

Goal: Facilitate sustainable commercial and recreational fisheries

Non-Spatial Objectives	Develop a licensing structure which will allow for better monitoring of reported catches. This will lead to better reporting as it relates to quotas and better management of fish stocks to ensure sustainable commercial and recreational fisheries.	DENR	2024
------------------------	--	------	------

List of acronyms: MoHA – Ministry of Home Affairs, DENR – Department of Environment and Natural Resources, MRB - Marine Resources Board, CFC – Commercial Fisheries Council
Priority – 1 – High, 2- Medium, 3 – Low

Feedback that has been received during public consultations is detailed in the 'Comments' column next to the appropriate actions. Where feedback has already been incorporated, this is highlighted in the comments. Other pieces of feedback should be reviewed by the person responsible and incorporated into the action plan where possible (or the reason given for not including).

Item No.	Action Description	Responsible Department	Person Responsible	Start Date	Due Date	Required Resources	Output	Priority	Status	Comments
	Create a Monitoring Strategy for the Marine Spatial Plan that incorporates fisheries and marine resources monitoring as detail in Section B, D and E.	DENR	Senior Marine Resources Officer & Senior Marine Conservation Officer	2023	2024	Consultant, Local Scientists	Strategy Document	1	Not yet started	A RFP will be issued to develop this Monitoring Plan
A	Licensing and management of fishing activities reform									
A1	License recreational fishing activities and prioritise licensing of vessels	MoHA/DENR/MRB	Senior Marine Resources Officer	2021	2024	In house (Government)	Legislation	1	In progress	In order to incorporate feedback from the public consultations, recreational licences should also be used as an opportunity to raise awareness. They should be issued with material explaining the rules and the reasons for them.
A2	Require recreational fishers to report their catch and effort	MoHA/DENR/MRB	Senior Marine Resources Officer	2021	2024	In house (Government)	Legislation	1	In progress	In order to incorporate feedback from public consultations, it is suggested that AIS be conditional with fishing license and automatic fine when AIS is turned off
A3	Introduce bag limits for recreational fishers.	MoHA/DENR/MRB	Senior Marine Resources Officer	2021	2024	In house (Government)	Legislation	1	In progress	

Item No.	Action Description	Responsible Department	Person Responsible	Start Date	Due Date	Required Resources	Output	Priority	Status	Comments
B1	Conduct an intensive month-long sampling programme using two strategies: selecting landing sites or selecting individual fishers to be surveyed	DENR/MRB/CFC	Senior Marine Resources Officer	2023	2023	Dedicated samplers	Additional staff; Data	1	Not yet started	In order to incorporate feedback from public consultations, it is suggested that observers be employed to help with catch assessments
B2	Develop a year long pilot sampling programme to capture seasonal changes	DENR/MRB/CFC	Senior Marine Resources Officer	2023	2024	Dedicated samplers	Additional staff; Data; Strategy	1	Not yet started	This action is dependent on the cooperation of fishers.
B3	Utilize results of pilot study in comparison to self-reported data to determine if a catch validation programme, and therefore output measures are feasible.	DENR/MRB/CFC	Senior Marine Resources Officer	2025	2026	In house (Government)	Data; Strategy	2	Not yet started	
B4	Using previous results, and logistical considerations, develop and implement an efficient long term statistically sound sampling programme	DENR/MRB/CFC	Senior Marine Resources Officer	2025	2026	Dedicated samplers	Additional staff; Strategy; Data	2	Not yet started	
B5	Examine the feasibility of technological solutions for monitoring and tracing catches e.g. Shellcatch	DENR/MRB/CFC	Senior Marine Resources Officer	2020	2025	TBD	Strategy; Data	1	In progress	In order to incorporate feedback from public consultation, it is suggested that fishers use technology to supply data.
C	Improving the catch reporting system									
	Commercial Reporting									
C1	Conduct a series of orientation presentations for new commercial fishers	DENR	Senior Marine Resources Officer	2018	Ongoing	In house (Government)	Various delivery methods	1	In progress	
C2	Develop a "best practices" reporting guide for commercial fishers	DENR	Senior Marine Resources Officer	2018	Completed	In house (Government)	Publication	2	Completed	Have guides for both online reporting and for paper reports

Item No.	Action Description	Responsible Department	Person Responsible	Start Date	Due Date	Required Resources	Output	Priority	Status	Comments
D1	Review and document the method of acquisition for all existing marine resources data, starting with priority fishery species, then conduct a quality control and evaluation exercise	DENR	Senior Marine Resources Officer	2018	2024	Students	Data	1	In progress	Data evaluation conducted for spiny lobster
D2	Compile a database of fishery biology parameters for priority fishery target species.	DENR	Senior Marine Resources Officer	2018	2024	Students	Data	1	In progress	Information compiled for spiny lobster and red hind
D3	Collect length frequency data on landed fish to monitor changes and detect trends in size structure and/or changes in recruitment to the fishery.	DENR	Senior Marine Resources Officer	1990s	Ongoing	Dedicated samplers	Additional staff; Data	1	In progress	Collecting length data on spiny lobster, red hind and black grouper
D4	Assess the reproductive status of specimens measured for mean length analysis to evaluate the proportion of mature fish in the landed catch	DENR	Senior Marine Resources Officer	2024	Ongoing	Dedicated samplers	Additional staff; Data	1	Not yet started	Dependent on corporation from fishers and recruiting dedicated samplers.
D5	Collect otoliths for age-growth studies and reproductive organs for maturity studies from a subset of fish	DENR	Senior Marine Resources Officer	2024	Ongoing	Dedicated samplers	Additional staff; Data	1	Not yet started	Dependent on cooperation from fishers and recruiting dedicated samplers.
D6	Process otoliths for age-growth studies and reproductive organs for maturity studies (if visual examination is not adequate)	DENR	Senior Marine Resources Officer	2024	Ongoing	Technician or Partners, Funding	Additional Staff or Contracts	1	Not yet started	Dependent on obtaining funds and technician or partners.

Item No.	Action Description	Responsible Department	Person Responsible	Start Date	Due Date	Required Resources	Output	Priority	Status	Comments
D7	Estimate and monitor changes in mortality rates annually using above data.	DENR	Senior Marine Resources Officer	2026	Annually	In house (Government)	Assessments	2	Not yet started	Dependent on successfully obtaining data in actions D1-D6
D8	Conduct seasonal surveys for fishery-dependent data, including catch size (abundance), and individual length and weight in areas adjacent and nonadjacent to fully protected areas, using logbook data from fishers and/or targeted experimental fishing	DENR	Senior Marine Resources Officer	2025	Annually	Dedicated samplers	Additional staff; Data	2	Not yet started	
D9	Conduct lobster puerlus study to estimate abundance of post larval lobsters	DENR	Senior Marine Resources Officer	2023	2023	Student or technician, funding	Additional staff	1	Not yet started	
D10	Use higher level stock assessment models to assess priority species	DENR	Senior Marine Resources Officer	2021	Ongoing	Partners, Funds	Contracts; Assessments	1	In progress	
E	Marine Resources Monitoring									
E1	Annual fishery-independent monitoring of fish diversity (finfish and shellfish diversity), abundance and biomass for 10 years in fully protected areas, highly protected areas and comparable unprotected 'control' areas during the same season:	DENR	Senior Marine Resources Officer	2024	TBD	Partners, Funds	Contracts	1	Not yet started	In order to incorporate feedback from consultations, it is suggested that local scientists develop and manage this plan and that the BOPP Science Committee approve the final monitoring plan.
E2	Regular / annual fishery-independent surveys for lobsters and other selected shellfish species.	DENR	Senior Marine Resources Officer	2024	TBD	Partners, Funds	Contracts	1	Not yet started	As above

Item No.	Action Description	Responsible Department	Person Responsible	Start Date	Due Date	Required Resources	Output	Priority	Status	Comments
E3	Towed video transect surveys and diver-based video transect surveys, as dictated by depth, to evaluate coral community structure and health at reef MPAs and control sites.	DENR	Senior Marine Conservation Officer	2024	TBD	Partners, Funds	Contracts	1	Not yet started	As above
E4	Diver-based surveys of seagrass and associated benthic habitats from shore across the lagoon to the rim reef, following established protocols.	DENR	Senior Marine Conservation Officer	2024	TBD	Partners, Funds	Contracts	1	Not yet started	As above
E5	BRUVs method calibrated against previous surveys conducted (e.g. stationary video (unbaited), Bohnsack and Bannerot cylinder method, AGRRR method, roving diver method)	DENR	Senior Marine Resources Officer & Senior Marine Conservation Officer	2025	TBD	Partners, Funds	Contracts	2	Not yet started	As above
E6	BRUVs fish surveys conducted during a minimum of two seasons per year, with the same seasons repeated annually	DENR	Senior Marine Resources Officer	2025	TBD	Partners, Funds	Contracts	2	Not yet started	As above
E7	Monitor the above metrics in areas directly adjacent to fully protected areas to A) examine and compare fisheries abundance, biomass, and diversity inside and outside protected areas, and B) quantify spillover and ecosystem health	DENR	Senior Marine Conservation Officer	2025	TBD	Partners, Funds	Contracts	2	Not yet started	As above