

11. FISHERIES IMPACT

11.1 Legislation, Policies, Plans, Standards and Criteria

11.1.1 *The Technical Memorandum on Environmental Impact Assessment Process*, promulgated under Section 16 of the Environmental Impact Assessment Ordinance (Cap. 499) 1997, provides guidelines (Annex 17) and criteria (Annex 9) for evaluating fisheries impacts.

11.2 Description of the Environment

11.2.1 The study area for fisheries impact assessment included the Victoria Harbour, Western Buffer and Easter Buffer Water Control Zones, same as those used in ecological and water quality impact assessments. The Agriculture and Fisheries Department in 1998 published Port Survey 96/97, based on information gathered in the study titled Fisheries resources and Fishing Operations in Hong Kong Waters. This report contains the most up-dated information on capture fisheries in Hong Kong waters, including both adult and fry productions. No field survey was carried out to collect fisheries data in this study.

11.2.2 The 96/97 Port Survey¹ divided Hong Kong waters into 189 fishing areas. **Table 11.1** summarises commercial fisheries data according to the 96/97 Port Survey. Approximately 90% of the vessels surveyed were less than 15 m in length. They contributed to 62% of the adult fish production, 100% of the fry production and 77% of the total value.

Table 11.1 Summary of Capture Fisheries Data in Hong Kong Waters from the 96/97 Port Survey

	Vessel < 15m	Vessel > 15m	Total
No. of areas (out of 189) fished	177	112	179
No. of vessels fished in these areas	2,352	266	2,619
Adult fish production (kg)	10,932,365	6,748,878	17,681,243
Fry production (tails)	6,383,437	0	6,383,437
Total value (HK\$)	263,823,652	80,146,211	343,969,863
Average value per ha (HK\$)	1,451	441	1,892

11.2.3 **Table 11.2** shows capture fisheries statistics for the study area for fishing vessels < 15 m and compares such statistics among the three water control zones (Western Buffer, Victoria Harbour and Eastern Buffer). The size of the study area represents 7.3% of the total fishing areas in Hong Kong waters.

¹ Agriculture & Fisheries Department. 1998. Port Survey 96/97. Prepared by the Capture Fisheries Division, Agriculture & Fisheries Department.

Table 11.2 Summary of Capture Fisheries Data in the Study Area by Vessels < 15 m

	Western Buffer Water Control Zone	Victoria Harbour Water Control Zone	Eastern Buffer Water Control Zone
Relevant fishing areas	1, 2(part), 24, 25, 28(part), 34, 36, 37, 38, 78, 79, 80(part), 81, 82, 83, 84, 85, 86, 87, 88, 89	35, 151, 152, 153, 154, 155, 158, 160, 162, 163, 164, 165, 166, 167, 168	51, 52, 53, 54(part), 104(part), 105(part), 156, 157, 169, 172 (part), 173
<u>Size of Fishing Areas:</u>			
Total size	7,214.04 ha	3,562.65 ha	2,302.35 ha
% of Hong Kong waters	4.0%	2.0%	1.3%
<u>Adult Fish:</u>			
Total production	468,663.26 kg	233,287.27 kg	368,964.58 kg
Production per hectare	64.97 kg	65.48 kg	160.26 kg
% of Hong Kong waters	4.3%	2.1%	3.4%
<u>Fry:</u>			
Total production (tails)	45,967.74 tails	0 tail	219,756.90 tails
Production per hectare	6.37 tails	0 tail	95.45 tails
% of Hong Kong waters	0.7%	0%	3.4%
Total Value (HKD)	\$19,943,548.52	\$6,563,534.15	\$11,945,672.70
Value per hectare	\$2,764.55	\$1,842.32	\$5,188.47
% of Hong Kong waters	7.6%	2.5%	4.5%

11.2.4 In terms of adult fish production per hectare, the Eastern Buffer WCZ showed the highest production, while those for the Victoria Harbour and Western Buffer WCZs were comparable. Total adult fish production from the study area accounted for 9.8% of all adult fish production in Hong Kong waters.

11.2.5 Fry production in the study area accounted for 4.2% of total fry production in Hong Kong waters. Again, the Eastern Buffer WCZ showed considerably higher fry production per hectare than the other two WCZs. It should be noted that no fry production was recorded in the Victoria Harbour WCZ. This shows that the study area, particularly Victoria Harbour and the Western Buffer WCZs, was not a major nursery ground for species of commercial importance.

11.2.6 Production value per hectare was highest in the Eastern Buffer WCZ and lowest in the Victoria Harbour WCZ. Combined production value of the study area accounted for 14.6% of the total capture fisheries value in Hong Kong waters.

11.3 Assessment Methodology

11.3.1 Assessment of fisheries impact followed the criteria outlined in Annex 9 of the *Technical Memorandum on Environmental Impact Assessment Process* issued under EIAO. These included the nature of impact, size of affected area, loss of fisheries resources/production, destruction and disturbance of nursery and spawning grounds, impact on fishing activity, and impact on aquaculture activity.

11.4 Identification, Prediction and Evaluation of Potential Impacts

11.4.1 Capture Fisheries

11.4.1.1 Fisheries impact could arise from the removal of fishing areas due to dredging and reclamation. According to the latest layout plan, approximately 61 ha of the upper Kowloon Bay, 25 ha of the Kai Tak Approach Channel, and 39 ha of the existing Kwun Tong Typhoon Shelter would be reclaimed.

11.4.1.2 Those in or near Victoria Harbour are shown in **Drawing No. 22936/EN/007** (from the 96/97 Port Survey).