Japan Green Resources Corporation

1. Summary of operations implemented using FILP funds

(1) Project of main forestry road construction

The Corporation constructs forestry roads in the seven areas nationwide, including the Kitakami and Chuugoku mountainous regions, aiming at higher forestry productivity and regional development. In these areas, abundant forest resources are not being fully developed because of bad geographical conditions, advanced depopulation and aging societies in mountain regions.

(2) Project of forestation in watershed areas

In order to foster water resources, the rapid and planned implementation of forestation is necessary. However, forestation in private forest areas cannot be advanced only through forestry production activities or even through forest owners' own initiatives. Accordingly, the Japan Green Resources Corporation performs the task of bearing the expenses for forestation, with the aim of promoting water conservation in the interests of the public, the preservation of national land, and the prevention of global warming.

(3) Project of comprehensive development of agricultural land

The Corporation has taken over the project, following the dissolution of the Japan Agricultural Land Development Agency. Through unified and intensive investment in rezoning of the agricultural land and construction of farm roads, this project improves the agricultural productivity and structure, and ultimately contributes to the regional vitalization.

Note: Except for the FILP overseas agricultural development operations such as surveys concerning international cooperation in the agriculture field.

2. Amount of lending under FY 2002 FILP

(Unit：billion yen)

FY 2002 FILP	Estimated outstanding amount of FILP lending at end of FY 2001
12.2	463.8

3. Outcome and social and economic benefits of operations

- In forestry roads construction projects, as of the end of FY2001 the Corporation has built or improved 1,171km of forestry roads.

  In the benefits from such projects, the operations includes seven newly constructed road extensions between FY2001 and FY2002, based on the implementation guide for project assessment of public forest projects, the benefit at the time of its adoption (calculated by adding 40 years to the life of forest roads into the construction period) is approximately ¥53.2 billion. The following major benefits can be expected:

1) Timber production benefit (increase in timber production): ¥31.8 billion
2) Forestation benefit (better public awareness of forest improvement): ¥10.0 billion
3) Forest-related benefit (health and recreation): ¥7.2 billion
4) Rural development benefit (overall traffic benefit): ¥2.0 billion

- In a forestation project of a watershed area, as of the end of FY2001 the Corporation has forested 427,000ha of private forest.

  Based on an assessment of the diversified functions of forests in the "Assessment of Diversified Functions of Agriculture and Forest Related to Global Environment and Human Living", a report by the Science Council of Japan published in November 2001, feasible estimates of the benefit from this watershed forestation project through a proportional calculation are as follows:

1) Mud disaster prevention and soil preservation: ¥623.2 billion/year
   (Soil erosion prevention: ¥479.8 billion, surface layer collapse prevention: ¥143.4 billion)
2) Creation of water resources: ¥506.7 billion/year
   (Flood alleviation: ¥109.8 billion, water reserves: ¥148.4 billion, water quality purification: ¥248.5 billion)
3) Global environmental conversation: ¥21.0 billion/year
   (Absorption of carbon dioxide: ¥21.0 billion)

   In addition, associated with the implementation of a forestation project of a watershed area, the effect for securing employment of forestry workers in mountainous regions (approximately 1500,000 workers annually: "average employment over the past five years").

4. Estimated policy (subsidy) cost of the project

Outline of estimate

1) The cost for three projects by the Corporation completed by FY2002, the forestry road construction project, watershed forestation project and comprehensive agricultural land development project are subject to analysis.

2) Estimates for each project

- Forestry road construction project

  Within the planned road extention of 2,168km, the construction and improvement of each section due by FY2002 (approximately 1,801km of the planned extension) is completed.

  (Total project cost after FY2002: ¥315.9 billion)

- Watershed forestation project

  Of 510,000ha of the total area for new planning, because planting after FY2002 is not subject to the entire subsidies, the project continue until nursing and management of forested land (subject to approximately 430,000ha to be planted by FY2001) is completed.

  (Total project cost after FY2002: ¥972.0 billion)

- Comprehensive agricultural land development project

  Of sections completed and continuously implemented in FY2002 (111,000ha of the total beneficiary area), until the improvement in agricultural land and roads subject to 14 sections implemented by FY2002 (approximately 77,000ha of beneficiary area: including one section in the overall plan) is completed.

  (Total project cost after FY2002: ¥175.9 billion)

3) The following are the analysis periods when all debts related to each of the above-mentioned projects are repaid:

   Forestry road construction project: ····· 39 years
   (37-year period for FY2001)

   Watershed forestation project: ····· 79 years
   (80-year period for FY2001)

   Comprehensive agricultural land development project: ··23 years
   (25-year period for FY2001)

• In a comprehensive agricultural land development project, as of the end of FY2001 the Corporation has improved approximately 34,000ha of agricultural land and roads in 18 municipalities in 6 sections.

As for the 13 sections implemented in FY2002 (except for sections which have not yet started), the accumulated benefits of the latest project plan are as follows [the total project expenses including related projects: ¥337.2 billion, calculation of the benefits to be arisen within the comprehensive life (average 46 years)]:

1) Improvement in agricultural roads
Reduction in operation expenses, shortening of operation hours, prevention of damage to agricultural products: ¥329.1 billion

2) Improvement in agricultural land and drainage facilities
Improvement in agricultural productivity (increase in production, improvement in quality) and improvement in agricultural management (labor savings, reduction in maintenance and operation costs) and renewal of irrigation facilities: ¥49.7 billion

4) In the forestry roads for the development of large-scale forestry areas project and the comprehensive development of agricultural land project, project income such as the income from burden charges is calculated under the existing system of burden charge collection. In the river source forest creation project, project income, such as income from profit sharing forests, is estimated from the Corporation's quota based on the national average price of timber on mountains.

Furthermore, with respect to loan payments for the forestry road construction project and comprehensive agricultural land development project, analysis is completed through advanced repayment of the balance of the previous year's burden charges. In other words, burden charges are used for repayment.

5) From this viewpoint, the simulation of the project's future is conducted on specified premises. Based on the results, capital investment, subsidies and financial assistance required for the achievement of the projects are estimated.

Policy (subsidy) cost

(Unit : billion yen)

Category	Project of main forestry road construction			Project of forestation in watershed areas			Project of comprehensive development of agricultural land			Total		
	FY2001	FY2002	Increase/ Decrease	FY2001	FY2002	Increase/ Decrease	FY2001	FY2002	Increase/ Decrease	FY2001	FY2002	Increase/ Decrease
1. Subsidies from the national treasury	219.9	225.2	5.3	4.0	3.2	– 8	137.3	119,3	–18	361.2	347.7	–13.5
2. Opportunity cost of capital investment from the national treasury	0.4	– 0.4	– 0.8	1,010.2	1,004.7	– 5.5	2.5	2.6	0.1	1,013.1	1,006.9	– 6.2
Subtotal (1+2)	220.3	224.8	4.5	1,014.2	1,007.9	– 6.3	139.8	121.9	–17.9	1,374.3	1,354.6	–19.7
3. Money transfer to the national treasury	—	—	—	—	—	—	—	—	—	—	—	—
Total (1+2+3=policy cost)	220.3	224.8	4.5	1,014.2	1,007.9	– 6.3	139.8	121.9	–17.9	1,374.3	1,354.6	–19.7
Analysis period (years)	37	39	2	80	79	–1	25	23	– 2			

< Reasons for increase/decrease in policy cost >

• Forestry road construction project
Compared with FY2001 (¥220.3 billion), policy cost increased by ¥4.5 billion because projects expenses subject to the analysis increased due to the estimation of sections to be newly undertaken in FY2002 and increased subsidies.
In addition to the increase in project expenses, the completion year of the project was postponed due to a decrease in project expenses for each fiscal year based on the analysis over the previous year. Accordingly, the analysis period was extended to 2 years.

• Watershed forestation project
Compared with FY2001 (¥1.2142 trillion), policy cost declined by ¥6.3 billion because all expenses related to forestation and management were financed through subsidies. The project scheme does not require FILP loans and was therefore excluded from the cost analysis. Accordingly, project expenses subject to the analysis decreased and capital investment declined.
In addition to the previous year, the completion year of the analysis was assumed to be until planted forests are to be harvested, which is 1 year from commencement of the analysis elapsed. Accordingly, the analysis period was shortened by 1 year.
(Reference) In accordance with the "Reorganization and Rationalization Plan for Special Public Corporations", "project funds are to emerge from FILP loans in a phased manner and the method of capital investment is to shift to a method of subsidies".

• Comprehensive agricultural land development project
Compared with FY2001 (¥139.8 billion) policy cost declined by ¥17.9 billion. The reason for this is that project expenses subject to the analysis decreased because sections to be newly undertaken were not estimated and then subsidies decreased.
In addition, due to the shortening of 1 year for the construction period as a result of a review of the construction contents and the lapse of 1 year from commencement of the analysis, the analysis period was shortened by 2 years.

The case if assumption is changed

(Unit : billion yen)

Category	Changed assumption and extent of change	Increase / decrease in policy cost
Project of main forestry road construction	Project expenses +10%	22.4
Project of forestation in watershed areas	Business revenue –10%	11.4
Project of comprehensive development of agricultural land	Project expenses +10%	11.8

(Reference)

Budgeted amount of subsidies and capital investment in FY 2002

Subsidies: ¥34.2 billion

Capital investment: ¥24.5 billion

5. Projections in the analysis

1) As for the forestry road construction project, loans payable and subsidies calculated utilizing project expenses for the section multiplied by the subsidy ratio (standard ratio: 2/3) are appropriated for required expenses. An amount equivalent to loans payable shall be collected from beneficiaries, etc as "imposed charges" and "burden charges" by means of equal semi-annual payments with interest 21 years after non-payment for 4 years of determent. Accordingly, the amount used in FY2019, the previous year of project achievement, shall be used in FY2040.

By the way, no bad debt is expected in the policy cost analysis because burden charges and imposed charges have been collected with out fail from local government and beneficiaries.

Change in project expenses

(Unit : billion yen)

FY	Result		Estimated	Planned	Trial assumption	
	1999	2000	2001	2002	2003~2018	2019
Project expenses	27.6	28.0	22.8	17.6	Same as the previous year	16.9

2) As for the watershed forestation project, required expenses are covered with 2/3 by capital investment and 1/3 by loans by FY2023 if project achievement is expected to be possible only with project income. From then, income from logging shall be appropriated as funds for repayment of loans. The period for income anticipated from logging shall be regarded to be until FY2080 when land afforested during and prior to 2001 has matured and is deforested.

Change in project incomes

(Unit : billion yen)

FY	Result		Estimated	Planned	Trial assumption		
	1999	2000	2001	2002	2003~2009	Total of 2010~2080	
Project income	0.14	0.07	0.06	0.01	0.03	830.9	Total based on felling plan

3) In the project of the comprehensive development of agricultural land, subsidies and loans from the national treasury are appropriated for project expenses. The amount of subsidies is calculated with yearly project expenses by area, multiplied by the subsidy ratio, and the amount of loans is calculated with yearly project expenses after the deduction of subsidies and the adjustment of the difference between the collected amount and the repaid amount. The amount equivalent to loans payable shall be collected under the name of burden charges by means of yearly equal payment with interest for 15 years. Therefore, the collection of the amount used in FY 2009, the last year of the project achievement shall be completed in FY 2024. No bad debt is expected in the policy cost analysis because burden charges have been collected with certainty from local governments.

Change in project expenses

(Unit : billion yen)

FY	Result		Estimated	Planned	Trial assumption	
	1999	2000	2001	2002	Total of 2003 ~ 2009	
Project expenses	28.9	29.7	37.5	27.2	148.7	Total based on implementation plan for sections started by FY2001

6. Reasons for granting of subsidies, mechanism and underlying laws

1) Project of main forestry road construction

The project is a public enterprise to promote comprehensive regional development centering on forestry in the mountainous regions with abundant forest resources and a high percentage of forest area. Therefore, the project accepts subsidies from the general account. The amount of the subsidies is calculated in the following formula: project expenses × standard subsidy ratio (2/3) × adjustment ratio × marginal region adjustment ratio (average subsidy ratio to the overall project expenses analyzed: 81%).

(Underlying laws and regulations)

Subsidies: Article 36 of the Law concerning the Japan Green Resources Corporation and Article 35 of the Ordinance for Enforcement of the Law concerning the Japan Green Resources Corporation

2) Project of forestation in watershed areas.

The project is a public enterprise for forestation of non-forest or sparsely woodland and degraded forestland within current or planned protected forest areas for the purpose of the conservation of water resources and preservation of national land. Therefore, the project accepts capital investment [(project expenses – subsidiaries) x 2/3 (partially 10/10 for special measures operations for river source forests) and subsidiaries (expenses for planting and growing after FY2002). In addition, the Corporation accepts financial assistance from the national treasury, equivalent to the amount of interest on loans payable from the transfer of capital investment for the period FY1980 to FY1989.

(Underlying laws and regulations)

Capital investment: Article 3-2 of the Law Concerning the Japan Green Resources Corporation
Subsidiary: budget subsidies

3) Project of comprehensive development of agricultural land

This is a project aimed to improve agricultural land and to establish facilities for land improvement, for the purpose of the steady supply of food, the improvement of agricultural productivity and structure. Therefore, the project accepts subsidies from the general account (averaged subsidy ratio to the overall project expenses is analyzed: 69%). The formula for the amount is as follows: (yearly project expenses by area) × (general subsidy ratio) + (total balance occurring from differences in backward region subsidy ratio). The general subsidy ratio is the ratio of the total of expenses by type of operation multiplied by each subsidy ratio (for example 45% for rezoning and 2/3 for agricultural-use roads), to the total project expenses in the area.

(Underlying laws and regulations)

Subsidies: Budget-based

7. Special remarks

In accordance with the Reorganization and Rationalization Plan for Special Public Corporations, although independent administrative institutions are to be established in FY2003, for the time being, details have not yet been formulated, and analysis was implemented assuming existing corporation form.

(Reference) **Financial Statements**

Japan Green Resources Corporation

Balance Sheet (Forestry Road Account and Others)

(Unit : million yen)

Item	End of FY 2000 (Result)	End of FY 2001 (Estimated)	End of FY 2002 (Planned)	Item	End of FY 2000 (Result)	End of FY 2001 (Estimated)	End of FY 2002 (Planned)
(Assets)				**(Liabilities and capital)**			
Current assets	31,118	20.073	16,341	Current liabilities	7,479	604	559
Cash and deposits	26,536	16,575	13,113	Account payable	6,856	49	49
Securities	3,510	2,926	2,727	Accrued expenses	547	504	459
Accrued income	538	491	499	Advances	4	2	2
Account receivable	534	0	0	Other current liabilities	71	49	49
Other current assets	1	82	1	Fixed liabilities	611,703	561,603	564,753
Fixed assets	595,857	549,978	556,855	Green resources bonds	—	—	5,000
Assets related to forestry road activities	300,405	293,527	293,771	Long-term loans payable	246,210	235,891	218,804
Assets for specified region development project	0	172	444	Installments payable	30	0	0
Assets for agricultural land development project	291,558	252,534	259,069	Long-term advances received	355,935	315,884	333,834
Loans related to infrastructure maintenance activities	2,078	1,91	1,751	Reserves	9,528	9,828	10,114
Tangible fixed assets	1,214	1,181	1,150	(Total liabilities)	619,182	562,207	565,312
Investments and other assets	603	613	669	Capital			
				Capital investment from the national treasury	1,435	1,435	1,435
				Surplus			
				Earned surplus	6,358	6,409	6,448
				(Total capital)	7,793	7,844	7,884
Total assets	626,975	570,051	573,196	**Total liabilities and capital**	626,975	570,051	573,196

Income Statement (Forestry Road Account and Others)

(Unit : million yen)

Item	FY 2000 (Result)	FY 2001 (Estimated)	FY 2002 (Planned)	Item	FY 2000 (Result)	FY 2001 (Estimated)	FY 2002 (Planned)
(Expenses)				**(Revenues)**			
Ordinary expenses	11,847	11,267	9,810	Ordinary profits	11,511	11,359	9,850
Interest expense on borrowings	9,530	9,138	8,207	Income of installment interest	9,846	9,234	8,282
Bond issuance expenses	—	—	0	Revenues from entrusted activities	537	868	587
Development activities expenses	7	0	0	Compensation for administrative expenses related to infrastructure maintenance activities	1	3	0
Expenses related to entrusted activities	337	525	259				
Agent service fees	16	16	—	Income of subsidies from the national treasury	789	612	483
Overseas agricultural development and survey expenses	480	327	226	Non-operating revenue	338	672	498
General and administrative expenses	811	893	861	Extraordinary revenue	0	0	0
Provision for collection expenses	507	173	119	Net loss	352	—	—
Non-operating expenses	159	196	139				
Extraordinary losses	17	71	0				
Net profit	—	51	40				
Total	11,863	11,389	9,850	**Total**	11,863	11,389	9,850

Note: This account is based on Article 28 of the Finance Law.
This table includes figures concerning the following projects and others which are out of the analysis: project of establishing foundation for comprehensive use of specified forests, project of forestry roads for development of specified forestry areas, special project of Hachirougata,overseas special project, entrusted works and sub-leased funds.

Balance Sheet (Account of Forestation)

(Unit : million yen)

Item	End of FY 2000 (Result)	End of FY 2001 (Estimated)	End of FY 2002 (Planned)	Item	End of FY 2000 (Result)	End of FY 2001 (Estimated)	End of FY 2002 (Planned)
(Assets)				**(Liabilities and capital)**			
Current assets	6,834	5,504	3,990	Current liabilities	599	256	493
Cash and deposits	4,212	3,253	2,813	Accounts payable	16	16	16
Securities	817	817	417	Accrued expenses	530	500	467
Accrued income	6	7	7	Other current liabilities	13	10	10
Accounts receivable	4	0	0	Fixed liabilities	235,325	238,354	235,774
Other current assets	1,795	1,427	753	Green resources bonds	—	—	2,000
Fixed assets	906,111	944,583	974,324	Long-term loans payable	231,108	234,123	229,700
Assets related to forestation activities	905,250	943,733	973,485	Reserves	4,217	4,232	4,074
Tangible fixed assets	815	806	796	(Total liabilities)	235,884	238,880	236,268
Investment and other assets	46	45	43	Capital			
				Capital investment from the national government	674,453	708,586	733,121
				Surplus	2,608	2,621	8,926
				Capital surplus	0	0	6,213
				Earned surplus	2,608	2,621	2,713
				(Total capital)	677,061	711,207	742,047
Total assets	912,945	950,087	978,314	**Total liabilities and capital**	912,945	950,087	978,314

Income Statement (Account of Forestation)

(Unit : million yen)

Item	FY 2000 (Result)	FY 2001 (Estimated)	FY 2002 (Planned)	Item	FY 2000 (Result)	FY 2001 (Estimated)	FY 2002 (Planned)
(Expenses)				**(Revenues)**			
Ordinary expenses	1,191	1,024	787	Ordinary profits	1,137	1,037	878
Cost of forestation activities	177	122	4	Revenues from forestation activities	66	48	4
Administrative expense related to sales from and termination of forestation activities	3	10	9	Compensation for administrative expenses related to sales from and termination of forestation activities	3	10	9
Interest on loans payable	1,007	890	773				
Non-operating expenses	3	2	1	Revenues from government grants	1,007	890	773
Extraordinary losses	1	0	0	Non-operating revenue	60	89	92
Net profit	—	13	91	Net loss	55	—	—
Total	1,191	1,037	878	**Total**	1,191	1,037	878

Note: This account is based on Article 28 of the Public Finance Law.
This table includes figures concerning the project of maintenance and improvement of specified mountainous areas, which is out of the analysis.