

**GENÈSE
MULTIFACTORIELLE
DES MALADIES
CHRONIQUES**

**UNESCO, COLLOQUE 14 novembre 2014
SECOND APPEL DE PARIS**

Main Problems of our Time

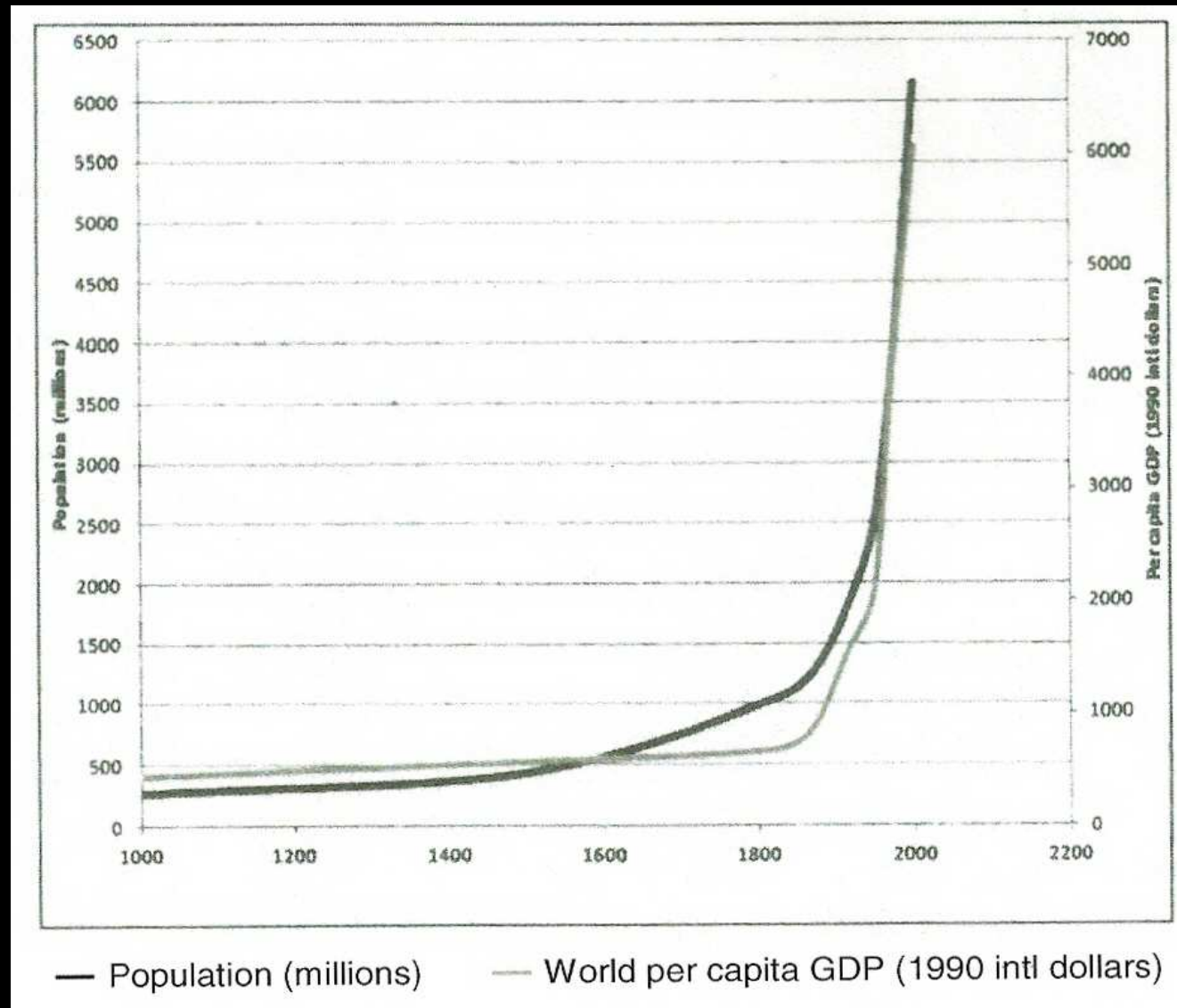
- Demography**
- Environmental changes**
- Health**

□ Demography

**Uncontrolled growth of
population
in some parts of the World**

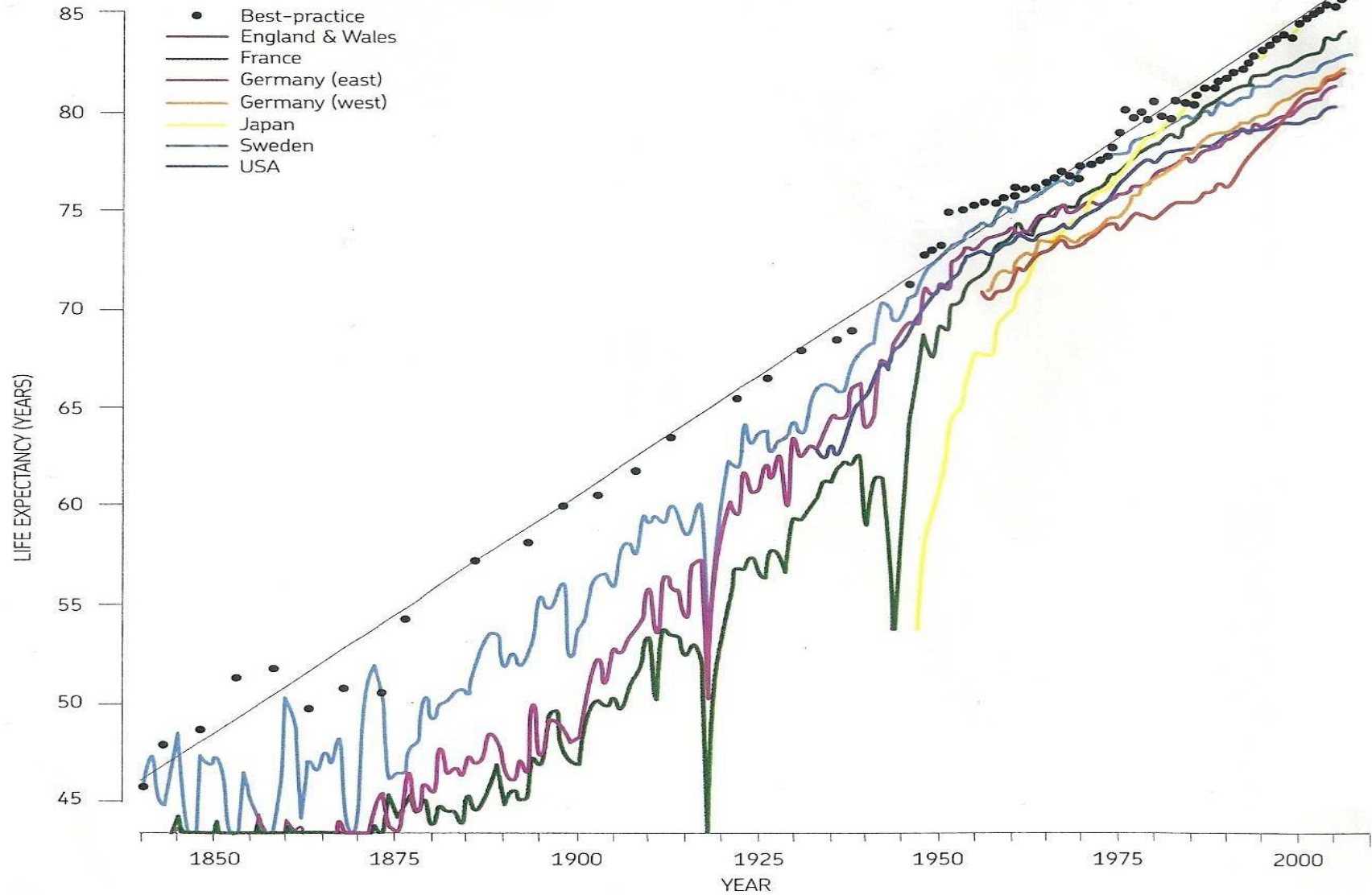
Water, food shortages

World Population and Per Capita GDP (PPP) from 1000 to 2005*



* Ivo Štaus and Gary Jacobs, "Human Capital and Sustainability", Sustainability 1, N° 3 (2011)

Increase in life expectancy (1850 – 2000)



Source: Christensen *et al.*, Lancet, 2009.

❑ **Environmental changes**

- **Global warming,**
- **Air and food pollution,**
- **Electromagnetic fog**

□ Main Domains in Research

- Energy
- Health
- Communication

□ Health

- Ageing
- Chronic diseases
- New or recurrent epidemics
- Globalization

Emergence or reemergence of new epidemics due to :

- ✓ Globalization of exchanges and travels
- ✓ Demography: concentration in large cities
- ✓ Nutrition (pesticides, water)
- ✓ Environmental factors
- ✓ Climate changes, electromagnetic radiations
- ✓ Contacts with wild and farm animals
- ✓ Decline of immune defenses

The most important burden

Chronic Diseases

- Cancers
- Cardiovascular
- Neurodegenerative
- Arthritic
- Autoimmune
- Multifactorial, but in common:
 - oxidative stress
 - infectious agents (?)

Various environmental factors effects

accumulate

Radiations (γ , X, UV, visible, hertzian)

+

Air chemical pollution

+

Inadequate Food

+

Excessive physical exercise

+

tobacco smoke

+

alcohol

+

ischemia

+

Parasitic infections

+

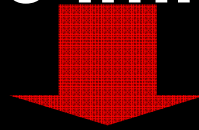
Bacterial infections

+

Viral infections

= **DISEASE**

**Oxidative stress
Weakens the immune system**



**Activates transcription factors
(NF-kappa B)**



**Activates genes involved
in cell division, inflammatory cytokines,
lymphocytes activation**



**Immune dysfunction, apoptosis
(TH1 → TH2)**

A newly discovered property of DNA :

Resonance emission of low frequency
electromagnetic waves by high water
dilutions of DNA.

FACTS

Detection of Ultra Low Frequencies Waves (ULF 500-2000 hertz) in certain dilutions of filtrates (100nM, 20nM, 15nM) from cultures of micro-organisms (virus, bacteria) or from the plasma of humans infected with the same agents.

The Evolution of Medicine

Toward 4 P Qualities

- P1 Preventive
- P2 Predictive
- P3 Personalized
- P4 Participative