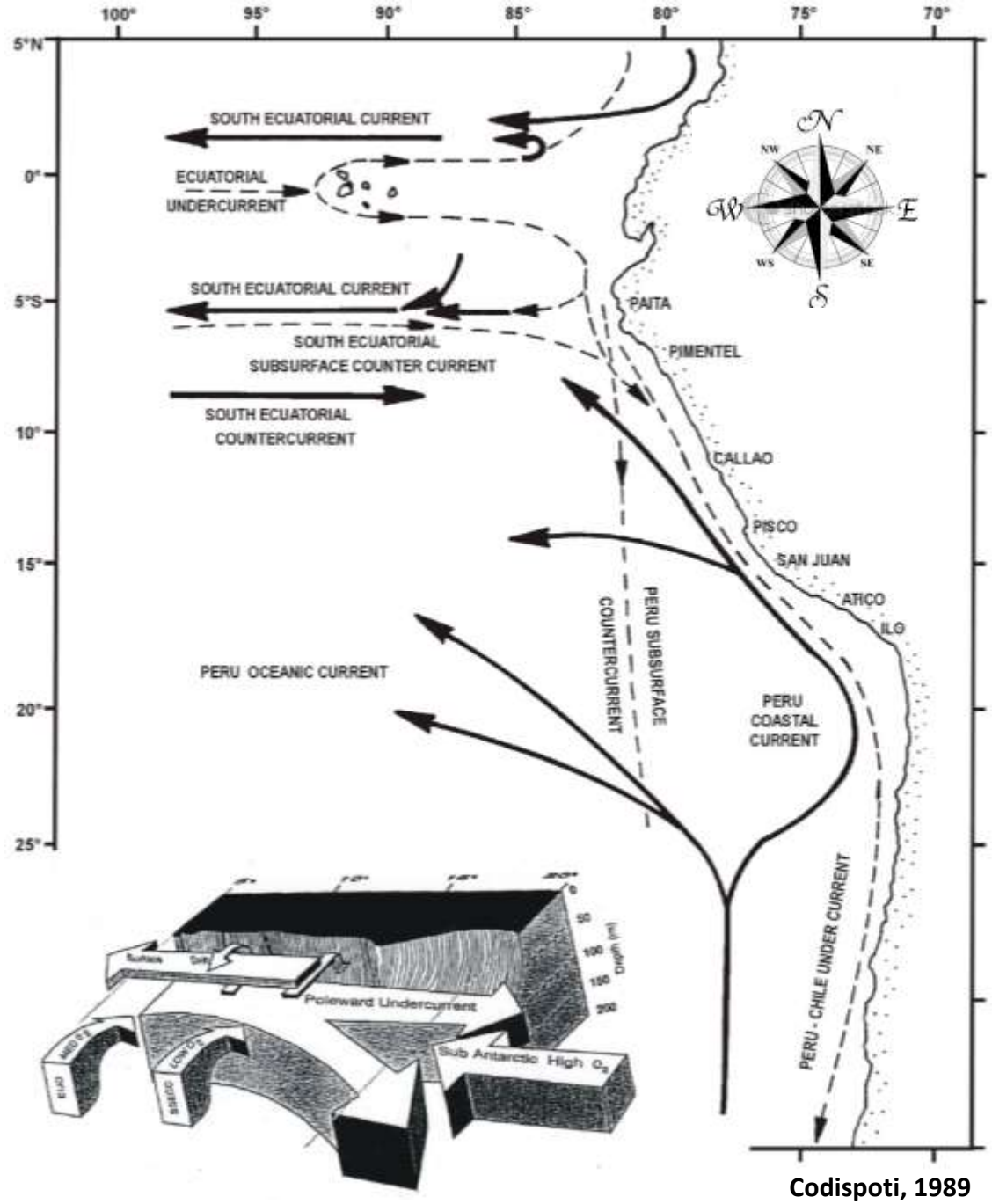
SITUACIÓN ALGAS PERUANAS EN PERU 1995 - 2011

PAUL KRADOLFER
Director Ejecutivo ITP



Codispoti, 1989

PCC (Peruvian Coastal Current)

- Low T° (13-14°C W / 15-17°C S)
- Nutrient rich
- 200 m depth, 5 m transp
- Highest activity in winter
- 0.2-0.3 knots
- Conects SEC

POC (Peru Oceanic Current)

- 700 m depth, 8 m transp
- Higher T° (+/- 21°C)
- 0.4-0.5 knots

PCC (Peru Countercurrent)

- Between 40 – 500 m depth (S: Superficial / W: Subsuperficial
- Divides PCC and POC
- Responsible for upwelling

PSCC (Peru Subsurface Countercurrent)

- Between 100 – 300 m depth
- Matches El Niño current in summer

El Niño Current

- Starts in the north of Panama
- Marks start of summer in Ecuador
- Coastal warm current

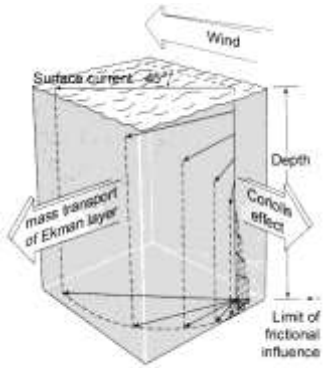
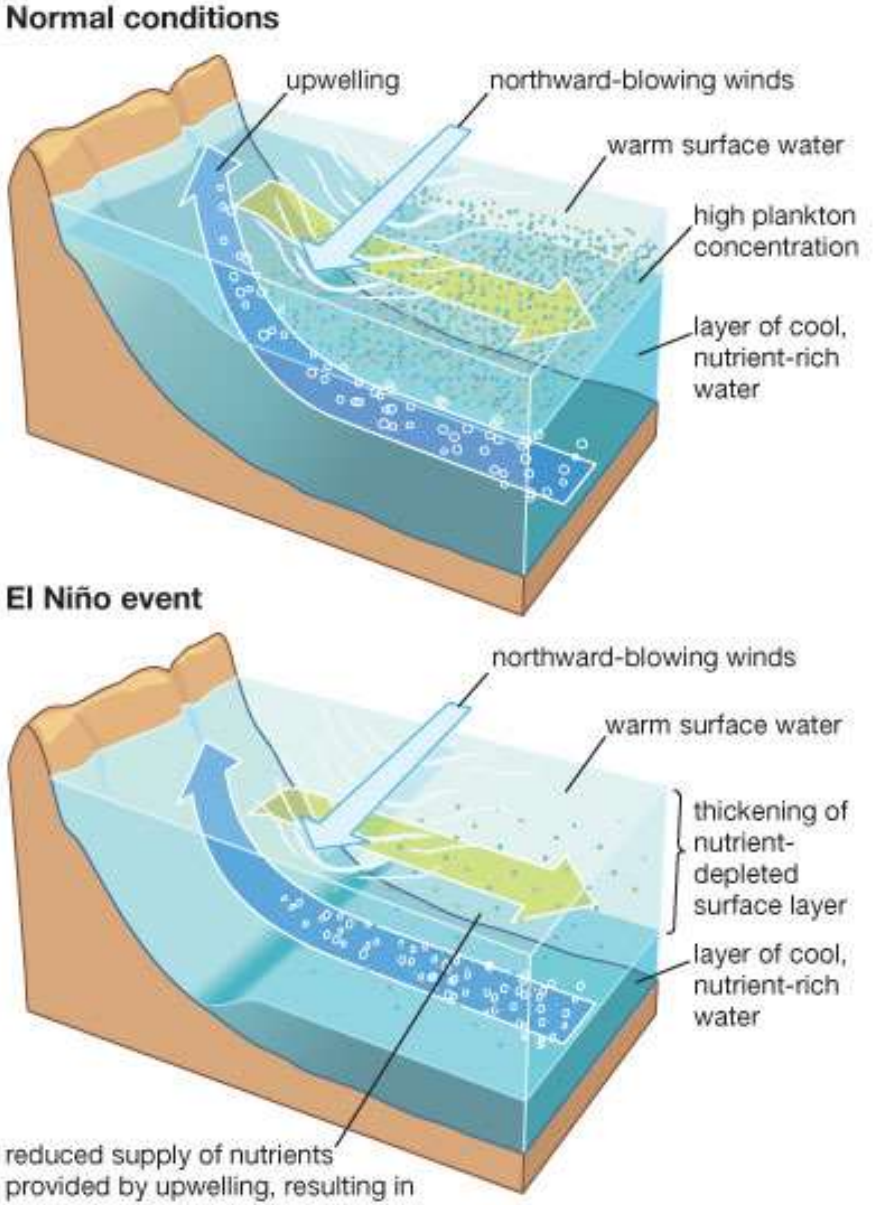
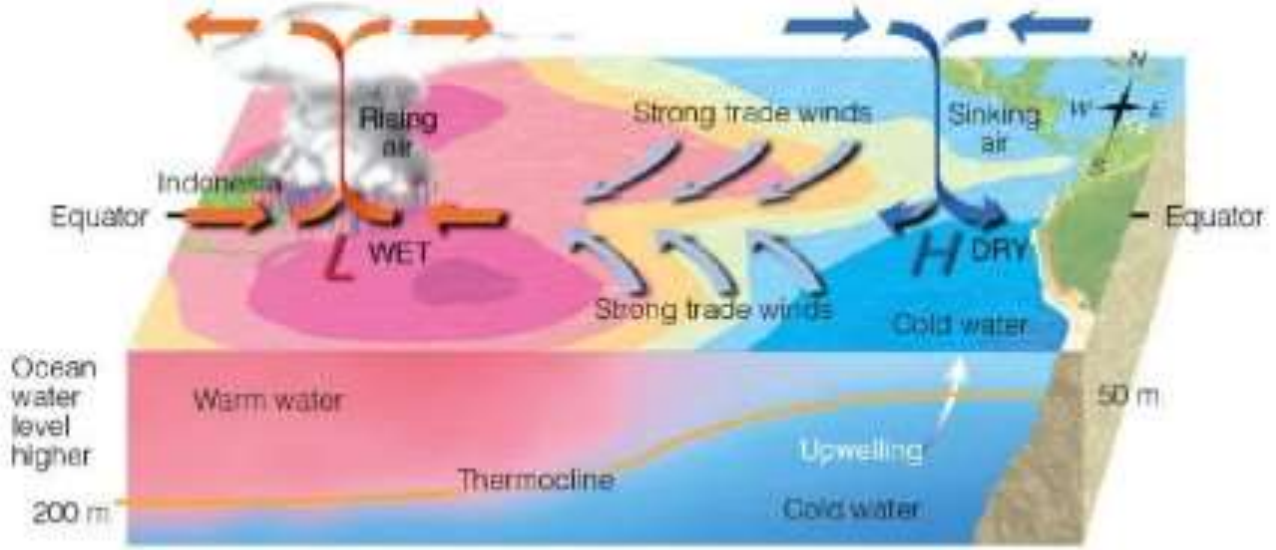
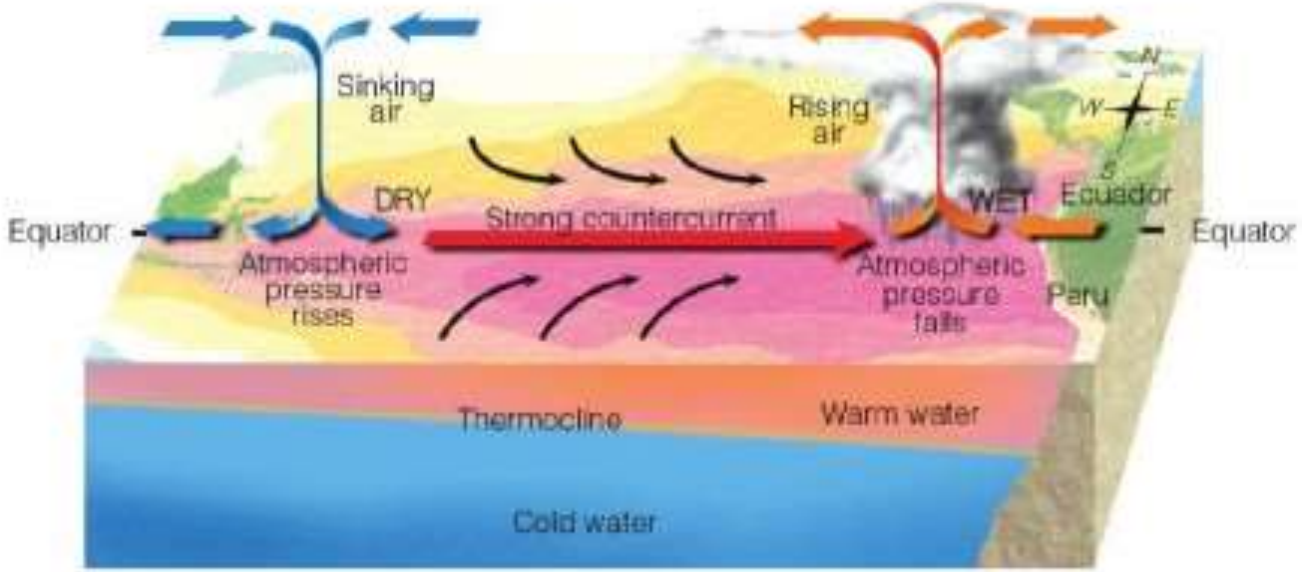


Fig.4 The Ekman spiral (southern hemisphere) is believed to be the result of the action of steady wind on surface waters.

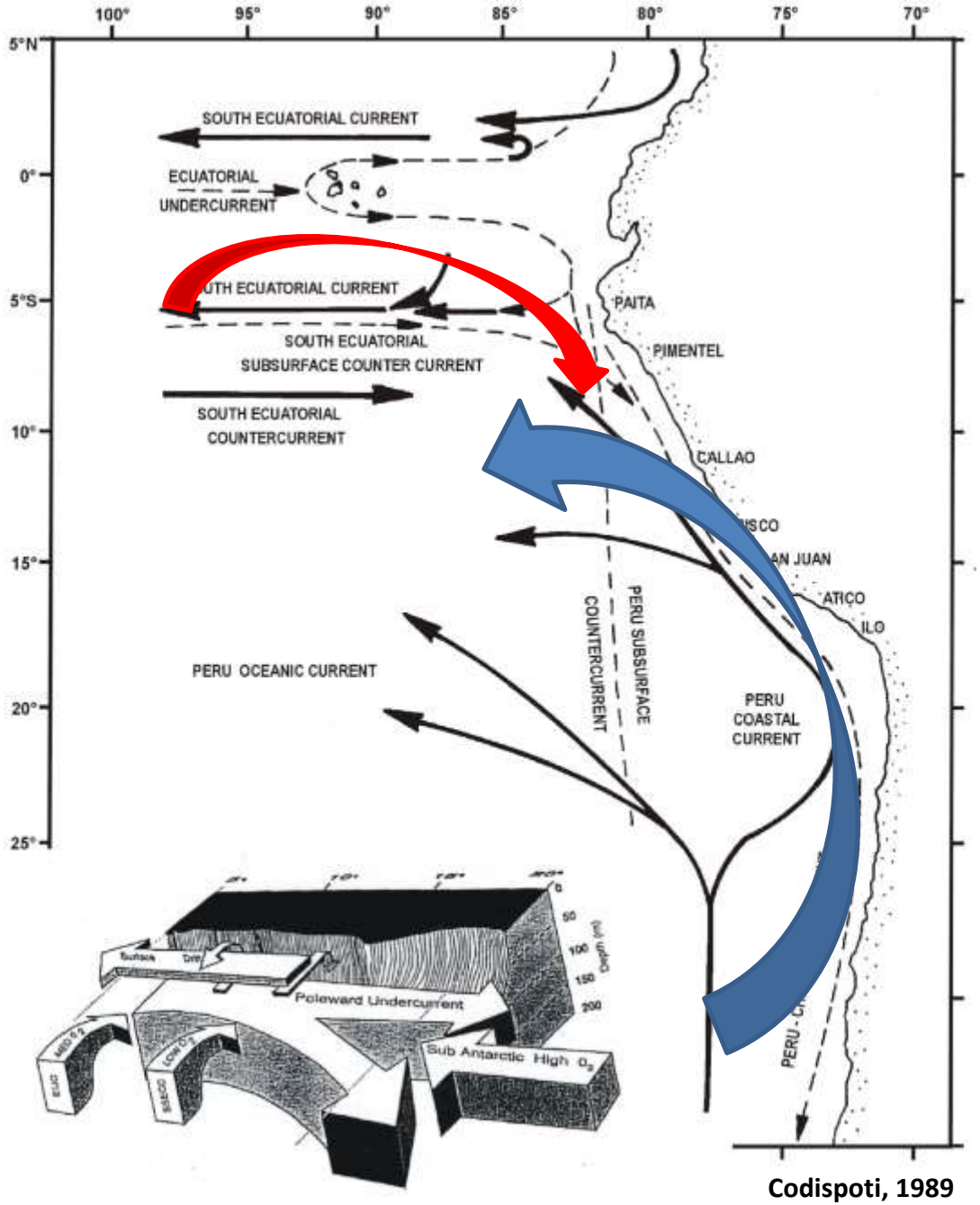




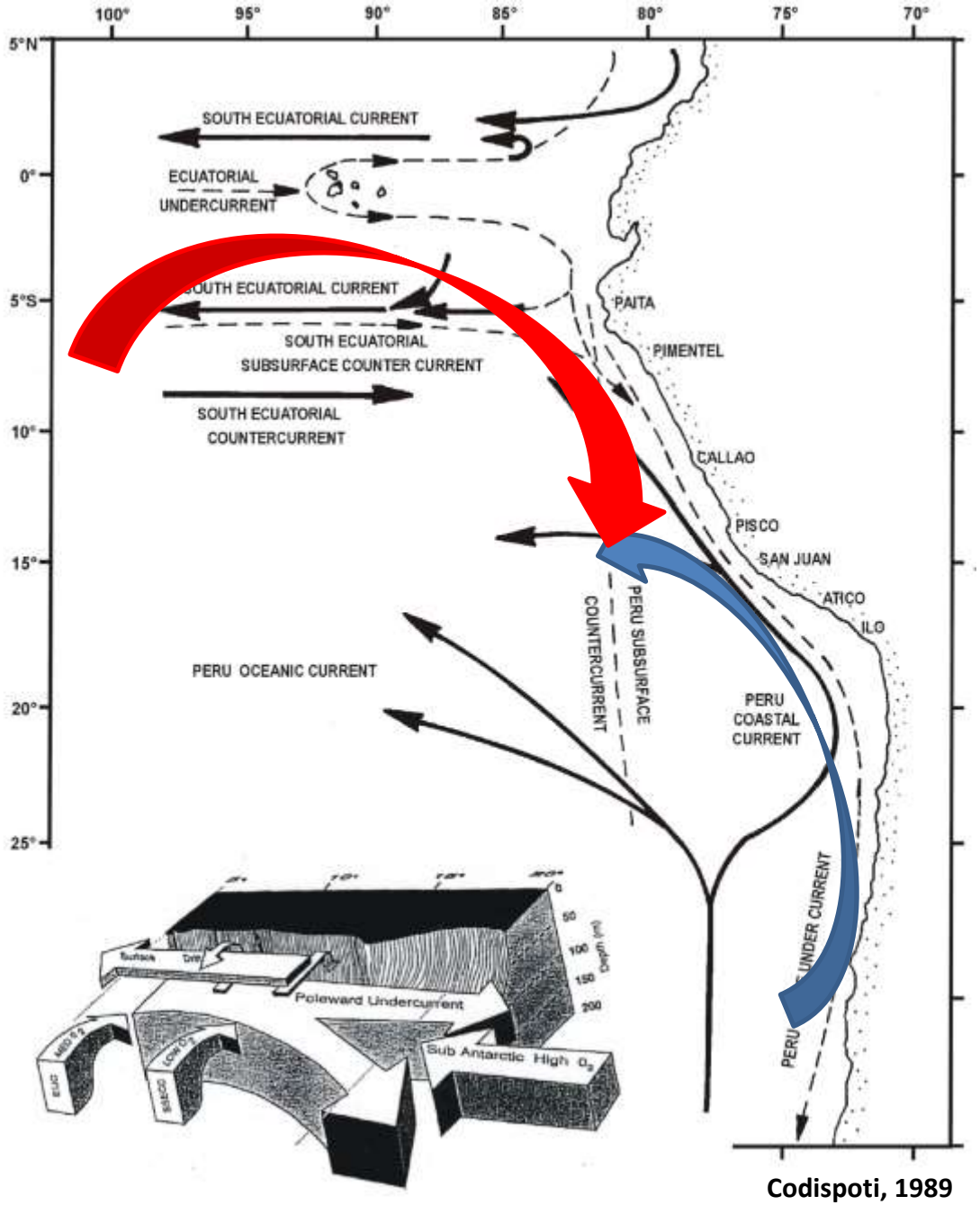
(a) Non-El Niño conditions



(b) El Niño Conditions

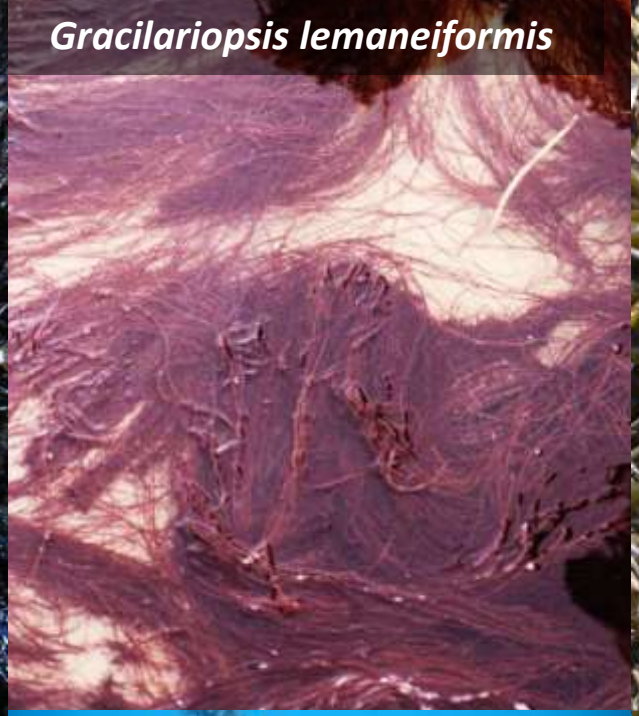


Codispoti, 1989



Codispoti, 1989


Chondracanthus chamissoi


Gracilariopsis lemaneiformis


Macrocystis integrifolia


Lessonia nigrescens


Lessonia trabeculata


Macrocystis pyrifera

Lessonia nigrescens

Lessonia trabeculata

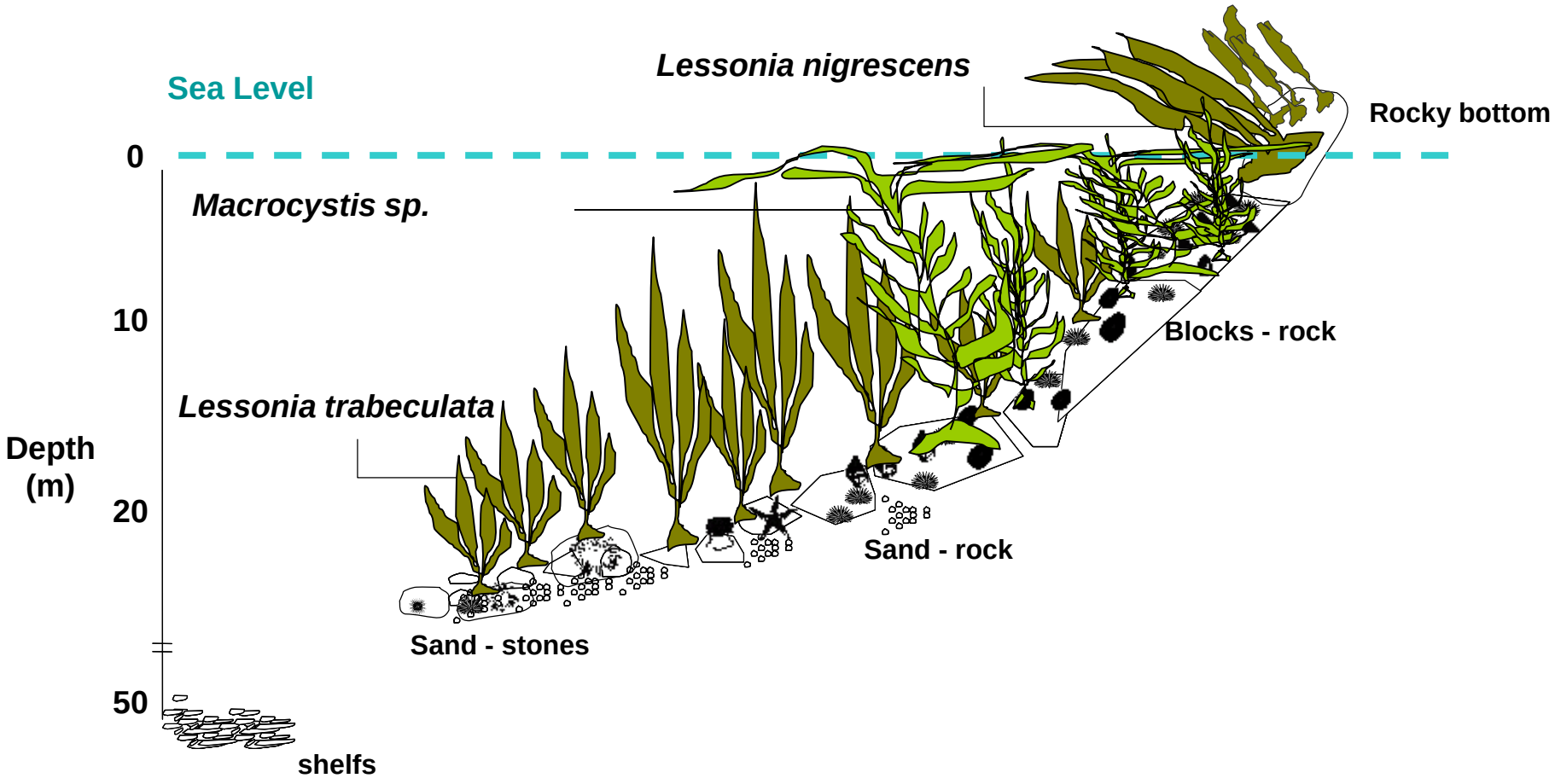
Macrocystis pyrifera

Macrocystis integrifolia

Gracilariopsis lemaneiformes

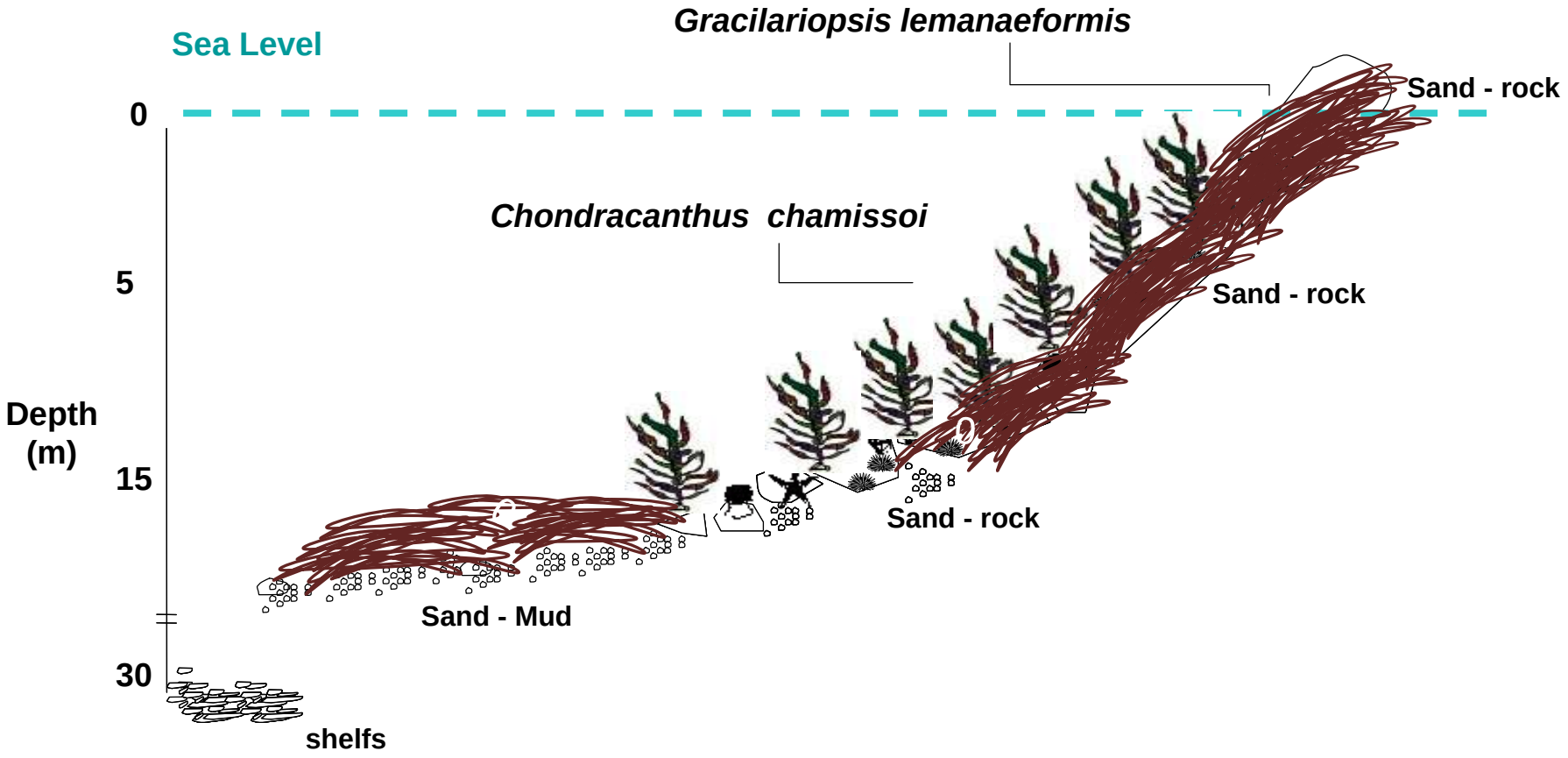
Chondracanthus chamissoi

Brown seaweeds zonification



IMARPE – Ilo, 2008

Red seaweeds zonification



IMARPE – Ilo, 2008

EL NIÑO EFFECT

HISTORY OF PERUVIAN SEAWEEDS INDUSTRY

The first report of seaweeds industralization: 1950's – ALGAS PERUANAS (Red seaweeds for FMC)

1970, militar goverment (Velasco) – Algas Peruanas is nationalized (all further exports: EPSEP)

1974, FMC decides to stop buying seaweeds from Perú.

20 years without explotation

1995, ALGAEX (future COSLAND TECNICA) – Red seaweeds , carragenans for FMC and Japan (HC)

1996, Starts brown seaweeds exploitation (L. nigrescens) – Only peruvian companies.

1997 – 1998, El Niño. Affects until 2000 (Brown seaweeds)

1998, ALGAS MULTIEXPORT (Chile) starts operation (Brown seaweeds)

1998 – 2004, Aproximate 3 companies for brown seaweeds and 2 companies for red seaweeds.

2005, Chinesee strong companies (alginates producers in China) entry peruvian territory (SINO TIRE)

2005 – 2012, *CHINA EFFECT* in brown seaweeds and red seaweeds.

EXPORT PRODUCTS

CHONDRACANTHUS CHAMISSOI HARVEST / DRYING

CHONDRACANTHUS CHAMISSOI.wmv

LESSONIAS AND MACROCYSTIS HARVEST / DRYING









SOME CHARACTERISTICS

Artisanal, non mechanized

Red seaweeds south:
Andes people - brought to the coast for cotton harvest
Cotton harvest time (feb – abr) and to seed new cotton (may – jun) the rest of the time collect / harvest seaweeds.
They were not fishermen, they were agriculture minded people – Easy to understand life cicles (reproduction, growth, harvest) of seaweeds.

Fishermen = Hunter / Seaweeds = Agriculture

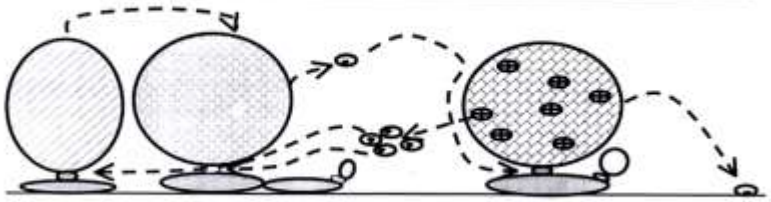
Most of them registered, but it is not clear the activity or the fishing effort for each resource

…..until China effect

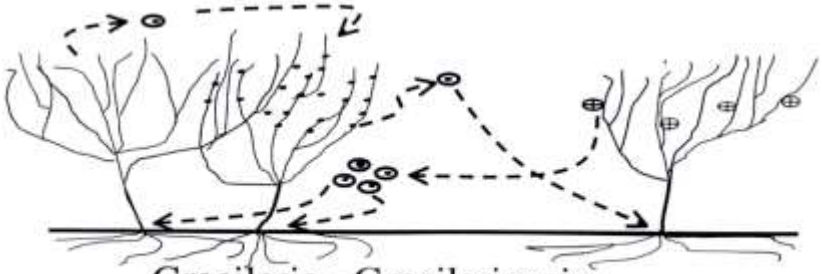
Every single soul available became “alguero”= Depredation, beach war prices, social conflicts….
Too many people for the resources availability
Seaweeds can’t swim

LIFE CICLES STRATEGY

Sporophytic - Gametophytic dominance

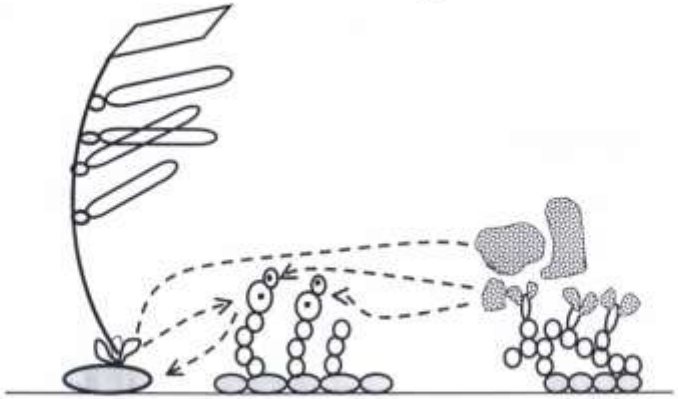


Gigartina – Mazzaella - Sarcothalia



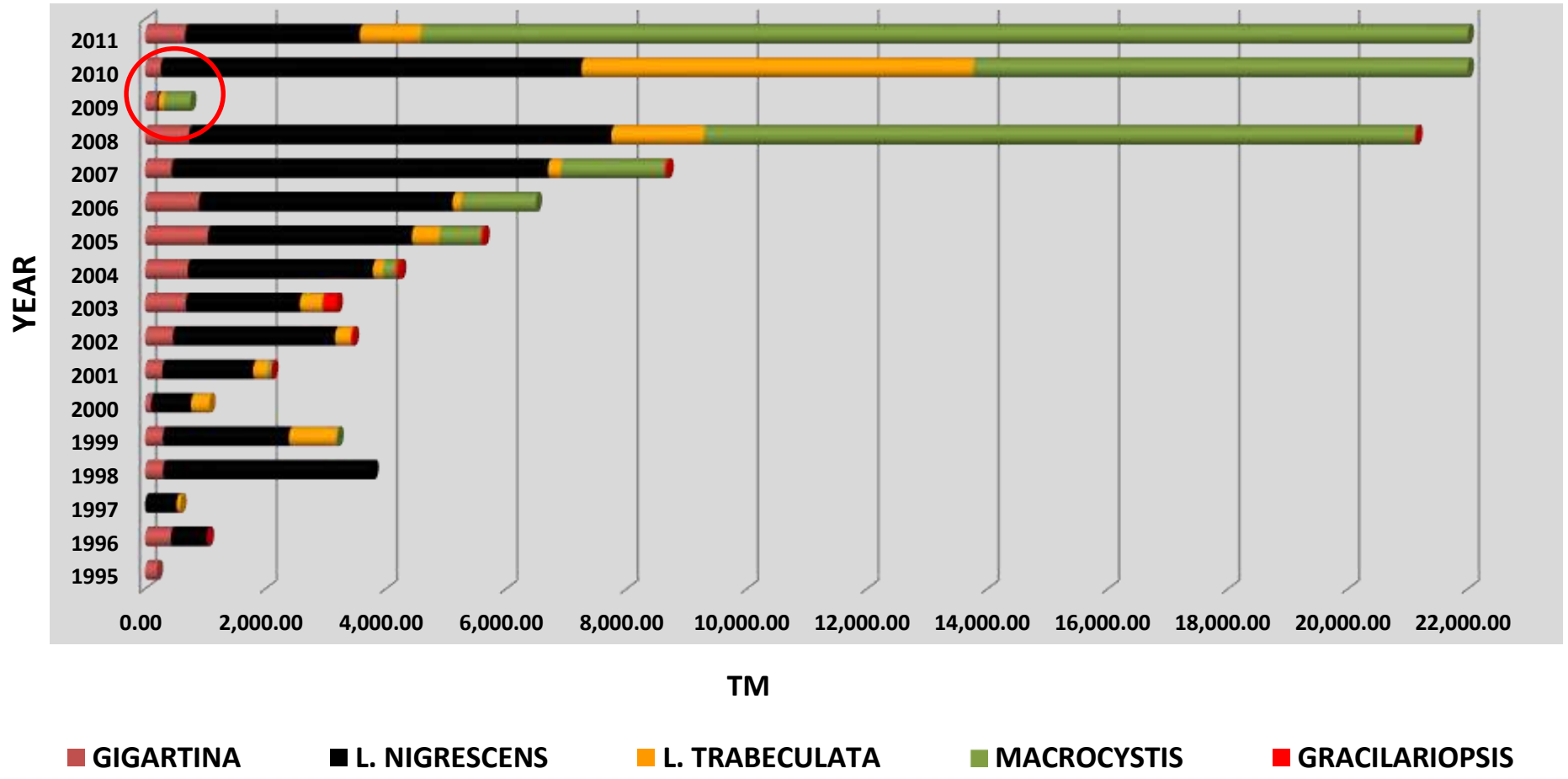
Gracilaria - Gracilariopsis

Sporophytic dominance

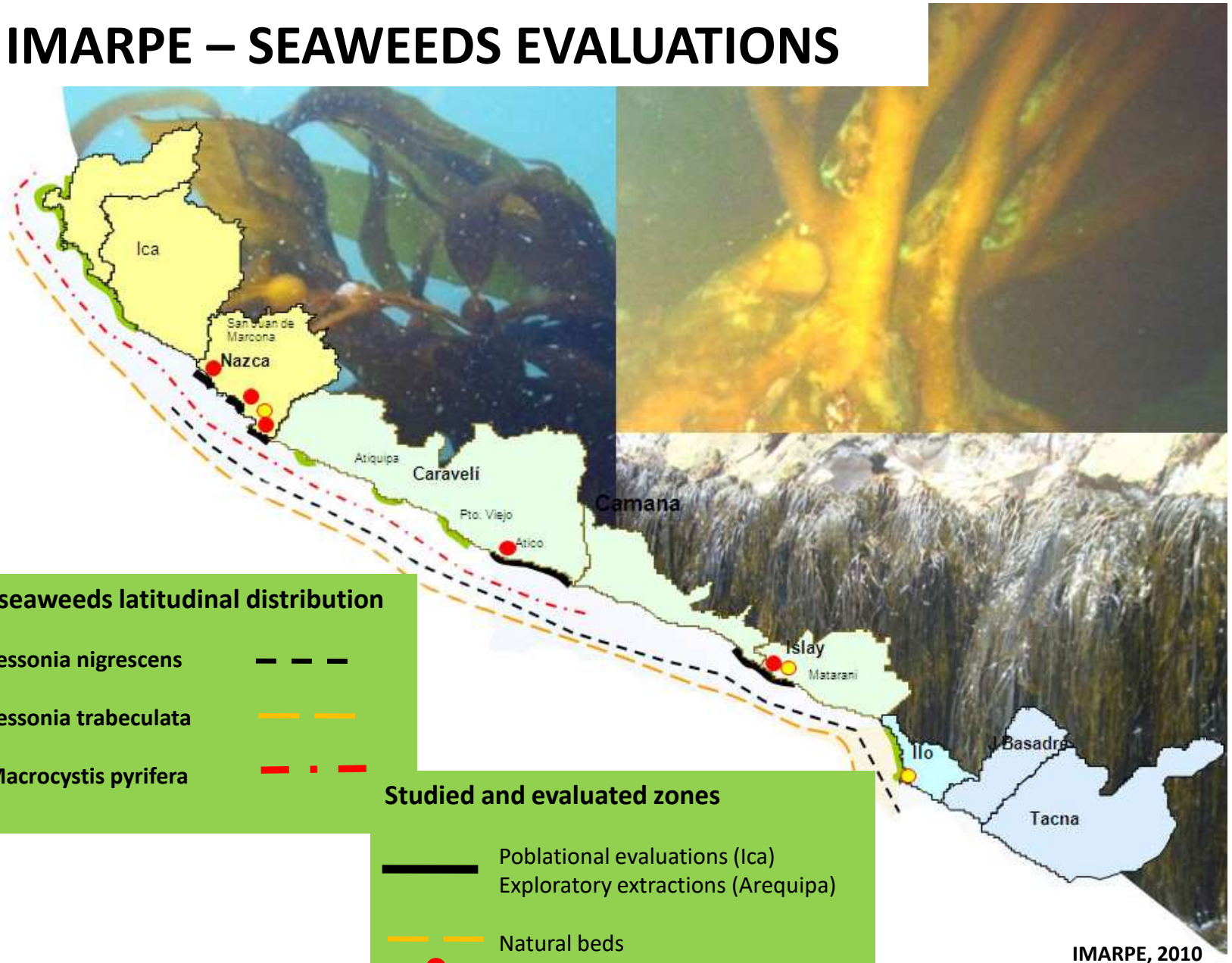


Macrocystis - Lessonia

TOTAL SEAWEEDS EXPORTS (PRODUCT TM / YEAR)



IMARPE – SEAWEEDS EVALUATIONS



Brown seaweeds latitudinal distribution

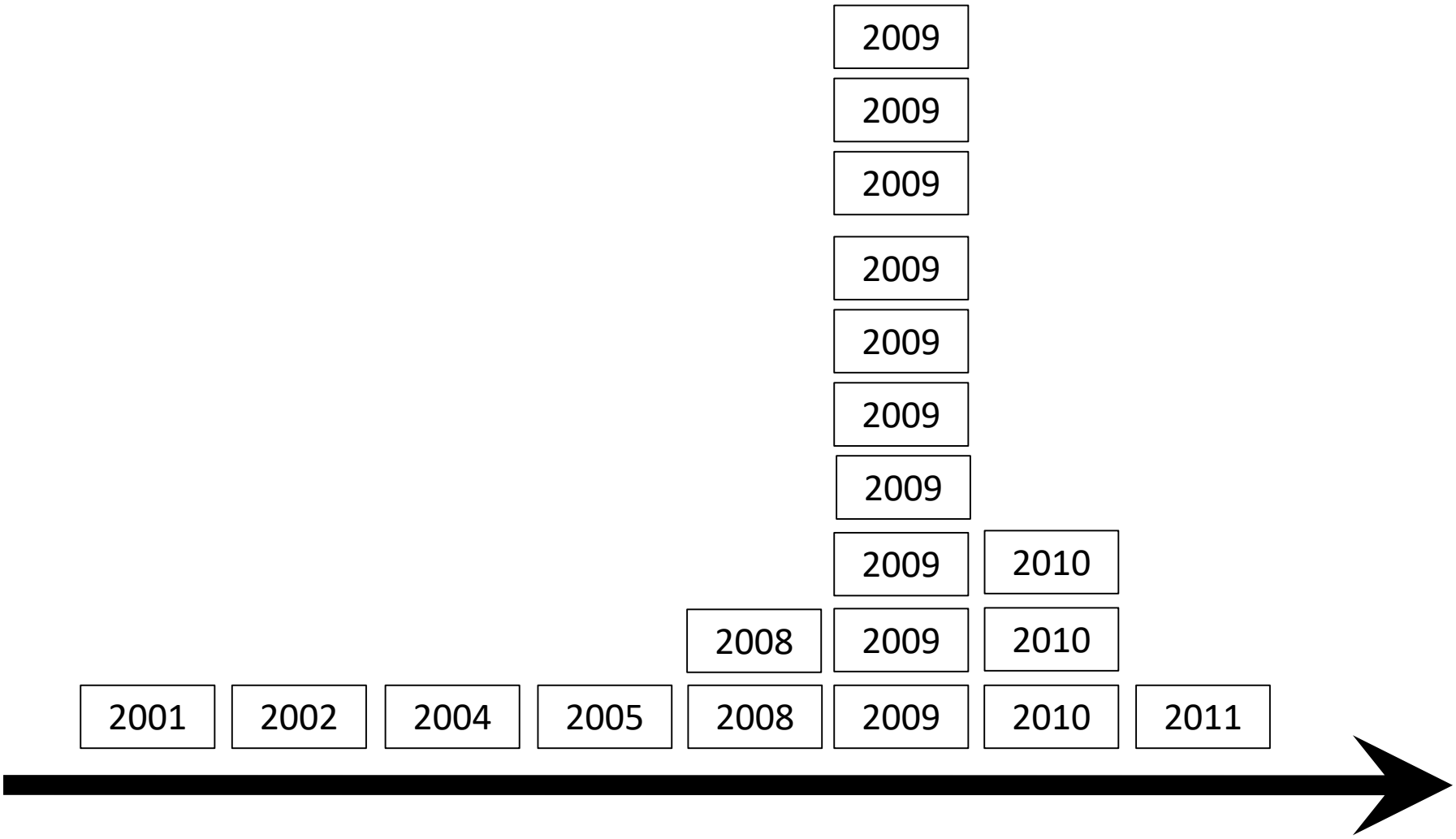
- **Lessonia nigrescens**
- **Lessonia trabeculata**
- **Macrocystis pyrifera**

Studied and evaluated zones

- Poblational evaluations (Ica)
  Exploratory extractions (Arequipa)
- Natural beds
- Cast areas
- Exploratory extractions

IMARPE, 2010

MINISTERIAL RESOLUTIONS (2001 – 2011)

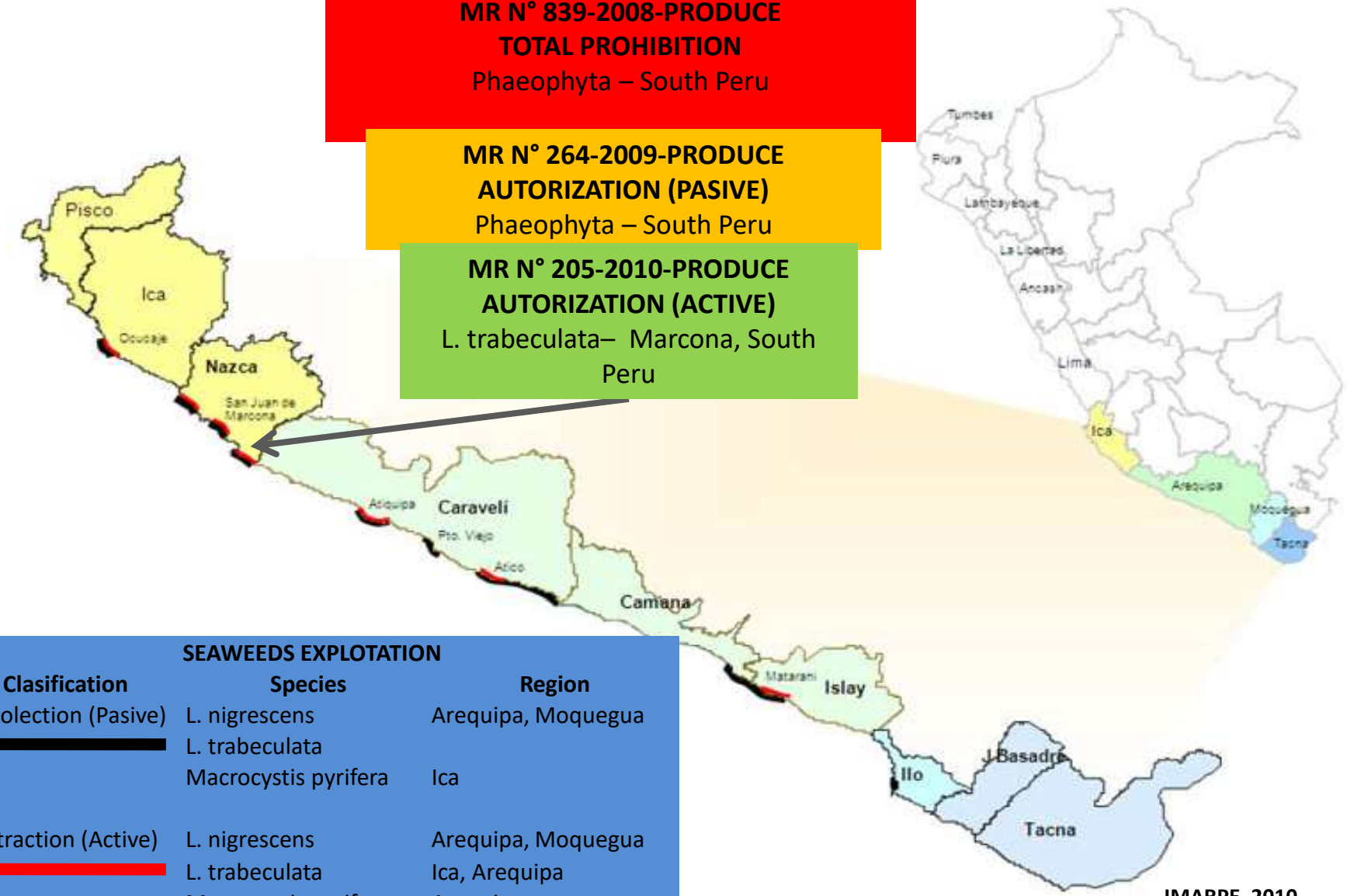


MINISTERIAL RESOLUTIONS (2001 – 2011)

MR N° 839-2008-PRODUCE
TOTAL PROHIBITION
Phaeophyta – South Peru

MR N° 264-2009-PRODUCE
AUTORIZATION (PASIVE)
Phaeophyta – South Peru

MR N° 205-2010-PRODUCE
AUTORIZATION (ACTIVE)
L. trabeculata– Marcona, South Peru

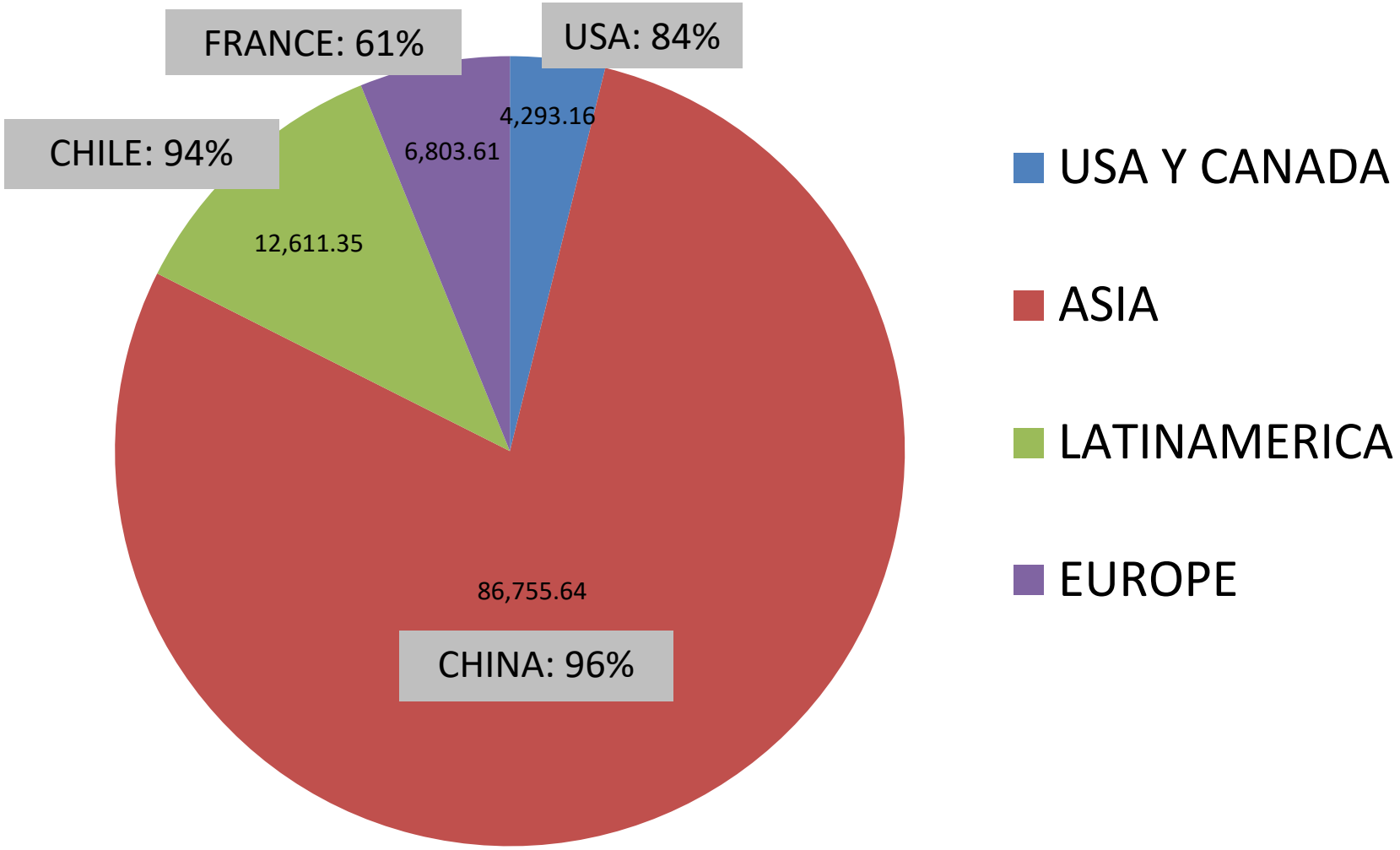


SEAWEEDS EXPLOTATION

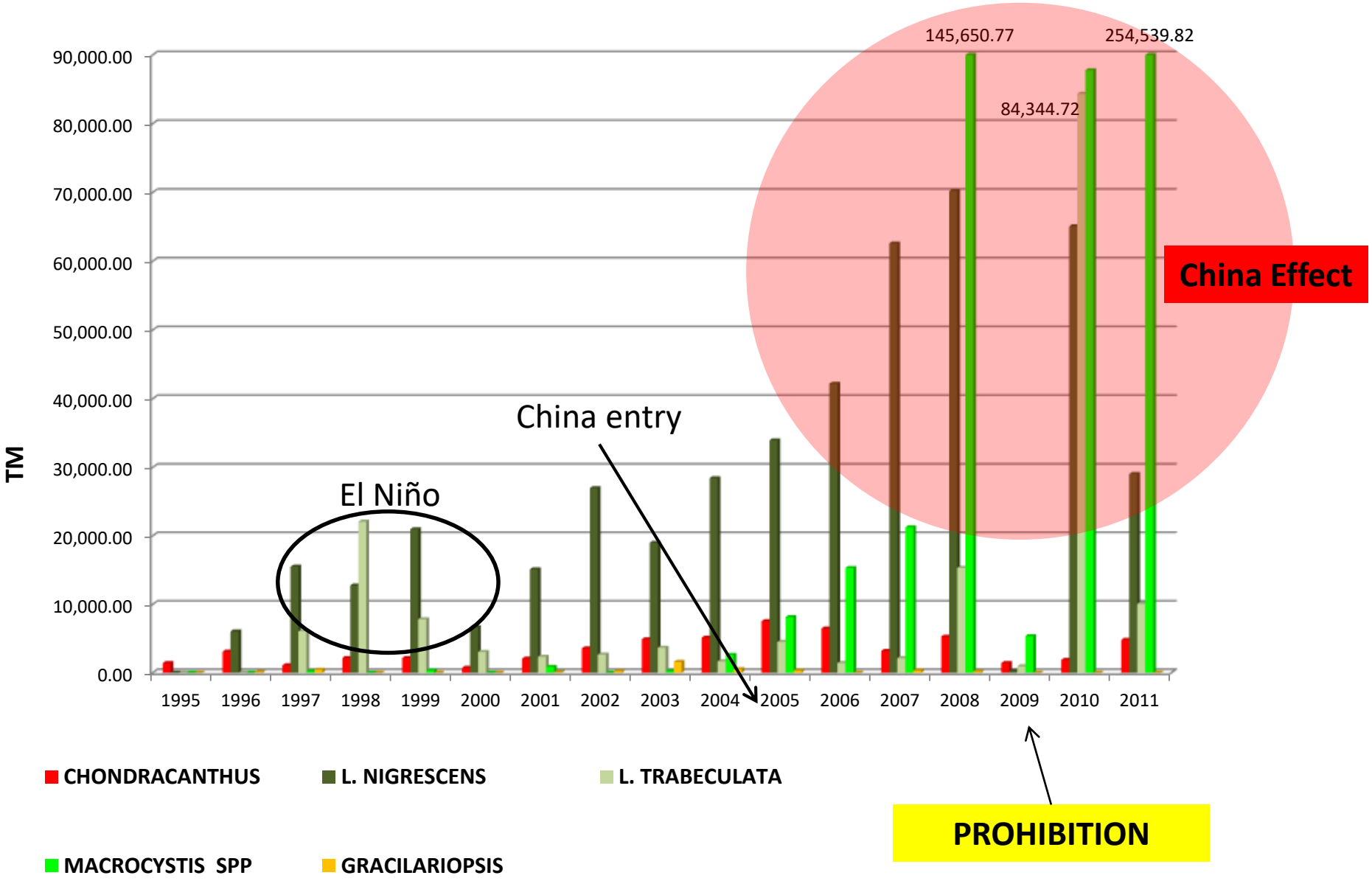
Clasification	Species	Region
Recolection (Pasive)	L. nigrescens	Arequipa, Moquegua
	L. trabeculata	
	Macrocystis pyrifera	Ica
Extraction (Active)	L. nigrescens	Arequipa, Moquegua
	L. trabeculata	Ica, Arequipa
	Macrocystis pyrifera	Arequipa

IMARPE, 2010

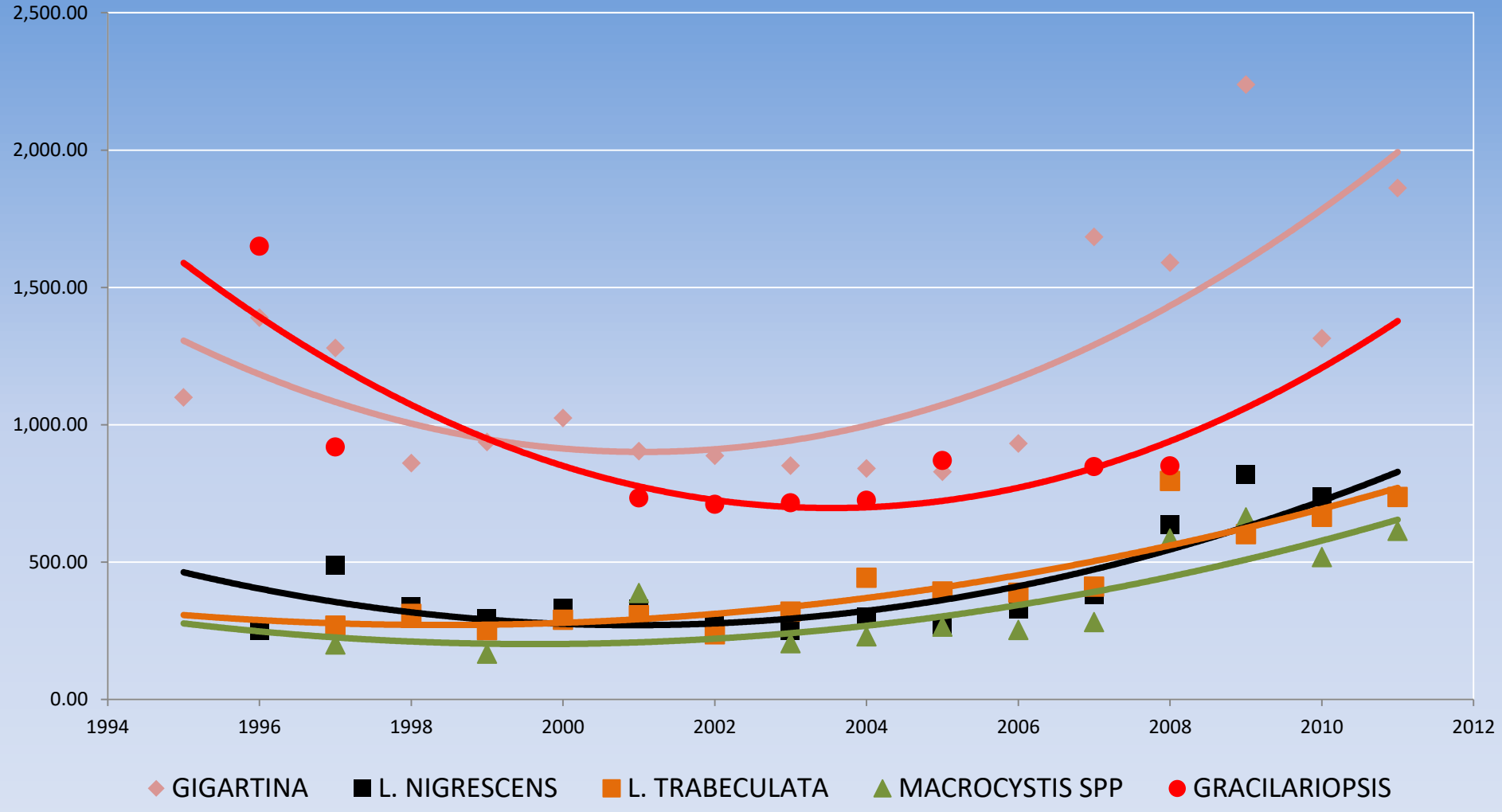
1995 – 2011 TOTAL EXPORTS (PRODUCT TM)



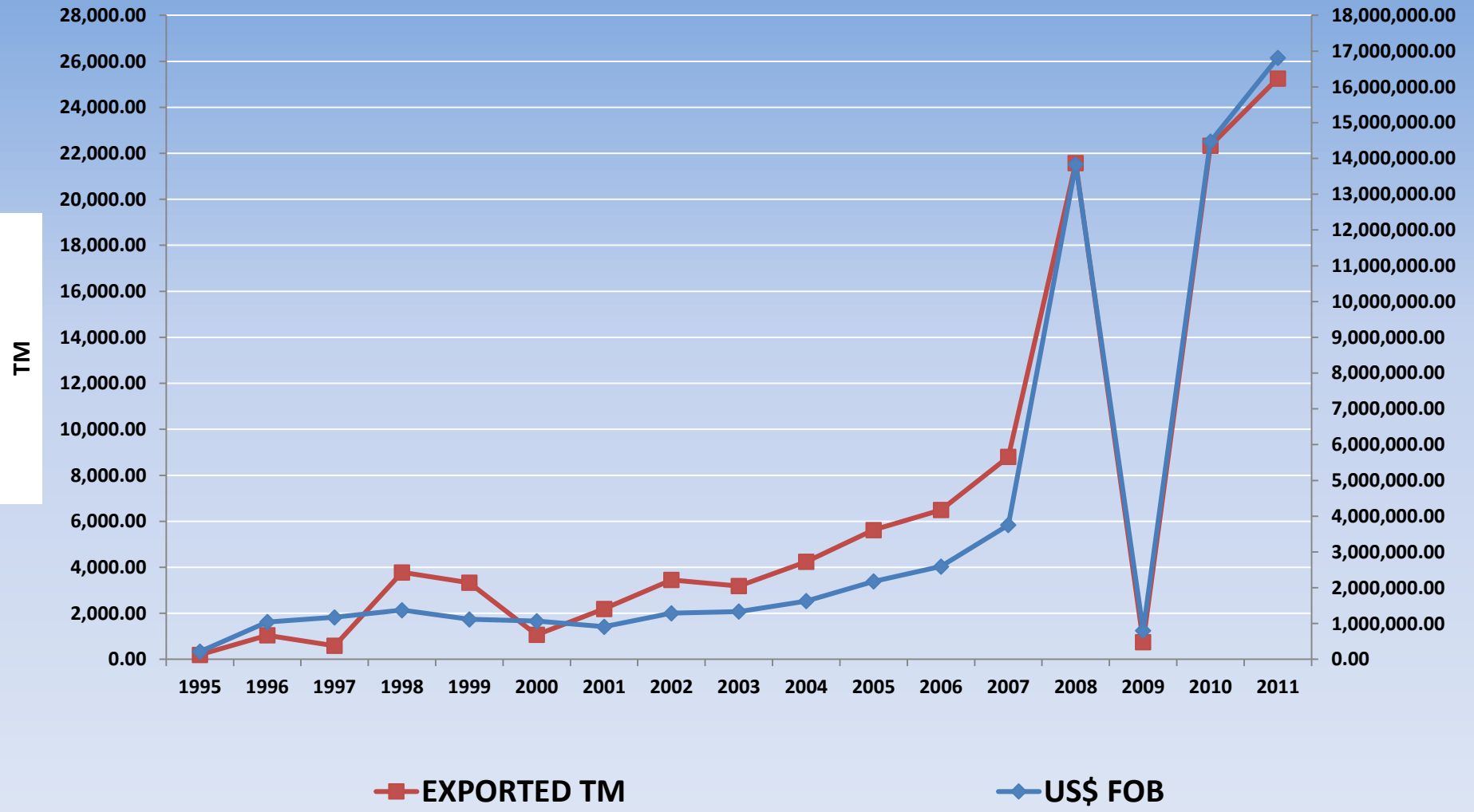
WET TONS CALCULATED FORM EXPORT DATA



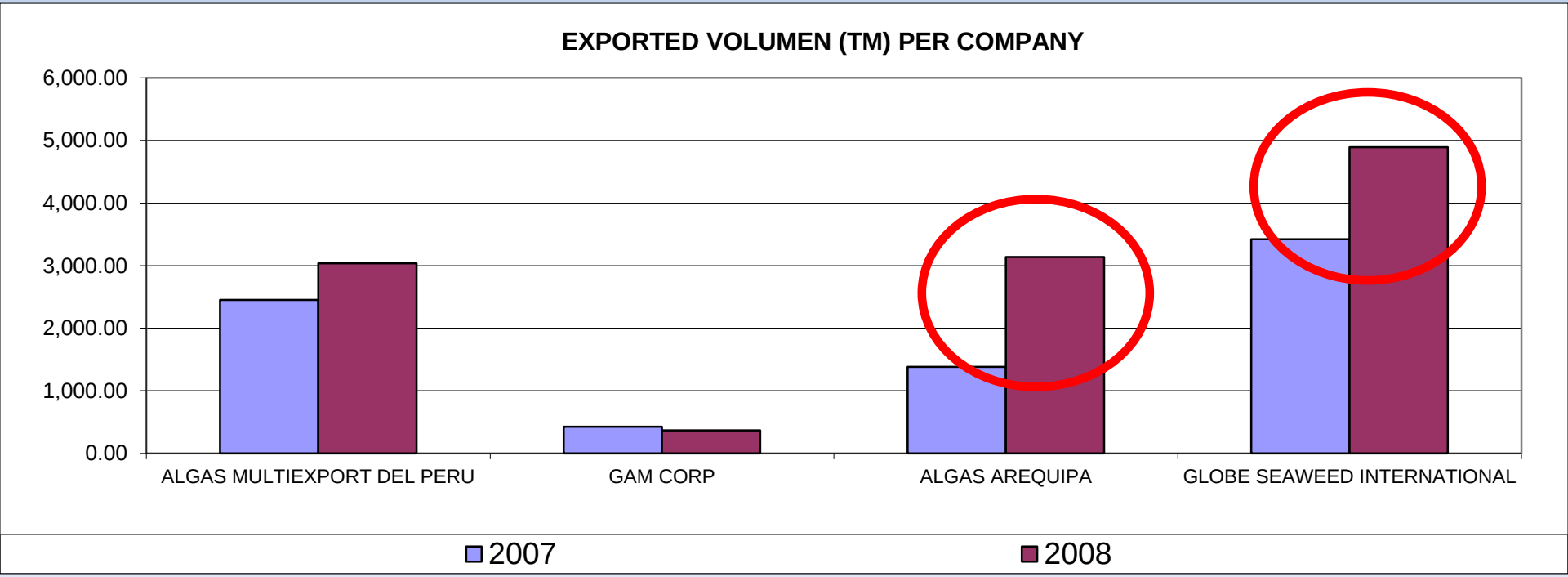
AVERAGE EXPORT PRICE US$ / YEAR / SPECIES



TOTAL SEAWEEDS EXPORTS
VS
FOB US$



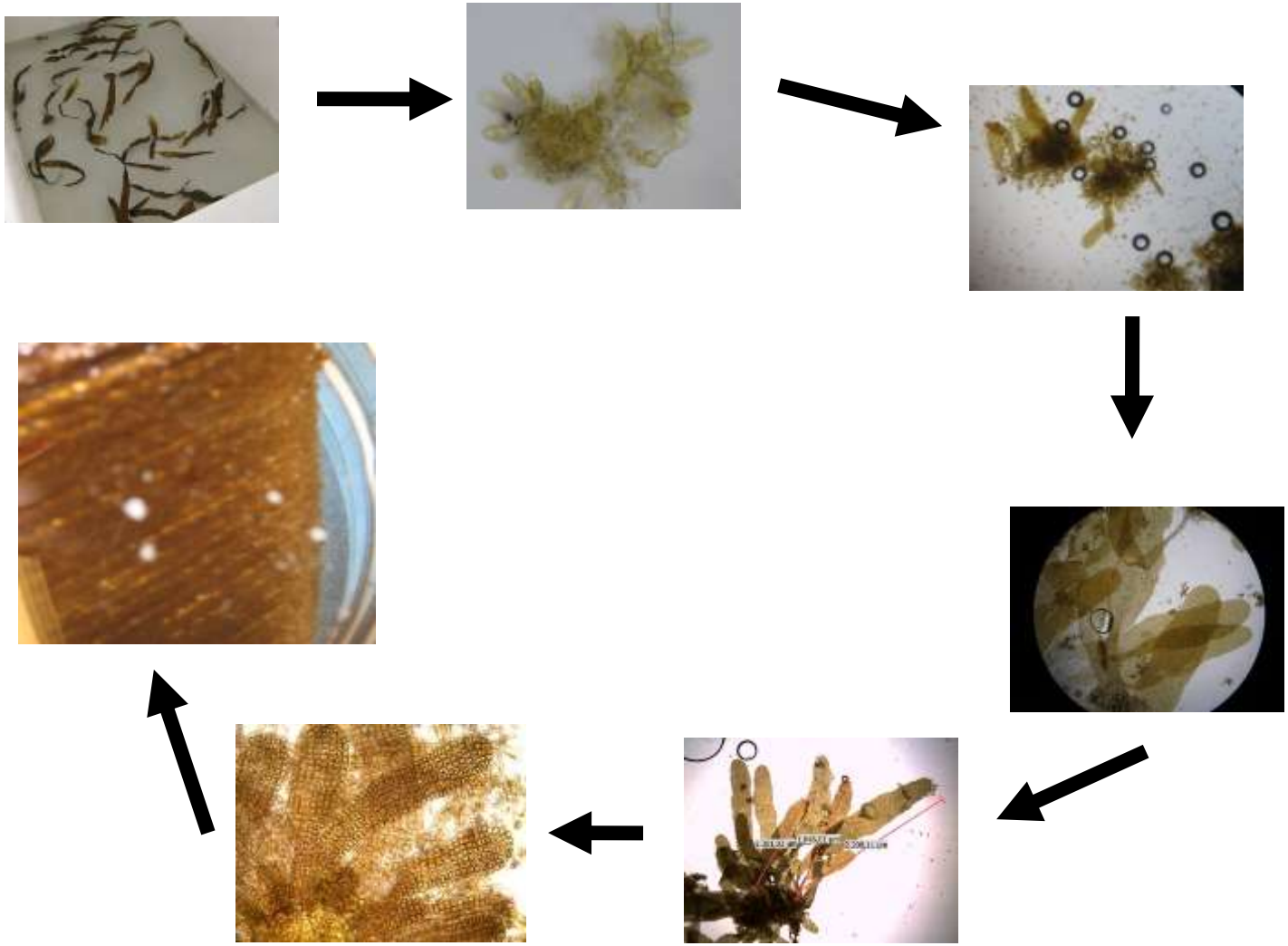

NUMBER OF EMPLOYEES
90
80
70
60
50
40
30
20
10
0
ALGAS MULTIEXPORT DEL PERU
GAM CORP
ALGAS AREQUIPA
GLOBE SEAWEED INTERNATIONAL
2007
2008


EXPORTED VOLUMEN (TM) PER COMPANY
6,000.00
5,000.00
4,000.00
3,000.00
2,000.00
1,000.00
0.00
ALGAS MULTIEXPORT DEL PERU
GAM CORP
ALGAS AREQUIPA
GLOBE SEAWEED INTERNATIONAL
2007
2008

LESSONIA TRABECULATA - SAN JUAN.wmv

LESSONIA NIGRESCENS ECOLOGIC PROBLEMATIC

Controled conditions



NATURAL CONDITIONS