

The background of the slide is an underwater photograph showing a diver in a black wetsuit and yellow fins swimming through a massive, dense school of small, silvery fish. The water is a clear, deep blue-green color.

# Innovation in Green Technologies for Sustainable Development

R. Raghunathan, CEO, WWF-Singapore

# ASEAN

650 million people

1,000 spoken  
anguages

Combined GDP of  
US\$2.8 trillion



# Climate change lurks as a threat to Indonesia's food security



Photo by [The Diplomat](#)

# Innovation: Technology to enable P2P investments in agriculture



# Cambodia faces a drastic loss of biodiversity

Late  
1960s



**95%**  
Population  
Decrease



Early  
1990s

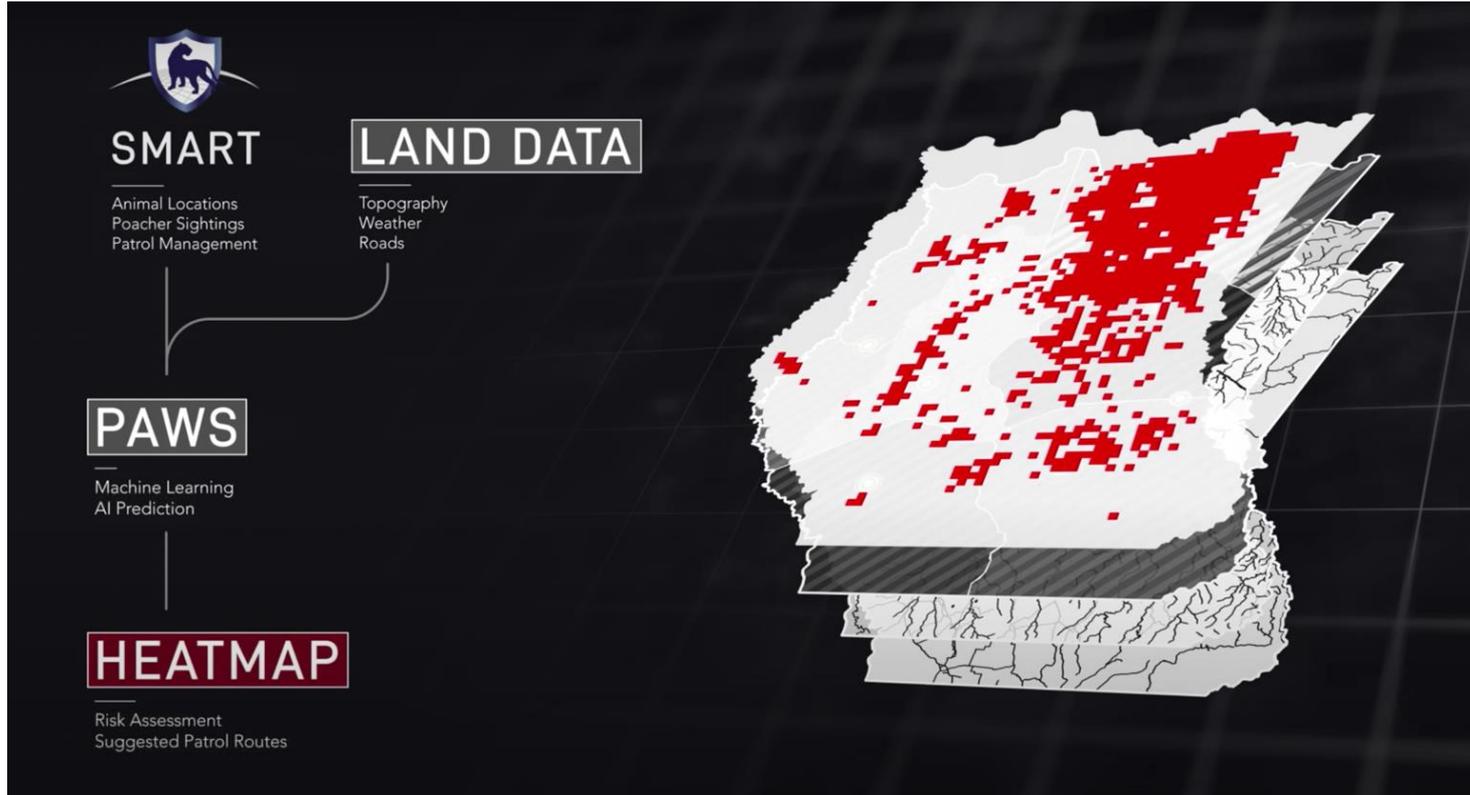


*Banteng  
(Ungulate, or  
hoofed mammal)*

# Innovation: AI to improve on-ground conservation effectiveness



## S.M.A.R.T – Spatial Monitoring and Recording Tool



# Singapore's challenges



Photo source: Unsplash

# Singapore is highly vulnerable to climate change



# We are dependent on global supply chains for 90% of our food



Photo by [London School of Economics and Political Science](#)

# How is Singapore innovating?



Photo source: Unsplash

# Renewable energy using our limited surface area

Tengoh Reservoir Solar Floating Farm – one of the world's largest floating farms



# Reducing energy usage with green buildings



Photo by [veryrealandrew](#)

# Repurpose existing spaces with urban farming



# WWF-Singapore and sustainable seafood



Photo by [The Straits Times](#)

# Recycling our limited resources



# Diversity of challenges across ASEAN



Photo by [SG Green Plan](#)

## Challenges:

- Land scarce
- Natural resource scarce
- Low-lying, island nation
- Government resolve & resources



Photo by [Mirror](#)

## Challenges:

- Large land & ocean space
- Mix of rural & urban areas
- Limited financial resources

# Wide range of innovations to meet diverse challenges in ASEAN



Photo by Margarita / Flickr

## Focuses on Innovations that can:

- Recycle resources
- Repurpose existing spaces
- Reclaim sustainable energy sources



Photo by [CNN](#)

## Focuses on Innovations to:

- Attract investment
- Optimise natural resources
- Conserve biodiversity

# Emerging opportunities in ASEAN for sustainable development



- Government: Policies to enable faster commercialization of IP
- Businesses, innovators, communities & NGO's to come together for the greater good



॥ माता भूमिः पुत्रोऽहं पृथिव्याः ॥

“Do not harm the environment, do not harm the water and the flora, earth is my mother, I am her son, may the waters remain fresh, do not harm the waters.... Tranquility be to the atmosphere, to the waters, to the crops and vegetation”

*Atharva Veda, Prithvi Sukta, slok no. 12.*