

Thailand: National Study on automobile waste sector

Final Workshop RISPO-II

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Topic

- Situation of automobile sector in Thailand
- EI impacts on automobile sector
- Policy gaps
- Proposed policy options
- Analysis of recommended policy
- Conclusion

Situation of automobile sector in Thailand

Why we focused on automobile sector:

Automobile sector is important sector in the country

- generated 16% of GDP
- generated 8% of employment
- ranked in no.15th for automobile production and no.17th for domestic sale

Situation of automobile sector in Thailand

Why we focused on automobile sector:

Car Manufacturer

- Extended producer responsibility (EPR) has been initiated by some of the major automobile producers

Customer

- Environmental friendly issues have not been taken in to consideration for buying cars
- Responsibility on automobile waste management after end-of-life is posed on car owners

Recycling sector

- There are just only some components in cars, which have been under taken recycling processes.

El impacts on automobile sector

What are the impacts from them:

Economic impacts – Growths of the automobile industry and trades tend to increase.

- Domestic production such as replacing equipment will be raised.
- Domestic demand for automotive products (inc. second-handed parts) will increase.
- Regional trades of automotive products will grow to a larger extent
- Employment in automobile and recycling sectors will be on an upward trend.

El impacts on automobile sector

Environmental impacts

With less restriction of current policies in Thailand, the country will become pollution havens.

- increasing resource exploitation
- higher hazardous and chemical substances causing more accidents
- GHG emission

When considered with DEI

GTAP model : high metal wastes, high electronic equipment waste

... The degree of environmental impacts will be raise

Current Policy

Production

- Created Master Plan on Automobile Industry focusing on export
- Policy to push the country to be Detroit of Asia

Usage

- Support the production of energy efficiency cars
- Set exhaust emission : EURO3 set to be EURO4 in 2010

End of live vehicle

- No policy regarding automobile waste
- No infrastructure to support systematic management on automobile waste

Policy gaps

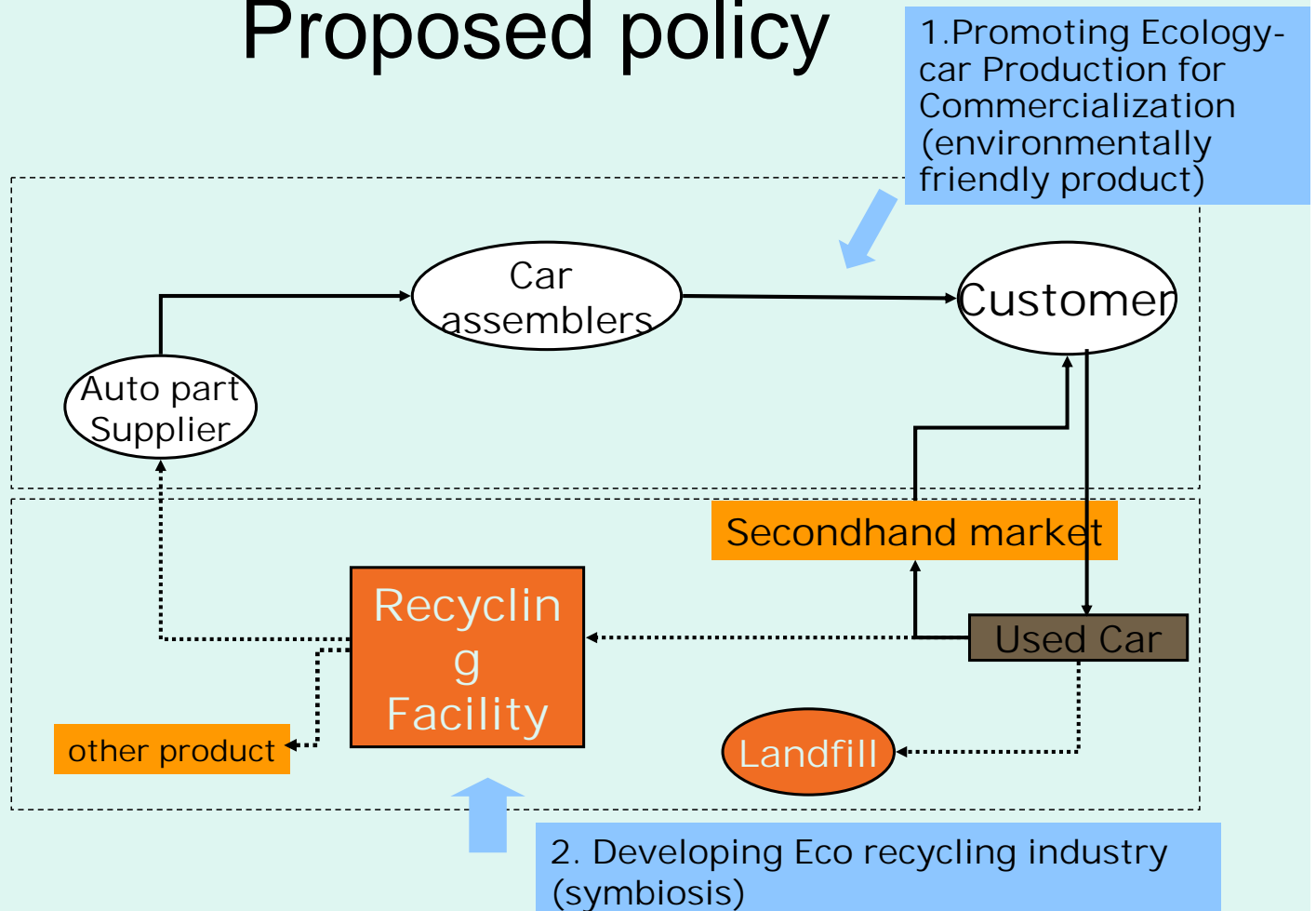
- No governmental policies to support and promote Ecological car producers
- No policies to stipulate car users to concern and buy ecological cars
- No policy regarding automobile wastes
- No infrastructure to support systematic management on automobile wastes

Why proposing policy package

- expanding the market share of the ecological cars
- Reducing negative impacts from EI

..... Need for NEW POLICIES

Proposed policy



1. Promoting Ecology-car Production for Commercialization

Why we selected this policy

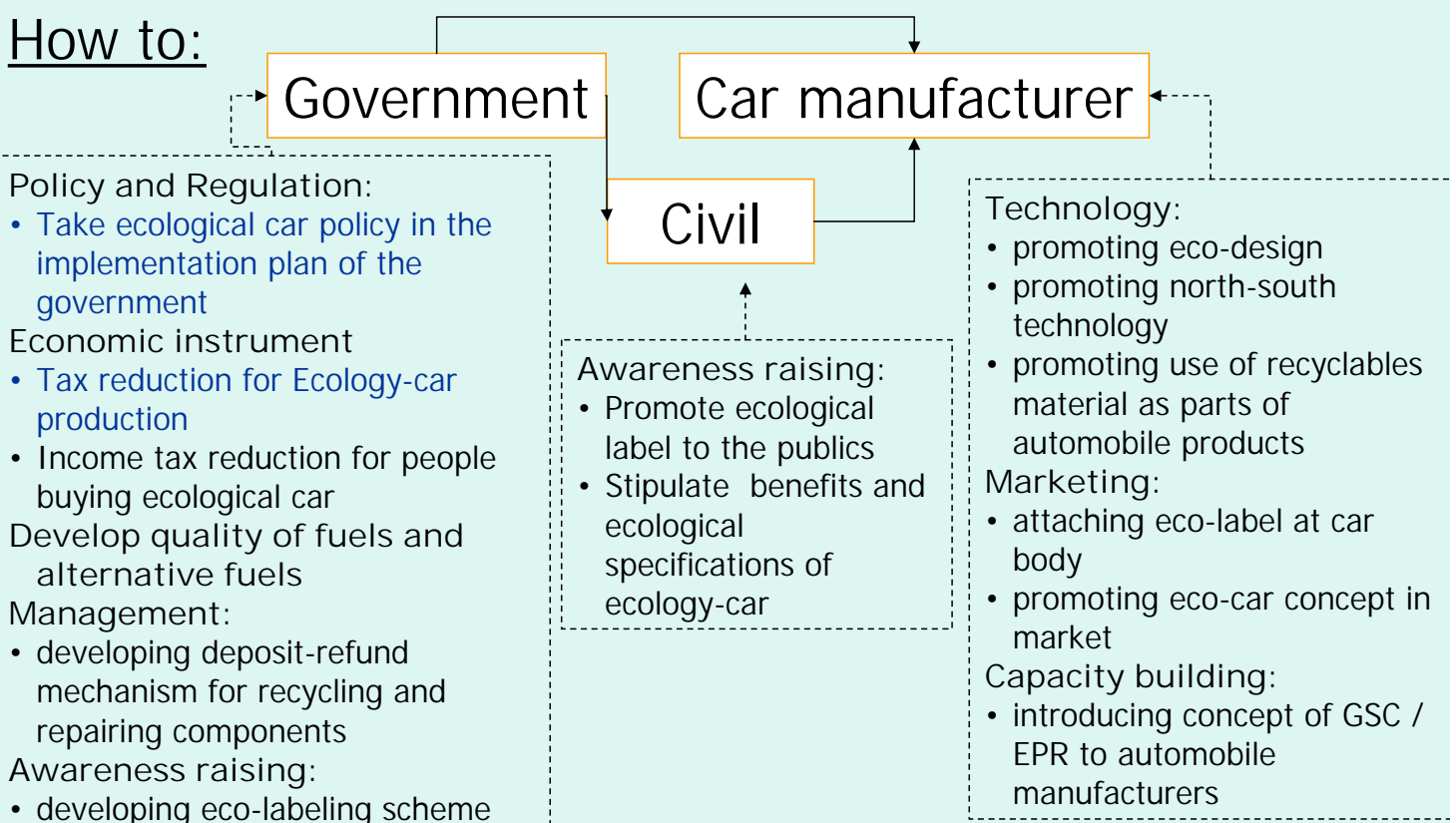
Specification	Conventional car	ECO Car (Economic Car)	Ecological Car
Fuel saving	-	/	/
Exhaust emission reduction	-	/	/
Recyclable and recycled components	-	-	/
Engine is suitable for renewable fuel	-	-	/
Environmental management in manufacturer	-	-	/

cheap:
937,500 Yen

market:
- premium car
- mass market

1. Promoting Ecology-car Production for Commercialization

How to:



Analysis of recommended policy

Multi-Criteria Assessment

Stakeholder	Result	Impact
Car manufacturer	Ready to produce ecological car	+
	High capital cost for SMEs	-
Consumer	Price incentive	+
	Increasing buying capacity	+
Government	Can take policy to national policy	+
	Decreasing imported fuel	+
	Natural resource minimization	+
Civil	Better for environment	+

Analysis of recommended policy

Conclusion

After conducting MCA, there is just only one stakeholder requiring policies to stipulate the movement toward ecological car policy implementation, which is Government..

Analysis of recommended policy

For Cost benefit analysis:

- The comparative of price between conventional car and Ecological car: [NEARBY](#)

Engine type	Ecological car	Conventional car
1,600 cc.	2.58 Million Yen (OPTRA ESTATE)	2.58 Million Yen (Mitsubishi New Lancer)

- Environmental benefit: Ecological car is better than.
 - better for environment in manufacturer
 - better for exhaust emission.
 - better for fuel consumption

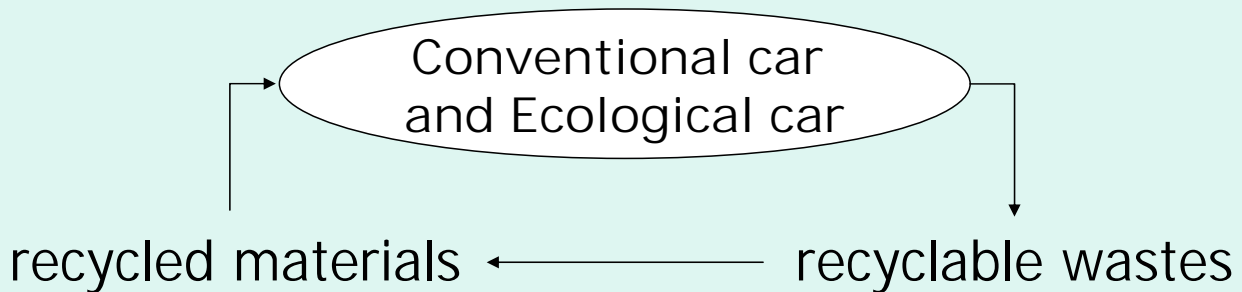
Analysis of recommended policy

Social Capacity Analysis

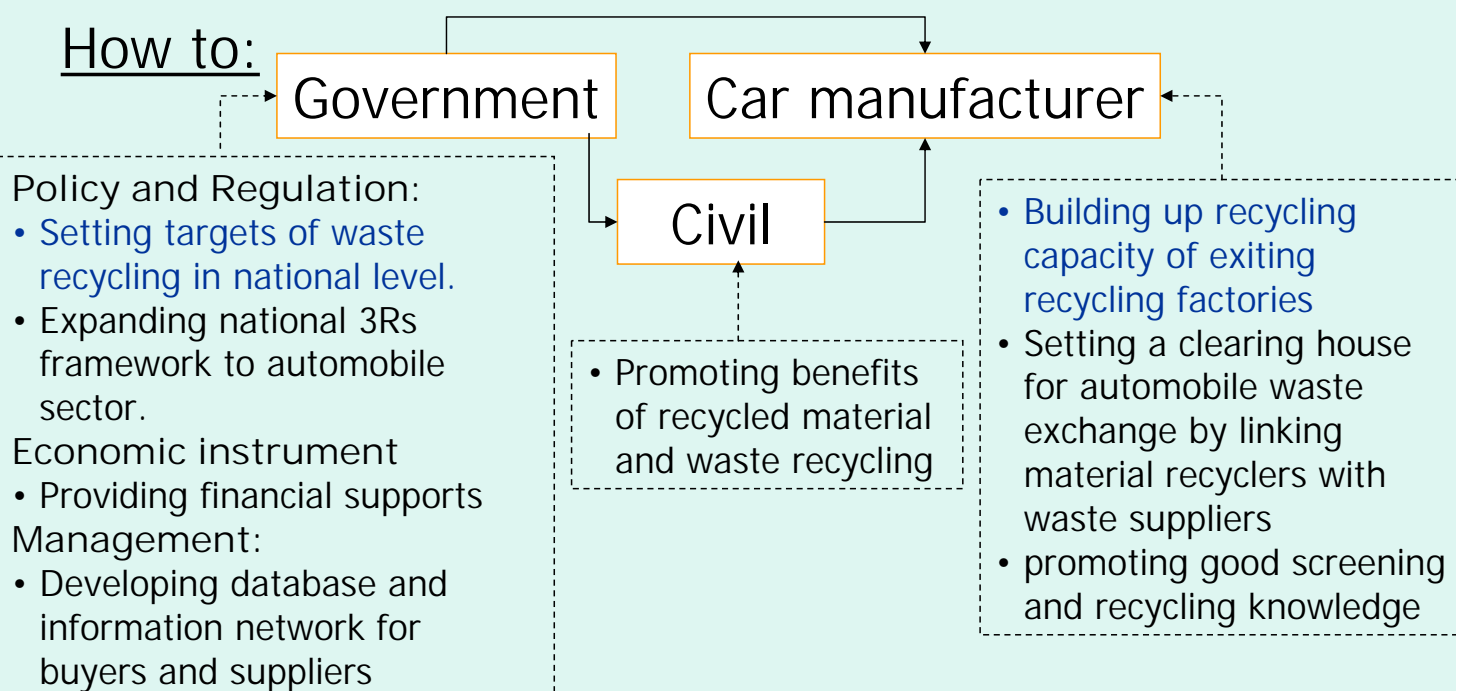
- Government sector
 - + Policies on energy efficiency car production
 - + Supports from various agencies
 - - [Lacking of waste recycling policy, facility, system and technology for used car](#)
- Business sector
 - + Adopt environment friendly policies from holding company
 - + Advanced technologies
 - + Capital allowance, CSR and image building
 - + Job availability for renewable energy sector
 - - [Waste recall system](#)
- Civil sector
 - + Accessibility to information and good communication
 - + Energy concern due to skyrocketing prices
 - - [Price driven factor](#)

2. Developing Eco recycling industry (symbiosis)

Why we selected this policy



2. Developing Eco recycling industry (symbiosis)



Analysis of recommended policy

Multi-Criteria Assessment

Stakeholder	Result	Impact
Recycling manufacturer	Increasing income and employment	+
	High investment cost	-
	High R&D cost	-
Consumer	Price for recyclable waste	+
Government	Target for waste recycling	+
	Adaptable with manifest system	+
	Natural resource minimization	+
Civil	Better for environment	+

Analysis of recommended policy

Social Capacity Analysis

- Government sector
 - + Policies on 3Rs in household
 - + Supports from various agencies
 - - Lacking of waste recycling policy, facility, system and technology for used car
- Business sector
 - + informal recycling sector
 - + size and activeness of recycling ELVs market
 - - knowledge on proper recycling technologies
- Civil sector
 - + Accessibility to information and good communication
 - + Price incentive for recycling
 - - Awareness in waste and health issue

Integrated Policy Assessment

- Economic
 - Lower energy consumption -> Lower expense for importing energy
 - recycling sector will grow -> resulted in more job availability
- Social
 - Problems of human health
 - Conflict resource management
- Environment
 - Efficient use of vehicles wastes -> Lower cost of disposal
 - minimize resource consumption
 - Waste management system
 - Emission (includes GHGs) and waste reduction: air, soil, water quality improvement

Conclusion

Based upon policy gaps, analysis, and other opportunities, ...

- Policies provide benefit to everyone.
 - save energy
 - save natural resource
 - protect environment
 - expanding employment

Value added of the research

- The result can be applied in other wastes, such as E-waste
- lesson learnt for other countries in ASEAN, in terms of alternative fuel development and legal promulgation

Conclusion

Need for further research

- Study on good practice in automobile business that concerns environmentally friendly product.
- Study on percent of recycled and recycling materials in products

Thank you for your
attention



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