

# One Health : Principle & Critical skills for youth



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Thailand One Health  
University Network



thohun.org

**INFO SESSION 1**  
on  
**13<sup>th</sup> REGIONAL CONGRESS**  
**Search for SEAMEO**  
**Young Scientists**  
*"Youth for One Health through STEM Innovations"*

**Date:**   
13 December 2023

**Mode:**   
Online (via Webex)

**Time:**   
3:00 to 4:30 PM  
(GMT +8 Malaysian Standard Time)

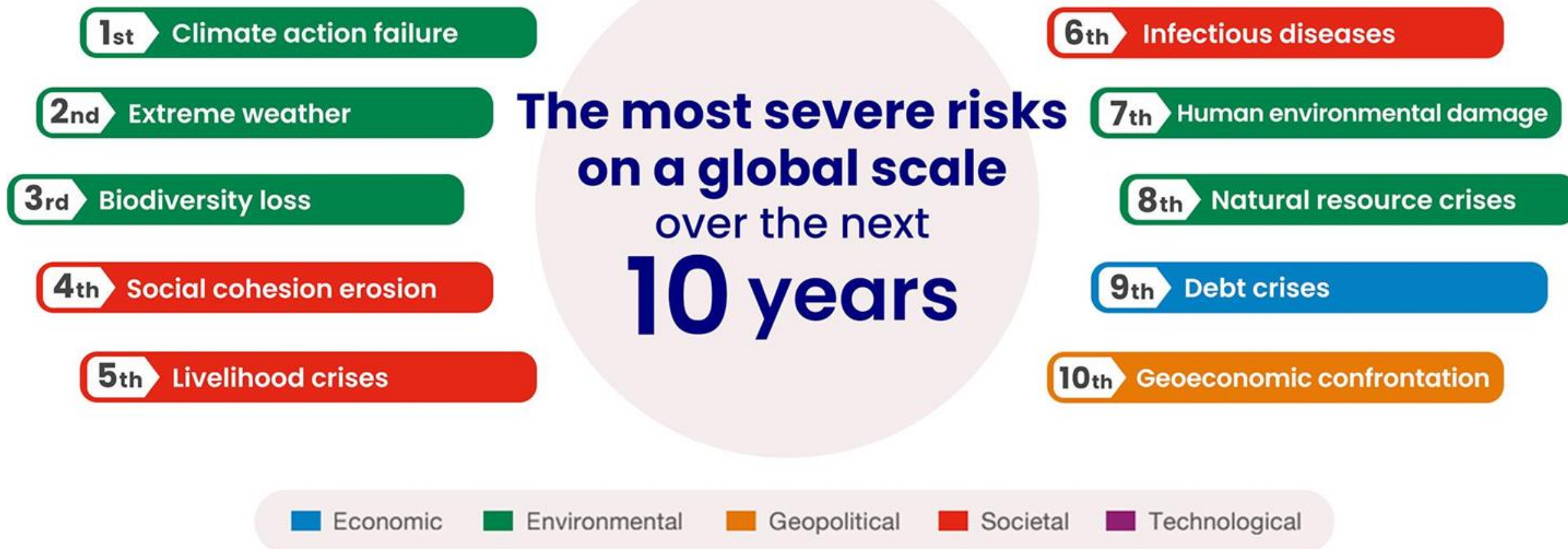
**Target Participants:**   
Secondary School Students /  
Teachers / Educators / Parents

**Organised By:** 

  
In collaboration with  
  **SEA OHUN**  
Southeast Asia One Health  
University Network

**QR Code**  
for registration  



Source: World Economic Forum Global Risks Perception Survey 2021-2022



# Nature of wicked problems

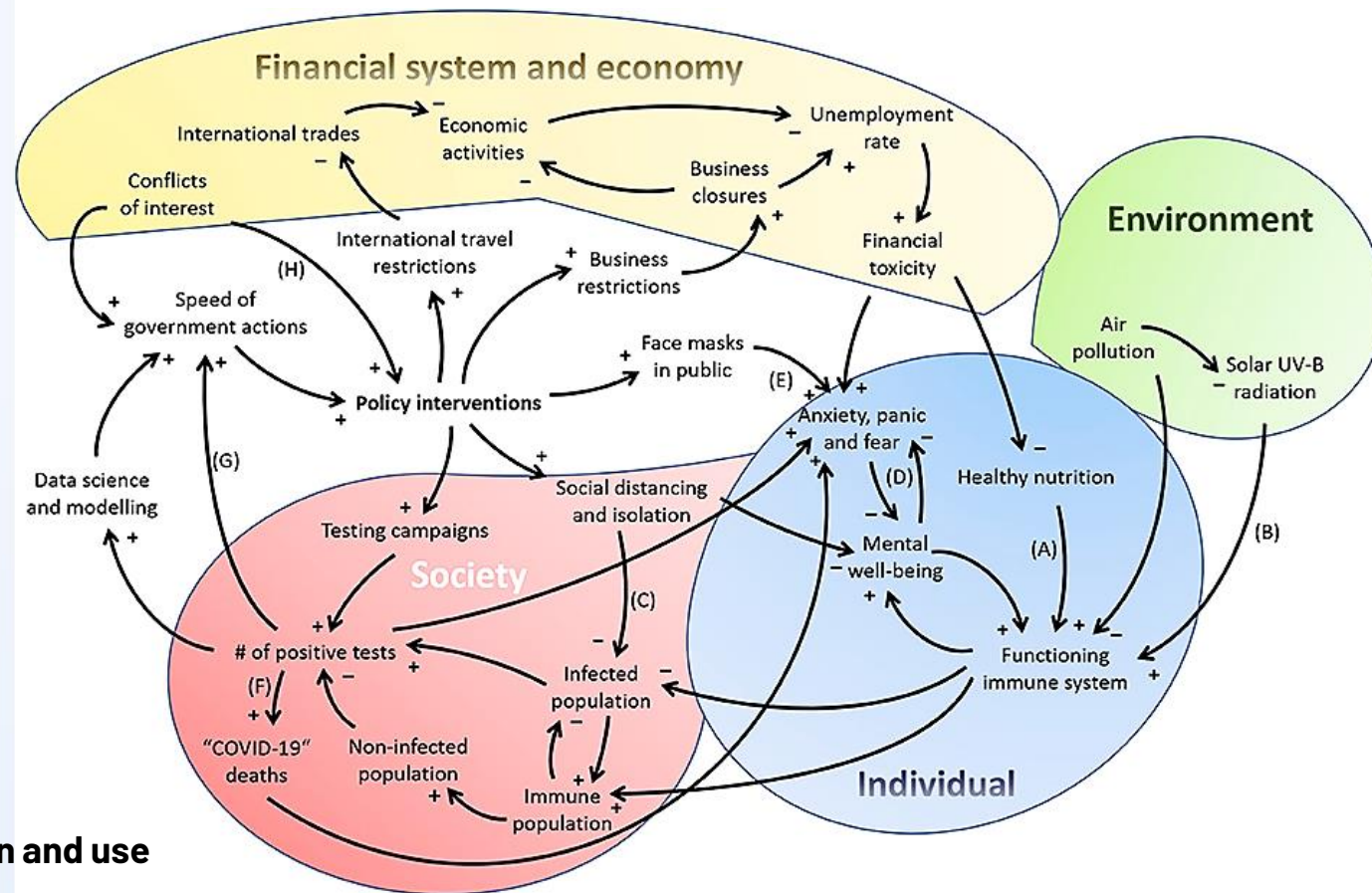
- Culture
- Economics
- Policy
- Behavior
- Education

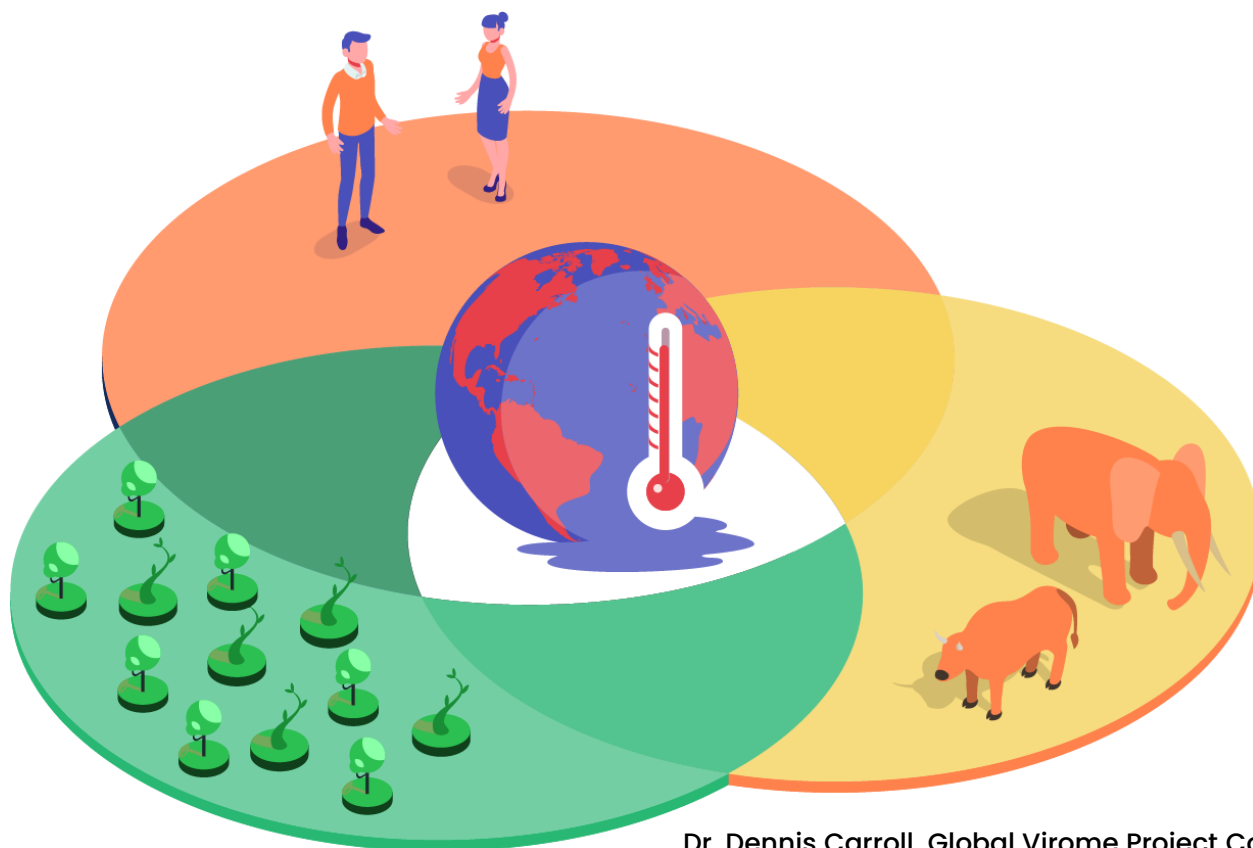
**Influences**

**Problems**

**Drivers**

- Land use
- Climate change
- Economic development
- Globalization
- Energy extraction and use
- Migration





# One Health Concept

**The One Health concept recognize the interrelationship between animal, human, environmental health**

Dr. Dennis Carroll. Global Virome Project Core Team. Six Mega-Trends and Their Implications for "Global Health" in the 21st Century.

**Chronic diseases, mental health, injury, occupational health, and non-communicable diseases**  
can benefit from a One Health approach involving collaboration across disciplines and sectors.

**Contamination of water**  
used for drinking, recreation, and more  
can make people and animals sick.

**Diseases in food animals**  
can threaten supplies, livelihoods, and economies.

# One Health issues

**Antimicrobial-resistant germs**  
can quickly spread through communities, the food supply, healthcare facilities, and the environment (soil, water), making it harder to treat certain infections in animals and people.

**Vector-borne diseases**  
are on the rise with warmer temperatures and expanded mosquito and tick habitats.

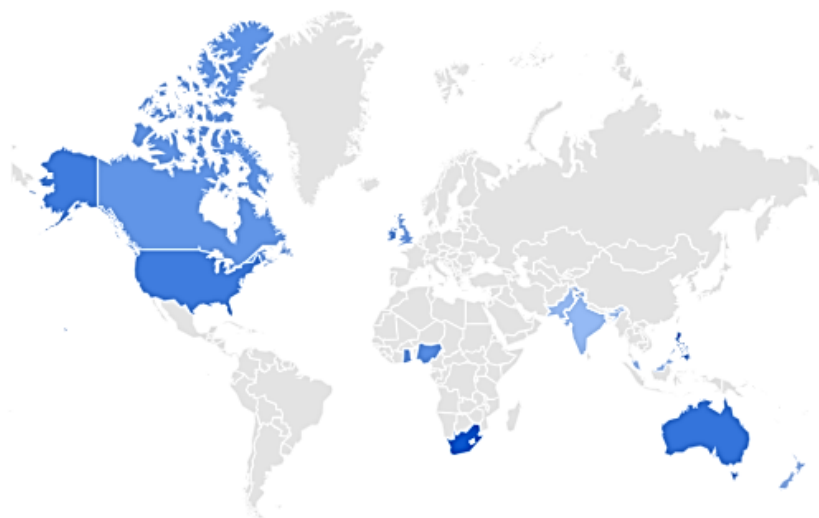
**The human-animal bond**  
can help improve mental well-being

**One Health issues** include zoonotic diseases, neglected tropical diseases, vector-borne diseases, antimicrobial resistance, food safety and food security, environmental contamination, climate change and other health threats shared by people, animals, and the environment.

## school issues

Interest by region ?

Region ▼



☐ Include low search volume regions

Related queries ?

Top ▼



1 mental health issues

100



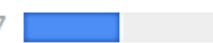
2 mental health

99



3 social issues

47



<https://trends.google.com/trends/>



Ke S, Lai J, Sun T, Yang MM, Wang JC, Austin J. Healthy young minds: the effects of a 1-hour classroom workshop on mental illness stigma in high school students. *Community Ment Health J*. 2015 Apr;51(3):329-37. doi: 10.1007/s10597-014-9763-2.

# VUCA to BANI era



**V**-Volatility



**U**-Uncertainty



**C**-Complexity



**A**-Ambiguity



**B**-Brittle



**A**-Anxious



**N**-Non linear



**I**-Incomprehensible



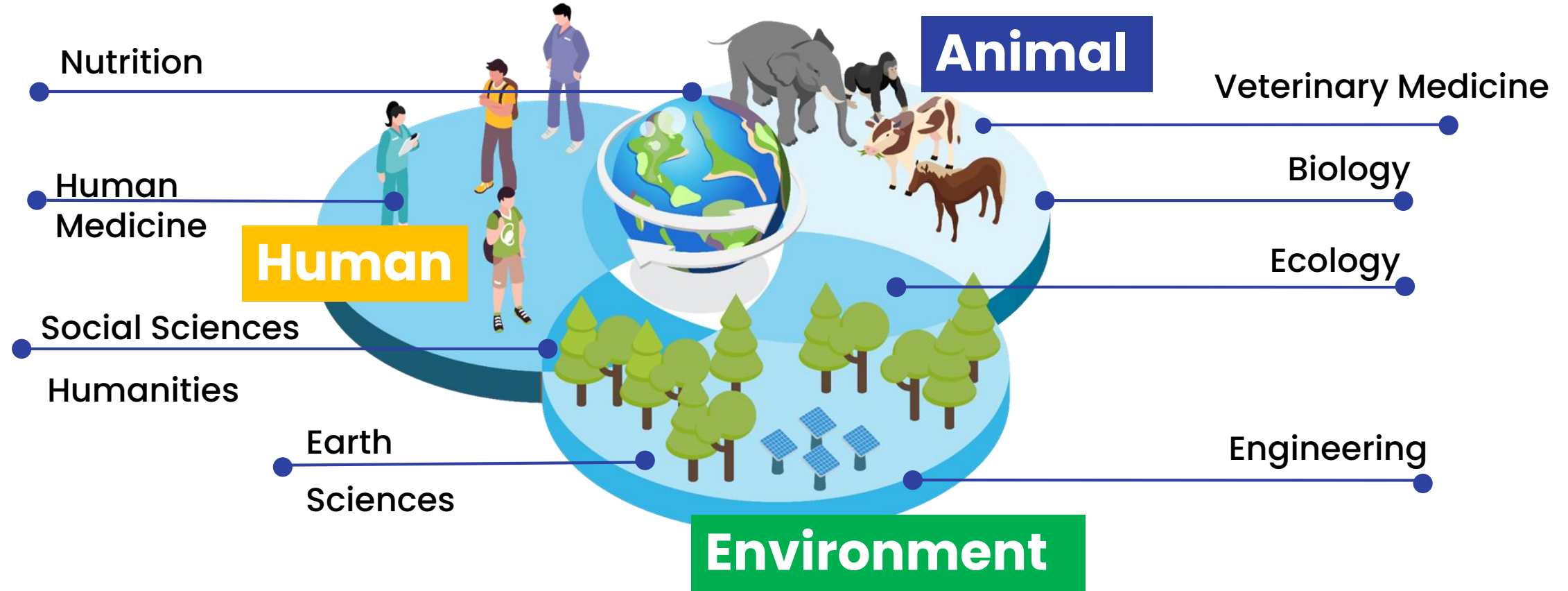


# World Disruption

# Opportunity



# One Health Approach



The collaborative effort of multiple disciplines working locally, nationally, and globally to attain optimal health for people, animals and the environment.

*(By The American Veterinary Medical Association)*

Approach as the integration of a multi-sector approach to public health objectives (EPT-USAID)

# Workforce Development





# One Health Competencies

## Life-long skills

Sets of knowledge, skills and attitude that are required for a workforce who could collaboratively work with multiple disciplines and sectors at locally, nationally, and globally to attain optimal health for people, animals and the environment, and the skills that are crucial for survival in VUCA/BANI era.



## 21st-Century Skills

### Foundational Literacies

How students apply core skills to everyday tasks



1. Literacy



2. Numeracy



3. Scientific literacy



4. ICT literacy



5. Financial literacy



6. Cultural and civic literacy

### Competencies

How students approach complex challenges



7. Critical thinking/  
problem-solving



8. Creativity



9. Communication



10. Collaboration

### Character Qualities

How students approach their changing environment



11. Curiosity



12. Initiative



13. Persistence/  
grit



14. Adaptability



15. Leadership



16. Social and cultural awareness

WORLD  
ECONOMIC  
FORUM

Lifelong Learning

C Creativity & Innovation

C Critical Thinking  
& Problem Solving

C Communication

C Collaboration

# Skills needed for survival in the fast-paced disruptive world

## Leaders



Communication



Fearlessness



Urgency



Strategic mindset



Collaboration



Empathy



Authenticity

WORLD  
ECONOMIC  
FORUM

## Workforce



Learning agility

Ability and willingness to learn and apply knowledge & skills to unfamiliar situation. A Harvard Business "Improve your ability to learn" calls out Innovating, Performing, Reflecting and Risking.



Resilience

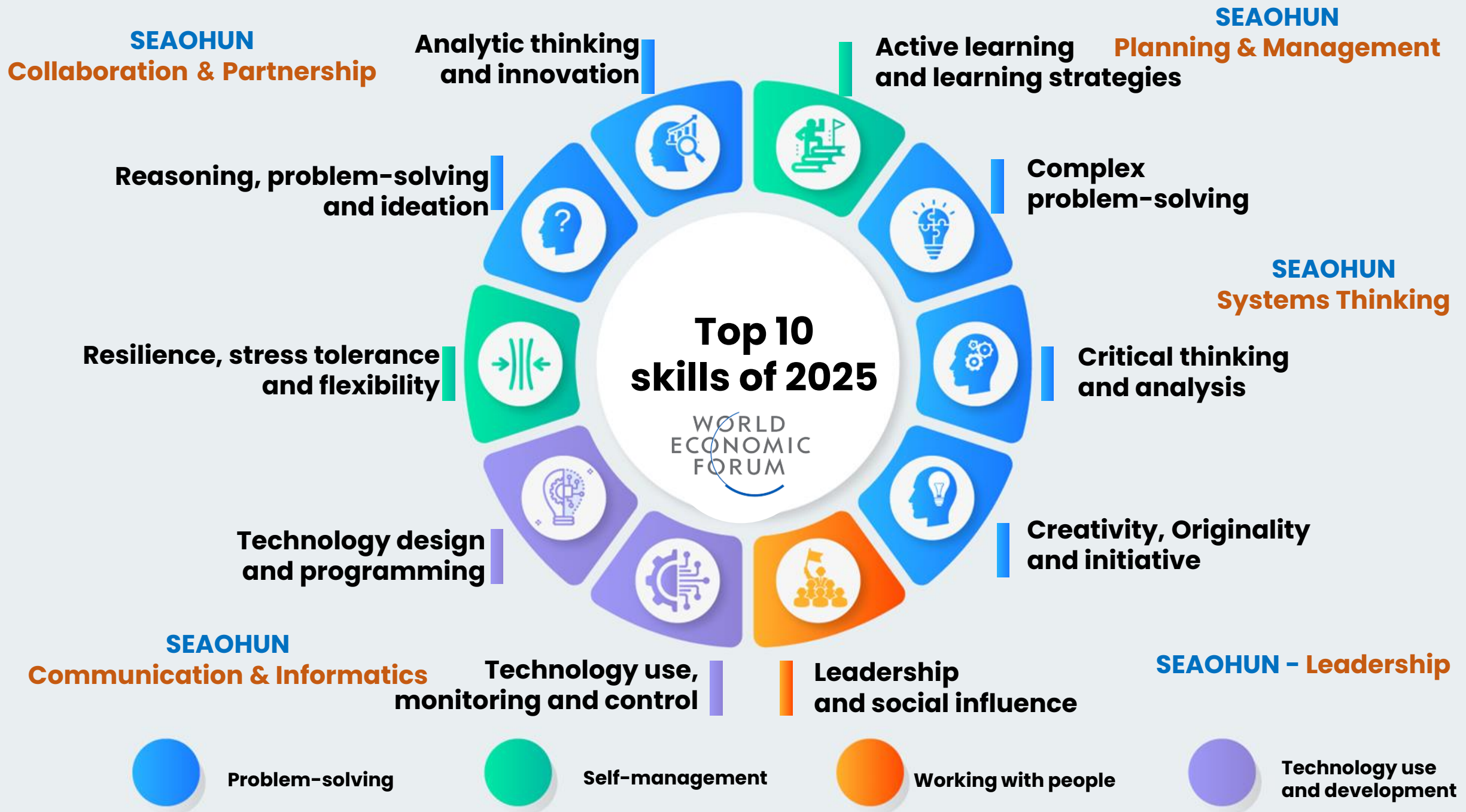
Ability enables one to bounce back when knocked down by life by practice cognitive reframing, avoid the victimization mindset, meditate.



Grounded optimism

An optimistic and realistic outlook. Be mindful and focus on the positive





## The Most In-demand skills in **Finance & Accounting**



Management



Financial analysis



Analytical skills



Sales



Customer service



Teamwork



Communication



Research



Leadership



Financial reporting

## The 2023 Most In-demand **Hard skills**

- Software Development
- Structured Query Language (SQL): programming language used for managing and manipulating relational databases
- Finance
- Python (Programming Language)
- Java
- Data Analysis
- JavaScript
- Cloud Computing
- Operations
- Customer relationship management

# Top 10-job skills for the future? | World Economic Forum([weforum.org](https://www.weforum.org))



**50%** of employees need reskilling by **2025**, as adoption of technology increases (The World Economic Forum's Future of Jobs Report).

Employers said that **Critical thinking** and **problem-solving** are the top skills required in the next five years.



**Skills in self-management; active learning, resilience, tolerance and flexibility to stress** are newly emerged in 2023.

**40%** of workers require reskilling **within six months or less.**





# Time needed to start building new skills online in jobs of tomorrow





Thailand One Health  
University Network

The multidisciplinary expert  
network of **16** universities  
formed to foster the One  
Health concept and actions  
to secure health of Thai  
society

## KEY ACHIEVEMENTS



### Student education

Supported training of 486 students, ensuring next generation of professionals from medical sciences, public health, veterinary medicine, environmental science, and other disciplines have the skills, characteristics and mindset to apply the One Health approach at their researches and works.

### New curricula

Developed and strengthened One Health-focused training curricula to enhance the education of professionals, Village Health Volunteers and community members across the country for years to come



### Faculty development

Trained One Health trainers and developed a toolkit for planning, design and assessment of competency-based education/training for faculty members.

### Student engagement

Established Student One Health Ambassadors for peer to peer training of students and community voluntary-based learning to foster innovation, advocacy, and learning for different types of learners across the country.



### COVID-19 response.

Developed platforms and educational programs for healthcare personnel and VHVs to increase capacity in multisectoral coordination and risk communication, and surveillance, prevention and response of rabies and COVID-19 in Thailand.

## OUR IMPACT AREAS



Partnering with national and international organizations



Serving as One Health literacy resource



Providing of One Health education and training services in Thailand and the region

## OUR NETWORK



**14** Thai leading Universities



**83** Faculties



**6,607** Individuals trained in One Health topics



# HOW DO WE TRAIN OUR YOUTH?





# Steps to develop Critical Thinking

**1** Become more self-aware

**2** Understand your mental process

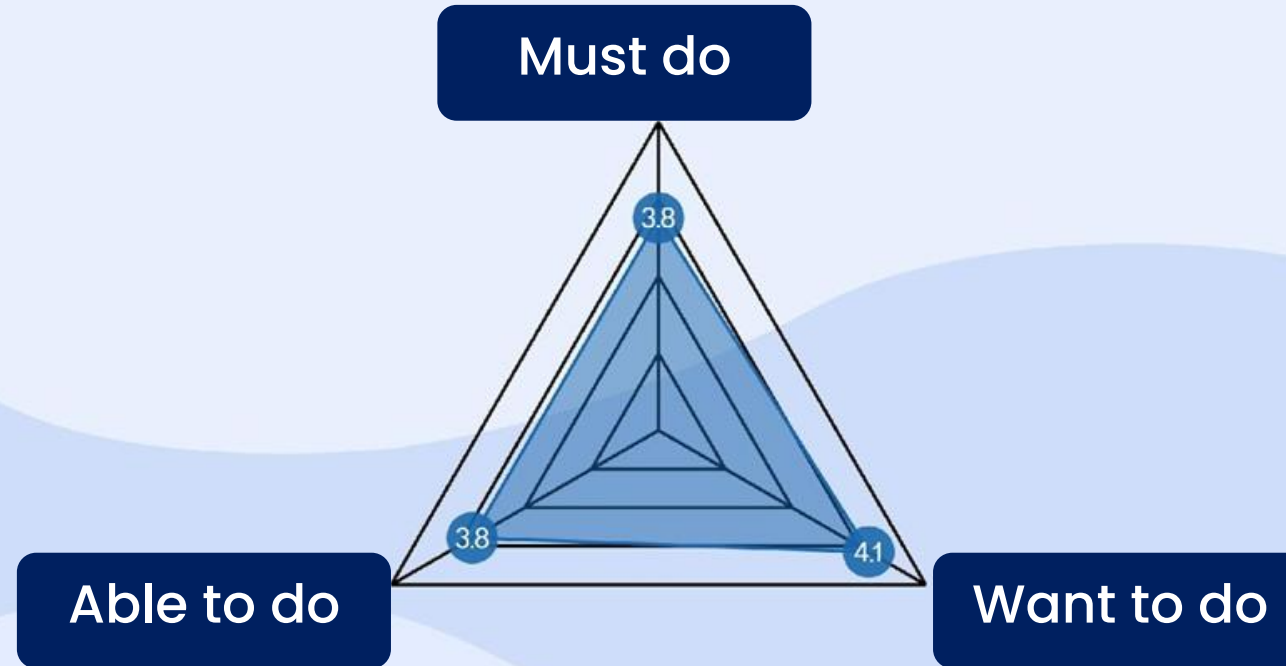
**3** Develop foresight

**4** Practice active listening

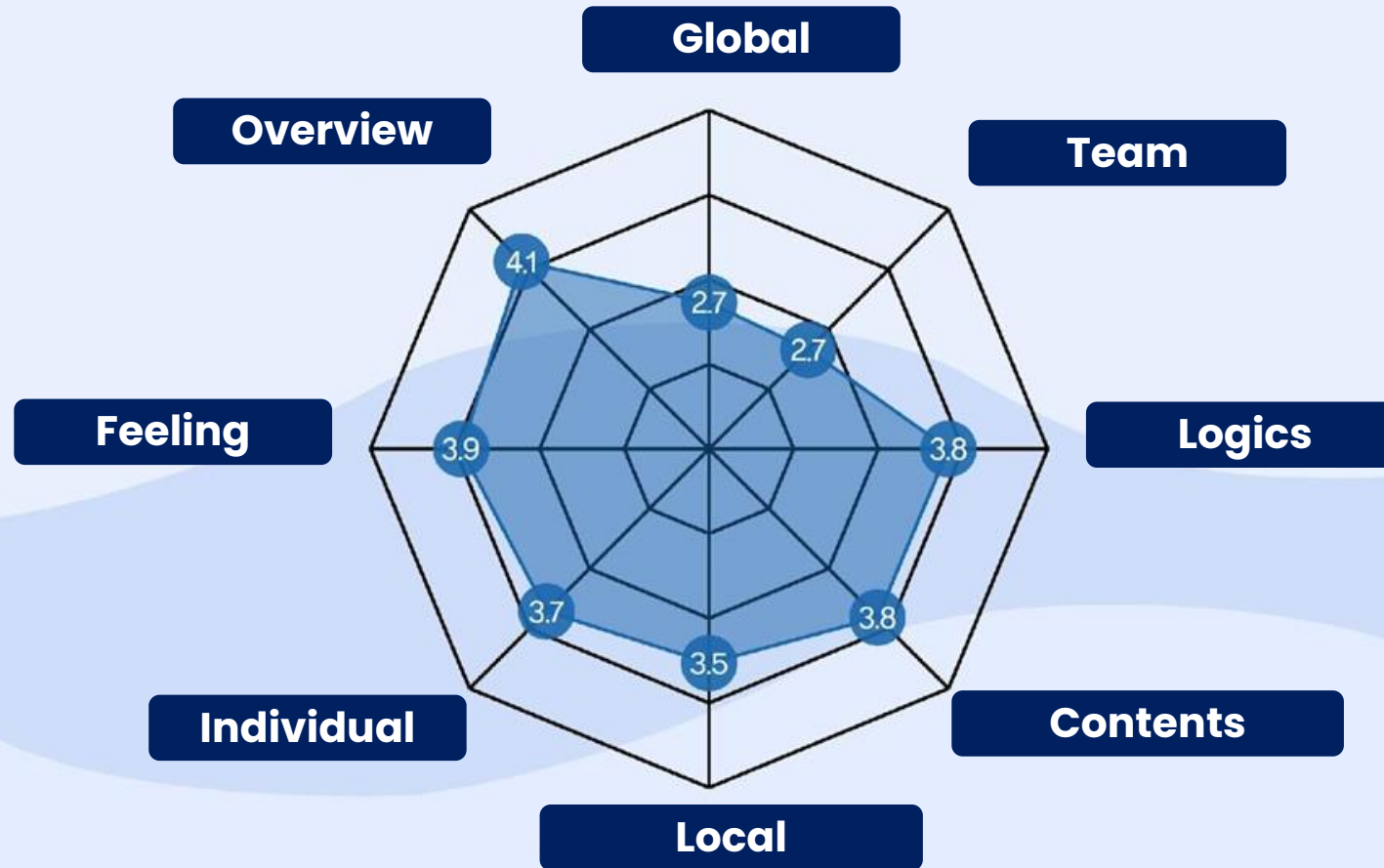
**5** Ask questions

**6** Evaluate existing evidence

# Self-Assessment working style



# Self-Assessment working style





# Managing emotions

## The four competencies of emotional intelligence



### INWARD COMPETENCIES

#### Self-awareness

- Emotional self-awareness
- Accurate self-assessment
- Self-confidence

#### Self-Management

- Emotional self-control
- Trustworthiness
- Conscientiousness
- Achievement orientation
- Adaptability
- Optimism
- Initiative

### Relationship Management

- Development of others
- Inspirational leadership
- Influence
- Communication
- Effecting change
- Conflict management
- Bond building
- Teamwork and collaboration

### OUTWARD COMPETENCIES

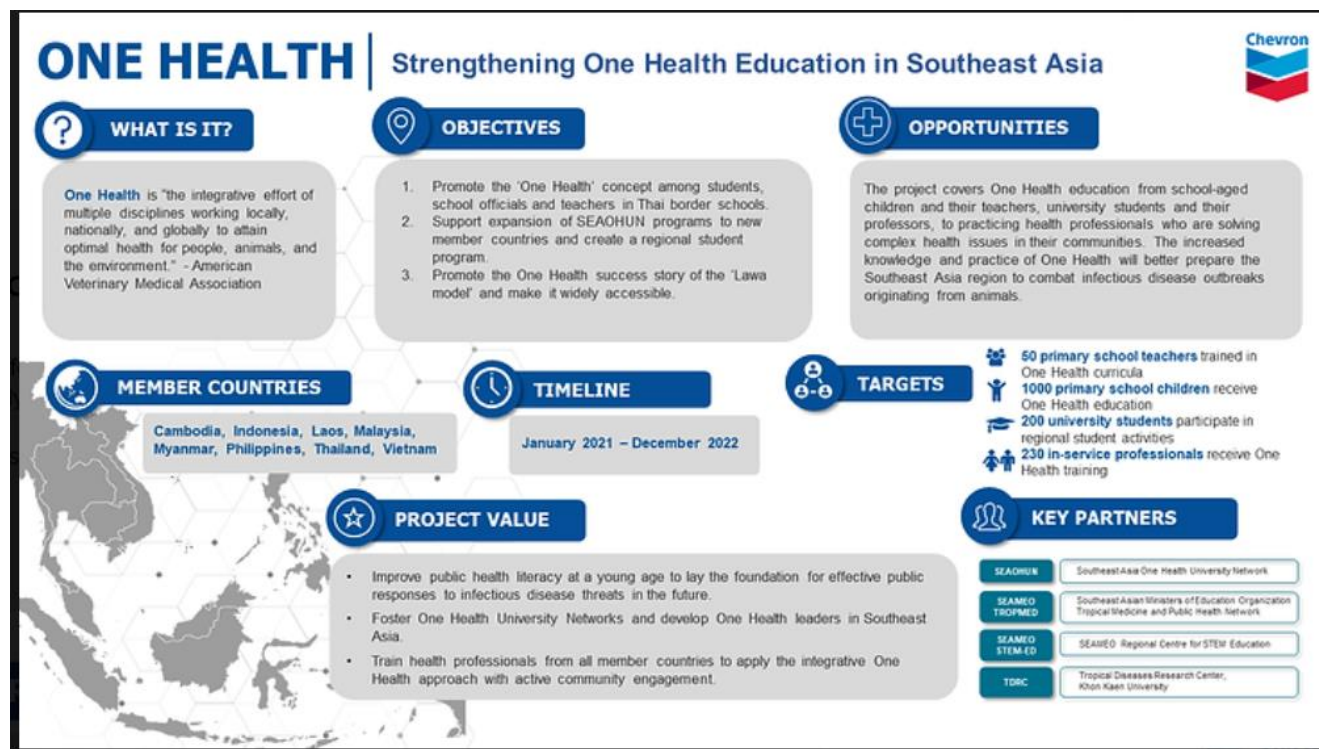
#### Social Awareness

- Empathy
- Organizational awareness
- Service orientation

## Nurturing Child Well-being through One Health Education



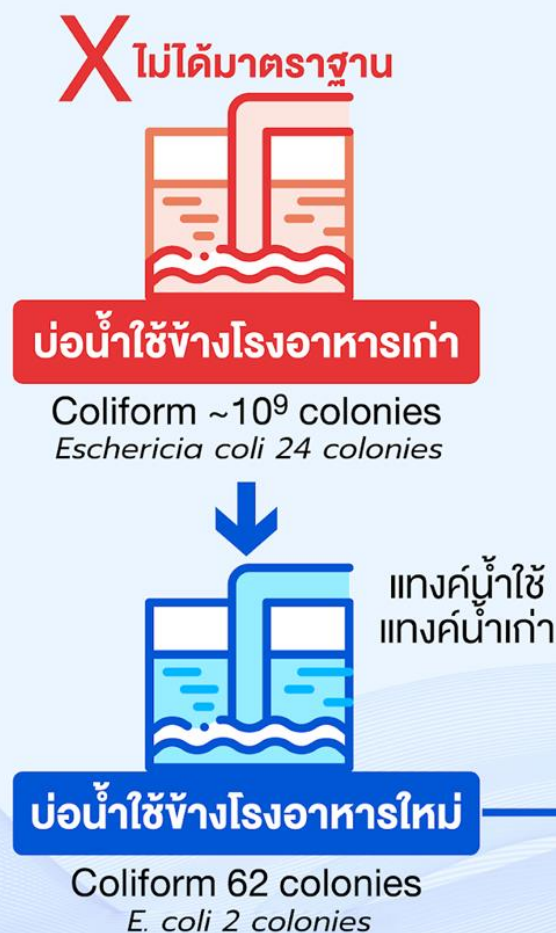
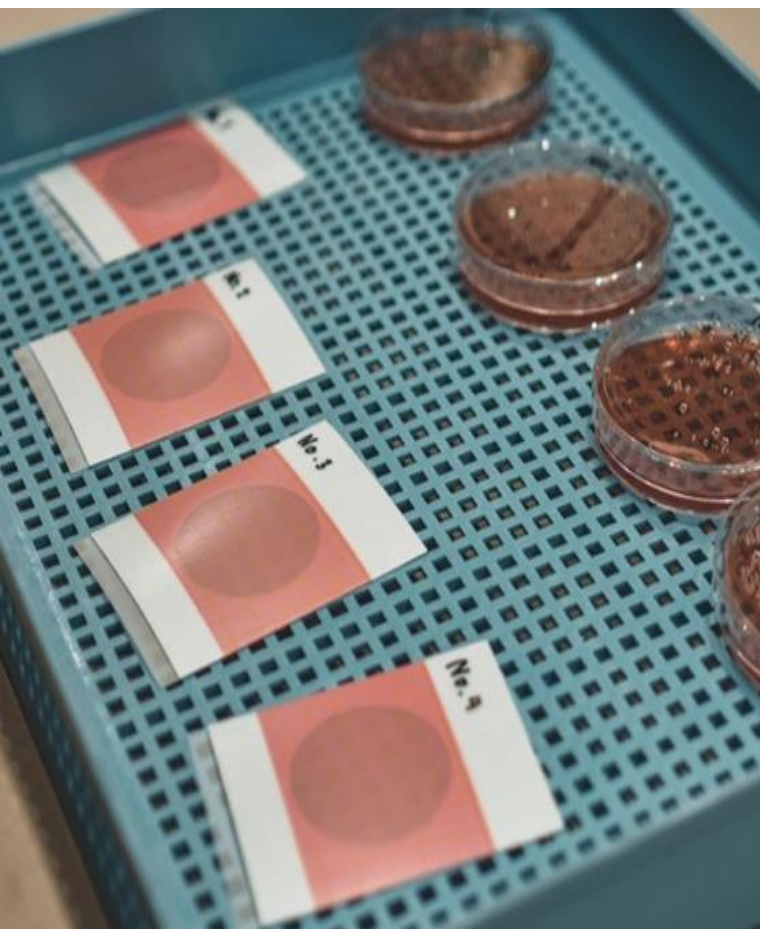
In a groundbreaking partnership between SEAMEO TROPED Network, SEAMEO Regional Centre for STEM Education (STEM-ED), Southeast Asia One Health University Network (SEAOHUN), and Chevron, the "Promoting One Health Education in Thai Border School" project has achieved remarkable success.



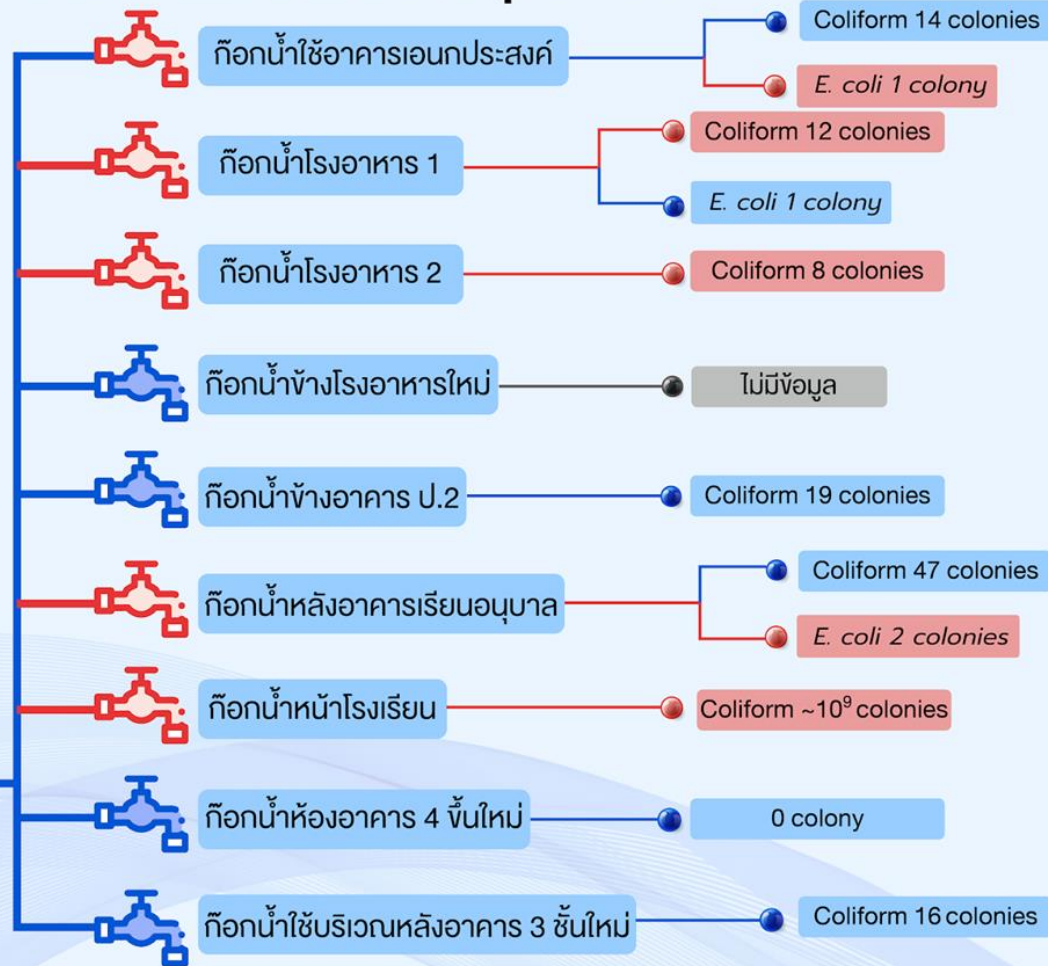
[Nurturing Child Well-being through One Health Education \(SEAOHUN.org\)](https://seahun.org)



# School-based Training: Systems Thinking & Problem solving



## แหล่งน้ำใช้ของโรงเรียนรุจิรวัฒน์







# Activity-based & Participative learning



# Peer to Peer Training

Student One Health Camp  
Aug 1 - 2, 2020 In Songkhla










## Thailand One Health University Network

### Intro

Thailand One Health University Network or  
THOHUN

-  **Page** · Non-Governmental Organization (NGO)
-  THOHUN- National Coordinating Office, 9th FL, Tranakchit Harinasuta building, 420/6 Ratchawithi Road, Bangkok, 10400, Bangkok, Thailand, Bangkok
-  02 354 4189

<https://www.facebook.com/ThailandOneHealthUniversityNetwork>

**Student One Health Voluntary  
Activity, 3-4 April 2023. Bangsaen,  
Chonburi province**







Thailand One Health University Network

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**☎** 02 354 4189

[https://www.facebook.com/Thailand  
One Health University Network](https://www.facebook.com/ThailandOneHealthUniversityNetwork)

Student One Health Voluntary  
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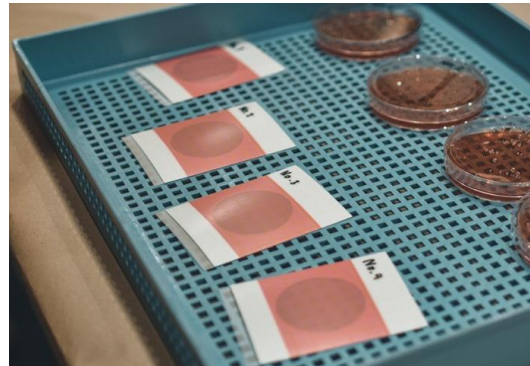
# ONE HEALTH – BASED LEARNING OR ON-JOB TRAINING

## Laboratory Investigation



## Water Quality Assessments

Technical skills on the quality assessments of water were transferred to students such as water sampling methods from the surface, deep, drinking water, and their physical and chemical properties of water, including their biological testing.



## Vector-Borne Disease

The procedures on mosquito adult trapping, mosquito larval survey and mosquito identification were provided previously through e-learning modules. On-site, participants, set up traps, placed their traps around the training venue and collected them in the following day. Participants practised on mosquito identification using a mosquito guide book and guidance from the instructors.



## Diagnosis of Helminthic

Common human and animal helminths were demonstrated by microscopy. Participants practised on helminthic and protozoal detection by microscopy using direct stool smear and Kato thick sample methods with identification keys provided as posters, and handbooks.



# Challenge



**Virtual or blended learning allow learners to repeat listening and re-reading knowledge many times as they want, and easy to access and spend less budget and effort to learn...**

“

**Despite of well design, most of learners believe that the virtual activities could neither gain their experience and skills nor friendship and partnership as the activity and field based learning.**

”



# THANK YOU FOR YOUR ATTENTION



[WWW.THOHUN.ORG](http://WWW.THOHUN.ORG)



[CONTACT.THOHUN@GMAIL.COM](mailto:CONTACT.THOHUN@GMAIL.COM)



# People interests related to youth

● school issues  
Search term

● Health issues  
Search term

● Teenage  
Search term

+ Add comparison

Worldwide ▼

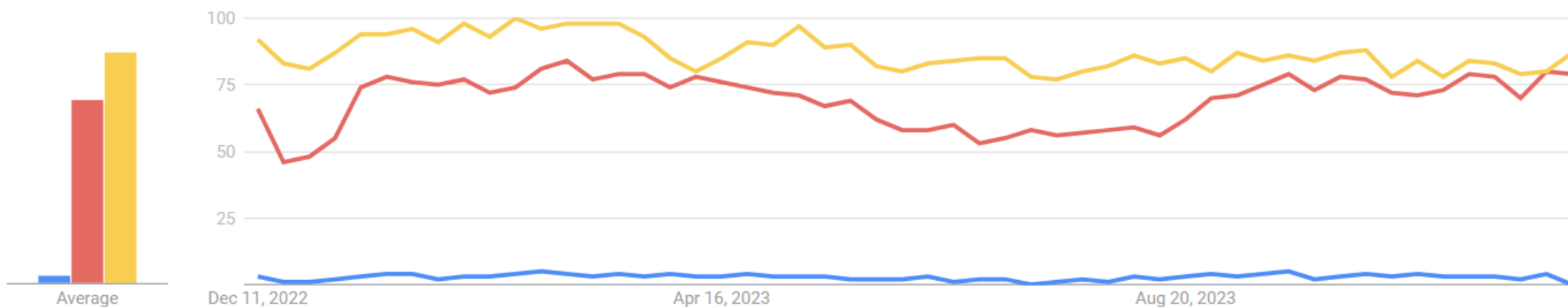
Past 12 months ▼

Health ▼

Web Search ▼

<https://trends.google.com/trends/>

Interest over time ⓘ





● school issues ● Health issues ● Teenage

Worldwide, Past 12 months, Health

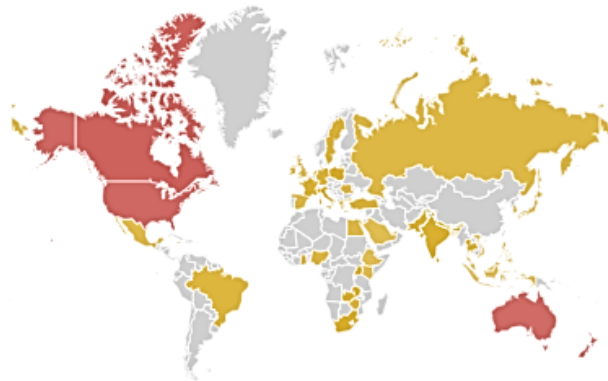
## Compared breakdown by region

Region ▼



● school issues ● Health issues ● Teenage

Sort: Interest for school issues ▼



1 Vietnam



2 South Africa



3 Australia



4 United States



5 Canada




Color intensity represents percentage of searches [LEARN MORE](#)

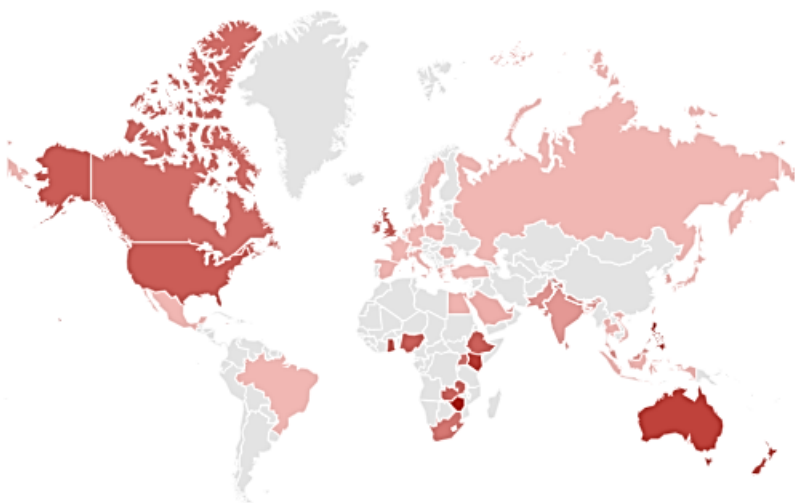
< Showing 1-5 of 45 regions >

☐ Include low search volume regions


## Health issues

Interest by region 

Region 



☐ Include low search volume regions

Related queries 


Rising 



1 kxanzaadi

Breakout 

2 kxanzaadi health issues

Breakout 


3 drake health issues

Breakout 

4 exacerbated health issues meaning

Breakout 

5 chris hemsworth health issues

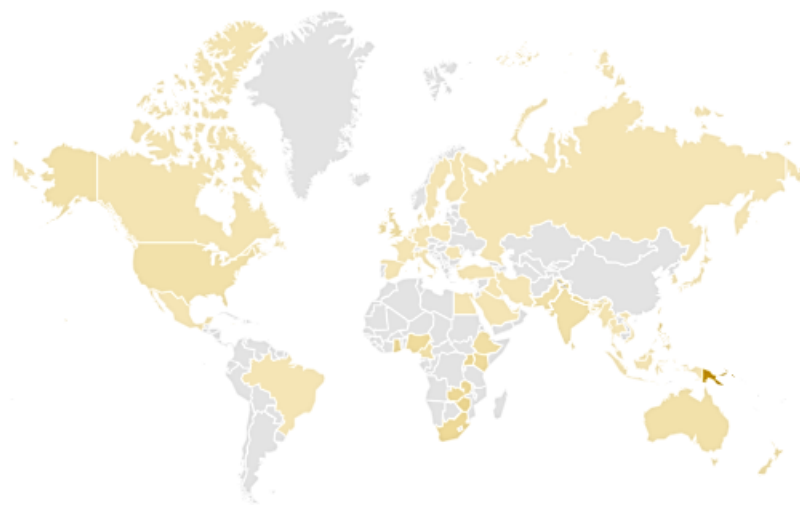
Breakout 

< Showing 1-5 of 21 queries >

## Teenage

Interest by region ?

Region ▾



☐ Include low search volume regions

Related queries ?

Rising ▾



1 teenage kraken

Breakout ⋮

2 how long is teenage mutant ninja turtles

Breakout ⋮

3 teenage mutant ninja turtles mutant mayhe...

Breakout ⋮

4 ruby gillman teenage kraken

Breakout ⋮

5 ruby gillman, teenage kraken

Breakout ⋮

< Showing 1-5 of 25 queries >