# ZOOMOTICIDISEASESI

**Transmission of Diseases from Animals to Humans** 

## Why are zoonoses becoming more prevalent?

Zoonoses, especially those caused by zoonotic viruses, are becoming more prevalent in line with development and globalisation. Let's look at some of these factors closely!

# Factors Driving the Emergence of Zoonotic Viruses



#### **Population Growth &** Urbanization

Denser cities make disease transmission easier! Clearing lands and developing industries close to natural environments increase the possibilities of wildlife and human interaction.



#### **Deforestation & Creation** of Dams & Reservoirs

These activities fragment habitats and displace species, forcing closer contact between wildlife and human, either directly or through another animal.



Intermediate hosts are species that transmit viruses to humans from its initial animal host.



#### **Pocket Fact:**

SARS-CoV was likely to be transmitted to humans from bats via the intermediate host, civet cats!



#### Climate Change

Global heating changes the behaviour of many species. Species that thrive in tropical settings now can also be found in regions where temperature used to be low!



#### **Pocket Fact:**

Zika virus, carried by mosquitoes, is an example of this!



Virus Hunter Icon:

Dian Fossey was a

wildlife, particularly

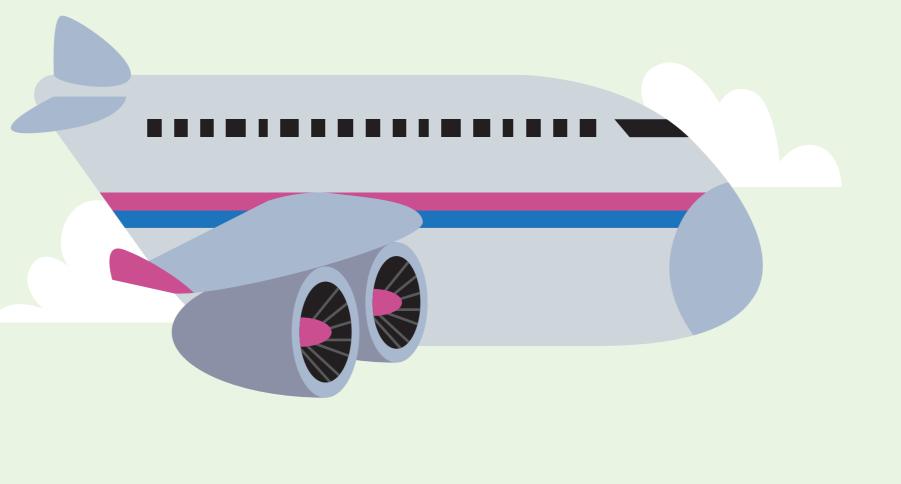
primates.

conservationist who spent

her life advocating against

trafficking and poaching of





#### **Transportation & Travel**

Millions of people travel—and millions of animals are transported annually, increasing possibility of spreading emerging viruses into new regions.



#### Illegal Wildlife Trafficking & Trading

Unlawful trade of animals, both living and in parts, brings animals to close proximity to humans. These animals include species of different origins, which may increase possibility of contact between natural reservoir and intermediate host!



#### **Pocket Fact:**

Natural reservoir is the group of animals in which a virus naturally lives, without necessarily causing a disease in the animals!

Tackling wildlife trafficking is one of the keys to preventing future zoonotic disease outbreaks.



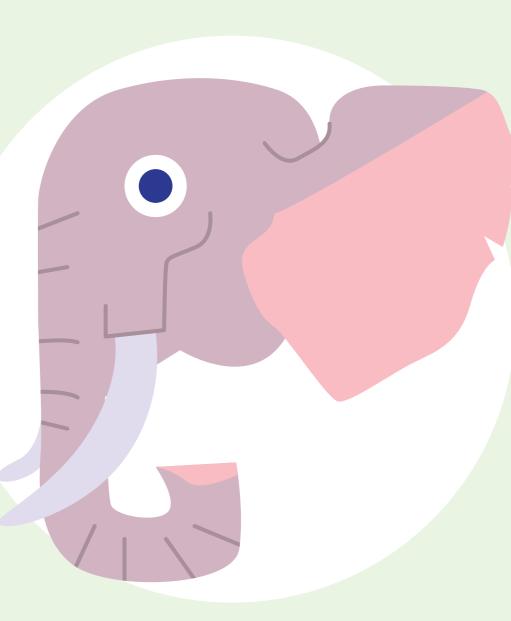
#### **Pocket Fact:**

Widely Trafficked Animals



#### **Tigers**

Poached for their parts including bone, skins, claws, teeth and blood



## **Elephants**

Poached for their ivory tusks



### **Pangolins**

Believed to be the most trafficked animal, pangolins have been identified to be a potential intermediate host for novel coronavirus



#### **Turtles**

Poached for their shell and meat, and illegally traded as exotic pets



#### Rhinos

Poached for their horn



# Hornbills

Poached for their bill casque



#### Try this:

How does animal trafficking facilitate development of zoonotic viruses?



#### What's Next?

Other than understanding factors that drive emerging viruses, previous experience in disease outbreaks can also help us to prepare better for future disease threats.

Let's continue virus hunting!

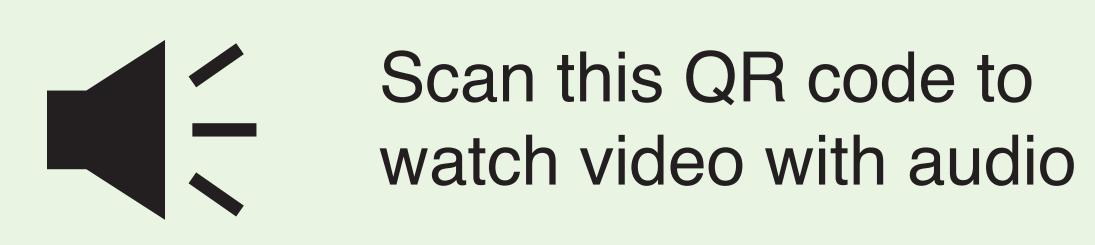
# ZOONOTIC DISENSES

# Wildlife Trafficking Facilitates the Emergence of Zoonotic Diseases

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The Pangolin and the Dark World of Trafficking is a multimedia project by The Star's award-winning R.AGE investigative team, in collaboration with the Environmental Reporting Collective. The videos you see here are the result of a months-long investigation by R.AGE journalists into the illegal wildlife trafficking trade, which sees large numbers of endangered wildlife transported across multiple countries, potentially carrying or picking up rare zoonotic viruses along the way. Read the full illustrated report at rage.my/pangolin.







#### **Pocket Fact:**

Wildlife trafficking involves illegal trading of wild animals or their parts. Trafficking also includes animal poaching, which is illegal hunting and capturing of wild animals.