SANITATION CHALLENGES IN NIGERIA AND HOW ECOSAN COULD PLAY A ROLE

BY

DR. CHRISTIE O. ONYIA

DIRECTOR, ENVIRONMENTAL BIOTECHNOLOGY AND BIORESOURCES CONSERVATION DEPT.

NATIONAL BIOTECHNOLOGY DEVELOPMENT AGENCY, ABUJA, NIGERIA

AT

THE REGIONAL REFRESHER SEMINAR ON
ECOLOGICAL SANITATION TO ACHIEVE MILLENNIUM DEVELOPMENT GOALS IN SUB-SAHARA AFRICA
OUGADOUGOU, 1ST – 8TH OCTOBER, 2006

SANITATION CHALLENGES IN NIGERIA AND HOW ECOSAN COULD PLAY A ROLE.

- Nigeria is the most populous country in Africa with an estimated population of 130 million and average density of about 130 persons per sq. km.

- Population has been growing at an estimated average of 2.9% per annum.

POPULATION GROWTH AND INFRASTRUCTURAL DEVELOPEMENT

- Population growth is not commensurate with amenities such as water supply, sewerage and sanitation, and solid waste management.
- An estimated 50% of the urban and 20% of the semi-urban population have access to reliable water supply.
- Sewerage system is limited to Abuja (the national capital city) and a few mega cities like Lagos.
- The proportion of the population with access to safe facilities for disposal of excreta and waste water is lower than for water supply in both rural and urban areas.

RURAL SITUATION

Children collecting water from an open pond in the outskirts of Oju town in Benue state.

Source: Water Aid

DISPOSAL FACILITY IN HOUSEHOLD

Traditional Pit Latrine.....54%

Open field.....39%

VIP Pit Latrine. 3%

Flush Toilet.....2%

River.....1%

Others.....1%

Source: Small Towns Water Supply and Sanitation Program development studies: FMWR

HOLISTIC APPROACH TO SANITATION ISSUES

- Nigeria launched her Sanitation Policy in 2004, however the bill is yet to be passed into law by the upper house of the national assembly.
- No comprehensive strategy on sanitation as a whole, including excreta disposal, solid waste disposal, wastewater disposal, drainage and treatment of wastewater.
- Currently, individual solutions are adopted at the household level e.g. pit latrines, septic tanks and storage. There is very little sewerage in urban Nigeria and wastewater still pollutes surface water.

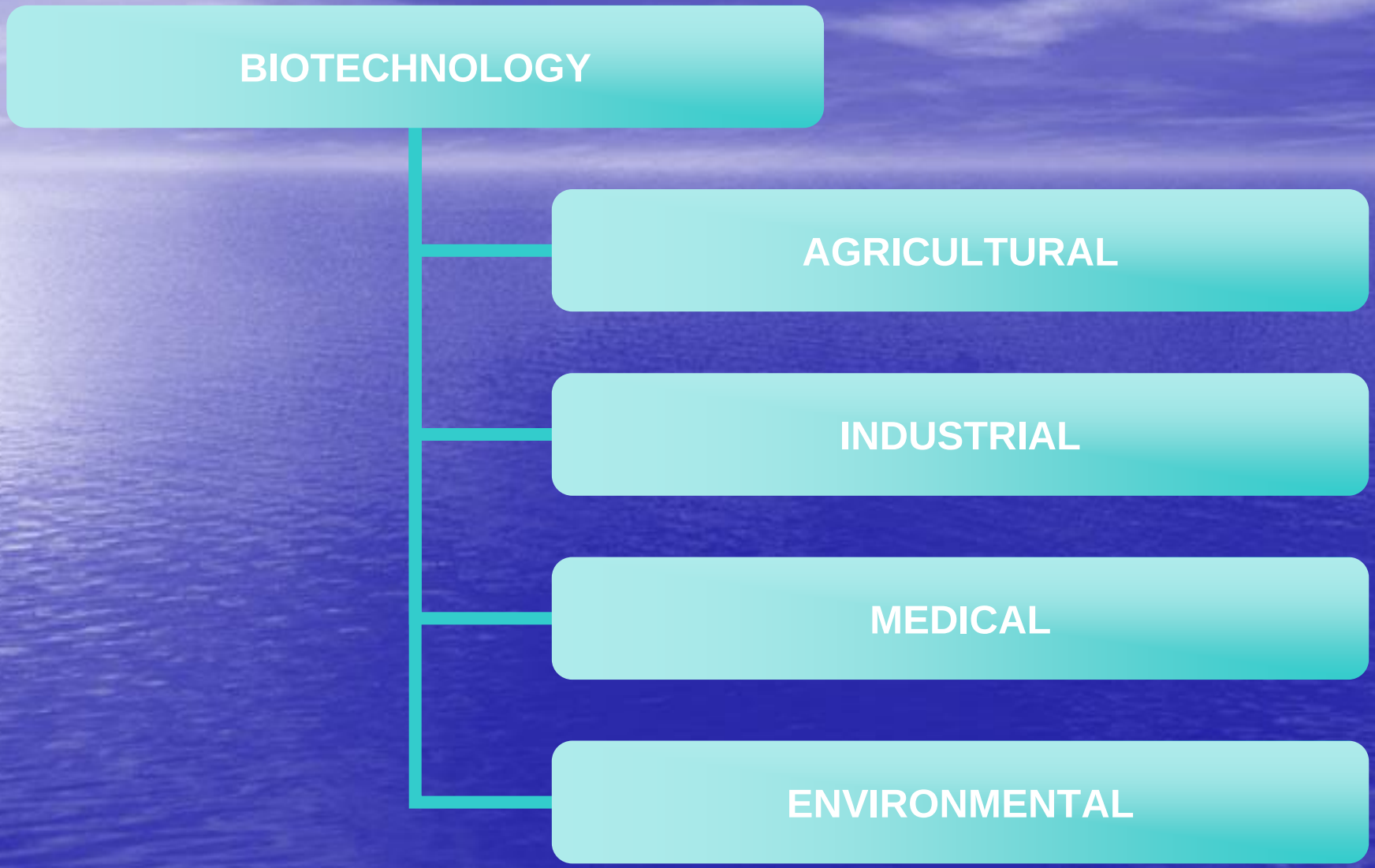
ROLE OF NATIONAL BIOTECHNOLOGY DEVELOPMENT AGENCY (NABDA)

- **NABDA, through the department of Environment and Bioresources Conservation is charged with the responsibility to evolve and promote emerging technologies/concepts that lead to 'sustainable' management and utilization of our national bioresources and environmental stewardship.**

BIOTECHNOLOGY

- Any technique that uses biological systems, living organisms or derivatives from organisms to make or modify a product; or processes to improve plants or animals or develop microorganisms for specific uses. – CBD 1992, Perseley *et. al.* 1993.

- The integration of natural sciences and engineering in order to achieve the application of organisms, parts of organisms or molecular analogues for development of products and services (IFPRI, 1999).


BIOTECHNOLOGY
AGRICULTURAL
INDUSTRIAL
MEDICAL
ENVIRONMENTAL

NABDA'S CURRENT APPROACH: BIOGAS FOR SCHOOLS AND SMALL SCALE FARMING PROJECTS

- NABDA has been involved in the promotion of generation of biogas from household organic waste (including human), animal dung e.t.c. for cooking and electricity production.

Types of Dung	Gas Production Per Kg Dung (m^3)
Cattle (cows and buffaloes)	0.023 – 0.040
Pig	0.040 – 0.059
Poultry (Chickens)	0.065 – 0.116
Human	0.020 – 0.028

Source: Updated Guidebook on Biogas development, 1984

AIMS AND OBJECTIVES

- Improved sanitation/cleaner environment
- Biodiversity conservation/protecting our fast depleting forests
- Resource recovery and reuse
- Improved agricultural yield
- Demystification of 'biotechnology' at early stage (UNESCO sponsored project)

ECOSAN POSSIBILITIES

- With the current water shortage and poor sanitation situation, ecological sanitation concept can take principle of environmental sanitation a step further in Nigeria
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- The development of an integrated approach to water and sanitation management will enhance economic and political interest in developing a framework for implementation of Ecosan

- Ecosan on a large scale has potential for the following:
  - Protect our groundwater, streams, lakes and seas from faecal contamination
  - Reduce water use
  - Reduce environmental degradation.
  - Boost agricultural productivity

ECOSAN ADVOCACY

- Acceptance of Ecosan by local populace is pictured to face strong resistance on cultural and religious grounds in certain parts of the country.
- However, the potentials of the technology can reverse the rising trend of rural sanitation inadequacy.
- An implementation plan supported by policy, and community involvement in design can enhance acceptance.

THANK YOU