



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Pacific Islands Fisheries Science Center
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Final Project Instructions

Date Submitted: June 11, 2014

Platform: NOAA Ship (*Oscar Elton Sette*)

Project Number: SE-14-04 (PIFSC)

Project Title: Insular Reef Fish & Bottomfish Bio-Sampling – Commonwealth of the Northern Mariana Islands (CNMI) and Mariana Trench Marine National Monument (MTMNM)

Project Dates: June 19, 2014 to July 21, 2014

Prepared by: Robert L. Humphreys Dated: 6/11/2014
Robert Humphreys, *Chief Scientist Legs I & II*
Fisheries Research & Monitoring Division; Life History Program Lead
Pacific Islands Fisheries Science Center

Approved by: Samuel G. Pooley Dated: 6/11/14
for Samuel G. Pooley, Ph.D.
Science Director
Pacific Islands Fisheries Science Center

Approved by: Robert A. Kamphaus Dated: 6/13/2014
Commander Robert A. Kamphaus, NOAA
Commanding Officer
Marine Operations Center – Pacific Islands

I. Overview

A. Brief Summary and Project Period

The project period will start on June 19, 2014 and end July 21, 2014. The primary objectives are to support the conduct of the following projects for CNMI resource agencies: 1) deep-slope bottomfish bio-sampling, 2) documentation of shark depredation/interaction with deep-slope bottomfish operations, 3) reef-fish bio-sampling, 4) deploy and later retrieve archeological field researchers and supplies on Alamagan, and 5) intertidal-shallow water benthic surveys and water quality sampling of Uracas, Maug, and Asuncion within the Marina Trench Marine National Monument (MTMNM) and Pagan, Guguan, Sarigan, and Anatahan within the Commonwealth of the Northern Marianas (CNMI). These projects are anticipated to provide samples to support additional research projects to evaluate latitudinal shifts in trophic relations via stable isotope analysis of tissue samples, and to evaluate genetic connectivity within the Mariana Archipelago.

Additional operations that will be conducted at night are conductivity-temperature-depth (CTD) casts to 1,000 m depth to obtain depth-stratified oceanographic data, midwater plankton sampling using a 6-ft. Isaacs-Kidd (IK) trawl, and the dip-net collection of small pelagic fishes and early life stages of pelagic-stage reef fishes attracted to a drifting surface night-light.

B. Days at Sea (DAS)

Of the 30 DAS scheduled for this project, 30 DAS are funded by an OMAO allocation, 0 DAS are funded by a Line Office Allocation, 0 DAS are Program Funded, and 0 DAS are Other Agency funded. This project is estimated to exhibit a Medium Operational Tempo.

- Total DAS = 30
- OMAO Allocated DAS = 30
- Lin Office Allocated DAS = 0
- Program Funded Days (PFD) = 0
- Other Agency Funded DAS = 0. This project is estimated to exhibit a Medium Operational Tempo.

C. Operating Area

The Operating Area for each leg of SE-14-04 follows:

Leg I: The operating area includes Alamagan and the MTMNM (Uracas, Maug, and Asuncion) during the first leg (6/19-7/03/2014) of the cruise (Figure 1a).

Leg II: The operating area includes Pagan, Guguan, Sarigan, and Anatahan within the Northern Mariana Islands during the second leg (7/07-21/2014) of the cruise (Figure 1b).

D. Summary of Objectives

The ship will support bio-sampling and oceanographic operations in the waters surrounding the Commonwealth of the Northern Mariana Islands and the Mariana Trench Marine National Monument. The scientific objectives of this project are to:

1. Conduct daylight bottomfish bio-sampling in the 50-400 m depth zone around Uracas, Maug, and Asuncion within the MTMNM and Pagan, Guguan, Sarigan, and Anatahan. Heads, gonads, and tissue samples will be extracted and stored in support of CNMI Division of Fish and Wildlife research proposals to 1) evaluate the life history of deep-slope bottomfish species, 2) to evaluate latitudinal shifts in trophic relations via stable isotope analysis of tissue samples, and 3) to support a University of Guam research proposal to evaluate genetic connectivity within the Mariana Archipelago.
2. Document shark depredation or other interactions that occur during the conduct of bottomfish bio-sampling operations in support of a Northern Marianas College research proposal. Efforts will include video photography using GoPro camera attached to poles that can be quickly submerged alongside the vessel to document observed shark interaction. Efforts will be made to collect biopsy tissue samples of any sharks near the surface for DNA based species identification.
3. Conduct daylight reef-fish snorkel/free-dive bio-sampling in <20 m depth zone around Uracas, Maug, and Asuncion within the MTMNM and Pagan, Guguan, Sarigan, and Anatahan. Heads, gonads, and tissue samples will be extracted and stored in support of CNMI Division of Fish and Wildlife research proposals to 1) evaluate the life history of reef-fish species, 2) to evaluate latitudinal shifts in trophic relations via stable isotope analysis of tissue samples, and 3) to support a University of Guam research proposal to evaluate genetic connectivity within the Mariana Archipelago.
4. Conduct daylight snorkel surveys to document the benthic community within the shallow water ($\leq 3\text{m}$) habitat and also to conduct water sample collections around Uracas, Maug, and Asuncion within the MTMNM and Pagan, Guguan, Sarigan, and Anatahan in order to characterize the marine water quality at these sites. This work will directly support the CNMI Bureau of Environmental and Coastal Quality research needs.
5. The ship will collect oceanographic data from routine conductivity-temperature-depth (CTD) casts, continuous acoustic Doppler current profiler (ADCP), and thermosalinograph (TSG) measurements throughout the cruise. CTD casts will be conducted once each night at an offshore location immediately adjacent to Uracas, Maug, and Asuncion within MTMNM and Pagan, Guguan, Sarigan, and Anatahan.
6. 6-ft Isaacs-Kidd (IK) midwater trawl operations off either the port side longline pit or the stern A-frame will be conducted in the evening to collect midwater larval and juvenile

stages of pelagic and reef fish species. Samples collections will support University of Guam genetic connectivity research proposal and CNMI Division of Fish and Wildlife research to evaluate latitudinal shifts in trophic relations via stable isotope analysis of tissue samples. The conduct of these operations will be on a time available basis.

7. Drifting night-light dip-netting operations off the port side longline pit will be conducted in the late evening to collect surface occurring larval and juvenile stages of pelagic and reef fish species. Samples collections may provide partial support for a University of Guam research proposal to evaluate genetic connectivity within the Mariana Archipelago. The conduct of these operations will be dependent on calm weather and surface current conditions.

8. Deploy two archeologist and field camp supplies on Alamagan during the Leg 1 transit up to Uracas. The archeologists and field camp will be retrieved by the Sette during the Leg 1 transit back to Saipan after completion of field operations at Asuncion.

E. Participating Institutions

We anticipate participants from our partner agencies in CNMI:
Bureau of Environmental and Coastal Quality (BECQ)
Division of Fish and Wildlife (DFW)

Participation in this cruise will also include one instructor and one student per leg from Northern Marianas College and three cooperating fishermen per leg, one of which represents the Northern Marianas Mayor's Office.

F. Personnel/Science Party:

Please note that the names of some participants either remain to be named (TBN) or are subject to change.

| Name (Last, First) | Title | Date Aboard | Date Disembark | Gender | Affiliation | Nationality |
|---------------------------|-------------------------------|--------------------|-----------------------|---------------|--------------------|--------------------|
| Humphreys, Robert | Chief Scientist | Leg I 6/19/2014 | Leg II 7/21/2014 | M | NOAA-PIFSC | USA |
| Barlow, Jamie | Biological Science Technician | Leg I 6/19/2014 | Leg II 7/21/2014 | M | NOAA-PIFSC | USA |
| Cruz, Eric | Natural Resource Specialist | Leg I 6/19/2014 | Leg I 7/3/2014 | M | NOAA-PIFSC | USA |

| | | | | | | |
|-------------------------|---|--------------------|---------------------|---|-----------------------------------|-----|
| Mooney, Eric | Biological Science Technician | Leg I 6/19/2014 | Leg II 7/21/2014 | M | NOAA- PIFSC | USA |
| Trianni, Michael | Natural Resource Specialist | Leg I 6/19/2014 | Leg II 7/21/2014 | M | NOAA- PIFSC | USA |
| Sundberg, Meagan | Fisheries Bio- Sampling Associate | Leg I 6/19/2014 | Leg II 7/21/2014 | F | University of Hawaii- JIMAR | USA |
| Buniag, Francis | Fisheries Biologist | Leg II 7/7/2014 | Leg II 7/21/2014 | M | CNMI- DFW | USA |
| Camacho, Gregory | Fisheries Biologist | Leg I 6/19/2014 | Leg II 7/21/2014 | M | CNMI- DFW | USA |
| Dunn, William (Trey) | Fisheries Biologist | Leg I 6/19/2014 | Leg II 7/21/2014 | M | CNMI- DFW | USA |
| Guerrero, Jesus | Fisheries Biologist | Leg I 6/19/2014 | Leg I 7/3/2014 | M | CNMI- DFW | USA |
| Iguel, Jose | Fisheries Biologist | Leg II 7/7/2014 | Leg II 7/21/2014 | M | CNMI- DFW | USA |
| Miller, Todd | Fisheries Biologist | Leg I 6/19/2014 | Leg I 7/3/2014 | M | CNMI- DFW | USA |
| Tenorio, Michael | Fisheries Biologist | Leg I 6/19/2014 | Leg II 7/21/2014 | M | CNMI- DFW | USA |
| Villagomez, Frank | Fisheries Biologist | Leg II 7/7/2014 | Leg II 7/21/2014 | M | CNMI- DFW | USA |
| Iguel, John | Cooperating Scientist | Leg I 6/19/2014 | Leg I 7/3/2014 | M | CNMI- BECQ | USA |
| Johnson, Steven | Cooperating Scientist | Leg I 6/19/2014 | Leg II 7/21/2014 | M | CNMI- BECQ | USA |
| Johnston, Lyza | Cooperating Scientist | Leg II 7/7/2014 | Leg II 7/21/2014 | F | CNMI- BECQ | USA |
| Okano, Ryan | Cooperating Scientist | Leg I 6/19/2014 | Leg II 7/21/2014 | M | CNMI- BECQ | USA |

| | | | | | | |
|--------------------|-----------------------|--------------------|---------------------|---|---|-----|
| Perez, Denise | Cooperating Scientist | Leg I 6/19/2014 | Leg II 7/21/2014 | F | CNMI-BECQ | USA |
| Castro, John | Cooperating Fisherman | Leg I 6/19/2014 | Leg II 7/21/2014 | M | Northern Mariana Islands Mayor's Office | USA |
| Flores, Tony | Cooperating Fisherman | Leg I 6/19/2014 | Leg II 7/21/2014 | M | | USA |
| Ito, Patrick | Cooperating Fisherman | Leg II 7/7/2014 | Leg II 7/21/2014 | M | | USA |
| Crane, Matthew | Instructor | Leg I 6/19/2014 | Leg I 7/3/2014 | M | Northern Marianas College | USA |
| Schafer, Nicole | Instructor | Leg II 7/7/2014 | Leg II 7/21/2014 | F | Northern Marianas College | USA |
| Taitano, Shirley | Student | Leg I 6/19/2014 | Leg I 7/3/2014 | F | Northern Marianas College | USA |
| TBN | Student | Leg II 7/7/2014 | Leg II 7/21/2014 | | Northern Marianas College | USA |
| Athens, J. Stephen | Archeologist | Leg I 6/19/2014 | Leg I 7/3/2014 | M | | USA |
| Leppard, Tom | Archeologist | Leg I 6/19/2014 | Leg I 7/3/2014 | M | | UK |

G. Administrative

1. Points of Contact

Chief Scientist:

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Agent – for Port of Saipan; to be determined

2. Diplomatic Clearances

None required.

3. Licenses and Permits

The Chief Scientist has submitted the required permit applications with federal and CNMI (DFW and BECQ) agencies and has obtained approval to conduct all planned scientific operations in the waters of CNMI and the MTMNM prior to the start of the cruise.

II. Operations

The Chief Scientist is responsible for ensuring the scientific staff are trained in planned operations and are knowledgeable of project objectives and priorities. The Commanding Officer is responsible for ensuring all operations conform to the ship's accepted practices and procedures.

A. Project Itinerary

The following operational plans can be considered only a guide as to how the Chief Scientist expects the surveys to progress without being able to predict the weather, operational and scheduling problems, and equipment failures. In particular, it should be noted that the transit time is approximate and may be altered based on weather or the progress of the survey. The following itinerary is based on a ship speed of 9.0 knots:

Leg I:

- | | |
|------------|--|
| 19 June | Embark all Leg I scientific party aboard by 1300. Depart from Port of Saipan at 1400 for Alamagan. Begin Leg I of cruise. |
| 20 June | Arrive Alamagan at 0600. Begin deployment of two archeologists (Athens and Leppard), field camp supplies and equipment onto Alamagan. Depart Alamagan at 1300. |
| 21 June | Arrive Uracas at 0800. Commence deep-slope bottomfish bathymetry survey at 0800. At 0900 launch 2 small boats to commence reef-fish snorkel/free-dive bio-sampling, and shallow water-snorkel benthic survey. After launching small boats, Sette commences deep-slope bottomfish bathymetry survey. At 1200, deploy 3 rd small boat and commence deep-slope bottomfish bio-sampling from the small boat and Sette. Small boats cease scientific activities and return to Sette by 1530. In the evening, complete processing of collected biological samples and store/preserve extracted tissues and otoliths. At 1800 conduct 1,000 m depth CTD cast followed by night 6-ft IK tow deployed from the stern. Afterwards conduct night-light operation off the port side longline pit if winds and currents are minimal. |
| 22-23 June | Commence deep-slope bottomfish bathymetry survey at 0500. At 0800 launch 3 small boats to commence deep-slope bottomfish bio-sampling, reef-fish snorkel/free-dive bio-sampling, and shallow water-snorkel benthic survey. After launching small boats, Sette commences deep-slope bottomfish bio-sampling. Small boats cease scientific activities and return to Sette by 1530. In the evening, complete processing of collected biological samples and store/preserve extracted tissues and otoliths. At 1800 conduct 1,000 m depth CTD cast followed by night 6-ft IK tow deployed from the stern. Afterwards conduct night-light operation off the port side longline pit if winds and currents are minimal. |
| 24 June | Depart Uracas at 0000 and arrive Maug Islands at 0400. Commence deep-slope bottomfish bathymetry survey at 0500. At 0800 launch 3 small boats to commence deep-slope bottomfish bio-sampling, reef-fish snorkel/free-dive bio-sampling, and shallow water-snorkel benthic survey. After launching small boats, Sette commences deep-slope bottomfish bio-sampling. Small boats cease scientific activities and return to Sette by 1530. In the evening, complete processing of collected biological samples and store/preserve extracted tissues |

and otoliths. At 1800 conduct 1,000 m depth CTD cast followed by night 6-ft IK tow deployed from the stern. Afterwards conduct night-light operation off the port side longline pit if winds and currents are minimal.

- 25-27 June Commence deep-slope bottomfish bathymetry survey at 0500. At 0800 launch 3 small boats to commence deep-slope bottomfish bio-sampling, reef-fish snorkel/free-dive bio-sampling, and shallow water-snorkel benthic survey. After launching small boats, Sette commences deep-slope bottomfish bio-sampling. Small boats cease scientific activities and return to Sette by 1530. In the evening, complete processing of collected biological samples and store/preserve extracted tissues and otoliths. At 1800 conduct 1,000 m depth CTD cast followed by night 6-ft IK tow deployed from the stern. Afterwards conduct night-light operation off the port side longline pit if winds and currents are minimal.
- 28 June Depart Maug Islands at 0000 and arrive Asuncion Island at 0400. Commence deep-slope bottomfish bathymetry survey at 0500. At 0800 launch 3 small boats to commence deep-slope bottomfish bio-sampling, reef-fish snorkel/free-dive bio-sampling, and shallow water-snorkel benthic survey. After launching small boats, Sette commences deep-slope bottomfish bio-sampling. Small boats cease scientific activities and return to Sette by 1530. In the evening, complete processing of collected biological samples and store/preserve extracted tissues and otoliths. At 1800 conduct 1,000 m depth CTD cast followed by night 6-ft IK tow deployed from the stern. Afterwards conduct night-light operation off the port side longline pit if winds and currents are minimal.
- 29-30 June Commence deep-slope bottomfish bathymetry survey at 0500. At 0800 launch 3 small boats to commence deep-slope bottomfish bio-sampling, reef-fish snorkel/free-dive bio-sampling, and shallow water-snorkel benthic survey. After launching small boats, Sette commences deep-slope bottomfish bio-sampling. Small boats cease scientific activities and return to Sette by 1530. In the evening, complete processing of collected biological samples and store/preserve extracted tissues and otoliths. At 1800 conduct 1,000 m depth CTD cast followed by night 6-ft IK tow deployed from the stern. Afterwards conduct night-light operation off the port side longline pit if winds and currents are minimal.
- 30 June Depart Asuncion Island at 2100; transit to Alamagan.
- 1 July Arrive Alamagan 1000. Embark archeologists (Athens and Leppard) and transfer field camp supplies and equipment onto Sette. Depart Alamagan at 1900 for Saipan.
- 3 July Arrive at Port of Saipan at 0000. End Leg I of cruise.

Leg II:

- 7 July All Leg II scientific party aboard by 0800. Depart Port of Saipan at 0900 for Pagan. Begin Leg II of cruise.
- 8 July Arrive Pagan at 0500 and commence deep-slope bottomfish bathymetry survey. At 0800 launch 3 small boats to commence deep-slope bottomfish bio-sampling, reef-fish snorkel/free-dive bio-sampling, and shallow water-snorkel benthic survey. After launching small boats, Sette commences deep-slope bottomfish bio-sampling. Small boats cease scientific activities and return to Sette by 1530. In the evening, complete processing of collected biological samples and store/preserve extracted tissues and otoliths. At 1800 conduct 1,000 m depth CTD cast followed by night 6-ft IK tow deployed from the stern. Afterwards conduct night-light operation off the port side longline pit if winds and currents are minimal.
- 9-11 July Commence deep-slope bottomfish bathymetry survey at 0500. At 0800 launch 3 small boats to commence deep-slope bottomfish bio-sampling, reef-fish snorkel/free-dive bio-sampling, and shallow water-snorkel benthic survey. After launching small boats, Sette commences deep-slope bottomfish bio-sampling. Small boats cease scientific activities and return to Sette by 1530. In the evening, complete processing of collected biological samples and store/preserve extracted tissues and otoliths. At 1800 conduct 1,000 m depth CTD cast followed by night 6-ft IK tow deployed from the stern. Afterwards conduct night-light operation off the port side longline pit if winds and currents are minimal.
- 12 July Depart Pagan at 0000 and arrive Guguan at 0500. Commence deep-slope bottomfish bathymetry survey at 0500. At 0800 launch 3 small boats to commence deep-slope bottomfish bio-sampling, reef-fish snorkel/free-dive bio-sampling, and shallow water-snorkel benthic survey. After launching small boats, Sette commences deep-slope bottomfish bio-sampling. Small boats cease scientific activities and return to Sette by 1530. In the evening, complete processing of collected biological samples and store/preserve extracted tissues and otoliths. At 1800 conduct 1,000 m depth CTD cast followed by night 6-ft IK tow deployed from the stern. Afterwards conduct night-light operation off the port side longline pit if winds and currents are minimal.
- 13-14 July Commence deep-slope bottomfish bathymetry survey at 0500. At 0800 launch 3 small boats to commence deep-slope bottomfish bio-sampling, reef-fish snorkel/free-dive bio-sampling, and shallow water-snorkel benthic survey. After launching small boats, Sette commences deep-slope bottomfish bio-sampling. Small boats cease scientific activities and return to Sette by 1530. In the evening, complete processing of collected biological samples and store/preserve extracted tissues and otoliths. At 1800 conduct 1,000 m depth CTD cast followed by night

6-ft IK tow deployed from the stern. Afterwards conduct night-light operation off the port side longline pit if winds and currents are minimal.

- 15 July Depart Guguan at 0000 and arrive Sarigan at 0400. Commence deep-slope bottomfish bathymetry survey at 0500. At 0800 launch 3 small boats to commence deep-slope bottomfish bio-sampling, reef-fish snorkel/free-dive bio-sampling, and shallow water-snorkel benthic survey. After launching small boats, Sette commences deep-slope bottomfish bio-sampling. Small boats cease scientific activities and return to Sette by 1530. In the evening, complete processing of collected biological samples and store/preserve extracted tissues and otoliths. At 1800 conduct 1,000 m depth CTD cast followed by night 6-ft IK tow deployed from the stern. Afterwards conduct night-light operation off the port side longline pit if winds and currents are minimal.
- 16-17 July Commence deep-slope bottomfish bathymetry survey at 0500. At 0800 launch 3 small boats to commence deep-slope bottomfish bio-sampling, reef-fish snorkel/free-dive bio-sampling, and shallow water-snorkel benthic survey. After launching small boats, Sette commences deep-slope bottomfish bio-sampling. Small boats cease scientific activities and return to Sette by 1530. In the evening, complete processing of collected biological samples and store/preserve extracted tissues and otoliths. At 1800 conduct 1,000 m depth CTD cast followed by night 6-ft IK tow deployed from the stern. Afterwards conduct night-light operation off the port side longline pit if winds and currents are minimal.
- 18 July Depart Sarigan at 0000 and arrive Anatahan at 0230. Commence deep-slope bottomfish bathymetry survey at 0500. At 0800 launch 3 small boats to commence deep-slope bottomfish bio-sampling, reef-fish snorkel/free-dive bio-sampling, and shallow water-snorkel benthic survey. After launching small boats, Sette commences deep-slope bottomfish bio-sampling. Small boats cease scientific activities and return to Sette by 1530. In the evening, complete processing of collected biological samples and store/preserve extracted tissues and otoliths. At 1800 conduct 1,000 m depth CTD cast followed by night 6-ft IK tow deployed from the stern. Afterwards conduct night-light operation off the port side longline pit if winds and currents are minimal.
- 19-20 July Commence deep-slope bottomfish bathymetry survey at 0500. At 0800 launch 3 small boats to commence deep-slope bottomfish bio-sampling, reef-fish snorkel/free-dive bio-sampling, and shallow water-snorkel benthic survey. After launching small boats, Sette commences deep-slope bottomfish bio-sampling. Small boats cease scientific activities and return to Sette by 1530. In the evening, complete processing of collected biological samples and store/preserve extracted tissues and otoliths. At 1800 conduct 1,000 m depth CTD cast followed by night 6-ft IK tow deployed from the stern. Afterwards conduct night-light operation off the port side longline pit if winds and currents are minimal.

21 July Depart Anatahan at 0000 and arrive Port of Saipan at 0800. Disembark scientific field party. End of Leg II and end of cruise.

B. Staging and Destaging

1. Staging

Prior to sailing from Ford Island on 31 May 2014, the ship's crew will inspect the port- and starboard-side J-frames and associated oceanographic winches, conducting cable and DESH-5 winch for CTD operations, the RD Instruments ADCP and associated computer and software, the thermosalinograph, the flow-through Turner 10-AU fluorometer, the Simrad EK60 echosounder, the Scientific Computing System (SCS), the Global Positioning System (GPS) navigational systems, and the scientific freezer to ensure that they are in proper working order. The SeaBird 9/11+CTD system and frame, and the SEACAT portable CTD will be installed and inspected ensuring that they are fully operational. Electrical continuity of the J-frame conducting cable, the winch's slip ring assembly, and connections to the electronic laboratory will be confirmed by the Chief Electronics Technician before sailing. The scientific small boat will be operational and ready to be deployed prior to sailing. The Program requests that Survey technician Robert Spina be assigned as Survey Technician during this project to participate in daytime bottomfish bio-sampling from the Sette and the CTD cast in the evening (1800-1900).

The stern hip-tanks will be fueled prior to the cruise to re-supply fuel daily to the three NOAA small boats (SE-2, SE-4, and SE-6) during deep-slope bottomfish bio-sampling, spear/snorkel reef-fish bio-sampling, and shallow water benthic surveys planned to be conducted daily on this cruise.

Prior to departing Ford Island on 31 May 2014, scientists and crew will load the PIFSC SE-6 SafeBoat.

Dates and equipment/personnel needed for loading of scientific equipment will be provided to the ship no later than 30 days prior to sailing.

2. Destaging

Dates and equipment/personnel needed for off-loading scientific equipment will be provided to the ship no later than 30 days prior to sailing.

C. Operations to be Conducted

The following operational plans can be considered only a guide as to how the Chief Scientist expects the surveys to progress without being able to predict the weather, operational and scheduling problems, and equipment failures. In particular, it should be noted that the amount of time required at each of the working areas is approximate and may be altered based on weather or the progress of the survey.

The Chief Scientist has the authority to revise or alter the technical portion of the instructions as work progresses, provided that, after consultation with the Commanding Officer, it is ascertained that the proposed changes will not (1) jeopardize the safety of personnel or the ship, (2) exceed the overall time allotted for the project, (3) result in undue additional expenses, and (4) alter the general intent of the project instructions. In addition, the Chief Scientist must notify the Office of the Director of the Pacific Islands Fisheries Science Center at the earliest opportunity prior to making: (1) deviations from the general project track or area of operations noted in the project instructions, (2) significant changes or additions of research operations to those specified in the project instructions, or (3) port calls not specifically identified in the project instructions.

1. Station Operations

It is requested that the Survey Technician be available during early evenings (1800-1900) for CTD casts.

a.) Conduct deep-slope bottomfish handline bio-sampling operations from the *Sette* and SE-6 SafeBoat to obtain scientific specimens of eteline snappers, epinepheline groupers, and other bottomfish species for life history, trophic, and population connectivity studies. Efforts to document any depredation or other interactions with sharks during these operations will be conducted using GoPro cameras mounted to poles and submerged alongside the ship.

b.) Conduct reef-fish snorkel/free-dive speargun bio-sampling operations from the NOAA SE-4 to obtain scientific specimens for life history, trophic, and population connectivity studies.

c.) Conduct daylight snorkel surveys to document the benthic community at shallow depths ($\leq 3\text{m}$) and conduct water quality sample collections from the NOAA SE-2.

The conduct of the above three scientific operations will require the use of three NOAA small boats daily while on station. Small boat operations will use SE-2, SE-4, and SE-6; operations will be conducted when weather permits and in adhering to GAR assessments. Each day of deep-slope bottomfish bio-sampling will be preceded (0500-0700) with a bathymetric survey of the 50-400 m depth zone to identify likely bottomfish habitat to be targeted. Following the bathymetric survey work, a daily meeting at 0730 will be held to discuss that day's small boat operations for the 3 NOAA small boats and to assess the conditions likely to be encountered on the water that day. Small boat deployments will be scheduled to start at 0800 daily while working at MTMNM and CNMI island locations and return to the *Sette* at 1530 daily.

d.) Conduct an early evening shipboard CTD cast in offshore waters adjacent to each island worked within the MTMNM and CNMI visited during the cruise.

For night operations, one CTD cast will be conducted as the first operation starting at about 1800. The CTD will be equipped with both a WetLab profiling and Seapoint flow-through fluorometer (for comparison between flow-through and non-flow-through sensors), redundant dissolved oxygen sensors, and a 12-Niskin water bottle carousel rosette sampler. Water samples will be collected for nutrients, chlorophyll-*a*, and chloropigments. All chloropigment samples including discrete chlorophyll-*a* samples will be filtered at sea. Chlorophyll-*a* samples will be analyzed at-sea post-filtration while chloropigments and nutrient samples will be stored in the ship's walk-in

scientific freezer. CTD casts will go down to a maximum of 1000 meters in depth. Current velocity will be continuously monitored with an ADCP, while surface temperature, salinity, and chlorophyll-*a* will be monitored with a hull-mounted thermosalinograph and flow-through fluorometer throughout the duration of the project.

e.) Conduct one midwater 6-ft IK tow per night adjacent to each island worked within the MTMNM and CNMI visited during the cruise.

On a time and weather available basis, an evening midwater 6-ft IK tow will be conducted after completion of the CTD. The IK net and paravane will be deployed off the stern using the stern A-frame and trawl ramp.

f.) Conduct a nightly drifting-night light operation while working within the MTMNM and CNMI.

On a time and weather available basis, a late evening drifting night-light operation will be conducted alongside the port side longline pit at each island visited during the cruise. The light attracted larval and early juvenile stages fish and invertebrates will be sampled using dip-nets.

g.) Deployment and pick-up of two archeologists including field camp supplies and equipment on Alamagan.

During the Leg 1 transit to Uracas, the Sette will first deploy two archeologists including their field camp supplies and equipment onto Alamagan on June 20. The Sette will embark these personnel and supplies/equipment back onto the Sette on July 1 prior to arriving back in Saipan to end Leg 1.

2. Underway Operations

Current velocity will be continuously monitored with an ADCP, while surface temperature, salinity, and chlorophyll-*a* will be monitored with a hull-mounted thermosalinograph and flow-through fluorometer throughout the duration of the project.

3. Mitigation Measures for Protected Species during Scientific Operations

3.1. Monitoring methods

The officer on watch, Chief Scientist (CS) (or other designated member of the Scientific Party), and small boat crew will visually scan for marine mammals, sea turtles, and other ESA-listed species (protected species) during all fishing and over-the-side operations. The member of the crew designated to stand watch for marine mammals is dedicated to that function and visually scans the waters surrounding the vessel prior to the planned start of putting bottomfishing lines, CTD, IK trawl, or night-light into the water.

3.2. Operational procedures

“Move-On” Rule. If any marine mammals or sea turtles are sighted anywhere around the vessel in the 30 minutes before setting any gear, the vessel may be moved away from the animals to a different section of the sampling area if the animals appear to be at risk of

interaction with the gear at the discretion of the officer on watch in consultation with the CS. Small moves within the sampling area can be accomplished without leaving the sample station. After moving on, if marine mammals or sea turtles are still visible from the vessel and appear to be at risk, the officer on watch may decide, in consultation with the CS, to move again or to skip the station. The officer on watch will first consult with the CS or other designated scientist and other experienced crew as necessary to determine the best strategy to avoid potential takes of these species based on those encountered, their numbers and behavior, position and vector relative to the vessel, and other factors. For instance, a whale transiting through the area and heading away from the vessel might not require any move or only require a short move from the initial sampling site while a pod of dolphins gathered around the vessel may require a longer move from the initial sampling site or possibly cancellation of the station if they follow the vessel. In most cases, trawl gear is not deployed if marine mammals have been sighted from the ship in the previous 30 minutes unless those animals do not appear to be in danger of interactions with the trawl, as determined by the judgment of the CS and officer on watch. The efficacy of the “move-on” rule is limited during night time or other periods of limited visibility; although operational lighting from the vessel illuminates the water in the immediate vicinity of the vessel during gear setting and retrieval.

D. Dive Plan

Dives are not planned for this project. Free-diving (snorkel) fish sampling activities will be conducted at each island surveyed during this project.

E. Applicable Restrictions

1. “Take” of Protected Species

a. Under the Marine Mammal Protection Act and Endangered Species Act it is unlawful to take a protected species. The MMPA defines take as "harass, hunt, capture, kill or collect, or attempt to harass, hunt, capture, kill or collect." The ESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." An incidental take is one that incidental to, but not the purpose of, otherwise lawful activities.

b. In the event of an incidental take of a marine mammal or federally listed threatened or endangered species during the cruise, the chief scientist will report the incident to the PIFSC Director and Deputy Director IMMEDIATELY via IRIDIUM, INMARSAT, and email. Samples should not be collected from any incidentally taken marine mammals, sea turtles, or seabirds. Photos of the incidentally caught animal should be taken to

properly identify the species, but the process of taking the photos must not contribute to the further injury of the animal. These photos are for the purposes of internal NMFS verification only, and must not be shared outside of PIFSC or the Office of Protected Resources (i.e., do not post the photos on the internet).

c. As described at II. C. 3. (above), PIFSC has developed mitigation measures for our fisheries and ecosystem research cruises to avoid take and comply with the Lecky, Murawski, and Merrick guidance. A copy of these documents is also available at <https://sites.google.com/a/noaa.gov/pifsc-science-operations/home/nepa-permits/protected-species-mitigation-measures> and on the ship's bridge.

III. Equipment

A. Equipment and Capabilities Provided by the Ship

- CTD system and heavy duty cage assembly
- 12 complete Niskin bottles, with at least enough spare parts to replace 4 bottles
- Port J-frame and open block for IK tow
- Starboard J-frame and block for CTD
- Oceanographic winches and cables (port and starboard)
- SEACAT portable CTD with backup
- Deck cranes with 600-lb static-lift block (for small boat deployment/recovery)
- Thermosalinograph
- RD Instruments ADCP and associated computer and software
- EK60 and ES60 echosounder system at the frequencies of 38 kHz, 70 kHz, 120 kHz, and 200 kHz
- GPS navigational system
- Depth sounders and recorders
- Scientific freezer, kept between -30° and -20°C at all times
- Two-way radios for communication from the electronics lab to the winch operator
- Operational Scientific Computing System (SCS)
- Navigational equipment and course plotter
- Supplies necessary for at least two re-terminations of the J-frame conducting cable
- Adequate fresh water for gear wash down
- Iridium phone
- A minimum of 2 terabyte shared network space
- Sette hydraulic handling gurdies (3) for day and/or night bottomfish sampling
- 1,000-watt night-light with rheostat
- SE-2 and SE-4 with spare parts
- 2 coxswains available for SE-2 and SE-4 operations
- 2 hip tanks and fuel racks

B. Equipment and Capabilities Provided by the Scientists

- Weight scales and measuring calipers
- Water filtration equipment (vacuum pump, filtering ring, filters, forceps, etc.)
- WetLabs profiling and SeaPoint flow-through fluorometers
- Redundant dissolved oxygen sensors
- Sample collection jars
- Turner 10-AU Fluorometer
- One laboratory dissecting microscope
- Laboratory glassware (e.g., Erlenmeyer flasks, graduated cylinders)
- External hard drives (at least 1-2 TB) for data common storage and backup capabilities.
- PIFSC SafeBoat and cradle
- Electric handline gurdies for SafeBoats
- Hooks, line, weights, and other fishing supplies for SafeBoat handline bottomfishing
- Frozen squid and fish bait
- Fuel (two hip tanks and six-55 gal barrels) for SafeBoats
- Weight scales and measuring calipers
- IK trawl paravane
- 1 bin containing 3 IK nets and bridles
- Knives and other tools for processing and measuring fish
- Fish tags
- Chest freezer (stored in Dive Locker)

IV. Hazardous Materials

A. Policy and Compliance

The Chief Scientist is responsible for complying with FEC 07 Hazardous Materials and Hazardous Waste Management Requirements for Visiting Scientific Parties (or the OMAO procedure that supersedes it). By Federal regulations and NOAA Marine and Aviation Operations policy, the ship may not sail without a complete inventory of all hazardous materials by name and quantity, MSDS, appropriate spill cleanup materials (neutralizing agents, buffers, or absorbents) in amounts adequate to address spills of a size equal to the amount of chemical brought aboard, and chemical safety and spill response procedures. Documentation regarding those requirements will be provided by the Chief of Operations, Marine Operations Center, upon request.

Per OMAO procedure, the scientific party will include with their project instructions and provide to the CO of the respective ship 30 days before departure:

- List of chemicals by name and anticipated quantity
- List of spill response materials, including neutralizing agents, buffers, and absorbents
- Chemical safety and spill response procedures, such as excerpts of the program's Chemical Hygiene Plan or SOPs relevant for shipboard laboratories

- For bulk quantities of chemicals in excess of 50 gallons total or in containers larger than 10 gallons each, notify ship's Operations Officer regarding quantity, packaging and chemical to verify safe stowage is available as soon as chemical quantities are known.

Upon embarkation and prior to loading hazardous materials aboard the vessel, the scientific party will provide to the CO or their designee:

- An inventory list showing actual amount of hazardous material brought aboard
- An MSDS for each material
- Confirmation that neutralizing agents and spill equipment were brought aboard sufficient to contain and cleanup all of the hazardous material brought aboard by the program
- Confirmation that chemical safety and spill response procedures were brought aboard

Upon departure from the ship, scientific parties will provide the CO or their designee an inventory showing that all chemicals were removed from the vessel. The CO's designee will maintain a log to track scientific party hazardous materials. MSDS will be made available to the ship's complement, in compliance with Hazard Communication Laws.

Scientific parties are expected to manage and respond to spills of scientific hazardous materials. Overboard discharge of hazardous materials is not permitted aboard NOAA ships.

B. Inventory

| Common Name of Material | Qty | Notes | Trained Individual | Spill Control |
|--------------------------------|------------|---|-------------------------------------|----------------------|
| Formaldehyde, 3.7% | 27-gal | Stored in Wet Lab and Hydro Lab HazMat cabinets | Robert Humphreys Meagan Sundberg | F |
| Ethanol, 95% | 15-gal | Stored in Wet Lab HazMat cabinet | Robert Humphreys Meagan Sundberg | F |
| Acetone, 99.5% | 4-gal | Stored in Hydro Lab HazMat cabinet | Robert Humphreys Meagan Sundberg | F |

C. Chemical safety and spill response procedures

F: Formalin/Formaldehyde/Ethanol/Acetone

- Ventilate area of leak or spill. Remove all sources of ignition.
- Wear appropriate personal protective equipment.
- Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible.
- Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e.g., vermiculite, dry sand, earth), and place in a chemical waste container.

- Do not use combustible materials, such as sawdust.

Inventory of Spill Kit supplies

| Product Name | Amount | Chemicals it is useful against | Amount it can clean up |
|-----------------------|--------|--------------------------------|------------------------|
| 3M Spill Response Kit | 1 | Formaldehyde, Ethanol, Acetone | 31 gallons |
| SPILFYTER | 1 | Formaldehyde | 5 gallons |

D. Radioactive Materials

No Radioactive Isotopes are planned for this project.

V. Additional Projects

A. Supplementary (“Piggyback”) Projects

The PIFSC bird, aquatic marine mammal, and fish school sightings log, per Chief Scientist instructions. No take is associated with any of the above operations.

B. NOAA Fleet Ancillary Projects

No NOAA Fleet Ancillary Projects are planned.

VI. Disposition of Data and Reports

Disposition of data gathered aboard NOAA ships will conform to NAO 216-101 *Ocean Data Acquisitions* and NAO 212-15 *Management of Environmental Data and Information*. To guide the implementation of these NAOs, NOAA’s Environmental Data Management Committee (EDMC) provides the *NOAA Data Documentation Procedural Directive* (data documentation) and *NOAA Data Management Planning Procedural Directive* (preparation of Data Management Plans). OMAO is developing procedures and allocating resources to manage OMAO data and Programs are encouraged to do the same for their Project data.

A. Data Responsibilities

The bridge will keep track of all scientific station operations (each fishing operation boat launch and retrieval, IK tow, Cobb Trawl, CTD cast, and drifting night-light). Each of these station operations will be assigned a unique station number using a sequential number sequence starting with Station #1 for the first scientific station operation. Each station number will have a start and end position, date, time, and depth over water. The Bridge will use the SCS system to event mark the start and end time of each station operation. For small boat fish sampling operations, the

same station number will be used for both launch and recovery. The Survey Tech and scientists will collect the more detailed primary data associated with each of the station operations.

Data Disposition: The Chief Scientist shall be considered to be the representative of the NMFS PIFSC Science Director for purposes of data disposition. A single copy of all data gathered by the vessel will be delivered to the Chief Scientist upon request who will be responsible for checking in a complete copy of this data to the PIFSC Scientific Information Services (SIS) Data Services group.

B. Pre and Post Project Meeting

Prior to departure, the Chief Scientist will conduct a meeting of the scientific party to train them in sample collection and inform them of project objectives. Some vessel protocols, e.g., meals, watches, etiquette, etc. will be presented by the ship's Operations Officer.

Pre-Project Meeting: A pre-project meeting between the Chief Scientist, the Commanding Officer, the Chief Marine Engineer, the Science Center Director's Office (or their designated representative) and their respective staffs will be held prior to commencement of operations to identify operational and logistic requirements. Additionally, prior to departure, the Chief Scientist will conduct a meeting of the scientific party for training in sample collection and to inform them of project objectives. General vessel protocols (e.g., meals, watches, etiquette, etc.) will be presented by the ship's Operations Officer on the first day of sailing.

Post-Project Meeting: Upon completion of the project, a meeting will normally be held at 0830 (unless prior alternate arrangements are made) and attended by the ship's officers, the Chief Scientist and members of the scientific party to review the project. Concerns regarding safety, efficiency, and suggestions for improvements for future projects should be discussed. Minutes of the post-project meeting will be distributed to all participants by email, and to the Commanding Officer and Chief of Operations, Marine Operations Center.

C. Ship Operation Evaluation Report

Within seven days of the completion of the project, a Ship Operation Evaluation form is to be completed by the Chief Scientist. The preferred method of transmittal of this form is via email to omao.customer.satisfaction@noaa.gov. If email is not an option, a hard copy may be forwarded to:

Director, NOAA Marine and Aviation Operations
NOAA Office of Marine and Aviation Operations
8403 Colesville Road, Suite 500
Silver Spring, MD 20910

VII. Meetings, Vessel Familiarization, and Project Evaluations

- A. Pre-Project Meeting: The Chief Scientist and Commanding Officer will conduct a meeting of pertinent members of the scientific party and ship's crew to discuss required equipment, planned operations, concerns, and establish mitigation strategies for all

concerns. This meeting shall be conducted before the beginning of the project with sufficient time to allow for preparation of the ship and project personnel. The ship's Operations Officer usually is delegated to assist the Chief Scientist in arranging this meeting.

- B. Vessel Familiarization Meeting: The Commanding Officer is responsible for ensuring scientific personnel are familiarized with applicable sections of the standing orders and vessel protocols, e.g., meals, watches, etiquette, drills, etc. A vessel familiarization meeting shall be conducted in the first 24 hours of the project's start and is normally presented by the ship's Operations Officer.
- C. Post-Project Meeting: The Commanding Officer is responsible for conducted a meeting no earlier than 24 hrs before or 7 days after the completion of a project to discuss the overall success and shortcomings of the project. Concerns regarding safety, efficiency, and suggestions for future improvements shall be discussed and mitigations for future projects will be documented for future use. This meeting shall be attended by the ship's officers, applicable crew, the Chief Scientist, and members of the scientific party and is normally arranged by the Operations Officer and Chief Scientist.
- D. Project Evaluation Report: Within seven days of the completion of the project, a Customer Satisfaction Survey is to be completed by the Chief Scientist. The form is available at <http://www.oma.noaa.gov/fleeteval.html> and provides a "Submit" button at the end of the form. Submitted form data is deposited into a spreadsheet used by OMAO management to analyze the information. Though the complete form is not shared with the ships', specific concerns and praises are followed up on while not divulging the identity of the evaluator.

VIII. Miscellaneous

A. Meals and Berthing

The ship will provide meals for the scientists listed above. Meals will be served 3 times daily beginning one hour before scheduled departure, extending throughout the project, and ending two hours after the termination of the project. Since the watch schedule is split between day and night, the night watch may often miss daytime meals and will require adequate food and beverages (for example a variety of sandwich items, cheeses, fruit, milk, juices) during what are not typically meal hours. Special dietary requirements for scientific participants will be made available to the ship's command at least seven days prior to the survey.

The Chief Scientist requests that lunches be provided for small boat crews. Three boats of 3-5 personnel in each boat.

Berthing requirements, including number and gender of the scientific party, will be provided to the ship by the Chief Scientist. The Chief Scientist and Commanding Officer will work together

on a detailed berthing plan to accommodate the gender mix of the scientific party taking into consideration the current make-up of the ship's complement. The Chief Scientist is responsible for ensuring the scientific berthing spaces are left in the condition in which they were received; for stripping bedding and linen return; and for the return of any room keys which were issued. The Chief Scientist is also responsible for the cleanliness of the laboratory spaces and the storage areas utilized by the scientific party, both during the project and at its conclusion prior to departing the ship.

All NOAA scientists will have proper travel orders when assigned to any NOAA ship. The Chief Scientist will ensure that all non NOAA or non Federal scientists aboard also have proper orders. It is the responsibility of the Chief Scientist to ensure that the entire scientific party has a mechanism in place to provide lodging and food and to be reimbursed for these costs in the event that the ship becomes uninhabitable and/or the galley is closed during any part of the scheduled project.

All persons boarding NOAA vessels give implied consent to comply with all safety and security policies and regulations which are administered by the Commanding Officer. All spaces and equipment on the vessel are subject to inspection or search at any time. All personnel must comply with OMAO's Drug and Alcohol Policy dated May 17, 2000, which forbids the possession and/or use of illegal drugs and alcohol aboard NOAA Vessels.

B. Medical Forms and Emergency Contacts

The NOAA Health Services Questionnaire (NHSQ, NF 57-10-01 (3-14)) must be completed in advance by each participating scientist. The NHSQ can be obtained from the Chief Scientist or the NOAA website <http://www.corporateservices.noaa.gov/noaaforms/eforms/nf57-10-01.pdf>.

All NHSQs submitted after March 1, 2014 must be accompanied by [NOAA Form \(NF\) 57-10-02](#) - Tuberculosis Screening Document in compliance with [OMAO Policy 1008](#) (Tuberculosis Protection Program).

The completed forms should be sent to the Regional Director of Health Services at the applicable Marine Operations Center. The NHSQ and Tuberculosis Screening Document should reach the Health Services Office no later than 4 weeks prior to the start of the project to allow time for the participant to obtain and submit additional information should health services require it, before clearance to sail can be granted. Please contact MOC Health Services with any questions regarding eligibility or completion of either form. Ensure to fully complete each form and indicate the ship or ships the participant will be sailing on. The participant will receive an email notice when medically cleared to sail if a legible email address is provided on the NHSQ.

The participant can mail, fax, or email the forms to the contact information below. Participants should take precautions to protect their Personally Identifiable Information (PII) and medical information and ensure all correspondence adheres to DOC guidance (http://ocio.os.doc.gov/ITPolicyandPrograms/IT_Privacy/PROD01_008240).

The only secure email process approved by NOAA is [Accellion Secure File Transfer](#) which requires the sender to setup an account. [Accellion's Web Users Guide](#) is a valuable aid in using this service, however to reduce cost the DOC contract doesn't provide for automatically issuing full functioning accounts. To receive access to a "Send Tab", after your Accellion account has been established send an email from the associated email account to accellionAlerts@doc.gov requesting access to the "Send Tab" function. They will notify you via email usually within 1 business day of your approval. The "Send Tab" function will be accessible for 30 days.

Contact information:

Regional Director of Health Services
Marine Operations Center – Pacific
2002 SE Marine Science Dr.
Newport, OR 97365
Telephone 541-867-8822
Fax 541-867-8856
Email MOP.Health-Services@noaa.gov

Prior to departure, the Chief Scientist must provide an electronic listing of emergency contacts to the Executive Officer for all members of the scientific party, with the following information: contact name, address, relationship to member, and telephone number.

C. Shipboard Safety

Hard hats are required when working with suspended loads. Work vests are required when working near open railings and during small boat launch and recovery operations. Hard hats and work vests will be provided by the ship when required.

Wearing open-toed footwear or shoes that do not completely enclose the foot (such as sandals or clogs) outside of private berthing areas is not permitted. At the discretion of the ship CO, safety shoes (i.e. steel or composite toe protection) may be required to participate in any work dealing with suspended loads, including CTD deployment and recovery. The ship does not provide safety-toed shoes/boots. The ship's Operations Officer should be consulted by the Chief Scientist to ensure members of the scientific party report aboard with the proper attire.

D. Communications

A progress report on operations prepared by the Chief Scientist may be relayed to the program office. Sometimes it is necessary for the Chief Scientist to communicate with another vessel, aircraft, or shore facility. Through various means of communications, the ship can usually accommodate the Chief Scientist. Special radio voice communications requirements should be listed in the project instructions. The ship's primary means of communication with the Marine Operations Center is via e-mail and the Very Small Aperture Terminal (VSAT) link. Standard VSAT bandwidth at 128kbs is shared by all vessels staff and the science team at no charge. Increased bandwidth in 30 day increments is available on the VSAT systems at increased cost to the scientific party. If increased bandwidth is being considered, program accounting is required it must be arranged at least 30 days in advance.

E. IT Security

Any computer that will be hooked into the ship's network must comply with the *NMAO Fleet IT Security Policy* 1.1 (November 4, 2005) prior to establishing a direct connection to the NOAA WAN. Requirements include, but are not limited to:

- (1) Installation of the latest virus definition (.DAT) file on all systems and performance of a virus scan on each system.
- (2) Installation of the latest critical operating system security patches.
- (3) No external public Internet Service Provider (ISP) connections.

Completion of these requirements prior to boarding the ship is required.

Non-NOAA personnel using the ship's computers or connecting their own computers to the ship's network must complete NOAA's IT Security Awareness Course within 3 days of embarking.

F. Foreign National Guests Access to OMAO Facilities and Platforms

All foreign national access to the vessel shall be in accordance with NAO 207-12 and RADM De Bow's March 16, 2006 memo (<http://deemedexports.noaa.gov>). National Marine Fisheries Service personnel will use the Foreign National Registration System (FRNS) to submit requests for access to NOAA facilities and ships. The Departmental Sponsor/NOAA (DSN) is responsible for obtaining clearances and export licenses and for providing escorts required by the NAO. DSNs should consult with their designated NMFS Deemed Exports point of contact to assist with the process.

Full compliance with NAO 207-12 is required.

One foreign national (Tom Leppard, UK) is scheduled to participate in SE 14-04, Leg 1.

Responsibilities of the Chief Scientist:

1. Provide the Commanding Officer with the e-mail generated by the FRNS granting approval for the foreign national guest's visit. This e-mail will identify the guest's DSN and will serve as evidence that the requirements of NAO 207-12 have been complied with.
2. Escorts – The Chief Scientist is responsible to provide escorts to comply with NAO 207-12 Section 5.10, or as required by the vessel's DOC/OSY Regional Security Officer.
3. Ensure all non-foreign national members of the scientific party receive the briefing on Espionage Indicators (NAO 207-12 Appendix A) at least annually or as required by the servicing Regional Security Officer.
4. Export Control - Ensure that approved controls are in place for any technologies that are subject to Export Administration Regulations (EAR).

The Commanding Officer and the Chief Scientist will work together to implement any access controls necessary to ensure no unlicensed export occurs of any controlled technology onboard regardless of ownership.

Responsibilities of the Commanding Officer:

1. Ensure only those foreign nationals with DOC/OSY clearance are granted access.
2. Deny access to OMAO platforms and facilities by foreign nationals from countries controlled for anti-terrorism (AT) reasons and individuals from Cuba or Iran without written NMAO approval and compliance with export and sanction regulations.
3. Ensure foreign national access is permitted only if unlicensed deemed export is not likely to occur.
4. Ensure receipt from the Chief Scientist or the DSN of the FRNS e-mail granting approval for the foreign national guest's visit.
5. Ensure Foreign Port Officials, e.g., Pilots, immigration officials, receive escorted access in accordance with maritime custom to facilitate the vessel's visit to foreign ports.
6. Export Control - 8 weeks in advance of the project, provide the Chief Scientist with a current inventory of OMAO controlled technology onboard the vessel and a copy of the vessel Technology Access Control Plan (TACP). Also notify the Chief Scientist of any OMAO-sponsored foreign nationals that will be onboard while program equipment is aboard so that the Chief Scientist can take steps to prevent unlicensed export of Program controlled technology. The Commanding Officer and the Chief Scientist will work together to implement any access controls necessary to ensure no unlicensed export occurs of any controlled technology onboard regardless of ownership.
7. Ensure all OMAO personnel onboard receive the briefing on Espionage Indicators (NAO 207-12 Appendix A) at least annually or as required by the servicing Security Officer.

Responsibilities of the Foreign National Sponsor:

1. Export Control - The foreign national's sponsor is responsible for obtaining any required export licenses and complying with any conditions of those licenses prior to the foreign national being provided access to the controlled technology onboard regardless of the technology's ownership.
2. The DSN of the foreign national shall assign an on-board Program individual, who will be responsible for the foreign national while on board. The identified individual must be a U.S. citizen and a NOAA or DOC employee. According to DOC/OSY, this requirement cannot be altered.
3. Ensure completion and submission of Appendix C (Certification of Conditions and Responsibilities for a Foreign National)

Appendices

1. Figures, maps, tables, images, etc.

Fig. 1a - Cruise track for Leg I of SE-14-04 (June 19-July 3, 2014)

Fig. 1b - Cruise track for Leg II of SE-14-04 (July 7-21, 2014)

2. Station/Waypoint List (coordinates in Latitude, Longitude: degree-minutes)

None provided.

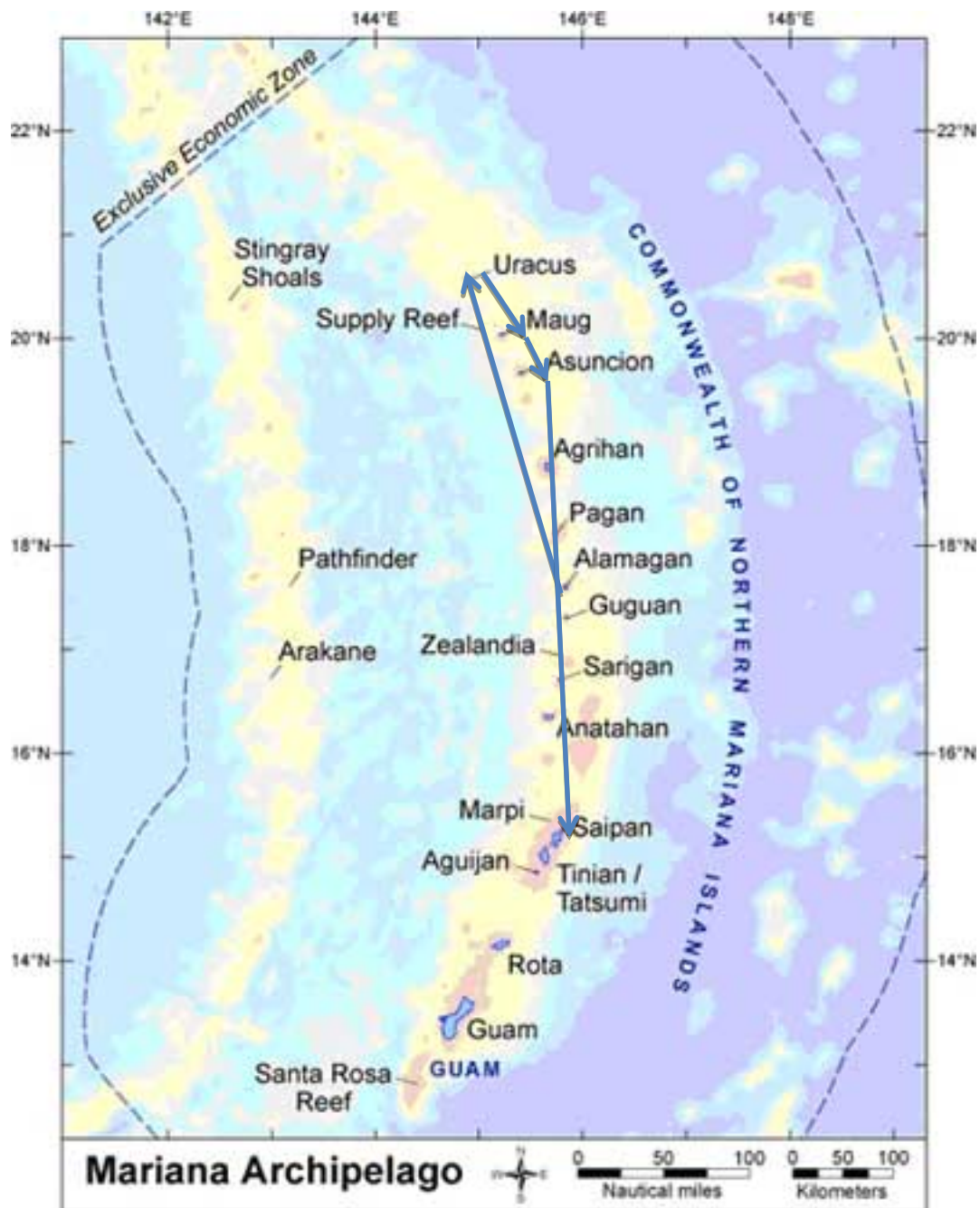


Fig. 1a - Cruise track for Leg I of SE-14-04 (June 19-July 3, 2014)

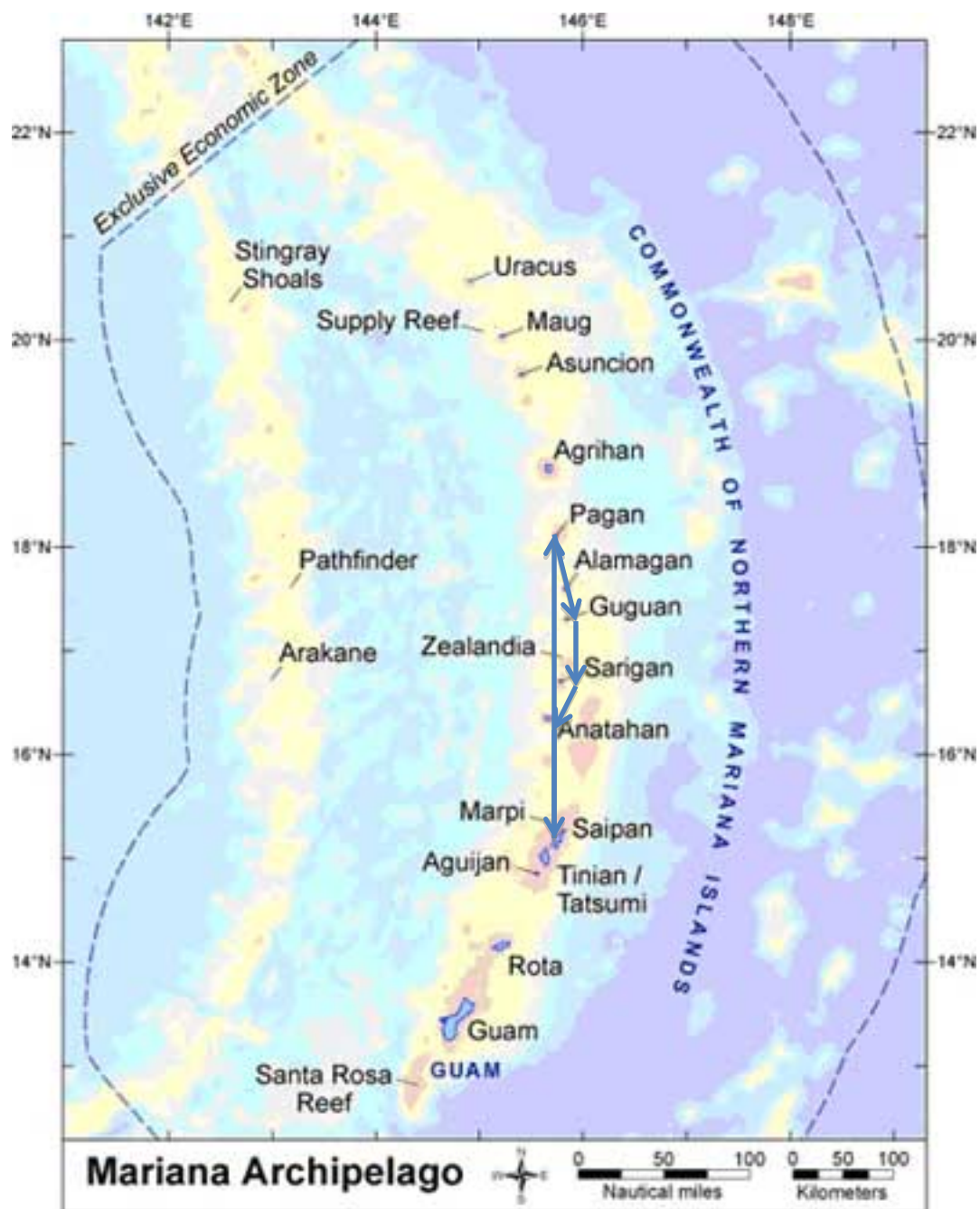


Fig. 1b - Cruise track for Leg II of SE-14-04 (July 7-21, 2014)