

IAEA - VIENNA

OBJECTIVES, CAPABILITIES AND
DANGERS FOR INTERNATIONAL
BODIES AND DONORS

JOHN HODGES

Gene-based technologies

UNPRECEDENTED OPPORTUNITIES

IMPROVING

or

REDUCING

QUALITY OF LIFE

**MIX OF POSITIONS
IN SOCIETY**

**MIX OF POSITIONS
IN SOCIETY**

FAUSTIAN BARGAIN
Benefits & Dangers

**MIX OF POSITIONS
IN SOCIETY**

FAUSTIAN BARGAIN
Benefits & Dangers

**DILEMMA FOR
INTERNATIONAL BODIES
AND DONORS**
Collateral Damage

POWER OF G-B TECHNOLOGY

BREAKING NEW FRONTIERS

MODIFY LIFE:

ANIMALS, FEED, MICROBES, PARASITES,
PATHOGENS

POWER OF G-B TECHNOLOGY

BREAKING NEW FRONTIERS

MODIFY LIFE:

ANIMALS, FEED, MICROBES, PARASITES,
PATHOGENS

COMPLEX NETWORK OF GENOMES

EACH OPERATING WITHIN SPECIES BOUNDARY

ASSUMPTION

RISK TAKING IS INEVITABLE FOR PROGRESS

DECISIONS

SENSIBLE & ETHICAL

ASSUMPTION

RISK TAKING IS INEVITABLE FOR PROGRESS

DECISIONS

SENSIBLE & ETHICAL

CAPITALISM

RISK & BENEFIT TOGETHER

NEGATIVE CONSEQUENCES UPON

RISK-TAKERS &

DECISION MAKERS

NOT UPON SOCIETY

NUCLEAR PHYSICS
GOVERNMENT CONTROL
RESTRICTED IN LOCATION
SECURITY
SCIENTISTS ON SITE
INTERNATIONAL
AGREEMENTS

NUCLEAR PHYSICS
GOVERNMENT CONTROL
RESTRICTED IN LOCATION
SECURITY
SCIENTISTS ON SITE
INTERNATIONAL
AGREEMENTS

HIROSHIMA
NAGASAKI
CHERNOBYL
NOT REGIONAL OR
GLOBAL EFFECTS

WORLD FOOD SYSTEM
COMPLEX
GENETIC NETWORK

GLOBALIZATION INCREASES
BIOLOGICAL COMPLEXITY

G-B-Tech UNKNOWN RISKS
TYPES WHICH CANNOT
BE TESTED IN
ADVANCE

THREE MAJOR ISSUES
FOR INTERNATIONAL
BODIES
AND DONORS

FIRST:
BIOLOGICAL
UNCERTAINTIES
AND RISKS

THREE MAJOR ISSUES
FOR INTERNATIONAL BODIES
AND DONORS

SECOND:
HUMAN DELIVERY
SYSTEMS

THREE MAJOR ISSUES
FOR INTERNATIONAL
BODIES AND DONORS

THIRD:
FEAR OF TERRORIST
USES

THREE MAJOR ISSUES
FOR INTERNATIONAL BODIES
AND DONORS

BIOLOGICAL UNCERTAINTIES
AND RISKS

HUMAN DELIVERY SYSTEMS

FEAR OF TERRORIST
USES

**CRITICAL ISSUES RE
OPPORTUNITIES CAPABILITIES DANGERS**

**DIFFICULTIES IN
TRANSFERRING GENETIC
PROJECTS FOR LIVESTOCK**

CRITICAL ISSUES RE
OPPORTUNITIES CAPABILITIES DANGERS

EXISTING TECHNOLOGIES
AND PRODUCTS
NOT YET STABLE

CRITICAL ISSUES RE
OPPORTUNITIES CAPABILITIES DANGERS

UNINTENDED EFFECTS

**CRITICAL ISSUES RE
OPPORTUNITIES CAPABILITIES DANGERS**

**G-B-Tech designed for
TEMPERATE REGIONS**

**CRITICAL ISSUES RE
OPPORTUNITIES CAPABILITIES DANGERS**

**SELECTION
TEMPERATE: SINGLE
TROPICS: SEVERAL**

**CRITICAL ISSUES RE
OPPORTUNITIES CAPABILITIES DANGERS**

SCIENTIFIC BACK-UP

**CRITICAL ISSUES RE
OPPORTUNITIES CAPABILITIES DANGERS**

**CURRENT LACK
OF PRECISION**

**CRITICAL ISSUES RE
OPPORTUNITIES CAPABILITIES DANGERS**

**DISPOSAL OF
DISCARD ANIMALS**

CRITICAL ISSUES RE
OPPORTUNITIES CAPABILITIES DANGERS

PREDATORS
AND TRANSGENES

CRITICAL ISSUES RE
OPPORTUNITIES CAPABILITIES DANGERS

POVERTY ALLEVIATION

CRITICAL ISSUES RE
OPPORTUNITIES CAPABILITIES DANGERS

WHO WILL BE
DECISION-MAKERS ?

**CRITICAL ISSUES RE
OPPORTUNITIES CAPABILITIES DANGERS**

**WHO WILL BE
BENEFICIARIES ?**

CRITICAL ISSUES RE
OPPORTUNITIES CAPABILITIES DANGERS

GLOBAL
REGIONAL
LOCAL

CRITICAL ISSUES RE
OPPORTUNITIES CAPABILITIES DANGERS

INTELLECTUAL
PROPERTY RIGHTS

CRITICAL ISSUES RE
OPPORTUNITIES CAPABILITIES DANGERS

LIABILITY
INSURANCE

**CRITICAL ISSUES RE
OPPORTUNITIES CAPABILITIES DANGERS**

**KEY
INFRASTRUCTURES**

Physical, Economic, Social

**CRITICAL ISSUES RE
OPPORTUNITIES CAPABILITIES DANGERS**

**PUBLIC HEALTH
AND SAFETY
SUPERVISORY BODIES**

**CRITICAL ISSUES RE
OPPORTUNITIES CAPABILITIES DANGERS**

CONTRAST:

HUMAN HEALTH

FOOD

CRITICAL ISSUES RE
OPPORTUNITIES CAPABILITIES DANGERS

CROSSING SPECIES BARRIERS
INTO HUMANS
THROUGH FOOD

CRITICAL ISSUES RE
OPPORTUNITIES CAPABILITIES DANGERS

LEVELS OF WEALTH
GAP: RICH AND POOR

**CRITICAL ISSUES RE
OPPORTUNITIES CAPABILITIES DANGERS**

**LOCATIONS OF FUTURE
FOOD PRODUCTION**

CRITICAL ISSUES RE
OPPORTUNITIES CAPABILITIES DANGERS

CULTURAL AND RELIGIOUS
PREFERENCES

CONCLUSIONS

OPPORTUNITIES CAPABILITIES DANGERS

BIOLOGICAL UNCERTAINTIES

HUMAN DELIVERY SYSTEMS

CONCLUSIONS

OPPORTUNITIES CAPABILITIES DANGERS

CARTAGENA PROTOCOL
SUBJECT TO WTO

DEALS WITH PROCESSES
NOT POLICIES

CONCLUSIONS

OPPORTUNITIES CAPABILITIES DANGERS

MAJOR ISSUE NOW

POLICY NOT PROCESS

CONCLUSIONS

OPPORTUNITIES CAPABILITIES DANGERS

AUSTRIAN NUCLEAR POWER

1978 NEW NUCLEAR POWER

STATION READY TO START

CONCLUSIONS

OPPORTUNITIES CAPABILITIES DANGERS

GOVERNMENT REFERENDUM

PEOPLE SAID:

AUSTRIA MUST BE NUCLEAR
FREE ZONE

POWER STATION NEVER
SWITCHED ON

PROPOSALS

OPPORTUNITIES CAPABILITIES DANGERS

MORATORIUM
on Gene-Based-Technologies
APPLIED TO LIVESTOCK

PROPOSALS
OPPORTUNITIES CAPABILITIES DANGERS

MORATORIUM
ON G-B-TECHNOLOGIES
APPLIED TO LIVESTOCK

UNITED NATIONS
GLOBAL REFERENDUM

OPPORTUNITIES CAPABILITIES DANGERS

Vaclav Havel

“If humanity is to survive and avoid new catastrophes, then the global political order has to be accompanied by a sincere and mutual respect among the various spheres of civilization, culture, nations or continents.....

If we examine all the problems facing the world today, be they economic, social, ecological or general problems of civilization, we will always come up against the problem of whether a course of action is proper or not, or whether, from the long-term planetary point of view, it is responsible”