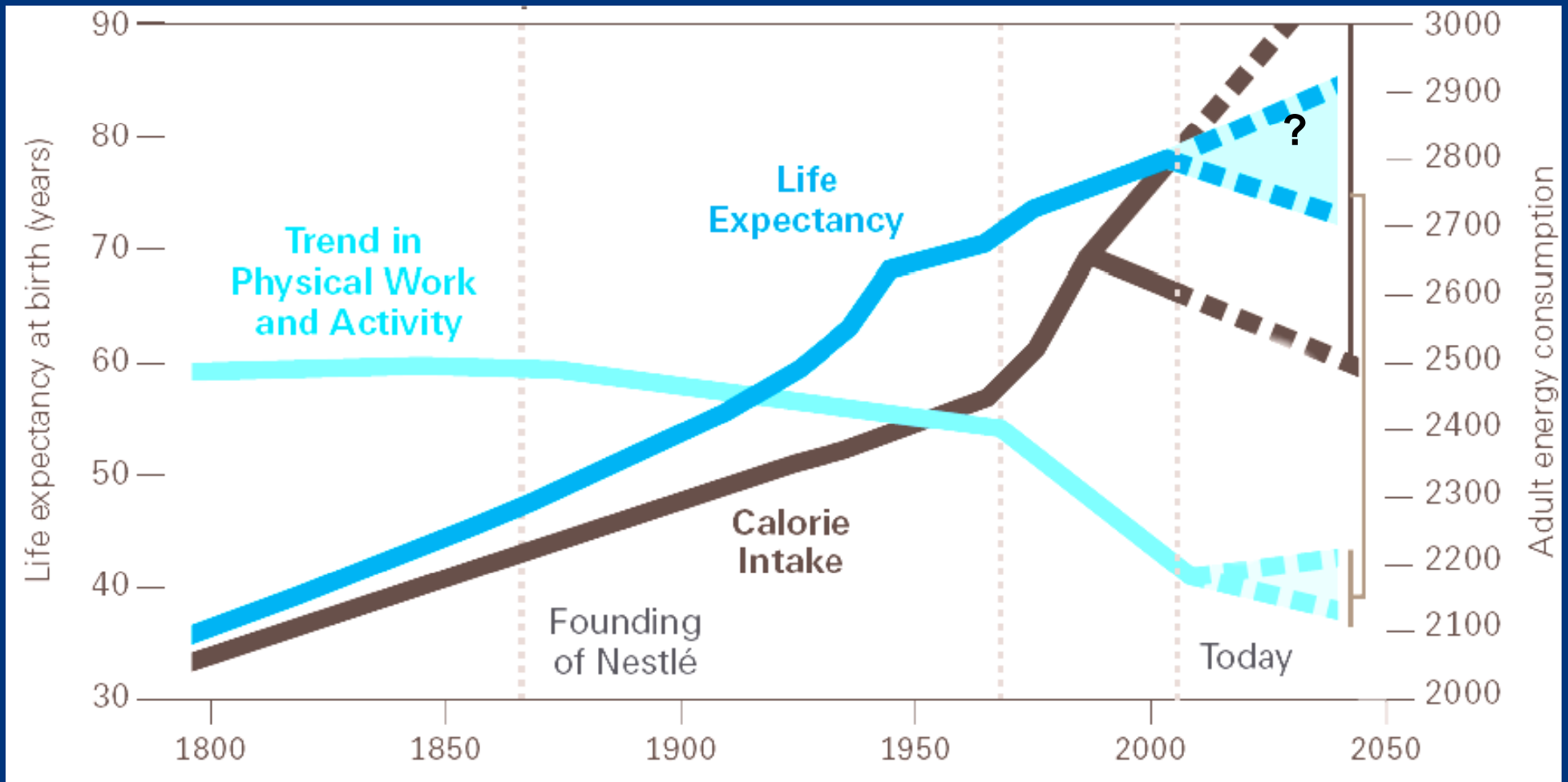


Unsustainable trends and imbalances

P. Brabeck-Letmathe
Chairman Nestlé SA Switzerland

Georgetown University
Washington 10 October 2008

From positive trends to imbalances: calorie intake and calorie needs, 1800 to 2050

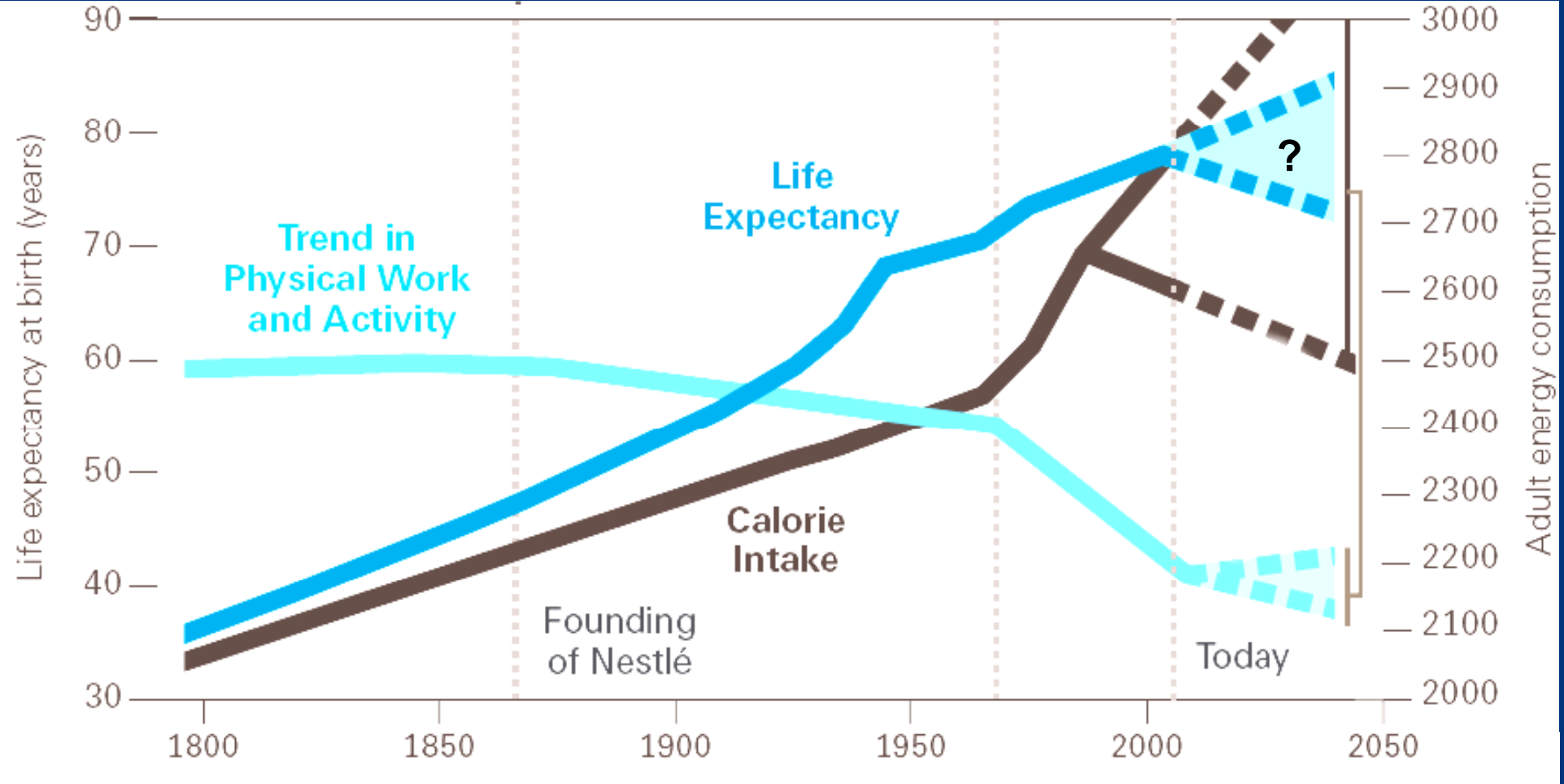


Source: Nestlé Research Center

WB IMF Washington PBL/Ob/tv 10 October 2008 #2

Nestlé SA

Need for new business approaches



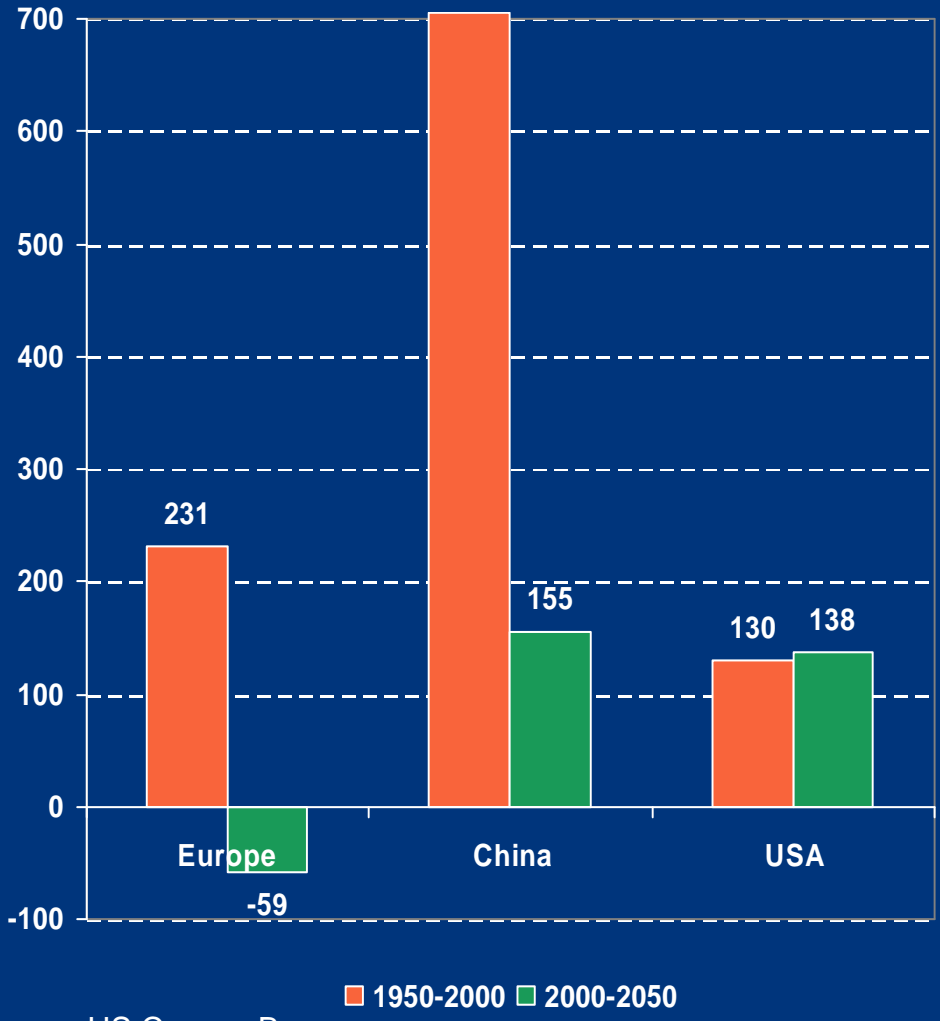
Public Health
Vitamins
Iodine

Targeted Nutrition
Low Fat/Low Salt
Probiotics
Nestlé NHW

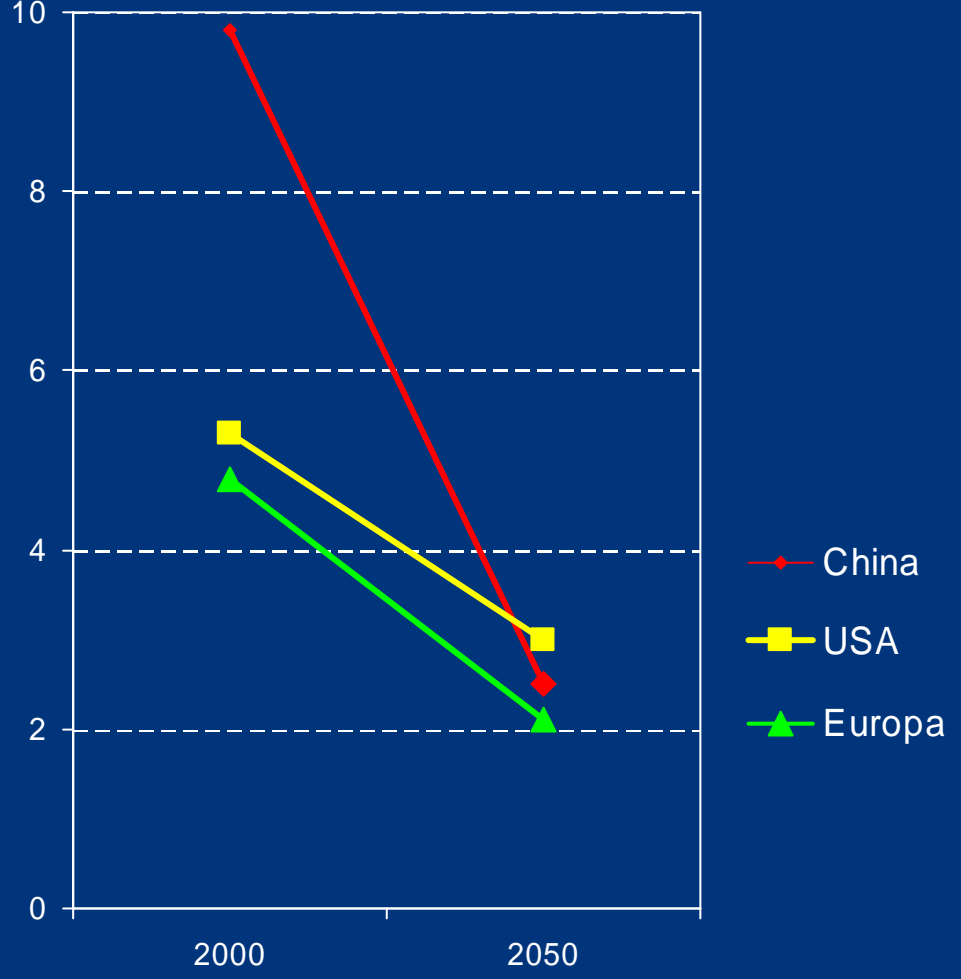
Individualized Nutrition
Biomarkers
Genetic Profiling
Nutrient Efficacy

Population growth and structure

Change in population in millions, 1950-2000 and 2000-2050



Number of people at active age per person over 65



Source: US Census Bureau

From water shortage to food shortage

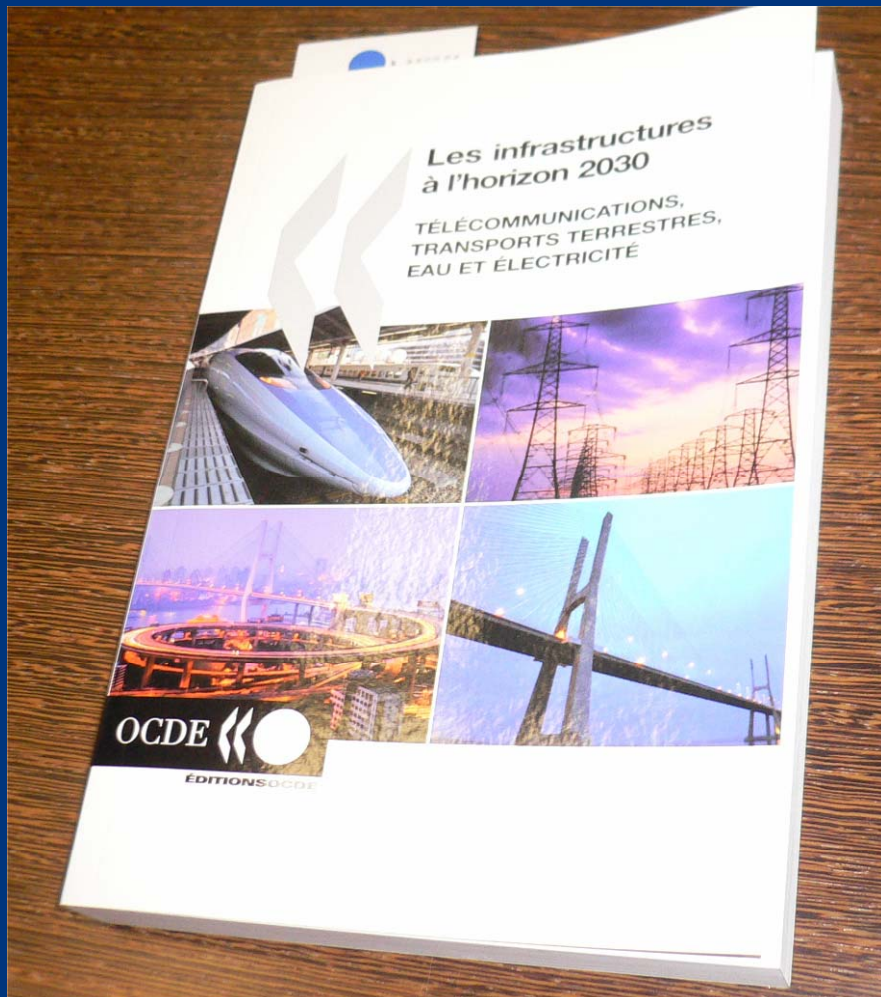
“If present trends continue the livelihoods of one third of the world’s population will be affected by water scarcity by 2025.

We could be facing annual losses equivalent to the entire grain crops of India and the US combined.”

*Frank Rijsberman, Director General
International Water Management
Institute, 2003*



Lack of investment in water infrastructure



Investment for water distribution and sanitation for 34 countries (source OECD)

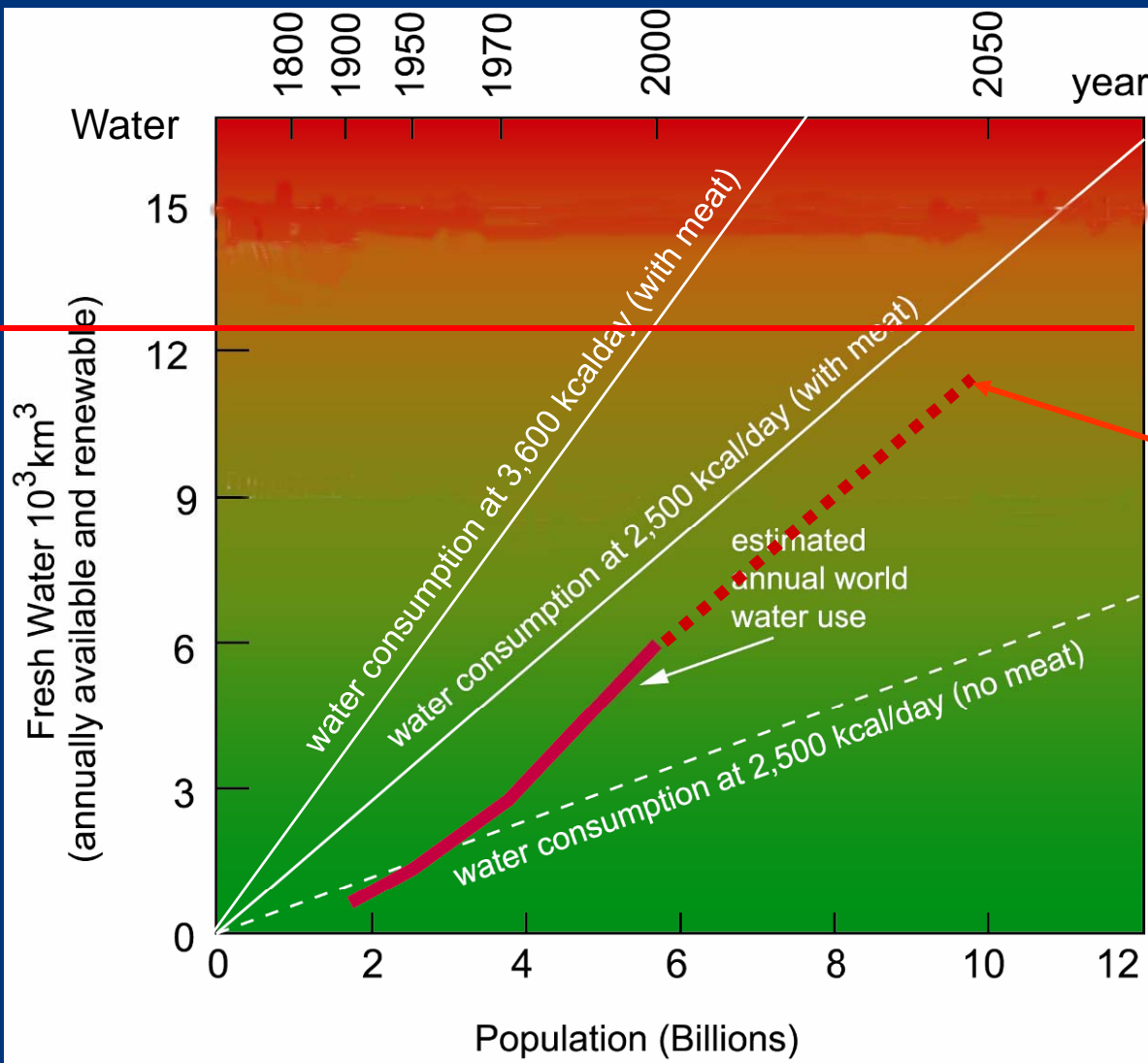
2007-2025 investement required:
US\$ 1040 billion per year

actual as of today
US\$ 580 billion per year

Present water losses in pipes:
30%, up to 75%?

Source: OECD 2006

Water for agriculture: one litre per calorie produced



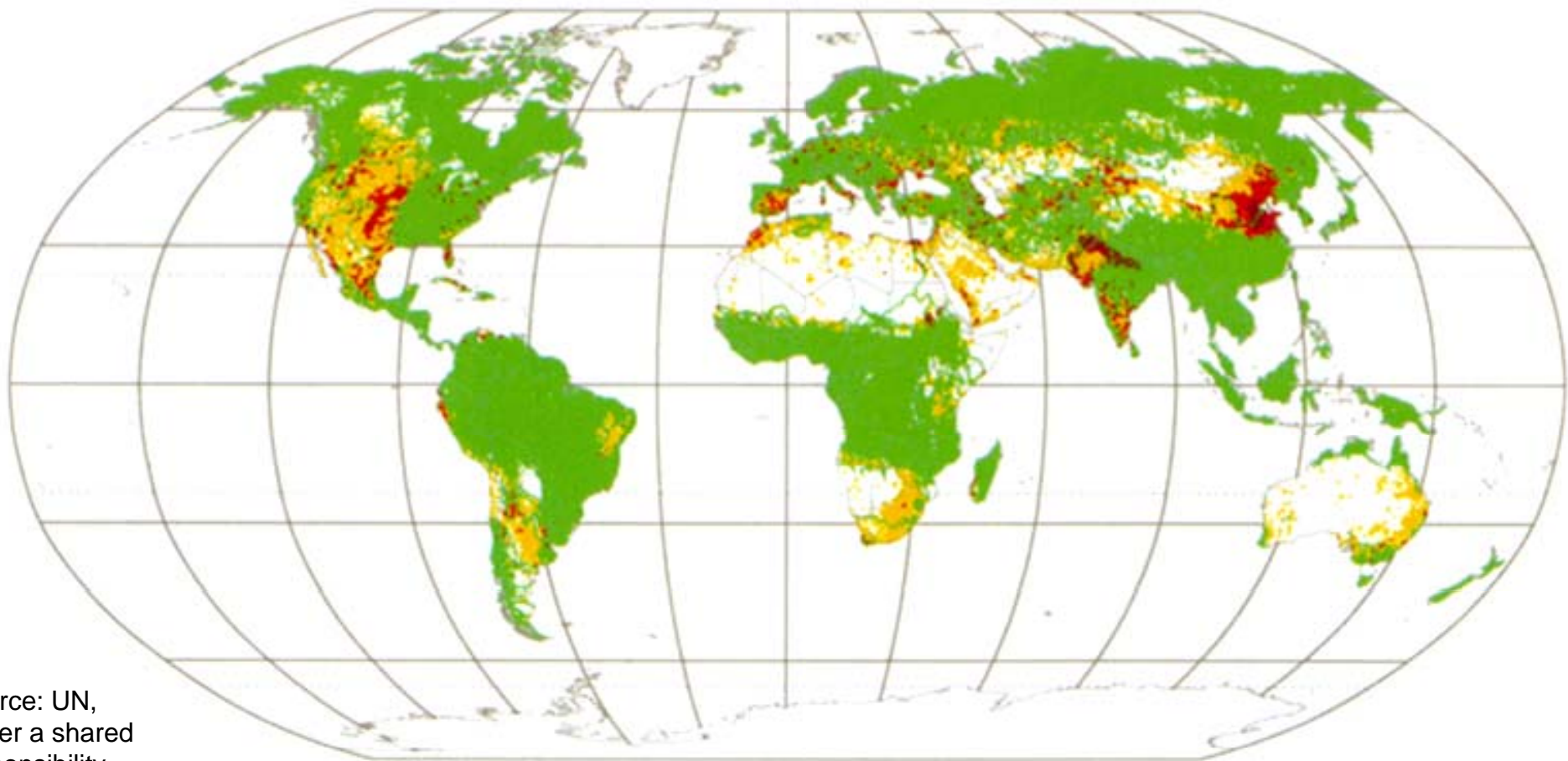
Upper limit of freshwater available globally for human use

World water withdrawals: actual and scenario 2050

Source: A. Zehnder, Swiss Federal Institute of Aquatic Science and Technology ETHZ 1999

Outlook: Falkenmark/Lannerstadt: Consumptive water use to feed humanity – curing a blind spot; in: Hydrology and Earth System Sciences, 9.2005, pp 15-28 (published by European Geoscience Union) and Shiklomanov 1999

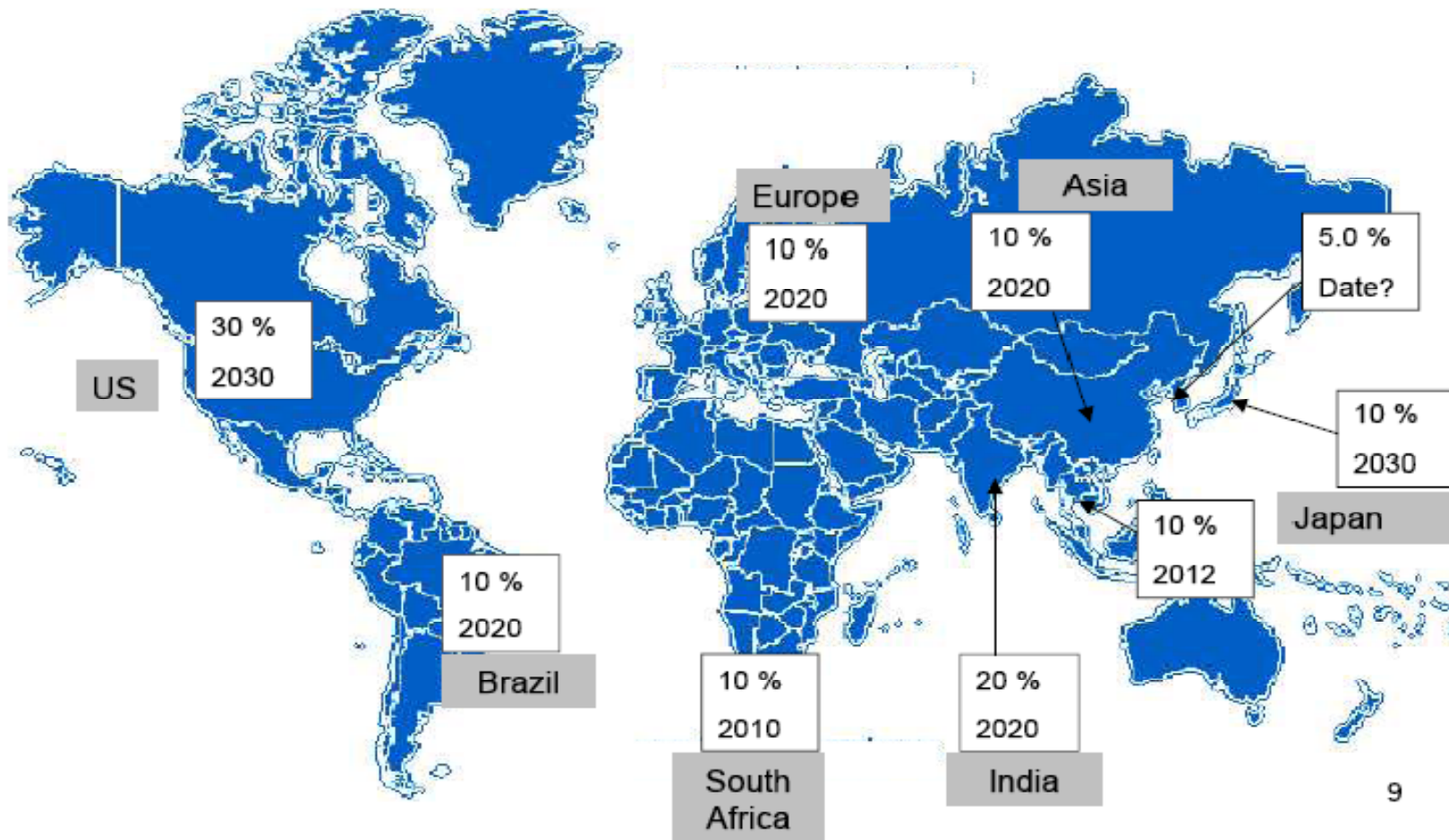
Water withdrawals exceeding natural supply



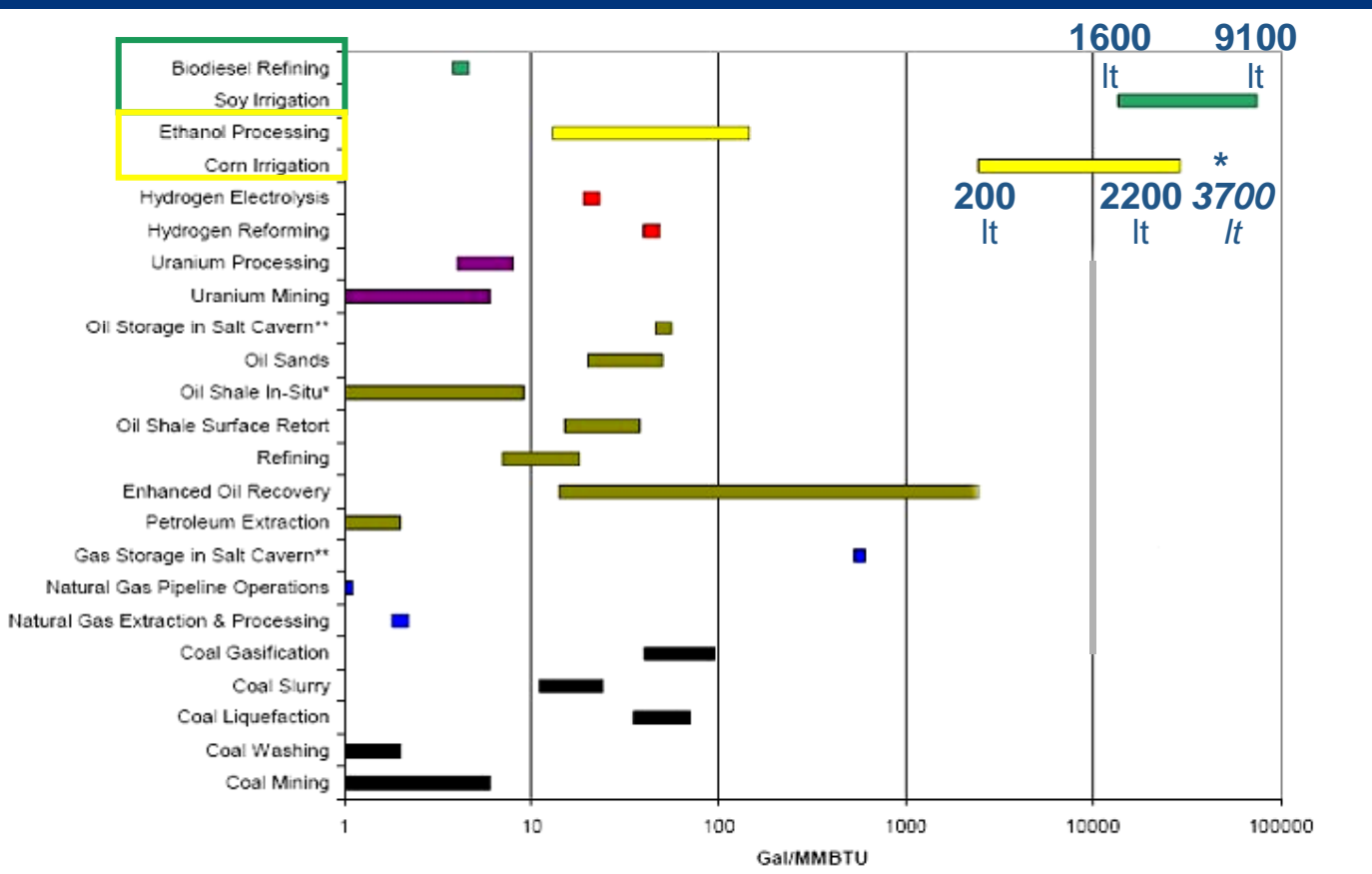
Source: UN,
Water a shared
responsibility,
New York 2006



New trends, but in the wrong direction – targets for biofuel in transportation



Freshwater withdrawals to produce biofuels



Water withdrawn:
for 1 lt of biodiesel
up to 9,100 lt
(mostly for farming the
raw material)

for 1 lt of ethanol from
corn or sugar cane;
up to 3,700 lt*

Figure V-4. Water Consumption Per-Unit-Energy and Current Water Use for Fuel Extraction and Processing
See Appendix B for Data References

Energy Demands on Water Resources; Report to Congress; U.S. Department of Energy; December 2006; * IWMI **own estimate

Principles for sustainable water governance: full cost recovery, tradable water rights

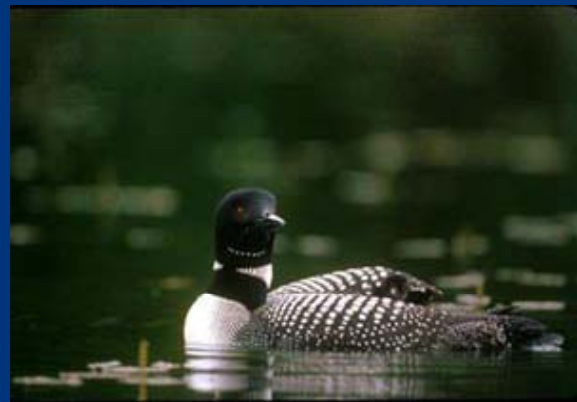
Tariffs that recover the full cost of industry-
and household water

Exception: free water to cover basic needs
for those who cannot afford to pay



Full cost recovery for irrigation
infrastructure, water rights
tradable among farmers

Exception: quotas/caps for the environment
i.e., rivers, lakes and wetlands.



For water in Oman: <http://uk.youtube.com/watch?v=C7smujmaMfE>



Nestlé

Good Food, Good Life