



ကျန်းမာရေးနှင့်အားကစားဝန်ကြီးဌာန

ဒေါက်တာခင်ခင်ကြီး
ညွှန်ကြားရေးမှူး (EID)
ဗဟိုကူးစက်ရောဂါတိုက်ဖျက်ရေးဌာနခွဲ
ပြည်သူ့ကျန်းမာရေးဦးစီးဌာန



What is zoonosis?

- Zoonotic Disease (also known as zoonoses) are caused by infections that spread between animals and people



What ARE zoonoses?

- Zoonotic diseases commonly prioritized include viral hemorrhagic fevers such as Ebola virus and Rift Valley fever, zoonotic influenza viruses, rabies, and anthrax
- According to WHO, Neglected zoonotic diseases are Echinococcosis, foodborne trematode infections, Rabies, Snakebite envenoming, Taeniasis/ Cysticercosis



Current situation of zoonotic disease control in myanmar

- တိရစ္ဆာန်မှတစ်ဆင့်ကူးစက်တတ်သောရောဂါများ (Zoonotic Diseases) ဆိုင်ရာ ကာကွယ်ထိန်းချုပ်ခြင်းလုပ်ငန်းများကို One Health Approach ဖြင့် ဆောင်ရွက်လျက်ရှိပါသည်။
- One Health (Healthy Humans, Healthy Animals, Healthy Environment) concept ဖြင့် နှီးနွယ်ဌာနများဖြစ်သည့် ကျန်းမာရေးနှင့်အားကစားဝန်ကြီးဌာန၊ စိုက်ပျိုးရေး၊ မွေးမြူရေး နှင့် ဆည်မြောင်းဝန်ကြီးဌာနနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးနှင့် သစ်တောရေးရာ ဝန်ကြီးဌာနများနှင့်ပူးပေါင်းဆောင်ရွက်လျက်ရှိပြီး၊ မိတ်ဖက်အဖွဲ့အစည်းများဖြစ်သည့် WHO, OIE, FAO အဖွဲ့တို့နှင့်လည်း ပူးပေါင်းဆောင်ရွက်မှုများရှိပါသည်။



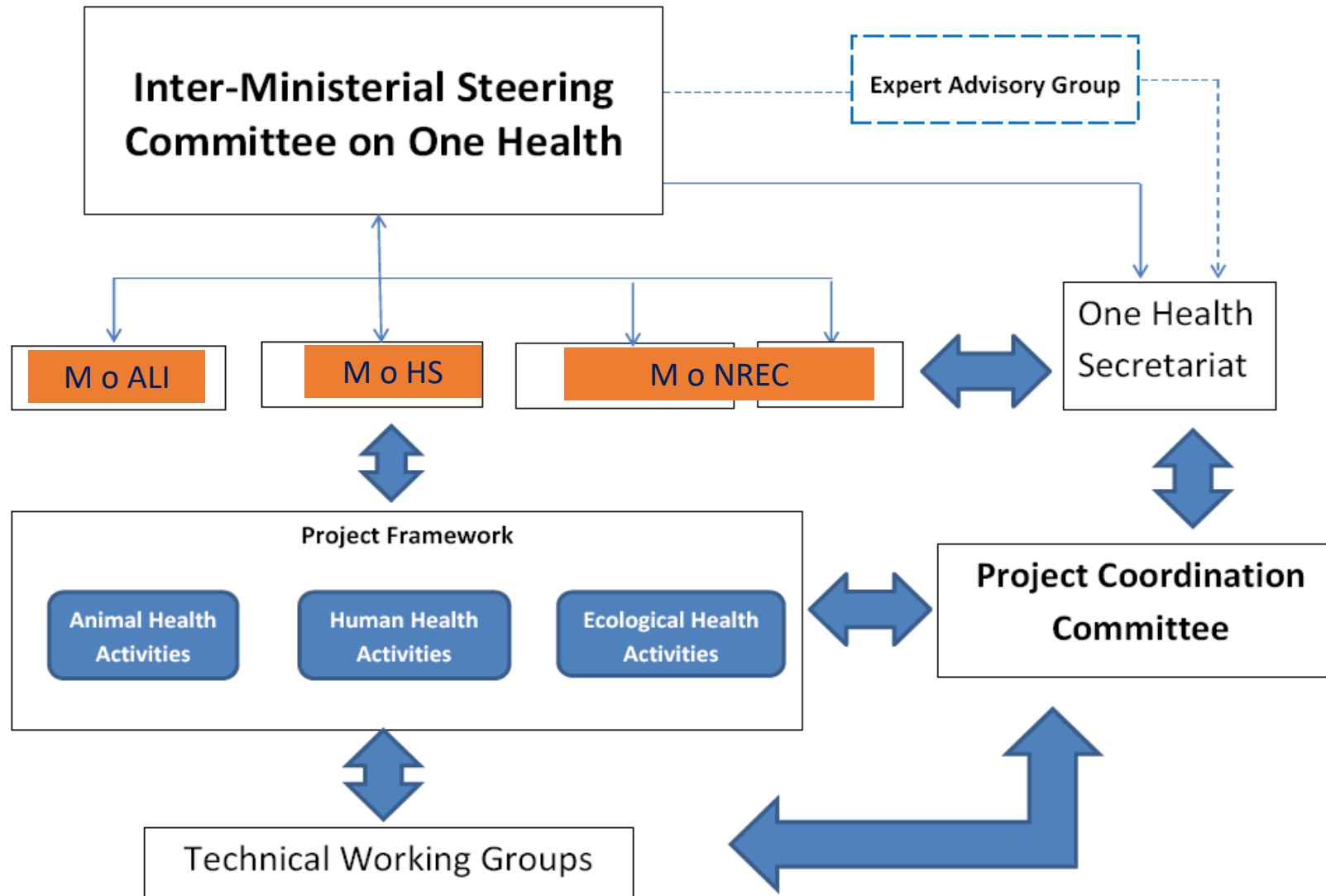


Figure 1: proposed institutional arrangements

Working together under One Health

1. One Health – **System Mapping and Analysis Resources Toolkit Training (OH-SMART)** , attended by concerned stakeholders from DoMS, DOPH, FDA, LBVD and Natural Resources and Wildlife Reservation Center, conducted on May 1-2, 2018, under the Lower Mekong Initiative Program
2. Collaborating among DoPH and LBVD for implementing activities to achieve the goal of **Rabies Elimination in 2030**
3. Through IHR (2005) and Cross border collaboration, DoPH and LBVD are working together for **Laboratory network, Border trade control (Ground Crossing Check Point), Port Health (Surveillance, Quarantine, and Prevention and control activities) for human and animals.**



What have been done

- National One Health strategic framework and Action Plan for Myanmar (Draft) (2017-2021) in 2017 September
- National Action Plan for Health Security (NAPHS) (2018-2022) plan in 2018 October



Collaboration

- Awareness raising - World Rabies Day (LVBD) on every September 28
- World Antibiotic Awareness Week (NHL) on November 14 (2nd week)
- One Health Day on November 3 (Plan)
- One World, One Health symposium (Predict) on 9-1-2019 at 47th
DMR research congress



- ခွေးရူးပြန်ရောဂါကြိုတင်ကာကွယ်ခြင်း၊ ကုသခြင်းနှင့် ခွေးရူးပြန်ရောဂါကြိုတင်ကာကွယ်ဆေး ဖြန့်ဝေခြင်းလုပ်ငန်းများကိုလည်း ဆောင်ရွက်လျက်ရှိပါသည်။ နီးနွယ်အဖွဲ့အစည်းများဖြစ်သည့် မွေးမြူရေးနှင့်ကုသရေးဦးစီးဌာန၊ စည်ပင်သာယာရေးအဖွဲ့များနှင့်လည်း ပူးပေါင်းဆောင်ရွက် လျက်ရှိပါသည်။
- Zoonotic influenza surveillance လုပ်ငန်းနှင့် Anthrax surveillance လုပ်ငန်းများကို monthly data reporting system ဖြင့် ဆောင်ရွက်လျက်ရှိပါသည်။

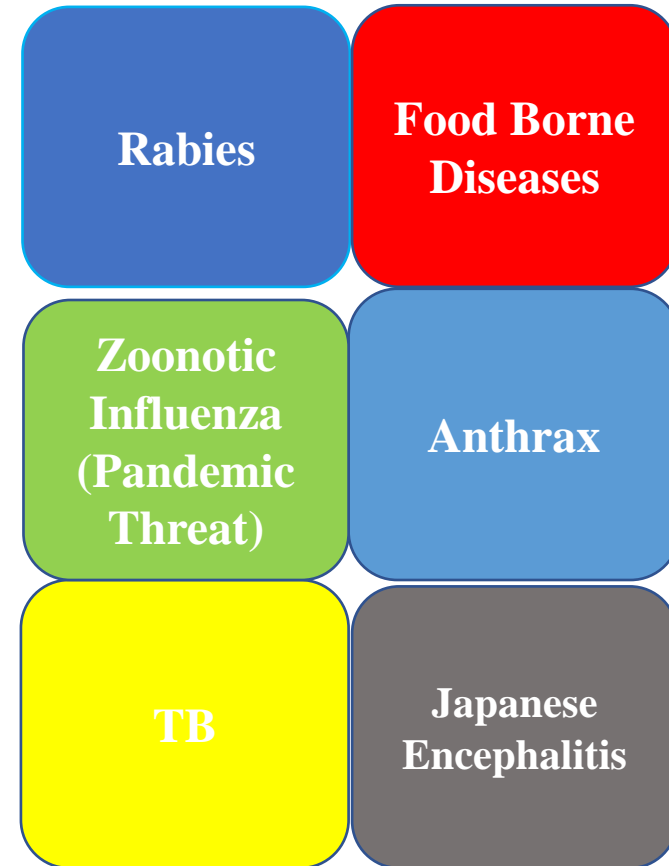


2. Existing one health platforms, framework and/or policies

Myanmar National One Health Strategic Framework

The One Health Strategy Workshop held in Nay Pyi Taw on 09 and 10 March 2016 agreed that **One Health priority topics for Myanmar are as follows:**

- AMR (antimicrobial resistance)
- Six priority diseases/syndromes



Current implementation

- Snake bite (Non Communicable Disease Unit)
- Antimicrobial resistance (National Health Laboratory)
- Zoonotic Influenza, Rabies, Anthrax, Leptospirosis (Central Epidemiology Unit)
- Tuberculosis (National Tuberculosis Program)
- Japanese Encephalitis (Vaccination- EPI, Surveillance – CEU, Prevention and Control- Vector Borne Disease Control Unit)
- Foodborne diseases (NHL/ CEU/ FDA)
- Schistosomiasis (CEU, NHL, DMR)



Concerning CEU Surveillance

- Zoonotic Influenza
- Rabies
- Anthrax
- Leptospirosis
- Japanese Encephalitis
- Foodborne diseases
- Schistosomiasis
- Emerging zoonoses



Rabies

- Causative agent
 - Rabies virus
- Host
 - Rabid animal
- Environment
 - Dog population : Human population
- Rabies prevention and control program
- Monthly dog bite cases reporting to CEU through S/R
- Rabies cases reporting through HMIS

Zoonotic influenza

- Zoonotic influenza
 - Avian influenza virus subtypes
 - highly pathogenic – A(H5N1), A(H5N1), A(H7N9) and A (H9N2) and
 - Low pathogenic – A(H7N2) - cat
 - swine influenza virus subtypes A(H1N1), A(H1N2) and A(H3N2)
- Contact (poultry and wild birds)
- Touch birds or carcasses
- Good food safety and food hygiene practices

What is the problem?

- Biological weapons
- Weapons in an envelope



Anthrax

- Causal agent
 - Bacillus anthracis
- Infected animals
 - Cows and Sheep
- Types of anthrax
 - Cutaneous anthrax, gastrointestinal anthrax, Inhalation anthrax, Injection anthrax



What is the problem?

- Bacterial disease
- Through rodents and pets



Leptospirosis

- Leptospira
- Leptospirosis are spread through the urine of infected animals, which can get into water or soil



What is the problem?

- AES surveillance
- Acute encephalitis syndrome



Japanese encephalitis

- JE virus
- Single stranded RNA virus
- Mosquito borne flavivirus
- Same genus belong to Dengue
- Transmitted through bites of infected mosquitoes of Culex species
- Transmission cycle b/t mosquitoes, pigs and/or water birds (enzootic cycle)



What is the problem?

- Eating undercooked infected intermediate hosts
- Presenting with GI symptoms

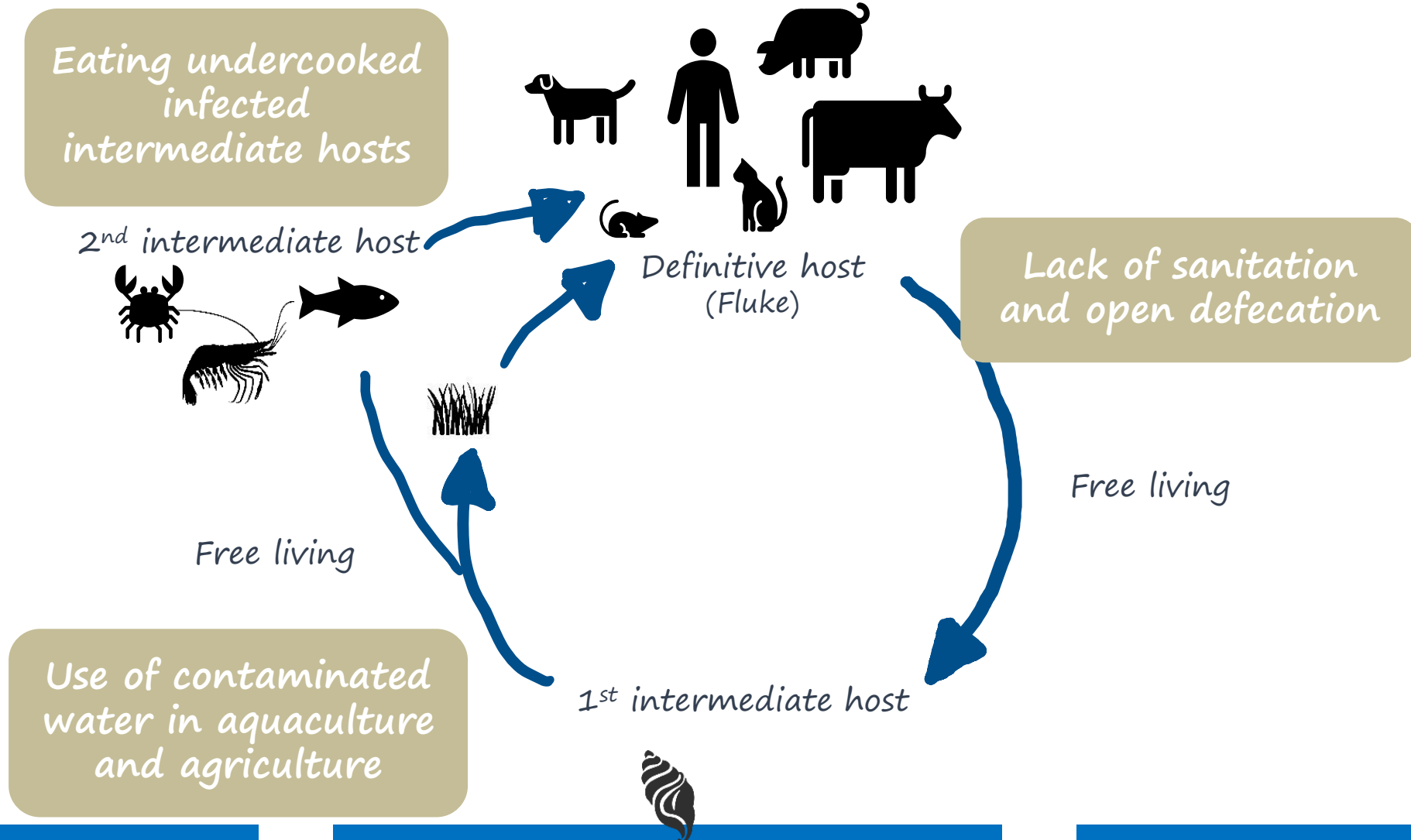


Foodborne Zoonosis

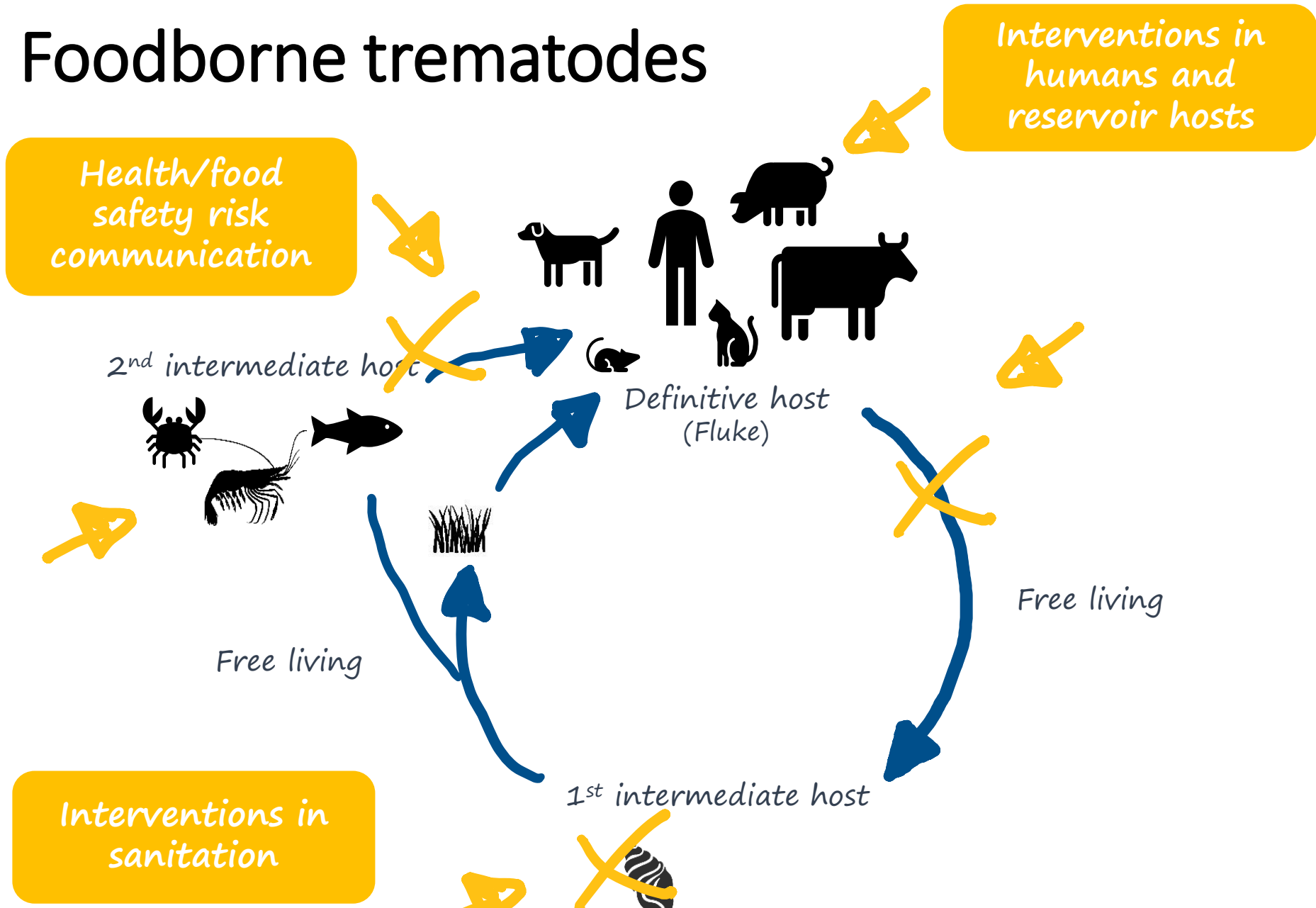
1. *Taenia solium* → taeniasis / cysticercosis
2. *Echinococcus granulosus* → hydatid disease
3. Food Borne Trematodiasis:
 - *Clonorchis sinensis*
 - *Opistorchis viverrini*
 - *Fasciola hepatica*, *F gigantica*
 - *Paragonimus spp*
 - *Metagonimus* or other intestinal trematodes



Foodborne trematodes



Foodborne trematodes



What is the problem?

- In 2016, 6 year old girl from Sittwe was admitted to Sittwe Hospital with a history of haematuria with SPA discomfort for 2 days. After history taking and proper physical examination, she was investigated for Urine RE,ME and treated with Amikacin for 10 days and sign and symptoms will not improve.
- The environmental condition of this area is flooded area and some household do not use sanitary latrine type.



Schistosomiasis

- What are next steps?
- Reporting
- Diagnosis
- Treatment



Emerging zoonosis

- Nipah virus
- Ebola
- Marburg
- VHF



Case Definition

- <http://mohs.gov.mm/Main/content/publication/data-dictionary-hmis-data-dictionary-mm>



Generic process for tracking progress at national level

Planning	1- Situation Analysis	Mapping Prioritization
	2- Strategies, policies and plans	Action plan
Implementation	3- Process	Surveillance & monitoring
	4- Results towards attaining objectives	Outcome indicators
	5- Impact evaluation	Impact indicators



3. Ongoing activities

1. Electronic Based Data sharing system strengthening (to develop a platform)
2. Advocacy and Capacity-building (for both human and animal side stakeholders to implementation level)
3. Under one health approach, needs more Evidence-based research and Laboratory capacity building
4. Strong Legislation and Policy Development (Communicable Disease Law and Notifiable Animal Disease)
5. To develop Monitoring and evaluation framework and action plan



THANK YOU

