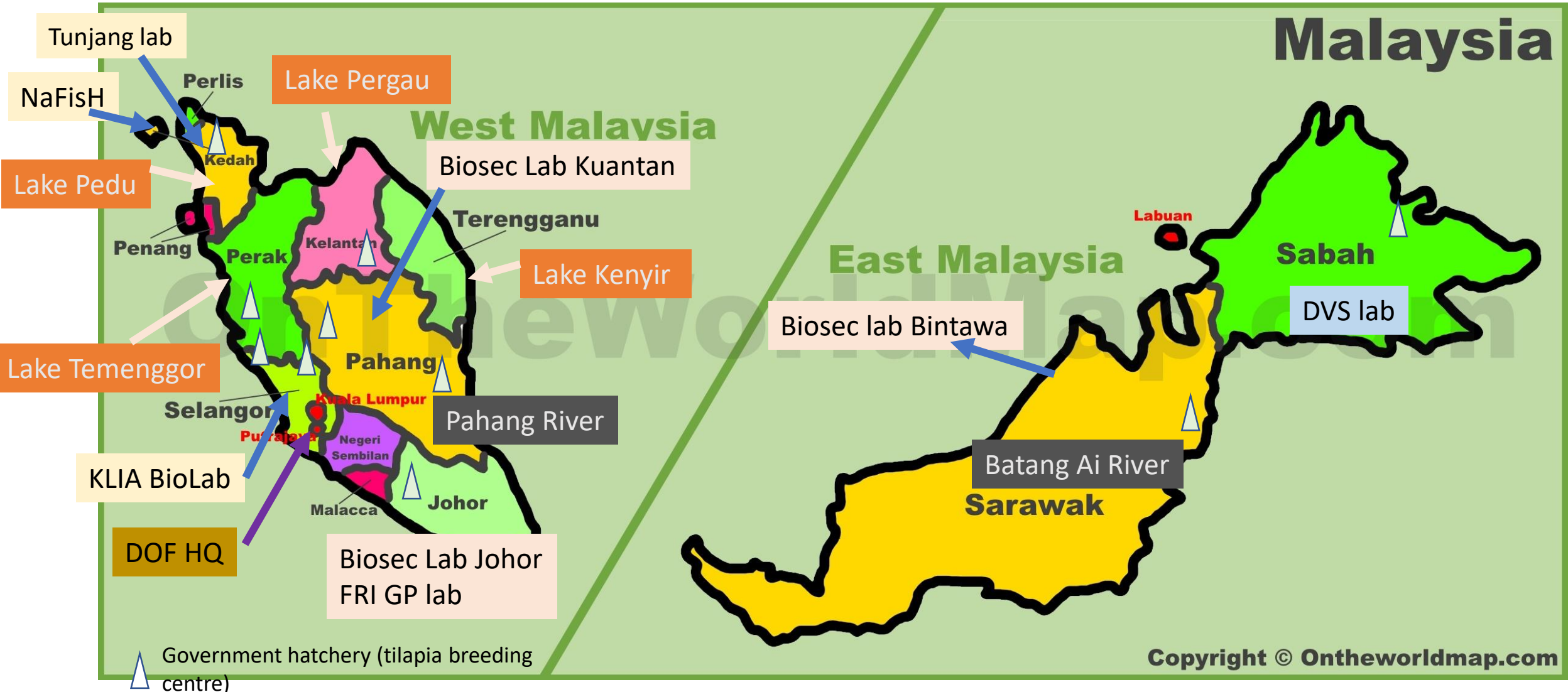


# Malaysia

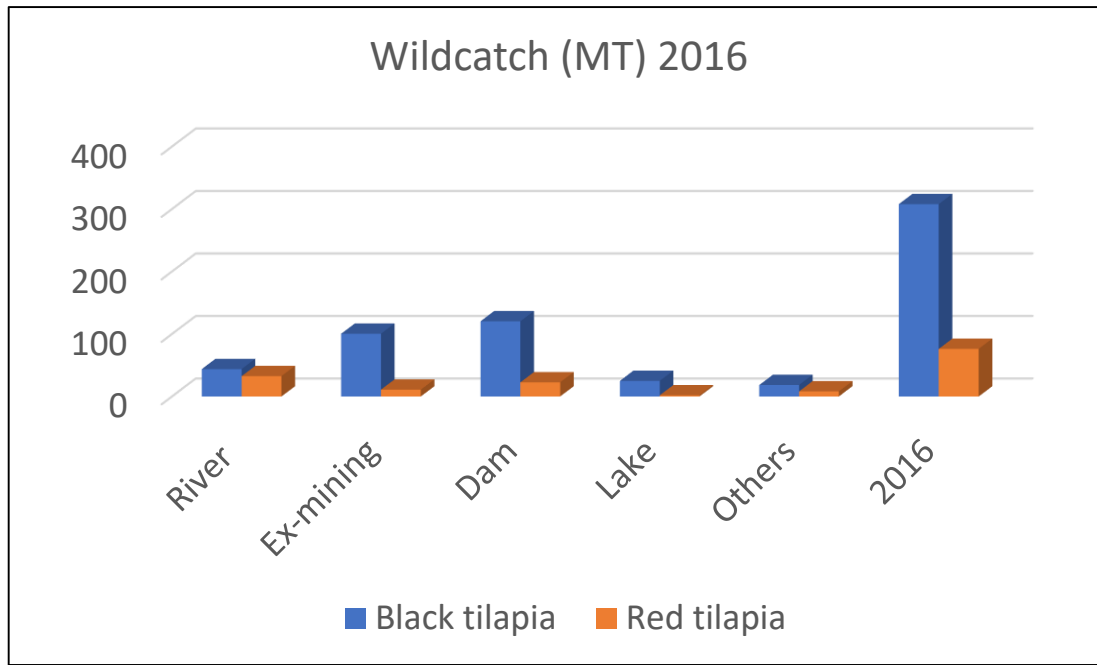
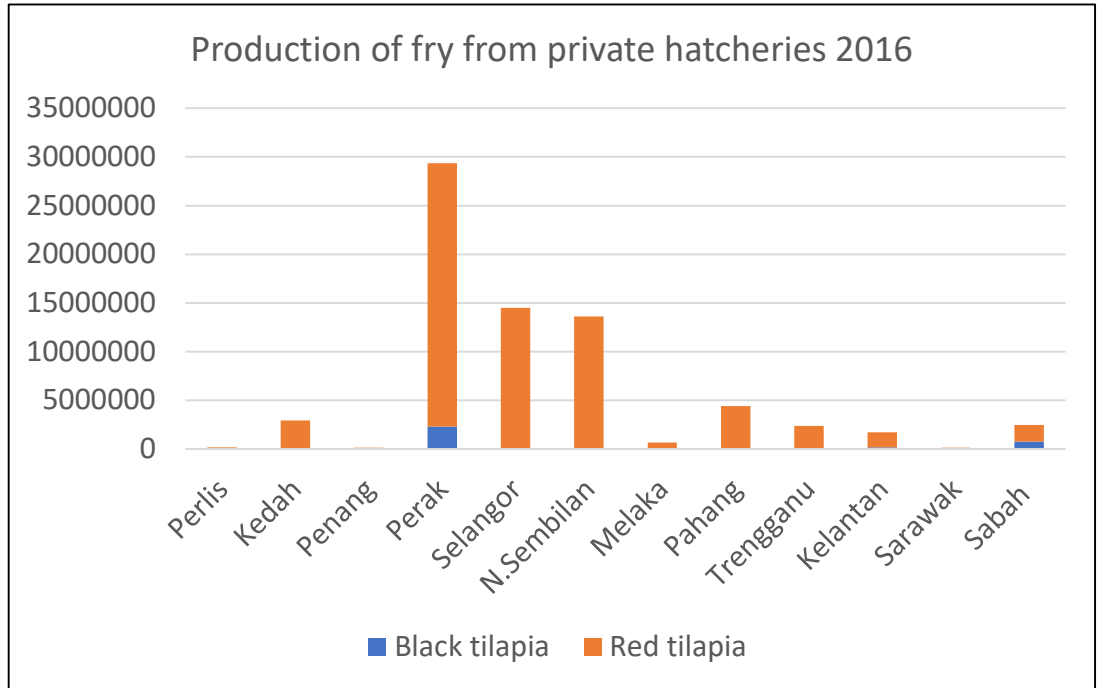
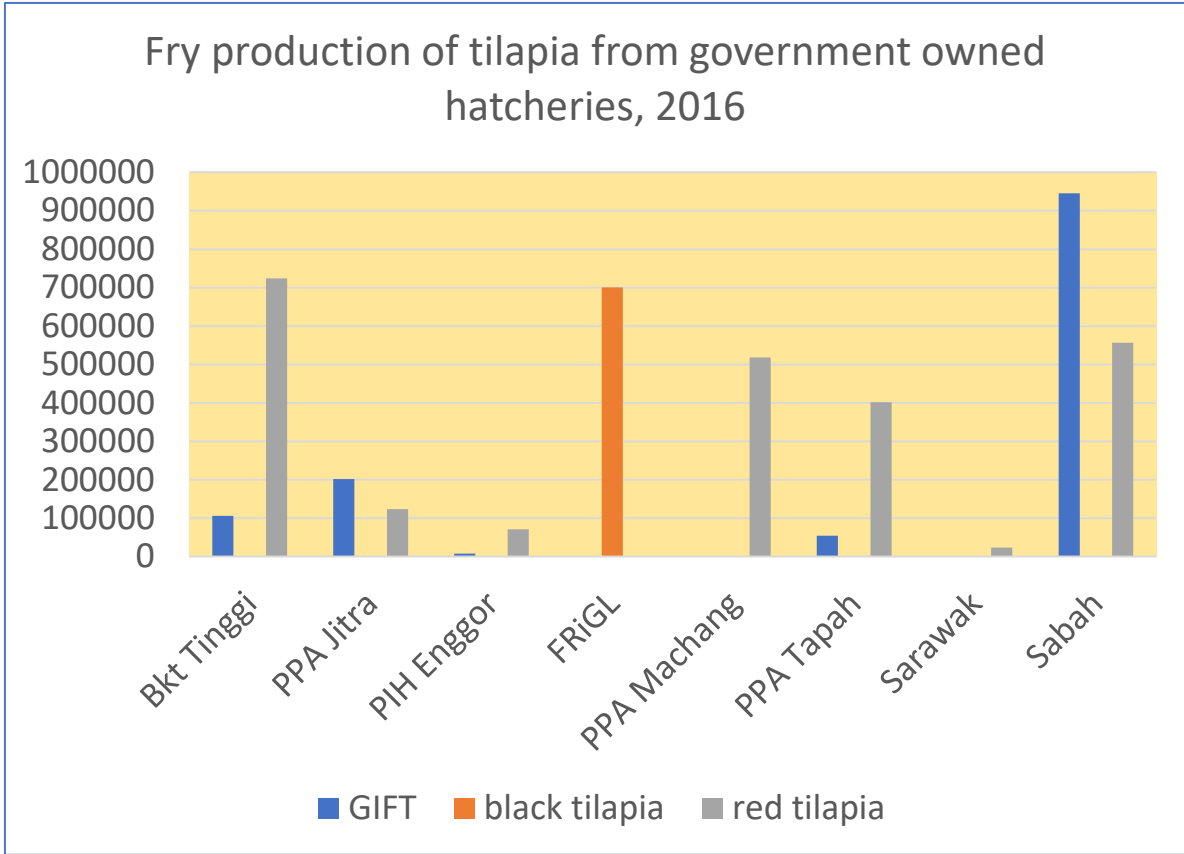
**National action plan elements**



Location of the government hatcheries, tilapia culture sites, diagnostic labs



# Industry overview



Culture systems – cage, earthen ponds, tanks system  
 13 Gov. hatcheries, 8 tilapia, 150 private hatch  
 Wild in lakes, dam, ex mining pool, local consumption  
 Average production per year = 20,000 – 30,000 MT (2011 – 2015)  
 Fry importation : 3 – 4 mil in values /year



# TiLV Outbreak investigation Flowchart

Control & prevention strategies

Suspected case of TiLV

Report by stakeholders on mass mortality of tilapia at a culture site

Chairman of the response team (HQ)

Instruct the chairman of state response team  
Notification  
Diagnostic Reports

Chairman of the response team (state fisheries)

Instruct & manage the action by the state response team  
Checklist and forms

State response team

Field investigation SOP  
Samples & Data collection

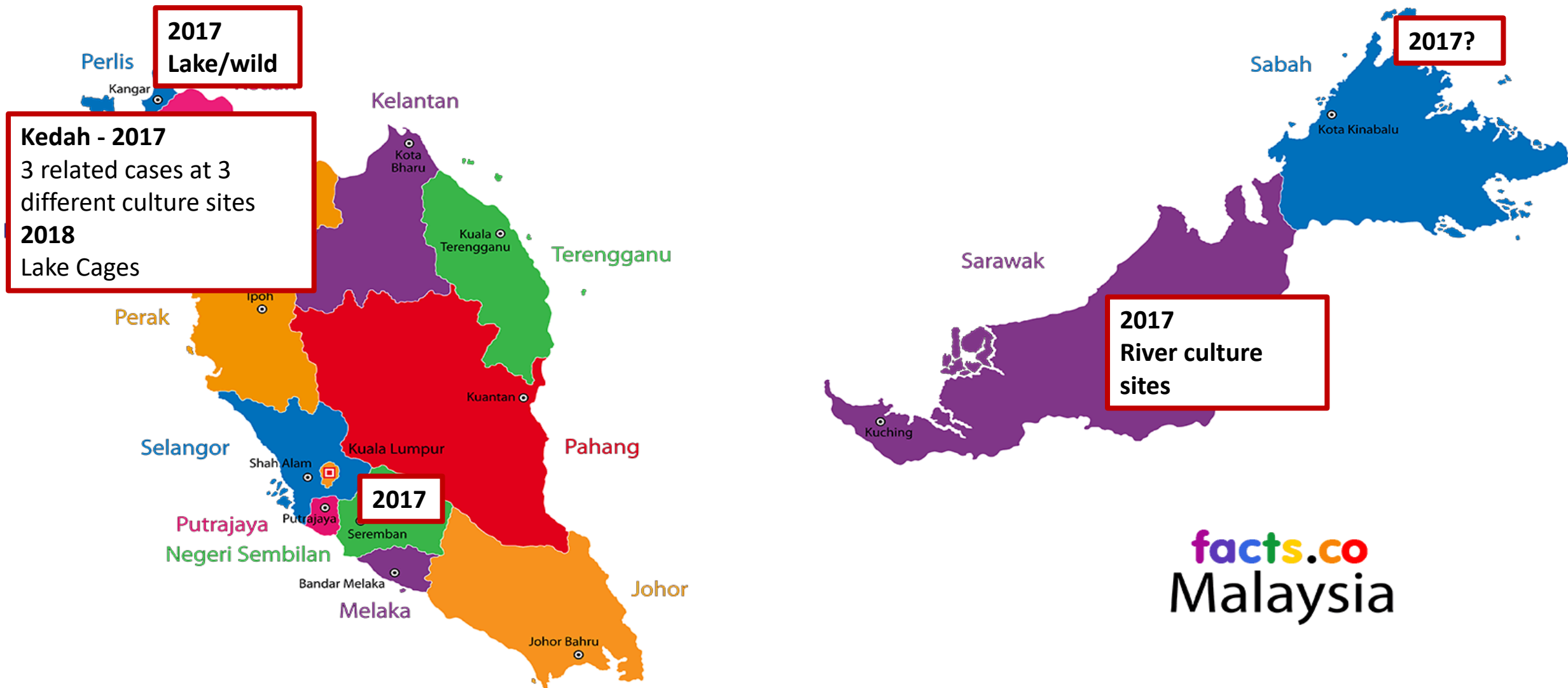
Diagnosis & Retesting by NaFiSH (crosscheck)

Lab  
SOP, accreditation

PCR & sequencing (TiLV Ref lab)  
Report to state fisheries & HQ response team

Google

# TiLV reports in Malaysia (NaFisH/Biosecurity Division Database)



# Surveillance strategy

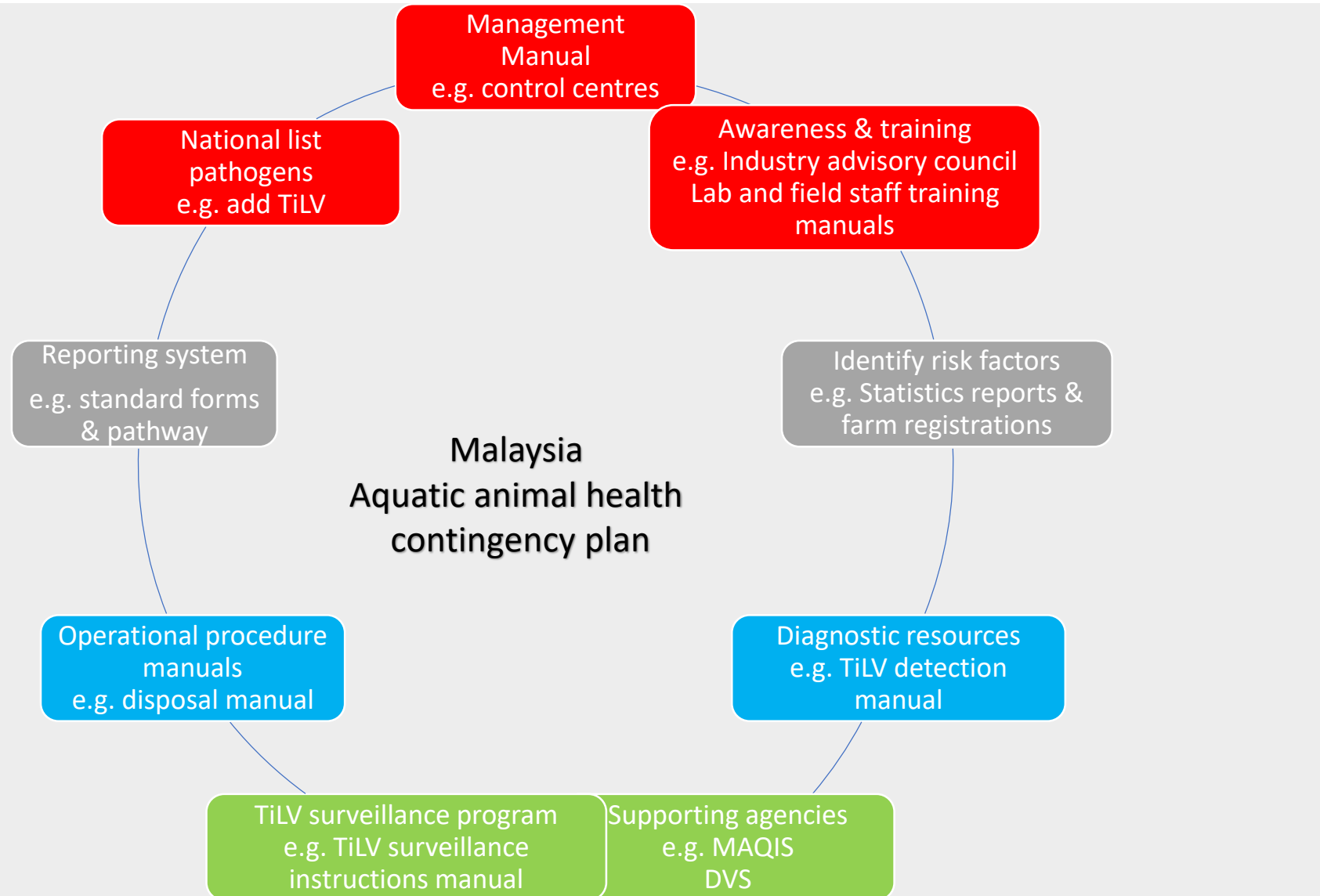
1. Objective : prevalence & possible risk factors in .....
2. All the susceptible species of tilapia (young, adults stages and broodstocks) in hatchery and wild population.
3. Throughout year in wild and every quarterly at hatcheries
4. Develop the correct case definition
5. Samples randomized designed in wild and hatchery ponds at unit level
6. Testing all the samples with molecular techniques, histopathology, and other relevant test (if possible)



Sampling cost	Per trip
daily allowance /average per person	45
lodging	100
chemicals (alcohol)	90
viral transport media	50
bacterial media	10
buffered formalin	10
other consumables	100
car rentals	300
Lab cost	Per sample
PCR	50
histopathology	20
bacteriology	30
cell culture isolation	100
<b>Total cost/day/trip</b>	<b>RM905</b>

RM1 = USD4.2

# EMERGENCY PREPAREDNESS ELEMENTS



Currently, Malaysia has develop the general contingency plan and several SOPs and forms that can be downloaded in the DOF website: [www.dof.gov.my](http://www.dof.gov.my)

# What needs to be done

- Review and approve rules and regulations to effectively contain and mitigate the outbreak of TiLV
- Review and add in the TiLV as a national disease list pathogen
- Conduct surveillance starting at the hatchery level to know the true status of TiLV in the country for control and prevention strategies and for reporting
- Increase number of trained staff at field and at lab, local and international level
- Review the SOP for live movement of tilapia locally and internationally
- Increase awareness of TiLV at all levels
- Simulation exercise





TERIMA KASIH  
謝謝