

## SECTOR ASSESSMENT (SUMMARY): Transport

### A. Sector Road Map

#### 1. Sector Performance, Problems, and Opportunities

1. Tuvalu is located in the southwest Pacific Ocean with a total population of 11,646 living on nine atolls and outer islands, which from north to south are Nanumea, Niutao, Nanumaga, Nui, Vaitupu, Nukufetau, Funafuti, Nukulaelae, and Nulakita. Around half of the population lives on these outer islands. The small land mass, combined with infertile soil, create a heavy reliance on the sea. The primary economic activities are fishing and subsistence farming, with income from foreign fishing access being a major source of government revenue (comprising around 58% of nonaid revenue and 43% of the national budget or A\$31.4 million in recent years).<sup>1</sup> Income from Tuvaluan seafarers working on international ships has previously provided a substantial source of remittance, but as of 2019 only a small number of seafarers are employed overseas.

2. The effectiveness and efficiency of maritime transport is highly correlated and integral to the economic development of Tuvalu. The nation is served by an international container shipping service, and bulk fuel is delivered by an oil and chemical carrier. Domestic shipping is provided by government-owned ships, which are the only means of transport between the islands.

3. The government fleet includes two passenger–cargo ships operated by the Ministry of Transport, Energy and Tourism (MTET), a fisheries research vessel, a vessel used for a variety of development tasks, and a patrol boat. The passenger–cargo ships travel from Funafuti to the outer islands and Fiji, so each island only has access to these ships once every 2–3 weeks. Table 1 shows the passengers and cargo carried by the ships in recent years. In addition to the regular services, these ships are occasionally used for medical evacuations. They also carry students between Funafuti, Vaitupu, and Fiji where secondary or higher-level education is available. These ships therefore not only provide lifeline support to the Tuvaluan people but also help keep the communities connected.

**Table 1: Outer Island Passenger and Cargo Data**

Vessel	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 <sup>a</sup>
<i>Nivaga II</i> <sup>b</sup>											
Passengers	7,650	8,044	7,862	3,813	4,559	6,487	3,592	0	0	0	0
Cargo (m <sup>3</sup> )	4,403	2,529	2,084	982	957	1,707	403	0	0	0	0
<i>Manu Folau</i>											
Passenger	6,542	6,652	6,299	3,892	5,912	5,064	6,359	3,593	5,453	3,544	3,051
Cargo (m <sup>3</sup> )	2,950	2,574	2,151	1,046	1,166	954	1,045	595	910	1,879	1,623
<i>Nivaga III</i>											
Passengers	0	0	0	0	0	0	0	11,294	7,750	10,843	10,480
Cargo (m <sup>3</sup> )	0	0	0	0	0	0	0	2,103	1,185	1,373	2,211
<b>Total</b>											
<b>Passengers</b>	<b>14,192</b>	<b>14,696</b>	<b>14,161</b>	<b>7,705</b>	<b>10,471</b>	<b>11,551</b>	<b>9,951</b>	<b>14,887</b>	<b>13,203</b>	<b>14,387</b>	<b>13,531</b>
<b>Cargo (m<sup>3</sup>)</b>	<b>7,353</b>	<b>5,103</b>	<b>4,235</b>	<b>2,029</b>	<b>2,123</b>	<b>2,661</b>	<b>1,448</b>	<b>2,698</b>	<b>2,095</b>	<b>3,252</b>	<b>3,834</b>

m<sup>3</sup> = cubic meter.

Note: Numbers may not sum precisely because of rounding

<sup>a</sup> 2019 figures are based on data extrapolated from incomplete records.

<sup>b</sup> The *Nivaga II*, originally donated by the United Kingdom in 1988 (gross tonnage 1,043 tons and passenger capacity of 209) was replaced by the *Nivaga III* in December 2015.

Source: Ministry of Transport, Energy and Tourism.

<sup>1</sup>Food and Agriculture Organization. 2015. *Tuvalu Fisheries and Aquaculture Profile*. Available at <http://www.fao.org/fishery/facp/TUV/en>.

4. In December 2019, the government's fleet consisted of five vessels:
- (i) *Nivaga III*, passenger–cargo ship built in Japan and delivered in December 2015; gross tonnage 1,270 tons; passenger capacity 320 (international) or 429 (domestic); cargo capacity 520 cubic meters (m<sup>3</sup>); 31 crew. It was gifted to Tuvalu by the Government of Japan.
  - (ii) *Manu Folau*, passenger–cargo ship built in 2002, donated by Japan; gross tonnage 582 tons; passenger capacity 80; cargo capacity 190 m<sup>3</sup>; 23 crew.
  - (iii) *Tala Moana*, 34 meter (m) research vessel purchased on behalf of the Government of Tuvalu by the United Nations Development Programme (UNDP), to support UNDP and other projects in Tuvalu's outer islands.
  - (iv) *Manui*, 19 m fisheries research vessel built in 1989, donated by Japan, due to be replaced by a similar sized vessel in 2020–2021.
  - (v) *Te Mataili II*, a new 39.5 m patrol boat donated by Australia in 2019 and operated by the Tuvalu Police Service; used for fisheries surveillance and medical evacuation.

5. Tuvalu's interisland maritime transportation service is subsidized by the government as per Table 2. Ship operations currently cost about A\$1.0 million annually. This figure has been higher in previous years, however revenue obtained from vessel charters in 2018–2019 has improved matters and helped offset increasing costs involved in maintaining and repairing older vessels, especially the *Manu Folau* which has required emergency repairs in Suva on three occasions since 2017, and is subject to an annual slipping regime. Anecdotally, freight revenue does not accurately reflect the quantity of cargo transported to the outer islands. The passenger fare is A\$20 one way in deck class regardless of distance, while the fare for first- and second-class cabins is A\$100–A\$200. Some student travel is provided free.

**Table 2: Financial Performance of Maritime-Related Activities**  
(A\$)

Item	2013	2014	2015	2016	2017	2018	2019
<b>A. Revenue</b>							
1. Direct from ship operation							
Passenger income	319,648	407,763	396,837	550,003	437,577	541,648	523,435
Freight income	176,277	152,521	132,546	159,646	136,450	56,766	55,285
<b>Subtotal direct revenue</b>	<b>495,925</b>	<b>560,285</b>	<b>529,383</b>	<b>709,649</b>	<b>574,027</b>	<b>598,414</b>	<b>578,720</b>
2. Indirect from ship operation							
Vessel registration	804,609	3,100	522,855	1,158,282	644,803	854,895	686,075
Wharfage charges	149,358	161,200	512,963	314,742	517,544	352,350	580,910
Other income	47,741	45,647	42,764	34,961	137,280	1,083,553	936,758
<b>Subtotal indirect revenue</b>	<b>1,001,708</b>	<b>209,947</b>	<b>1,078,582</b>	<b>1,507,985</b>	<b>1,229,627</b>	<b>2,290,798</b>	<b>2,203,743</b>
<b>Total revenue</b>	<b>1,497,633</b>	<b>770,232</b>	<b>1,607,965</b>	<b>2,217,634</b>	<b>1,873,654</b>	<b>2,889,212</b>	<b>2,782,463</b>
<b>B. Expenditure</b>							
1. Direct for ship operation							
Fuel	817,083	1,018,176	736,334	1,475,063	1,215,936	602,681	614,582
Staff	777,894	915,564	620,650	1,001,804	849,735	1,232,860	1,573,377
Maintenance	905,713	545,877	1,006,566	436,680	593,221	576,947	892,850
<b>Subtotal direct costs</b>	<b>2,500,690</b>	<b>2,479,616</b>	<b>2,363,550</b>	<b>2,913,547</b>	<b>2,658,892</b>	<b>2,412,488</b>	<b>3,080,809</b>
2. Indirect for ship operation							
<b>Subtotal indirect costs</b>	<b>256,392</b>	<b>701,127</b>	<b>511,158</b>	<b>756,263</b>	<b>692,659</b>	<b>735,700</b>	<b>668,676</b>
<b>Total expenditure</b>	<b>2,757,082</b>	<b>3,180,743</b>	<b>2,874,708</b>	<b>3,669,810</b>	<b>3,351,551</b>	<b>3,148,188</b>	<b>3,749,485</b>
Profit or loss	(1,259,449)	(2,410,511)	(1,266,743)	(1,452,176)	(1,477,897)	(258,976)	(967,022)

( ) = negative.

Note: Numbers may not sum precisely because of rounding.

Source: Ministry of Transport, Energy and Tourism.

6. The government's 2020 budget includes an increased allocation of funds for maintenance. If asset depreciation and the operation and maintenance of wharves, docking facilities, warehousing, and other facilities are taken into consideration, the total subsidy could reasonably exceed A\$3 million–A\$4 million per annum. Revenue from vessel registration (relating to Tuvalu's International Shipping Registry) was volatile during 2013–2015 with fees dropping to almost nothing in 2014 but recovering in 2015. Passenger and freight income did not cover the cost of fuel, even though the fuel price was low during this period. Any negative variation in the fuel price has a direct impact on the government subsidy. The MTET is considerably under-resourced and so is unable to effectively carry out its functions and would benefit from additional funding.

7. Government ships carry passengers and cargo between the capital and outer islands, but no outer island has a facility for the ships to berth alongside (as is possible in Funafuti). Passengers and cargo have to be carried by small workboats that shuttle between the ship and the shore, which can be dangerous in rough seas. Transferring between the ships and the workboats offshore is particularly challenging because of the differing motion between the ship and the workboats alongside. Workboats loaded with passengers and cargo navigate narrow channels, with operators needing to adjust their timing to cater for the period and direction of the swell. While Nanumea, Nukufetau, and Vaitupu have basic reception facilities for workboats, the movement of passengers in the other islands involves strenuous, potentially risky embarkation and disembarkation from workboats via shallow water, while cargo needs to be carried ashore manually. Numerous incidents have occurred during these transfers, including fatalities in 2019.

## **2. Government's Sector Strategy**

8. The sector strategy outlined in the government's National Strategy for Sustainable Development, 2016–2020 (Te Kakeega III) recognizes that sea transport and shipping services among the eight outer islands remain difficult.<sup>2</sup> A new national strategy document (Te Kakeega IV) is being developed in 2020. Servicing these communities by being able to ship greater volumes of bulk cargo more frequently is a development priority. The strategy also states that an interval of 2 months or more between ship visits is unacceptable. It tasks the Ministry of Home Affairs and Agriculture and the MTET with working together to produce outer island shipping schedules that minimize disruptions—a common characteristic of past shipping schedules—to maximize shipping efficiency for cargo and passengers.

9. The existing strategy includes (i) the consideration of alternative international air and sea services; (ii) the provision of safer boat facilities on all outer islands; (iii) the provision of adequate shipping services to the outer islands; and (iv) the provision of more accurate and reliable observations, forecasts, and warnings of weather and climate. These objectives are backed up with refitting and maintenance programs for the five government-owned ships.

10. The maritime transport component of the Tuvalu Infrastructure Strategy and Investment Plan 2016–2025, endorsed by the Tuvalu Cabinet in December 2016, focuses on the construction of harbors on the four outer islands particularly vulnerable to ship–shore transfer challenges (Nanumaga, Nui, Niutao, and Nukulaelae). Under the original project, Nukulaelae was the first of the islands to receive upgraded port infrastructure, with work commencing in late 2018 involving the construction of a new channel and small boat harbor. The second island was Niutao, under the first additional financing, with procurement ongoing. The World Bank is preparing designs in discussion with the government for a new harbor facility in Nanumaga.

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<sup>2</sup> Government of Tuvalu. 2016. *Te Kakeega III: National Strategy for Sustainable Development, 2016–2020*. Funafuti.

11. With the change of national government in late 2019, a range of outer island transport priorities were promulgated by the new administration. An immediate priority is to improve shipment of cargo to outer islands through procurement of a landing barge. There are other priorities in the government's plan, such as medical clinics, schools, housing, cyclone remediation, and trade development projects in the outer islands that will entail a dependency on maritime transport if they are to be realized.

12. Concurrent with the government's actions to address the domestic shipping situation, the Asian Development Bank (ADB) has completed a scoping study to assess the viability of replacing the ageing *Manu Folau*. The government has a preference for a passenger–cargo vessel to serve the nation's transport needs.

13. Tuvalu's infrastructure strategy includes a whole-life approach, covering operation and maintenance (both routine and periodic maintenance). This approach includes the application of investment criteria (multicriteria analysis) for the prioritization of major infrastructure projects, including links to the original Tuvalu Infrastructure Strategy and Investment Plan, Tropical Cyclone Pam Recovery, and Vulnerability Reduction Plan. The strategy goes to some lengths to explain that identifying the operation and maintenance costs will ensure adequate funding allocation, but failure to identify these costs could result in nonallocation of the required funds. An institutional development plan for maintenance of outer island maritime infrastructure was prepared in 2018 as an activity under the original project.

14. Despite the aspirations described in the government's strategic documents, and in common with many other remote communities exposed to harsh, corrosive tropical environments, in practice it has proven difficult to maintain assets, including vessels and maritime facilities, in Tuvalu. In recognition of this, the government committed to increasing the amount of funding dedicated to maintenance in its 2019 and 2020 budgets.

## B. Major Development Partners: Strategic Focus and Key Activities

15. Tuvalu relies heavily on official development assistance, and its main development partners are the governments of Australia, Japan, and New Zealand; the European Union; Taipei,China; and the World Bank (Tables 3 and 4).

**Table 3: Major Development Partners**

<b>Australia</b>	Australia's aid to Tuvalu is organized under three strategic priorities: (i) good governance, economic growth, and stability; (ii) education and human resources; and (iii) environment and climate change. Australia will provide an estimated \$6.2 million (A\$9.3 million) to Tuvalu in 2020.
<b>European Union</b>	Under the current assistance program (2014–2020) to Tuvalu, the EU will make available €6.8 million (\$6.1 million) to improve waste management and provide incentives for improvements in public financial management through budget support.
<b>Japan</b>	Japan's recent grant aid includes the replacement of the research fishing vessel, the <i>MV Manau</i> (estimated to cost \$3.7 million [A\$5.6 million]), \$2.4 million to help procure diesel fuel, and scholarships. In 2015, Japan handed over the <i>MV Nivaga III</i> , an interisland passenger vessel costing \$20 million. Recently, Prime Minister Natano directly requested financial assistance from Japan to support land reclamation (16 square kilometers), estimated to cost \$280 million.
<b>New Zealand</b>	Total development funding for 2018–2021 is \$24.8 million (NZ\$38.3 million) with a focus on (i) growing Tuvalu's sovereign wealth and economic governance, (ii) ensuring Tuvalu's infrastructure (fisheries, energy) and services (health, education) are climate resilient and well managed, and (iii) building the skills and qualifications of Tuvalu's population (tertiary scholarships).
<b>Taipei,China</b>	Taipei,China will continue to provide recurrent budget support for 2018–2020 of \$6.5 million. Taipei,China also finances a range of medical equipment, including some medical staff, at the only hospital, the Princess Margaret Hospital on Funafuti.

<b>World Bank</b>	The World Bank allocation for Tuvalu is \$60 million–\$65 million (July 2020–June 2023), approximately \$20 million annually financing infrastructure projects and budget support. The World Bank has approved over \$140 million in financing to Tuvalu since 2010. The World Bank approved the Telecommunications and ICT Development Project (\$29 million) in January 2019 and the Maritime Investment in Climate Resilience Infrastructure Project (\$20 million) in December 2018.
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EU = European Union, ICT = information and communication technology.

Source: Asian Development Bank.

16. ADB’s Strategy 2030 operational priorities underpin Te Kakeega III, with focus on providing efficient, high-quality, and climate-resilient infrastructure and support services—e.g., maritime transport, renewable energy, and information and communication technology—and sound macroeconomic management. ADB’s country operations business plan (COBP), 2019–2021 for Tuvalu is consistent with its Pacific Approach 2016–2020, which serves as the country partnership strategy for the 11 small Pacific island countries (PIC-11), including Tuvalu. The COBP uses a similar multicountry approach to identify commonalities and opportunities for operational efficiencies across the PIC-11, and forms part of the overall PIC-11 COBP.<sup>3</sup>

**Table 4: Recent Major Projects by Development Partners**

Development Partner	Project Name	Duration	Amount (\$ million)
<b>Maritime Transport and Civil Aviation</b>			
ADB	Outer Island Maritime Infrastructure Project	2018	15.4
ADB	Outer Island Maritime Infrastructure Project	2016	11.3
World Bank	Tuvalu Aviation Investment Project	2015	18.0
Japan	Construction of a Cargo–Passenger Vessel	2013–2015	14.7
New Zealand	Ship to Shore Transport Project	2008–2014	3.5
Japan	Construction of a Cargo–Passenger Vessel to replace <i>Nivaga II</i>	2013–2016	15.6
<b>Information and Communication Technology</b>			
World Bank	Tuvalu Telecommunications and ICT Development Project	2019	29.0
<b>Environment Sustainability</b>			
UNDP	Coastal Adaptation Protection (GCF)	2018–	32.0
UNDP	Ridge to Reef Project	2015–	8.4
Japan	Beach Nourishment Project	2015–2017	2.0
World Bank	Pacific Islands Regional Oceanscape Program – Tuvalu	2017–	8.8

ADB = Asian Development Bank, GCF = Green Climate Fund, ICT = information and communication technology, UNDP = United Nations Development Programme.

Source: Government of Tuvalu. *National Budget Documents 2013–2015*. Funafuti.

### C. Institutional Arrangements and Processes for Development Coordination

17. Donor coordination with stakeholders at several levels appears to work well for Tuvalu and several mechanisms are in place, including annual high-level consultation meetings led by Tuvalu; biannual Tuvalu Trust Fund board meetings; management meetings, including joint missions and meetings; regular interdonor high-level meetings between ADB and Australia, New Zealand, the European Union, and the World Bank on respective activities in the region; and quarterly catch-ups between development partners in Suva. Significant support for infrastructure

<sup>3</sup> ADB. 2018. *Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific*. Manila; ADB. 2016. *Pacific Approach, 2016–2020*. Manila; and ADB. 2018. *Country Operations Business Plan: 11 Small Pacific Island Countries, 2019–2021*. Manila.

planning is coordinated under the ADB-administered Pacific Region Infrastructure Facility.<sup>4</sup>

18. The planning of development projects in Tuvalu begins with project ideas from staff of line ministries who complete a project proposal form. This is sent for appraisal to the Aid Management Unit in the Planning and Budget Department of the Ministry of Finance and Economic Development. The appraisal focuses on (i) feedback to improve the quality of the proposal (rather than a cost–benefit analysis); (ii) consistency with the National Strategy for Sustainable Development, 2016–2020; and (iii) the relationship of respective ideas to the sector plan (notwithstanding the fact that some sector plans have yet to be completed).

19. Following this appraisal, the Aid Management Unit submits the vetted proposals to the Development Coordination Committee, which comprises secretaries from all ministries and meets every month, followed by final submission to Cabinet for approval. Cabinet’s decisions are conveyed to the Aid Management Unit, which seeks and coordinates development partner support through annual development partner meetings. Funding that is received from development partners for specific projects is deposited in the Tuvalu Development Fund.

20. The World Bank is assisting Tuvalu in implementing the Maritime Investment in Climate Resilient Operations Project, in Funafuti and Nanumaga. The project aims to improve the climate resilience of Tuvalu’s maritime transport subsector and, in the event of an eligible crisis or emergency, to provide an immediate response. ADB and the World Bank are coordinating their support programs, particularly in maritime and energy infrastructure, in view of similarities.

21. The government and development partners face various challenges in coordination and implementation because of Tuvalu’s small size, remoteness, and associated high operational costs. The government has had limited involvement in the international aid effectiveness dialogue because of the limited capacities of its small administration. This also constrains the full implementation of aid effectiveness principles. Despite these challenges, all major development partners actively coordinate and align their support to achieve the goals set in Tuvalu’s Te Kakeega III. The government has shown political commitment by assigning human resources to the extent possible to implement all projects.

22. In 2018, ADB approved the establishment of a country office in Tuvalu. The office strengthens ADB’s presence in the country, working to enhance the relationship between ADB and the government, improve development partner coordination, and help build local capacity in the design and implementation of ADB-supported projects.

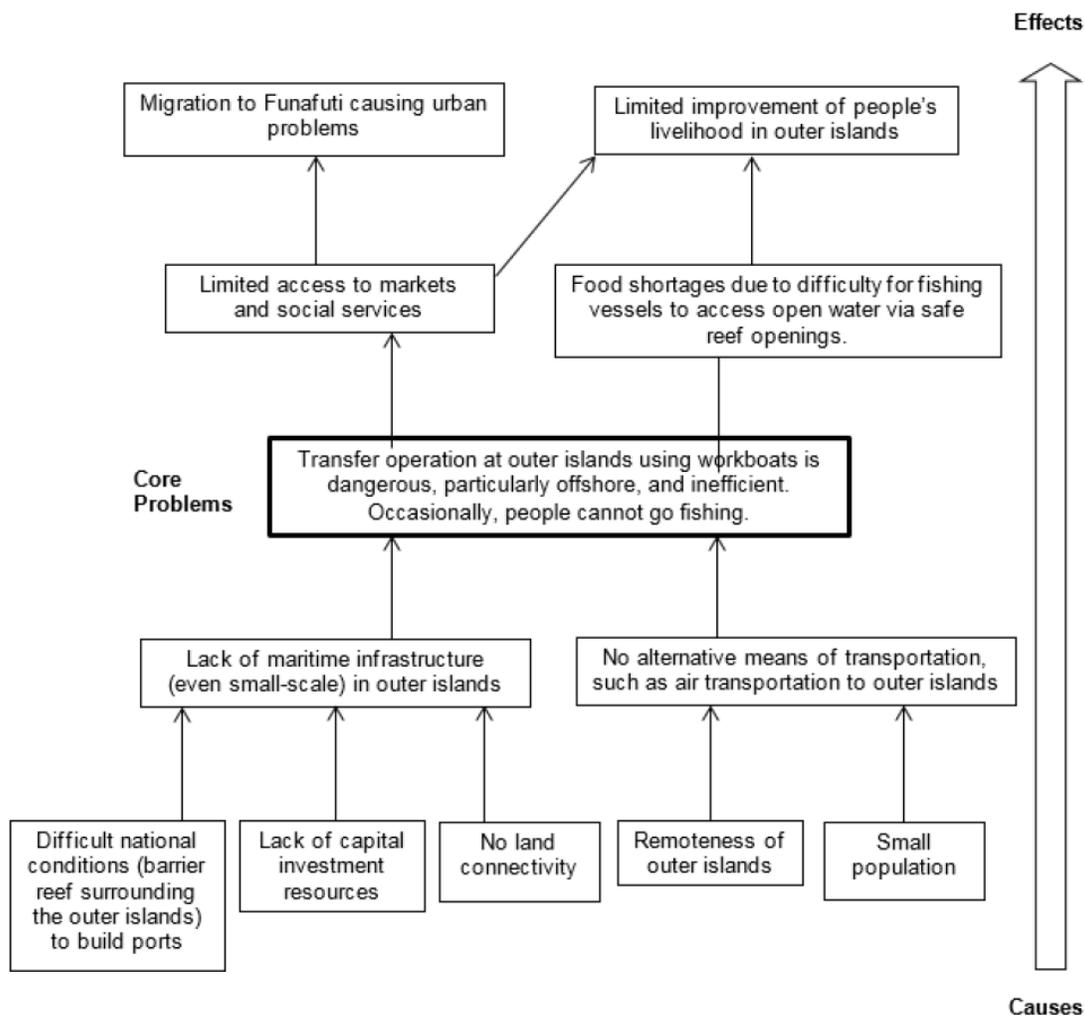
#### **D. ADB Experience and Assistance Program**

23. The original project included as separate outputs the preparation of a master plan to determine Tuvalu’s maritime transport needs, and the preparation of an institutional development plan aimed at evaluating the current capacity of the government to maintain outer island maritime infrastructure and where necessary develop the means necessary to do so in the future. The master plan has been completed, providing an implementation plan for future projects, including this second additional financing. The implementation of the institutional development plan for maintenance has been monitored through 2018–2019 and will be finalized with an evaluation of the progress aligned with the timing of conclusion of the Nukulaelae civil works in 2020.

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<sup>4</sup> The Pacific Region Infrastructure Facility was initiated in 2008 by ADB, the Australian Department of Foreign Affairs and Trade, the New Zealand Ministry of Foreign Affairs and Trade, and the World Bank, including the International Finance Corporation. The European Commission and the European Investment Bank became members in 2010, and the Japan International Cooperation Agency in 2013.

## Problem Tree for Transport



Source: Asian Development Bank