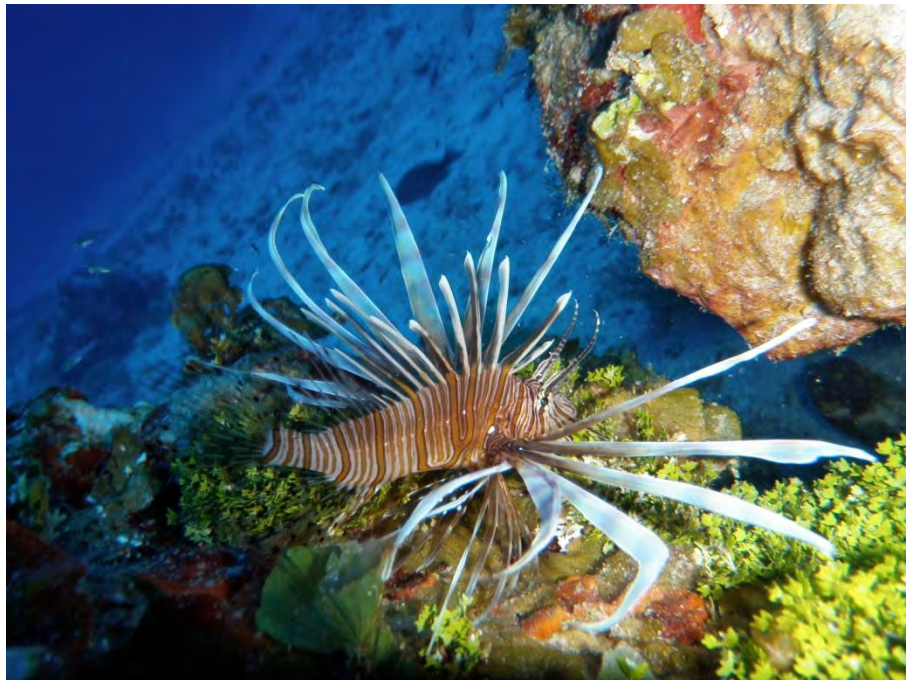
LIONFISH INVASION in JAMAICA

Lionfish and Sea Cucumber workshop
Havana, Cuba

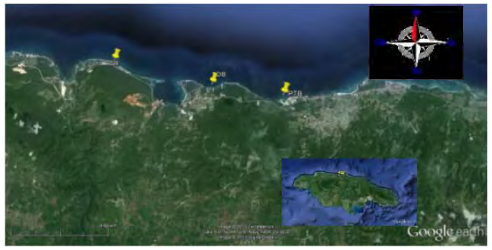
Presenter: Mr. G. André Kong, CEO, Fisheries Division,
Ministry of Agriculture and Fisheries

REPORTS OF SIGHTINGS IN JAMAICA

- Unknown prior to 2000s
- Few people had lionfish in their aquarium
- Mid-2000s sporadic reports to the Division of lionfish sightings in Jamaican waters
- The IAS occurrence was more localised vs. Islandwide
- Within a few years significant increase sightings

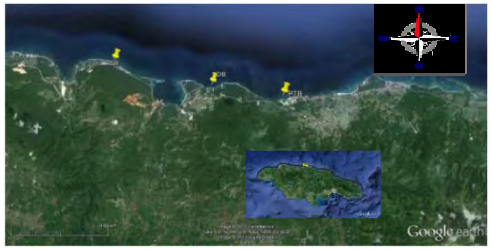


SUCCESSFUL IMPACT of the LIONFISH PILOT PROJECT



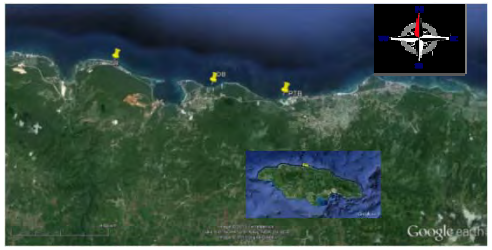
- MTIASIC -MITIGATING THE TREATS OF INVASIVE ALIEN SPECIES IN THE INSULAR CARIBBEAN PROJECT was implemented in 2009
- Project's objective: to mitigate the threats to the local biodiversity and the economy of countries like Jamaica from IAS
- 4.5 year project
- Ends in April, 2014

SUCCESSFUL IMPACT of the LIONFISH PILOT PROJECT



- Lionfish Pilot Project was one of the major outputs
- Lionfish pilot project was spearheaded by Dr. Dayne Buddo, UWI, DBML
- Major financing provided by Global Environment Facility (GEF) and U.N. Environment Programme

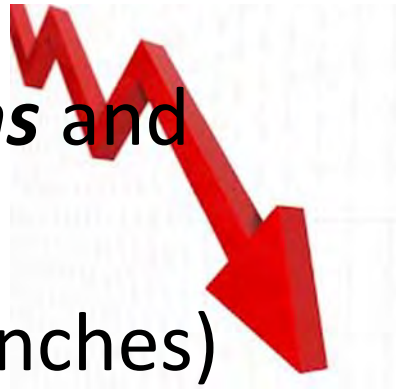
SUCCESSFUL IMPACT of the LIONFISH PILOT PROJECT



- Objectives of lionfish pilot project
  - Component 1: *Island-wide Population Tracking*
  - Component 2: *Examination of Prey Preferences*
  - Component 3: *Development of a Passive Capture Mechanism*
  - Component 4: *Formulation of an Adaptive Management Plan*

"LIONFISH PILOT PROJECT"

Buddo and Chin, 2014: Lionfish Pilot Project Final Report



- Two spp. identified: ***Pterois volitans*** and ***Pterois miles***
- Largest individual – 44.5 cm (17.5 inches) length
- Mean length – 24.6 cm (3.7 inches)
- Sex ratio = 1 male : 1 female (89% of total number sexually mature)

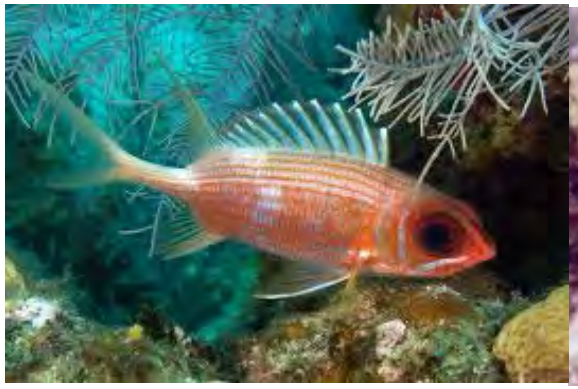
“Lionfish Pilot Project”

- 26 fin fish species, 3 crustaceans, 1 mollusc found in stomach contents
- 79% fin fish, 7% crustaceans, <1% mollusc found in stomach contents

“Lionfish Pilot Project”

Most abundant telosts found in the gut contents of *Pterois sp*. (based on frequency of occurrence):

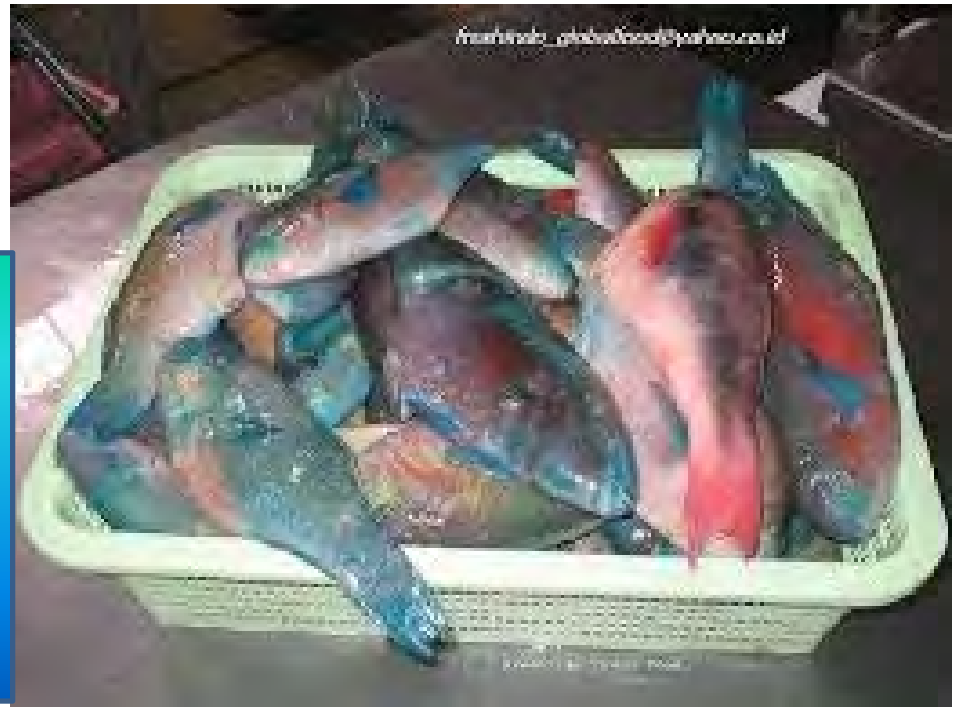
- Holocentridae – carnivorous (prey on small fish)
- Labridae – carnivorous (prey on invertebrates)
- Gobiidae – ‘cleaners’ and ‘watchers’ on the reef



“Lionfish Pilot Project”

- Scaridae
  - Algal grazers and reef cleaners
  - Important commercial fish species in Jamaica

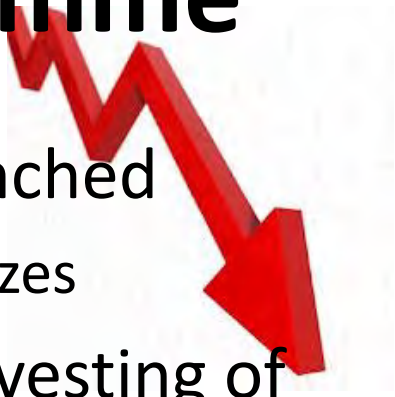
10th most abundant prey found in the gut contents of lionfish sampled in Discovery Bay



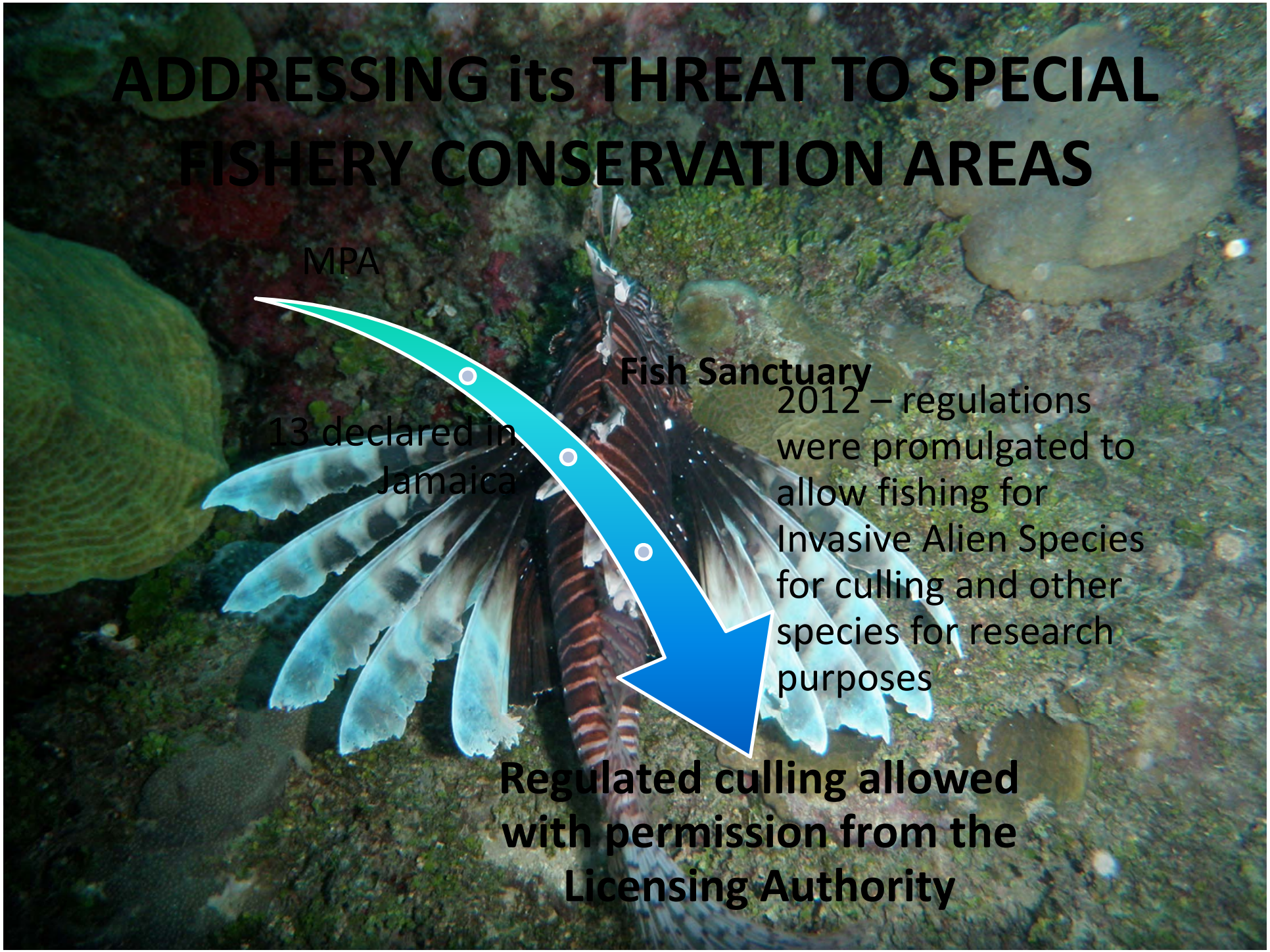
Lion Fish Eradication Programme

- Massive public awareness programme launched
- Private sector/Public sector/NGO Partnership
- **"Eat it to Beat it"**
- Some hotels and restaurants have lionfish on their daily menus- equates to additional income for fishers and sustained fishing pressure of the lionfish
- Some Hotels have special Scuba tour offers: training of guests in lionfish handling and management; and specific culling exercis

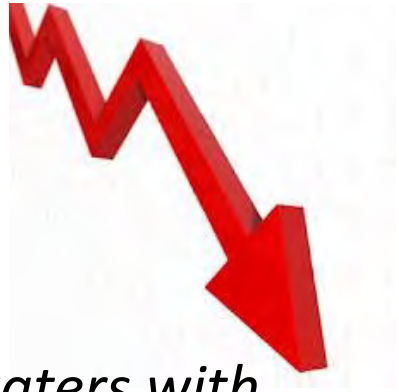
Lion Fish Eradication Programme



- Massive lionfish culling programmes launched
  - Numerous culling competitions with cash prizes
- Legislation amended to allow for the harvesting of Invasive Alien Species or other species for scientific purposes


ADDRESSING its THREAT TO SPECIAL FISHERY CONSERVATION AREAS
MPA
13 declared in Jamaica
Fish Sanctuary
2012 – regulations were promulgated to allow fishing for Invasive Alien Species for culling and other species for research purposes
Regulated culling allowed with permission from the Licensing Authority

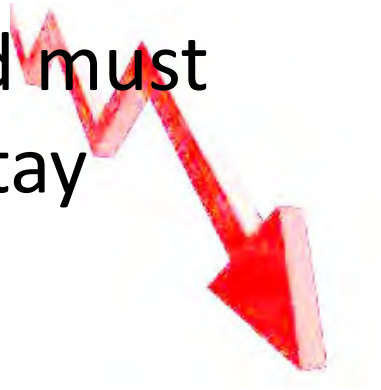
Results - Lion Fish Eradication Programme

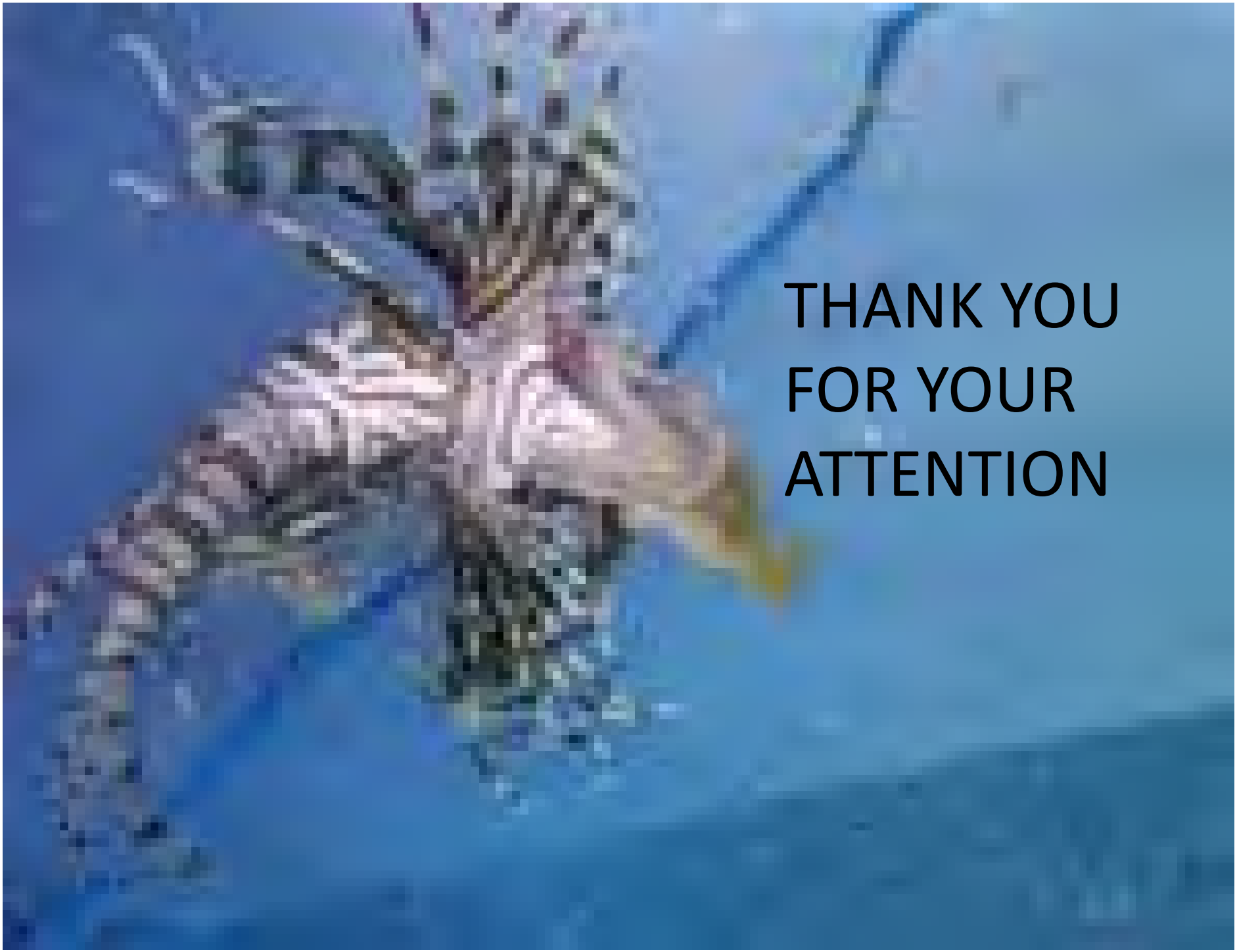


- *66 per cent drop in sightings of lionfish in coastal waters with depths of 75 feet (23 meters).*
- sightings from an average of up to 50 individuals per dive when the project started 4 years ago (i.e., in 2009) to as low as 1 lionfish per dive in some areas.
- *Reducing densities attributed to increasing fishing pressure of the lionfish.*
- *Lionfish are being observed at deeper depths (21.2m / > 70'). (large individuals have been sited)*
- *Change in lionfish behaviour (avoiding divers, moving to deeper areas?)*

SUSTAINED ACTION

- Total eradication not possible
- Control densities desired level
- Fishing pressure needs to increase and must remain relentless if the numbers are stay down
- Sustained '*Eat it to Beat it'* campaign
- Launch and sustained '*Train the Trainers'* programme




THANK YOU
FOR YOUR
ATTENTION