Fisheries in Crisis and Conflict in the Coral Triangle

Reflections on the Live Reef Fish Trade and The “Coral Triangle Initiative”

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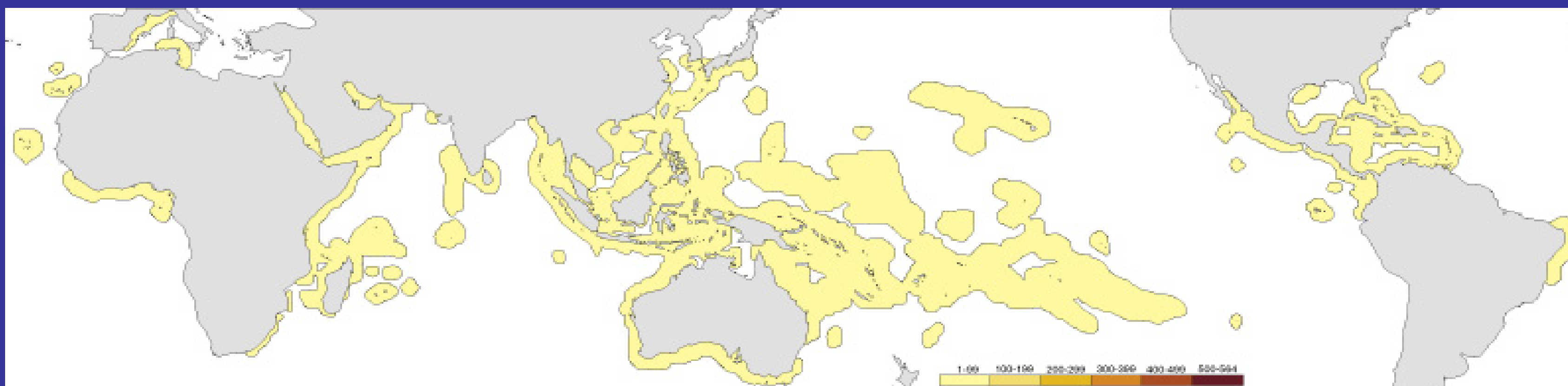
Synopsis

- Overview of the live reef fish trade in Southeast Asia
- Impacts, conflicts and causes
- Recent policy responses and the obstacles they have faced
- The Coral Triangle Initiative: Hope for the future?

Southeast Asia’s Coral Reefs

- Global center of diversity for corals, reef fishes, mollusks (“The Coral Triangle”)
- Key source of animal protein for poor coastal communities
- Cash income from marine products as well as eco-tourism (in some places)
- Key element of wider marine food chain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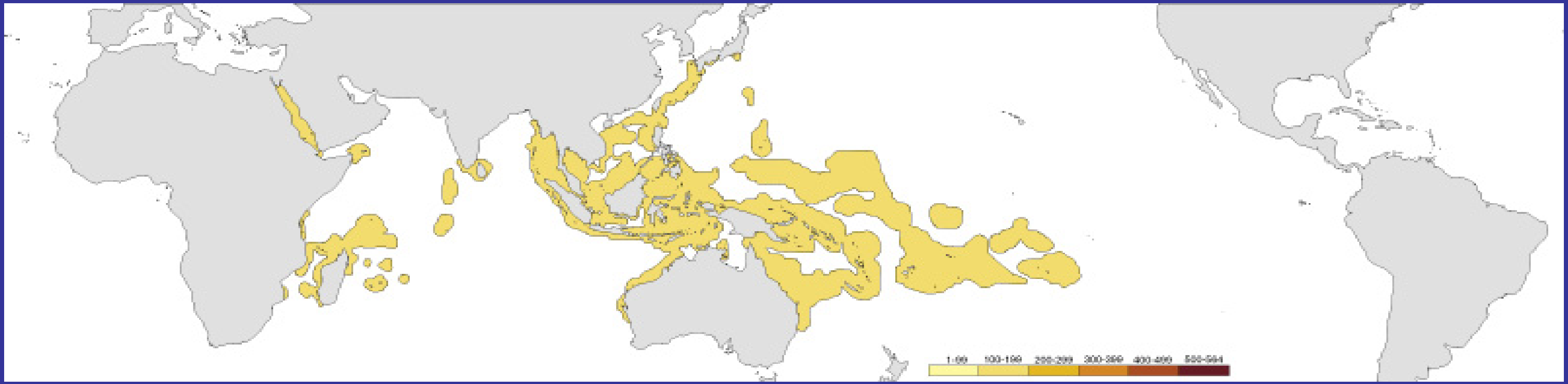

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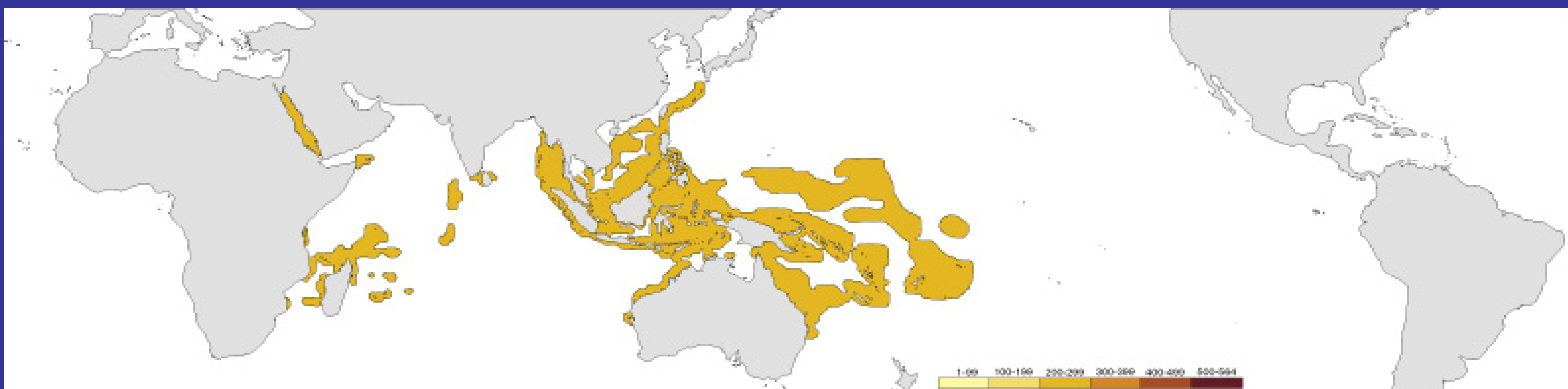
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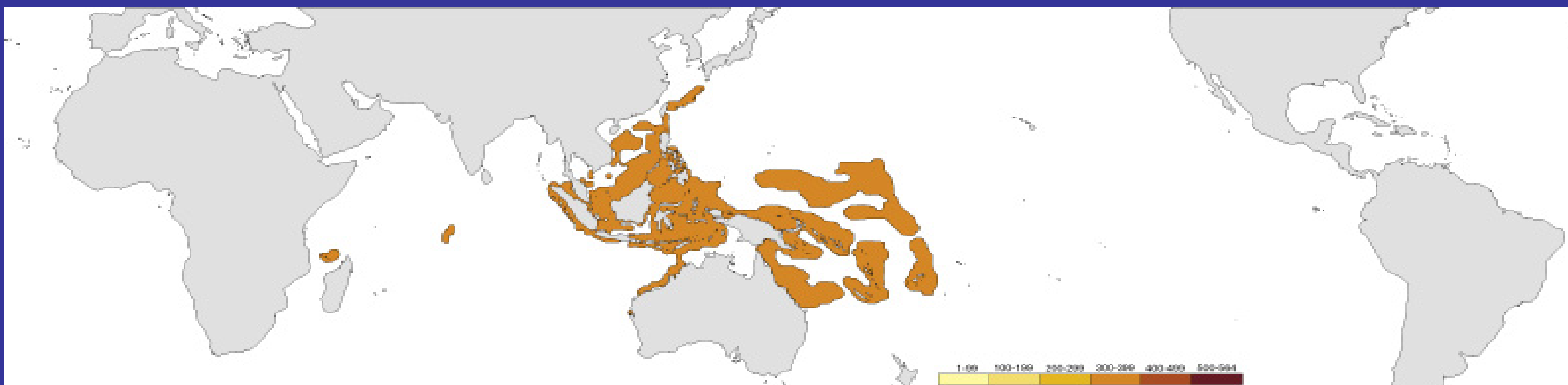

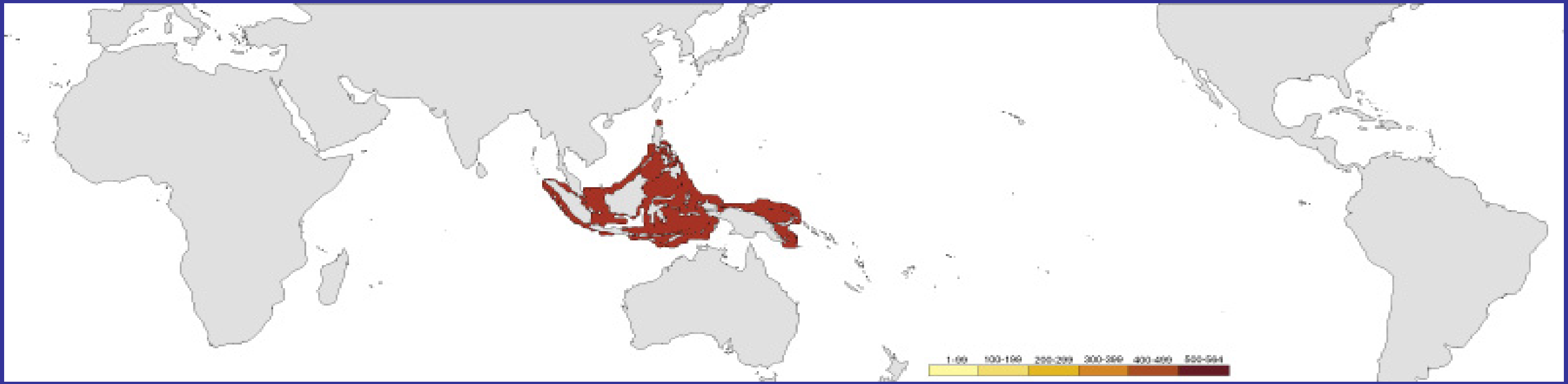

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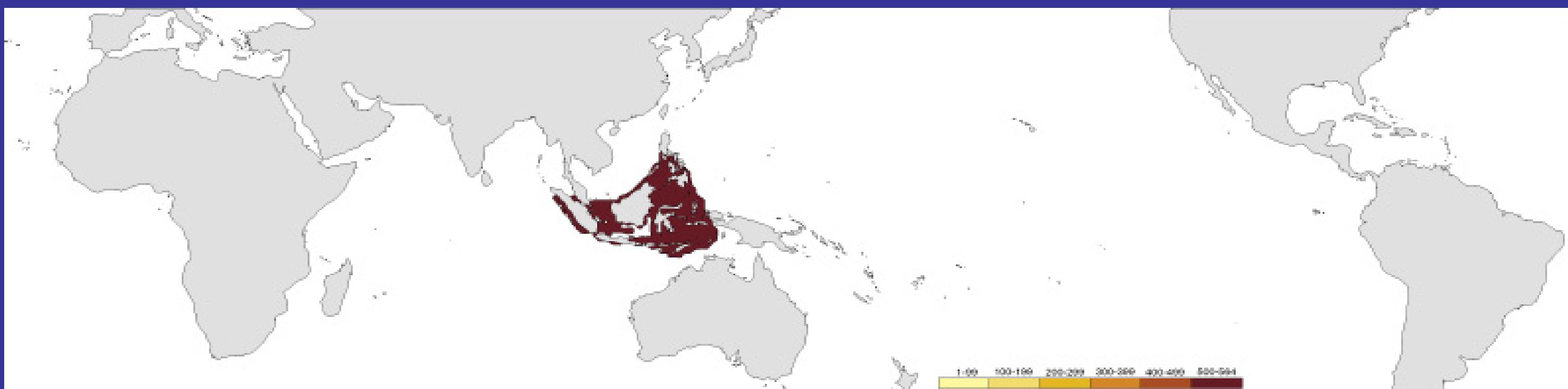
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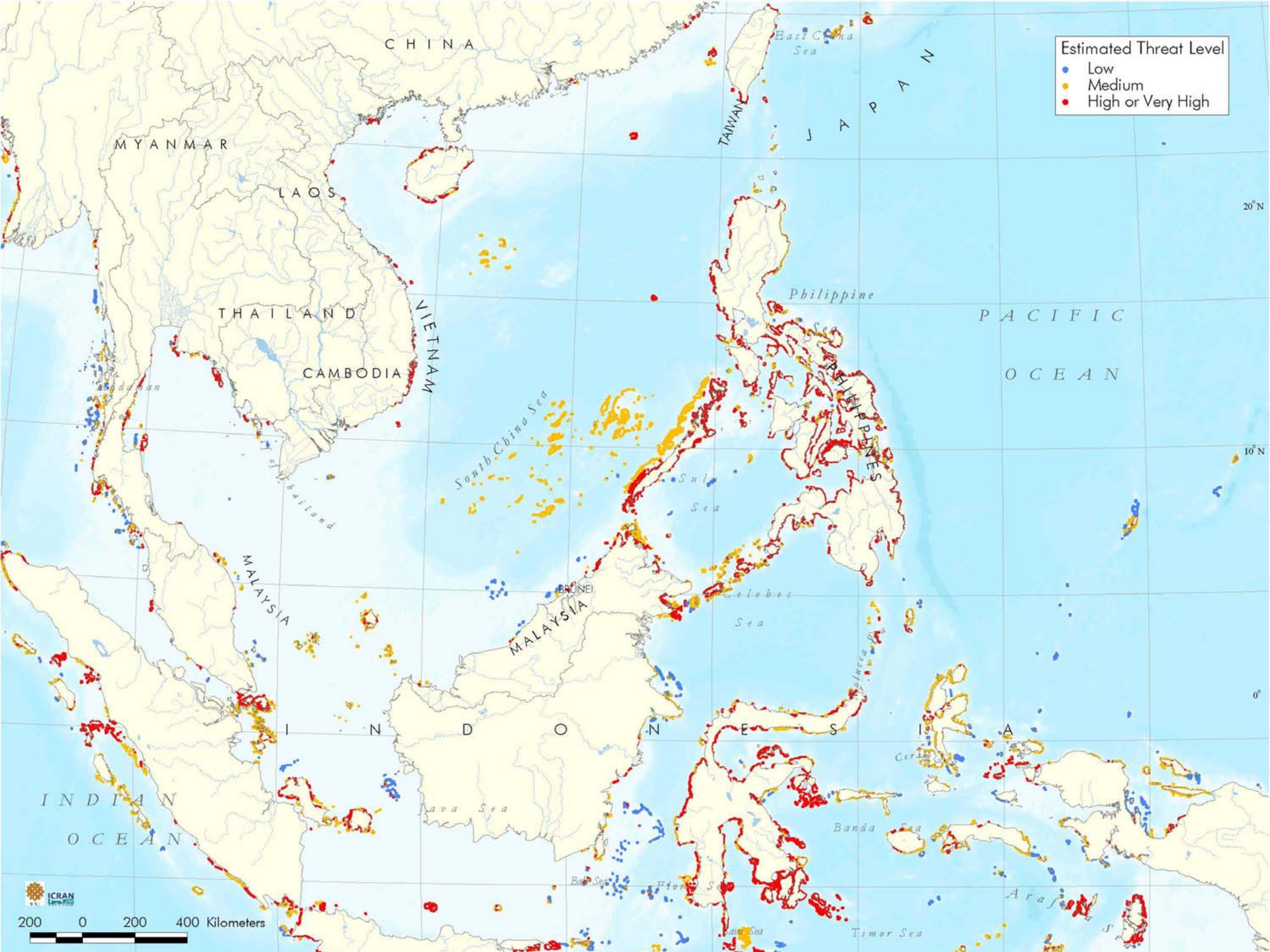
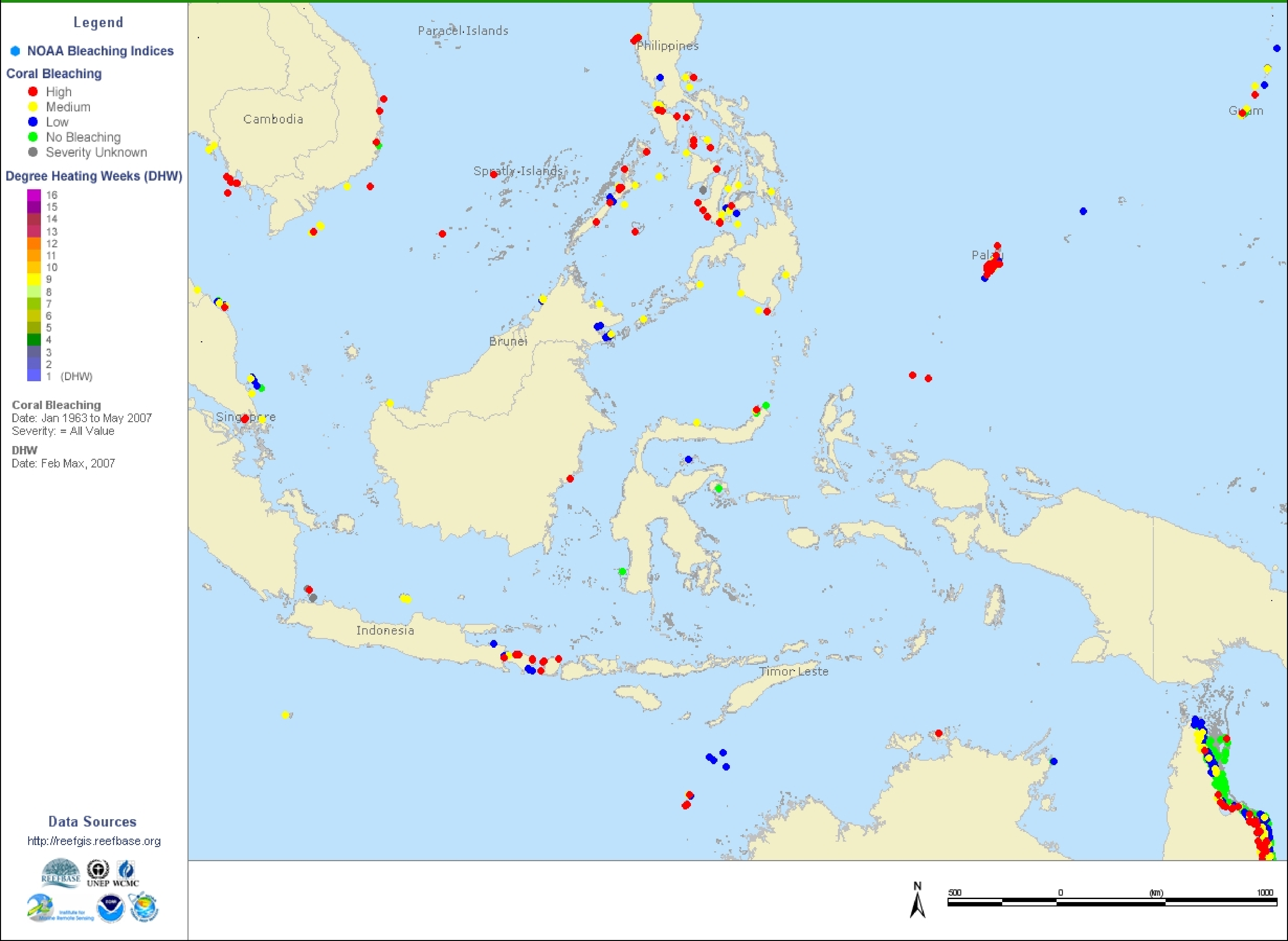
Threats to SE Asia's Reefs & Coasts

- Overfishing & destructive fishing methods
- Coastal development: Cities, towns, airports, mines, infrastructure, tourism, etc.
- Marine-based pollution: Ports, oil tanks and wells, shipping lanes
- Sedimentation & erosion due to deforestation & land use change
- Climate change (coral bleaching; sea level rise)


Estimated Threat Level
Low
Medium
High or Very High
CHINA
MYANMAR
LAOS
THAILAND
VIETNAM
CAMBODIA
TAIWAN
JAPAN
East China Sea
Philippine Sea
PACIFIC OCEAN
PHILIPPINES
South China Sea
Sulu Sea
Celebes Sea
BRUNEI
MALAYSIA
MALAYSIA
INDONESIA
INDIAN OCEAN
Java Sea
Banda Sea
Bali Sea
Timor Sea
20° N
10° N
0°
ICRAN
200 0 200 400 Kilometers

Coral Bleaching & DHW




Thailand
Philippines
Brunei
Malaysia
Singapore
Indonesia
Jakarta
Timor Leste
Christmas I.
Australia
N
Legend
1-meter rise
rivers
lakes
international borders
intranational borders
High : 146668
Low : 0
Susceptibility to Sea Level Rise
Weiss & Overpeck
The University of Arizona
0 210 420 630 840
Kilometers

The Reef Species Trade

- Aquarium fish, corals and “live rock” – Markets are mainly US and EU
- Live reef food fish – Market is mainly Hong Kong and southern China
- Curio trade (ornamental coral, shells, etc.)
- Traditional Chinese Medicine (e.g. seahorses, sea cucumbers)

The Live Reef Aquarium Trade

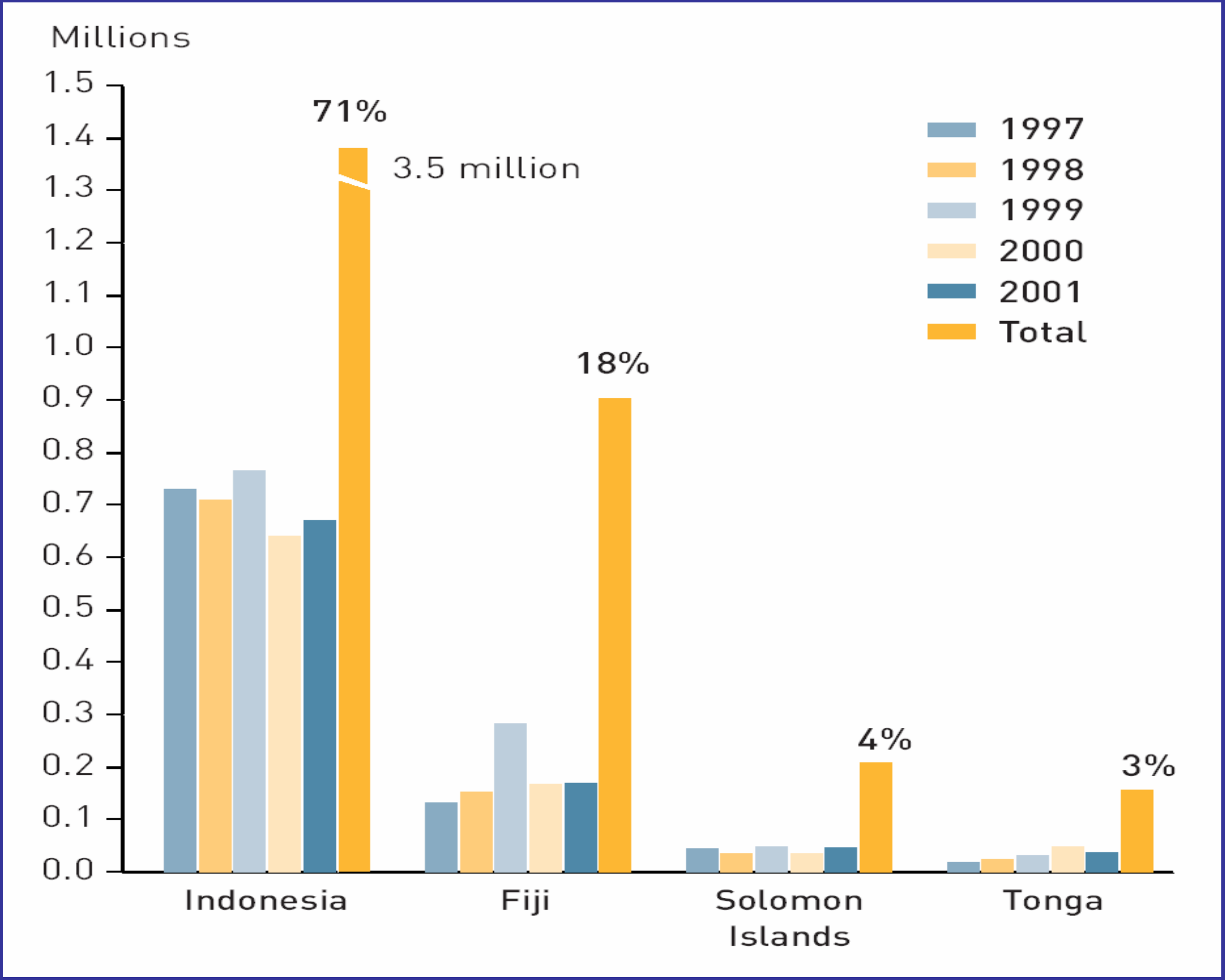
Main Source Countries of Marine Ornamental Fish

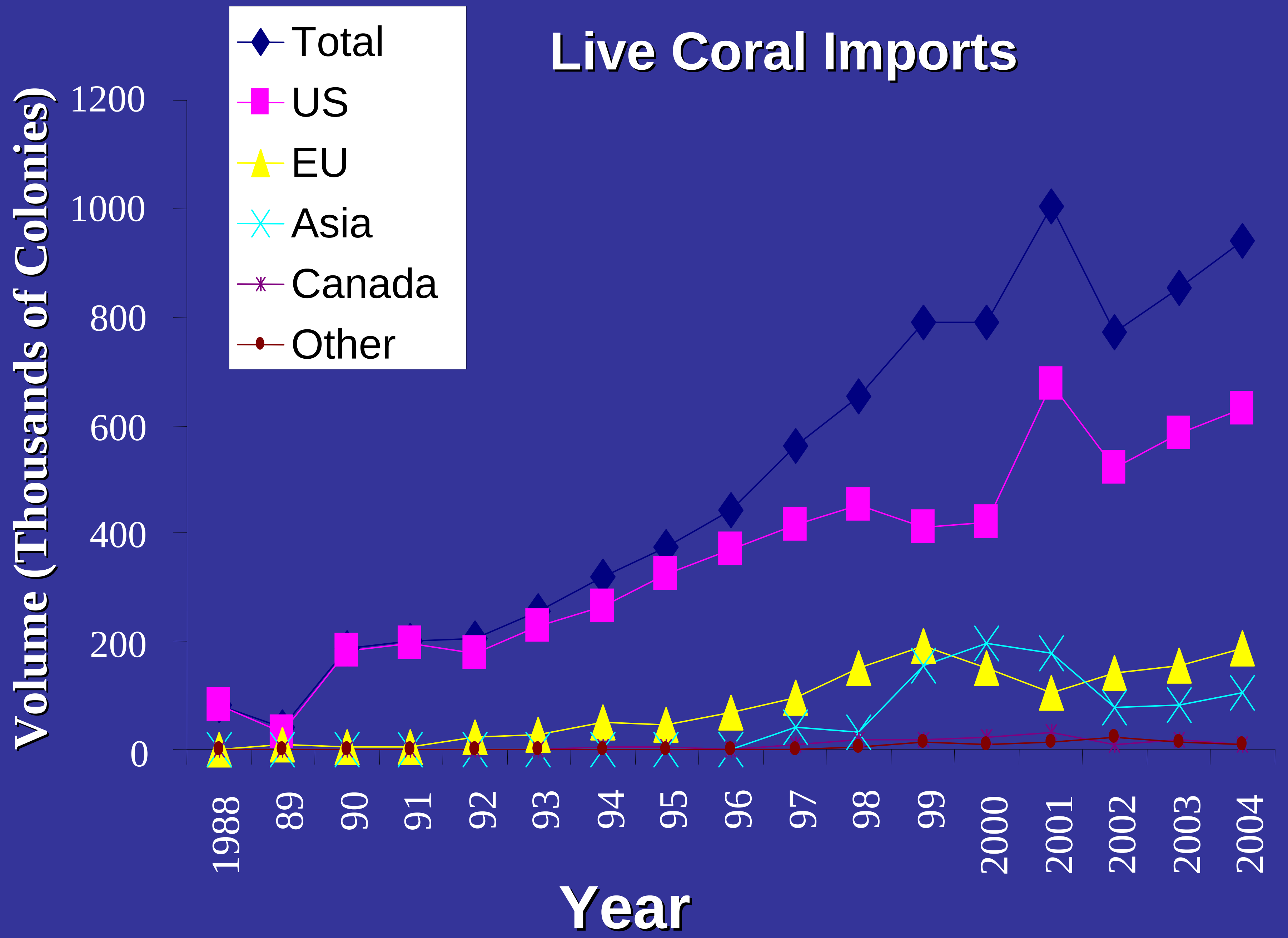
Origin	# fish (exp. data)	%	Origin	# fish (imp. data)	%
Philippines	1,523,854	43	Unknown	3,556,772	81
Indonesia	943,059	26	Indonesia	316,355	7
Solomon Islands	416,262	12	Fiji	237,872	5
Sri Lanka	183,537	5	Philippines	81,294	2
Australia	173,323	5	Sri Lanka	60,220	1
Fiji	131,746	4	Solomon Islands	25,732	1
Maldives	78,018	2	Maldives	22,165	1
Palau	63,482	2			
Total	**3,513,281**	**99**	**Total**	**4,300,410**	**98**

Main Importers of Marine Ornamental Fish

Destination	# fish (exp. data)	%	Destination	# fish (imp. data)	%
USA	1,462,347	41	USA	3,054,273	69
Unknown	788,230	22	UK	874,557	20
Taiwan	244,454	7	Netherlands	264,976	6
Japan	222,613	6	France	103,234	2
Hong Kong	152,738	4	Germany	99,955	2
France	132,439	4			
Germany	119,739	3			
Netherlands	117,248	3			
Italy	70,686	2			
UK	48,911	1			
Total	**3,360,405**	**93**	**Total**	**4,300,410**	**98**

Major Exporters of Live Coral





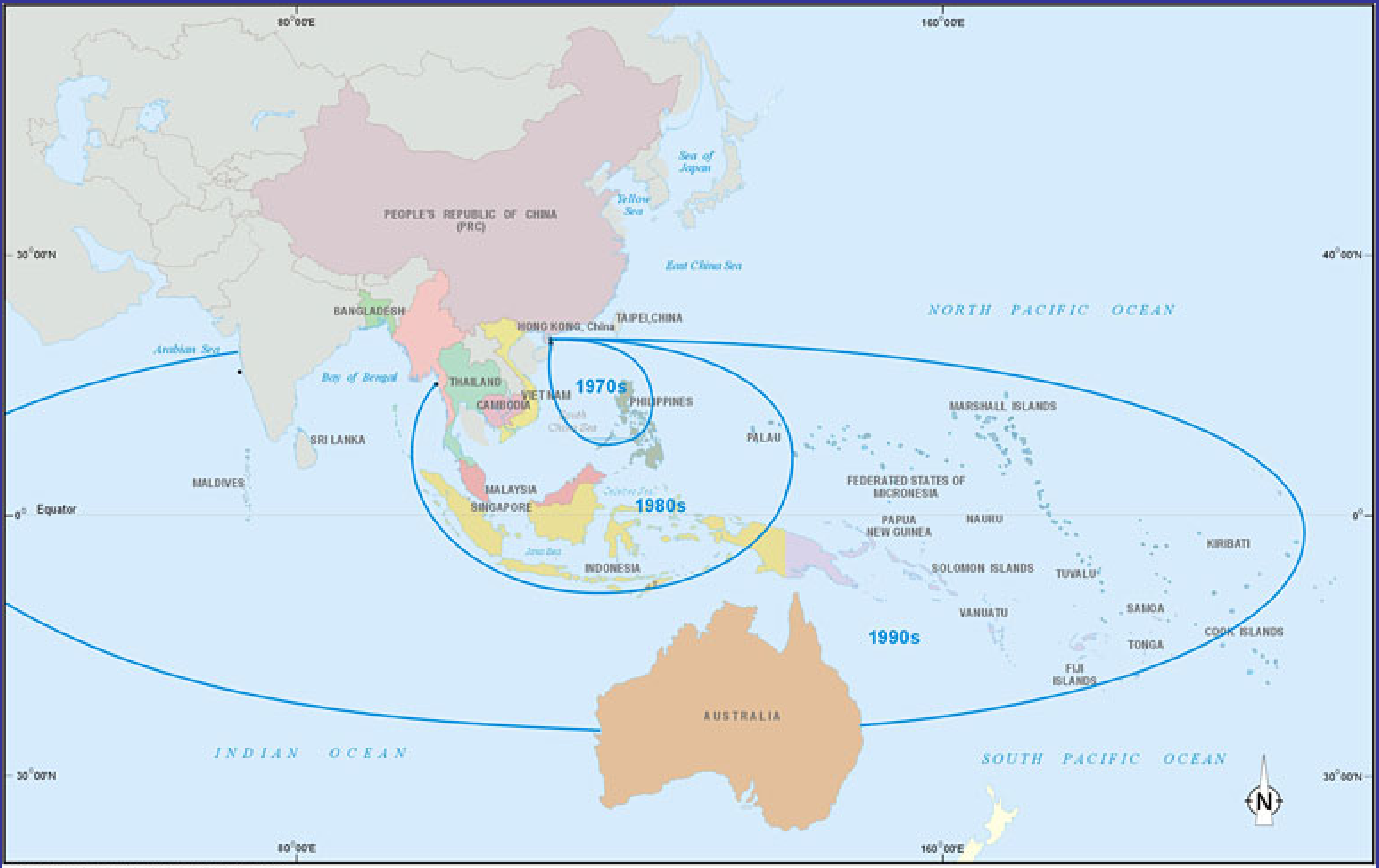
Live Coral Imports
Total
US
EU
Asia
Canada
Other
Volume (Thousands of Colonies)
1200
1000
800
600
400
200
0
1988
89
90
91
92
93
94
95
96
97
98
99
2000
2001
2002
2003
2004
Year

Live Food Fish Trade

LRFFT Overview

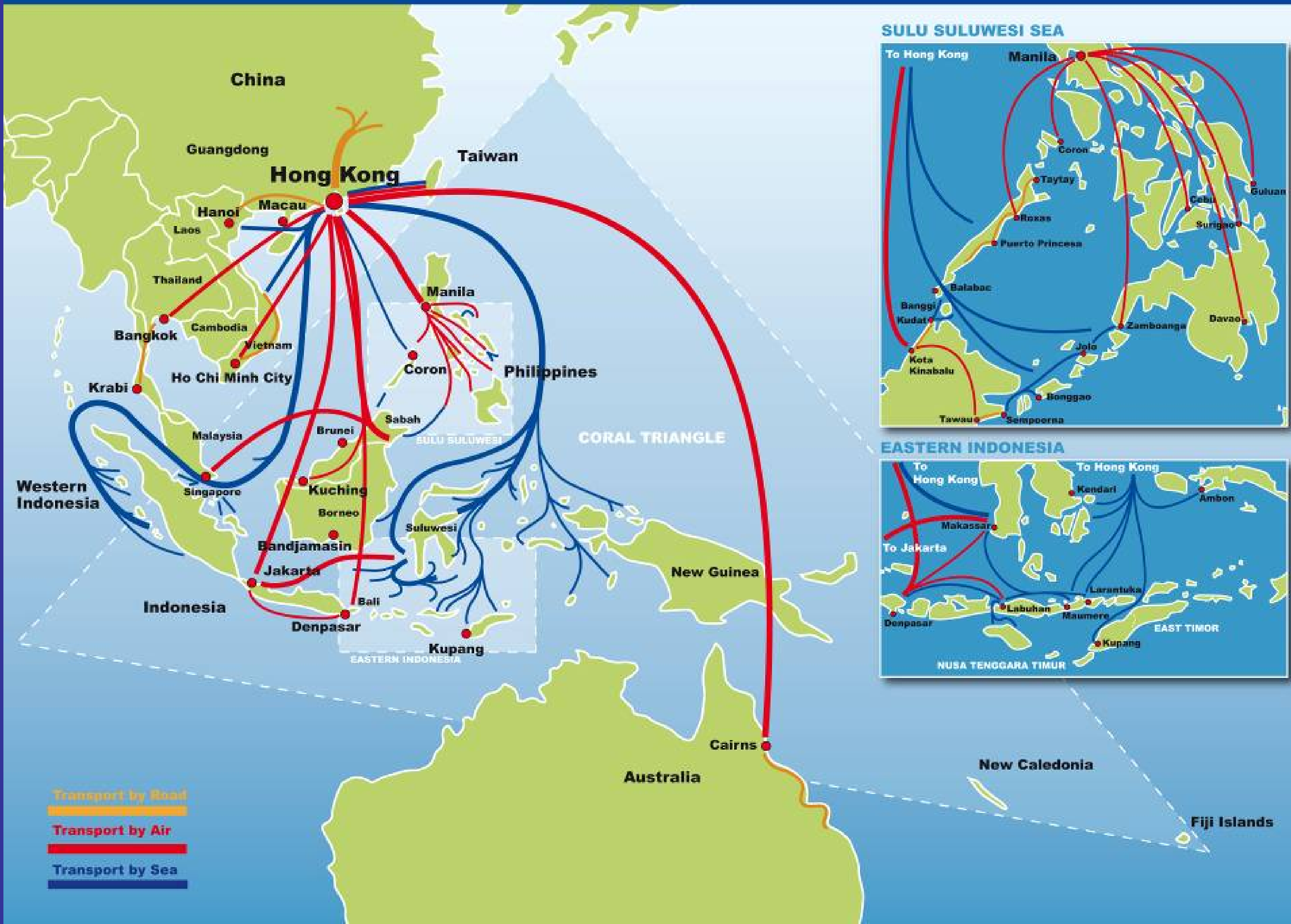
- Markets in Hong Kong & Southern China
- Sources mainly SE Asia & W Pacific
- Overfishing and destructive methods common
- High-value/low-volume
- Mobile operators; “boom-and-bust”
- Sensitive to economic factors (e.g. 1998 financial crisis; growing incomes in China; energy/transport prices; development of cultured sources)

Expansion of the LRFFT



Note: Boundaries are not necessarily authoritative.

Asia-Pacific Trade in Live Reef Food Fish

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KAMP


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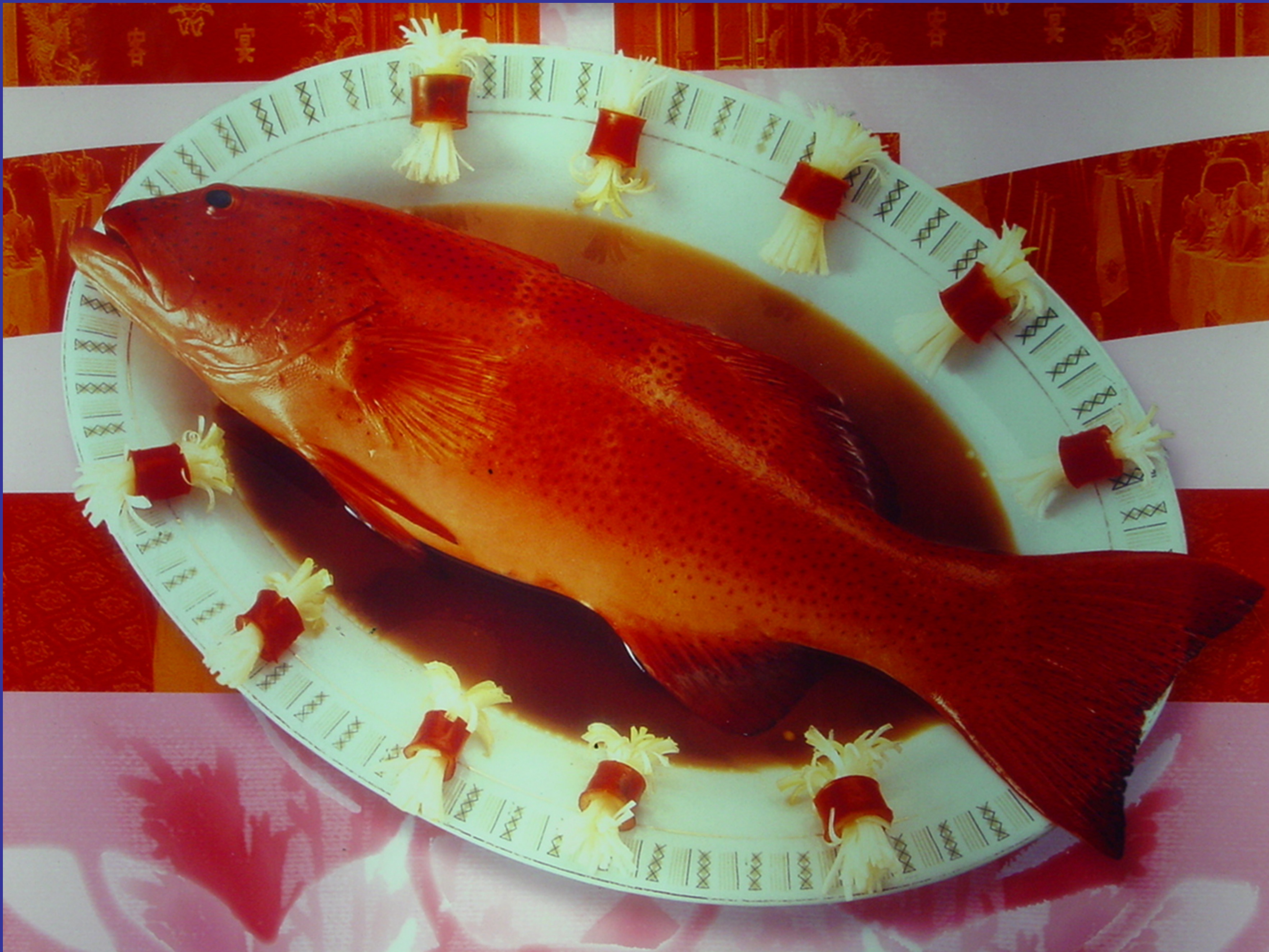
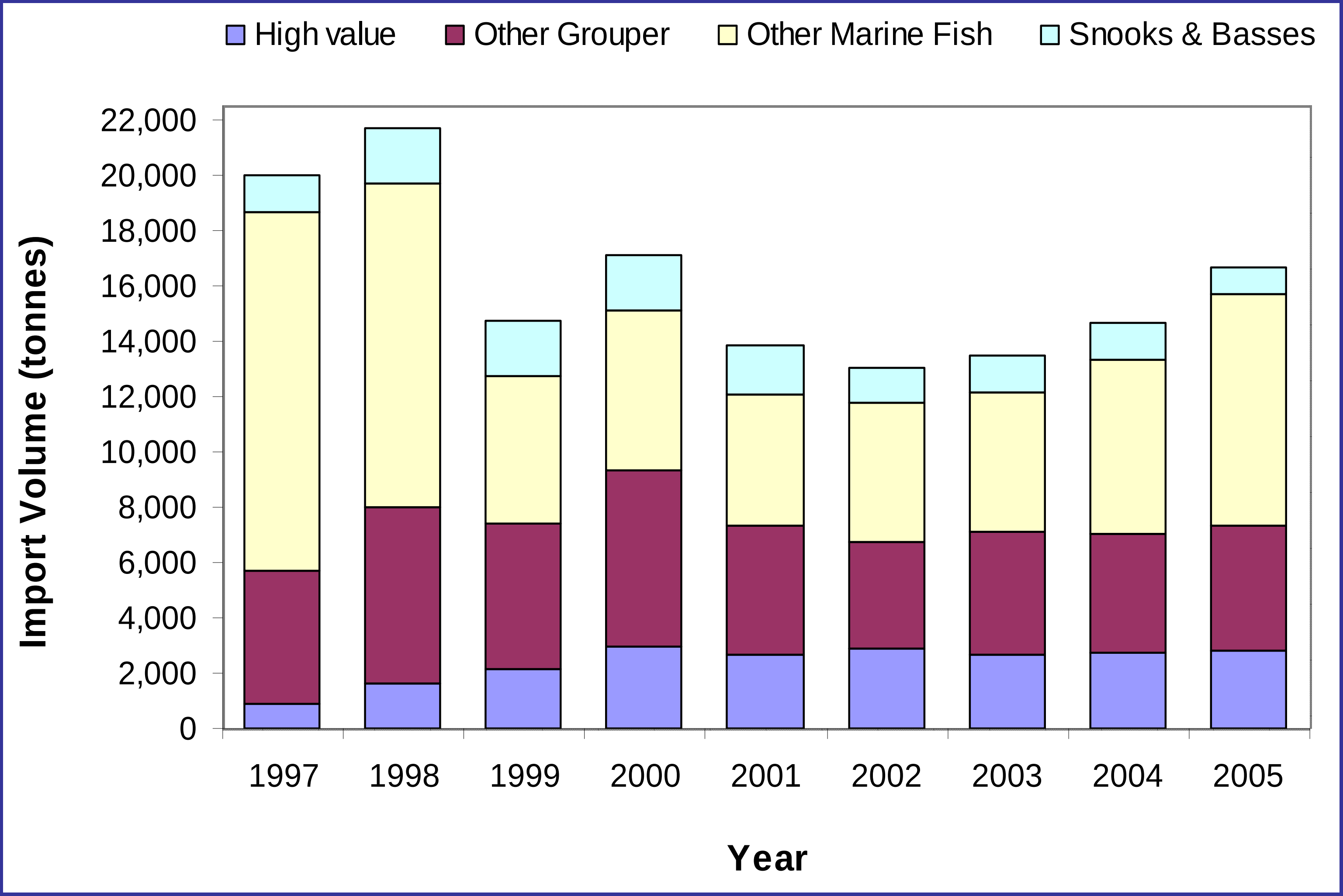
分店



Hong Kong Imports 1999-2005



The (Cloudy) Import Picture

- Total imports into Hong Kong have risen by at least 27.5% since 2002
- Total volume likely 15% or more higher due to HK catch declaration rules
- Some 40-50% of HK imports are transshipped into Mainland China
- Total retail value = >$400 million/year
- Trend is towards higher-value species, more “cultured” sources

Impacts of the LRFFT

- Overfishing for target species and other fish to support “grow-out” in cages
- Targeting of spawning aggregations and juveniles
- Use of cyanide as a capture method
- Diving injuries for poorly-trained divers
- Depletion of locally-important food species
- Low prices paid to local fishers
- Local conflicts arising from growing scarcity, “reef right” disputes, distribution of benefits, etc.

Root causes of the problems

- Open access/state control in absence of capacity/governance
- Weak enabling conditions for CBCRM
- Mobile operators with no downward accountability or commitment to sustainability (commodity as well as spatially mobile)
- Transient or fractured “communities”
- Lack of demand-side pressure or action
- Sporadic donor & NGO interest

Types of Conflict

- Intra-community (property rights, resource depletion, profit distribution, gender, age)
- Local fishers versus outside operators
- Local fishers versus the State
- Source versus consuming countries (e.g. illegal fishing incursions, ciguatera poisoning, trade-related environmental disputes)
- Conservation pressures versus development pressures and livelihood needs

Approaches to Reform

- Government regulation and enforcement
- Certification and other market-based instruments and mechanisms
- Aquaculture of target species
- Community-based management and co-management approaches

All of these have faced obstacles

Government Regulation & Enforcement

- Power relationships & corruption
- Poor government-community relations
- Inadequate legal frameworks & provisions
- Incomplete/conflicted decentralization
- Lack of government capacity
- Dependence on external financing
- Local fishers' lack of alternative sources of income

Market-based Approaches

- **Aquarium Trade (MAC):** complex supply chains with multiple species; sustainability monitoring problems; lack of market premium; insufficient demand-side policy reform pressure
- **LRFFT (Standards):** Total lack of market pressure; no institutional structure
- **Both:** Markets alone, w/out government action *and* CBNRM, can never solve the problems.

Aquaculture

- Difficult to culture some preferred species
- LRFFT market preference for wild-caught
- Local communities often don’t benefit, so no disincentive to fish (and sometimes the opposite, as prices drop)
- Much “aquaculture” is just grow-out of wild-caught juveniles
- Pressures on feed-fish populations for grow-out operations (empty reef syndrome)
- Disease and pollution

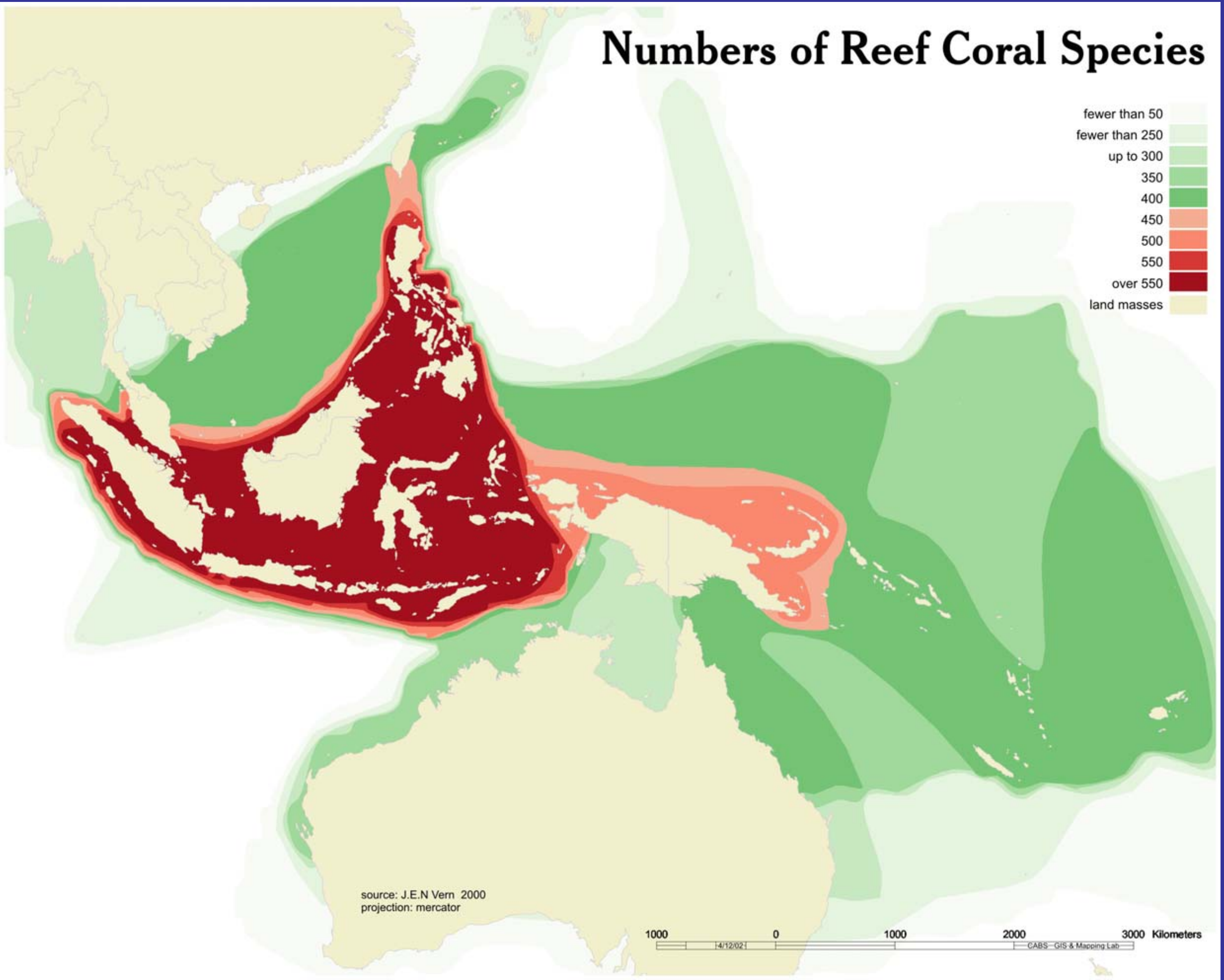
Community-Based Management

- Lack of tenurial rights
- Growing demographic pressures
- Non-cohesive “communities”
- Erosion of traditional institutions
- New external actors and technologies
- Increasing local demand for cash income
- Lack of enabling government policies
- Lack of access to credit and technology
- Lack of market access and leverage

The Coral Triangle Initiative: Hope for the Future?

- Political Initiative of 6 CT governments at Heads of State level
- Strong BINGO backing (WWF, TNC, CI)
- Strong donor support: GEF ($60M; ADB, WB, FAO, UNDP and other GEF partners (>$300M); USAID (>$30M); Foundations (e.g. Walton)
- Strategic framework decided in Dec 2007
- Currently in strategic plan/design phase

“The Coral Triangle”



CTI Boundaries & “Ecoregions”

Outcome #1: "Priority Seascapes" designated and effectively managed

("Priority Seascapes" are defined as "large-scale geographies prioritized for investments and action, where best practices are demonstrated and expanded")

- Target date for designation of a set of X "Priority Seascapes" (# could vary by country)
- Target date for adopting comprehensive "Seascape Management and Investment Plans"
- Implement and monitor "Seascape Management and Investment Plans"

<u>Outcome #2: Ecosystem approach to management of fisheries and other marine resources fully applied</u>

- Target date for establishing "legal, social, economic and **policy regimes**" to support ecosystem approach to fisheries management (near-shore and pelagic)
- Target date for establishing a **Regional Alliance on Tuna Governance and Management**
- Target date for legal protection of **special tuna spawning and migration zones**
- Target date for establishing a ***Regional Forum on Live Reef Food Fish Trade***
- Target date for integrating "sustainable marine resources management objectives into regional and sectoral planning" (i.e. "**Mainstreaming**").

Outcome #3: MPAs established and effectively managed, including community-based resource utilization and management

- Target % of marine area given legal protection (with representation, connectivity, etc.)
- Target for % MPAs effectively managed
- Target date for resilient networks of MPAs to be fully functional

Outcome #4: Climate change adaptation measures achieved

- Target date by which CT governments and key private sector partners define an adaptive management strategy for conserving their marine and coastal resources in response to climate change pressures, and a mechanism for implementation of such strategies.

Outcome #5: Threatened species status improving

- Target date by which targeted threatened species are no longer declining, and a further target date by which their status is no longer threatened.
- Target date for completion of a regional strategy on marine invasive species.

Priority Areas for Action

- Assessment, monitoring and information management
- Sustainable financing
- Capacity building
- Public/private partnerships
- Enabling laws and policies

Institutional/Governance Structure

- Governing Council of Ministers
- Secretariat
- National focal points/secretariats
- CTI Partners Forum
- CTI Support entity
- Donors

Still a work in progress

Concerns & Recommendations

- National policy reform commitments and benchmarks are needed (e.g. tenure, fisheries subsidies, corruption, enforcement, enabling CBCRM)
- National financial commitments are key to continued donor support & sustainability
- BINGOs are key partners but are not strong on fisheries & critical policy advocacy
- Big differences among CT countries in terms of situations, culture and capacity

Concerns & Recommendations

- BINGOs have done a great job, but risk charges of excluding national NGOs, monopolizing donor funding, and an overly protectionist agenda
- CTI process thus far is quite “top-down”
- Sustainable livelihoods and economic development for poor coastal communities is underemphasized
- GCC adaptation focus is very narrow (focus on marine resources)
- CBCRM needs stronger emphasis and not just in the MPA context


Thank You !