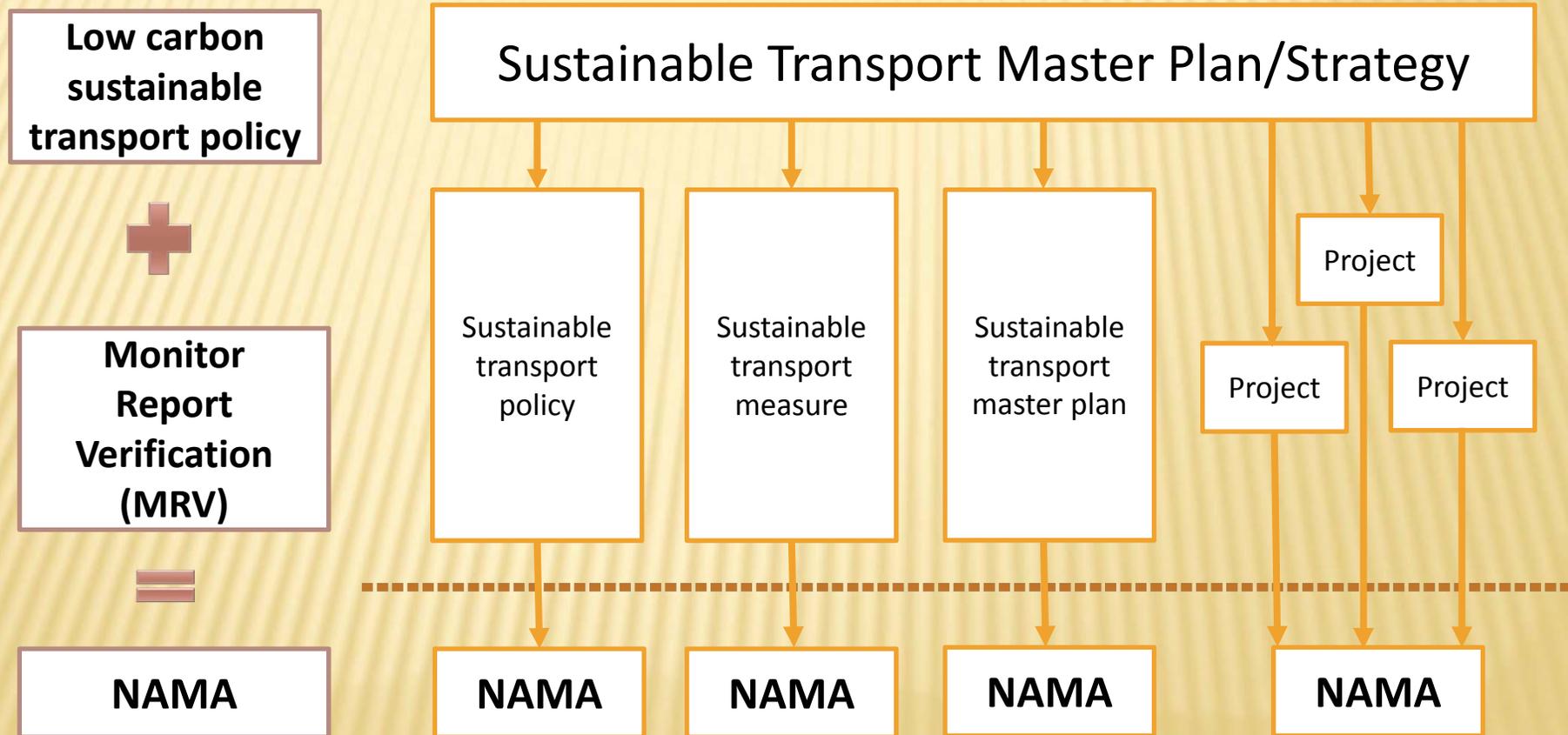


**Selection of Nationally Appropriated
Mitigation Action (NAMA)
for Thailand's Land Transport Sector**

**Halong
October 2nd, 2014**

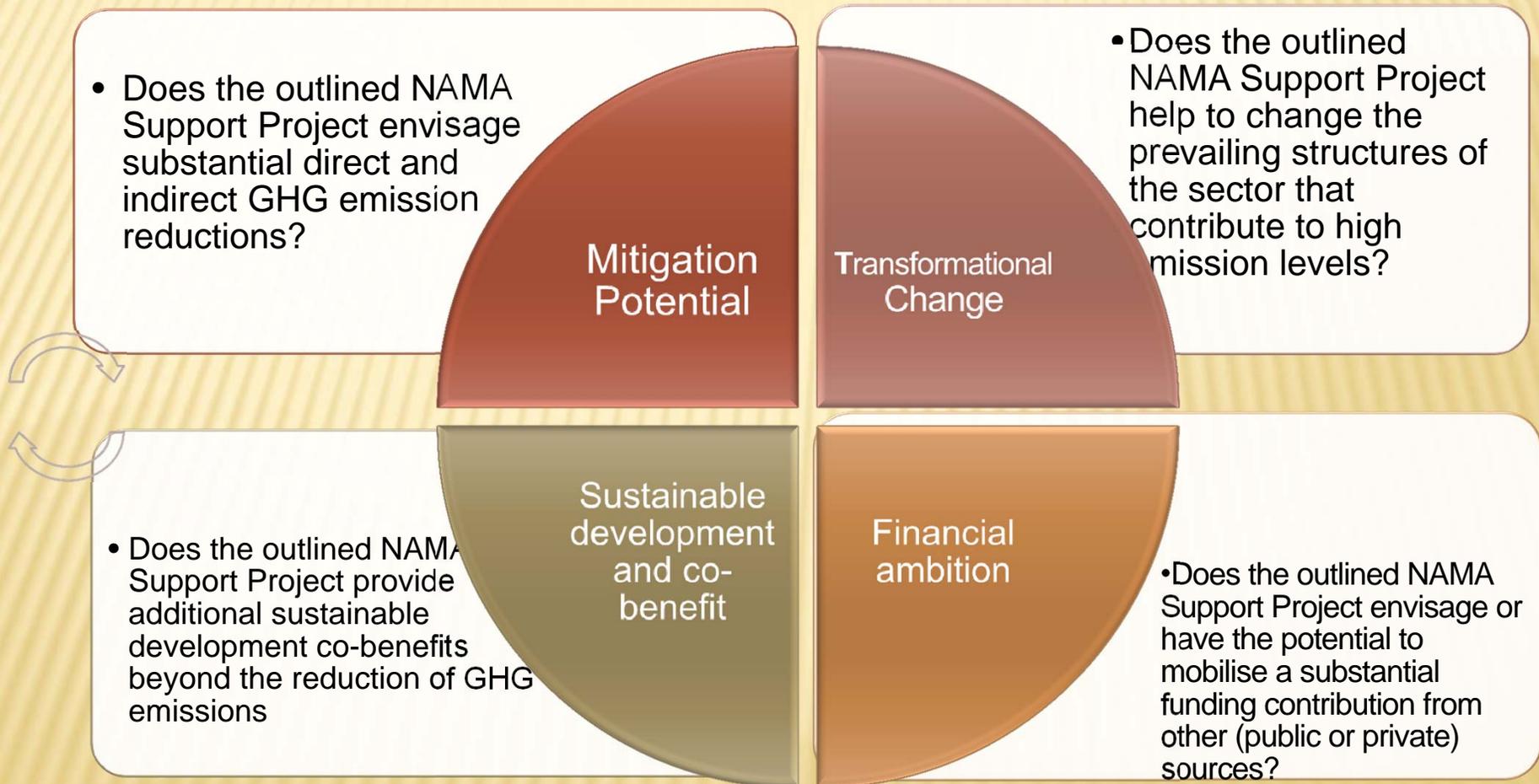
NAMA and Sustainable transport



Criteria for selecting NAMA proposals of NAMA Facility

- Mitigation potential
- Transformational Change
- Sustainability development co-benefits
- Financial Ambition

Criteria of NAMA Facility



Supported Transport NAMAs from NAMA Facility

□ Colombia Transit-oriented Development NAMA

- Grant : 14.9 Million Euro
- Mitigation potential 3.6 – 5.5 MtCO₂/year within 2040



□ Indonesia Sustainable Urban Transport Program Indonesia (SUTRI NAMA)

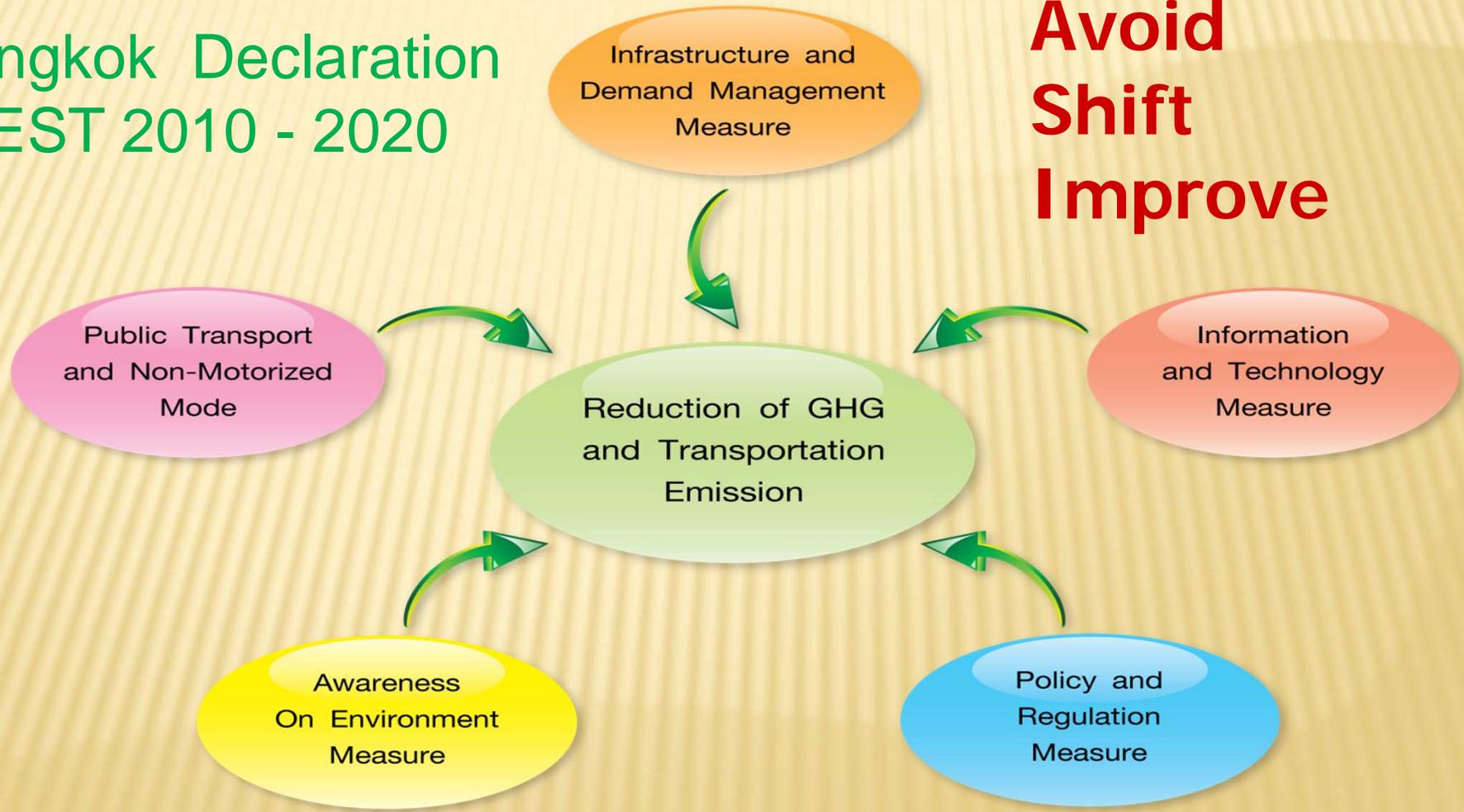
- Grant : 14 Million Euro
- Mitigation potential 0.6 – 1.5 MtCO₂/year within 2020



SUSTAINABLE TRANSPORT MASTER PLAN

Bangkok Declaration
EST 2010 - 2020

**Avoid
Shift
Improve**





**S
T
R
A
T
E
G
Y**

Strategy 1: *Upgrade capability of agencies and personnel for the development of an environmentally sustainable transport system.*

Strategy 2: *Establish appropriate plans and mechanisms for interfacing and monitoring of transport and traffic work plans/measures/projects; and to move them forward to implementation.*

Strategy 3: *Establish comprehensive and inter-connected transport infrastructure.*

Strategy 4: *Efficient transport management for sustainability and greenhouse gas reduction.*

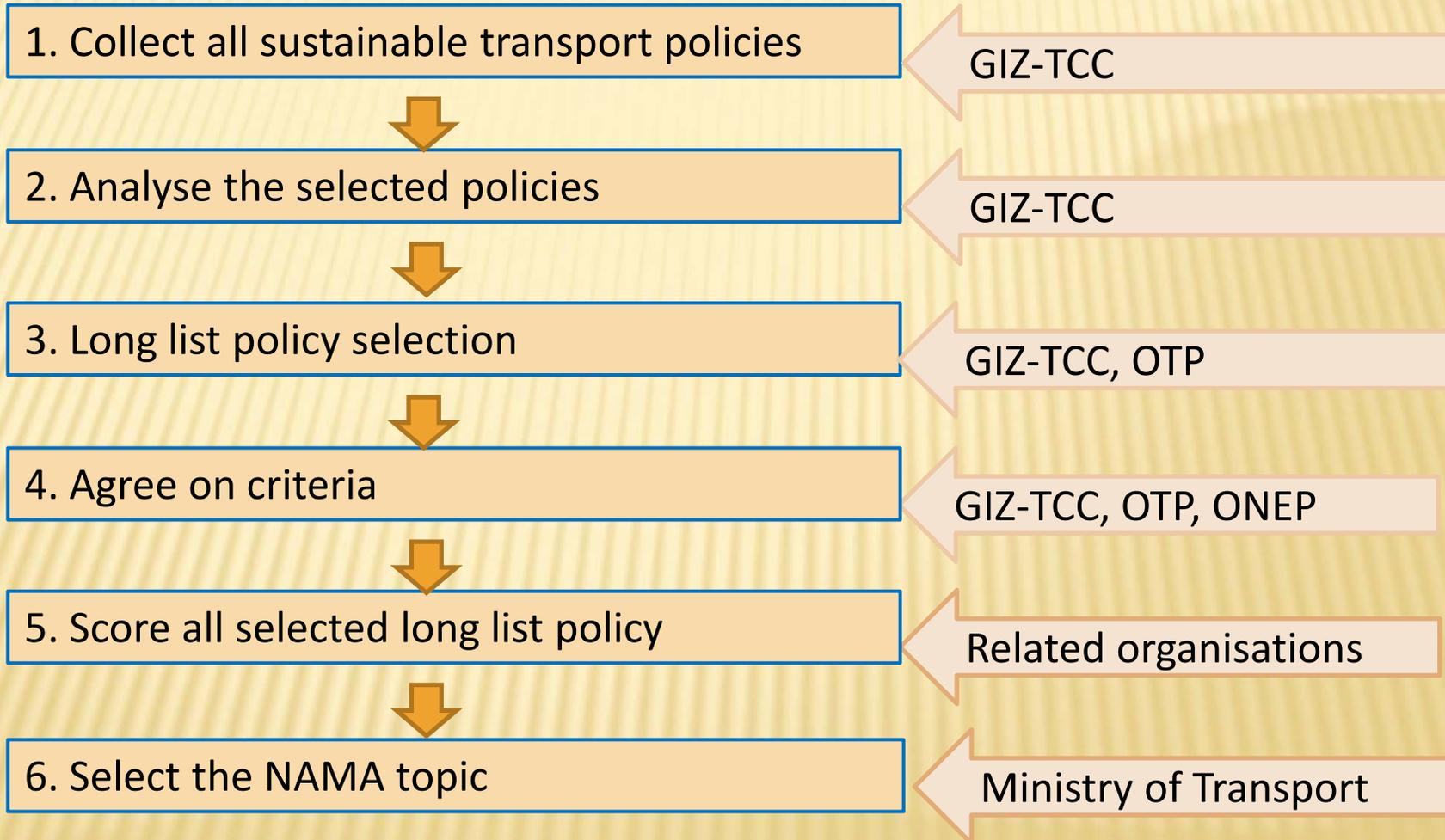
Strategy 5: *Promote transport R&D and adoption of environment-friendly innovations and technologies.*

Strategy 6: *Promote public awareness of the environment.*

Potential GHGs reduction in Transportation Sector

Year	GHGs at BAU (Million tons CO ₂ e)	Potential of GHGs reduction	
		(Million tons CO ₂ e)	%
2005	57.52	-	-
2017	67.53	11 - 13	16 - 19
2020	74.02	15 - 16	20 - 22
2030	102.82	27 - 30	26 - 29

NAMA Selection Process*



* From International Institute for Sustainable Development

Selection Criteria

1. Likelihood of successful implementation

Stage of development (status) of the measure: idea, existing regulation, included in budget, implementation started, etc

Number and diversity of stakeholders, social acceptance

Technical and operational feasibility

2. Mitigation potential

What are the anticipated direct and indirect impacts?

3. Co-benefits:

Social: access to transport, road safety, comfort increase

Economic : economic growth, job creation, congestion reduction, security of energy supply

Environment: air quality, noise reduction,

4. Costs and finance

Abatement cost per tonne of CO₂-eq

Transaction costs

Access to financial resources

Financial risks;

Score system of each Criteria

Score	Likelihood of successful implementation	Mitigation potential (MtCO ₂ -eq/yr)	Co-benefits	Cost/finance
5	High chance of success	>1	Very high	Low cost and good access to finance
4	Good chance of success for at least the main parts	0.5 – 1	High	Low cost but some financial barriers
3	Medium-good chance for most parts	0.1 – 0.5	Average	Medium cost and/or financial barriers
2	High barriers for several parts	0-0.1	Low	High cost and/or financial barriers
1	Very high implementation barriers	0 (only indirect)	Negative	Very high cost and/or financial barriers

Sample of scoring of policies against criteria

Policy / measure	Description	Scoring				Total score
		Likelihood of implementation	Mitigation potential	Co benefits	Costs and Benefits	
Non-Motorised Transport (NMT)	<p>Master planning for PT/NMT:</p> <p>A master plan for urban rail transit system in Bangkok was developed by MOT. BMA also developed a master plan for public transport and bicycle system.</p>	4	2	4	3	13

Scores of each selected policy/measure (Thailand)

Policies/measure	Likelihood of successful implementation	Mitigation potential	Co-benefits	Cost and Finance	Scores
Urban Public Transport Connectivity	5	4	5	3	17
Fuel Efficiency Policy	5	5	4	3	17
Public Transport Management	4	3	3	4	14
Non-urban Rail Transport Improvement	4	4	4	2	14
Fuel Subsidy	3	3	4	4	14
Transit Oriented Development (TOD)	3	2	5	3	13
Road Pricing	2	3	4	4	13
Intelligent Transport System (ITS)	3	3	4	3	13
Non-motorised Transport (NMT)	4	2	4	3	13
EV/Hybrid/Hydrogen Infrastructure	3	4	4	2	13
Inefficient Vehicle Policy	2	4	4	3	13
Rest area	5	2	3	2	12
Parking management/pricing	2	3	3	3	12

1. Urban Public Transport connectivity



http://www.straitstimes.com/sites/straitstimes.com/files/imagecache/ST_REVAMP_2014_STORY_PAGE_640X360/ST_20130331_RSLINKWAY31PH_Z4_3591709e.jpg

- If the accessibility to the public transport is not convenient, shift mode may be difficult to success.
- The convenient NMT and public bus can help shifting mode from private vehicle to public transport.

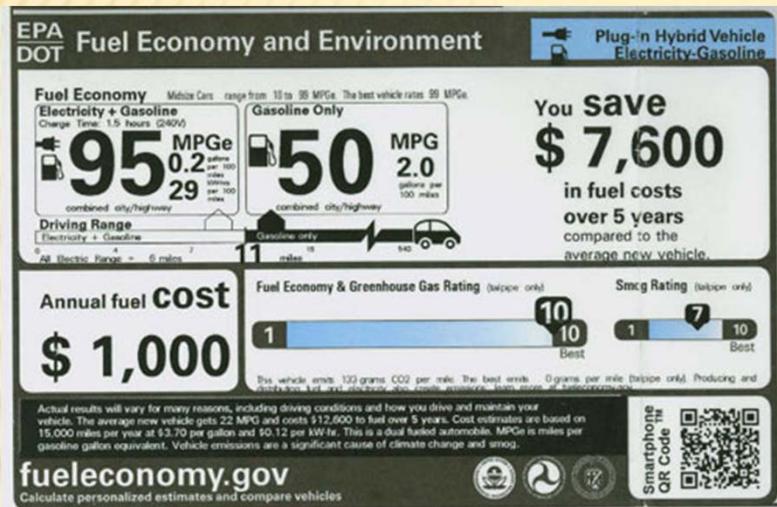
Mitigation potential:

can be over 0.3-0.5 MtCO₂ in the longer term (within 2030).

Role of NAMA, international support:

financial support (grant, soft-loan, other financial instruments), technical assistance

2. Fuel Efficiency Policy



http://www.hybridcars.com/files/2012_Toyota_Prius_Plugin_EPA_Label-a.jpg

Mitigation potential:
can be over 5-10 MtCO₂
(within 2020).

Role of NAMA, international support:
technical assistance, capacity building

- Fuel economy standard is the mandatory or voluntary standard that set the minimum value of fuel consumption of vehicle.
- This policy programme is based on existing plans and could consist of:
 - Car labelling for newly sold vehicles a
 - Vehicle inspection programme
 - Tax differentiation for vehicles based on emission levels (every 5 years)
 - Low friction tyre policy:
 - Emission or fuel efficiency standards applied to newly sold vehicles (cars, pickups, trucks and/or motorcycles)

3. Public Transport Management



<https://www.fhwa.dot.gov/publications/publicroads/10novdec/images/chapt2pic2.jpg>

Mitigation potential:
can be over 0.1-0.5
MtCO₂ within 2020

Role of NAMA,
technical assistance

- The bus routes should be well planned in order to transfer people to other public transport modes such as MRT, BRT and to reduce bus routes repetition.
- This set of actions, mostly related to Bangkok but also other cities could consist of:
 - Bus route optimisation:
 - Integrated ticketing:
 - Real-time public transport information and multimodal connections.
 - Improved incentives for private sector to invest in public transport and its operation
- Indirectly it could have a positive impact on the larger urban transport system, making public transport more attractive and thereby contribute to larger emission reductions.

4. Non-Urban Railway Improvement



https://encrypted-tbn1.gstatic.com/images?q=tbn:ANd9GcSCp_fBPqvmEtlmzyZ4btVAgX3hXIEFTOD_YSIU0AIVgnly6ECEg

- Non-urban railway improvement. Includes in the Infrastructure development strategy for the transport and logistic 2015-2022.
- The improved non-urban rail infrastructure can lead to “transformational change” of passenger and freight sector.

Mitigation potential:

can be over 0.2-0.6 MtCO₂
within 2030
(based on emission reduction from
passenger transport)

Role of NAMA, international support:

Financial support (grant, soft-loan, other
financial instruments), technical assistance,
feasibility study, land acquisition

Comparison of top four policies

Policy/ measure	Mitigation potential*	Co-benefits	Possible NAMA support	Potential to be supported NAMA
1. Urban public transport connectivity	0.3-0.5 MtCO ₂ in the longer term (within 2030).	<ul style="list-style-type: none"> • Improved accessibility • Improved air quality • Reduced congestion • Reduced oil consumption • Improved liveability 	<ul style="list-style-type: none"> • Grant • Technical assistance 	Medium to High
2. Fuel efficiency policy	5-10 MtCO ₂ (within 2020)	<ul style="list-style-type: none"> • Reduced fuel costs for consumers and fuel subsidies by government • Improved energy security, reduced oil imports and resource consumption • Air quality, noise reduction, safety 	<ul style="list-style-type: none"> • Technical assistance • Capacity building 	Medium to High
3. Public Transport Management	0.1-0.5 MtCO ₂ within 2020	<ul style="list-style-type: none"> • Improved accessibility • Improved air quality • Reduced congestion • Reduced oil consumption • Improved liveability 	<ul style="list-style-type: none"> • Grant • Technical assistance 	Medium
4. Non-urban railway improvement	0.2-0.6 MtCO ₂ within 2030 (based on passenger transport)	<ul style="list-style-type: none"> • Improved connectivity to provinces, and international connections • Reduced oil consumption and imports • Access to markets and more efficient logistics • Air quality • Convenient travel 	<ul style="list-style-type: none"> • Soft loan, etc. • Technical assistance 	Medium to High

* Roughly estimation, please not cited

Conclusion

Thailand NAMAs in Transport sector

Urban public transport connectivity

+

Public Transport Management



Thank you

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