

SHAPING OUR AIRPORT
OUR FUTURE



Environmental Impact Assessment for the Expansion of HKIA into a Three-Runway System

ACE Meeting - 15 September 2014

Airport Authority Hong Kong

Marine Ecology and Fisheries Enhancement Plan

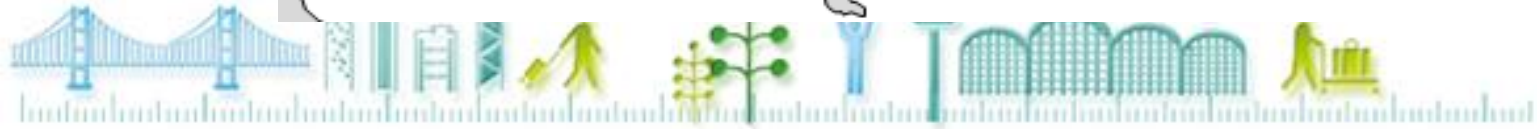
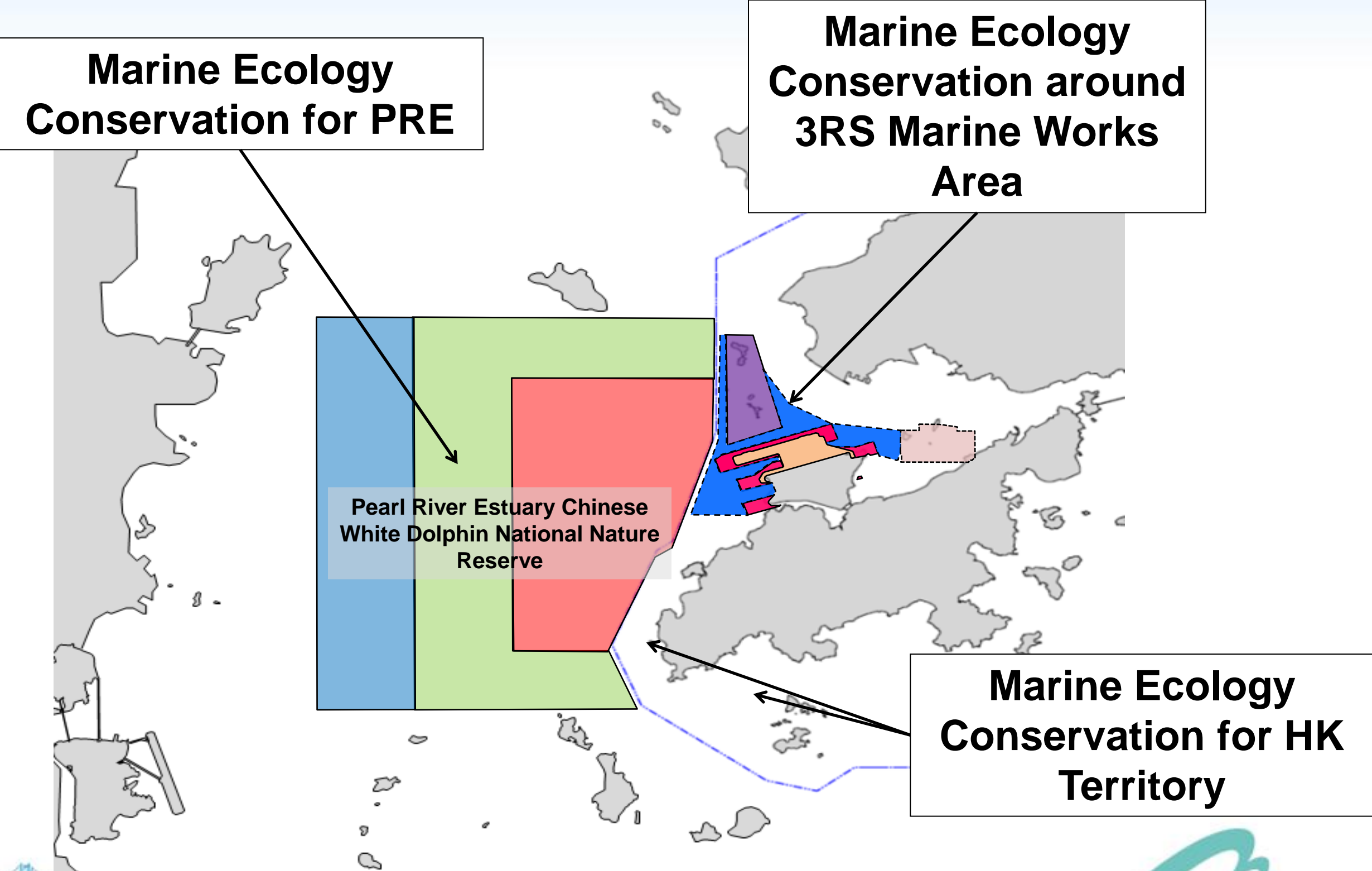


Key Objectives

- Enhance habitats for marine ecology, in particular Chinese White Dolphins (CWD), and recovery of fisheries resources
- Support scientific research and studies
- Promote environmental education and eco-tourism
- Promote a sustainable fisheries industry



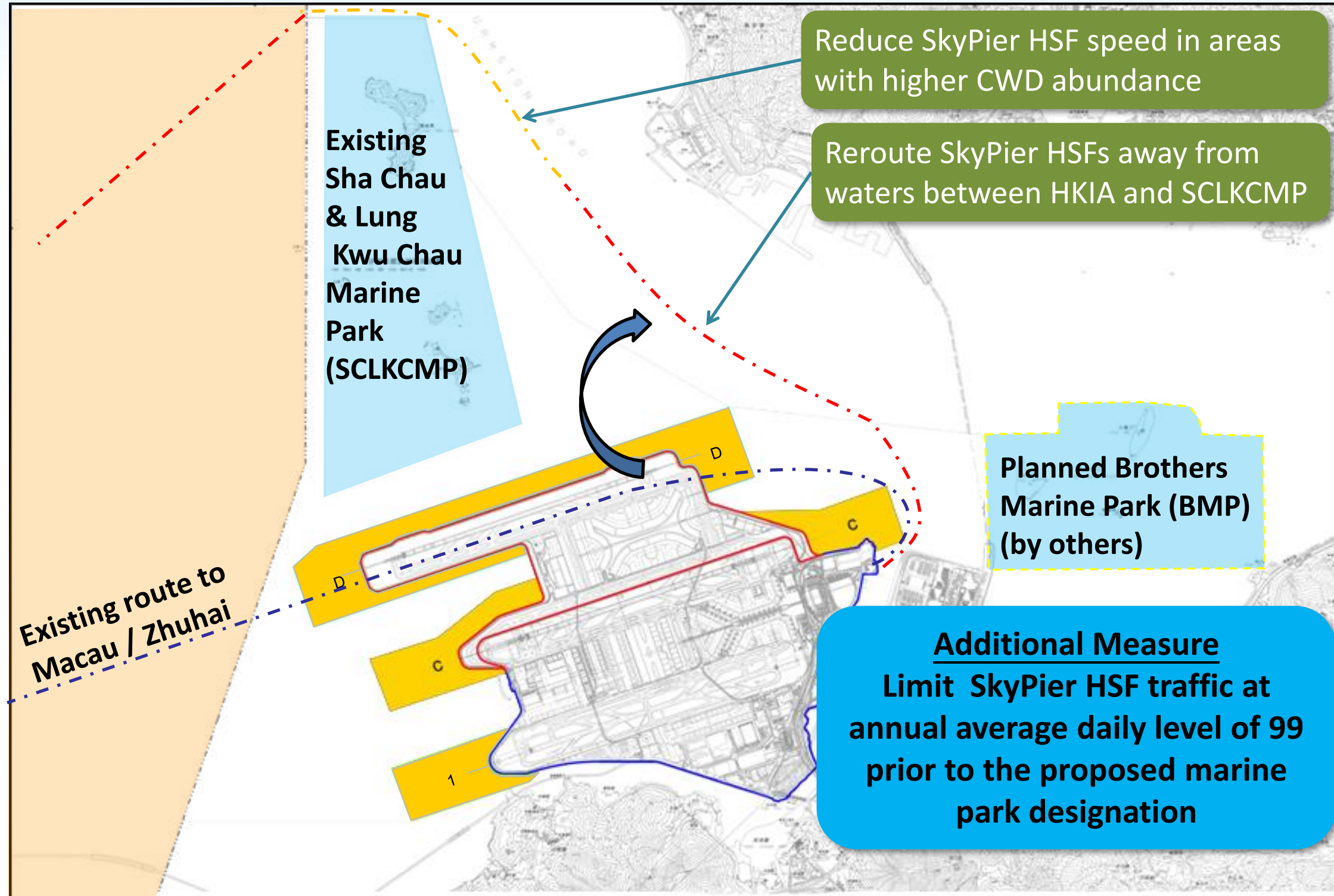
Marine Ecology and Fisheries Enhancement Strategy



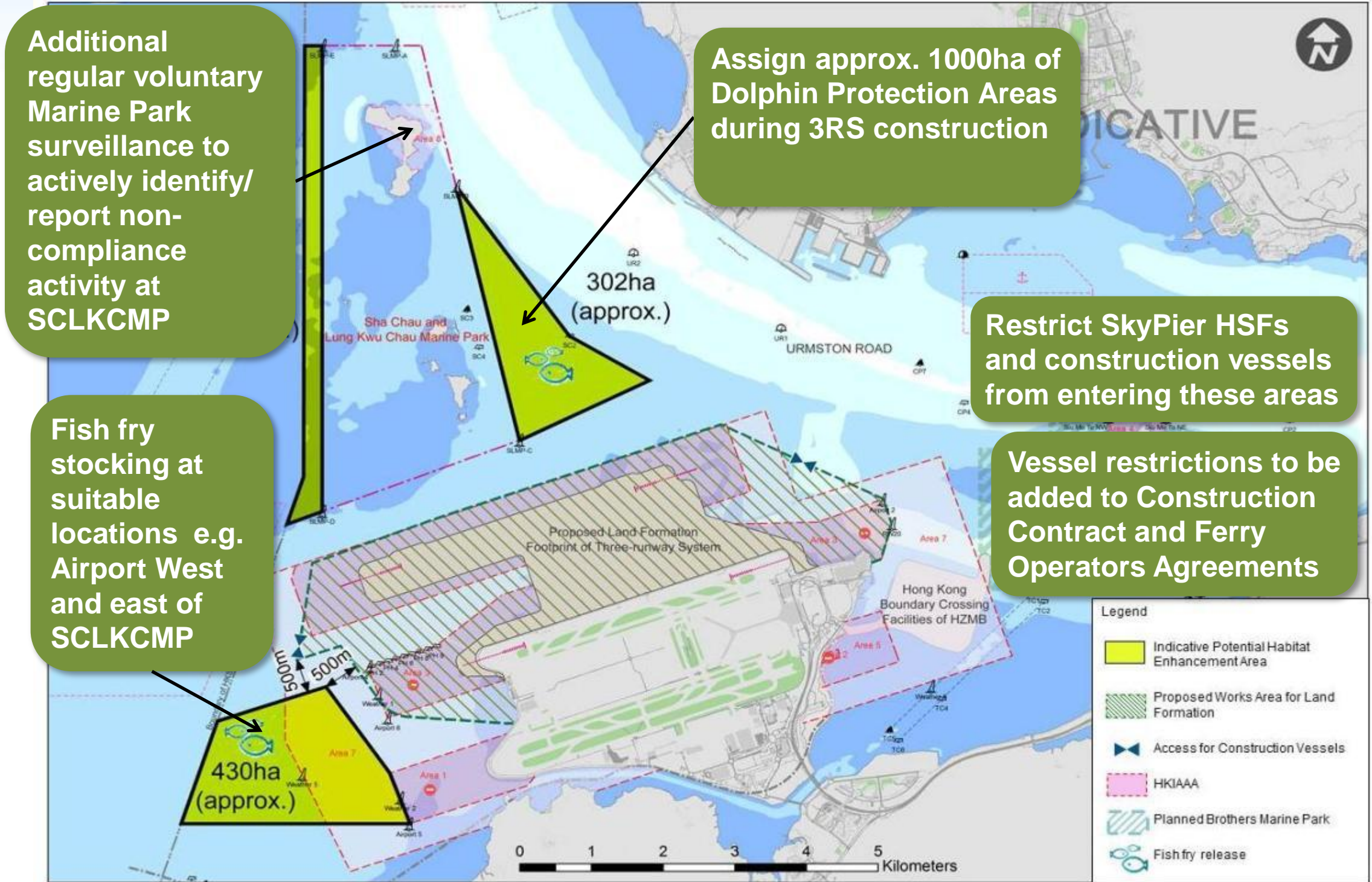
**Marine Ecology
Conservation
Around
3RS Marine Works Area
(before /during 3RS Construction)**



High-speed Ferry (HSF) Marine Traffic Routes and Management Plan



Marine Habitat Enhancement and Dolphin Protection Zone during Construction Phase



Marine Ecology Conservation For HK Territory



Marine Ecology Conservation for HK Waters

- Collaborate and fund habitat enhancement measures / scientific research & studies
- Promote environmental education and eco-tourism
- Promote sustainable fisheries industry



Habitat Enhancement and Scientific Research / Study

Key aims:

- Foster in-depth understanding of marine ecology & fisheries resources in Western HK waters through funding long-term monitoring
- Provide funding support for the development of practices, measures and programmes to enhance marine ecology & fisheries resources in Western HK waters

Relevant initiatives / studies may include:

Measures to enhance marine ecology and carrying capacity of existing CWD hotspots



Information sharing on CWD studies and status



Dolphin Stranding Response and Education Programme



Identify sources of pollution in CWD habitats and make recommendations on appropriate mitigation measures

Acoustic studies to evaluate noise impacts of marine construction activities



Measures to support the development of a CWD conservation management plan in HK waters, including focused marine ecological surveys (including CWD)



Environmental Education and Eco-tourism

Funding support for initiatives that promote environmental education and ecotourism relating to marine ecological & fisheries resources

Relevant initiatives may include:

Skipper workshops for HSF captains on collision risk & safe operations around cetaceans



Development of eco-tourism on sustainable fishing operations



Organisation of campaigns for cleaning of sandy shores



Establishment of education programme or eco-trails



Collaborations with AFCD and NGOs to provide training to local dolphin watching tour



Promotion of eco-tourism in Marine Protection Areas



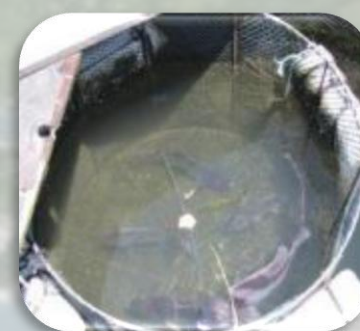
Support AFCD / NGOs to conduct training programmes for frontline protection staff



Promotion of Sustainable Fisheries Industry

Work with fishermen who are directly and indirectly affected:

- Support fishermen in adapting their fishing activities to suit different marine environments
- Support measures to encourage use of better fishing technologies and techniques
- Support the promotion and enhancement of fisheries-related business opportunities



Marine Ecology Conservation for PRE



CWD Conservation in PRE

Funding support for the development of a 'PRE CWD Conservation Strategy and Action Plan'

Engage experienced local and PRC organizations (e.g. OPCF, local universities, Sun Yat-zen University, and Shantau University) via the National Nature Reserve Authority

Collaborate and fund PRE CWD surveys and studies to deliver critical ecological information necessary for an effective conservation plan

Funding support for the implementation of conservation plan involving research effort / education / engagement and advocacy and review regularly (e.g. under local NGO leadership)

Pearl River Estuary
Chinese White Dolphin
National Nature
Reserve

● Line Transect Surveys (Dry Season 2005-2008)

[2]

Enhancement Measures in the Proposed Marine Park



Identify Potential Areas for Enhancement

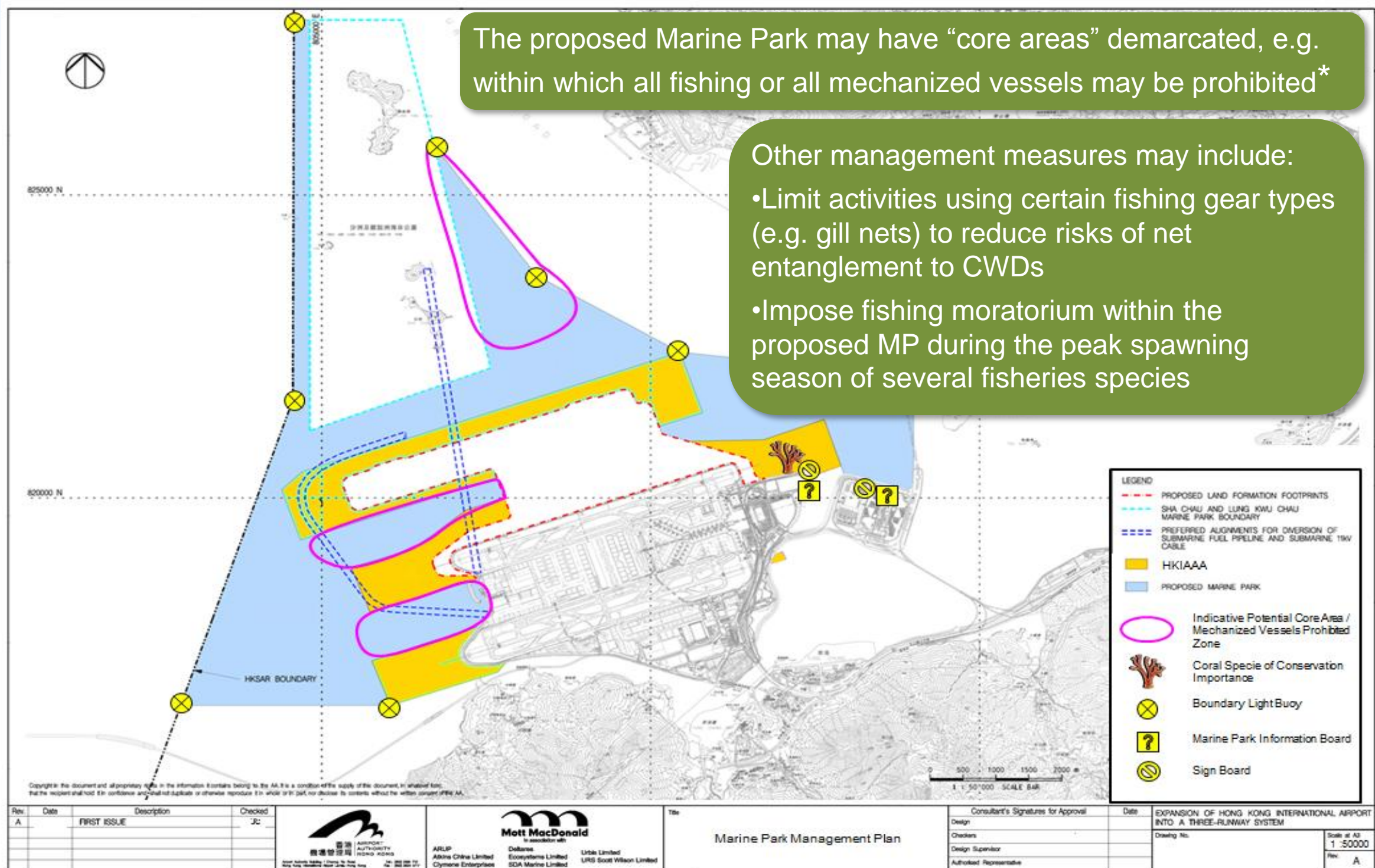
- Prior to designation, AA will develop a Marine Park Management Plan
- AA will work with relevant stakeholders to identify areas within proposed MP with potential for additional enhancement
 - *Subject to detailed ecological study after approval of 3RS project*
 - *In accordance with statutory provisions in the Marine Parks Ordinance and stakeholder consultations*

For example - Airport West has good potential for additional enhancement:

- *3RS surveys identify this area is used for foraging and travelling by CWDs*
- *Commercial marine traffic at Airport West is expected to be even lower after 3RS is operational*



Identify Potential Areas for Enhancement



* in accordance with MP Ordinance requirements / will require thorough stakeholder consultation



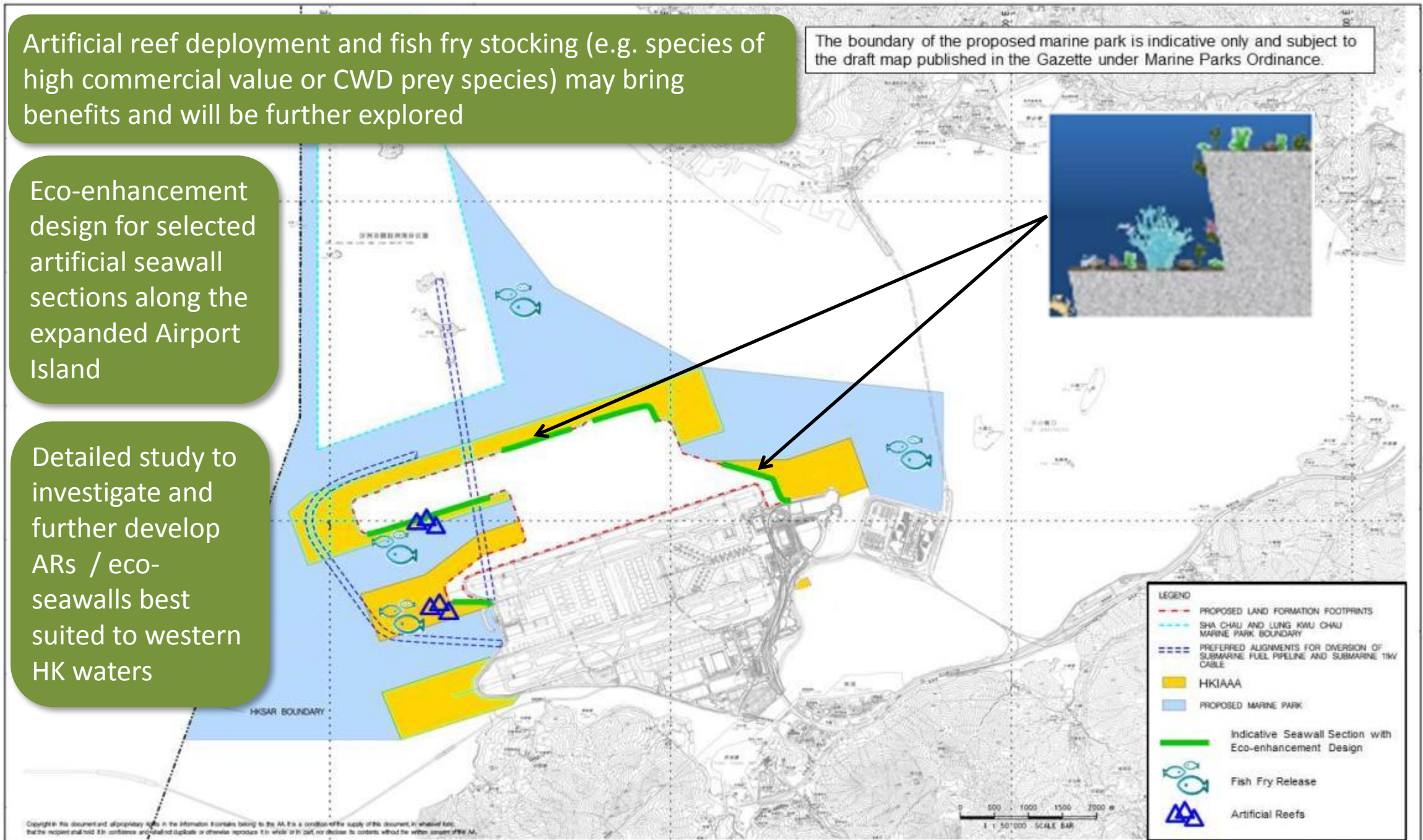
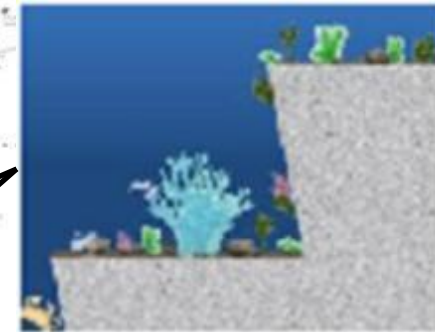
Identify Potential Areas for Enhancement

Artificial reef deployment and fish fry stocking (e.g. species of high commercial value or CWD prey species) may bring benefits and will be further explored

Eco-enhancement design for selected artificial seawall sections along the expanded Airport Island

Detailed study to investigate and further develop ARs / eco-seawalls best suited to western HK waters

The boundary of the proposed marine park is indicative only and subject to the draft map published in the Gazette under Marine Parks Ordinance.



Rev.	Date	Description	Checked			Title		Consultant's Signatures for Approval Design Checkers Design Supervisor Authorized Representative		Date	EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM Drawing No. Scale at A3 1:50000 Rev. A	
A		FIRST ISSUE	JC	ARUP Atkins China Limited Cyrene Enterprises		Marine Park Habitat Enhancement Plan						



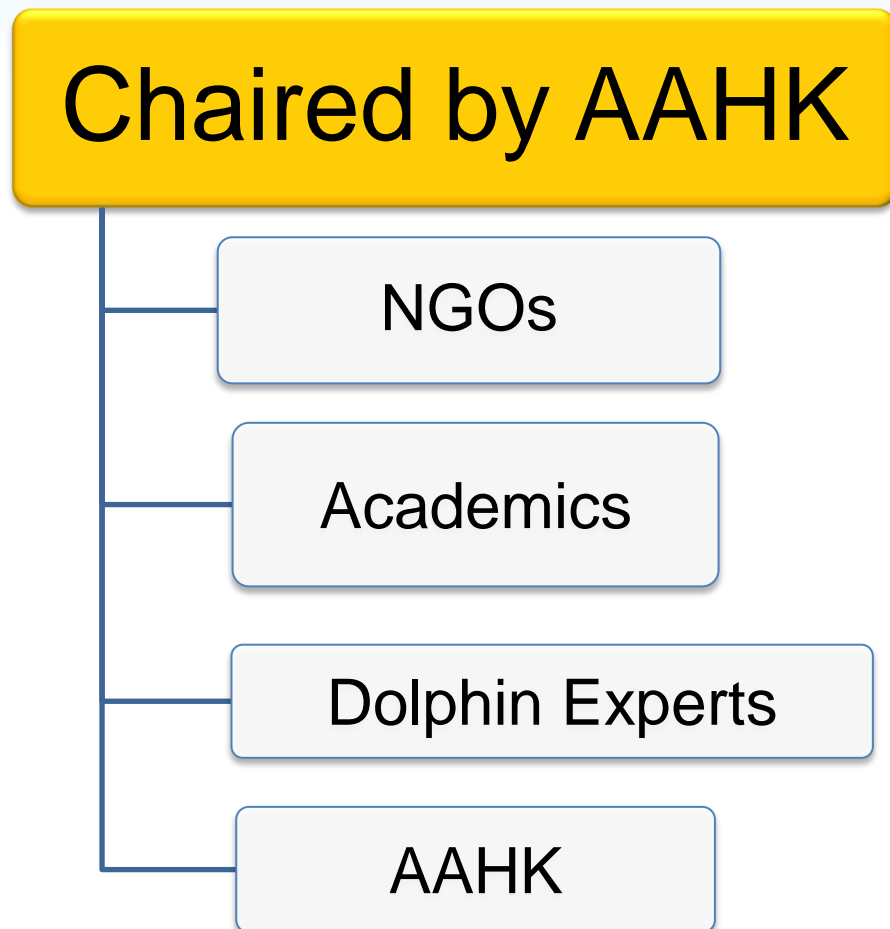
Marine Ecology and Fisheries Enhancement Strategy

Management and Funding Arrangements

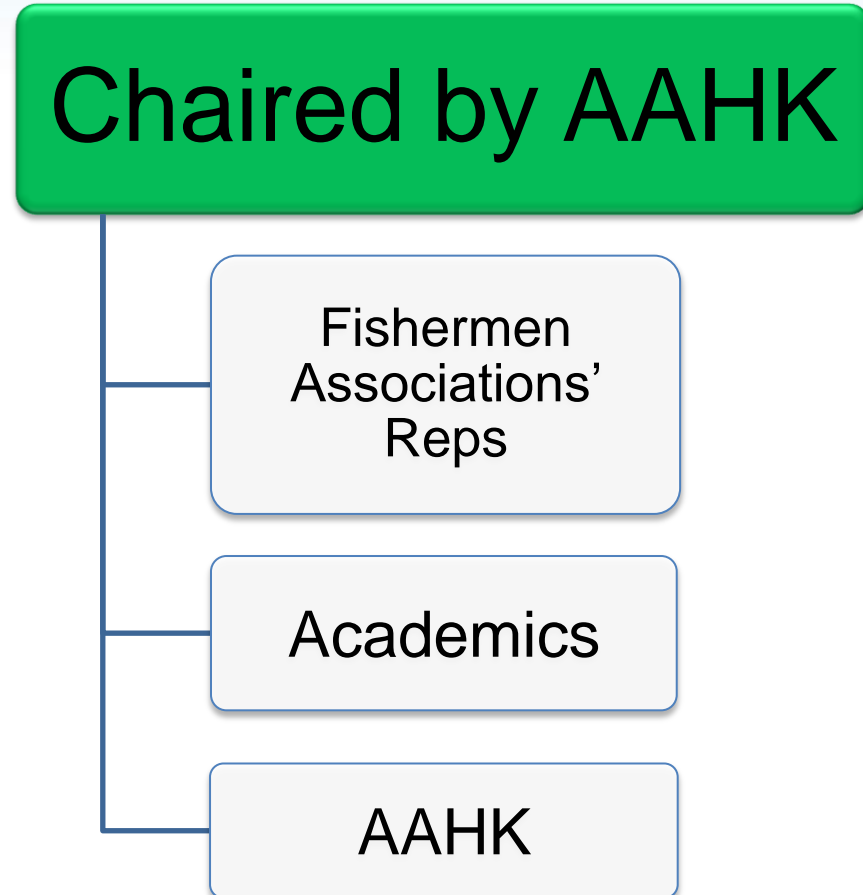


Management Committees

Marine Ecology Enhancement



Fisheries Enhancement



Planned Funding Allocation

- **Marine Ecology Enhancement Fund: Up to \$150M**
- **Fisheries Enhancement Fund: Up to \$150M**
- **Total Fund commitment: Up to \$300M**
(subject to final approval from the Board of AAHK)



Management Arrangements

AAHK will develop:

- TOR and *modus operandi*
- Appropriate mechanisms for accepting funding applications and means of managing funds and deliverables
- Details on Secretariat, technical support and staffing arrangements



Existing HKIA Environmental Fund

- Provides funding support for projects, activities and initiatives that promote environmental protection, green living and a sustainable lifestyle in Hong Kong
- Eligibility for funding:
 - (i) projects that further our understanding of Hong Kong's flora, fauna and ecosystems
 - (ii) projects that promote “green living” and a sustainable lifestyle
 - (iii) projects that promote the betterment of the airport and/or the nearby community
- Up to HKD 3.5 million may be granted annually (full or partial support of projects)
- An AAHK fund award committee, with external advisors (External advisors invited to comment on projects with value over HKD300,000)

* HKIA Environment Fund Application Guide available on HKIA web-site:
<http://www.hongkongairport.com/eng/csr/environmental-fund/index.html>



Examples of AAHK Funded Initiatives

Since 2011, AAHK has funded various initiatives, including:

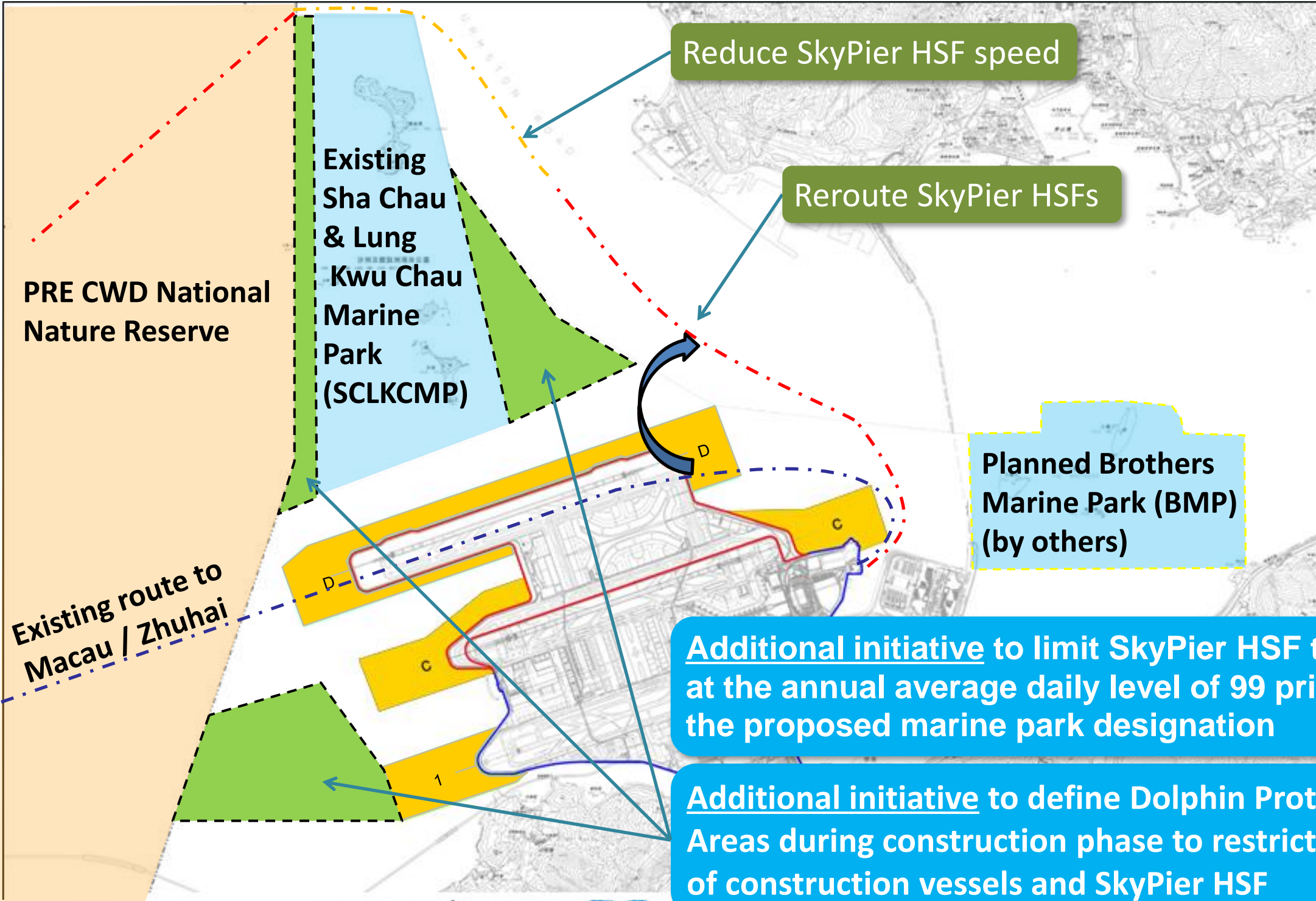
- **PRE CWD Conservation Study (pending approval)**
- **Finding Pipefish in Hong Kong 2012**
- **Micro Carbon Operation**
- **ClimateWatch Community Engagement Programme**
- **Food Angel, Food Rescue & Assistance Program**
- **Hong Kong Kids Ocean Week**



SkyPier High Speed Ferry Management Plan



High-speed Ferry (HSF) Traffic Routes and Management Plan

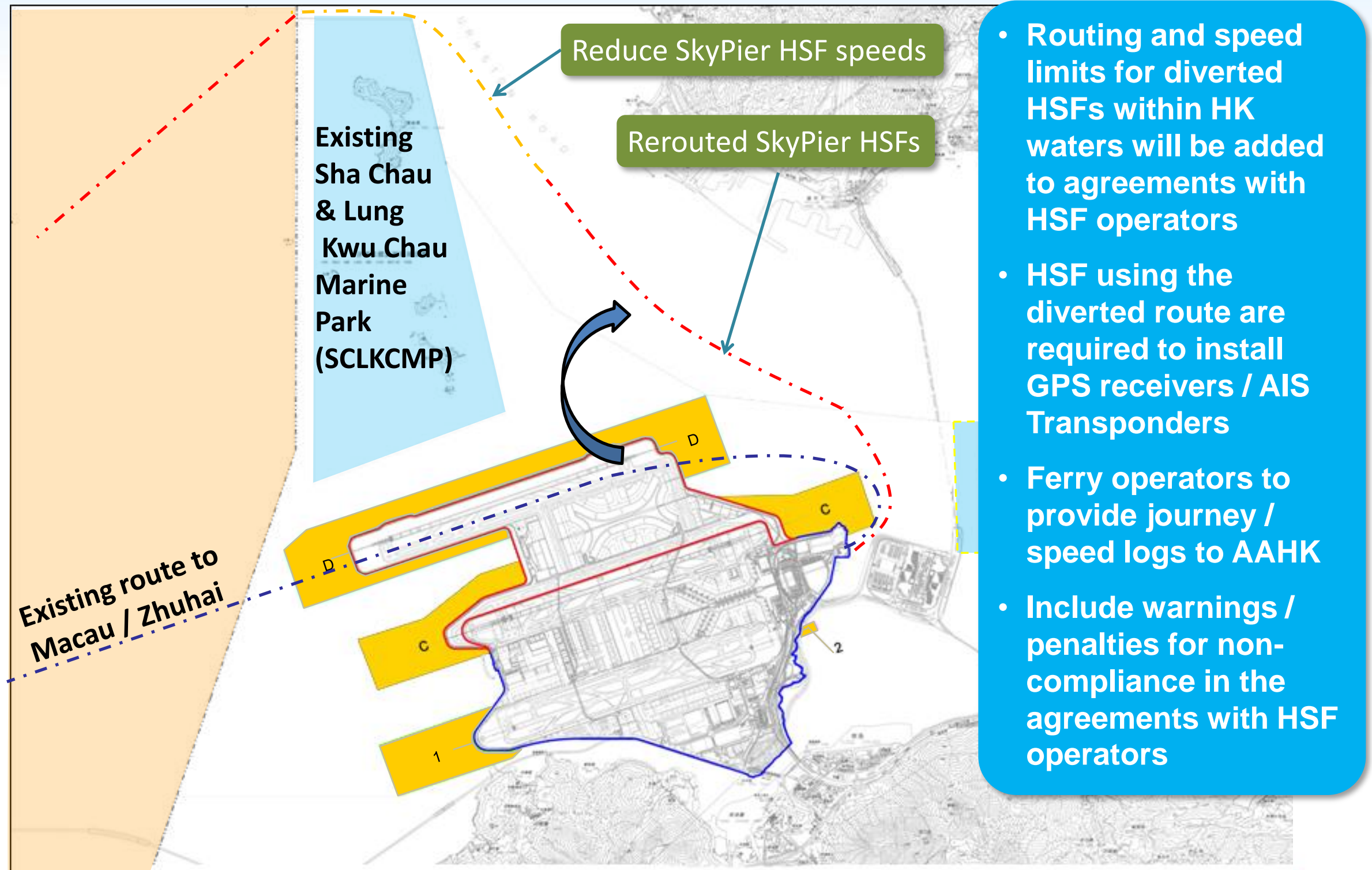


Speed Reduction to 15 knots in CWD hotspots

- HSFs generally travel at speeds of 30-40 knots are associated with increased risks of injury and mortality to CWDs
- Further speed reduction below 15 knots for HSF operators would lead to difficulty in manoeuvring and increased passenger discomfort
- The portion of the diverted route subject to speed reduction shall be determined before commencement of construction based on review of up-to-date CWD abundance data, including
 - Baseline monitoring data under 3RS EM&A programme
 - AFCD long-term monitoring data



High-speed Ferry (HSF) Marine Traffic Routes and Management Plan



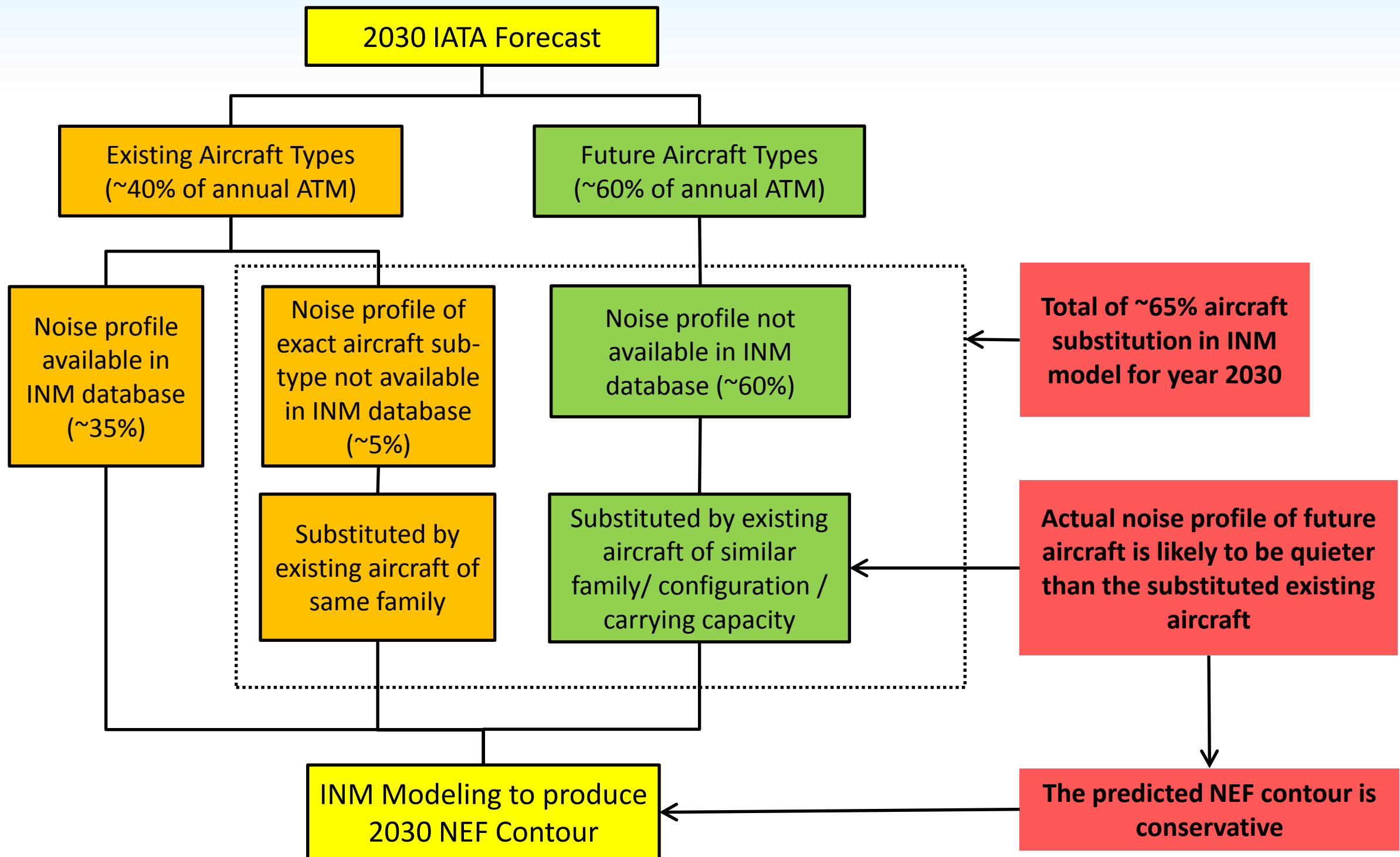
- Routing and speed limits for diverted HSFs within HK waters will be added to agreements with HSF operators
- HSF using the diverted route are required to install GPS receivers / AIS Transponders
- Ferry operators to provide journey / speed logs to AAHK
- Include warnings / penalties for non-compliance in the agreements with HSF operators



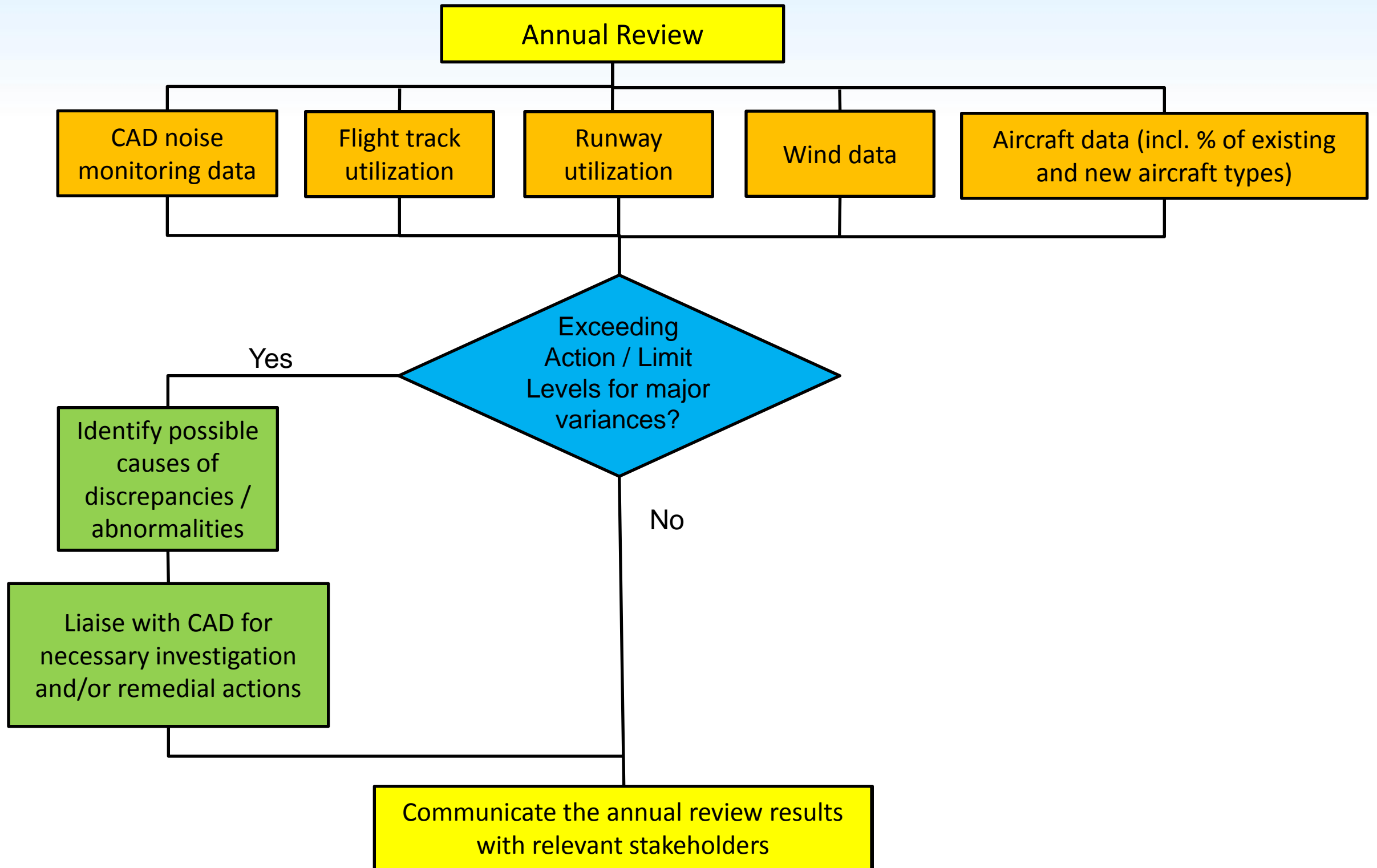
Aircraft Noise



Aircraft Substitution in Noise Modelling



Aircraft Noise EM&A (Annual Review)



Thank You

