

# Effects of climate change and globalization on the transmission of vector-borne endemic diseases

## SERVICE-LEARNING PROJECT

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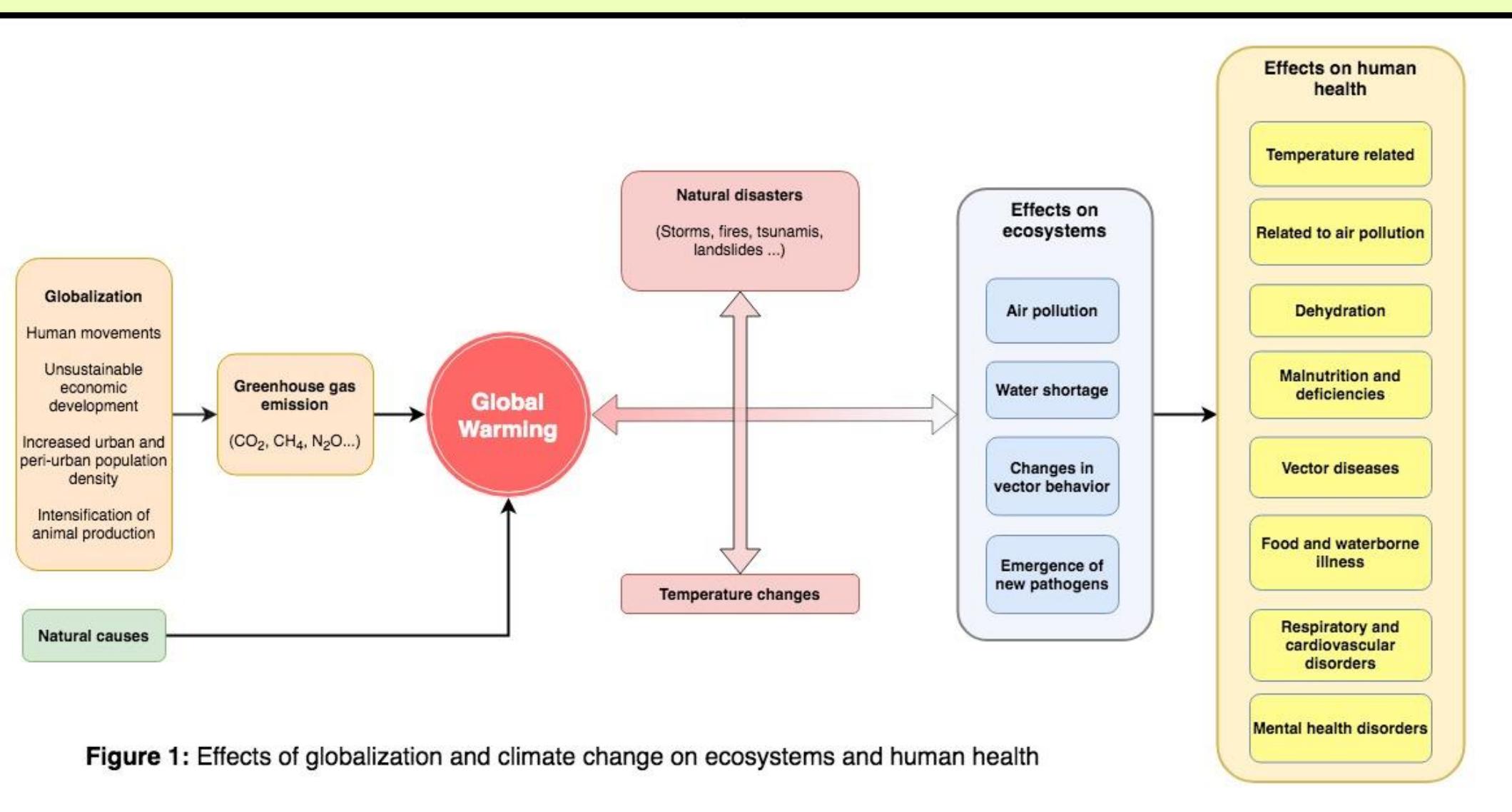
- Project intervention:** Ribot i Serra Institute (Sabadell)
- Mission:** public educational center for ESO, baccalaureate and training cycles composed of 70% of students of foreign origin with low academic level
- Class intervention:** 23 students in the first year of Baccalaureate, in the framework of the subject «Sciences for the contemporary world».



### OBJECTIVES

- The realization of this **Learning and Service project** focuses on the **adaptation** of a scientific topic of social interest.
- The intervention is based on a total of 4 sessions composed of **interactive activities** in order to raise student's **awareness** on the relationship between **globalization, climate change and vector-borne endemic diseases**, as well as **encourage their interest** in science.

### THEORETICAL CONTEXT



As a veterinary student, the theoretical context focuses on three **zoonotic** endemic diseases of **vectorial** transmission, with cases reported in **Spain** and with a close **relationship with climate change and globalization**:

- Leishmaniosis
- Mediterranean spotted fever
- Murine typhus

### PRELIMINARY SESSION

- First **contact** with the class group.
- Observation of **work dynamic** and the **general atmosphere**.
- Evaluation of the level of **individual knowledge** on the subject with a Google form.

### FIRST SESSION

- Division of the class into groups of 3-4 students to form **homogenized teams** of **similar academic level**.
- Introduction to **general concepts** relating to climate change, globalization and vector-borne diseases with a **Kahoot**.
  - Construction of a **mosquito trap**.



Figure 2: Realization of the Kahoot



Figure 3: Construction of a mosquito trap

### SECOND SESSION

- Vector **observation** and **identification** using a binocular loupe (adult samples of **fleas, mosquitoes** and **ticks**)
- Reconstruction of the **biological cycle** of the vectors using cardboards.
  - Reflexion on **preventive measures**.



Figure 4: Material used during the second session

### LAST SESSION

- Online-session:** study on **zoonotic endemic** diseases of **vectorial** transmission in **Spain** (Classroom platform).
- Material used:** theoretical presentation with audio, a Google form to fill out individually and three crosswords to complete in teams, with a detailed posterior correction.

### CONCLUSION AND REFLEXION

For me, it was a **very enriching** human experience through the **relationship** and **cooperation** established between students of **different cultures** and **social classes**.

Thanks to this project, I have been able to acquire **new skills** in another aspect of veterinary medicine: **raising awareness**, **transmitting** and **adapting** my knowledge to a specific sector of our society.

