Introduction of New SDB

Go Hibino of MHIR

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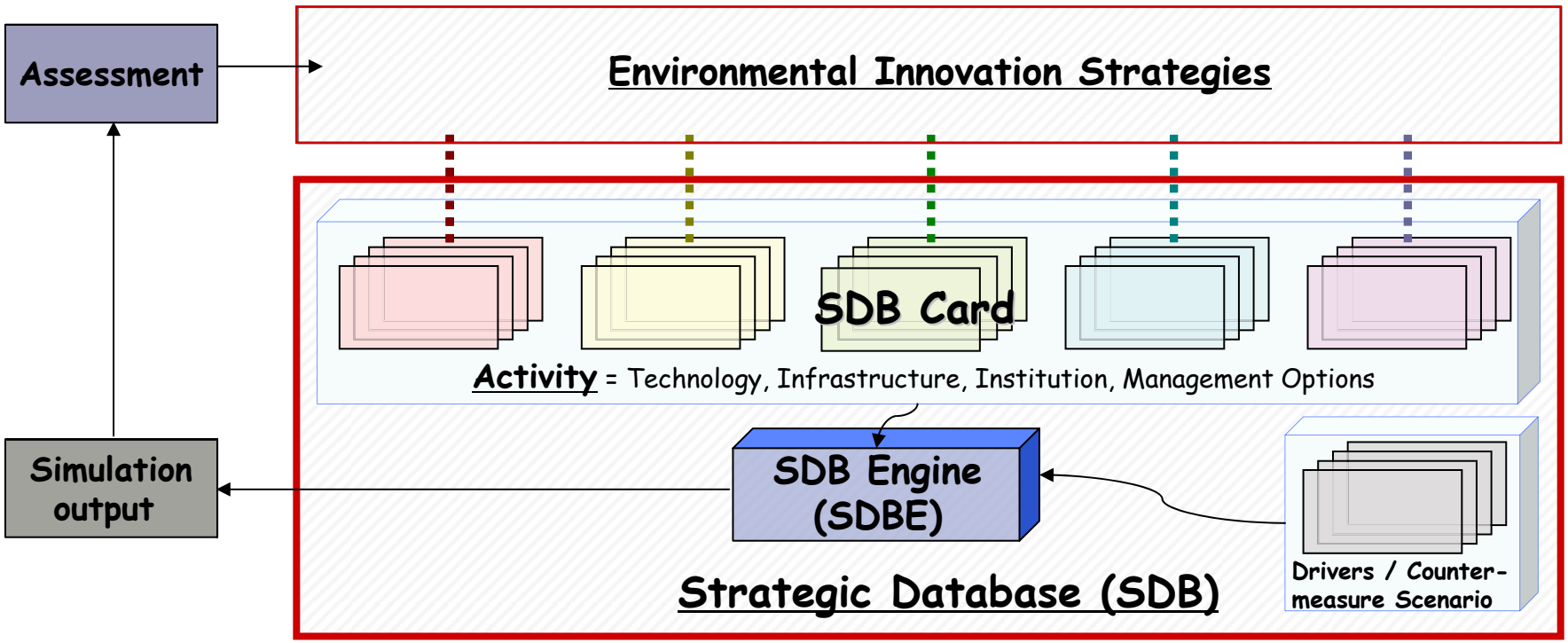
The 11th AIM International Workshop

1. What is SDB ?

SDB = Strategic DataBase



Structure of SBD and application of SDB

2. Update of SDB

SDB = Strategic DataBase

1) Modify form design.

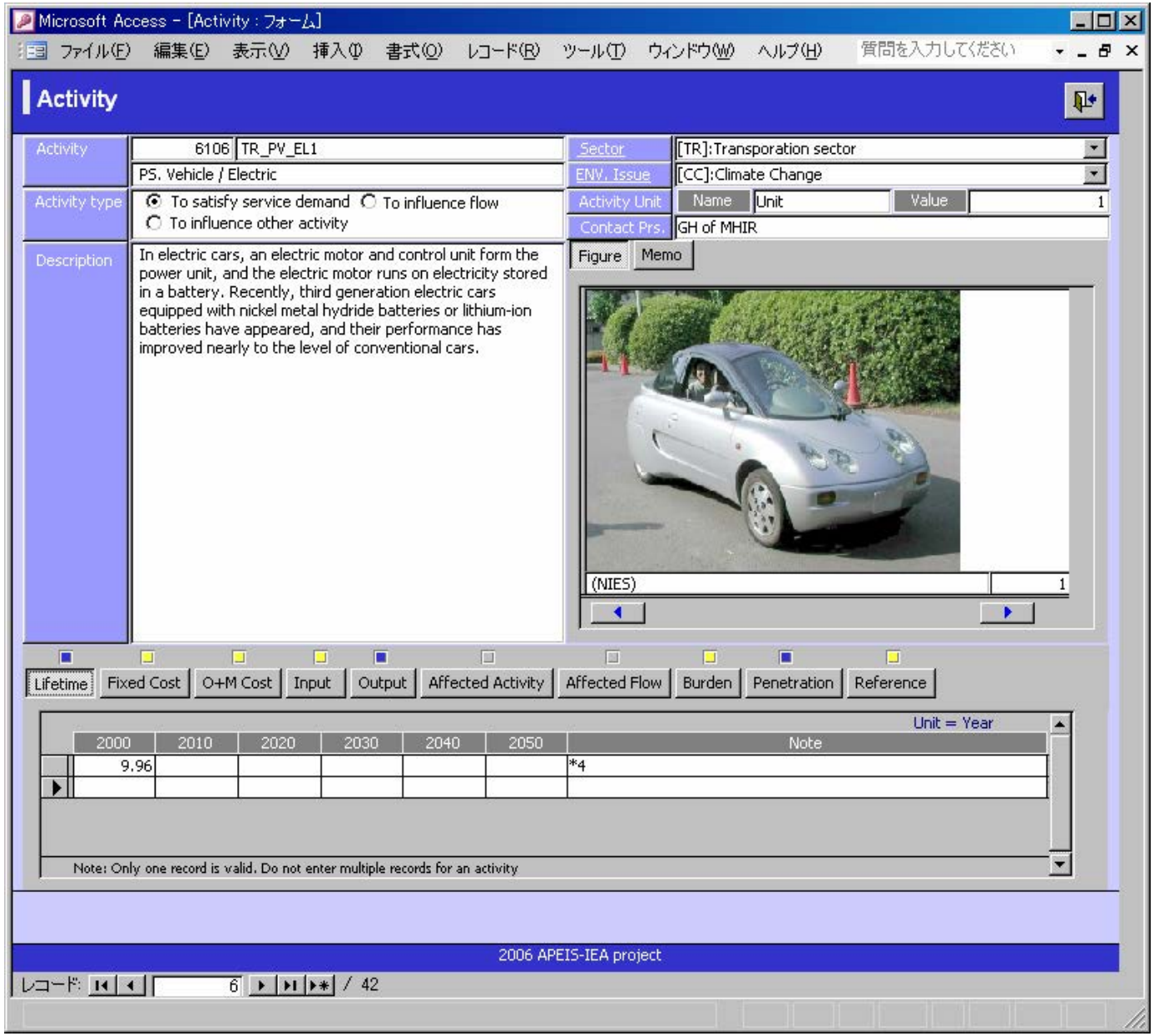
- Users browse data in a longitudinal direction without scroll bar

- SDB provides warehouse of material for data developers.

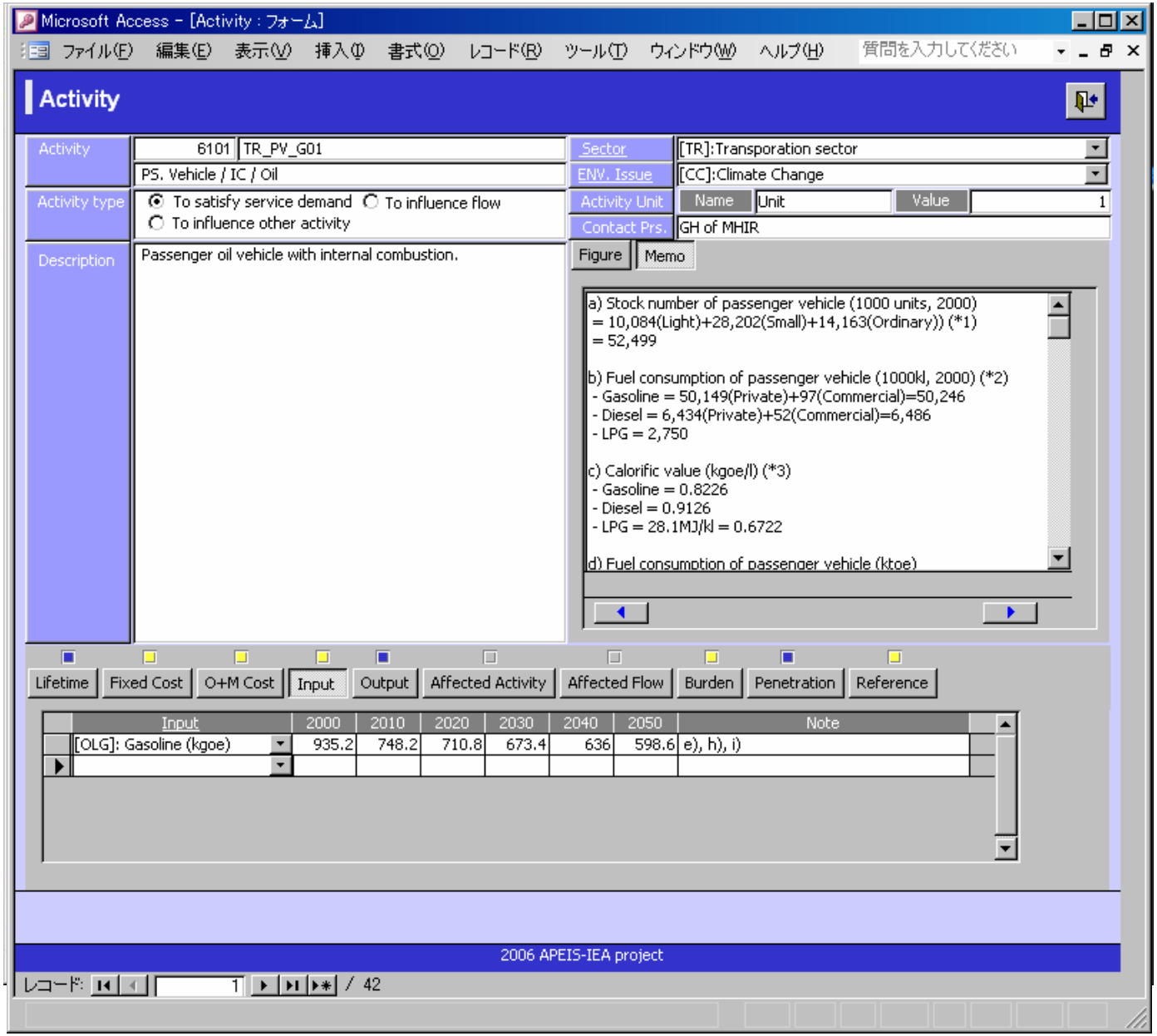
2) Develop a module estimating future environmental burden. (=SDBE)

Start form of SDB

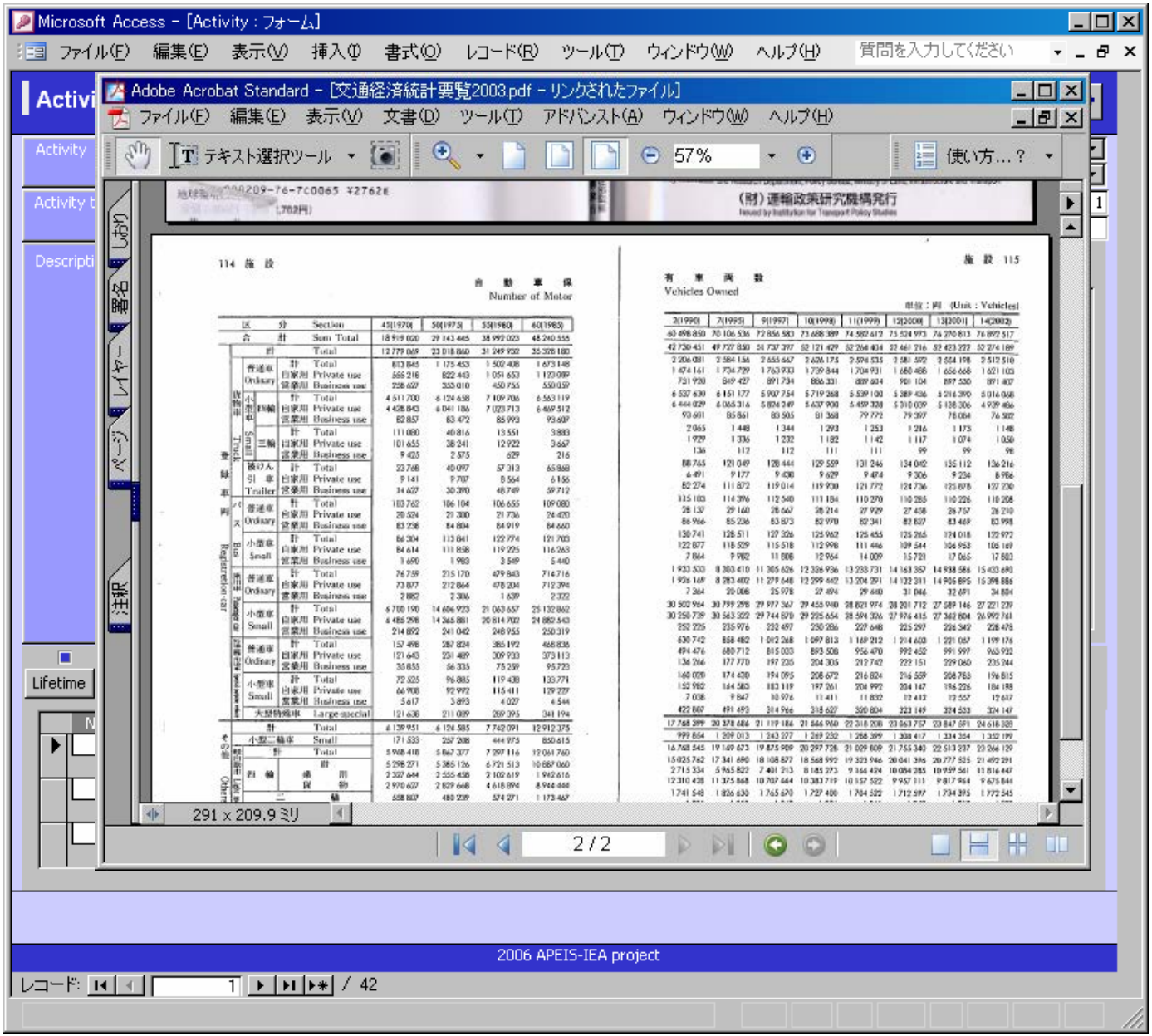
Activity : Passenger vehicle with electric motor



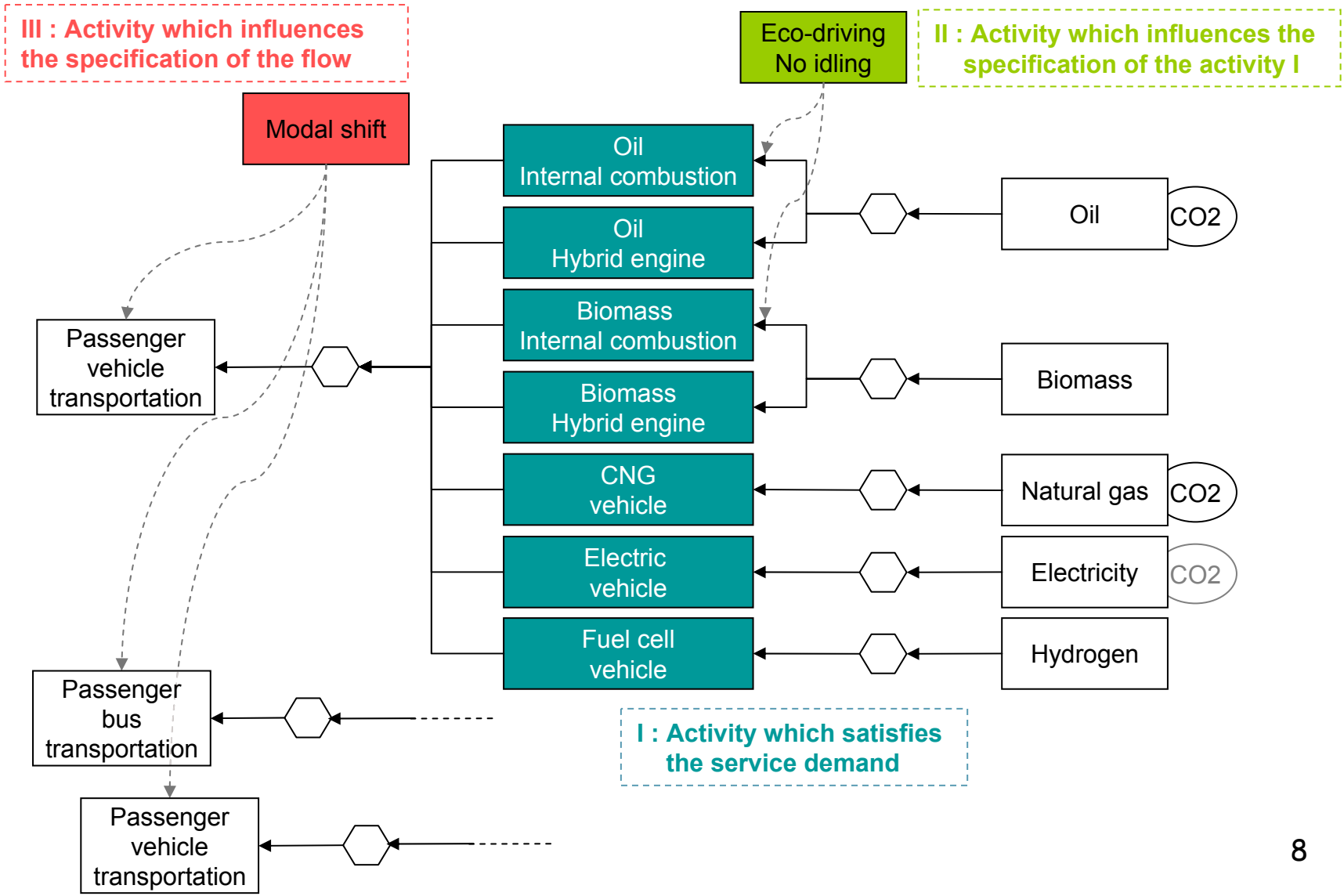
Activity : Passenger vehicle with internal combustion



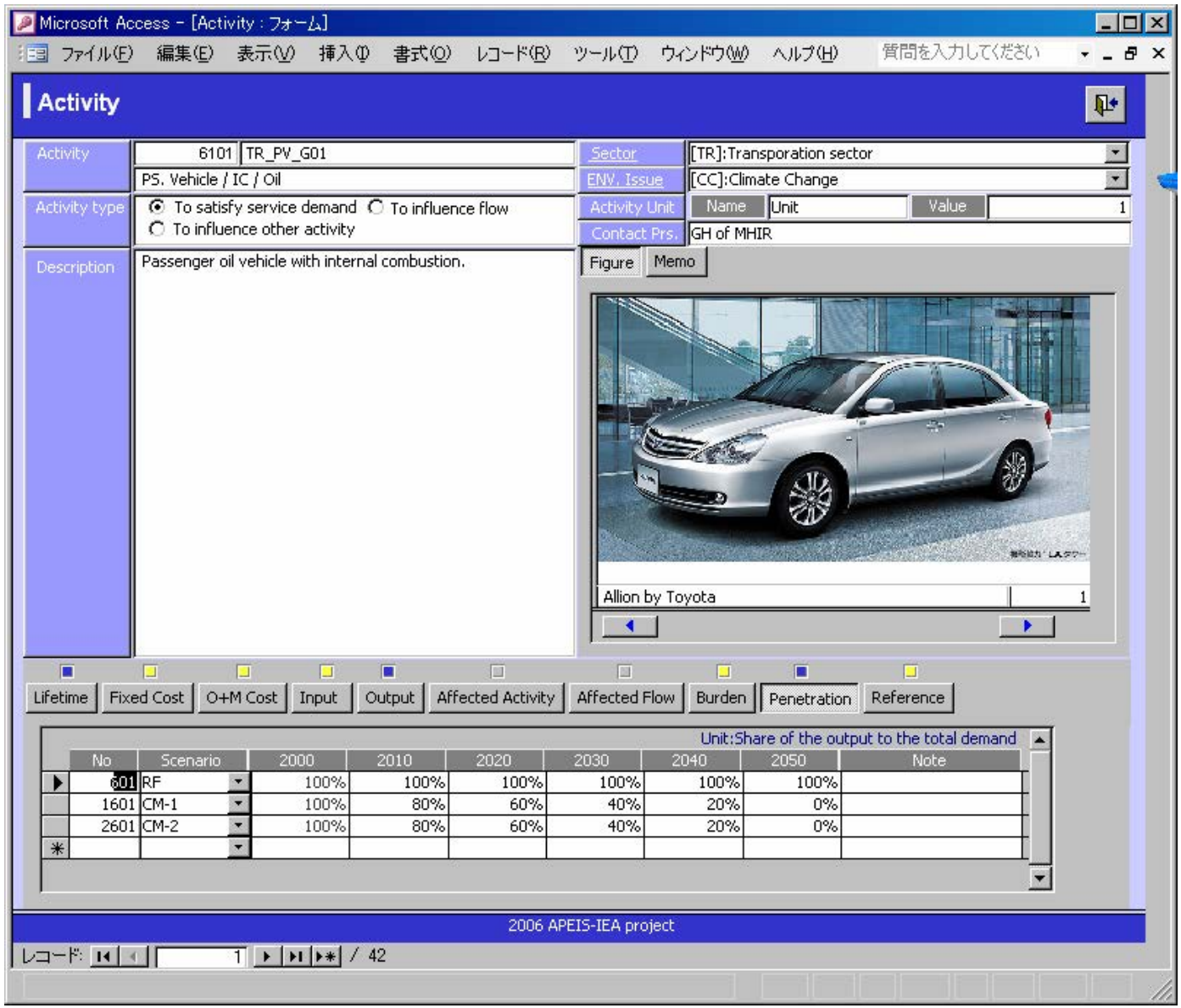
Reference of estimation



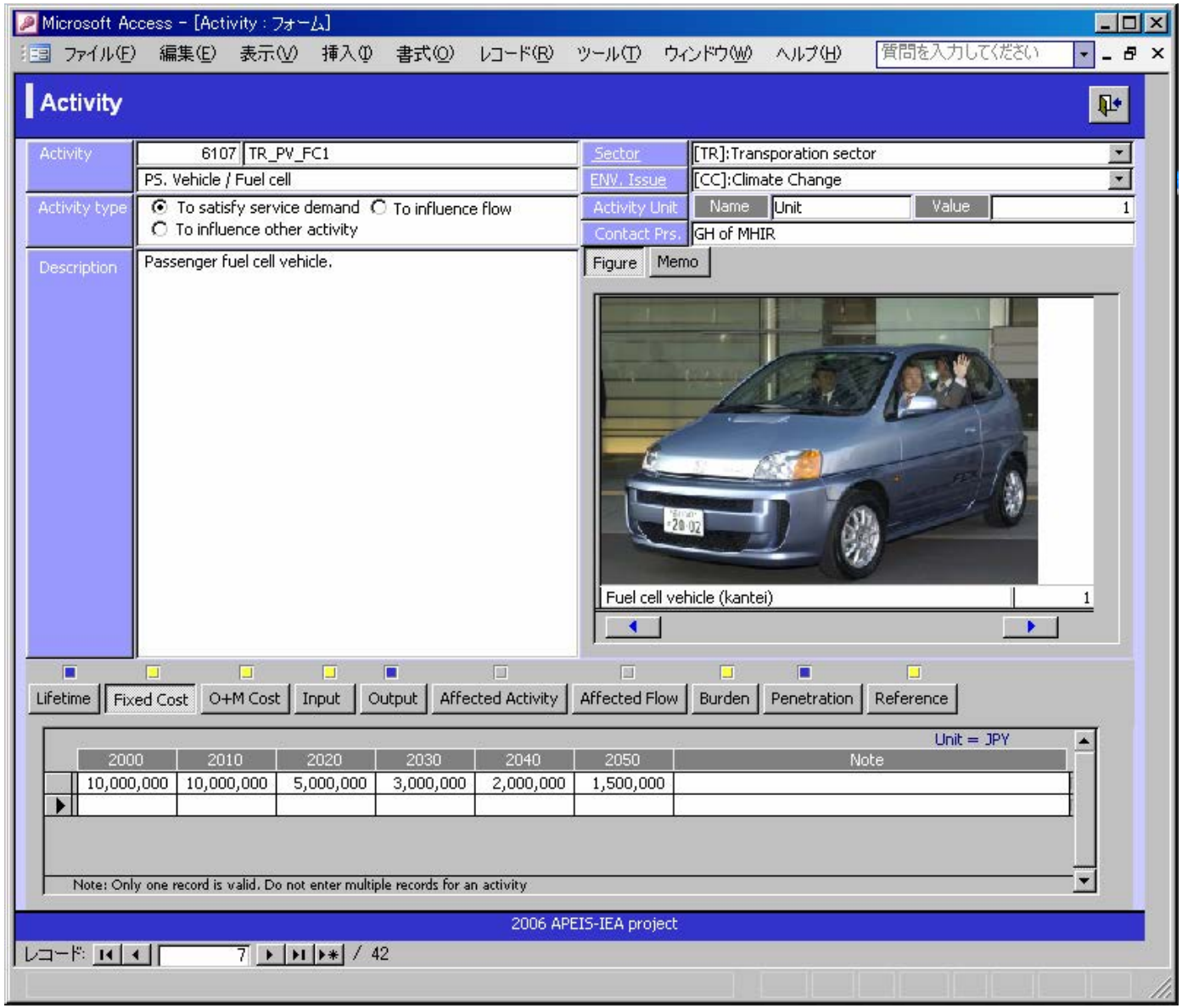
3. Application to transportation sector



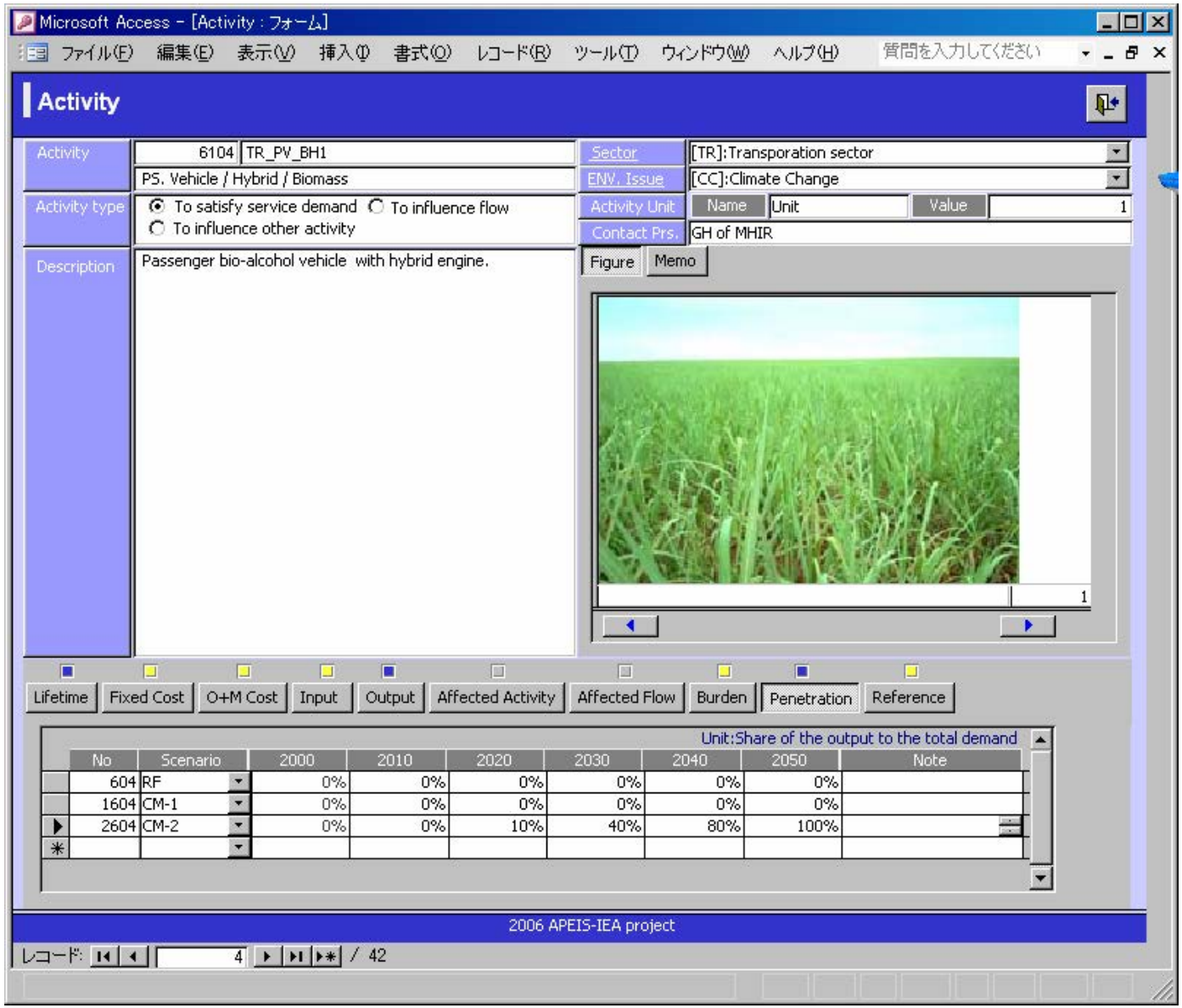
Activity : Passenger vehicle with internal combustion



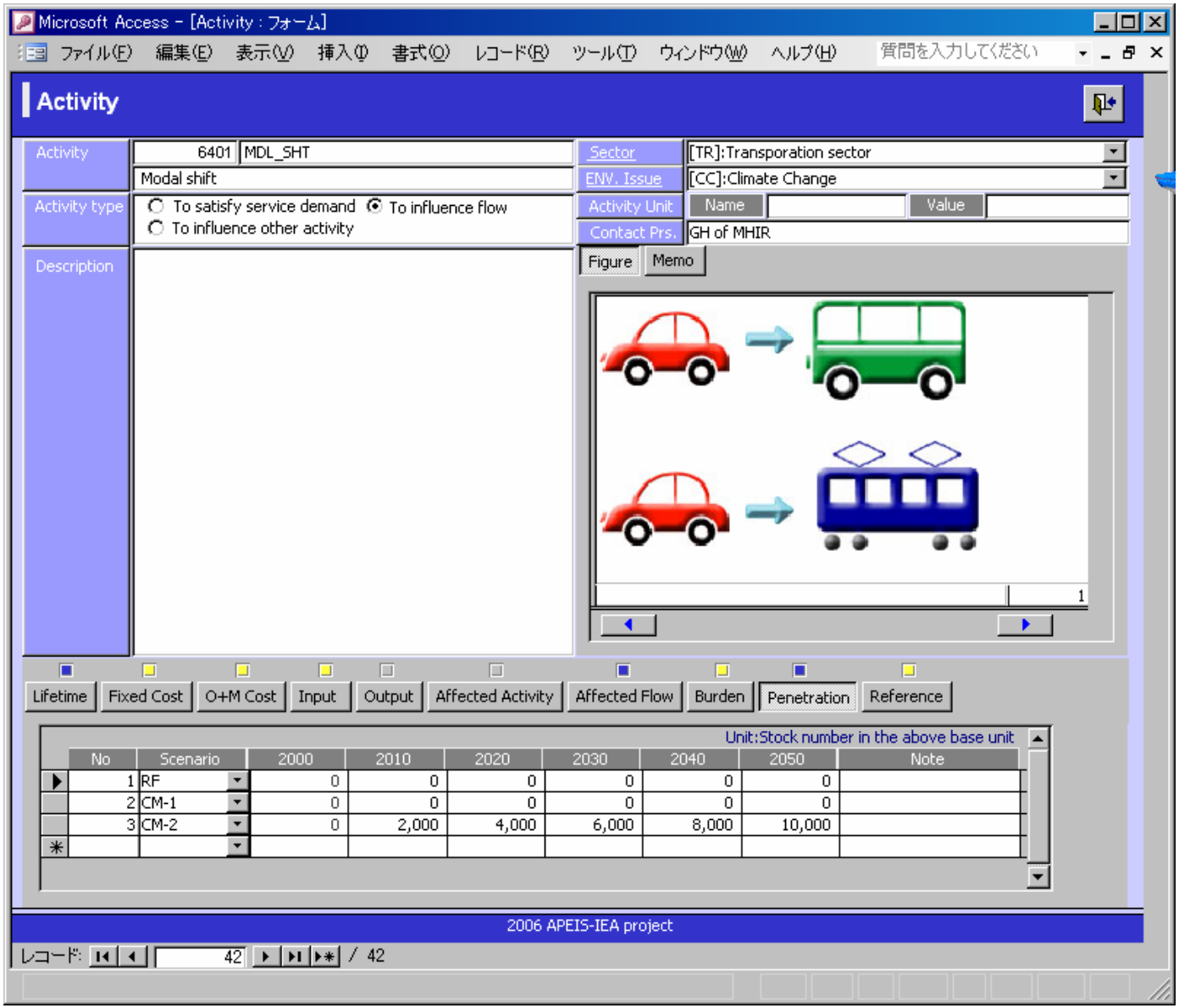
Activity : Passenger vehicle with fuel cell



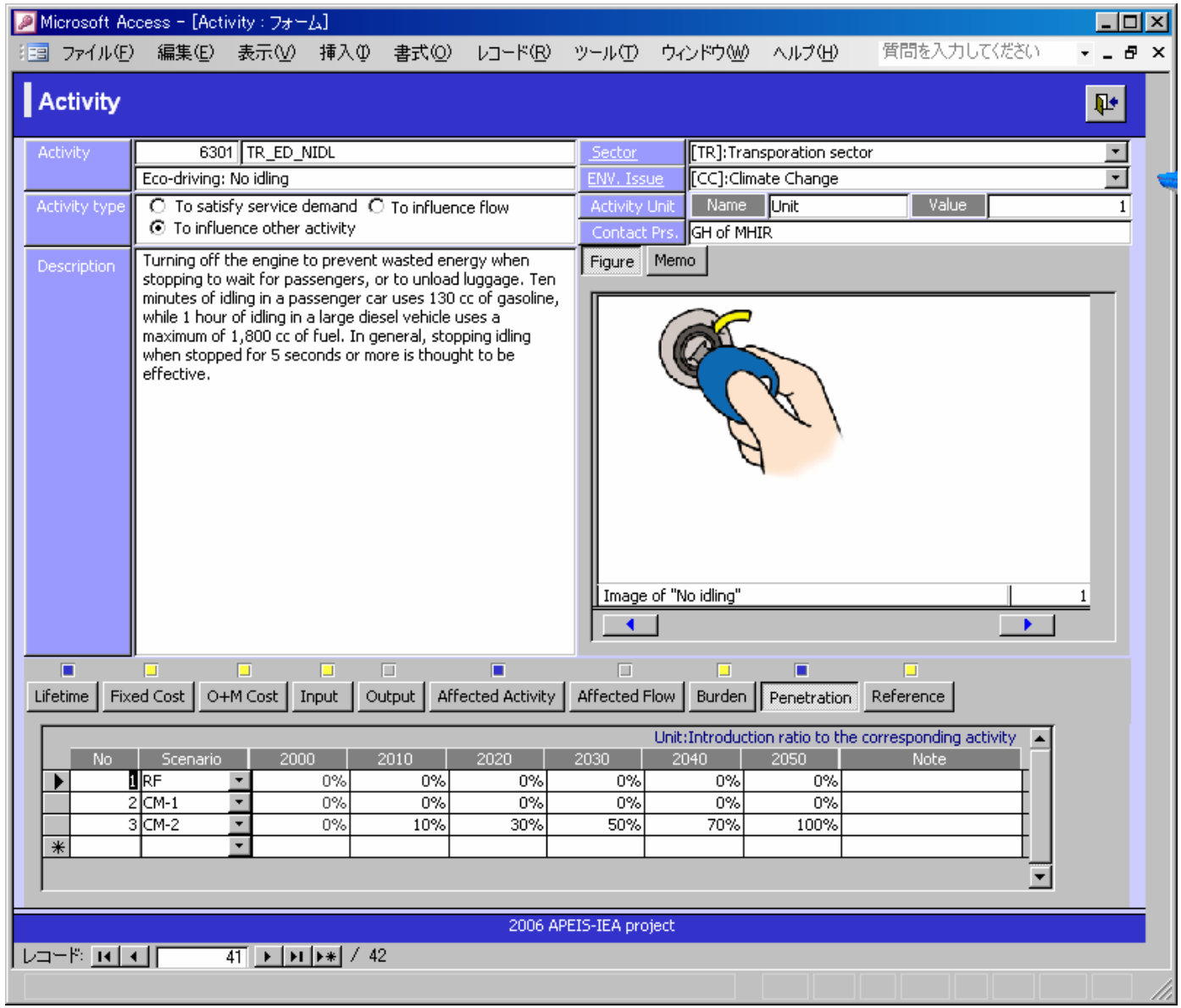
Activity : Passenger bio-fuel vehicle with hybrid engine



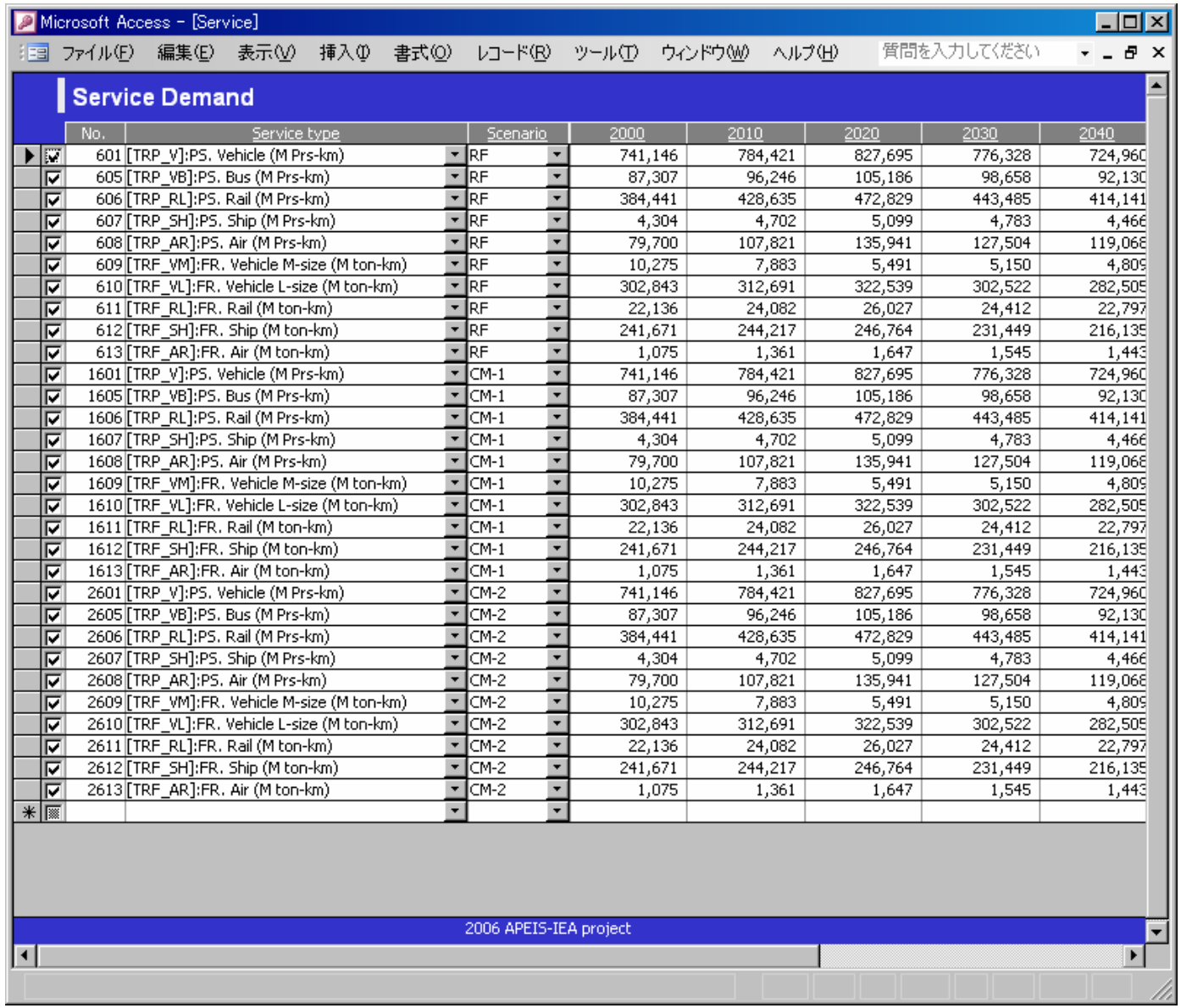
Activity : Modal shift to public transportation system



Activity : No Idling



Service demand



Microsoft Access - [Service]

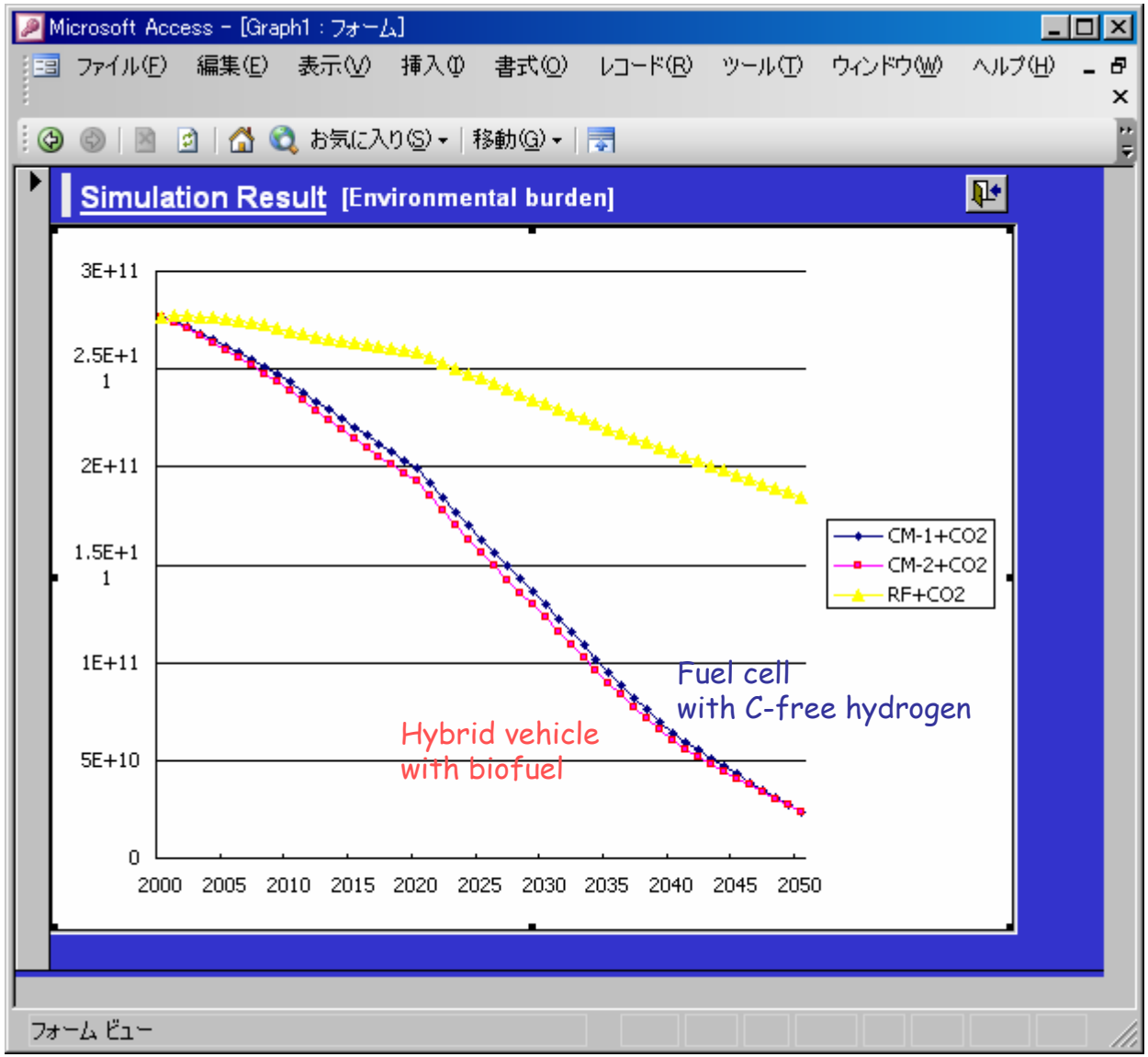
ファイル(F) 編集(E) 表示(V) 挿入(I) 書式(O) レコード(R) ツール(T) ウィンドウ(W) ヘルプ(H) 質問を入力してください

Service Demand

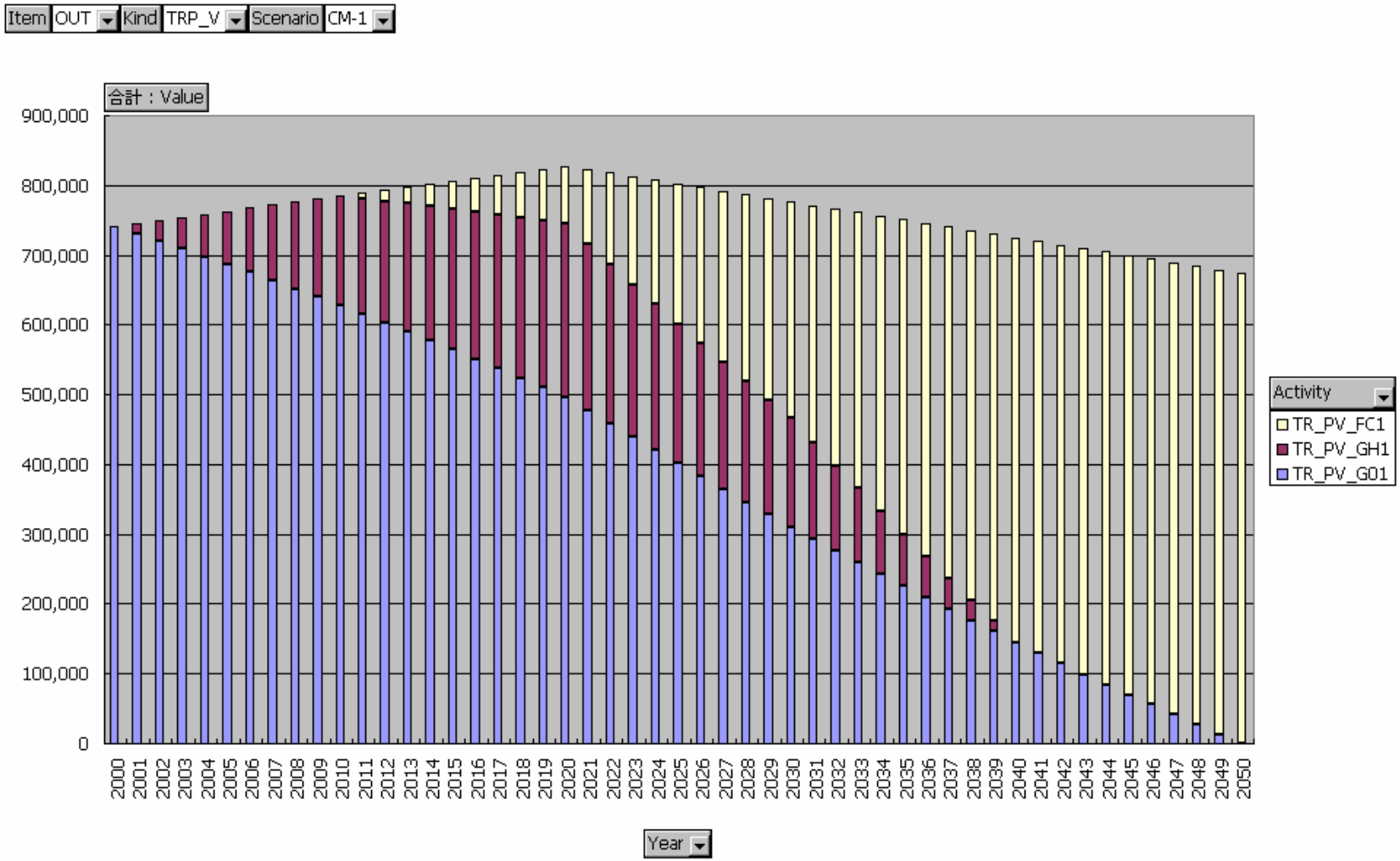
No.	Service type	Scenario	2000	2010	2020	2030	2040
601	[TRP_V]:PS. Vehicle (M Prs-km)	RF	741,146	784,421	827,695	776,328	724,960
605	[TRP_VB]:PS. Bus (M Prs-km)	RF	87,307	96,246	105,186	98,658	92,130
606	[TRP_RL]:PS. Rail (M Prs-km)	RF	384,441	428,635	472,829	443,485	414,141
607	[TRP_SH]:PS. Ship (M Prs-km)	RF	4,304	4,702	5,099	4,783	4,466
608	[TRP_AR]:PS. Air (M Prs-km)	RF	79,700	107,821	135,941	127,504	119,068
609	[TRF_VM]:FR. Vehicle M-size (M ton-km)	RF	10,275	7,883	5,491	5,150	4,809
610	[TRF_VL]:FR. Vehicle L-size (M ton-km)	RF	302,843	312,691	322,539	302,522	282,505
611	[TRF_RL]:FR. Rail (M ton-km)	RF	22,136	24,082	26,027	24,412	22,797
612	[TRF_SH]:FR. Ship (M ton-km)	RF	241,671	244,217	246,764	231,449	216,135
613	[TRF_AR]:FR. Air (M ton-km)	RF	1,075	1,361	1,647	1,545	1,443
1601	[TRP_V]:PS. Vehicle (M Prs-km)	CM-1	741,146	784,421	827,695	776,328	724,960
1605	[TRP_VB]:PS. Bus (M Prs-km)	CM-1	87,307	96,246	105,186	98,658	92,130
1606	[TRP_RL]:PS. Rail (M Prs-km)	CM-1	384,441	428,635	472,829	443,485	414,141
1607	[TRP_SH]:PS. Ship (M Prs-km)	CM-1	4,304	4,702	5,099	4,783	4,466
1608	[TRP_AR]:PS. Air (M Prs-km)	CM-1	79,700	107,821	135,941	127,504	119,068
1609	[TRF_VM]:FR. Vehicle M-size (M ton-km)	CM-1	10,275	7,883	5,491	5,150	4,809
1610	[TRF_VL]:FR. Vehicle L-size (M ton-km)	CM-1	302,843	312,691	322,539	302,522	282,505
1611	[TRF_RL]:FR. Rail (M ton-km)	CM-1	22,136	24,082	26,027	24,412	22,797
1612	[TRF_SH]:FR. Ship (M ton-km)	CM-1	241,671	244,217	246,764	231,449	216,135
1613	[TRF_AR]:FR. Air (M ton-km)	CM-1	1,075	1,361	1,647	1,545	1,443
2601	[TRP_V]:PS. Vehicle (M Prs-km)	CM-2	741,146	784,421	827,695	776,328	724,960
2605	[TRP_VB]:PS. Bus (M Prs-km)	CM-2	87,307	96,246	105,186	98,658	92,130
2606	[TRP_RL]:PS. Rail (M Prs-km)	CM-2	384,441	428,635	472,829	443,485	414,141
2607	[TRP_SH]:PS. Ship (M Prs-km)	CM-2	4,304	4,702	5,099	4,783	4,466
2608	[TRP_AR]:PS. Air (M Prs-km)	CM-2	79,700	107,821	135,941	127,504	119,068
2609	[TRF_VM]:FR. Vehicle M-size (M ton-km)	CM-2	10,275	7,883	5,491	5,150	4,809
2610	[TRF_VL]:FR. Vehicle L-size (M ton-km)	CM-2	302,843	312,691	322,539	302,522	282,505
2611	[TRF_RL]:FR. Rail (M ton-km)	CM-2	22,136	24,082	26,027	24,412	22,797
2612	[TRF_SH]:FR. Ship (M ton-km)	CM-2	241,671	244,217	246,764	231,449	216,135
2613	[TRF_AR]:FR. Air (M ton-km)	CM-2	1,075	1,361	1,647	1,545	1,443

2006 APEIS-IEA project

Simulation Results : CO2 emission

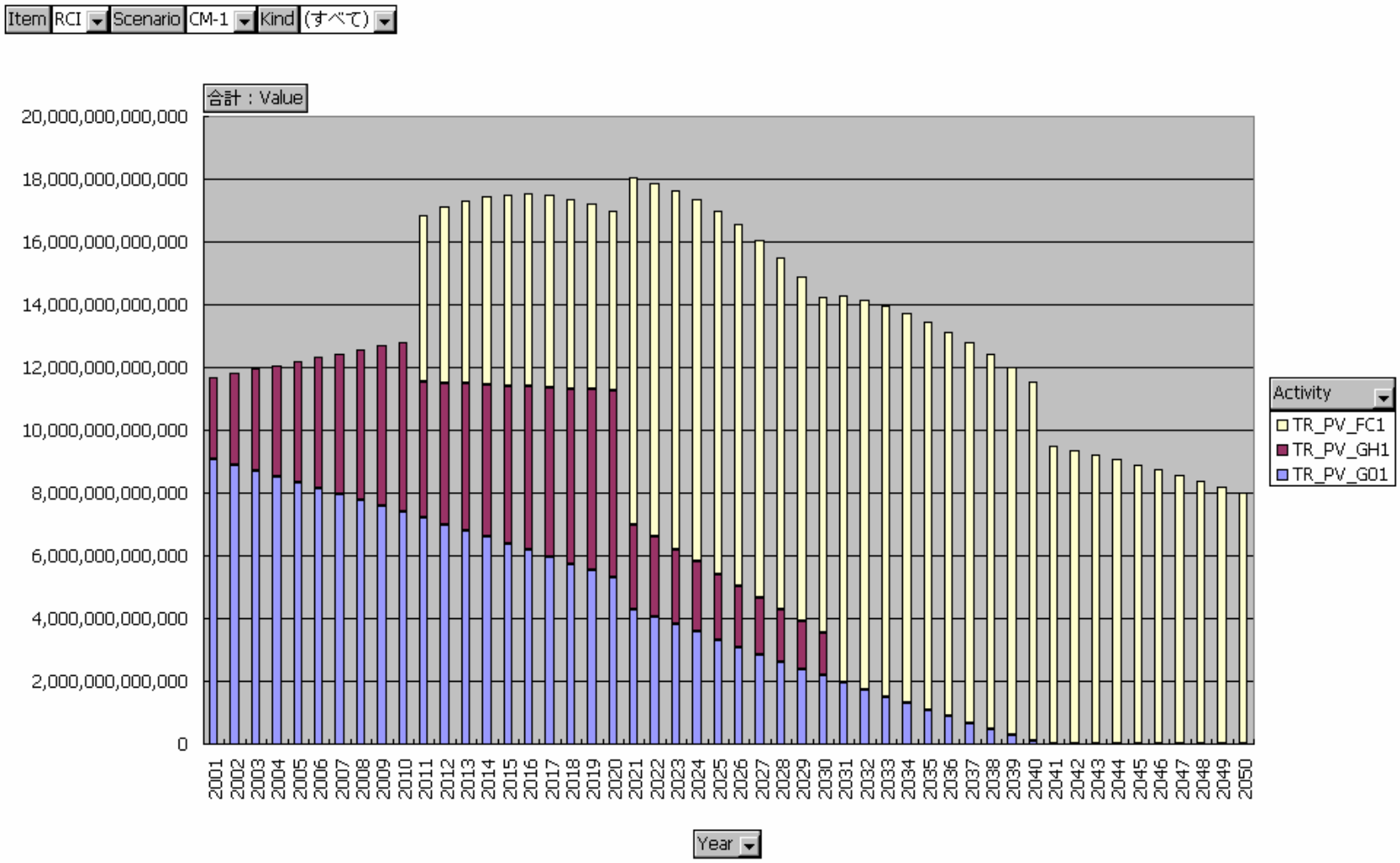


Simulation Results : Output from activity

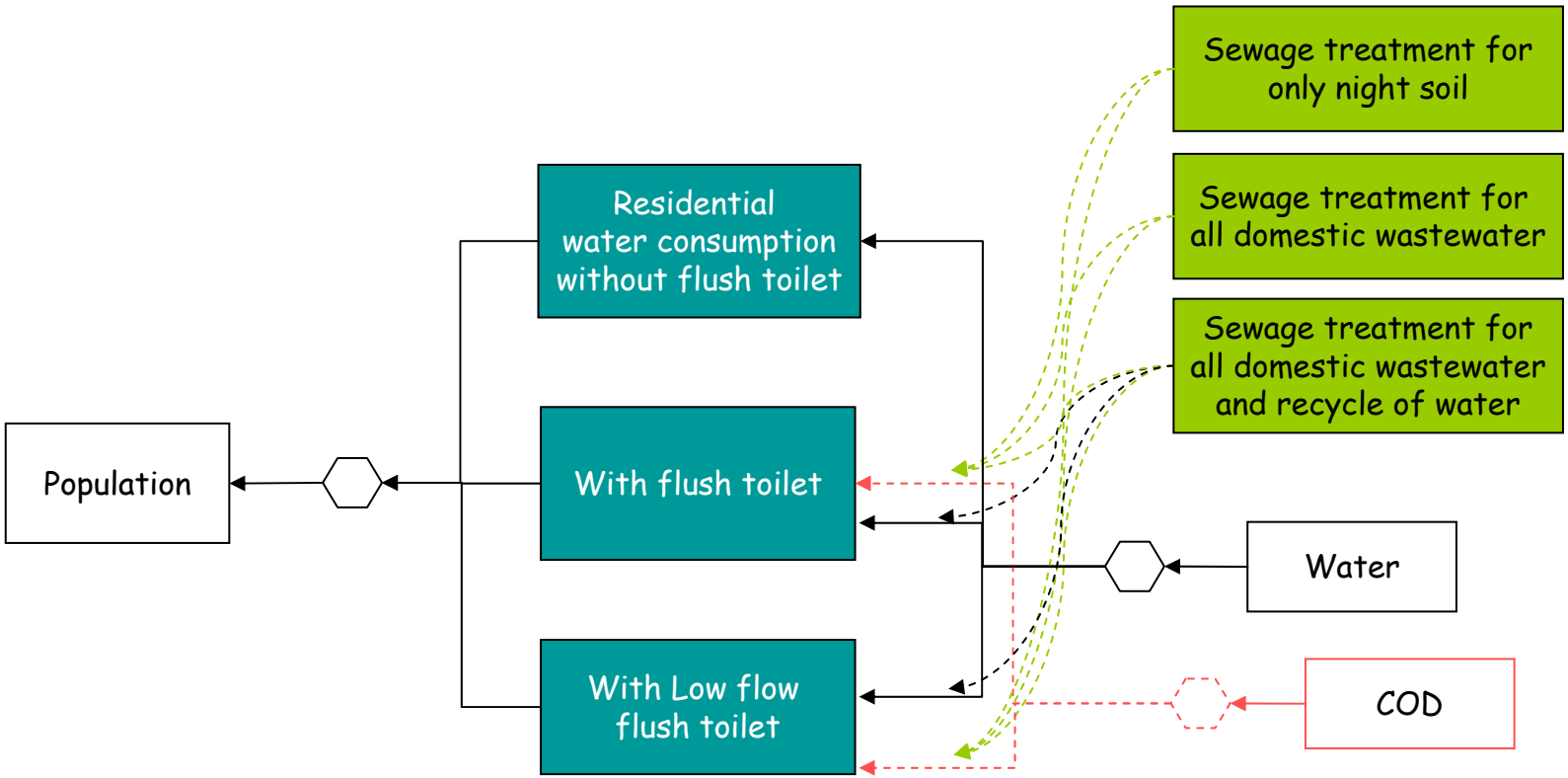


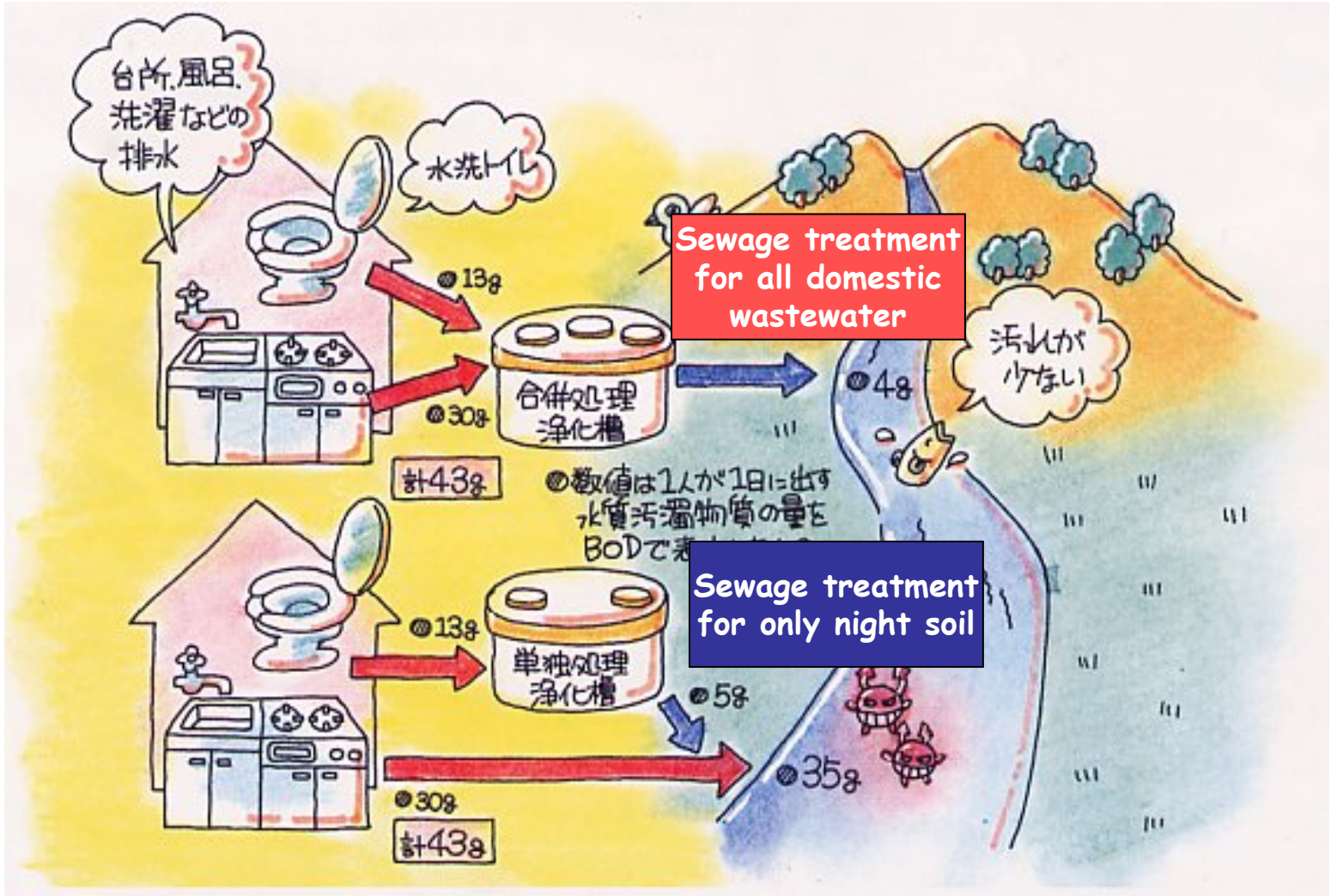
Simulation Results : Energy consumption

Simulation Results : Cost for recruitment



4. Application to water sector

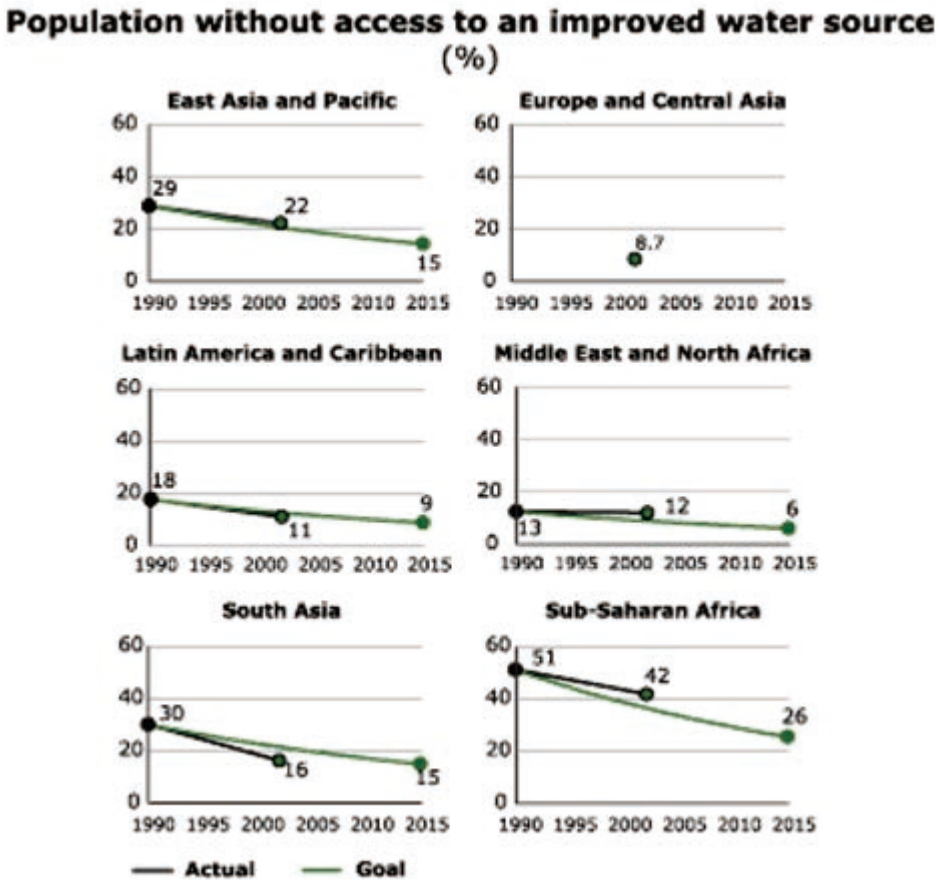


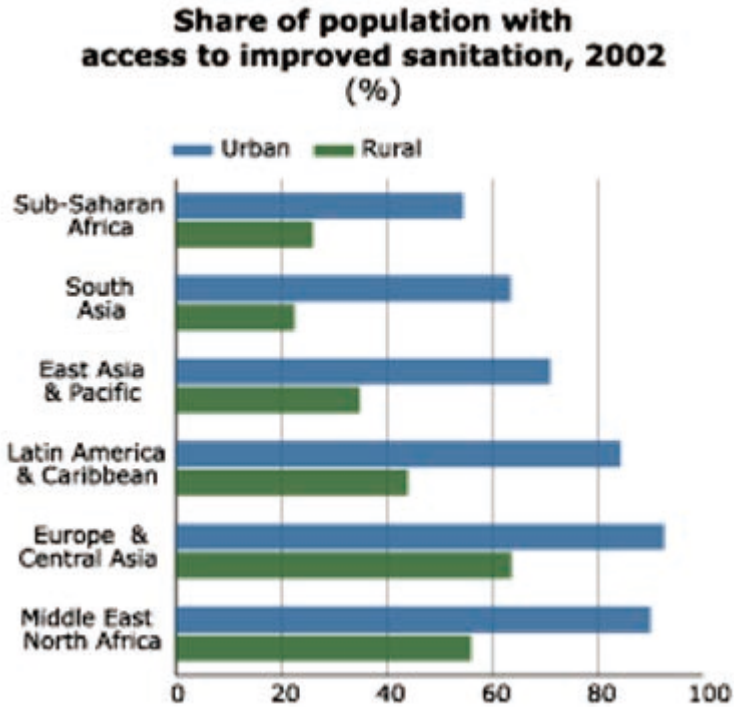

台所、風呂、洗濯などの排水
水洗トイレ
13g
30g
合併処理浄化槽
計43g
4g
汚れが少ない
Sewage treatment for all domestic wastewater
13g
単独処理浄化槽
5g
30g
計43g
35g
Sewage treatment for only night soil

Millennium Development Goal

Target 10

Halve by 2015 the proportion of people without sustainable access to safe drinking water and basic sanitation.





Mitigation of Water pollution

Countermeasure 1

Flush toilet	30% (2000)	100% (2050)
Sewage treatment for only night soil	30% (2000)	100% (2050)

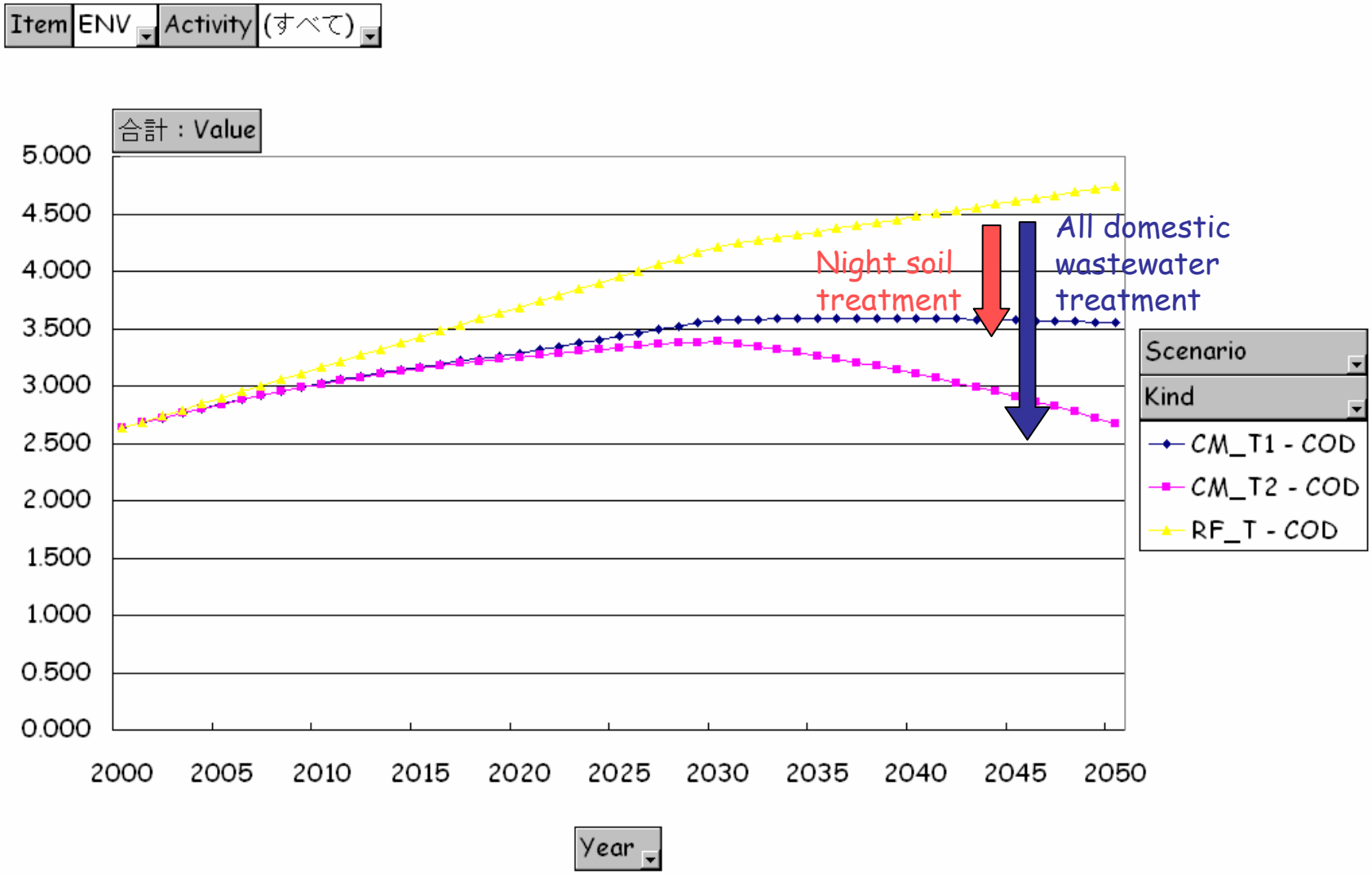
(COD -27%)

Countermeasure 2

Flush toilet	30% (2000)	100% (2050)
Sewage treatment for only night soil	30% (2000)	0% (2050)
Sewage treatment for all domestic wastewater	0% (2000)	50% (2050)

(COD -90%)

Simulation result : COD emission



Mitigation of Water consumption

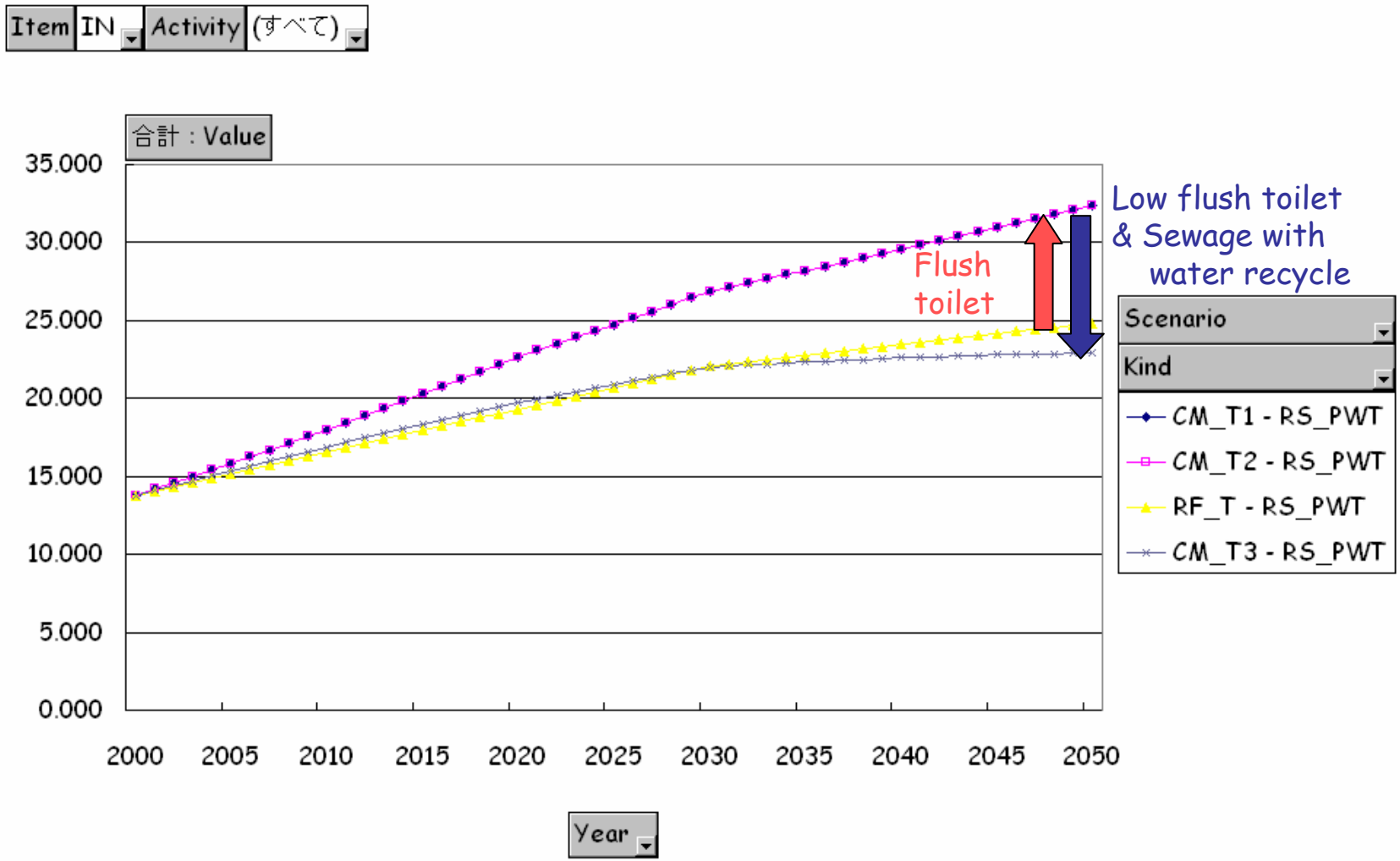
Countermeasure 2

Flush toilet	30% (2000)	100% (2050)
Sewage treatment for all domestic wastewater	0% (2000)	50% (2050)

Countermeasure 3

Low flow flush toilet	30% (2000)	100% (2050)
Sewage treatment for all domestic wastewater and water recycle	0% (2000)	50% (2050)

Simulation result : Water consumption



Finally,

we expect that you will apply the SDB to analyze the innovational strategies in your country and will introduce the effective strategies to achieve sustainable development.