Report of the planning meeting for the 2008/09 IWC/SOWER cruise and future cruises

1. OPENING REMARKS AND WELCOMING ADDRESS

The meeting was held at the Tokyo University of Marine Science and Technology, 26-27 September 2008. The convenor, Kato, welcomed the participants.

On behalf of the Japanese Government, Morishita welcomed all participants, especially visitors from overseas. He looked forward to the meeting reaching constructive conclusions on what might be achieved on the forthcoming cruise. In addition he looked forward to the meeting having useful discussions on a strategy for future cruises.

On behalf of the IWC, Donovan thanked the Government of Japan for once again generously providing the vessel and crew for the SOWER programme. The Commission and its Scientific Committee attach great importance to this cooperative programme and look forward to its continuation into the future.

In subsequent discussion, Morishita addressed the question of availability of the vessel, both this year and in the future. For 2008/09, the vessel would be available as anticipated, and the meeting should proceed in its planning under the assumptions made at the Scientific Committee's 2008 annual meeting in Santiago. For cruises beyond 2008/09, there had been no major change in the position since Santiago. Under the Japanese budgeting process, a draft budget for 2009/10 should be available by the end of calendar year 2008, with the final budget determined by the end of the fiscal year, 31 March. Efforts would be made to obtain the same level of funding for 2009/10 as for 2008/09, but the result cannot be guaranteed. Nevertheless for the time being the meeting should assume that the same budget would be available for 2009/10 as for 2008/09.

Morishita also raised the question of the future of the cruises in the longer-term. He believed there is a need for a long-term perspective for IWC cooperative research, particularly in the context of the Commission's own discussions of its future. The Scientific Committee should, he believed, be considering the issue, especially the future of the SOWER programme. He personally looked forward to continued international cooperation, within a long-term scenario. Through its support of the SOWER programme Japan had been the major sponsor of the Commission's Southern Ocean research, and he hoped that situation would continue, recognising that the final decisions on what research is undertaken rest with the Scientific Committee. In his view, three main considerations need to be addressed in discussing the programme's long-term future: (i) what technical questions still need to be answered to obtain the best results from SOWER vessel surveys; (ii) how does the IWC see its own future in regard to cooperative research, and (iii) what will be the Japanese Government's attitude to funding such research. The meeting should bear these in mind in its deliberations over future cruises, i.e. beyond 2008/09.

Further discussion of these and related matters appears under Section B.

Meeting participants are listed in Annex A.

2. APPOINTMENT OF CHAIR AND RAPPORTEURS

Kato was elected chair.

Bannister, Donovan and Ensor acted as rapporteurs.

3. ADOPTION OF AGENDA

The agreed agenda is given as Annex B.

4. ORGANISATION OF THE MEETING

It was **agreed** that the first day, 26 September, would be devoted to discussion of Item 8 (Priority for the Cruise), Item 10 (Cruise Plan) and several aspects of Item 11 (Details of the cruise). The remainder of the agenda would be allocated to the remaining two days, Saturday and Sunday 27, 28 September, with Monday 29 September reserved for preparation of the Meeting Report. In the event the meeting's business was concluded by the end of 27 September (see Part C), with 29 September devoted to final preparation of the report.

5. REVIEW OF AVAILABLE DOCUMENTS

A list of documents available appears as Annex C.

A. The 2008/09 Cruise

6. REVIEW OF PLANNING DISCUSSIONS FOR THE 2008/09 CRUISE AT IWC60

The meeting reviewed the Scientific Committee's discussions at its Santiago meeting, in particular IWC/60/Rep1 Items 10.5.2, and 10.5.3, as well as Annex G, Item 5.3 and Appendix 2. It noted that several ideas had been investigated, including possible collaboration with Australian and/or German sea ice research programmes and the commencement of a fourth circumpolar survey. It had been noted that the Australian aerial survey will only be a limited study to take place in December, i.e. before any SOWER cruise could start. In that event, and given the prevailing high fuel costs, the 2008/09 cruise had been planned to investigate temporal changes in the spatial distribution of minke whales in relation to the ice recession in Area IV. It was anticipated that target species and the general order of priority would be the same as in previous cruises, using methods recommended in IWC/60/Rep1 Annex G, Appendix 2, pending discussions at the planning meeting.

7. AVAILABILITY OF RESEARCH VESSELS

7.1 Research vessels offered by Japan

As last year, because of continuing financial constraints, only one vessel can be provided this year.

On behalf of the IWC, Donovan thanked the Japanese Government for providing the one vessel.

8. PRIORITIES FOR THE CRUISE

Given the discussions under Item 6 above, the meeting **agreed** that highest priority should be given to work investigating changes in Antarctic minke whale density with respect to ice recession. It was **agreed** that a small technical sub-group under Donovan should undertake an in-depth discussion of Items 8, 10 and 11. The meeting accepted the report of that sub-group and this has been incorporated into this report.

8.1 Changes in Antarctic minke whale density with respect to ice recession

The meeting was pleased to receive SOWER/08/WP6 by Bravington. This had been produced in response to a recommendation from the 2008 Scientific Committee meeting and had examined the power of mark-recapture and line-transect methods to determine changes in distribution with respect to changes in ice, assuming 35 days of effort and a longitudinal range of 95°-115°E. This is a somewhat complex problem and the analyses in SOWER/08/WP6 were presented to stimulate discussion of the issue. Following discussion of the paper and an additional analysis proposed by Kitikado, the meeting **agreed** that a combination of line-transect and mark-recapture information had the potential to address this important issue. The primary limitation, however, related to sample size considerations – it was clear that any successful experiment would require a major field effort to obtain the required number of recaptures and suitable density estimates; this would require considerably more effort than the 26[1] days that may actually be available; less research time than in the past is available due to the increasing fuel costs. The meeting therefore **agreed** that one option was to request IWC member governments to contribute additional funding to provide additional research time; the estimated cost for 15 additional days is thought to be $390,000 ($26,600 per day).

However, recognising the financial climate, the meeting **agreed** that it would also work on the basis of the number of days that could be expected given the existing budget (and see Item 10). It was noted that to the extent possible, data collected this year should be compatible with that collected last year to allow combined analyses.

After considerable discussion, it was **agreed** to undertake a combination of line transect survey and the collection of individual identification data (biopsy/mark-recapture). The objective is to combine some feasibility aspects (especially with respect to the biopsy/mark-recapture effort) with the ability to undertake combined analyses with data collected the previous year and to develop a targeted plan for the future. The line transect field effort will focus on BT Option II mode and SS-II mode (closure when abeam); further details are provided under Item 11.2. The Antarctic minke whale biopsy/photo-identification work will also provide an opportunity to carry out some preparatory work with respect to telemetry studies (see SOWER/08/WP7); further details are given under Items 8.7 and 11.12.

8.2 BT mode option 2

As noted above, this mode, which proved successful on previous cruises (see SOWER/08/WP14) and which is of value both for interpreting past data and for designing future cruises, will be used as required during the cruise, in combination with the less crew-intensive SS-II mode. Further details are given under Item 11.2.

8.3 School size estimation

Given the lack of research time available, the meeting **agreed** that, over and above the information obtained when in SS-II mode, this work will be given low priority on the cruise.

[1] 'additional' days may be available because the pre-cruise meeting may occupy only one day.

8.4 Visual dive time
Given the lack of research time available, the meeting **agreed** that this work will be given low priority on the cruise.

8.5 Biopsy sampling/photo-identification
The discussion of the collection of such data for Antarctic minke whales is included under Item 8.1. With respect to other species, it was **agreed** that priority will be given to blue and southern right whales during the early part of the cruise, with additional priority allocated to humpback whales later in the cruise, depending on time available; this is because humpback whales are known to be abundant throughout the area. This is discussed further under Items 10.1 and 11.9.

8.6 Acoustic studies
As in previous years, the meeting **agreed** that acoustic work will be undertaken opportunistically (e.g. at night or in poor weather) and in conjunction with blue whale sightings.

8.7 Direct data entry
As in previous years, the meeting **agreed** that it was premature to attempt to dedicate significant effort into developing a direct data entry system until discussions on the future of the SOWER cruises had been completed.

8.8 Collaboration with the aircraft
Bravington informed the meeting that (as had been reported in Santiago), there would be only limited time for Australian aerial survey work this year. The work would be completed during late December 2008 i.e. before the vessel arrives. The meeting noted that whilst this precluded the chance for direct collaboration, the work that *Shonan Maru No. 2* was undertaking was of value to future aerial survey planning and possible collaboration.

8.9 Other matters

8.9.1 Telemetry work
Given the great potential value of telemetry data to considerations of minke whales and ice, at the meeting in Santiago, Gales had agreed to co-ordinate the production of a working paper on the feasibility of undertaking such work (SOWER/08/WP7). The meeting **agreed** that it was not possible to consider such work on the present cruise for a number of reasons, not least the lack of suitable equipment. However, it **agreed** to the request to collect information that could be valuable in assessing the feasibility of attaching telemetry devices to Antarctic minke whales from large vessels such as *Shonan Maru No. 2*, to the extent that this does not interfere with the primary work of the cruise. This is discussed further under Item 11.12.

8.9.2 Use/testing of SCANS equipment
Given the fundamental importance of accurate distance and angle data, the meeting **agreed** to continue work related to SCANS equipment; details are given under Item 11.6.2.

9 REVIEW OF THE BUDGET

The meeting noted that the sum sought by the Scientific Committee for the cruise, £67,614, had been approved by the Commission.

10 CRUISE PLAN

10.1 Priorities in conjunction with research effort
The meeting **agreed** that highest priority will be allocated to the work on Antarctic minke whales and the ice (see Item 8.1). In addition, it **agreed** that up to two days (at the discretion of the Cruise Leader) can be spent working on blue, southern right and humpback whales (see Items 8.5 and 8.6).

10.2 Itinerary
The meeting initially discussed an itinerary with Fremantle as the proposed home port; the Government of Japan had stated that this was their preferred option, adding that it should maximise the available research time. They had requested that the Secretariat request the Government of Australia confirm its support of the SOWER programme by facilitating this option and preventing the legal difficulties that had led to the change of port (from Fremantle to Benoa, Bali) last year.

Donovan made a number of points with respect to this issue:

(1) it is clear that all member governments strongly support the SOWER programme, as witnessed by the unanimous recommendation for this work and its associated budget at Santiago;

(2) to the best of his knowledge, the problems last year arose out of a private court case and judicial ruling – as in many countries the Australian judiciary is independent of the government;

(3) the decision to change ports at the last minute last year had not only created considerable additional work and difficulties for the Secretariat last year but had also increased the travel costs related to scientists travel and to equipment – it was better to avoid such problems in advance;

(4) from a Secretariat and IWC budgetary perspective it would be most efficient to use Benoa as the home port for the forthcoming cruise since much of the equipment was already in bond in Benoa.

(5) whatever the options, the IWC Secretariat will of course raise issues related to the security of the participants, vessel and equipment with the relevant authorities, including the Commissioner for Australia;

(6) in addition to the above, maximising the research time must form an important component of any final decision.

After considerable discussion, the meeting **agreed** to the options provided in Table 1.

Which option is appropriate will depend on the discussions between the Secretariat and relevant Governments. It is expected that a decision on the Plan to be adopted can be reached by the Secretariat by13 October 2008.

Table 1
Summary of the timing options, transit times and research days available for various options

	Plan A (homeport Fremantle)	Plan B1 (homeport Benoa and transit Australian EEZ)	Plan B2 (homeport Benoa and avoiding Australian EEZ)
Depart Shiogama	22-Dec-2008	22-Dec-2008	22-Dce-2008
Pass Lombok Strait	3-Jan-2009	-	-
Arrive homeport	9-Jan	4-Jan-2009	4-Jan-2009
Depart homeport	11-Jan	6-Jan	6-Jan
Pass latitude 32°S (Fremantle)	-	12-Jan	12-Jan
Start survey (105°E)	19-Jan	20-Jan	20-Jan
Finish survey	13-Feb	12-Feb	12-Feb
Pass latitude 32°S (Fremantle)	-	20-Feb	20-Feb
Arrive homeport	21-Feb	26-Feb	26-Feb
Depart homeport	24-Feb	1st-Mar	1st-Mar
Pass Lombok Strait	1st-Mar	-	-
Arrive Shiogama	14-Mar	14-Mar	14-Mar
Research days (Antarctic)	41 (26)	53 (24)	53 (24)

10.3 Survey area

There was some discussion as to the most appropriate research area, given the confirmation that the aerial survey work would be completed well before the vessel arrives. It was recognised that the proposed research area had primarily been chosen in the light of the proposed collaboration and that Antarctic minke whale density was not expected to be high (with associated problems of sample size) in the area. However, the meeting noted the difficulty of choosing higher density areas (or collaboration with the German helicopter survey mentioned in Santiago) given the logistical/financial circumstances related to increased transit times and consequent reduced research time. After some discussion, and noting the need to be able to cover the research area at least twice in the available research time, it was **agreed** to cover the longitudinal range 105-115°E; the northern boundary will be some 60 n.miles from the ice-edge on the first track (see Fig. 1).

10.4 Research vessel

As in recent years, the Government of Japan has kindly offered *Shonan Maru No. 2*.

11. DETAILS OF THE CRUISE

11.1 Cruise track design and itinerary

It will not be possible to finalise cruise track design prior to the cruise, given the dependency on prevalent ice conditions. A provisional cruise track plan was developed in relation to a mean ice edge derived from satellite imagery from the area 105°-115°E for the years 1992 – 2002.

The survey will commence at 105°E and proceed eastward to 115°E. The vessel will then resurvey the area in the reverse direction. If time allows, a further repeat survey will be undertaken.

For each survey, the northern boundary of the research area will be the same and will be constructed as a line 60 n.miles north of the ice edge mapped during the first survey. The width of the survey area for the second survey (and subsequent survey) will be potentially wider than 60 n.miles due to southward recession of the ice edge.

The cruisetrack design for each of the surveys will be a series of evenly spaced zigzags covering the entire north-south extent of the research area. The zigzags will be interspersed with survey segments parallel to the ice edge. An example of the cruisetrack design for the first survey is shown in Fig. 1. Fig. 2 shows the same design for the resurvey north of

the main ice edge. Fig. 2 also indicates the occurrence of two polynyas south of the main ice edge, and an indication of a cruisetrack design covering one of these. Prior to the cruise, it is probably unlikely that a prediction can be made of whether survey in these polynyas will be possible. However, as coverage of these areas would probably contribute greatly to the success of the cruise it is important that if these areas are accessible for survey, research be conducted there. If one or both of the polynyas are accessible for survey, separate cruisetrack designs will be developed (for example using the 'box' design developed for the CP3 Ross Sea survey).

Due to the limited time available, coupled with the requirement to cover the entire area at least twice, it is likely that gaps in survey coverage will be necessary as the total length of the trackline will be too great to be entirely covered. Survey effort will be distributed as evenly as possible by latitude and longitude. Survey will be in alternating Passing mode (BT option 2) and Closing (SS-II) mode. Mode change waypoints on the zigzags will to be constructed to ensure a 2:1 ratio of Passing to Closing modes. Each of the segments of trackline parallel to the ice edge will be divided equally by mode. Mode change waypoints on the segments in the polynyas will be constructed to ensure a 2:1 ratio of Passing to Closing mode.

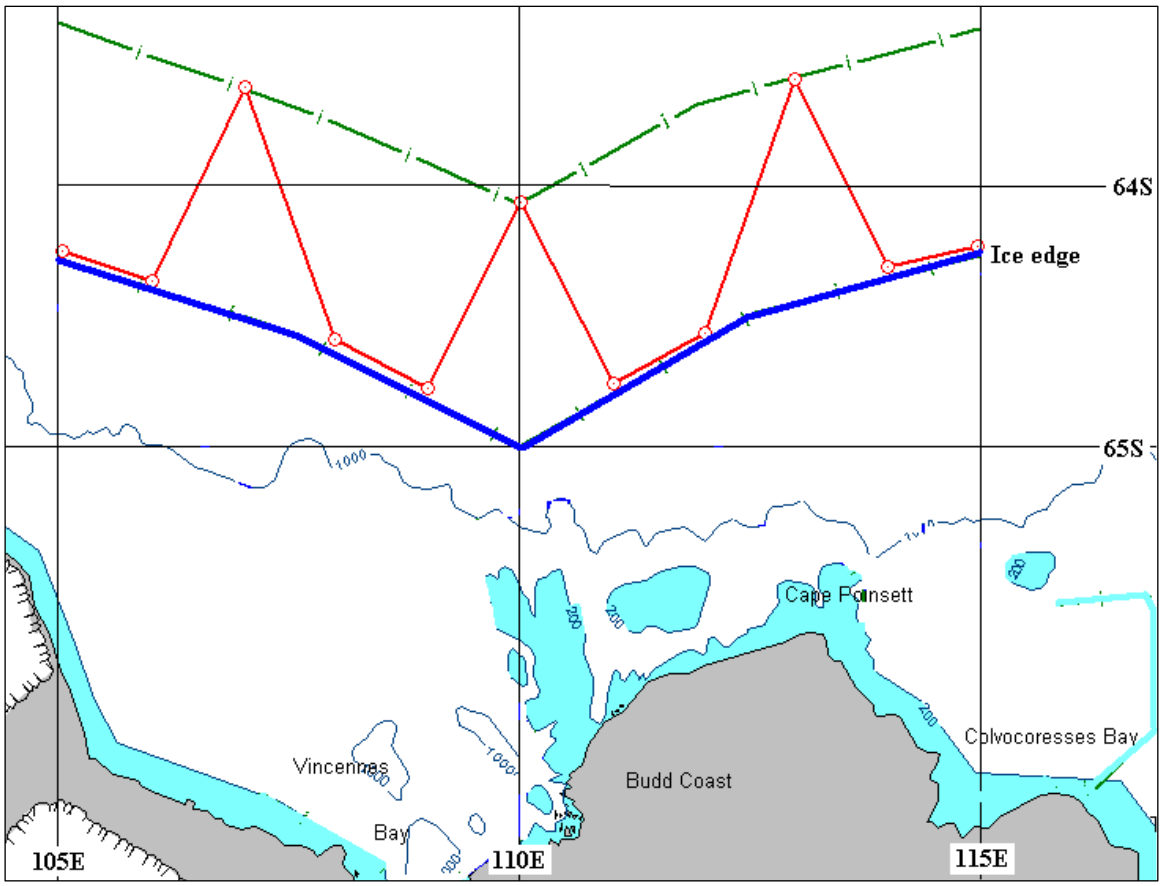

Fig.1. Provisional cruisetrack design for the *Shonan Maru No.2* during the first survey. The pattern of mode alternation is not indicated.

11.2 Survey mode and research hours

The vessel will survey in alternating BT option 2 mode and SS-II mode during the entire survey using the normal guidelines for construction of mode change waypoints (including inter alia no more than 100 n.miles surveyed continuously in BT option 2 mode where the duties of the TOP and IOP observers will be essentially the same as for normal IO mode).

During survey in SS-II mode, normally closure will only be completed to whales that are believed to be minke whales.

During survey in BT option-II mode normally only whales that are believed to be minke whales will be tracked.

Research hours during the cruise will be the same as on recent SOWER cruises. During days when survey is conducted in BT option-II, research will be scheduled between 0600-1900 hours and there will be provision for two meal breaks each of 30 minutes duration. When, due to conditions unacceptable for the sightings survey, the vessel is waiting on a BT option-II mode segment of the trackline, meal breaks will be treated in the same manner as if the vessel is surveying.

When surveying in SS-II or NSP (passing) modes are the only activities of the day, research will be conducted between 0600-1800 hours.

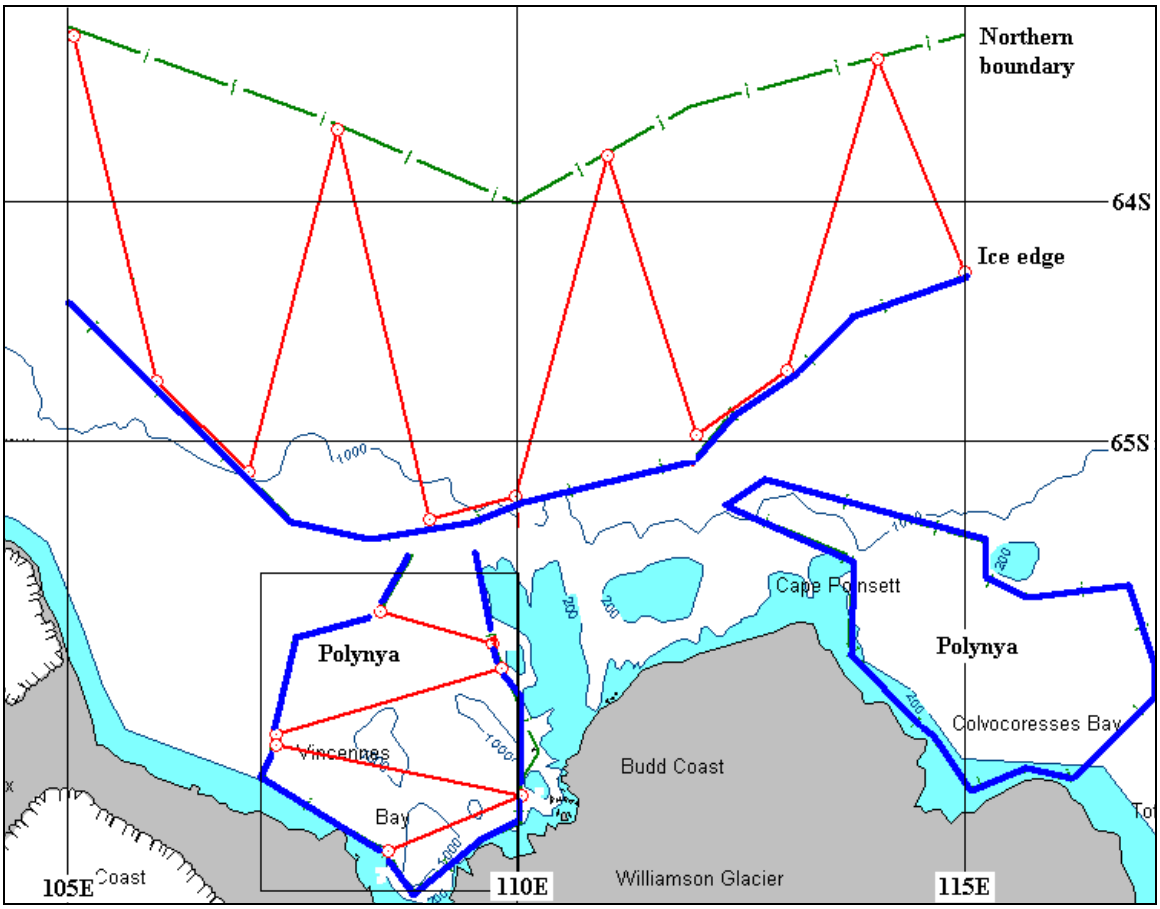

Fig. 2. Provisional cruisetrack design for the *Shonan Maru No.2* during the resurvey and coverage of a polynya. The pattern of mode alternation is not indicated.

For priority species (such as blue whales), it may be beneficial to extend research outside the normal research hours as during recent cruises. The basis for such special extension of research hours will involve mutual agreement between the Captain and Cruise Leader and, as during the last cruise, an allocation of equivalent time-off the following morning or evening.

Limited night steaming may be conducted. Night steaming will be restricted to a maximum of 30 n.miles per day and should always be completed prior to midnight.

The research day in transits will begin 30 minutes after sunrise and end 30 minutes before sunset, with a maximum of a 12-hour research day.

If necessary, time-zone changes will be in 30-minute intervals, coming into effect at midnight.

11.3 Number of crew on effort

Two crewmembers will be in the barrel whenever full searching effort is conducted. One crewmember will be in the Independent Observer platform whenever the BT option 2 mode is conducted. One crewmember will be at the helm on the Upper Bridge, regardless of the research mode. Also present on the Upper Bridge, whenever the sighting survey is conducted, will normally be the captain and chief engineer (or an alternate).

This is the same number of observers per platform as on previous cruises and again, in the interests of standardised data collection, the number of observers on the Upper Bridge is to be limited as above. As last year, observers should not search from the Upper Bridge during their scheduled rest periods. They may visit the Upper Bridge on a casual basis during their rest periods, but must not inform the on-effort observers of any sightings they may make, until such sightings have passed abeam, unseen by any of the on-effort observers.

There will be four researchers on the vessel. During survey in SS-II mode, the number of researchers searching from the Upper Bridge should be standardised at three.

During the BT option-II trials, there should be two observers in the IOP, one crew observer and one researcher.

11.4 Navigation and research speeds
Research during transit will be conducted at an average speed of 11.5 knots.

In general, surveying in the research area will be conducted at an average speed of 11.5 knots although in SS-II mode, the vessel will usually close to sightings at 15.0 knots.

11.5 Acceptable conditions
Search effort for minke whales will be conducted only when the Cruise Leader believes that sighting conditions are acceptable. The usual Guidelines for acceptable conditions apply, i.e. visibility (to see a minke whale) is greater than 1.5 n.miles and wind speed is <25 knots (in the vicinity of the ice-edge) and <20 knots (remote from the ice-edge); the sea state should be <Beaufort 6. 11.6 Angle and distance estimation

11.6.1 Estimated angle and distance experiment
The meeting **agreed** that it was valuable to conduct the 'traditional' angle and distance training and experiment. The experiment is designed to calibrate and identify any biases in individual observers' estimation of angle and distance.

The number of trials shall be at the discretion of the Cruise Leader. Observers should be tested from platforms where they normally conduct sighting effort and should use the same procedures and equipment as in their normal sighting procedures. The experiment should be conducted during weather and sea conditions representative of the conditions encountered during the survey.

The detailed protocol can be found in the Guide for Researchers.

11.6.2 Use of SCANS equipment
The meeting **agreed** to the following:

(a) the SCANS video equipment for estimating distance will be used by the researchers on the upper bridge;

(b) still camera equipment will be used to record angle estimation by topmen and to obtain information on search patterns – Ensor and Nishiwaki **agreed** to ensure that this equipment arrives in Japan in sufficient time to be installed on the vessel and for the crew to familiarise themselves with it.

11.7 School size estimation
The only work on school size estimation will be undertaken during SS-II mode; the detailed protocol is given in the Guide for Researchers.

11.8 Data format
The meeting **agreed** that:

(1) the modifications to the acoustic records form recommended at the previous post-cruise meeting should be made;

(2) an additional data form to record information relevant to telemetry studies (see Item 8.9.1) should be developed by Donovan and Ensor.

Donovan will send a complete set of forms to ICR as soon as possible and the Guide for Researchers will be modified accordingly.

11.9 Biopsy sampling/photo-identification/videotaping studies
Biopsy sampling and photo-identification of Antarctic minke whales will be undertaken as part of normal operations during the survey (SS-II mode) in accordance with guidance from the Cruise Leader.

In addition, as noted under Item 8.5, the meeting **agreed** that up to two days can be spent on biopsy sampling/photo-identification studies of species other than Antarctic minke whales, at the discretion of the Cruise Leader. Priority will be given to blue, southern right and humpback whales as discussed under Item 8.5. Video-taping of blue whales will occur in accordance with the protocol given in the Guide for Researchers, which also provided further information on biopsy sampling and photo-identification protocols.

Photographs are the property of the IWC and are available under standard IWC guidelines.

11.10 Acoustic studies
As noted under Item 8.6, acoustic studies are directed primarily at blue whales. Details of the acoustic protocol are given in the Guide for Researchers. The meeting was pleased to be informed that the Chief Operator (Y. Tsuda) will undertake the acoustic work.

11.11 Oceanographic studies
As in previous years, the meeting is pleased to able to assist with the Argo oceanographic programme. It **agreed** that the vessel will deploy two floats at the target latitudes (to be provided by JAMSTEC) during transit and outside EEZs.

11.2 Telemetry studies
As noted under Item 8.9.1, at the discretion of the Cruise Leader, information relevant to future deployment of telemetry equipment will be collected. The meeting **agreed** that the new protocol and data sheet (see Item 11.8) will be developed by Donovan and Ensor and included in the Guide for Researchers.

12. INTERNATIONAL RESEARCHERS AND ALLOCATION OF RESEARCH PERSONNEL

12.1 Number of researchers
The single vessel available this year can accommodate four researchers.

12.2. Nomination and allocation of researchers
A subgroup under Bannister (Bravington, Brownell, Donovan, Ensor, Hedley, Kato) reviewed possible candidates on the basis of their experience and expertise.

Last year, given the experimental nature of the programme, preference was given to those with experience on previous IDCR/SOWER cruises. This year, it was felt that the opportunity should be taken to enlarge the pool of possible future candidates by considering not only those with relevant SOWER experience but also those experienced in, e.g., line transect surveys and biopsy sampling, but not necessarily with SOWER and who were likely to play a continuing role within the IWC Scientific Committee. From the seven applicants in addition the Cruise Leader, the subgroup recommended appointments as below:

Table 2

Researchers for the 2008/09 SOWER cruise

Name	Nationality	Position	Experience
Ensor	New Zealand	Cruise Leader	Extensive IDCR/SOWER
Kumagai	Japan	Scientist/crew liaison	Antarctic (3 seasons) not SOWER
Olson	USA	Scientist	Extensive SOWER experience, blue whale photo-id analysis
Kuningas	Finland	Scientist	Line transect (North Atlantic) and D-tag deployment
Sekiguchi	Japan	Reserve	Extensive SOWER experience
De Stefanis	Spain	Reserve	Line transect and biopsy (North Atlantic Mediterranean)

The meeting **accepted** the recommendations, noting that of the reserves, Sekiguchi (with extensive SOWER experience) would be given preference if Olson (with previous SOWER experience) was not available while De Stefanis (no SOWER experience) would act as reserve for Kuningas.

Donovan undertook to inform all applicants of the outcome immediately, asking the appointees to forward necessary personal details, including passport numbers, where these were not already available, to Shimada as a matter of urgency. Dietary requirements are to be forwarded to Matsuoka. As in past years, letters of appointment will emphasise the need to follow the previously adopted technical and personal guidelines.

13. GENERAL PREPARATIONS FOR THE 2008/09 CRUISE

13.1 Identification of home port organiser
Under Plan A, Bannister undertook to act as home port organiser in Fremantle. Should either Plan B be adopted, the IWC Secretariat will be responsible for arrangements in Benoa (Bali).

13.2 Entry and other permits
Under Plan A, Fremantle port access permits will be sought by the Fisheries Agency of Japan. Given the time constraints in reaching the research area from Fremantle there will be no possibility of undertaking closing mode operations in the Australian EEZ so no permit for that activity is required; only passing mode would be undertaken there, although a permit for that activity may also be required. Donovan undertook to arrange for the IWC to approach the Australian Commissioner to IWC to seek cooperation as necessary. Copies of permits should be sent from the Fisheries Agency of Japan to the IWC Secretariat.

Under Plan B (either part) permits will need to be sought from the Indonesian authorities; again, time constraints mean that only passing mode survey mode will be used.

13.3 Review of recommendations from the 2007/08 cruise (SC/60/IA1, p17)
Ensor reported that while all recommendations had been endorsed at the Santiago meeting, given the limited opportunity available for blue whale research this year, the recommendations on acoustics (apart from that related to data forms), particularly recommendation 1 (purchase and installation of special software), do not need to be implemented. The meeting **concurred**.

14. IN TRANSIT SURVEY

14.1 Japan to Home Port

In the absence of researchers, and given the time constraints, passing mode sightings operations will be conducted by the crew (but see Item 13.2).

14.2 Home Port to Research Area

Given the time constraints, Passing mode only will be adopted (but see Item 13.2).

14.3 Antarctic to Home Port

Passing mode only will be adopted (but see Item 13.2).

14.4 Home Port to Japan

As for Item 14.1.

14.5 Necessary permits

Given the problems encountered last year over possible import into Australia of biopsy specimens obtained on the high seas, it was **agreed** that under Plan A all specimens should be retained on board until Japan; this is also true either Plan B option.

Individual researchers are responsible for obtaining any permits required from their home countries to take part in the cruise.

15. TRANSPORTATION OF DATA, SAMPLES AND EQUIPMENT

15.1 Details

The meeting reviewed an equipment list (SOWER/08/WP10) prepared by Matsuoka. As in past years, ICR and The Institute of Far Seas Fisheries will supply many of the essential items for the cruise.

A final corrected list will be provided by Matsuoka.

15.2 Necessary permits

See Item 14.5.

Shimada reported that the Japanese Government would provide the necessary permits for import of specimens into Japan from the high seas.

In response to a query over the status of some specimens from the 2005/6 cruise not yet received at the La Jolla Laboratory, Shimada undertook to investigate the matter in conjunction with Donovan and Brownell. He reported that steps are under way to export samples from 2007/08 under the necessary regulations.

15.3 Responsible persons

The meeting noted the following: Fremantle – Bannister; Benoa – IWC Secretariat; at sea – Cruise Leader. The Cruise Leader and Japanese researcher will be responsible for data transport after the cruise.

15.4 Other matters

None were raised.

16. COMMUNICATIONS

16.1 Safety aspects

The meeting noted that a cruise by an ice-strengthened yacht under the auspices of the Australian Antarctic Division, planned for Area IV, will not now take place. On the other hand, the Australian Research vessel *Aurora Australis* will be operating at the same time as the SOWER cruise in the vicinity of Casey Station.

There will be a daily report from *Shonan Maru No.2* to the Institute of Cetacean Research and thence to the Fisheries Agency of Japan. As necessary, communication between the vessel and *Nisshin Maru*, operating under the JARPA II programme in Area V, will be by Inmarsat, using the same protocol as in previous years.

16.2 Between Cruise Leader and IWC

The Cruise Leader will send a weekly progress report to the IWC Secretariat and to the Steering Group (Bannister, Best, Bravington, Brownell, Clark, Donovan, Hedley, Kato, Palka). A report will also be sent after the completion of each phase of research as appropriate. Matsuoka will forward copies of those reports to The Institute of Cetacean Research, the Fisheries Agency of Japan, the National Research Institute of Far Seas Fisheries and Kyodo Senpaku Co. Ltd.

16.3 Ice information
When required, SSM/I ice data, obtained by the radio operator from the internet, will be transformed using computer programs on board the vessel. The meeting noted that transformed ice data can also be made available from the Australian Antarctic Division, as last year.

16.4 Other official communication
Email, telephone and facsimile will be available. The vessel's email address will be available at a later date.

All official communications by the Cruise Leader will be paid for by the IWC. Communications can be by radio, telephone, email, or fax.

16.5 Private communications
Researchers and crew may send and receive private communications, including email, at their own expense.

16.6 Terms of payment of communication cost
Accounts must be paid by researchers before leaving the vessel at the home port. Payment is required in US dollars. Payment may be made by credit card. The researchers are requested to make payment if possible on the day prior to port entry.

16.8. Other matters
None were raised.

17. MEETINGS

17.1 Pre-cruise Meeting
Under Plan A, a pre-cruise meeting will be held in Fremantle at a venue to be arranged by Bannister. The IWC Secretariat will be responsible for arranging a venue for Plan B. It is likely that only one day will be required. Kumagai will undertake translation to and from Japanese at the meeting. The cost of hiring transport for the researchers and crew while in port (e.g. to attend the meetings) will be met by the IWC.

Japanese translations of the Planning Report and the Data Records Usage Notes will be made available to the ship's crew before the meeting.

Attending the pre-cruise meeting will be: all researchers, plus the captain, boatswain, chief (or second) officer, chief operator, and chief engineer. The radio operator and chief engineer will probably be required for the first part of the meeting only. In Fremantle, Bannister would be invited to attend.

As necessary, arrangements will be made by Ensor for training in use of the SCANS system.

17.2 Post-cruise Meeting
As there is again only one vessel, it should be possible to complete the Cruise Report during transit from the Antarctic to the home port. Therefore a post-cruise meeting will only be necessary if that is not possible. If a post-cruise meeting is necessary, under Plan A it will be held in Fremantle at a venue to be arranged by Bannister; under Plan B (either part) arrangements will be made by the IWC Secretariat. All researchers, the captain and radio officer would be required to attend. In Fremantle, Bannister would also be invited to attend.

17.3 Home port arrangements
The vessel owners will consult with the home port shipping agents to make the necessary arrangements for a berth for the research vessel.

17.4 Responsible persons
Under Plan A, hotel reservations for all researchers in Fremantle will be made by Bannister. Donovan will inform him immediately of the names of the researchers for him to make provisional hotel bookings for the pre-cruise period. Donovan will ask researchers to confirm their arrival dates with Bannister as a matter of urgency. Under Plan B (either part) arrangements will be made by the IWC Secretariat. As early as possible during the cruise, the Cruise Leader will confirm the researchers' post-cruise reservation requirements and forward them to the relevant home port organiser.

Home port contact details are given in Annex D.

18. REPORTS

18.1 Planning meeting report

A copy of the final version will be emailed by the IWC Secretariat to the Steering Group, the Chairman of the Scientific Committee, ICR, the home port organisers, all researchers and reserves, the Australian Government and the Australian Antarctic Division, attention Gales. Under Plan B, the appropriate Indonesian/Balinese authorities will be included.

18.2 Cruise report

A draft of the cruise report will be prepared, in accordance with the guidelines documented in IWC (1993), prior to arrival in the home port and, as necessary, the draft will be reviewed during the Post-cruise Meeting . The Cruise Leader will email the final report to IWC from the home port.

Copies of the final report will be forwarded by the IWC Secretariat to all Steering Group members, all researchers, the captain, the Australian and (as necessary) the Indonesian Governments and the Australian Antarctic Division, attention Gales.

19. OTHER LOGISTICS

19.1 Press release

The Cruise Leader, in consultation with Kato and the IWC Secretariat, will draft a pre-cruise press release for issue by the IWC Secretariat. The statement should be available at least one week prior to the ship's arrival in the home port. Under Plan A, a press release will be sent by the Cruise Leader to Bannister near the end of the cruise, so that it can be available in Fremantle prior to the ship's arrival. Copies of all press releases will be sent to the Steering Group and the IWC Secretariat, and placed on the IWC website. Under Plan B, the IWC Secretariat will be the responsible body.

Statements to the press during the cruise and while the ship is in port will be made only by the Cruise Leader.

Under Plan A, the Japanese Consul General in Perth should be asked by the IWC Secretariat to assist as necessary with press relations in Fremantle. Under Plan B, the IWC Secretariat will be the responsible body.

19.2 Security

Extra security, as provided on previous cruises, may be helpful in the home port. As on previous cruises, the display of 'Research' on the side of the vessel and the display of the IWC flags are intended to help reduce security problems in port. Large IWC banners for display on the ship when in port are also available. Under Plan A, the IWC Secretariat is asked to contact the Australian Government to request that adequate security arrangements be made for the vessel. Under Plan B (either part) the assistance of the Indonesian Government should be sought. The meeting noted that the Japanese Government will also contact the Australian or Indonesian Governments, as relevant, on the matter.

19.3 Accommodation and food costs

The daily subsistence charge aboard the ship will be ¥2500 per day for each researcher. The IWC will make direct payment of these fees to the Institute of Cetacean Research for the IWC-funded researchers.

As last year, a charge for alcoholic drinks will be made except on special occasions.

19.4 Other matters

The meeting noted that any change of plan, e.g. unavoidable delay in departure of vessels from port, be communicated to the Japanese authorities by the Cruise Leader through Kato, with a copy to Matsuoka by email beforehand.

B. Future Cruises

The meeting recalled the discussion on the opening day (see Item 1) where Morishita raised the question of the future of the cruises in the long-term. In the light of that discussion, and in particular the Japanese budget situation and the Commission's ongoing deliberations on its own future, the meeting **agreed** it would be more appropriate to hold over further consideration of the matter until the next Scientific Committee meeting in Madeira, May 2009. However, the meeting **reiterated** its view that such further deliberation should take place within the overall objective adopted by the Scientific Committee at its 2004 meeting, *viz*.

to provide information to allow determination of the status of populations of large whales that feed in the Antarctic waters. The programme will primarily contribute information on abundance and trends in abundance (including of Antarctic minke whales), learning from both the successes of past IDCR-SOWER cruises and the difficulties in interpreting previous results (IWC, 2004: 35).

Discussion of the previously adopted sub-objectives (consideration of methodological developments and improvements in abundance estimation and its interpretation; stock structure; abundance estimates and trends in abundance) would then also be held over to the Madeira meeting. In that context, the meeting drew attention to its detailed deliberations last year (SC/60/Rep7, Part B).

C. Concluding remarks

On behalf of the IWC, Donovan thanked all those people who have contributed to the success of the IDCR and SOWER cruises over the three decades of their operation. He reiterated his remarks of previous years that the Commission continues to regard the cruises as an extremely important element of its scientific work. He thanked all those involved for their contributions to the meeting: to Kato as meeting chairman; to the President, Tokyo University of Marine Science and Technology and his staff, to Morimoto and his staff at ICR, and in particular to the Government of Japan for their continued support of the programme in such times of financial stringency. But on behalf of the IWC, its Scientific Committee, and the scientists present at this meeting, he noted that without the enthusiastic and extremely competent support of the officers and crew of the research vessels the cruises would not have been so successful. He asked the *Shonan Maru II* officers and crew present to pass on the meeting's appreciation to those crew members who had not been able to attend. He thanked the scientists who had come to the meeting and who put in much time on the cruise's behalf between meetings. Lastly, and in particular, he thanked the interpreters for undertaking their most difficult task so cheerfully and efficiently.

Captain Komiya responded on behalf of his colleagues at the conclusion of discussions under Part A. He thanked all those present for their keen participation in the work of the meeting. The officers and crew were pleased to have been able to attend, and he assured the meeting that they looked forward to a successful cruise.

The meeting concluded at approximately 1800 hrs on 27 September 2008.

SOWER/08/Annex A

Planning meeting for the 2008/09 IWC/SOWER cruise and workshop for SOWER future options

(Tokyo, 26 - 29 September, 2008)

List of participants

John Bannister	Western Australian Museum, Australia
Mark Bravington	CISRO, Australia
Robert Brownell	Southwest Fisheries Science Center, U.S.A.
Greg Donovan	Head of Science, IWC, United Kingdom
Paul Ensor	Cruise Leader, New Zealand
Sharon Hedley	United Kingdom
Joji Morishita	Fisheries Agency of Japan, MAFF
Shigeki Takaya	Fisheries Agency of Japan, MAFF
Toshinori Uoya	Fisheries Agency of Japan, MAFF
Tomio Miyashita	National Research Institute of Far Seas Fisheries
Hiroyuki Shimada	National Research Institute of Far Seas Fisheries
Hidehiro Kato	Tokyo University of Marine Science and Technology
Toshihide Kitakado	Tokyo University of Marine Science and Technology
Shigetoshi Nishiwaki	The Institute of Cetacean Research
Koji Matsuoka	The Institute of Cetacean Research
Hiroto Murase	The Institute of Cetacean Research
Saeko Kumagai	The Institute of Cetacean Research
Hirohisa Shigemune	Kyodo Senpaku Co., Ltd.
Mitsuo Ishikawa	Kyodo Senpaku Co., Ltd.
Kenichi Hosone	Kyodo Senpaku Co., Ltd.
Hiroyuki Komiya	Kyodo Senpaku Co., Ltd., Captain
Takuro Oshima	Kyodo Senpaku Co., Ltd., Chief Officer
Yasunari Tsuda	Kyodo Senpaku Co., Ltd., Chief Operator
Zenetsu Suzuki	Kyodo Senpaku Co., Ltd., Boatswain
Kazumitsu Kurisu	Kyodo Senpaku Co., Ltd., Quartermaster
Naoto Iwasaka	Japan Agency for Marine-Earth Science and Technology
Yoko Yamakage	Interpreter
Hiroko Yasokawa	Interpreter

Meeting of the IWC/SOWER Cruise and its future planning

TOKYO, 9/26-29, 2008

Component A, The 2008-2009 Cruise

1. OPENING REMARKS AND WELCOMING ADDRESS
2. APPOINTMENT OF CHAIR AND RAPPORTEURES
3. ADOPTION OF AGENDA
4. ORGANIZATION OF MEETING
5. REVIEW OF AVAILABLE DOCUMENTS
6. REVIEW OF PLANNING DISCUSSIONS FOR THE 2008-2009 CRUISE AT IWC 60
7. AVAILABILITY OF RESEARCH VESSELS
   - 7.1 Research vessels offered by Japan
   - 7.2 Other possibilities
8. PRIORITY FOR THE CRUISE
   - 8.1 Examine changes in Antarctic minke whale density with respect to changes in the position of the ice edge due to ice recession
   - 8.2 BT Mode (option2)
   - 8.3 School size estimation
   - 8.4 Visual dive time
   - 8.5 Biopsy sampling/photo id (including usefulness of photo-id and sample size consideration of minke whale)
   - 8.6 Acoustic studies
   - 8.7 Direct data entry
   - 8.8 Collaboration with the aircraft (including contingency plan)
   - 8.9 Other matters
9. REVIEW OF THE BUDGET
10. CRUISE PLAN
    - 10.1 Several priorities, including allocation of research effort
    - 10.2 Itinerary
    - 10.3 Survey area
    - 10.4 Research vessel
    - 10.5 Other matters
11. DETAILS OF THE CRUISE
    - 11.1 Standard sightings
      - 11.1.1 Cruise track design and Itinerary
      - 11.1.2 Survey mode and research hours
      - 11.1.3 Number of crew on effort
      - 11.1.4 Navigation and research speeds
      - 11.1.5 Acceptable condition
      - 11.1.6 Estimated Angle and Distance training and Experiment (+SCANS)
      - 11.1.7 BT mode (Option II only)

11.1.8 School size estimation
11.1.9 Visual dive time
11.1.10 Data format
11.1.11 Computer Data entry
11.1.12 Biopsy sampling/ photo-id
11.1.13 Video taping
11.1.14 Oceanographic survey
11.1.15 Acoustics
11.2 Collaboration with the aircraft
12. INTERNATIONAL RESEARCHERS AND ALLOCATION OF RESEARCH PERSONNEL
12.1 Number of researchers
12.2. Nomination and allocation of researchers
13. GENERAL PREPARATIONS FOR THE 2008-2009 CRUISE
13.1 Identification of home port organiser
13.2 Entry and other permits
13.3 Review of recommendations from the 2007-2008 cruise
14. IN TRANSIT SURVEY
14.1 Japan to Homeport
14.2 Homeport to Research Area
14.3 Antarctic to Homeport
14.4 Fremantle to Japan
14.5 Necessary permits
15. TRANSPORTATION OF DATA, SAMPLES AND EQUIPMENT
15.1 Details
15.2 Necessary Permits
15.3 Responsible persons
15.4 Other matters
16. COMMUNICATIONS
16.1. Safety aspects
16.2 Between Cruise leader and IWC
16.3 Ice information
16.4 Other official communication
16.5 Private communications
16.6 Terms of payment of communication cost
16.7 Coordination with the aerial survey
16.8 Other matters
17. MEETING
17.1 Pre-cruise Meeting
17.2 Post-cruise Meeting
17.3 Home port arrangements
17.4 Responsible persons

18. REPORT
18.1 Planning meeting report
18.2 Cruise report
19. OTHERS
19.1 Press release
19.2 Security
19.3 Accommodation and food costs
19.4 Other matters

Component B, Future Cruises

1. TERMS OF REFERENCE
2. OBJECTIVES
2.1. General Objective
2.2. Sub-objectives
2.3. Discussion
3. METHODS TO ACHIEVE THE OBJECTIVES
4. TIMEFRAME AND INITIAL PROPOSAL
5. OTHER MATTERS

SOWER/08/Annex C

Planning meeting for the 2008/09 IWC/SOWER Cruise and workshop for SOWER future options (Tokyo, 26 -29, September 2008)

List of Documents

SOWER/08/WP

1. Extract from 60th IWC/SC report
2. Extract from Report of the Sub-committee on In-depth Assessment (IA) (60th IWC/SC report, Annex G with Appendix 2)
3. Report of the Planning Meeting for the 2007/2008 IWC/SOWER Cruise and future cruises（SC/60/Rep7）
4. 2007/2008 International Whaling Commission - Southern Ocean Whale and Ecosystem Research (IWC-SOWER) Cruise (SC/60/IA1)
5. Analysis of the BT mode experiments conducted on the IWC-SOWER 2005/06 and 2006/07 cruises (SC/60/IA7)
6. Options for a SOWER survey to study minke/ice relationships (By Bravington)
7. Working paper on tagging options for SOWER cruises (By Gales)
8. 2008/09 IWC-SOWER Crew List
9. Agent List
10. Required equipment (by Matsuoka)
11. International Whaling Commission equipment in Bali, Indonesia from the *Shonan Maru No.2* (By Ensor)
12. Proposal for Access to IWC/SOWER Genetic Samples (By Archer)
13. Itinerary of 2008/09 SOWER cruise
14. Detection probability of Antarctic minke whales: analyses of the BT mode experiments conducted on the IWC-SOWER 2005/06-2007/08 cruises (By Burt)

Annex D

Contact details for the cruise

Homeport organiser

J. L. Bannister
c/o Western Australian Museum
Francis Street
Perth, WESTERN AUSTRALIA 6000
Australia
Phone: 0061 89 212 3800
e-mail: bannisj@bigpond.com

Shipping agents (Fremantle)

Hetherington Kingsbury Shipping Agency Responsible person: Laurie Rebisz
Address: Suite 2, 18 Norfolk Street,
Fremantle WA 6160, Australia
Postal:
PO Box 391, Fremantle WA 6160
Telephone:
61 8 9335 6111
Facsimile:
61 8 9335 3196
Mobile:
0419 637 081
Email:
lrebisz@hksa.com.au

Shipping agents (Benoa)

PT.BAHTERA ADHIGUNA (Mr. Andi Mulia)
Address: Jl.Raya Pelabuhan Benoa,
Bali Indonesia,
Postal:
Telephone:
361-724253 / 724254
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361-724253

Email: bagunabali@telkom.net