

# Research and Capacity- building in Biotechnology Policy Issues

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# Structure of this presentation

- Potential and impacts of biotechnology
- The activities of the UNU-IAS in biotechnology.
- The report of the UNU-IAS roundtable on biotechnology development in Asia.

# Potential and Impacts of Biotechnology

- Probably the most powerful technology ever developed.
- Understanding its full impact on our lives, our economies and our use of the planet is many years away.

# Potential and Impacts of Biotechnology

- Driven by advances in genomics, genetic engineering, cell technology.
- Practical applications in medicine, cosmetics, fuel production, farming, food science, forensics, waste management.

# Potential and impacts of biotechnology

- Transgenic crops have increased from 2 to 81 million hectares from 1996 to 2004.
- Two transgenic fish species are awaiting regulatory approval for food purposes – a GM salmon in the United States and a GM tilapia in Cuba.

# Potential and impacts of biotechnology

- Over 150 biotechnological drugs have received FDA approval.
- And nearly 500 biotech drugs undergoing preclinical testing in Europe.

# Potential and impacts of biotechnology

- Simplistic to assume biotech is just GMOs or new drugs.
- The power of the technology may be more apparent and dramatic on other less high tech activities – waste remediation, energy production, cosmetic development, new industrial materials such as paints, adhesives and packaging.

# Why biotechnology is important for governments

- Biotechnology is a fact in our day-to-day life.
- Biotechnology has a broad interface through its products and services with the society.
- Biotechnology is a dominant agenda in global dialogues.

Therefore, biotechnology is an important policy matter for governments.



# Biotechnology at the UNU-IAS

## The mandate of the UNU-IAS:

- Carry out policy relevant research.
- Human capacity building.
- Finding solutions to the most pressing global issues that pose challenge to sustainable development.

# Biotechnology policy work qualifies within the mandate of the UNU-IAS

- Biotechnology is at the crossroad of environment, development and trade.
- To fully capture the potentials of biotechnology it is essential that a connection is made between those who develop biotechnology and those who apply it for socio-economic development.
- This connection is absent or very weak in many developing countries.

# The objectives of the UNU-IAS biotechnology work

- Adding to our understanding in how to capture the benefits of biotechnology in a problem solving approach.
- Contribute to the implementation of the WSSD Plan of Implementation and attaining the MDG.
- Promote biosafety.

# Elements of the UNU-IAS work in policy aspects of biotechnology

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- Policy research.
- Human capacity building.
- Raising awareness of policy makers.  
and promoting dialogue.

# Biotechnology policy research at the UNU-IAS

1. Technology transfer under Multilateral Environmental Agreements (MEAs).
2. International trade, biotechnology and biosafety.
3. Agricultural biotechnology development and transfer in Africa.
4. Biotechnology policy assessment, learning from countries in Asia.



# Biotechnology policy research at the UNU-IAS

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5. Asian biotechnology industrial development policies.
6. An assessment of ongoing efforts to build capacity for biotechnology and biosafety.
7. International comparison of ethical, legal and social aspects of medicine and access to health care.

# Human capacity development at the UNU-IAS

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- Fellowship programmes.
- Policy training courses.

# Raising public awareness among policy makers

Public awareness on biotechnology among policy makers is important and the Institute approach to that is through **dialogue** and **interaction**.



# **The UNU-IAS roundtable on “Policy Issues Pertaining to Biotechnology Development in Asia”**

**Four areas were identified as important to complement on-going efforts:**

- 1 Recognize the endogenous development priorities.
- 2 Improve the effectiveness of collaboration between the private and the public sectors.
- 3 Promote a dynamic and multi stakeholder human resources capacity building.
- 4 Develop efficient regional biotechnology networks.

# 1- Recognize the endogenous development priorities

- Promote access to the most advanced beneficial biotechnologies on best available terms reflecting the indigenous needs.
- Tackle the question of uncertainty of the potential impact and risk of biotechnology development to the society.
- Balance the diverse interests and perspectives and at the same time secure wide legitimacy and the possibility of enforcement.
- Promote fulfilling of social corporate responsibility.

## **2- Improve the effectiveness of collaboration between the private and the public sectors**

- Encourage a meaningful alliance between the private and the public sectors.
- Consider social equity in public / private sector alliance.
- Attract private sector financial support.
- Expand such collaboration from national level to regional and international levels.
- Develop a coherent and harmonized regional regulatory environment.

Roundtable recommendations:

## **3-Promote a dynamic and multi stakeholder human resources capacity building**

- Develop a dynamic, multi stakeholders and rapid-response human capacity building system.
- Involve all those actors that are involved in biotechnology development.
- Involve both the formal and the informal education systems.
- Reflect the human resource needs of biotechnology sector in all the trainings.
- Create effective communication between education system and biotechnology actors

## **4-Develop efficient regional biotechnology networks**

- Realize that biotechnology is a “network industry” that involves many specialized actors.
- Establish new regional networks on biotechnology and strengthening the existing ones.
- Make networks more accessible to less developed countries.

**Thank you**