2. THEME 2 : Environement - Serge Morand and Claire Lajaunie

Question 1 : How do you define the environment?

- Composition of abiotic and biotic factors. Air, water, soil, land, climate, carbon.
- Wildlife, human, animal, flora, fauna. Everything around us. My environment is what is surrounding me.
- Ecosystem functions, social environment as part of the global environment.
- Interations between living and non-living things. Home where you live happily, harmony on the planet.
- Law, policies, culture, religious practices, beliefs; well being.

Question 2 : What environmental factors are crucial for your research / activities?

- Hydrology, water quality, water, soil, biodiversity, pollution. Soil health, good agro-ecological practices, biogeochemical cycles, drivers of biodiversity loss, carbon, dust. Water, soil, human, animal communities, plants. Temperature, humidity, land use, urban, rural environment, forest.
- Interface between animal, human and the environment. Human interaction with wild species of fauna and flora.
- Dynamic of environmental factors and their links; land degradation, biodiversity, climate change and their interactions.
- Resilience, which is quite difficult to measure.
- Oil palm plantation.
- Genetic diversity.
- Socio-cultural context participation, socioecological system.

Question 3 : What socio-economic aspects should be taken into account and how?

- Awareness and engagement in soil health.
- Socio-economic drivers of diseases, pesticide use, clinical trials.
- Mechanisms of political decision in terms of human/animal and environmental health, demographic factors, integration of human health and animal health.
- Demographics (urban, rural areas), activities (agricultural, industrial, recreational…), laws.
- Level of poverty and richness, disease burden, poverty line, poverty, occupation, age/gender.
- Circular economy, pressure of development (e.g. market integration and cash economy).
- Zoonotic disease risk, knowledge transfer.
- Environmental heritage and landscape (practical interpretation of culture). Traditional ecological knowledge, indigenous/local knowledge, cultural habits. Urban/rural distribution, ancestral lands.
- Education, beliefs, national laws and policies. National and international multilateral environmental agreements.

Question 4 : Which environmental data do you need? and where do you get them?

- Climate data, animal data, pathogen data; soil carbon data. Soil biodiversity esp. insects. Temperature, humidity, land use (satellite),
- Need of “temporal” environmental data: long term monitoring, remote sensing, geo-localisation.
- DNA, scientific literature.

- Infection rate among different zoonotic diseases.
- Data sharing system, data processing. Standard protocol projects.
- Asean clearing-house mechanism. Land use habitat, GPS collars, household socio-economics, field surveys.

Observations of the recurring themes mentioned	**Proposition for future research, next step for OHSEA**
• Environment includes a lot of factors : Air, water, soil, land, climate, carbon, wildlife (human, animal, flora, fauna), ecosystem function (including social environment) between living and non-living things, law, policies, culture, religious practices, beliefs; well being. • To monitor these factor, a lot of environmental pieces of information are required : water, soil, pollution, agro-ecological practices, biogeochemical cycles, drivers of biodiversity loss, carbon, dust, animal communities, plants, temperature, humidity, land use, urban, rural environment, forest, Infection rate, ... • No “temporal” environmental data: long term monitoring, remote sensing, geo-localisation. • No data sharing system, data processing	**Some are not always taken into account, even though they should, because they bring information on the monitored factors** : integration of human and animal health, socio-economic drivers of diseases, pesticide use, clinical trials, political decisions and laws, demographic factors, activities, poverty line, poverty, circular economy, pressure of development, knowledge transfer on zoonotic diseases and ecology **Explore new data gathering technics useful for the environment**: for example, temperature, humidity, land use (obtained by satellite) ; or fauna data (obtained via GPS collars) **Easy access** to scientific literature is needed **Keeping old data** for comparison