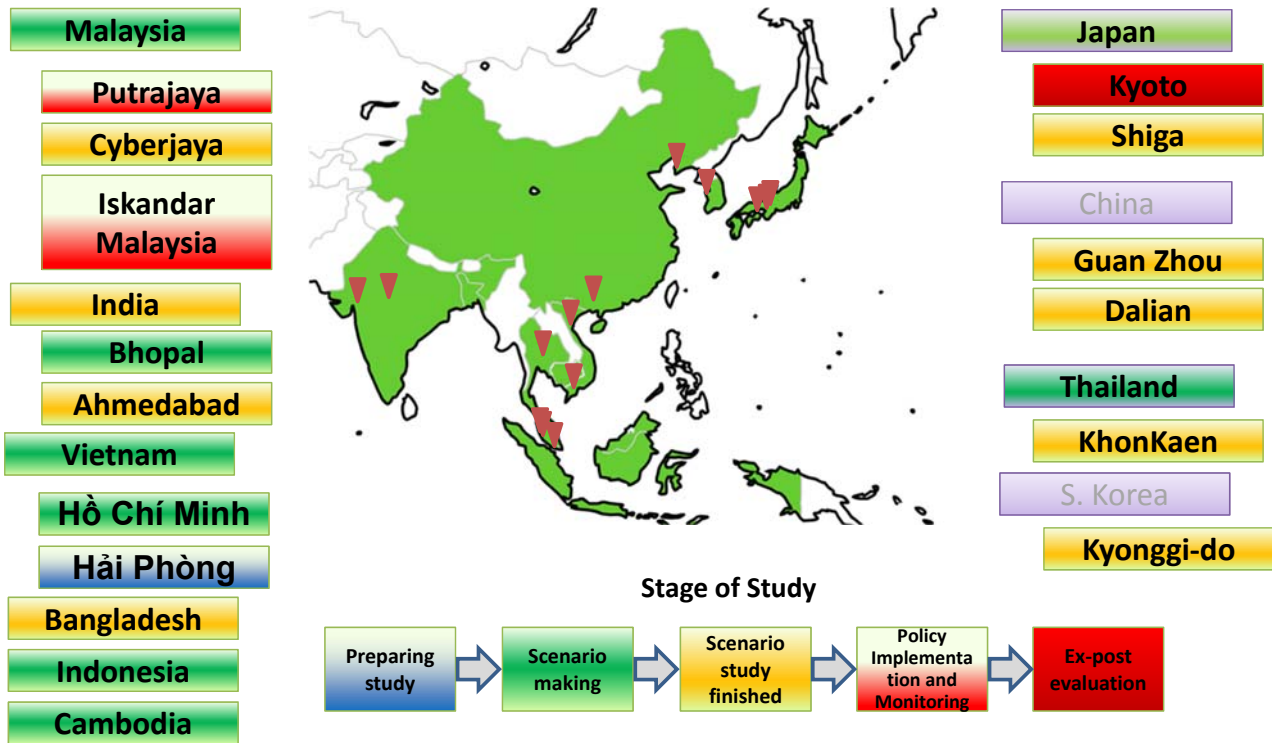
## Up to now, we applied and are applying our LCD study approach to 8 nations and 13 regions in Asia regions



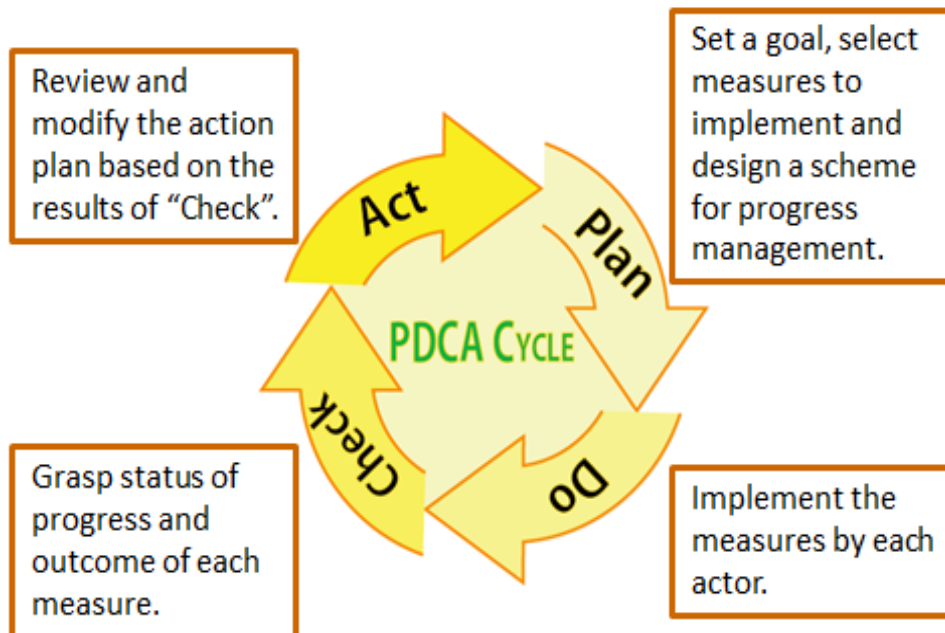
## AIM approach of regional low carbon development



## Up to now, we applied and are applying our LCD study approach to 8 nations and 13 regions in Asia regions



## However, still many things remains after the proposal Low Carbon Development Actions, i.e. PDCA of LCDAs



Year	Nation	Kyoto City	Research activity
2004		Establishment of Ordinance on "Measures against global warming in Kyoto City", the first climate change ordinance in Japan	
2006		Construction and implementation of the first round of "Actions for Combating Global Warming in Kyoto"	Start of a study on "Kyoto LCS Scenario" with ExSS, and proposed 40% emission reduction target by year 2030
2007			(continue)
2009		Selected as "Environmental Model City" by the cabinet office	Proposal of "A roadmap towards Low Carbon Kyoto" with WBS methodology and "Backcasting tool"
2010	National GHG emission reduction target: 25% from year 1990	Revision of the global warming ordinance, and set city mitigation targets as 25% emission reduction by year 2020, 40% reduction by year 2030, from year 1990	
2011	Shutdown of all nuclear power plants in Japan	The second round of "Actions for Combating Global Warming in Kyoto" was started	
2013	National GHG emission reduction target: 3.5% from year 2005		
2014			Start review study of the actions and targets, considering recent socio-economic environment
2015		Review and performance evaluation of the actions considering recent national, social, and economic circumstance	



An image of "Environmental model city Kyoto" presented by Kyoto city to the selection committee, Cabinet Office



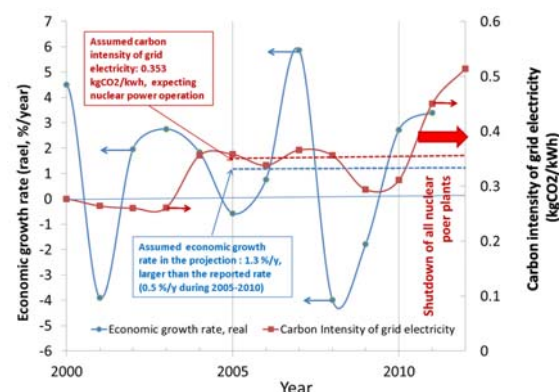
A roadmap proposed to Kyoto city for "Environmental model city Kyoto" and setting mitigation targets"

## Review study of the Ordinance of "Measures against global warming in Kyoto City" and reduction targets considering recent socio-economic environment

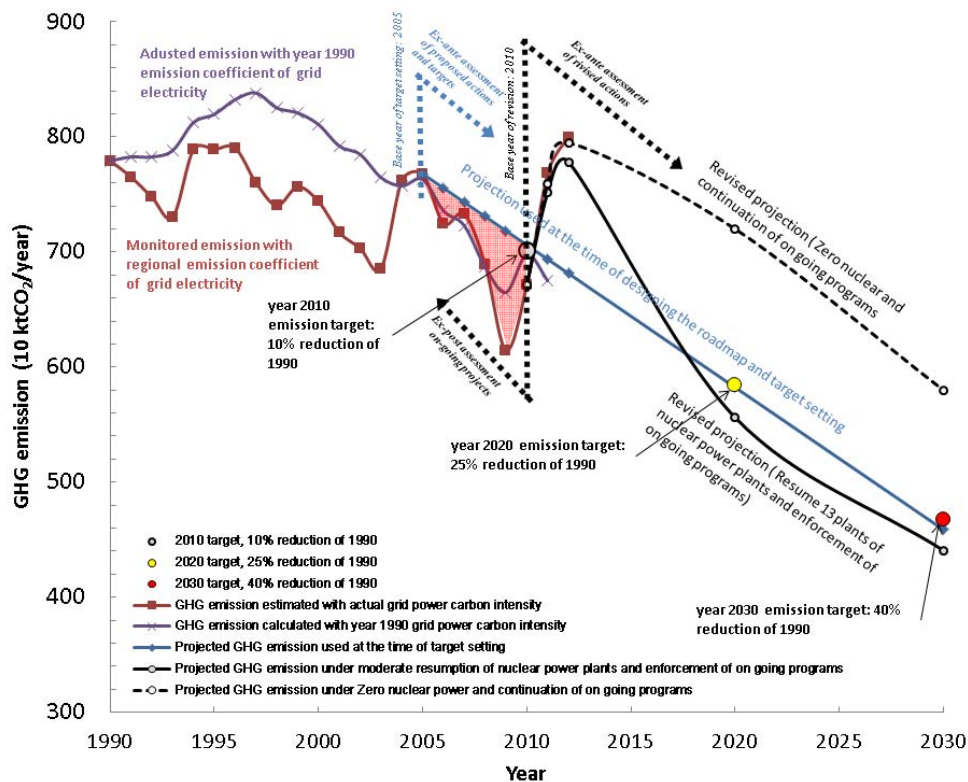
- The ordinance was established in year 2004, and fully revised in year 2010 which includes the following quantified targets.
- GHG emission reduction targets compared with FY1990: FY2010: 10% , FY2020: 25%, FY2030: 40%, FY2050: Realization of Low Carbon Society with a drastic cut of GHG emission

*However, after five year of the revision, background socio-economic environments at the time of the revision changed drastically.*

- Shutdown of nuclear power plants after the Fukushima accident (National government changed the target from 25% reduction (of 1990 emission) to 3.8% (of 2005 emission)
- Stagnation of recent economic growth of the city. In the ex-ante projection for target setting, we used 1.3%/y for real growth rate assumption. Can we keep the same value now?



## Assessments of GHG emission reductions by ex-ante and ex-post analysis of actions



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## Final remarks

1. In the past 15 years, we have developed and applied our LCD Scenario approach to many Asian nations and local regions, 8 nations and 13 regions in Asia regions.
2. "Low Carbon Society (LCS)" issue is not only related to energy supply and consumption, but also connected to socio-economic planning. Real and quantitative integration of them is necessary.
3. It is a knowledge and experience intensive work, and it needs counterparts with intelligent and precise thinking. Finding of such relevant persons determines the success of the study.
4. Not only planning stage, but also monitoring, auditing and improving the LCS policies are important to make the LCS happen in the Asian region. It may take several decades. How to continue this long term support is another important issue.
5. Within my presentation, I introduced some of them. Collaborating with Asian colleagues, we want to extend and deepen our approach, acquiring experience, improving and intensifying the applicability to real world.