Development of
Low Carbon Society Scenarios for Asian Regions

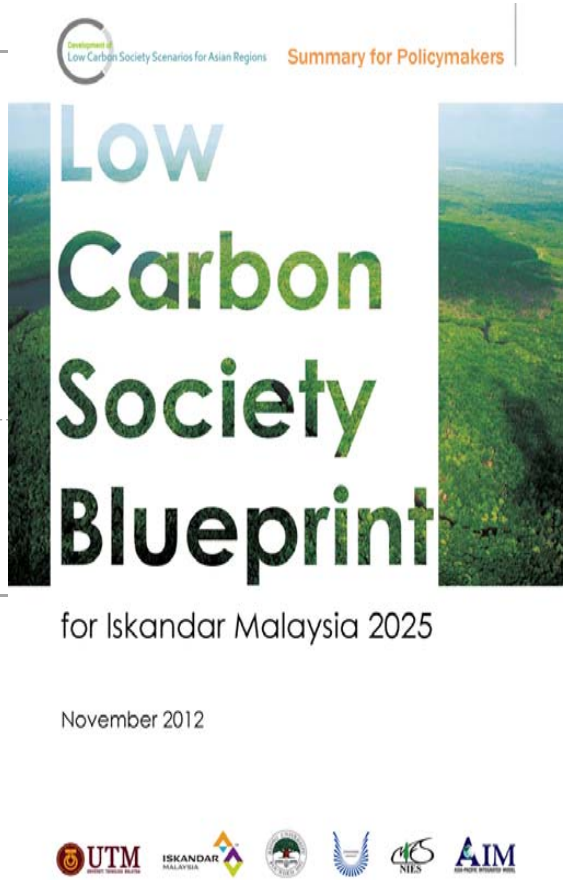
AIM International workshop

14 December 2012

NIES Tsukuba Japan

Low Carbon Future : Bridging Science and Policy

The Case of UTM and Iskandar Malaysia



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Background

Iskandar Malaysia: Key Challenges

Voluntary 40% reduction of CO_2 emission intensity by 2020

Issues

Rapid urbanization and industrialization

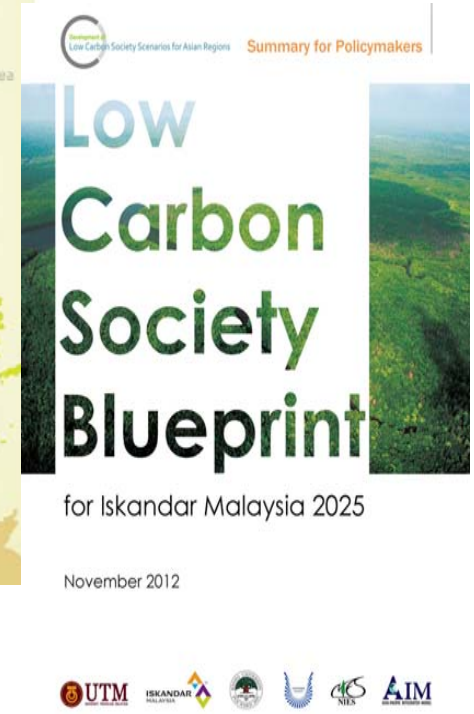
Higher energy demand and Co2 emission

Decouple economic growth and emission on fossil fuel

Size: 2,216.3 km²

Population: 1.3 mil. (2005) I 3.0 mil. (2025)

GDP: 35.7 bil. RM (2005) I 141.4 bil. RM (2025)



Blueprint – 3 main thrusts – Green economy, community and environment.

=12 actions

Joint collaboration work of UTM, KU, NIES under SATREPS program

IM LCS Actions – Potential CO_2 Reduction

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Table 1: Projected main socio-economic variables

	2005	2025	2025 /2005
Population (1000)	1,353	3,000	2.22
Household (1000)	303	706	2.33
GDP (Bill. RM)	35.7	141.4	3.96
Gross output (Bill. RM)	121.4	438.9	3.61
Primary industry	1.5	2.4	1.59
Secondary industry	86.2	274.0	3.18
Tertiary industry	33.7	162.5	4.82
Passenger transport demand (Mill. passenger-km)	9,565	59,524	6.22
Freight transport demand (Mill. ton-km)	8,269	26,054	3.15

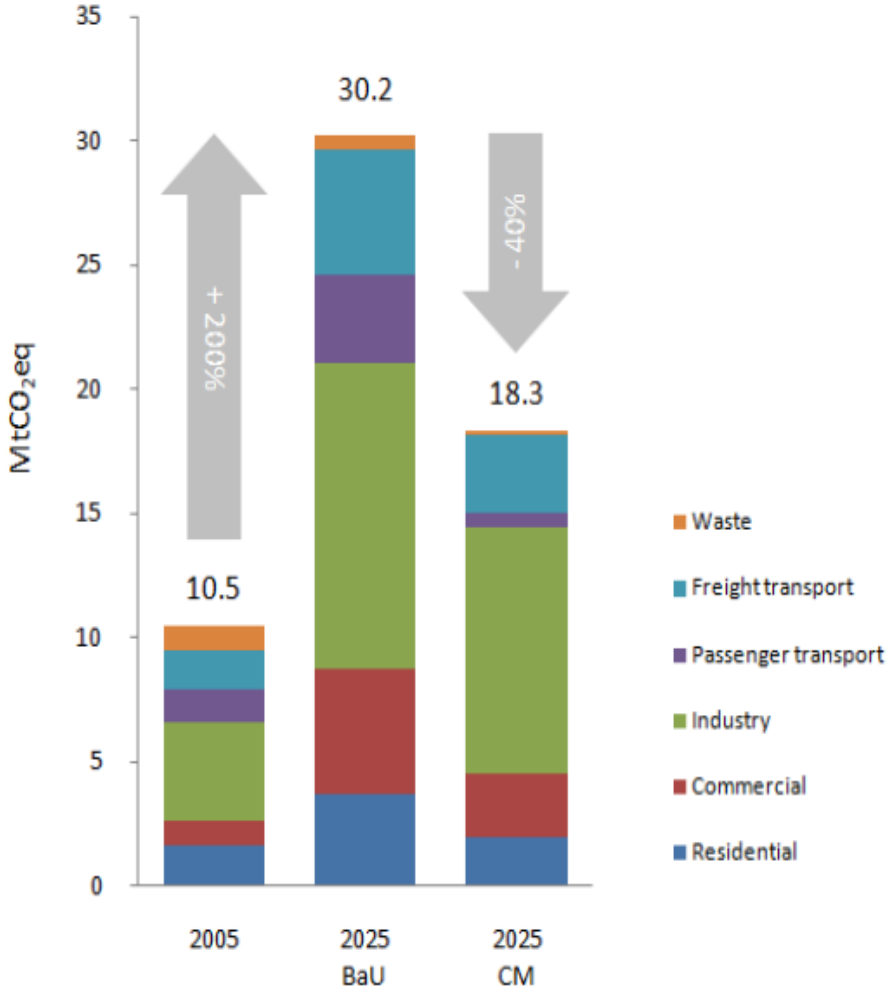

Figure 1: GHG emissions by sectors

Policy Scoping for IM LCS Blueprint 2025

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IM Vision: a Strong, Sustainable metropolis of International standing

Strong — develop a prosperous, resilient, robust and globally competitive ***economy***

Sustainable — nurture a healthy, knowledgeable and globally competitive ***society*** that sub-scribes to low carbon living

+

develop a total urban-regional ***environment*** that enables rapid economic growth but reduces growth's energy demand and carbon emission intensity

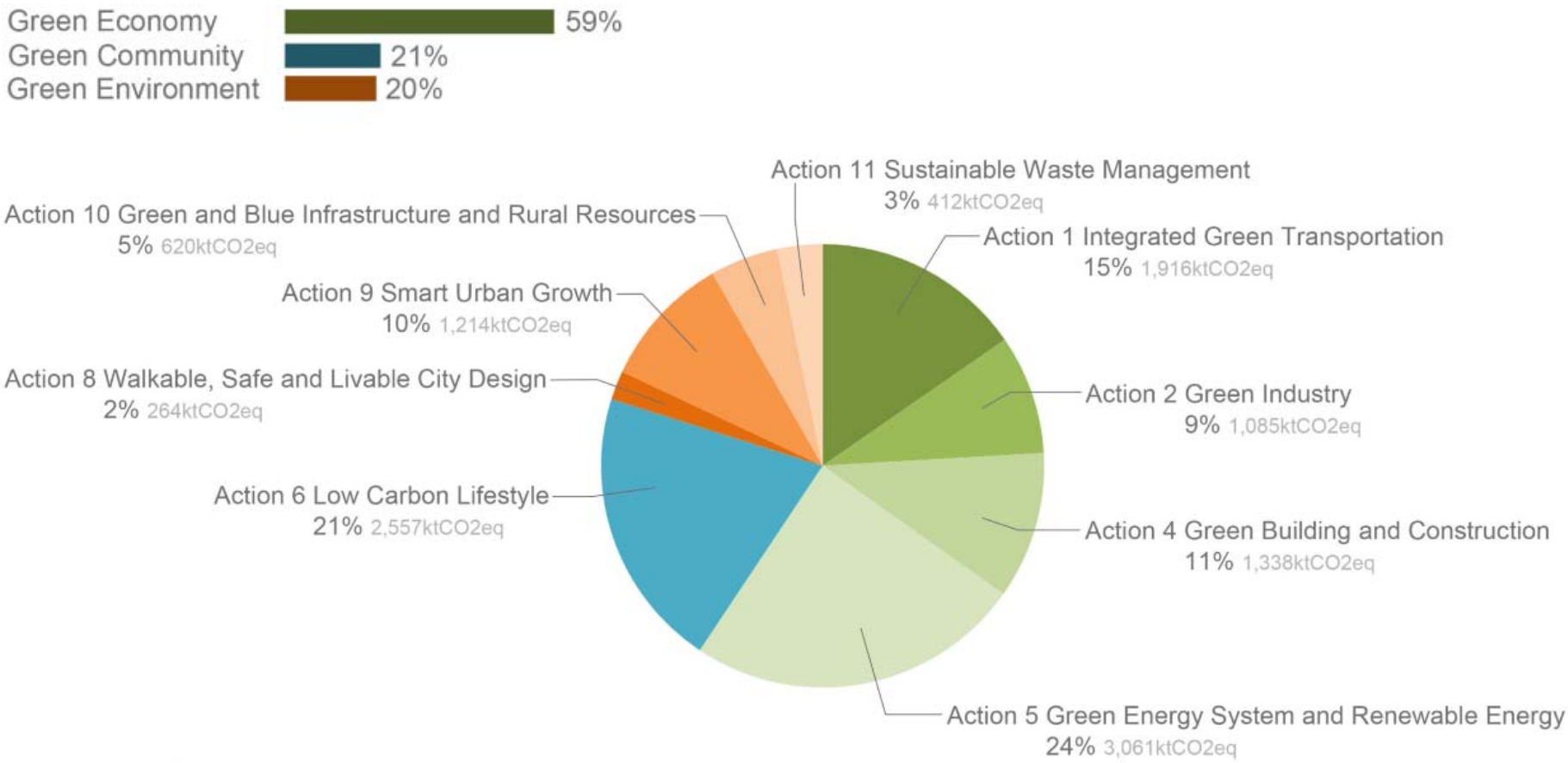
04 Potential Mitigation Options for Iskandar Malaysia

12 Actions Towards Low Carbon Future

Mitigation Options	CO2 Reduction	%
Green Economy	**7,401**	**59%**
Action 1 Integrated Green Transportation	1,916	15%
Action 2 Green Industry	1,085	9%
Action 3 Low Carbon Urban Governance**	-	-
Action 4 Green Building and Construction	1,338	11%
Action 5 Green Energy System and Renewable Energy	3,061	24%
Green Community	**2,557**	**21%**
Action 6 Low Carbon Lifestyle	2,557	21%
Action 7 Community Engagement and Consensus Building**	-	-
Green Environment	**2,510**	**20%**
Action 8 Walkable, Safe and Livable City Design	264	2%
Action 9 Smart Urban Growth	1,214	10%
Action 10 Green and Blue Infrastructure and Rural Resources	620	5%
Action 11 Sustainable Waste Management	412	3%
Action 12 Clean Air Environment**	-	-
Total	12,467**	100%

04 Potential Mitigation Options for Iskandar Malaysia

12 Actions Towards Low Carbon Future



IM LCS Actions – Potential CO_2 Reduction

Development of Low Carbon Society Scenarios for Asian Regions

Table 3: Contribution of 3 main themes and 12 actions

Actions	Contribution * (ktCO2eq)	Share
Green Economy	**7,401**	**59%**
Action 1 Integrated Green Transportation	1,916	15%
Action 2 Green Industry	1,085	9%
Action 3 Low Carbon Urban Governance **	-	-
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Action 12 Clean Air Environment**	-	-
Total	**12,467*** **	**100%**

*Contribution to GHG emission reduction from 2025BaU to 2025CM ** Action 3, 7 and 12 does not have direct emission reduction, but their effect is included in other Actions. *** Since contribution of Action 10 includes carbon sink by forest conservation and urban tree planting, the total of contribution of the 12 Actions is greater than difference of the GHG emissions between 2025BaU and 2025CM in Figure 2 and Table2.

LCS Actions for IM – Work Breakdown Structure

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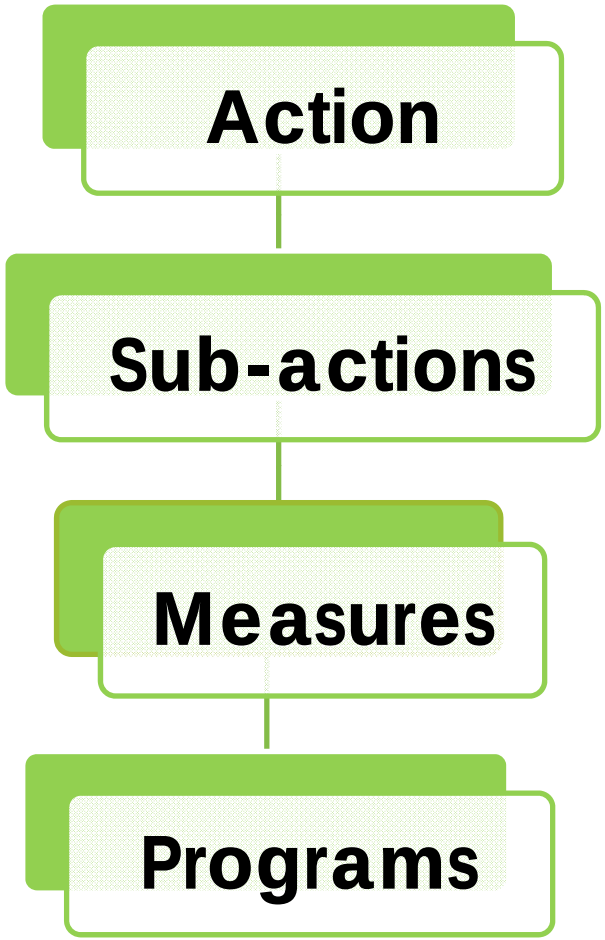
Work Breakdown Structure of 12 LCS Actions



1.0 Key Policy **Actions** needed to achieve the final goal of the project (targeted 50% cut in carbon emission intensity by 2025 based on 2005 levels)

1.1 Sub-actions needed to produce policy outcomes that jointly lead to the achievement of a key Policy Action

1.1.1 Measures that are more detailed breakdown and interpretation of Sub-actions into strategies with a clearer implementation dimension

1.1.1.1 Programs – Specific activities, deliverables, from which resource requirements, budget, implementation agencies and duration may be identified/estimated

LCS Actions for IM – WBS by Action

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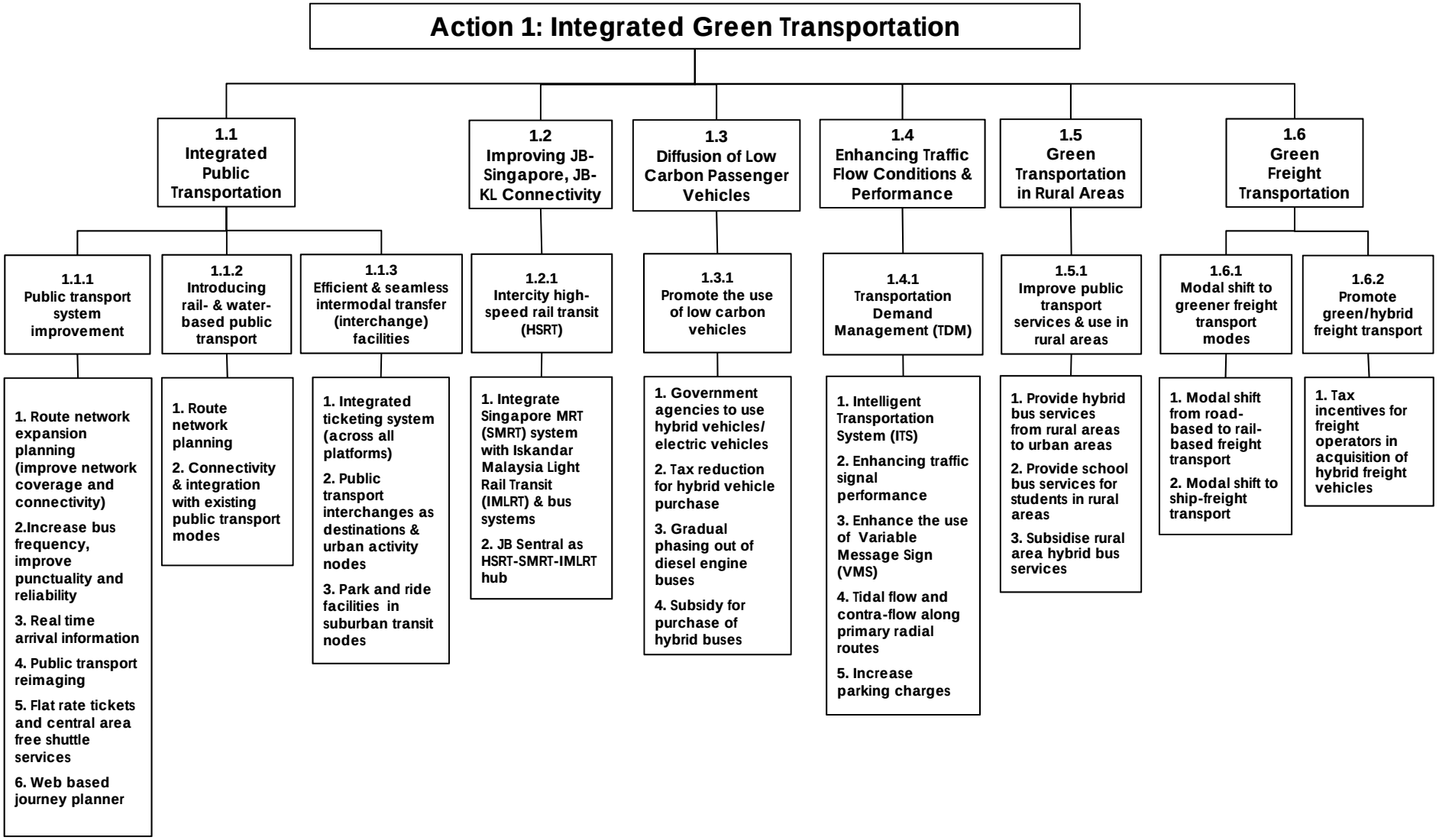

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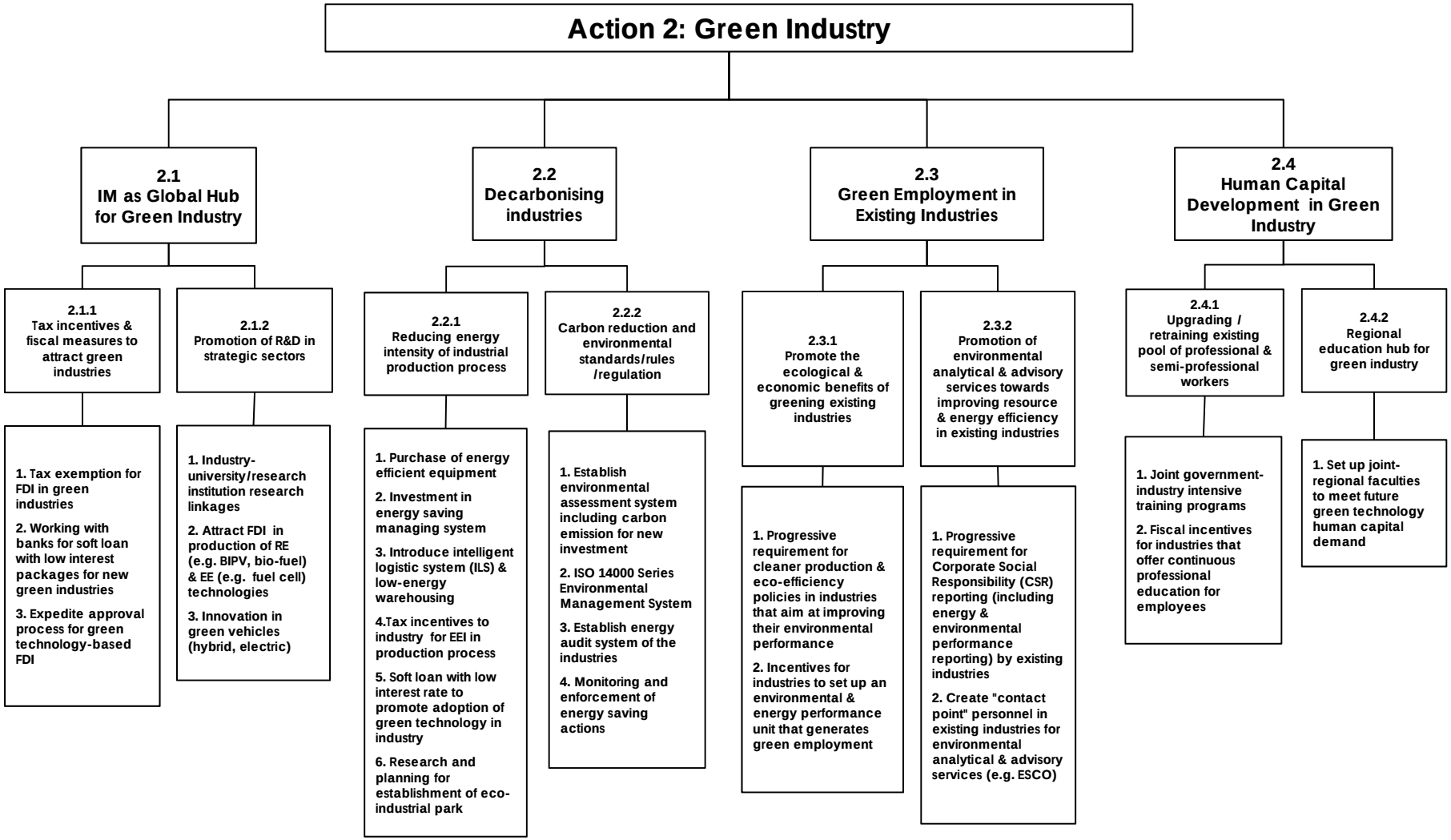

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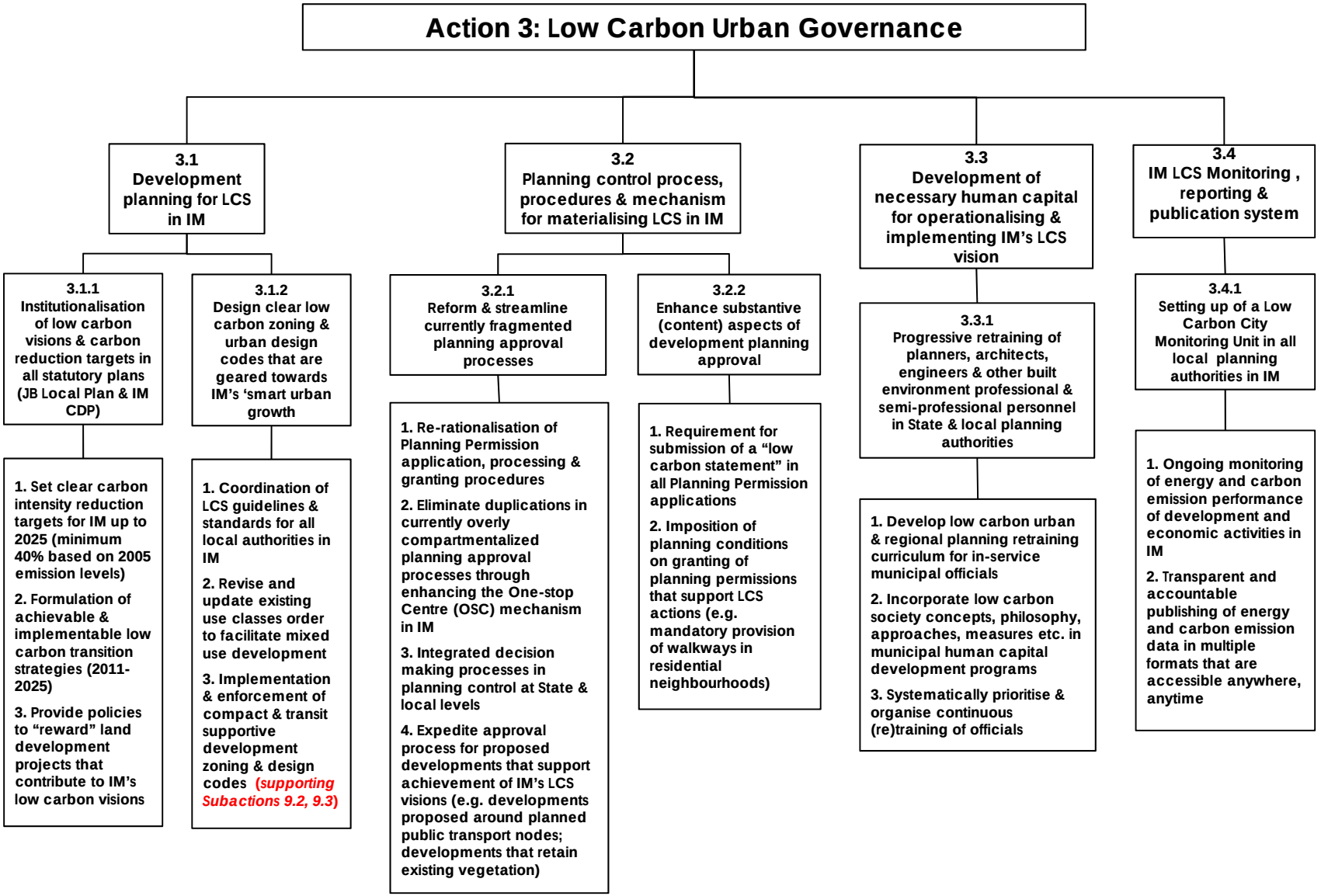

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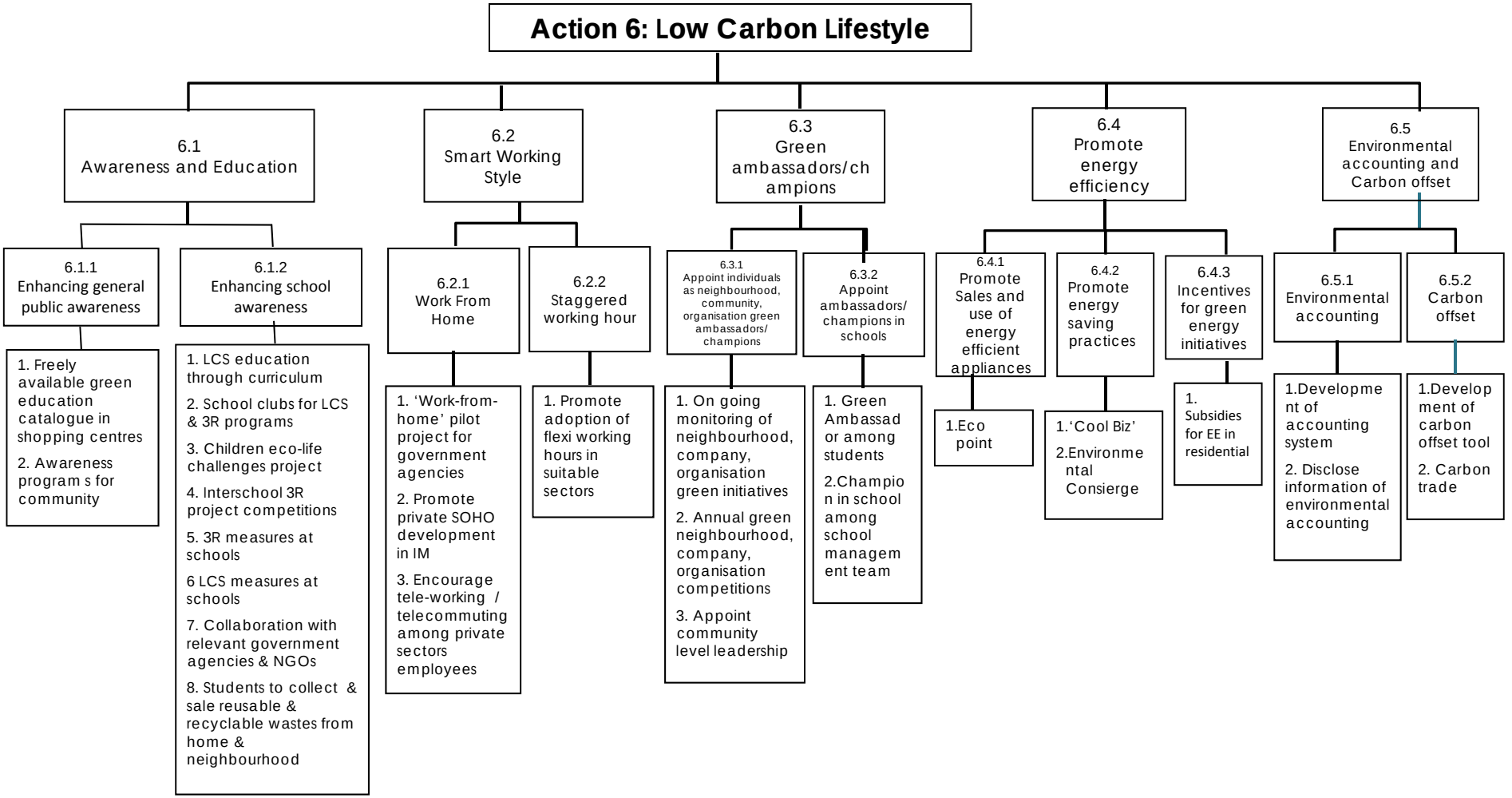

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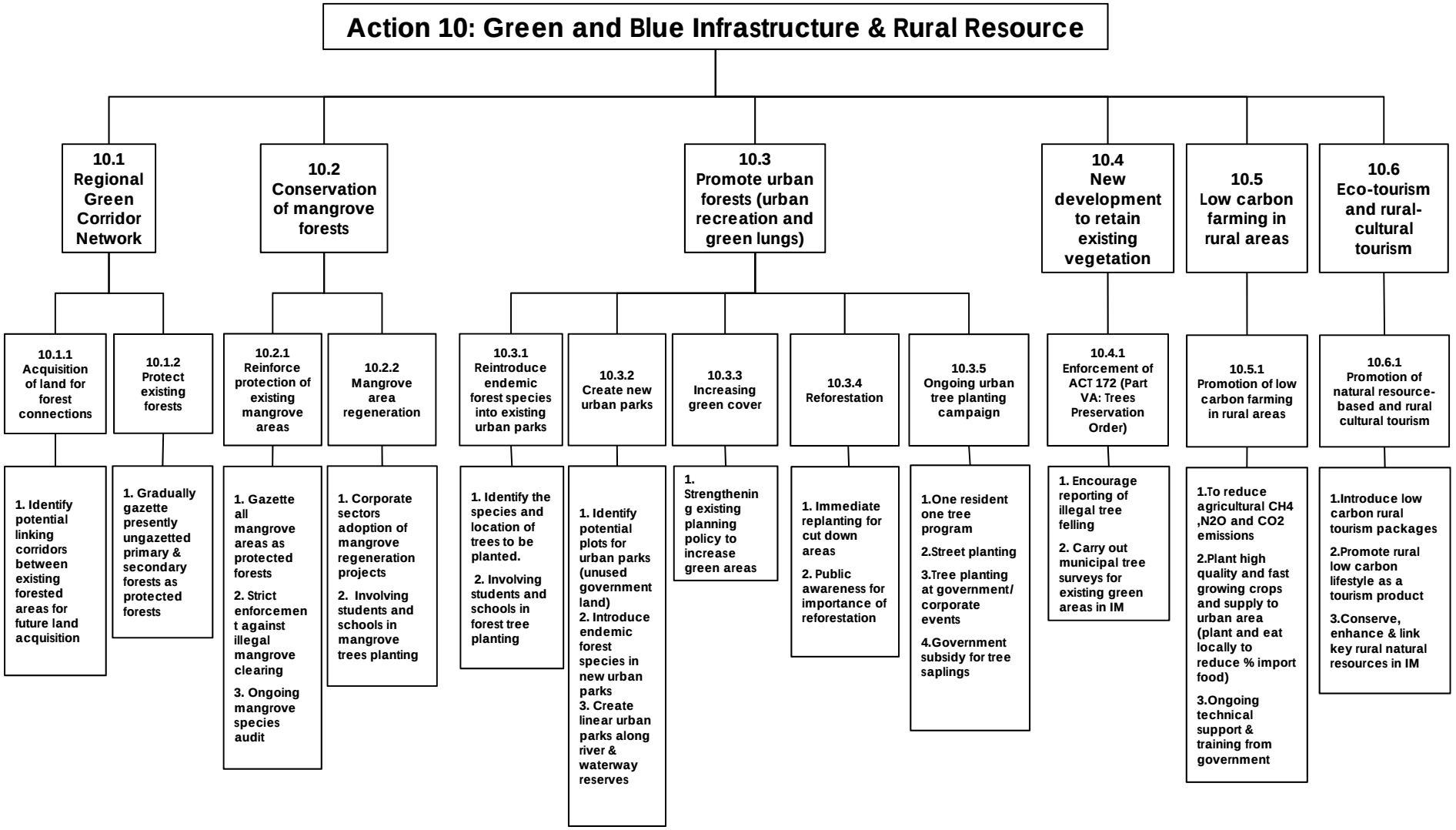

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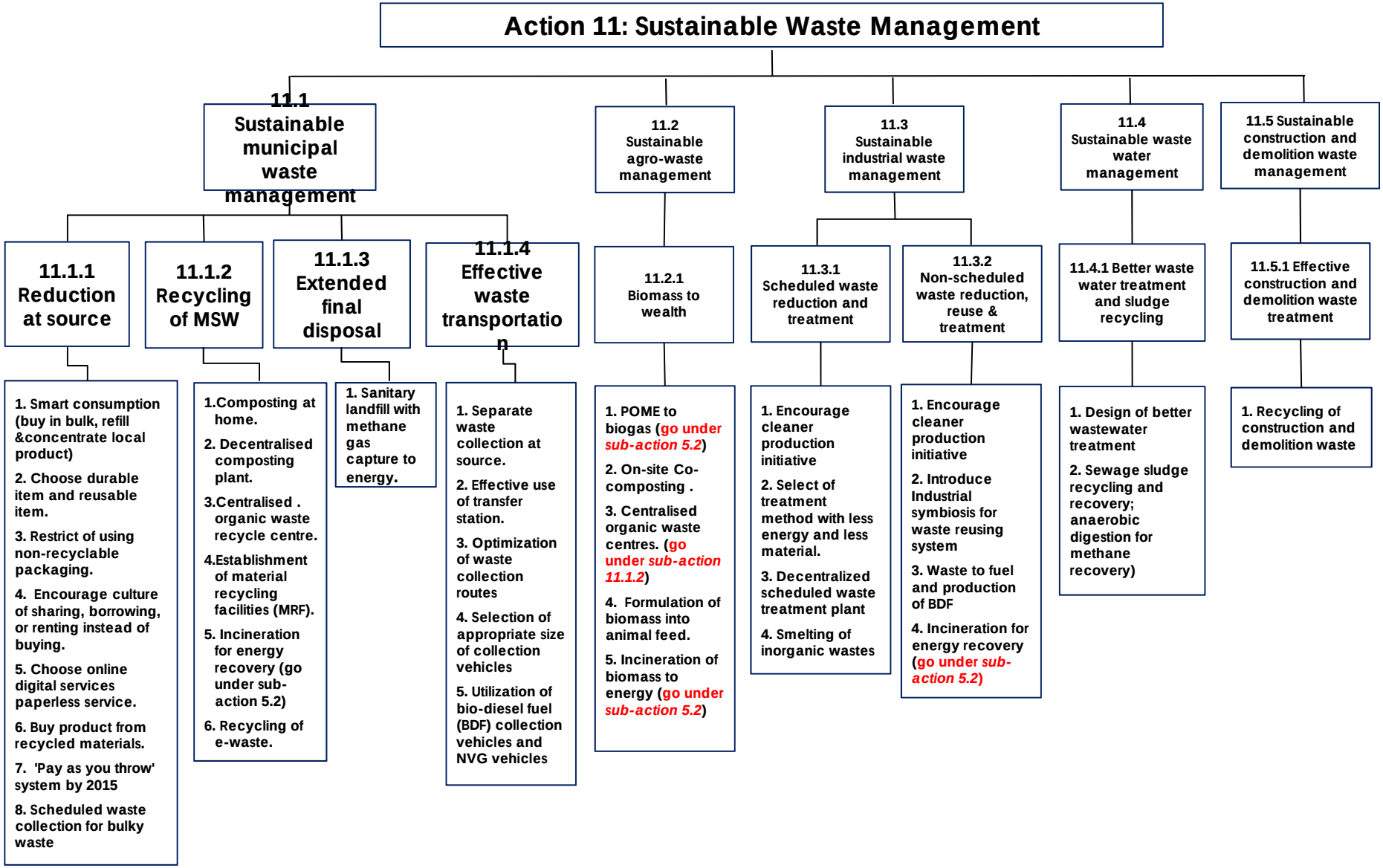


05 Conclusion

The Way Forward

Quantification from LCS modeling assist **better understanding** on impact of proposed actions, sub actions and programs.

Good **baseline study, consensus building and low carbon blueprint plan** will help to develop an **integrated climate resilient , Low carbon framework** for a city or region.

Green cities or Local carbon cities need to have a **LOW CARBON SOCIETIES mindset**/ behavior and **Joint effort** between different professions (Planners, architect, engineer and related environmental profession)

Important to have a Asian (eg IGES & AIM workshop) **and International platform** for **research collaboration** between researchers in LCS as well as **capacity building opportunities.**

Activities of Low carbon Societies2011- 12
Community, local, national and international level


Minister launching LCS


LCS talks


FGD- stakeholders


Capacity building


Press conference

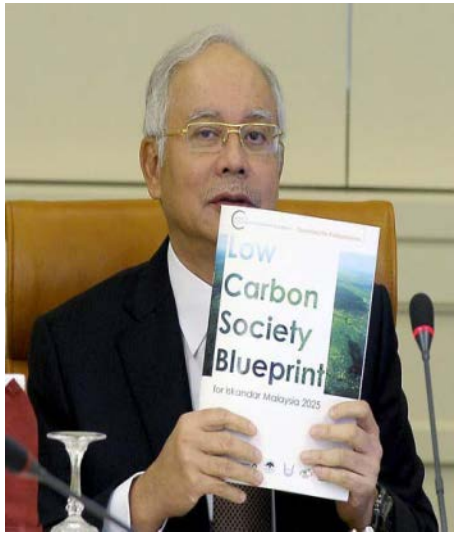

COP 17


school students & teachers


LCS at rural area


COP 17

PM Malaysia launched LCS Blueprint Iskandar Malaysia Dec 11, 2012



Bridging Research and Policy in Iskandar Malaysia.

SATREPS project between UTM, Kyoto University, NIES, Okayama University and IRDA and FTCPD.

Prime Minister Datuk Seri Najib Razak believed the newly launched Iskandar Malaysia Low Carbon Society (LCS) Blueprint has the potential to attract more interest among investors at Iskandar Malaysia as an investment destination

Thank you for your attention!

Thank You Terima Kasih 谢谢 धन्यवाद ありがとう