

# Country Report of Sri Lanka



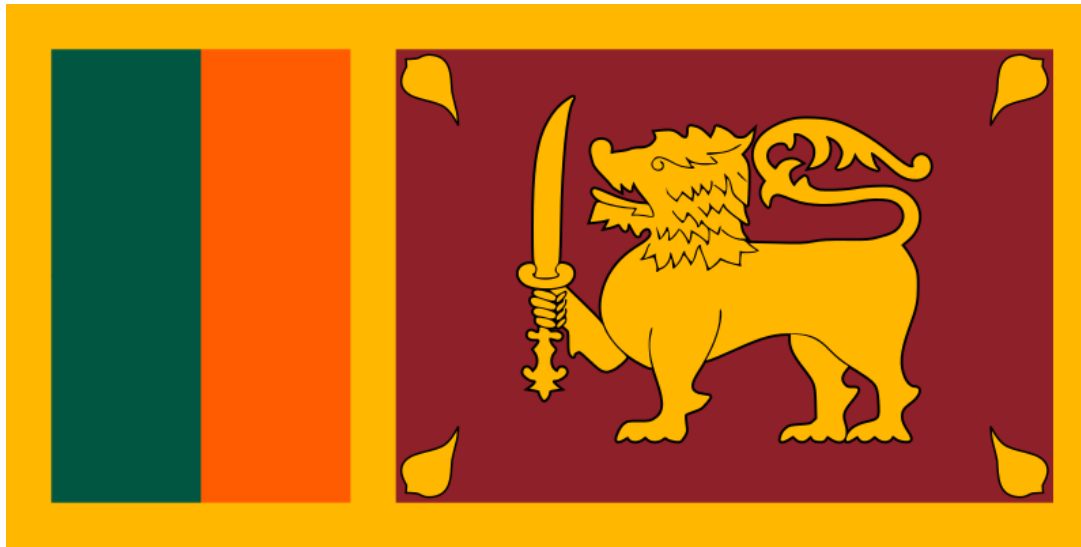
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# Location of Sri Lanka



**Location:** Southern Asia, island in the Indian Ocean, south of India

**Coordinates:** 6° and 10° N, 79° and 81° E



**Lion** - represents Sinhalese ethnicity, the strength of the nation, and bravery

**Sword** - demonstrates the sovereignty of the nation

**four bo leaves** - symbolizing Buddhism and its influence on the country - stand for the four virtues of kindness, friendliness, happiness, and equanimity

**Orange** - signifies Sri Lankan Tamils

**Green** - Sri Lankan Moors

**Dark red** - represents the European Burghers, but also refers to the rich colonial background of the country

**Yellow** - denotes other ethnic groups

# Sri Lanka Emblem



**Capital:**

Colombo

Sri Jayewardenepura Kotte (legislative capital)

**Independence:** 4 February 1948 (from the UK)

**Government Type:** Republic

**Currency:** Sri Lanka Rupees (LKR)

**Population:** 20,483,000 (Census 2013)



## **Country name:**

*Taprobane* (ancient Greek geographers called it)

*Serendib* (Arabs referred to it)

Ceylon (1948–1972, British)

Sri Lanka (after 1972)

## **Democratic Socialist Republic of Sri Lanka**

Sri Lanka is known as "the Pearl of the Indian Ocean" because of its natural beauty, its shape and the location

**Area:** total 65,610 sq km

**Land:** 64,630 sq km

**Water:** 980 sq km

**Coast line:** 1,340 km

**Climate:** Tropical monsoon

Northeast monsoon (December to March)

Southwest monsoon (June to October)

**Natural Resources:** limestone, graphite, mineral sands, gems,  
phosphates, clay, hydropower

**Population Growth rate:** 0.89% (2013)

**Birth Rate:** 17.5 births/1,000 population (2012)

**Death Rate:** 6.0 deaths/1,000 population (2012)

**Literacy:** 95.6% of total population

**Life Expectancy Rate:** Male 70.5 years - Female 79.8 years



## Ethnic Groups:

Sinhalese 73%

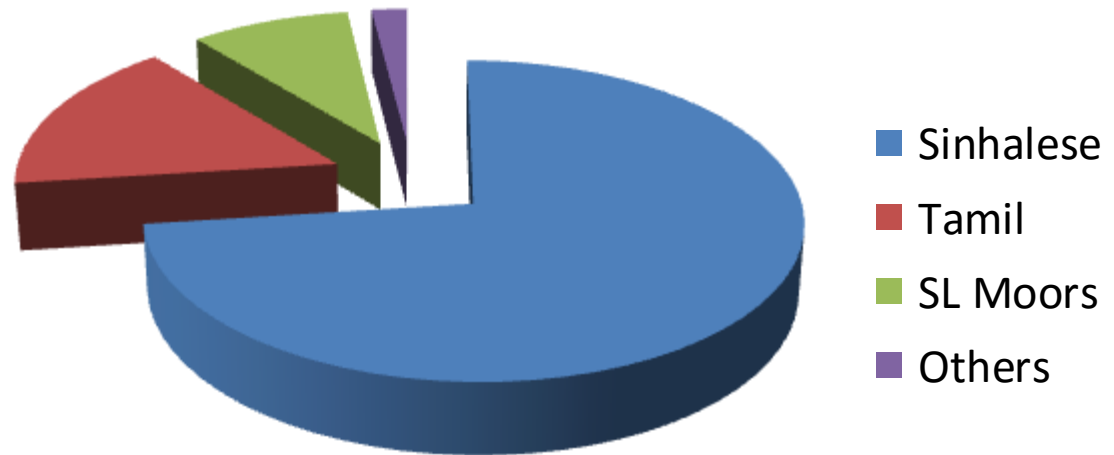
Tamil 16%

Sri Lankan Moors 9%

Others 2%



Ethnic groups



**Religions:** Buddhist 69%  
Christian 12%  
Muslim 9%  
Hindu 9%  
Others 1%



**Religions**



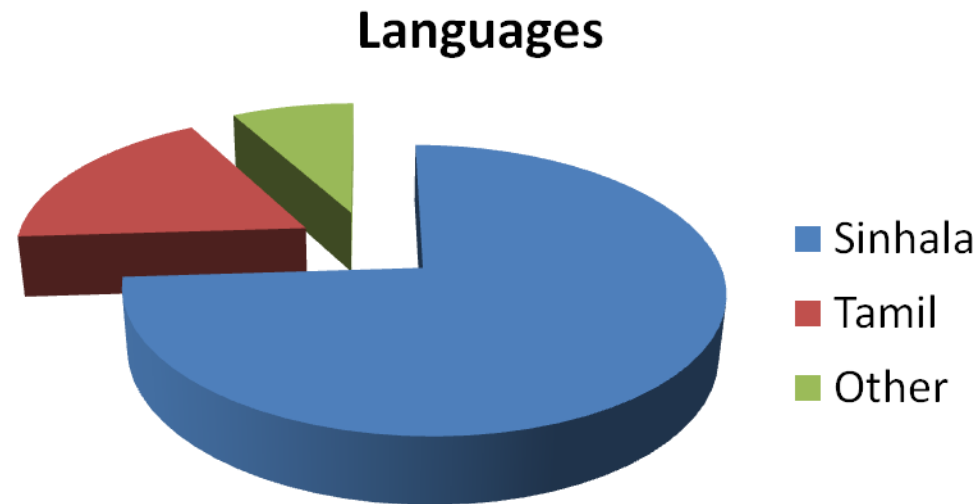
- Buddhist
- Christian
- Muslim
- Hindu

## Languages:

Sinhala (official and national language) 74%

Tamil (national language) 18%

Others 8%



# Education

- Primary Education – Grade 1 to Grade 5
- Junior Secondary Level- Grade 6 to Grade 9
- Senior Secondary Level- Grade 10 to Grade 11
- Tertiary Education- Grade 12 to Grade 13
- Higher Education-Universities

## Education – cont.

Governmental Schools: 10010

Private Schools: 104

Universities: 18

Pirivenas: 736

(monastic college for the education of Buddhist priests)

Education Expenditure: 1.7% of GDP (2012)

# Economic Condition (2013)

GNP Growth (%): 6.6

GDP Growth (%): 7.3

Share of GDP-Agriculture: 10.8

Industry: 32.5

Services: 56.8

GDP per capita income: 3280 (at market price USD)

# Major Exports

Tea

Rubber

Coconut

Coconut Products

Spices (cinnamon, black Pepper, cardamom, clove etc.)

Diamonds

Gems Textile

Garments

Fish/prawns/lobster

# Major Imports

Petroleum

Textiles

Building Materials

Mineral Products

Machinery

Transportation equipment

Food Stuff

Medicine



# Natural Resources

Limestone

Graphite

Mineral Sands

Gems

Phosphates

Clay

Hydropower

# Environmental Situation

Environmental policy and law

International agreements

Biodiversity

Climate Change

Endangered Species

Environmental Modification

Law of the Sea

Ozone Layer Protection

Ship Pollution

Wetlands

# Environmental Situation – Cont.

## Wet and Dry seasons

Yala Monsoon - abundant rainfall

western and southern regions from May to September

dry season-December through March

Southwest 4000mm of rainfall each year

Maha monsoon -northern and eastern Sri Lanka weather and often lasts from October to January, with the dry season usually lasting from May to September. This region receives approximately 1000mm of precipitation annually, significantly less than the other half of the country.

Inter-monsoonal period in October and November during which rain and thunderstorms occur frequently across the island.

Upland areas cooler and more temperate 16-20°C (60-68°F)

Coastal areas are warmer 27°C (80°F)

Humidity is typically rather high in Sri Lanka, averaging out at around 80% year-round.

# Biodiversity

The island contains tropical forests and diverse landscapes with a rich level of biodiversity



# National Parks with highest density of animals in the World



# Sinharaja Biosphere-UNESCO heritage site



# Indigenous Foods

## Cereals

Red millet

Maize

Common Millet

Rice

## Pulses

Green grams

Black grams

Pea

## Nuts & Oil seeds

Sesame- gingelly

Coconut

Ground nut

Cashue nut

## Roots & Tubers

Sweet pottatoe

Casava

Colacacea

Other indegenious tubers



# Indigenous foods – Cont.

## Fruits:

Wood Apple

Mango

Jack Fruit

Orange

Papaw

Banana

Pineapple

Ceylon olive

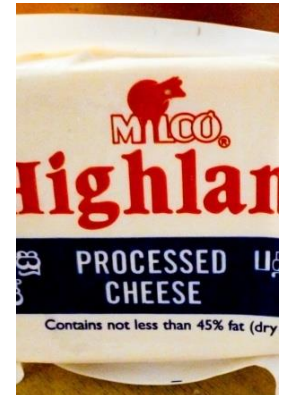
Cashew



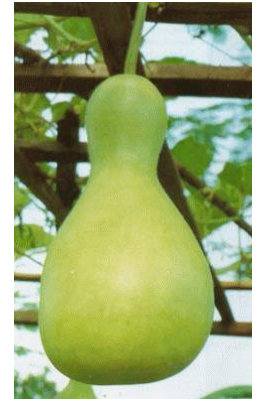


# Dairy products

Milk  
Yogurt  
Curd  
Butter  
Cheese



# Vegetables



Bottle gourd  
Pumpkin  
Bread fruit  
Bitter melon drumstick  
Leafy vegetable



# Ancient heritage



Temple of the sacred tooth relic



Watadageya in Madirigiriya

# Sigiriya, Lion Rock the Eighth World wonder of the world



# NARA

National Aquatic Resources Research and Development Agency



Dolphin-knowledge and intelligence  
friend of the man  
conservation.

represents freshwater as well as marine presence  
confident and forward looking.

# NARA

National Aquatic Resources Research and Development Agency

## **Vision**

To be the premier institution for Scientific Research in Conservation, Management and Development of Aquatic Resources in the Region

## **Mission**

To provide innovative solutions for national development issues in the aquatic resources sector utilizing scientific and technological knowledge & resource base

# **NARA: Roles and Responsibilities**

Designing, planning and implementing innovative and responsive research with special emphasis on the development of inland fisheries and aquaculture in Sri Lanka

# NARA Research projects on indigenous fish resources

1. Use of small indigenous fish species in reservoirs for the development of low cost fish feeds for koi-carp grow-out culture
2. Development of minor cyprinid-based fish feeds for Sea Bass (*Lateolabrax chinensis*) cage culture
3. Use of duck weeds to develop low cost fish feeds for Tilapia (*Oreochromis niloticus*) cage culture



# Future potential research projects

1. Integrated rice-fish farming
2. Aquaponic-fish integrated farming
3. Development of minor cyprinid-based fish feeds for Sea Bass (*Latus calcarifar*) cage culture
4. Use of duck weeds to develop low cost fish feeds for Tilapia (*Oreochromis niloticus*) cage culture

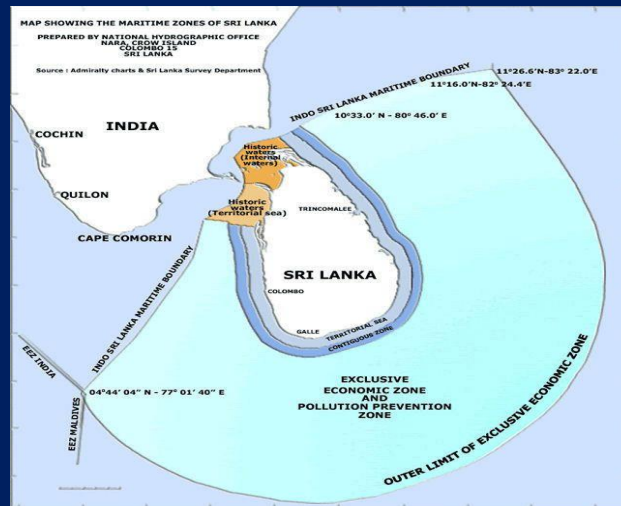
# Fisheries & Aquaculture

Sri Lanka has:

Total coast line : 1,730 km

EEZ cover : 500,000 km<sup>2</sup>

Continental shelf : 30,000 km<sup>2</sup>



# **Roles in fisheries sector in Sri Lanka:**

Employment opportunities

Income generations

Supply for animal protein to population

Foreign exchange

Major potential field for economy expansion

# Fisheries in Sri Lanka

**Account for:** 1.8 % of GDP at the current market prices

**Total fish production in 2013:** 512,840 metric tons

Per capita fish consumption 11Kg

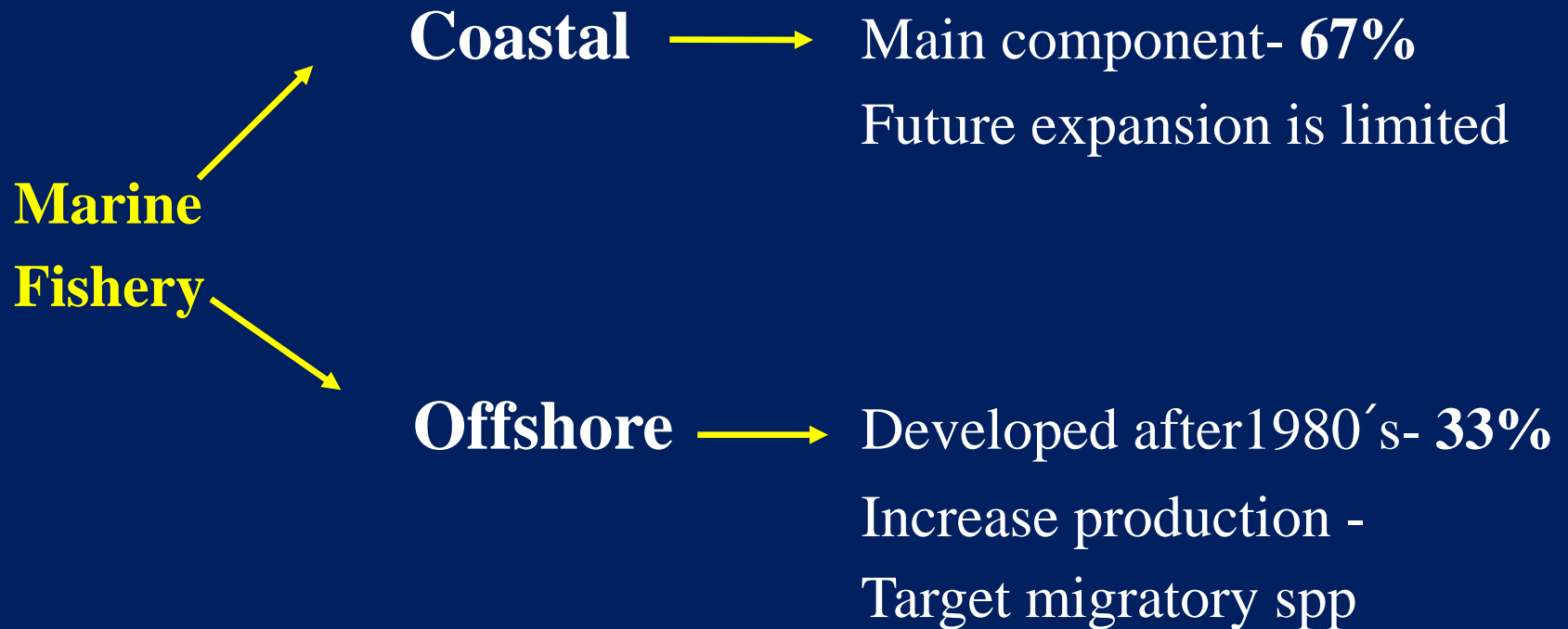
**Marine and inland fisheries:** 262,530 active fishermen

986,410 family members

**Fisheries sector:** generated Rs. 31,792 million (US\$ 246Mn.) in 2013 (2.5 % of total export earnings)

<b>Annual Fish Production (MT)</b>	<b>2009</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
<b>Marine Sector</b>	<b>293,170</b>	<b>385,270</b>	<b>417,220</b>	<b>590,900</b>
Coastal Waters	180,410	222,350	257,540	246,940
Offshore/Deep Sea Waters	112,760	162,920	159,680	343,960
<b>Inland and Aquaculture Sector</b>	<b>46,560</b>	<b>59,560</b>	<b>68,950</b>	<b>94,800</b>
Inland Capture Fisheries	39,030	50,050	58,680	79,610
Aquaculture Fisheries	3,980	5,360	6,960	9,360
Shrimp Farms	3,550	4,150	3,310	5,830
<b>Total Production</b>	<b>339,730</b>	<b>444,830</b>	<b>486,170</b>	<b>685,700</b>

# Major Classification of Marine Fishery



# Fishing methods



**Stilt fishing (Stick fishing)**



# Fishing crafts





# Major fishing gears



**Longline**



**Gillnets**

# Artisanal fishing crafts & gears



**Fiberglass out trigger canoes**



**Setting gill nets**

**(mesh size greater than 85 cm )**

# Targetted species

Mainly targetted on highly migratory species

There are seven major categories:

Tuna (Skipjack, Yellowfin, Bigeye, Frigate, Bullet)

Marlins (Black, Blue, Stripe, Shortbill spearfish)

Seer fish (Narrow barred, Wahoo)

Sword fish

Sail fish

Sharks (Silky, Blue, White tip, Thresher, Hammerhead)

Rays



**Skipjack tuna**



**Yellowfin tuna**

**Sail fish**

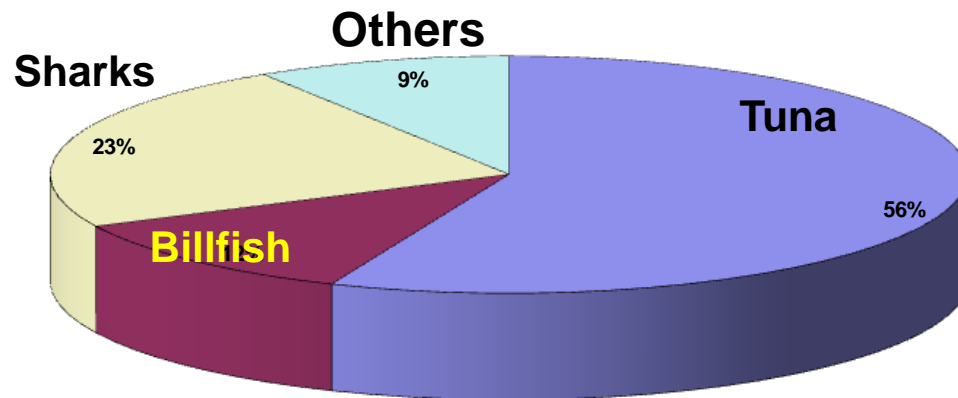


**Sword fish**



**Sharks**

# Contributions of different fish groups



# Inland & aquaculture resources (potential areas)

Resource	Area (ha)
Lagoons & estuaries	158,000
Mangrove zones, mud flats & salt marshes	71,000
Total extent of freshwater bodies	260,000
Perennial reservoirs	155,000
Seasonal tanks	100,000
Villus	5,000

# Classification of Inland Water Bodies

Water resources	Area (ha)
<b>Freshwater resources (total)</b>	261,941
Large irrigation reservoirs	70,850
Medium irrigation reservoirs	17,004
Seasonal tanks	100,000
Minor irrigation reservoirs	39,271
Flood lakes and villus	4,049
Upland reservoirs	8,097
Mahaweli reservoirs	22,670
<b>Brackish water resources (total)</b>	120,000
Deep lagoons and estuaries	80,000
Shallow lagoons and tidal flats	40,000
<b>Source:</b> Jayasekara (1990)	

# Aquaculture in Sri Lanka

- Contribution to the fishery is about 2%
- Major contribution to shrimp farming (6000 ha)
- 15% of the perennial and seasonal tanks are used for tilapia culture
- Fish pond culture (< 10,000 ha)
- Ornamental fish farming for export purposes
- Several oyster farms for supply production for tourist hotels
- Wild collection of sea weed and sea cucumber for export purpose



# Aquaculture features

- Limited number of indigenous fish species
- Introduced 18 exotic fish species including:
  - Chines carps: (Grass carp, Silver carp, Bighead carp)
  - Indian carps: (Catla, Rohu, Mirigal)
  - Cichlids: (Nile tilapia - *Tilapia mossambica*)
- Aquaculture production is almost entirely based on exotic cichlid species *Oreochromis mossambicus* and *O. niloticus*, which account for more than 90% of the production



Big Head Carp



Grass Carp



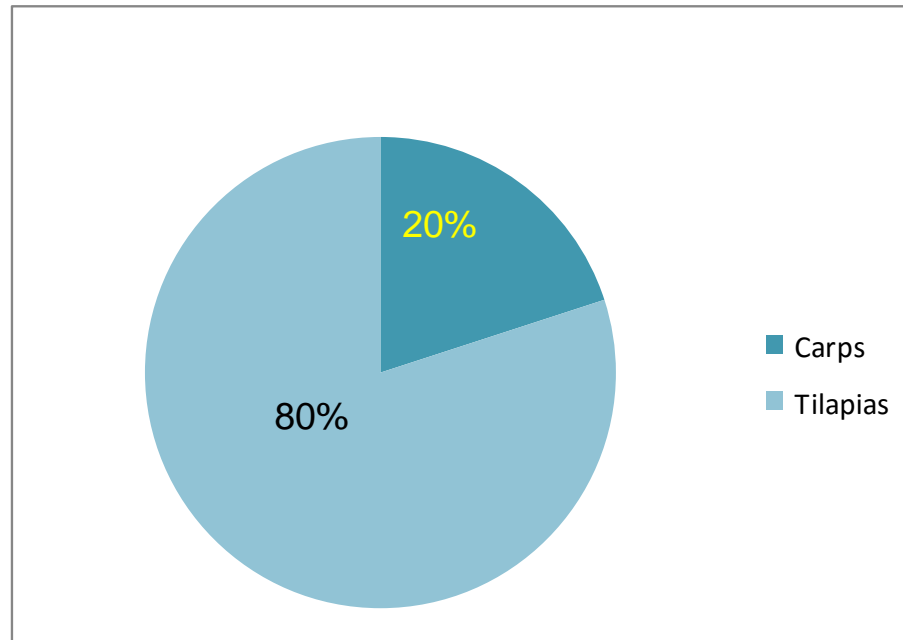
Tilapia Mossambica



Nile Tilapia



*Tilapia rendalli*



Rohu



Mirigal

# Seasonal village tank fish culture

- Mainly found in dry zone areas in Sri Lanka
- Stocking fingerlings and harvesting
- Supplementary feeds are not provided
- Stocking density 2000 – 3000 fingerlings/ha
- Average water area of tanks 4.5 ha – 7 ha
- Average Production – 750 – 1000 kg/ha
- production can be Increased up to 2000 kg/ha
- Fertilizing and/or feeding would match higher stocking rates



# Shrimp industry (overview)



**Locations:** Restricted to north western province

**Major culture species:** Black tiger shrimp (*Penaeus monodon*)

**Area covered:** 3500 ha

**Production:** 3250 tons

**Income:** 21.3 million US \$ - 50% export earning

## **Diseases:**

MBV, fouling of gills zoothamnium spp

Hatcheries: Luminous bacterial disease

1995 – white spot virus, Yellow head virus

# Ornamental fish industry



Carried out in cement tanks

**Fish species Includes:** marine, freshwater and brackish water fishes (platy, molly, guppy, sword tail, discus, angel, sea horses and others)

## **Income:**

2014 ...US \$ 10 million. 11% export earning  
80 % income from fancy guppy

**Principal markets:** U.S.A, Japan, United kingdom, Germany and France

**Awards:** Aqua Rama award 2014 at Singapore for new variety of different feature ...guppy

A landscape photograph featuring a body of water in the foreground with several dead, skeletal trees standing in it. A single bird is perched on a branch of the most prominent tree in the center. The background shows a green field and distant mountains under a cloudy sky. The text "Thank You" is overlaid in the center in a blue, cursive font.

*Thank You*