

The Cost-Effectiveness and Cost-Benefit Analysis Report for the Selected Project and Alternative Project for the "Environmental Cleaning, Maintenance, Patrol, and Management Project for High-Risk Areas for Dengue Fever in National Non-Public Use Real Estate" and the Relevant Explanation for the Financial Resources Funding and the Utilization of Funds

I. The cost-effectiveness and cost-benefit analysis report for the selected project and alternative project

A. The selected project and the alternative project

The National Property Administration (hereinafter referred to as NPA) of the Ministry of Finance (MOF) has encountered difficulty in the management of national non-public use real estate due to the large number of estates and the scattered distribution. Such difficulty has resulted in unclean and disorderly environments. The current budget fund for the cleaning and maintenance of the environment is extremely insufficient to cover the costs. For the past consecutive years, such fund was exhausted before the end of every fiscal year. The NPA had to report such situations to the Executive Yuan and request instructions on the use of the secondary reserve fund of the general budget proposal for the central government. In response to the NPA's problems of serious insufficiency of human resources, etc., the Ministry formulated this Project to patrol sites of national vacant houses and lands with high-risk areas for dengue fever with frequency variation between once a week or once a month in accordance with the seasonal characteristics and regional

differences. The environment of national non-public real estate shall be cleaned and maintained on a regular basis so as to reduce the breeding of dengue vector mosquitoes, lower the risk of dengue fever outbreak, improve the environment of national non-public use real estate, and create a high-quality living environment for the neighborhood.

All the patrol, management, and regular cleaning and maintenance of the national vacant houses and lands with high-risk for dengue fever require fund investment as well as manpower recruitment for the on-site cleaning and maintenance. In addition, due to the recent exacerbation of the dengue fever, competent authorities have requested the NPA to increase the frequency of the patrol and management; however, as there is no alternative for this Project, if the implementation is hindered by limitations of the fund or reduction in the budget, the NPA may only operate with its existing manpower and resources at hand, the expected benefits of this Project will not be achieved, which will have a significant impact on the nation's health.

B. Project Cost Analysis

The Project draws up a budget for the fiscal year 2024 with the total of NT\$136,962,000, further details are as listed below:

1. NT\$22,823,000 for the patrol and management in high-risk areas for dengue fever

The NPA plans to select 1,900 sites of high-risk areas for dengue fever, covering 820 sites in the southern region, to be patrolled once a week from May to December every year, and once a month for the other months; 1,080 sites in the central and northern

regions, to be patrolled once a week from May to October every year, and once a month for the other months. With 52 weeks in a year (26 weeks from May to October, 35 weeks from May to December), 66,540 patrols would be needed throughout a year.

Based on the estimated average site outsourcing cost of \$343 per inspection for each branch and office of the NPA, the annual cost for the fiscal year 2024 is NT\$22.823 million.

2. NT\$109,789,000 for the cleaning and maintenance of national non-public use real estate

Referring to the actual expenditure of NT\$107,845,000 for the cleaning and maintenance of the environment in the fiscal year 2021, adding to that an estimated cost of NT\$1,944,000 for the installation of hedges (including the follow-up maintenance), NT\$109,789,000 will be needed for the fiscal year 2024 where the operation will cover:

- (1) Removal and disposal of garbage and other waste materials.
- (2) Removing weeds.
- (3) Tree cutting (pruning).
- (4) Installation of blockage facilities (fences, hedges (including maintenance), car barriers, etc.).
- (5) Leading a site survey of the area to be cleaned by a clearance contractor.

3. NT\$4.35 million for the hiring of temporary staff, maintenance of the national non-public property management system, and the automated addition and amendment of functions.

- (1) The increase in the frequency of patrols in high-risk areas for dengue fever to once a week would significantly increase the

administrative workload. Therefore, this Project expects to hire 3 temporary staff members to handle the related administrative operations. The required cost of NT\$450,000 per person, NT\$1.35 million for 3 persons per year calculated by the basic wage, added with the appropriation of labor pension, subsidiary labor insurance and health insurance, year-end bonus, overtime pay, and the reimbursement of wages for unused annual paid leave.

- (2) The annual maintenance cost of approximately NT\$3 million involved in this Project is needed for the maintenance and data processing of the national non-public use property management system covered in this Project including the selection, correction, supplemental creation of the data file or the provision of statistical reports on the property to be patrolled and managed, the automated addition and amendment of functions, and the performance adjustments, etc.

C. The Expected Benefits of the Project

1. Quantifiable benefits

From 2024 to 2029, the Project is expected to reduce the number of penalties issued by the competent environmental protection authorities and health authorities by 12 times per year. Based on the estimated cost of NT\$60,000 per case for a lawyer to file an administrative litigation, the estimated cost savings is NT\$720,000 per year, or NT\$4.32 million in 6 years.

2. Non-quantifiable benefits

- (1) Increase the frequency of patrols in high-risk areas for dengue fever, identify and promptly remove inappropriately

disposed waste, avoid the influence of the Broken Windows Theory, in order to reduce the subsequent cleaning costs.

- (2) Implement the patrolling management project for high-risk areas for dengue fever and environment cleaning plans, diminish the breeding of dengue vector mosquitoes, reduce the chance of the prevalence of dengue fever, avoid the high cost required to contain the spread of the dengue fever with huge manpower and material resources in the future.
- (3) Enforce the environmental cleaning of national vacant houses and lands, with measures such as the installation of fences, hedges, car barriers, implementation of environmental afforestation and beautification or the demolition of abandoned buildings, to improve management efficiency, enhance the local city landscape, and create a high-quality living environment in the neighborhood.

II. Financial Resources Funding

In accordance with the official letter Tai-Cai-Zi No. 1110038655 issued on December 21, 2022 by the Executive Yuan, the Executive Yuan approved the total budget of NT\$821.772 million for the "Environmental Cleaning, Maintenance, Patrol, and Management Project for High-Risk Areas for Dengue Fever in National Non-Public Use Real Estate" to be implemented over six years from the fiscal year 2024 to 2029, with the following funding arrangements:

- A. The funds needed for the fiscal year 2024 shall be listed in the National Property Administration and Subordinated Agencies' fiscal year 2024 Unit Budget Proposal.

B. The funds required from the fiscal year 2025 to the fiscal year 2029 shall be handled in accordance with the due process provided by the budgetary procedures.

III. The Utilization of Funds

A. The Project Budget Requirements and Estimated Fund Utilization for each Fiscal Year

Unit: thousand NT\$

Task \ Year	2024	2025	2026	2027	2028	2029	Subtotal
Patrol and management in high-risk areas for dengue fever	22,823	22,823	22,823	22,823	22,823	22,823	136,938
Cleaning and maintaining national non-public use real estate	109,789	109,789	109,789	109,789	109,789	109,789	658,734
Hiring of temporary staff, maintenance of the national non-public property management system, and the automated addition and amendment of functions	4,350	4,350	4,350	4,350	4,350	4,350	26,100
Total	136,962	136,962	136,962	136,962	136,962	136,962	821,772

B. Project Work Tasks for Each Year and the Implementation Schedule

1. Patrol and Management in High-risk Areas for Dengue Fever

Year, Month Work Task		Previous Year				2024 - 2029												
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Patrol and management in high-risk areas for dengue fever	1. Planning and public tendering of the consignment agreement																	
	2. Bidding opening, price negotiation, and contract signing operations																	
	3. Patrol and management carried out by the contractors																	
	4. Inspection before acceptance carried out by the NPA's subordinate branches and offices																	

2. Cleaning and Maintaining National Non-Public Use Real Estate

Year Month Work Task		Previous Year				2024 - 2029												
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Sep	Dec	
Cleaning and maintainin g national non- public use real estate	1. Planning and public tendering of the consignment agreement																	
	2. Bidding opening, price negotiation, and contract signing operations																	
	3. Patrol and management carried out by the contractors																	
	4. Inspection before acceptance carried out by the NPA's subordinate branches and offices																	