

**Forest Research and Management Organization**  
(National Research and Development Agency) (Water Source Forest Account)

<https://www.ffpri.affrc.go.jp/>

1. Summary of operations implemented using FILP funds

Forestation for Water Conservation (The Forest Research and Management Organization, aiming at conserving headwaters, bears expenses for the project to plant water reservoir forests, conserve water resources indispensable to people's lives, preserve national land and prevent global warming in private sector forests where planting cannot be advanced only through forestry production activities under forest owners' own initiatives, although planting is necessary.)

Note: Operations not eligible for FILP include the expenses for planting since FY2002.

2. Amount of lending under FILP

(Unit: billion yen)

FY2023 FILP	Estimated outstanding amount of FILP lending at the end of FY2022
4.6	94.6

3. Estimated policy cost analysis of the project

(1) Policy cost (Unit: billion yen)

Category	FY2022	FY2023	Fluctuation
1. Government expenditure (subsidies, etc.)	2.7	4.8	2.1
2. Government revenue (payments to the government, etc.)*	-	-	-
3. Opportunity cost of capital investments, etc.	720.8	711.8	-8.9
<b>Total (1+2+3=policy cost(A))</b>	<b>723.4</b>	<b>716.6</b>	<b>-6.8</b>
Analysis period (years)	89	89	-

(2) Breakdown of policy cost by the time of the provision of funds (Unit: billion yen)

Category	FY2022	FY2023	Fluctuation
(A) Policy cost (previously cited)	723.4	716.6	-6.8
1) Opportunity cost of capital investments, etc. provided before the beginning of the analysis period	428.2	635.3	+207.1
2) Policy cost expected to be newly accrued during the analysis period	295.2	81.4	-213.9
Government expenditure (subsidies, etc.)	2.7	4.8	+2.1
Government revenue (payments to the government, etc.)*	-	-	-
Opportunity cost of surplus, etc.	240.4	14.4	-226.0
Opportunity cost of capital investments, etc.	52.2	62.2	+10.0

(3) Year-to-Year comparison analysis

(Computing any fluctuation from previous year)

(Unit: billion yen)

		FY2022	FY2023	Simple fluctuation
Policy cost	Simple comparison (before adjustment)	723.4	716.6	-6.8
	Past year comparison (after adjustment)	721.9	666.3	-55.6

[Real fluctuation factor analysis]

○Factors behind policy cost increase

- None

○Factors behind policy cost decrease

- Decrease in cost due to an increase in revenue from sales of timber from developed forests (-55.6 billion yen)

(4) Sensitivity analysis (cases where assumptions change)

(Unit: billion yen)

(A) Policy cost (previously cited)	Case of assumed interest rate + 1%	Fluctuation	1. Government expenditure (subsidies, etc.)	2. Government revenue (payments to the government, etc.)*	3. Opportunity cost of capital investments, etc.
			716.6	732.4	+15.8

(A) Policy cost (previously cited)	Case of a 1% decrease in operating revenues	Fluctuation	1. Government expenditure (subsidies, etc.)	2. Government revenue (payments to the government, etc.)*	3. Opportunity cost of capital investments, etc.
			716.6	718.1	+1.5

(Note) Components in each column may not add up to the total because of rounding.

\* Government revenue (payments to the government, etc.) is booked as a negative amount. Example: -10 b. yen for 10 b. yen in payments to government, etc.

#### 4. Outline of estimation and project prospect employed in the analysis

##### [Outline of estimation]

- 1) Regarding the Forestation Project for Water Conservation out of the various projects undertaken by the Organization, the analysis covers the operating expenses for a period ending when the portions of the project that had started by FY2001 will be completed. In the project, expenses were calculated in regard to the following works: The afforestation and water source special forests development projects which have started in FY2002 and thereafter, are excluded from the analysis because they are fully subsidized. Therefore, the forest development and management expenses of approx. 402,000 hectares which were afforested in and prior to FY2001 are calculated until the completion of the project. (Total operating expenses in FY2023 and thereafter: 270.1 billion yen)
- 2) The analysis period: 89 years from FY2023 to FY2111 until all lumbering is completed (89 years in FY2022).
- 3) Operating revenue (revenue from sales of timber from developed forests) is estimated based on the most recent timber prices.
- 4) The simulation of the future development of the projects has been done based on assumptions set based on the above-described way of thinking. Then, the amounts of investment, subsidies and grants-in-aid required for the implementation of these projects are calculated based on the simulation.

##### [Project prospect]

The required expenses are covered by financial resources including capital investment and loans until FY2039. Subsequently, revenues from the sale of timber from developed forests will be gradually used as the fund source for loan repayments. The period during which revenues from the sale of timber from developed forests are expected is until FY2111, when land afforested in and prior to FY2001 is expected to have matured and have been deforested.

(Unit: billion yen)

FY	Result				Estimated	Planned	Assumptions for calculation	
	2018	2019	2020	2021	2022	2023	2024-2111	
Operational income	0.57	0.62	0.56	0.92	0.69	1.31	299.0	Based on harvest schedule

\*Operational income does not include compensation for administrative expenses related to sales and contract cancellation.

#### 5. Reasons for granting of subsidies, mechanism and underlying laws

This is a public project for the development of forests at water source locations as parts of protected forests, such as non-forest, sparsely wooded land and degraded forestland, for the purpose of securing stable water resources and preserving national land. Therefore, for the project expenses, excluding internal revenue sources, the project accepts capital investments (2/3 of expenses for planting before FY2001) and subsidies (the entirety of the expenses for planting and growing since FY2002 and for special measures for water source forests, as well as the amount equivalent to 2/3 of interest payable on loans) from the General Account.

##### [Underlying laws and regulations]

##### (Capital investment)

"Act on the Forest Research and Management Organization, National Research and Development Agency"

##### (Capital)

Article 6: The capital of the Organization shall be the amount of funds provided by the Government as provided for in Article 5, Paragraph 2 of the Supplementary Provisions of the Act.

2 The government may grant the Agency additional funding if deemed to be necessary within the scope provided for in the budget.

3 (Omitted)

##### (Subsidies)

##### Budgetary measure

##### (Payments to the National Treasury)

"Act on the Forest Research and Management Organization, National Research and Development Agency"

Article 17: After the disposition related to the last business year of the medium- to long-term objective period prescribed in Article 35-4, paragraph (2), item (i) of the Act on General Rules (hereinafter referred to as the medium- to long-term objective period in this paragraph and paragraph (4)) based on the provisions of Article 44, paragraph (1) or (2) of said Act, in each account related to the operations described in the preceding Article, items (i) and (ii), and if there are reserve funds specified in paragraph (1) of said Article, the Organization may appropriate the amount approved by the Minister of Agriculture, Forestry and Fisheries among the amount corresponding to such funds to the operations prescribed in Article 13, paragraph (1) during the next medium- to long-term objective period as provided by the medium- to long-term plan approved under Article 35-5, paragraph (1) of said Act concerning the next period of such medium- to long-term objective period (when the approval was obtained on the revisions according to the latter clause of Article 35-5, paragraph (1) of said Act, then as provided by the revised version).

2 When the Organization has a surplus after deducting the amount approved in paragraph (1) from the reserve amount stipulated in the same clause, it shall pay the surplus to the national treasury.

3~5 (Omitted)

#### 6. Special remarks

None

#### (Reference) Outcome and social and economic benefits of operations

In Forestation for Water Conservation, the afforestation project in private water source forest areas totaling 489,000 hectares was completed by the end of FY2022.

The estimates on the beneficial effects for the 402,000 hectares of planted area (the total area targeted for mid-term assessment from FY1961 to FY2001 (Afforestation and water source forest special development projects that are carried out in FY2002 and thereafter are fully subsidized.)) based on the "Guidelines for Implementation of Evaluation on Afforestation Public Projects" indicates about 12,894.4 billion yen for the total expenses and 17,495.3 billion yen for the total benefits.

The following is the breakdown:

- (1) Water source development and protection effect (flood prevention, water preservation at watersheds, water purification): 11,943.9 billion yen
- (2) Mountain terrain preservation effect (soil outflow prevention, mudslide prevention): 4,200.1 billion yen
- (3) Environment preservation effect (carbon fix): 1,180.9 billion yen
- (4) Timber production effect (securing and facilitation of timber production): 170.4 billion yen

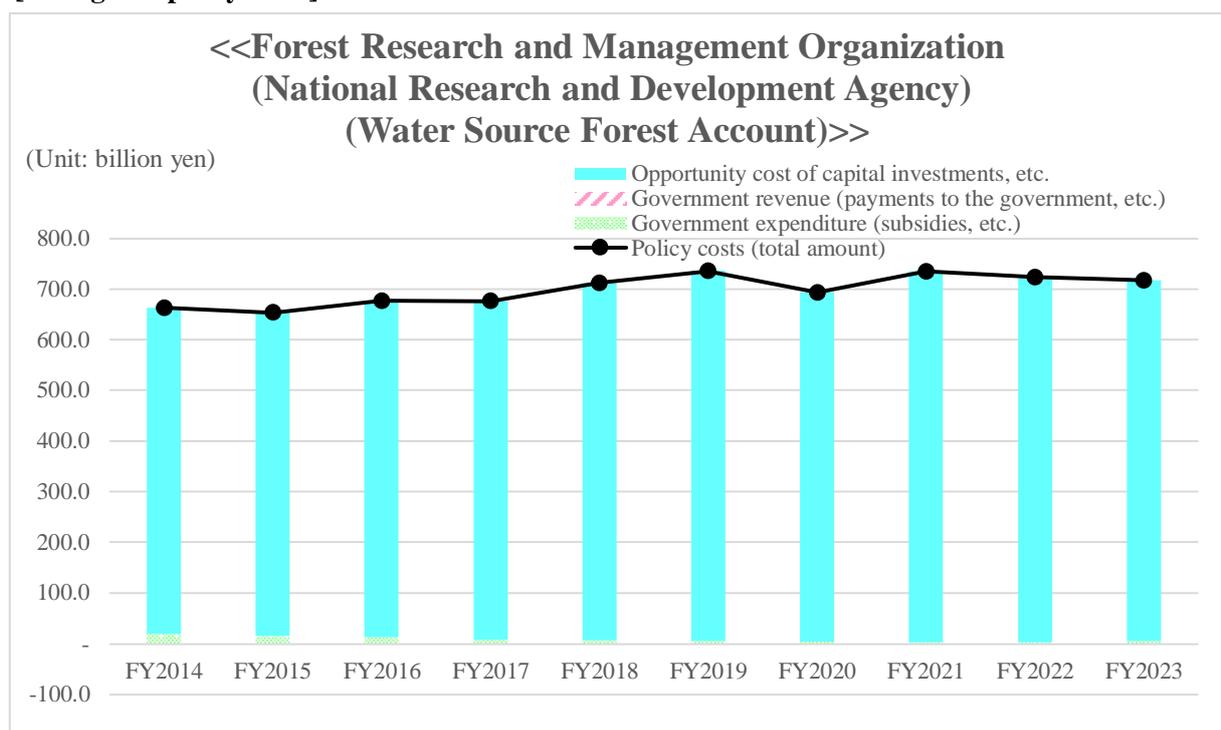
Albeit the difficulty in obtaining a quantitative measurement of the benefits generated by the operations in and after FY2022, the benefit can be estimated as follows with a certain condition and based on the aforementioned amount of the impact;

in the case where the social discount rate is set to 4%: 1,754.0 billion yen

in the case where the social discount rate is set to that of the policy cost analysis: 2,448.0 billion yen

# Overview of policy cost analysis results

## [Changes in policy costs]



Notes 1. Policy costs for each fiscal year differ in assumptions including interest rates applied to estimates.

2. Figures until FY2016 indicate the policy cost of Forestry and Forest Products Research Institute.

(Unit: billion yen)

	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023
Policy costs (total amount)	663.1	653.8	676.3	676.1	712.5	735.4	693.7	734.1	723.4	716.6
Government expenditure (subsidies, etc.)	19.7	15.7	13.0	8.3	7.1	5.8	3.7	2.9	2.7	4.8
Government revenue (payments to the government, etc.)	-	-	-	-	-	-	-	-	-	-
Opportunity cost of capital investments, etc.	643.4	638.1	663.2	667.8	705.4	729.6	690.0	731.3	720.8	711.8

### 【Explanation of policy cost trends】

- As the forestation project for water conservation in and before 2001 is subject to analysis and the total project cost remains almost unchanged, total investments accepted by the Organization that accepts investments covering a portion of the project cost remain almost unchanged. Therefore, no major fluctuations are seen in policy costs.

- Policy costs fluctuate due to interest rate changes over the long policy cost analysis period (89 years) for the long-term forestation project for water conservation.

### 【FILP agency's self-assessment of policy cost analysis results (FY2023)】

- The policy cost in FY2023 decreased by 55.6 billion yen from the previous year in real terms due to a rise in afforestation tree sales revenues accompanying a wood price hike. It is believed that there is no particular problem.

The results of the sensitivity analysis (case of assumed interest rate + 1%) showed an increase of 15.8 billion yen in the policy cost due to the effects of the discount factor and other assumptions. In the sensitivity analysis (case for a 1% decrease in operating revenues), the policy cost increased by 1.5 billion yen due to the effects of revenue assumptions. Given these results, no particular problem was recognized.

## (Reference) Financial Statements

## Balance Sheet

(Unit: million yen)

Item	End of FY2021 (Result)	End of FY2022 (Estimated)	End of FY2023 (Planned)	Item	End of FY2021 (Result)	End of FY2022 (Estimated)	End of FY2023 (Planned)
<b>(Assets)</b>				<b>(Liabilities and net assets)</b>			
Current assets	10,386	9,773	10,048	Current liabilities	10,473	9,619	9,051
Cash and bank deposits	9,746	9,222	9,501	Short-term borrowings	9,344	9,112	8,655
Prepaid expenses	17	17	17	Lease liabilities (short-term)	21	14	-
Accrued income	0	0	0	Accrued payments	189	256	161
Contra-accounts for provision for bonuses	195	215	211	Accrued expenses	8	8	8
Other current assets	428	319	319	Deposit received	21	15	15
Fixed assets	1,122,096	1,152,041	1,170,425	Provisions			
Tangible fixed assets	1,121,856	1,151,827	1,170,233	Provision for bonuses	195	215	211
Water source forest	1,120,483	1,150,484	1,168,913	Other current liabilities	695	-	-
Buildings	4	4	3	Fixed liabilities	92,252	87,967	83,943
Structures	34	29	25	Contra-accounts for assets liabilities			
Tools furniture and fixtures	67	41	22	Contra-accounts for assets funded by subsidies, etc	151	116	84
Land	1,269	1,269	1,269	Long-term borrowings	89,749	85,537	81,482
Intangible fixed assets	84	59	37	Lease liabilities (long-term)	14	-	-
Trademark rights	0	0	0	Provisions			
Software	84	59	36	Provision for retirement benefits	2,338	2,313	2,376
Telephone subscription right	0	0	0	(Total liabilities)	102,724	97,586	92,993
Investment and other assets				Capital			
Security deposit and guarantee	155	155	155	Government investment	782,784	792,396	801,940
				Capital surplus	243,918	268,771	282,507
				Capital surplus	263,149	290,397	305,341
				Other administrative costs accumulated			
				Amount equivalent to accumulated net gains or losses on sale or disposal (-)	-19,232	-21,627	-22,834
				Retained earnings	3,056	3,062	3,032
				Reserve fund carried over from the previous Mid-term Objective period	2,159	1,701	1,176
				Reserve fund	-	897	1,360
				Unappropriated income for the current year	897	464	495
				(Of this, gross profit)	(897)	(464)	(495)
				(Total net assets)	1,029,757	1,064,228	1,087,479
<b>Total assets</b>	<b>1,132,482</b>	<b>1,161,814</b>	<b>1,180,473</b>	<b>Total liabilities and net assets</b>	<b>1,132,482</b>	<b>1,161,814</b>	<b>1,180,473</b>

Note: Components may not add up to the total because of rounding.

## Income Statement

(Unit: million yen)

Item	FY2021 (Result)	FY2022 (Estimated)	FY2023 (Planned)
Ordinary expenses	2,311	2,771	2,441
Cost of forestation activities	102	29	50
Administrative expense related to sales from and termination of forestation activities	784	810	822
Water reservoir forest service expense	20	29	34
Administrative expenses for reconstruction promotion	26	48	33
General and administrative expenses	846	1,397	1,166
Finance expenses	525	458	335
Miscellaneous losses	8	0	0
Ordinary income	2,863	2,776	2,411
Revenues from forestation activities	551	113	193
Compensation for administrative expenses related to sales from and termination of forestation activities	786	810	822
Reversal of contra-accounts for assets by subsidies	36	35	32
Revenue from national treasury subsidies, etc.	1,000	1,399	972
Revenue for water reservoir forest service cost	2	3	3
Income regarding contra-accounts for provision for bonuses	35	37	36
Financial income	0	0	0
Miscellaneous income	453	379	353
Ordinary profit or loss	552	6	-29
(Net profit or loss)	552	6	-29
Reversal of reserve fund carried over from the previous Mid-term Objective period	345	458	525
Gross profit	897	464	495

Note: Components may not add up to the total because of rounding.