

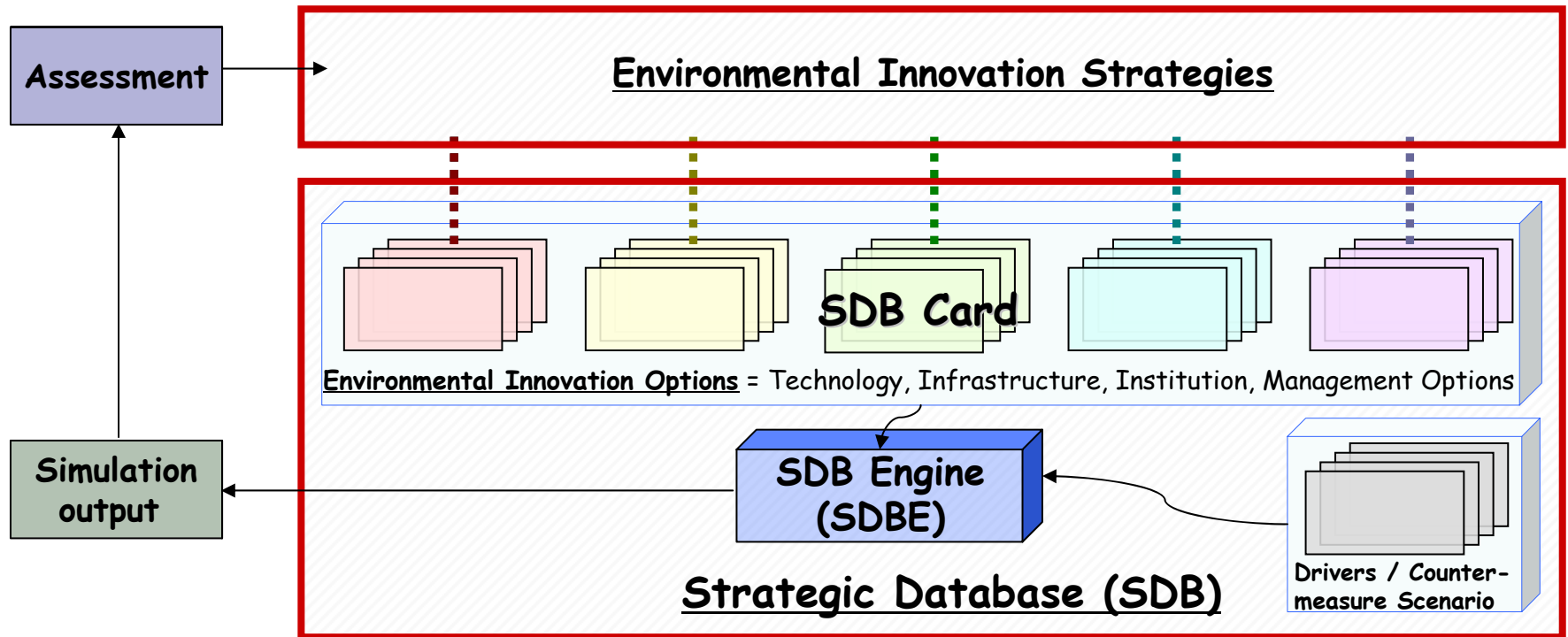
Strategic Database

Go Hibino of MHIR

2006.10.19

AIM Training Workshop 2006

What is SDB ?



Start form of SDB

Microsoft Access - [Frm_FrontPage : フォーム]

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)

APEIS Strategic Database

Activity	<ul style="list-style-type: none">List (simple tabular)Detail columnar
Simulation Condition	<ul style="list-style-type: none">Service DemandConstraintPrice of InputEnvironmental Burden from InputPrice of Environmental Burden
Simulation	<ul style="list-style-type: none">Penetration of activity (Read only)Run
Code etc.	<ul style="list-style-type: none">Result SimpleDetailScenario CodeInput/Output CodeEnvironmental Burden CodeSector CodeEnvironmental Issues CodeParameter
Maintenance	<ul style="list-style-type: none">Clean

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<http://www-iam.nies.go.jp/aim/apeis/>

Specification of Activity


Microsoft Access - [Activity : フォーム]

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

Activity

Activity	6106 TR_PV_EL1	Sector	[TR]:Transportation sector
	PS. Vehicle / Electric	ENV. Issue	[CC]:Climate Change
Activity type	<input checked="" type="radio"/> To satisfy service demand <input type="radio"/> To influence flow <input type="radio"/> To influence other activity	Activity Unit	Name Unit Value GH of MHIR 1
Description	In electric cars, an electric motor and control unit form the power unit, and the electric motor runs on electricity stored in a battery. Recently, third generation electric cars equipped with nickel metal hydride batteries or lithium-ion batteries have appeared, and their performance has improved nearly to the level of conventional cars.		

Figure Memo



(NIES) 1

☐ Lifetime
 ☐ Fixed Cost
 ☐ O+M Cost
 ☐ Input
 ☐ Output
 ☐ Affected Activity
 ☐ Affected Flow
 ☐ Burden
 ☐ Penetration
 ☐ Reference

	2000	2010	2020	2030	2040	2050	Note
	9.96						*4

Note: Only one record is valid. Do not enter multiple records for an activity

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Procedure of estimation

Microsoft Access - [Activity : フォーム]

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

Activity

Activity	6101 TR_PV_G01	Sector	[TR]:Transportation sector
	PS. Vehicle / IC / Oil	ENV. Issue	[CC]:Climate Change
Activity type	<input checked="" type="radio"/> To satisfy service demand <input type="radio"/> To influence flow <input type="radio"/> To influence other activity	Activity Unit	Name Unit Value 1
Description	Passenger oil vehicle with internal combustion. Contact Prs. GH of MHIR		

Figure Memo

a) Stock number of passenger vehicle (1000 units, 2000)
 = 10,084(Light)+28,202(Small)+14,163(Ordinary)) (*1)
 = 52,499

b) Fuel consumption of passenger vehicle (1000kl, 2000) (*2)
 - Gasoline = 50,149(Private)+97(Commercial)=50,246
 - Diesel = 6,434(Private)+52(Commercial)=6,486
 - LPG = 2,750

c) Calorific value (kgoe/l) (*3)
 - Gasoline = 0.8226
 - Diesel = 0.9126
 - LPG = 28.1MJ/kl = 0.6722

d) Fuel consumption of passenger vehicle (ktoe)

Lifetime Fixed Cost O+M Cost Input Output Affected Activity Affected Flow Burden Penetration Reference

Input	2000	2010	2020	2030	2040	2050	Note
[OLG]: Gasoline (kgoe)	935.2	748.2	710.8	673.4	636	598.6	e), h), i)

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Reference of estimation

Microsoft Access - [Activity : フォーム]

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

Adobe Acrobat Standard - [交通経済統計要覧2003.pdf - リンクされたファイル]

ファイル(F) 編集(E) 表示(V) 文書(D) ツール(T) アドバンスト(A) ウィンドウ(W) ヘルプ(H)

テキスト選択ツール 57% 使い方...?

地球地図 2009-76-7C0065 Y276ZE

(財) 運輸政策研究機構発行
Issued by Institution for Transport Policy Studies

114 施設
自 動 車 保
Number of Motor

区 分	Section	43(1970)	50(1973)	53(1980)	60(1985)
合 計	Sum Total	18 919 020	29 143 445	38 992 020	48 240 335
計	Total	12 779 069	23 018 060	31 249 930	35 326 180
普通車	Ordinary	813 845	1 175 453	1 502 408	1 673 148
私家用 Private use		585 216	822 443	1 051 453	1 112 089
営業用 Business use		228 629	353 010	450 955	561 059
小車	Small	4 511 700	6 124 458	7 109 706	6 563 119
私家用 Private use		4 428 943	6 041 186	7 023 713	6 469 512
営業用 Business use		82 857	83 472	85 993	93 607
三輪	Tricycle	111 080	40 816	13 551	3 883
私家用 Private use		101 655	38 241	12 922	3 667
営業用 Business use		9 425	2 575	629	216
軽便車	Light vehicle	23 748	45 097	57 313	65 848
私家用 Private use		9 141	9 707	8 564	6 156
営業用 Business use		14 607	35 390	48 749	59 692
バス	Bus	103 762	106 104	104 655	109 080
私家用 Private use		29 524	21 300	21 736	24 420
営業用 Business use		83 238	84 804	82 919	84 660
小車	Small	86 304	113 841	122 774	121 703
私家用 Private use		84 614	111 858	119 225	116 263
営業用 Business use		1 690	1 983	3 549	5 440
普通車	Ordinary	74 739	215 170	429 843	714 714
私家用 Private use		73 077	212 864	428 204	712 394
営業用 Business use		2 662	2 306	1 639	2 322
小車	Small	6 700 190	14 606 923	21 063 657	25 120 802
私家用 Private use		4 485 296	14 365 861	20 814 702	24 882 543
営業用 Business use		2 144 892	2 141 062	2 248 955	2 238 259
普通車	Ordinary	157 496	287 824	385 192	468 836
私家用 Private use		121 643	231 489	309 933	373 113
営業用 Business use		35 853	56 335	75 259	95 723
小車	Small	72 325	96 805	119 438	120 771
私家用 Private use		64 908	92 992	115 411	120 227
営業用 Business use		5 417	3 813	4 027	4 544
大型特殊車	Large special	121 638	211 039	269 395	341 194
計	Total	6 139 951	6 124 505	7 742 091	12 912 375
小車	Small	171 533	227 208	444 975	850 615
計	Total	5 968 418	5 897 297	7 297 116	12 061 760
私家用 Private use		5 298 271	5 385 126	6 721 513	10 689 060
営業用 Business use		7 327 644	2 512 450	7 102 619	1 915 616
計	Total	2 919 437	2 829 646	4 618 094	8 944 444
私家用 Private use		508 807	483 239	574 271	1 173 467

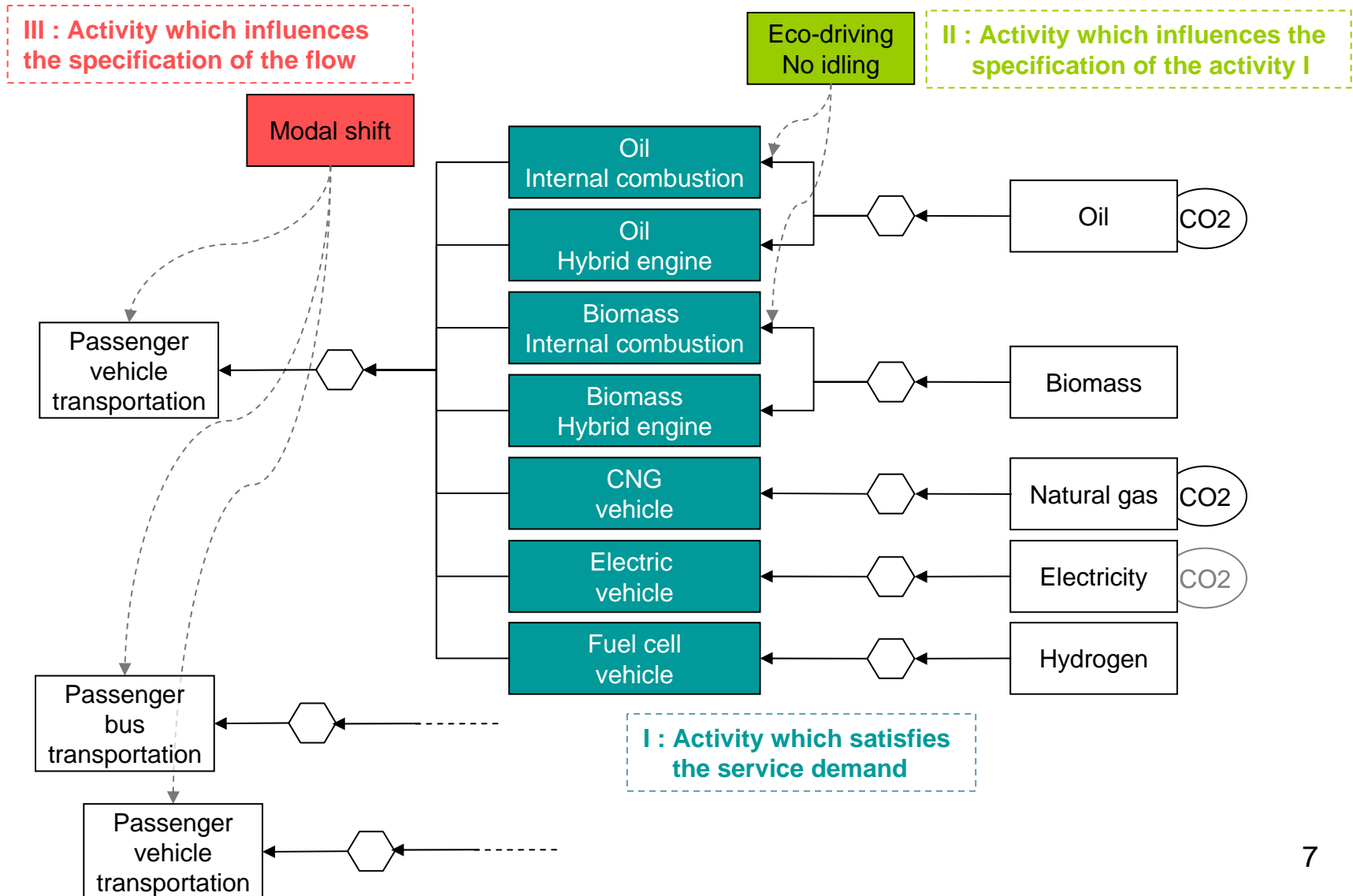
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レコード: 1 / 42

Application to transportation sector




Activity : Passenger vehicle with internal combustion

Microsoft Access - [Activity : フォーム]

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

Activity

Activity	6101 TR_PV_G01	Sector	[TR]:Transportation sector
	PS. Vehicle / IC / Oil	ENV. Issue	[CC]:Climate Change
Activity type	<input checked="" type="radio"/> To satisfy service demand <input type="radio"/> To influence flow <input type="radio"/> To influence other activity		
Description	Passenger oil vehicle with internal combustion.		
	Activity Unit	Name	Unit
	Contact Prs.	GH of MHIR	
	Figure	Memo	
			
	Allion by Toyota		
	1		

☐ Lifetime ☐ Fixed Cost ☐ O+M Cost ☐ Input ☐ Output ☐ Affected Activity ☐ Affected Flow ☐ Burden ☐ Penetration ☐ Reference

No	Scenario	2000	2010	2020	2030	2040	2050	Note
▶ 601	RF	100%	100%	100%	100%	100%	100%	
1601	CM-1	100%	80%	60%	40%	20%	0%	
2601	CM-2	100%	80%	60%	40%	20%	0%	
*								

Unit:Share of the output to the total demand

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レコード: 1 / 42

Activity : Passenger vehicle with fuel cell

Microsoft Access - [Activity : フォーム]

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

Activity

Activity	6107 TR_PV_FC1	Sector	[TR]:Transportation sector
	PS. Vehicle / Fuel cell	ENV. Issue	[CC]:Climate Change
Activity type	<input checked="" type="radio"/> To satisfy service demand <input type="radio"/> To influence flow <input type="radio"/> To influence other activity		
Description	Passenger fuel cell vehicle.		
	Activity Unit	Name	Unit
	Contact Prs.	Value	1
	GH of MHIR		
	Figure	Memo	
			
	Fuel cell vehicle (kantei)	1	

☐ Lifetime ☐ Fixed Cost ☐ O+M Cost ☐ Input ☐ Output ☐ Affected Activity ☐ Affected Flow ☐ Burden ☐ Penetration ☐ Reference

	2000	2010	2020	2030	2040	2050	Note
	10,000,000	10,000,000	5,000,000	3,000,000	2,000,000	1,500,000	

Note: Only one record is valid. Do not enter multiple records for an activity

2006 APEIS-IEA project


レコード: 7 / 42

Activity : Passenger bio-fuel vehicle with hybrid engine

Microsoft Access - [Activity : フォーム]

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

Activity

Activity	6104 TR_PV_BH1	Sector	[TR]:Transportation sector
	PS. Vehicle / Hybrid / Biomass	ENV. Issue	[CC]:Climate Change
Activity type	<input checked="" type="radio"/> To satisfy service demand <input type="radio"/> To influence flow <input type="radio"/> To influence other activity		
Description	Passenger bio-alcohol vehicle with hybrid engine.		
	Activity Unit	Name	Unit
	Contact Prs.	GH of MHIR	
	Figure	Memo	
			
			1

☐ Lifetime ☐ Fixed Cost ☐ O+M Cost ☐ Input ☐ Output ☐ Affected Activity ☐ Affected Flow ☐ Burden ☐ Penetration ☐ Reference

No	Scenario	2000	2010	2020	2030	2040	2050	Note
604	RF	0%	0%	0%	0%	0%	0%	
1604	CM-1	0%	0%	0%	0%	0%	0%	
▶ 2604	CM-2	0%	0%	10%	40%	80%	100%	
*								

Unit:Share of the output to the total demand

2006 APEIS-IEA project

レコード: 4 / 42

Activity : Modal shift to public transportation system

Microsoft Access - [Activity : フォーム]

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

Activity

Activity	6401 MDL_SHT	Sector	[TR]:Transportation sector
	Modal shift	ENV. Issue	[CC]:Climate Change
Activity type	<input type="radio"/> To satisfy service demand <input checked="" type="radio"/> To influence flow <input type="radio"/> To influence other activity		
Description	Activity Unit		Name Value
	Contact Prs		GH of MHIR

Figure Memo

1

☐ Lifetime ☐ Fixed Cost ☐ O+M Cost ☐ Input ☐ Output ☐ Affected Activity ☐ Affected Flow ☐ Burden ☐ Penetration ☐ Reference

Unit: Stock number in the above base unit								
No	Scenario	2000	2010	2020	2030	2040	2050	Note
▶ 1	RF	0	0	0	0	0	0	
2	CM-1	0	0	0	0	0	0	
3	CM-2	0	2,000	4,000	6,000	8,000	10,000	
*								

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レコード: 42 / 42

Activity : No Idling

Microsoft Access - [Activity : フォーム]

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

Activity

Activity	6301 TR_ED_NIDL	Sector	[TR]:Transportation sector
	Eco-driving: No idling	ENV. Issue	[CC]:Climate Change
Activity type	<input type="radio"/> To satisfy service demand <input type="radio"/> To influence flow <input checked="" type="radio"/> To influence other activity	Activity Unit	Name Unit Value 1
		Contact Pers.	GH of MHIR
Description	Turning off the engine to prevent wasted energy when stopping to wait for passengers, or to unload luggage. Ten minutes of idling in a passenger car uses 130 cc of gasoline, while 1 hour of idling in a large diesel vehicle uses a maximum of 1,800 cc of fuel. In general, stopping idling when stopped for 5 seconds or more is thought to be effective.		
	Figure Memo  Image of "No idling" 1		

☐ Lifetime ☐ Fixed Cost ☐ O+M Cost ☐ Input ☐ Output ☐ Affected Activity ☐ Affected Flow ☐ Burden ☐ Penetration ☐ Reference

Unit:Introduction ratio to the corresponding activity

No	Scenario	2000	2010	2020	2030	2040	2050	Note
1	RF	0%	0%	0%	0%	0%	0%	
2	CM-1	0%	0%	0%	0%	0%	0%	
3	CM-2	0%	10%	30%	50%	70%	100%	
*								

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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

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Simulation Results : CO₂ emission

