

## APPENDIX 13.6 FISH

**Appendix 13.6.1.** Fish species recorded in the Study Area in this and/or previous studies. Where study boundaries of previous studies extended beyond the current study area boundary, only records from within the area covered by this study are included. Note that for some sources, lists are incomplete and/or only some records are attributed to a specific locality.

Species	Conservation and Protection Status <sup>1</sup>	NENT Study <sup>2</sup>	Present Study - KTN	AFCD Biodiversity Database 2002 to June 2012 - KTN	Present Study - FLN	AFCD Biodiversity Database 2002 to June 2012 - FLN	Other Studies <sup>3</sup>
Japanese Eel <i>Anguilla japonica</i>							Y
<i>Acrossocheilus parallens</i>	GC				Y	Y*	Y
Big-head Carp <i>Hypophthalmichthys nobilis</i>	-						Y
Tinfoil Barb <i>Barbus schwanefeldii</i>	-					Y*	
Goldfish <i>Carassius auratus</i>	-		Y				Y
Grass Carp <i>Ctenopharyngodon idellus</i>	-			Y			
Common Carp <i>Cyprinus carpio</i>	IUCN(VU)			Y		Y*	Y
Predaceous Chub <i>Parazacco spilurus</i>	IUCN(DD) CRDB(VU)				Y		
Chinese Barb <i>Puntius semifasciolatus</i>	-		Y	Y	Y	Y*	
Freshwater Minnow <i>Zacco platypus</i>	-				Y		
Oriental Weatherfish <i>Misgurnus anguillicaudatus</i>	-				Y	Y	
Broken-band Hillstream Loach <i>Liniparhomaloptera disparis</i>	IUCN(DD)					Y*	
Sucker-belly Loach <i>Pseudogastromyzon myersi</i>	-					Y	
Nim <i>Pterocryptis anomala</i>	-					Y	
East Asian Catfish <i>Silurus asotus</i>	-						Y
Whitespotted Walking Catfish <i>Clarias fuscus</i>	-			Y	Y		Y
African Catfish <i>Clarias gariepinus</i>	-	Y					Y
Mosquito Fish <i>Gambusia affinis</i>	-	Y	Y		Y		
Guppy <i>Poecilia reticulata</i>	-		Y		Y	Y	
Swordtail <i>Xiphophorus hellerii</i>	-				Y	Y	
Variable Platyfish	-					Y	

Species	Conservation and Protection Status <sup>1</sup>	NENT Study <sup>2</sup>	Present Study - KTN	AFCD Biodiversity Database 2002 to June 2012 - KTN	Present Study - FLN	AFCD Biodiversity Database 2002 to June 2012 - FLN	Other Studies <sup>3</sup>
<i>Xiphophorus variatus</i>							
Swampy Eel <i>Monopterus albus</i>	-		Y			Y*	
Mozambique Tilapia # <i>Oreochromis mossambicus</i>	IUCN(NT)	Y					Y
Nile Tilapia <i>Oreochromis niloticus</i>	-		Y	Y	Y	Y*	Y
Redbelly Tilapia <i>Tilapia zillii</i>	-			Y		Y*	
Freshwater Goby <i>Rhinogobius duospilus</i>	-				Y	Y*	
Barcheek Goby <i>Rhinogobius giurinus</i>	-				Y		
Climbing Perch <i>Anabas testudineus</i>	IUCN(DD)		Y				
Paradise Fish <i>Macropodus opercularis</i>	-						Y
Small Snakehead <i>Channa asiatica</i>	LC					Y	Y
Dwarf Snakehead <i>Channa gachua</i>	-		Y	Y			
Spotted Snakehead <i>Channa maculata</i>	-						Y
Snakehead Murrel <i>Channa striata</i>	-	Y	Y				

**Note:**

- Conservation status refers to.
  - Cap. 170 = Chapter 170 Wild Animals Protection Ordinance
  - Fellowes *et al* (2002): GC = Global Concern; LC = Local Concern.
  - IUCN(2013): VU = Vulnerable; NT = Near Threatened; DD = Data Deficient.
  - China Red Data Book (Yue and Chen 1998): VU = Vulnerable. EN = Endangered.
- Maunsell (2003).
- Arup (2010), Atkins (2010), Binnie, Black and Veatch (2002), Dudgeon and Corlett (2001), Maunsell (1997), Mott Macdonald (2010 & 2012), field survey data from Agreement No. CE/2008 (CE). Planning and Engineering Study on Development of Lok Ma Chau Loop - Investigation, 白鼻心 (2013b).

**Key:**

- Y Species recorded in the corresponding study.  
# Hong Kong population is introduced.  
\* Also recorded in Kau Lung Hang EIS.

**Appendix 13.6.2.** Maximum number of fish recorded in stream surveys in Kwu Tung North NDA and observations during further surveys for this study.

Species	Conservation and Protection Status <sup>1</sup>	Habitat <sup>2</sup>			Stream <sup>3</sup>																	
		PO	MW	MA	MTL			PSA	FK		TF/STL	HSH	KT	NP	LW	TY		SYR		LV		
					MTLST	MTL-L	MTL-M		FK-L	FK-M	TF-M						TY-U	TY-L	SYR-N	SYR-S	LV-L	LV-M
Goldfish <i>Carassius auratus</i>	-		2			10	5															
Chinese Barb <i>Puntius semifasciolatus</i>	-				50+	100+	50+															
Mosquito Fish <i>Gambusia affinis</i>	-	100+	100+			30			10+	100+						30+	100+				50+	
Guppy <i>Poecilia reticulata</i>	-				10	10		100+								10						
Swampy Eel <i>Monopterus albus</i>	-			1																		
Nile Tilapia <i>Oreochromis niloticus</i>	-	10+	100+		10	20	100+									20+	100+				50+	
Climbing Perch <i>Anabas testudineus</i>	IUCN(DD)																5			4		
Dwarf Snakehead <i>Channa gachua</i>	-				1	1	6									1	1					
Snakehead Murrel <i>Channa striata</i>	-							1									5			1		

**Note:**

- Conservation and protection status refers to :
  - Cap. 170 = Chapter 170 Wild Animals Protection Ordinance
  - Fellowes *et al.* (2002).
  - IUCN (2013): DD = Data Deficient.
  - China Red Data Book (Yue and Chen 1998).
- Habitats: PO = Pond; MW = Mitigation Wetland; MA = Marsh.
- Stream: MTL = Ma Tso Lung stream; MTLST = Ma Tso Lung San Tsuen stream; MTL-L= Ma Tso Lung stream (lower section); MTL-M = Ma Tso Lung stream (middle section); MTL-U = Ma Tso Lung stream (upper stream); PSA = Pak Shek Au stream; FK = Fung Kong stream; FK-L = Fung Kong stream (lower section); FK-M = Fung Kong stream (middle section); FK-U = Fung Kong stream (upper section); TF/STL = Tung Fong/Shek Tsai Ling stream; TF-M = Tung Fong stream (middle section); TF-U = Tung Fong stream (upper section); HSH = Ho Sheung Heung stream; KT = Kwu Tung stream; NP = Ngam Pin stream; LW = Lo Wu Correctional Institution stream; TY = Tsung Yuen stream; TY-L = Tsung Yuen stream (lower section); SYR = Sheung Yue River; SYR-N = Sheung Yue river (North); SYR-S = Sheung Yue River (South); LV = Long Valley stream; LVM = Long Valley Marsh stream; LV-L = Long Valley stream (lower section); LV-M = Long Valley stream (middle section); LV-U = Long Valley stream (upper stream); NTR = Ng Tung River.

**Appendix 13.6.3.** Maximum number of fish recorded in stream surveys in Fanling North NDA and observations during further surveys for this study.

Species	Conservation and Protection Status <sup>1</sup>	Habitat <sup>2</sup>		Stream <sup>3</sup>																											
		PO	MW	SHR	NTR	FTA	CPT	SWST	TPST			MKV	SSWS		MSP	SHST			SUT	MWR				MWW		TH	KT		KLH		NWP
									TPST-L	TPST-M	TPST-U		SSWS-W	SSWS-E		SHST-L	SHST-M	SHST-U		MMW-TH	TH-KT	KT	KT-NMP	MMW-L	MMW-U		KT-N	KT-S	KLH-C	KLH-N	
<i>Acrossocheilus parallens</i>	GC																												100+	100+	
Wild Carp <i>Hemiculter leucisculus</i>	-																		20												
Predaceous Chub <i>Parazacco spilurus</i>	IUCN (DD) CRDB(VU)																50+														
Chinese Barb <i>Puntius semifasciolatus</i>	-																10							10					30+		
Freshwater Minnow <i>Zacco platypus</i>	-														100+		100+														
Oriental Weatherfish <i>Misgurnus anguillicaudatus</i>	-																20														
Whitespotted Walking Catfish <i>Clarias fuscus</i>	-																							2							
African Catfish <i>Clarias gariepinus</i>	-																			5		30+									
Mosquito Fish <i>Gambusia affinis</i>	-	100+	100+								100+				100+		30						1	100	100+				100+		
Guppy <i>Poecilia reticulata</i>	-												100+				1			100+	100+	100+		1					10		
Swordtail <i>Xiphophorus hellerii</i>	-																30												100+	50+	
Nile Tilapia <i>Oreochromis niloticus</i>	-	100+	50+			5		100+	100+			50+			100+		30	50+	20	100+	50+	100+		50			30	100+	10		
Freshwater Goby <i>Rhinogobius duospilus</i>	-																10													5	
Barcheek Goby <i>Rhinogobius giurinus</i>	-									1																					
Spotted Snakehead <i>Channa striata</i>	-																			1											

**Note:**

1. Conservation and protection status refers to :
  - a. Cap. 170 = Chapter 170 Wild Animals Protection Ordinance
  - b. Fellowes *et al* (2002): GC = Global Concern.
  - c. IUCN (2013): DD = Data Deficient.
  - d. China Red Data Book (Yue and Chen 1998): VU = Vulnerable.

2. Habitats: PO = Pond; MW = Mitigation Wetland.
3. Streams: SHR = Shek Sheung River; NTR = Ng Tung River; FTA = Fu Tei Au stream; CPT = Cheung Po Tau stream; SWST = Shek Wu San Tsuen stream; TPST = Tin Ping Shan Tsuen stream; TPST-L = Tin Ping Shan Tsuen stream (lower section); TPST-M = Tin Ping Shan Tsuen stream (middle section); TPST-U = Tin Ping Shan Tsuen (upper section); MKV = Man Kok Village stream; SSWS = Sheung Shui Wa Shan stream; SSWS-W = Sheung Shui Wa Shan stream (western stream); SSWS = Sheung Shui Wa Shan stream (eastern stream); MSP = Ma Shi Po stream; SHST = Siu Hang San Tsuen stream; SHST-L = Siu Hang San Tsuen stream (lower section); SHST-M = Siu Hang San Tsuen stream (middle section); SHST-U = Siu Hang San Tsuen stream (upper section); SUT = San Uk Tsuen stream; MWR = Ma Wat River; MWW = Ma Wat Wai stream; MWW-L = Ma Wat Wai stream (lower section); MWW-U = Ma Wat Wai stream (upper section); TH = Tong Hang stream; KT = Kiu Tau stream; KT-N = Kiu Tau stream (northern section); KT-S = Kiu Tau stream (southern section); KLH = Kau Lung Hang stream; KLH-C = Kau Lung Hang stream (channelised section); KLH-N = Kau Lung Hang stream (natural section); NWP = Nam Wa Po stream.