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**ASIAN DEVELOPMENT BANK  
TA 4004-RMI**

**Improving the Delivery of Sea and Air Transport Services  
in the Marshall Islands**

**Draft Final Report**

**30 September 2005**

McKay Shipping Ltd, trading as  
**Pacific Marine Management**  
Auckland, New Zealand

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## Shipping Series

### APPENDIX 1

Working Paper S1:	Ships Maintenance Plan,
Working Paper S1a:	Maintenance Checklist &
Working Paper S1b:	Corrective Program

### APPENDIX 2

Working Paper No. S2:	Specification for Shipping Commercial Systems, Performance Monitoring & Project BME
Working Paper No. S2a:	Shipping Management Information System
Working Paper No. S2b:	Outer Island Shipping Services Performance Monitoring System

### APPENDIX 3

Working Paper No. S3:	Ministry of Transportation & Communications: Corporate Strategy for Domestic Shipping
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Working Paper No. S3a:	Plan for Acquisition, Redeployment & Disposal of Ships
Working Paper No. S3b:	Annual Statement of Intent (SOI) & Statement of Service Performance (SSP)
Working Paper No. S3c:	Insurance of Fleet

## Aviation Series

### APPENDIX 4

Working Paper No. A1:	AMI: Corporate & Strategic Planning, Financial & Operational Performance
Working Paper No. A1a:	AMI: Industry Synopsis

### APPENDIX 5

Working Paper No. A2:	AMI: Financial Performance
Working Paper No. A2a:	AMI: Capital Structure

### APPENDIX 6

Working Paper No. A3:	AMI: Air Transport Performance
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### APPENDIX 7

Working Paper No. A3:	AMI: Management Information
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## **I Summary**

### **A Objectives and Program of Work**

1. This TA, improving the delivery of sea & air services to the outer islands of the Marshall Islands is associated with an accompanying loan for the development of outer island transport infrastructure. The TA is to assist the Government in the financial and operational management of interisland shipping and air transport, including private sector participation, to achieve more financially sustainable and cost-effective services at lower levels of subsidy, releasing funds for other social and economic programs.

2. The TA was conducted over a two-year period, from September 2003 to September 2005. There were three field visits in this time.

### **B Shipping**

3. In the shipping component, the consultants (i) reviewed and made improvements to the Ministry of Transportation & Communication's shipping commercial systems, ship operating systems, accounting and financial systems; (ii) undertook ship surveys and prepared condition reports, (iii) carried out a strategic review of domestic shipping; (iv) from this information prepared plans for redeployment or retirement of surplus or unsuitable vessels, replacement and acquisition plan for new vessels and determined an insurance guideline; and (v) set up a domestic shipping performance monitoring system for both government and subsidized private sector shipping services.

### **C Aviation**

4. In the aviation component, the consultants (i) reviewed the financial position and capital structure of Air Marshall (AMI); (ii) analyzed route structure, schedules and profitability for AMI, considered future market opportunities and options for restructuring, expanding or reducing operations, alliances, and competition in the subregion; (v) reviewed management and staffing structure, adequacy of information systems, and processes for financial and operational management; (vi) considered opportunities for outsourcing services; and (vii) assessed the feasibility, risks, and likely buyer interest in possible future privatization.

## **II Introduction**

### **A The Outer Island Infrastructure Project**

5. The Asian Development Bank (ADB) has made a loan to the Republic of the Marshall Islands (RMI) of US\$7.0 million for an Outer Island Infrastructure Project, number RMI 1948.

6. The Project will reduce costs and improve the reliability and efficiency of transport services to the outer atolls and islands through construction of navigation aids, small wharves and jetties, airstrip extensions, warehouses, and track improvements.

### **B Improving the Delivery of Sea & Air Transport Services**

#### **i Background**

7. During the 2002 Asian Development Bank (ADB) country programming mission to the Republic of the Marshall Islands (RMI), the Government, through the Minister of Transportation and Communications, requested technical assistance (TA) to improve the operational and commercial systems of the Ministry of Transportation and Communications (MOTC) and Air Marshall Islands (AMI) to enable improved effectiveness and efficiency of outer island sea and air transport services delivery.

8. In a memorandum of understanding (MOU) between the Government and ADB signed in Majuro on 23 April 2002, the Minister concurred with the content, financing, and timing of the TA. A concept paper for the TA was attached to the MOU.

9. The T A was included in the 2003-2004 pipeline and has been implemented in parallel with the Outer Island Transport Infrastructure Project.

10. This report is the Final Report of the TA, TA no. 4004-RMI: Improving the Delivery of Sea & Air Transport Services in the Marshall Islands.

#### **ii TA Objectives**

11. The TA is to complement the accompanying loan (for the Outer Island Transport Infrastructure Project).

12. The TA is to assist the Government in the financial and operational management of interisland shipping and air transport, including private sector participation, to achieve more financially sustainable and cost-effective services at lower levels of subsidy, releasing funds for other social and economic programs. It will assist the loan project achieve its economic rate of

return objectives by encouraging better fleet configuration and utilization and in taking maximum advantage of the efficiency gains provided by the infrastructure improvements.

**iii Terms of Reference**

13. The TA is split into two components:

- Shipping; and
- Aviation

14. In the shipping component, the consultants were to:

- (i) review and make improvements to shipping commercial systems, ship operating systems, accounting and financial systems;
- (ii) undertake ship surveys and prepare condition reports, undertake valuations and determine an insurance policy; and
- (iii) from this information prepare plans for redeployment or retirement of surplus or unsuitable vessels, replacement and acquisition plan for new vessels.

15. In the aviation component, the consultants were to:

- (i) review the financial position and capital structure of AMI;
- (ii) carry out a structural and mechanical assessment of the aircraft, and assess the remaining economic life, need for overhaul, and replacement policy;
- (iii) review compliance with Federal Aviation Administration and International Civil Aviation Organization regulations and guidelines and where corrective actions are necessary or desirable and how these can be achieved;
- (iv) analyze route structure, schedules and profitability, consider future market opportunities and options for restructuring, expanding or reducing operations, alliances, and competition in the subregion;
- (v) review management and staffing structure, adequacy of information systems, and processes for financial and operational management;
- (vi) consider opportunities for outsourcing services; and
- (vii) assess the feasibility, risks, and likely buyer interest in possible future privatization.

**iv Required Outcomes**

**Expected Results**

16. Government shipping service and private sector shipping contracts:



- (i) further development of the management information systems needed to enable the MOTC shipping operation to function as an efficient government-owned enterprise;
- (ii) implementation of systems for operational monitoring of shipping contracts and MOTC's shipping operation; and
- (iii) improved long-term fleet management.

17. AMI:

- (i) an assessment of the market position and strategic outlook for the airline; and,
- (ii) review and improvement of the airline's operational management, and financial accounting and commercial systems.

**Deliverables**

18. These include:

- (i) reports on project performance and baseline report on benefit monitoring for the Outer Island Transport Infrastructure Project;
- (ii) annual statements of intent and statements of service performance for the MOTC shipping operation, and improved annual reports for AMI;
- (iii) new and improved business and information systems for the MOTC shipping operation and AMI;
- (iv) long-term plan for utilization, maintenance, disposal, and replacement of the government shipping fleet; and
- (v) a strategic plan for the future direction of AMI.

19. TA outputs will be directly applied in business activities of MOTC and AMI.

**C Project Activities**

**i Program**

20. The ADB gave notice to proceed with the consulting services on 1 September 2003, which was acknowledged by the Consultants on 4 September. The TA was planned to consist of three Field Work Visits.

21. Mobilization of personnel in the field for the First Field Work visit was as follows:

- Mark Oxley, (Team Leader) Shipping Specialist, 15 September to 19 October 2003

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- Michael Murray, Air Transport Policy Specialist, 15 to 21 September 2003
- Kazimierz Aremka, Marine Surveyor, 29 September to 16 October 2003.

Mr Murray's visit was shortened as a result of a pending appointment of a new General Manager for the airline. His First Visit work was completed in July 2004. Mr Aremka's field visit was extended by 4 days. Mr Oxley's field visit was for the originally intended period.

22. General activities during the Inception Phase included:

- Establishment of the project office within MOTC's building at Majuro,
- Assignment of counterpart to the project team: Mr Betwel Lekka, Deputy Secretary MOTC,
- Initial meetings with the Minister and Secretary MOTC (the executing agency) and with other key government agencies and other stakeholders listed in an Appendix.
- Review of methodology and scope of the project, program and costs,
- Preliminary identification of office equipment for purchase under the contract.

23. The aviation component of the First Field Work Visit was completed between 17 July to 1 August 2004 when Mr Murray visited Majuro.

24. The Second Fieldwork Visit of the TA's program was delayed. Originally, it was due to take place in March 2004, but was instead carried out in September to November 2004. The shipping component needed work to be done by the RMI appointed IT/ Management Information Specialist before the Second Fieldwork visit could take place. The IT/ Management Information Specialist was not appointed until June 2004. His initial work was completed during July. The Shipping Specialist, Mark Oxley, was thus not able to undertake the second fieldwork visit until September. Personnel were:

- Mark Oxley, (Team Leader) Shipping Specialist, 23 September to 17 October 2004
- Michael Murray, Air Transport Policy Specialist, 2 October to 10 November 2004
- Ian Brown, Airline Management Systems Specialist, 27 October to 19 November 2004.

25. The Third Fieldwork Visit was split into two parts; the aviation component being undertaken in March 2005, and the shipping component in August 2005. Personnel were:

- Michael Murray, Air Transport Policy Specialist, 5 to 25 March 2005
- Mark Oxley, (Team Leader) Shipping Specialist, 15 to 28 August 2005

26. Immediately prior to his visit in March 2005, Mr Murray also took part in an RMI Country Program Review of Loan RMI-1948 and TA RMI-4004, from 21 February to 4 March 2005.

ii **Shipping**

**First Field Work Visit, September/ October 2003**

27. Completion of ToR tasks:

- survey and condition report on MOTC's Sea Transport Division's (STD) ships;
- development of long-term maintenance plan for STD's fleet.
- Report on preparation of baseline data and development of collection mechanisms for support of OITIP project benefit monitoring and evaluation

28. Commencement of ToR tasks:

- review and make improvements to:
  - shipping and commercial systems:
  - ship operating systems,
  - accounting and financial systems
- implement systems for operational monitoring of subsidized shipping contracts and STD's shipping operation.

**Second Field Work Visit, October 2004**

29. Completion of ToR tasks:

- Business Plan, Statement of Intent & Statement of Service Performance
- Fleet Replacement & Disposal Policy

30. Continuation of ToR tasks:

- Shipping Commercial Systems
- Performance Monitoring

**Third Field Work Visit, August 2005**

31. Completion of ToR tasks:

- Shipping Commercial Systems
- Performance monitoring
- Ship fleet insurance guidelines

iii **Aviation**

**First Field Work Visit, July 2004**

32. The first field work visit was planned for September 2003 in parallel with the first field visit for the shipping project. However, on arrival of team members in Majuro, the Minister of Transport and Communications and AMI board chairman advised that the airline was about to appoint a new general manager and finance manager. So it was agreed with the Minister of Transport and Communications that the start of the aviation component of the TA be delayed until these appointments had been made. This initial visit was therefore cut short (15-21 September 2003) and while in Majuro an assessment was made of the civil aviation and air transport regulatory environment and infrastructure (airport, air navigation services) in the context of the TA.

33. An acting general manager was appointed in mid July and the finance manager was appointed at the end of July 2004. During the first field work program, proper, (by Michael Murray 17 July to 1 August 2004) the following progress was made :

- review, refine and confirm the terms of reference with the Ministry of Transport and Communications and AMI
- initiate the corporate planning process;
- determine (draft) corporate objectives;
- research and draft an industry synopsis;
- initiate the strategic planning process;
- initiate an analysis of the airline network;
- initiate an analysis of the financial situation of the airline; and
- brief the Ministry of Transport and Communications on the situation and progress.

**Second Field Work Visit, October & November 2004**

34. It was initially planned that both the general manager and the finance manager would be available throughout the second field visit. However, due to sudden serious illness of the general manager and then various operational and management exigencies, the availability of both these people changed. The general manager was effectively unavailable during most of the second field visit due to the demands placed upon him by the unserviceability of the Dash 8 while awaiting an engine change and the need to arrange a second engine plus his involvement in and responses to proposals made by the Taiwanese ambassador to the RMI (see Recent Developments section below). This resulted in the general manager being available for only short periods of time and from time-to-time. The finance manager was away for the last week

(12-19 November) attending an air transport course at the University of Auckland but considerable progress was made with the financial situation of the airline. The upshot of this was that work that required the input or involvement of the general manager in particular (eg strategic plan) was unable to be progressed to the extent originally envisaged. However, this did not materially affect the progress of the TA at this stage as it was discovered that considerable research and analysis was needed to determine basic airline performance data and financial information.

35. During the second field visit by Michael Murray (2 October to 10 November 2004) and Ian Brown (27 October to 19 November 2004) the following progress was nevertheless made:

- refine the corporate objectives;
- finalise the industry synopsis;
- refine the strategic plan;
- analyse route structure, schedules and profitability;
- review the financial position and capital structure;
- help to scope and develop monthly management information reports (using the Dash system);
- review management and staffing structure and assist in the development of a manpower plan.

36. Because of the limited availability of the general manager and latterly the finance manager it was not possible during that Field Work Visit to

- assess future market opportunities and options for restructuring, expanding or reducing operations, alliances, and competition in the sub region;
- complete an assessment of opportunities for out sourcing services; and
- assess the feasibility, risks and likely buyer interest in possible future privatisation.

#### **Third Field Work Visit, March 2005**

37. During the third and final field visit by Michael Murray (5 to 25 March 2005) the general manager and finance manager were available throughout the visit and the following tasks were completed:

- a strategic review incorporating: corporate objectives, an industry synopsis;
- a strategic plan;
- a timetable and schedule to match passenger demand;

- a review of air fares and a recommendation for an overall increase in air fares;
- an assessment of future market opportunities and options for restructuring, expanding or reducing operations, alliances, and competition in the sub region;
- an assessment of opportunities for out sourcing services;
- assess the feasibility, risks and likely buyer interest in possible future privatisation; and
- a presentation to be made to the airline board.

## **D Reporting**

### **i Reports**

38. The TA has three formal reports:

- An Inception Report: 30 October 2003;
- A Mid-Term Report: 17 November 2004; and
- This Final Report: September/ November 2005.

### **ii Working Papers**

39. The main body of work completed is attached to this Final Report as two series of Working Papers:

- A Shipping Series; and,
- An Aviation Series

40. Many of the Working Papers describe systems that have spreadsheets associated with them. The Working papers and Spreadsheets have been provided to MOTC (shipping related) and AMI (aviation related). The spreadsheets have been provided on disc with this report to the ADB and the EA (MOTC).

### **iii Schedule of Working Papers**

41. A Schedule of the Working papers follows:

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**Working Paper Register**

<i>WkgPpr No</i>	<i>Title</i>	<i>Date</i>	<i>Appendix in Final Report</i>
<b>S</b>	<b><i>Shipping Series</i></b>		
S1	Ships Maintenance Plan	Oct 2003	1
S1a	Maintenance Checklist	Oct 2004	1
S1b	Ships' Corrective Program	Oct2004	1
S2	Specification for Shipping Commercial Systems, Performance Monitoring & Project BME	Oct 2003	2
S2a	Shipping Management Information System	Aug 2005	2
S2b	Outer Island Shipping Services Performance Monitoring System	Aug 2005	2
S3	Corporate Strategy for Domestic Shipping	Oct 2003	3
S3a	Plan for Acquisition, Redeployment, & Disposal of Ships	Oct 2003	3
S3b	Annual Statement of Intent (SOI) & Statement of Service Performance (SSP)	Aug 2005	3
S3c	Guidelines for Hull & Machinery Insurance of MOTC's Ships	Aug 2005	3
<b>A</b>	<b><i>Aviation Series</i></b>		
A1	AMI: Corporate & Strategic Planning, Financial & Operational Performance	Mar 2005	4
A1a	AMI: Industry Synopsis	Mar 2005	4
A2	AMI: Financial Performance	Nov 2004	5
A2a	AMI: Capital Structure	Nov 2004	5
A3	AMI: Air Transport Performance	Nov 2004	6
A4	AMI: Management Information	Nov 2004	7

### III Recent Developments in Outer Island Transport

#### A Shipping

##### i Outer Island Shipping

42. At the beginning of this TA, outer island shipping services had not changed significantly since the OITIP preparatory TA in 2001.<sup>1</sup> At that time, the Ministry of Transportation's Sea Transport Division (STD) was operating services to the outer islands, in conjunction with a subsidized private sector operator, PII.

43. Over the two years prior to the commencement of this TA in 2003, the subsidized franchise contract that was awarded to PII for operation of their ship, *Mercy K*, had been renewed, and this vessel, together with STD's four ships, *Litakbouki* 167t cargo 16 cabin, 75 saloon and 50 deck passengers, *Landrik* 185t cargo and 50 deck passengers, *Ribuuk Ae* 104t cargo 100 passengers and *Bokeneb* 50t cargo plus deck passengers, operated regular services.

44. The ships operated in five sectors of the outer islands, Northern, Central, Eastern, Southern and Western.

45. MOTC was also operating a small tanker, *Jobake*. This tanker is chartered by a Government authority and was intended to distribute fuel to the outer islands.

46. Since this TA commenced, there have been some changes in the Government subsidized shipping services. The greatest part of the services is now provided by the STD, using its ships *Aemman*, *Landrik*, *Ribuuk Ae* and *Boken-eb*. *Aemman* is a new ship, delivered from its builders in April 2005. It is a replacement for *Litakbouki*, which has now been laid up and is about to be disposed of. During FY2004 *Ribuuk Ae* was out of service for most of the year.

47. In FY 2004, PII operated its ship, *Mercy K*, under subsidy, but for only four voyages. In FY2005, two private sector operators received subsidies for provision of services. These were the owners of *Angelina* and *Neidaga*. PII was not directly involved in outer island services through the subsidy scheme, but it did operate one of its ship's under charter to Tobolar, the copra purchasing agency, to transport copra from outer islands to Majuro.

48. The Ministry of Public Works and Ministry of Resources and Development's landing craft, *YFU 82*, *YFU 77*, *LCM* and *Jejelat Ae*, came under MOTC's operational control during the inception phase of this TA, on 1 October 2003.

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<sup>1</sup> TA 3506-RMI Preparation of the Outer Islands Transport Infrastructure Project, 2001



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49. In FY2005 subsidized services for vessels less than 100 tons capacity were introduced for services to nearby outer islands.

50. Unsubsidized private sector operators continue to operate between Majuro and nearby atolls. MOTC continues to own the small tanker *Jobake* although it has hardly operated in 2004 or 2005. The former Ministry of Public Works and Ministry of Resources and Development landing craft that came under MOTC's operational control in October 2003 have for the most part also been idle.

51. *Litakbouki* went aground in September 2004, and was refloated with minor damage. However, on inspecting the damage in the ship's double bottoms, it was ascertained that the ship's internal structure and shell plating was in a very poor state of repair. A decision was made to withdraw the ship from service and place it up for sale. One former Public Works landing craft, *YFU 77* has been disposed of. Two landing craft, *Jeljelat Ae* and *LCM* are expected to be disposed of very soon. This will leave one landing craft in the MOTC fleet, *YFU 82*. The tanker *Jobake* and the small cargo/ passenger ship *Boken-eb* are also expected to be disposed of soon. This will leave MOTC with a fleet as follows:

Vessel	Type
Aemman	Cargo/passenger vessel
Landrik	Cargo/passenger vessel
Ribuuk Ae	Cargo/passenger vessel
YFU 82	Landing craft

**ii Sea Transportation Division (STD) of MOTC**

52. The Sea Transportation Division (STD) of MOTC's operations has not changed materially since the OITIP preparatory TA in 2001. Government was considering the establishment of a Shipping Corporation to take on the ship operating responsibilities of MOTC's Sea Transport Division. The main reason would be to separate the economic and safety regulatory function of the Ministry from the operation of the ships. The proposal was in the legislative program in 2004, but its progress has stalled.

**B Aviation**

**i Air Marshall Islands (AMI)**

53. Air Marshall Islands (AMI) has a fleet of three aircraft; a Dash 8 (passenger capacity of 36), and two Dornier 228s (capacity of 19). All are flown on domestic routes, but until May 2003 were also flying a weekly service to Tarawa, Kiribati.

54. AMI have difficulty maintaining the serviceability and so availability of their aircraft and this is simply due to insufficient capital and cash flow to enable the airline to maintain a proper inventory of operating and strategic spare parts.

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55. In October and November 2004 the Dash 8 was out of service for about five weeks, awaiting an engine change, and also out during March and May 2005 (almost three months) after a wheels up landing at Kwajalein (due to a mechanical problem) – relatively little damage was sustained to the aircraft. Since then the Dash 8 has spent about 10 days per month (a third of its time) on the ground awaiting spare parts. During this period Air Marshall Islands (AMI) maintained services with one Dornier 228 (Do 228).

56. AMI has two Do 228s. One Do228 was unserviceable from 14 November 2003 to 15 November 2004. In November 2003 the aircraft was due for its annual airworthiness inspection during which it was discovered that certain parts needed to be replaced. These were unable to be procured because funds were not (made) available for their procurement. In the meantime unscheduled 'service bulletin' maintenance was carried out on this Do228 and in the process corrosion was discovered in parts of the airframe. At the same time this unserviceable Do228 was cannibalized for parts to keep the other Do228 serviceable. Between November 2004 and January 2005, however, both aircraft were operating. But in January 2005 the other aircraft became unserviceable and since then has been awaiting an overhaul and spare parts, both for the lack of funds.

57. At the moment one Do228 and the Dash 8, when serviceable, maintain air services in the RMI.

58. In early July 2004 the AMI quality assurance manager was appointed (temporary) acting general manager by the AMI board and late July 2004 a finance manager took up his appointment. The AMI board at its October 2004 meeting confirmed the appointment of the acting general manager for a period of six months on probation.

59. In August 2004 (after our first bona fide field visit) AMI ordered an upgrade to their DASH airline sales and financial information system, which was essentially an upgrade from a DOS computer system to the Windows computer system. The DASH maintenance system and financial system are now compatible but operate separately – the two systems can be linked to operate as one but the costs of doing this are significantly higher than the benefits, at this stage. Installation and in-house training on the new Windows financial system was carried out over four days in mid October 2004 and the new system was in operation for the 2005 financial year (year ending September 2005).

60. The Republic of China (ROC) through the Taiwanese (ROC) Ambassador to the RMI offered to have the overhauls for the Do228s carried out by Mandarin Airlines, a subsidiary of China Airlines the national carrier of the ROC. The RMI government and the Board of AMI considered the offer and directed that a delegation comprising of the airline general manager, an airworthiness inspector from the Directorate of Civil Aviation, plus the Minister of Communications and Transport visit Taiwan to pursue the matter of the Do228 overhauls. The delegation visited Taiwan in October and November 2004. For a variety of reasons to do with cost, time and reliability the airline general manager recommended that the aircraft overhauls not be carried out in Taiwan but continue to be carried out as they have been in the past. The airline has a favorable agreement with a company in New Zealand to undertake the overhauls but lack of funds prevent this from being carried out.

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61. The Taiwanese Ambassador also made two other proposals for the RMI and AMI's consideration. One is a management contract between China Airlines and AMI whereby China Airlines would take over the management of AMI (for a management fee). We understand the management contract proposal was briefly discussed with China Airlines during the visit to Taiwan by the RMI delegation.

62. The other was (is) an offer from the Taiwanese Ambassador for the provision of aircraft for AMI as either replacement or additional aircraft. Specifically a Fokker 50 and /or a Fokker 100. The Fokker 50 is a 56-seat twin-engine turbo prop powered airplane that is a derivative of the (old but popular in its time) Fokker F27. The Fokker 100 is a 109 seat twin engine jet powered airplane that is a derivative of the Fokker F28. Mandarin Airlines operate nine F50s and two F100s and it is understood that these airplanes are surplus to Mandarin Airline's requirements. This offer was not discussed during the visit to Taiwan. The Consultants have advised AMI management that the acquisition of replacement or additional aircraft should (needs to) be viewed in the context of the airline's corporate and strategic plan, otherwise the airline can be saddled with inappropriate aircraft for its network and operating costs that are out of kilter with the type of services required.

63. Since March 2005 there have been significant changes to AMI's schedule. The frequency has been halved for about 50% of the sectors and so a number of atolls are served by two flights per month instead of four and some less frequently. There seems to have been little adverse reaction to this schedule change.

64. With effect September 1, 2005 air fares were increased in line with the suggestions made in this TA (about 23% overall). The previous air fares were introduced in 1992 (note: 1992 not 2002) at the time of the introduction into service of the Do 228 aircraft – 13 years ago. There appears to be no adverse reaction to this also.

65. Over recent months airline staff has been reduced by 10% from 79 in August 2004 to 71 at present. This is considered, in the circumstances of the RMI, to be an achievement.

66. The Government of the RMI is presently considering its annual budget and appropriations. AMI will be making a submission for funds to carry out the Do 228 overhauls. The airline will also make a presentation on sector operating costs and sector traffic density.

67. In December 2005 the lease on the Dash 8 expires. In the meantime AMI will need to decide on whether or not it renews this lease. The matter was discussed with airline management during the second and third field visits.

## **IV Work Carried Out, Outputs, Outcomes & Goals Achieved**

### **A Shipping**

#### **i Ship Maintenance Plan**

68. A survey of all of MOTC's vessels, including those transferred to MOTC on 1 October 2003, was undertaken, with vessels afloat. In most cases, some tanks were opened in order to inspect the steelwork condition in tank spaces. Machinery was observed running where this was practical. Condition reports have been prepared for each vessel, and two copies of these have been sent to MOTC, one for the ship, the other for MOTC's office.

69. A Working Paper has been written which contains a long-term maintenance plan for all the MOTC ships<sup>2</sup>. (Working Paper No. S1 – Ships Maintenance Plan). This paper contains a summary of the condition of each ship, a recommended corrective program with cost estimates and suggested timing for each ship, an on-going maintenance plan with suggested frequency for action points, and a budgeting guide for repair and maintenance for each ship. MOTC asked that parts of that plan be split into stand-alone documents; the Maintenance Plan, re-organized as a set of checksheets, and the Corrective Action List re-organized as a stand-alone document for each vessel. The new documents are appended as Working Papers No S1a - Maintenance Checklist and No S1b – Ship's Corrective Program<sup>3</sup>.

70. A seminar was held on Monday 13 October 2003 to explain the on-going maintenance plan to the Fleet captain, Fleet Engineer, Captains, Chief Engineers and Chief Officers of all MOTC's ships.

71. The documents and checklists have been issued to ships, where appropriate, and the STD operational staff is utilizing the maintenance plan.

#### **ii Management Information Systems and Monitoring**

72. A shipping management information system, comprising a commercial system and an operational reporting system, a performance monitoring system and an OITIP Loan BME database was designed, and specifications drawn up, based on the systems described in the Final Report of TA 3506-RMI Preparation of the Outer Islands Transport Infrastructure Project, April 2002. The systems have been modeled in MS Excel, and a copy of that model has been supplied to the MOTC and the MIS/IT Specialist that was provided by the EA. A Working Paper (Working Paper No S2: Specification for Shipping Commercial Systems, Performance

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<sup>2</sup> Appendix 1

<sup>3</sup> Both in Appendix 1

Monitoring & Project BME) setting out the design specification has also been written to guide the MIS/IT Specialist with the development of the systems.<sup>4</sup>

73. Not as much progress was made as was hoped for with the development of these systems. The engagement of the MIS/IT Specialist by the EA was delayed, then the technical requirements for development of the systems as proposed in the specifications proved to be beyond the capability and capacity of the Specialist. Nevertheless, the requirement was simplified during the third Field Work visit (August 2005), to a system that was within his capabilities, and still provided the essential elements of a shipping management information system monitoring systems (see description that follows).

### **iii Shipping Management Information System**

74. A revised and simplified shipping management information system was developed during the third fieldwork visit in August 2005. Its description and procedures for use are set out in Working Paper No S2a: Shipping Management Information System<sup>5</sup>. This system uses MS-Excel spreadsheets and consists of:

- A cargo booking, manifest and database system
- A passenger booking, manifest and database system
- A financial management reporting system
  - For each voyage of each ship
  - For all voyages in each month
- A ship operations reporting system
- A ship utilisation report

### **iv Performance Monitoring**

75. The terms of reference call for performance monitoring of STD's services and those of subsidized private sector operators. Ideally, while the MOTC is responsible for the commercial operation of outer-island shipping services, this monitoring should be the responsibility of an independent body. Discussions with the Economic Policy, Planning and Statistics Office (EPPSO) indicated that this body considered such monitoring to be a part of its function, and they indicated that they would consider undertaking it<sup>6</sup>.

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<sup>4</sup> Appendix 2

<sup>5</sup> Appendix 2

<sup>6</sup> At the time of finalizing this report, EPPSO had not responded with confirmation. Nevertheless, the format for such monitoring has been provided to them.

76. A suggested format for performance monitoring has been provided to EPPSO (see Working paper no S2b: Outer Island Shipping Services Performance Monitoring System <sup>7</sup>).

**v OITIP BME Baseline & Data Collection**

77. The TA deliverables calls for a report on a baseline report on benefit monitoring (BME) for the Outer Island Transport Infrastructure project. To this end, a description of what is required for Project BME has been prepared (see description in Working paper no S2: Specification for Shipping Commercial Systems, Performance Monitoring & Project BME <sup>8</sup>) and has been referred to EPPSO as the appropriate body to carry out any monitoring of RMI Government expenditures of this nature.

**vi Business Strategy**

78. A strategy for RMI's domestic shipping was developed by a team consisting of Jorelik Tibon, Secretary of Transportation, Betwel Lekka, Deputy Secretary, Michael Murray, Strategy Specialist and Mark Oxley, Shipping Specialist. The strategy identified the key strategic issues that face the Ministry, and the strategic plans that need to be developed as a result.

79. The Business Strategy is set out in Working Paper No. S3: MOTC: Corporate Strategy for Domestic Shipping<sup>9</sup>. MOTC is using the Strategy as a working document.

**vii Fleet Replacement & Disposal Policy**

80. A fleet replacement and disposal plan has been produced, discussed with the Secretary of Transportation, and modified as required.

81. A Working Paper has been issued: Working Paper No. S3a: Plan for Acquisition, Redeployment & Disposal of Ships<sup>10</sup>.

**viii Statement of Intent (SOI) and Statement of Service Performance (SSP)**

82. A Statement of Intent (SOI) and Statement of Service Performance (SSP) key performance monitoring system has been developed in line with the strategic issues uncovered during the strategy process. These statements measure key performance indicators for STD's domestic shipping services. The SOI sets the goals for the year and is intended to be prepared immediately prior to the commencement of a financial year (ie, at budget time). The SSP

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<sup>7</sup> Appendix 2

<sup>8</sup> Appendix 2

<sup>9</sup> Appendix 3

<sup>10</sup> Appendix 3

records the actual performance for each key performance indicator, and compares them with those in the SOI. It is intended to be prepared immediately after the end of the financial year.

83. A description of the SOI/SSP and how it should be used is set out in Working Paper No. S3b: Annual Statement of Intent (SOI) & Statement of Service Performance (SSP)<sup>11</sup>.

**ix Shipping Division Insurance Guidelines**

84. A paper outlining recommendations to MOTC regarding the insurance of their ships has been provided (Working Paper No S3c: Guidelines for Hull & Machinery Insurance of MOTC's Ships<sup>12</sup>).

**B Aviation**

**i Corporate Objectives**

85. Corporate objectives were developed during the first field visit, refined during the second visit and agreed to by airline management during the third and final visit. There was difficulty in determining accurate base financial and operational performance data and so reliable (or the best available) information was not determined until the end of October 2004. This meant that corporate objectives and a strategic plan could not be presented to the board during the 2nd field visit. At least two weeks notice of a special board meeting to consider the corporate and strategic plan is needed and because of other imperatives that were before the board it was very unlikely that a board meeting would have been able to have been arranged during the 2nd field visit to consider these plans. The plan was for a special board meeting to be held at which the corporate objectives and strategic plan would be submitted to the board during the 3rd and final field visit. This was planned for the second half of March 2005, however, there were various difficulties in scheduling a board meeting and it was held on 29<sup>th</sup> March 2005, the week following Michael Murray's departure.

**ii Strategic Plan**

86. The strategic planning process was initiated during the first field visit and much of the overall industry and airline analysis was carried out at that time. The emphasis during the 2nd field visit was in determining the strategic gap. This turned out to be a major task because of the ambiguity of the financial and sales reports produced by the DASH system and the absence of anyone who understood the system and its reports. After considerable research it became evident that the information being used by AMI in management and other reports was not necessarily correct. Numbers of passengers carried since 2000 were overstated by some

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<sup>11</sup> Appendix 3

<sup>12</sup> Appendix 3

20-30%. (They represented sector passengers rather than origin and destination (O&D) passengers or passengers carried. However, the statistics reported to the International Air Transport Association (IATA) by AMI more accurately reflected the performance of the airline.) Fortunately the financial information was not similarly effected. The upshot was that AMI has had no reliable or accurate O&D passenger information.

87. A strategic gap was nevertheless estimated during the second field visit and then refined and agreed by airline management during the third phase visit.

88. In turn, the strategic plan, which was developed during the first field visit and refined during the second visit after O & D passenger data was determined, was finalized. The industry synopsis was also finalized during the second field visit but updated in the last visit with the demise of a new regional carrier and the sudden withdrawal of services by Aloha Airlines into the RMI. Attached as Working Paper A1 is a copy of the report prepared for the AMI board entitled "Air Marshall Islands Inc: Corporate & Strategic Planning, Financial and Operational Performance", dated March 2005 plus the "Industry Synopsis" as Working Paper A1a<sup>13</sup>.

### iii Review of Financial Position of AMI

89. AMI had been operating without a chartered accountant for a number of years. The appointment of a finance manager who is a chartered accountant is a major step forward for AMI, even though he has no airline experience. His appointment assisted our review of AMI's financial position. During the 2nd field visit the auditors were carrying out an audit of the 2003 annual accounts. We had access to audited annual accounts for the years 1999 to 2002, unaudited 2003 accounts and a trial balance for 2004, which provided financial information for the last six years. We do not have confidence in the accuracy of these annual reports nor the information contained in them. Nevertheless as they represent the only financial information that was available they have been used to assess the financial position of the airline. It has taken considerably longer than anticipated in assessing the financial position of AMI, especially the capital structure (net assets employed and the financing arrangements). One of the major difficulties was verifying or determining various financing arrangements as the board minutes appear to be incomplete and cabinet papers also seem to be silent on some of these arrangements.

90. At the end of the second field visit the financial position of AMI was determined for the last six years (1999-2004). This is covered in Working Paper No. A2 – AMI: Financial Performance<sup>14</sup> – which was prepared at that time. Working Paper No A2 summarizes the financial performance of AMI. This shows that AMI's EBIT to be on average minus \$1.5 million per year. Total capital employed (or total net assets) has decreased from \$12.7 million to \$3.1 million since 1999.

91. During the second visit extensive discussions were held with the finance manager and a number of suggestions (recommendations) were made to restructure the airline's balance

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<sup>13</sup> Both in Appendix 4

<sup>14</sup> Appendix 5



sheet – essentially creating a new balance sheet. Working paper A2a "Capital Structure" is a summary of these discussions and recommendations<sup>15</sup>.

**iv Airline Operations & Air Transport Performance**

92. We are of the view that the current DASH revenue management system is quite inadequate for AMI's purposes and furthermore is a cumbersome and relatively complex out-of-date system. Consideration needs to be given by the airline to completely upgrading the DASH system with a new airline revenue management and accounting system. We recommend ARIS (Airline Revenue Information System) developed by Synergos, Australia, and widely used in the Pacific (eg Air Vanuatu, Solomon Airlines, etc). [Also see IATA publication: *Information Management Solutions*, 25<sup>th</sup> Edition, July 2004.]

93. As noted in the section on recent developments AMI upgraded their revenue management system – the DASH airline sales and financial information system. The arrival of the trainer from the DASH company in October 2004 enabled the problem over the interpretation of data to be partly resolved, although not until the last day of the trainer's visit and advice from DASH's US head office had been sought.

94. As a result of this, O&D data had to be extracted manually from DASH reports by month and by flights. This analysis, however, did not record non-revenue passengers. But a reasonable estimate could be made for these on an annual basis. O&D data was thus determined for about 180 O&Ds flown by AMI during the financial years of 2003 and 2004. This data was not determined until early November 2004 during the second field visit.

95. Once passenger, revenue and flight O&D data had been extracted it was then possible to further analyze the airline network, fare structure and profitability. The network (O&D) performance was thus assessed to determine the traffic density and the fare structure was analyzed to determine a break-even fare based on the 2004 financial year. Working Paper No A3- AMI: Air Transport Performance, prepared in November 2004, summarizes this analysis and is attached<sup>16</sup>.

96. Air fares have not changed since 1992. Initially it was understood by airline management and the Ministry of Transport and Communications that air fares require approval by the Cabinet. This was discovered not to be the case and that the AMI board had authority to approve air fares.

97. The basis of the current air fare was determined and a revised air fare for a break-even operation estimated, which indicated that based on the provisional financial performance for the 2004 financial year (ending September 2004 where the EBIT is minus \$0.75 million) a 24% increase in air fares was required. The fare at that time was based on 46 cents per passenger mile plus \$21. A break-even air fare would be 56 cents per passenger mile plus \$25. We emphasize that this indicative fare increase was based on 2004 where the EBIT deficit appeared to be half the average deficit over the last six years. Working Paper No A2 –

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<sup>15</sup> Also in Appendix 5

<sup>16</sup> Appendix 6

Financial Performance of Air Marshall Islands, Inc elaborates on this. The strategic review of the airline presented to the AMI board in March 2005 also summarized the situation regarding air fares and the financial performance of the airline (this is attached as Working Paper A1). In August 2005 the AMI board approved an increase in air fares in accordance with the increase required to reach a financial break-even situation and set out in the strategic review.

**v Route Structure**

98. The airline flies between about 180 O&Ds but only about 130 of these appear to be part of a schedule (of sorts). Essentially 21 O&Ds provide 67% of total passenger revenue, 34 O&Ds provide 80% and 66 O&Ds provide 95% of the total revenue. Passenger numbers show a similar trend – 31 O&Ds account for 67% of total passengers.

99. A physical (analogue) model for route planning was constructed along with a method for route planning that can be used by AMI in conjunction with the O&D traffic density analysis. The model was used to plan a route network for O&Ds requiring at least two flights per month. It was proposed that these O&Ds form the basis of the scheduled network, with all other O&Ds being essentially charter flights scheduled by agreement between AMI and the atoll representatives. A route planning team was formed from all AMI senior managers under the leadership of the general manager to consider the development of a new schedule and timetable. Arising from this the general manager and route manager restructured the existing network and developed a revised timetable that was designed to increase the overall load factor to 65% on the main routes and 40% on the other routes involving over 800 hours less flying time.

100. The general manager is also giving consideration to basing some flights out of Kwajalein. This is a more central location and would result in increased payloads for some O&Ds and probably an overall reduction in air miles flown.

**vi Profitability & Subsidies**

101. The RMI government provides AMI with four forms of subsidy:

- cash contributions to revenue – (now) accounted for as extraordinary revenue
- reduced costs (eg no airport charges, interest free loans)
- purchase of assets, and
- guarantor for loans.

102. The question of subsidies was fully explored with AMI management and an increase in air fares and a route structure to eliminate the need for a subsidy was favored.

103. In the strategic review of the airline (see Working Paper A1) subsidies were addressed in section 2.18, "The Question of Subsidies". We are of the view that AMI's board will be reluctant to review the whole question of subsidies.

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**vii Operational & Financial Management Information**

104. As previously referred to, the accounting information is suspect. With the appointment of the new finance manager, who has the necessary qualifications and experience, this unsatisfactory situation will be rectified. While management and financial reports have been issued in the past their usefulness (ability to take action) has been limited. It is our expectation that this will be rectified with the appointment of the new finance manager. Considerable time was spent with the finance manager during the second field visit and also some time during the final field visit reviewing and discussing financial and management information requirements. Working Paper A4 "Management Information" summarizes these discussions<sup>17</sup>.

**viii Manpower Planning**

105. One of the instructions given to the acting general manager by the board has been to "reduce staff". But this is only one leg of the stool. After having determined the airline strategies, the airline structure to support those strategies needs to be identified and this is the genesis of the manpower plan. The process and the detail were discussed during all field visits with the general manager. Developing a manpower plan is one of the key corporate strategies for the airline.

106. Thus staff levels cannot be decided in isolation. Furthermore the culture of the Marshall Islands is an indispensable factor that should be taken into account when assessing staff levels. Reductions in staff can be achieved through attrition – but this could take some time as staff turnover is low. After discussions with the general manager the following staff levels might optimistically be achievable over time.

	<i>Proposed</i>	<i>Existing</i>
Administration	13	21
Flight Operations	15	17
Maintenance	17	21
Traffic	15	18
Outer Island Agents	27	27
Total All	87	104

107. The Outer Island Agents are part-time and so excluding these the proposed staff levels would be 60 versus the level at November 2004 of 77 (and 79 in August). Staff levels are now at 71.

108. Our main observation has been the low individual productivity and apparent lack of functional supervision of AMI employees in all aspects of the airline operation. However, with the appointment of the new general manager and finance manager this has begun to change for the better.

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<sup>17</sup> Appendix 7

**ix Private Sector Participation**

109. The industry synopsis indicates the lack of private sector interest in being involved in airlines in the Pacific region because of the high failure rate

110. There are some significant risks attached to privatization, the main one being the continued provision of air transport services to the outer islands without a significant RMI government subsidy (which could be greater than any subsidy to AMI all other things equal because private operators will expect a return on capital employed).

111. There are some outsourcing possibilities but these have not yet been explored (eg airport traffic handling, sales, etc outsourced to Continental Airlines).

112. The question of privatization and outsourcing is addressed in sections 2.20 and 2.21 of the strategic review presented to the airline board (attached as Working Paper A1). Essentially the RMI Government needs to first decide on its general privatization policy and then to decide whether it wants to privatize AMI and its specific objectives in doing this. At present there seems to be a general perception that privatization would, all of a sudden, fix the airline and provide more frequent, more reliable and lower cost air services to the outer islands. This is just fanciful. Privatization is likely to reduce the frequency of services, increase the cost of air transport but possibly improve the quality and standard of air services.

**V Procurement of Equipment**

113. A budget sum of US\$5000 has been allocated in this TA for the purchase of computer equipment for the usage of the EA. At the date of this report, the EA has not yet made its application for purchase of this equipment.

**VI Contacts Made During the TA**

Hon Michael Konelios, Minister of Transportation and Communications (MOTC)

Jorelik Tibon, Secretary, MOTC

Betwel Lekka, Deputy Secretary, MOTC

Wallace Peter, Director, Sea Transportation Division, MOTC

Danny Peter, Operations Manager, Sea Transportation Division, MOTC

Albert O'Conner, Fleet Engineer, Sea Transportation Division, MOTC

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DRAFT FINAL REPORT

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Korean Joel, Fleet Captain, Sea Transportation Division, MOTC  
Salvador Sumalabe, Manager, TriPod Accounting & Allied Services  
Melvin Narruhn, Deputy Attorney General, RMI  
Dan Fitzpatrick, Acting General Manager, AMI  
Victor Balica, Chief Financial Officer, AMI  
Albon Jelke, Director of Flight Operations, AMI  
Mike Trevor, Special Projects, AMI  
Konou Smith, Pilot seconded to assist the Consultants, AMI  
Dick Schmidt, Flight Following Officer, AMI  
Merle Mercado, Revenue Accountant, AMI  
Tony Philips, Route Manager, AMI  
Elmer Langbata, Airworthiness Safety Inspector, DCA  
Stanley Myazoe, Director of Civil Aviation, DCA  
Peter Chapman, Project Manager, OITIP, SMEC

## APPENDICES