

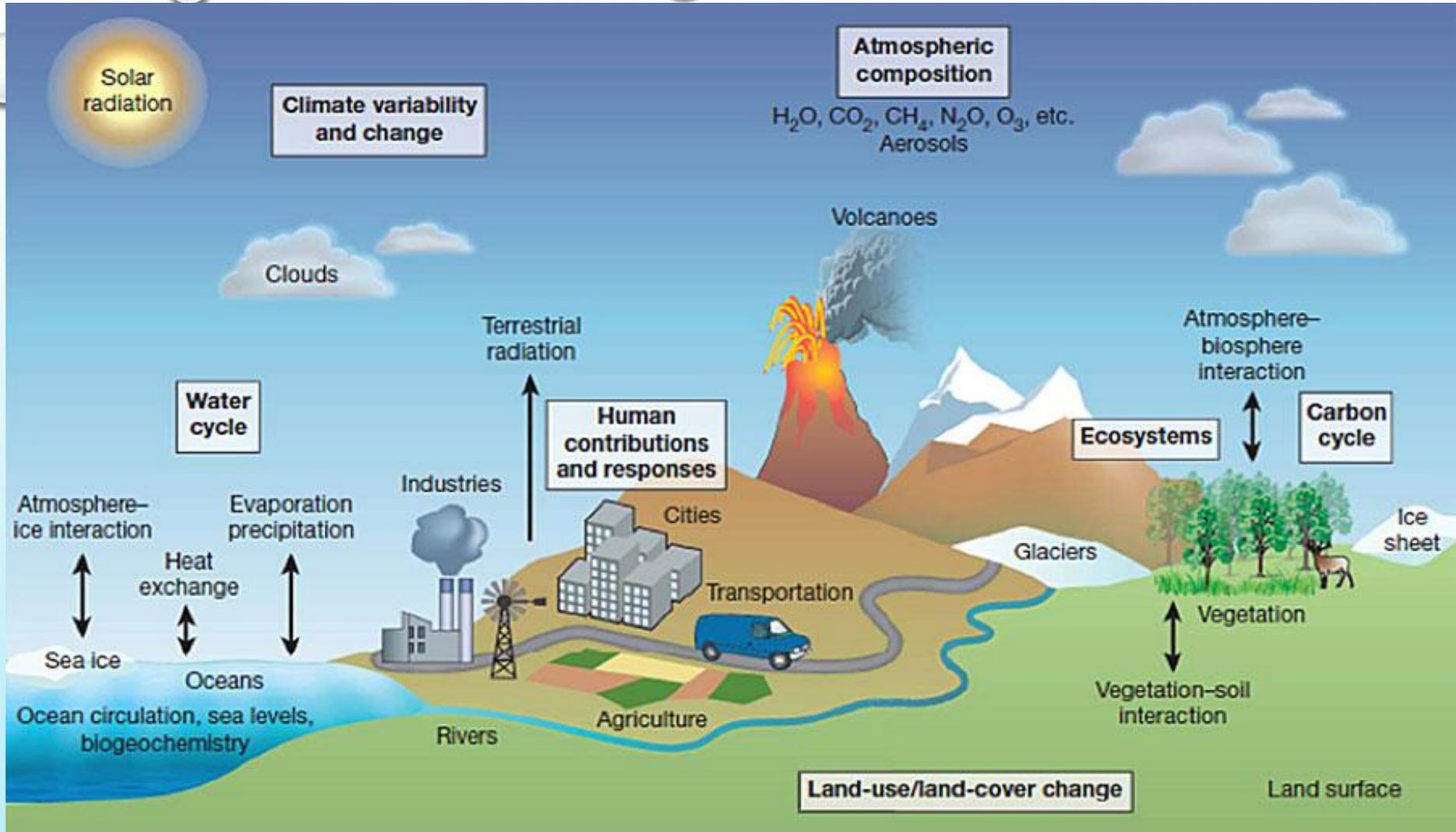
HARNESSING BIOTECHNOLOGY FOR SUSTAINABLE ENVIRONMENT MANAGEMENT

Presentation at the 5th Annual Biosafety Forum, June 21 – 23rd 2022

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Brief Background





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Background cont'd





Background cont'd



❑ Biotechnology being a set of scientific techniques that utilize living organisms or parts of organisms to make, modify, or improve products which could be plants or animals. It therefore **has a great potential** to improve sustainable environment management.

❑ The need to harness biotechnology for sustainable environment management therefore, cannot be over emphasised.

❑ Hinderances, **can** be attributed mainly to human resource, **infrastructure, technology**, mindset and availability of funds



Purpose



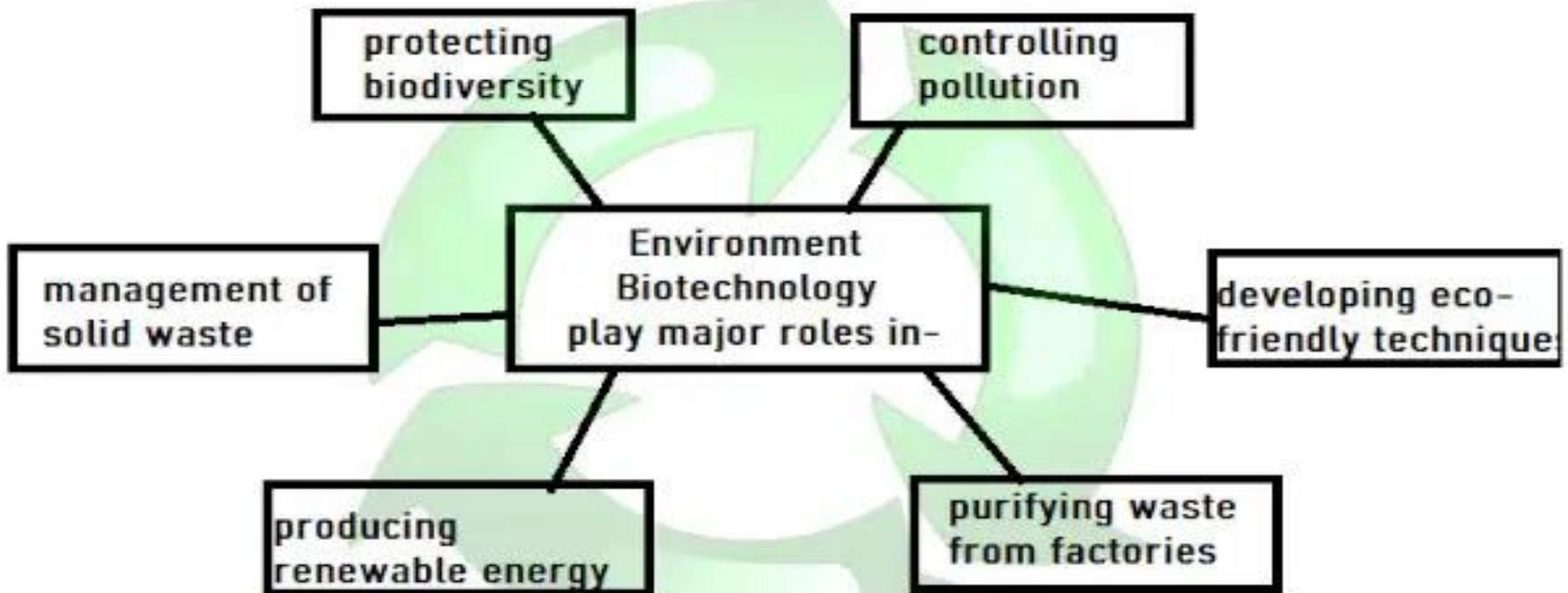
‘foster biotechnological techniques towards sustainable environment management’.



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Current Biotechnology Applications In Environmental Management





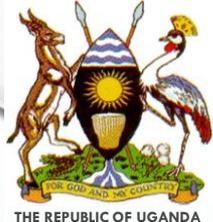
Environmental Applications of Biotechnology



❑ **Bioremediation**, a clean-up technology utilizing naturally occurring microorganisms to degrade **hazardous substances** into less or non-toxic compounds in domestic and industrial waste.



❑ Alternative energy sources e.g. through development of bio-energy crops to reduce reliance on woody biomass.

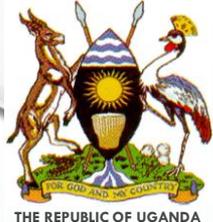


Strategies



Biotechnology supportive policy formulation

- Policy formulation as an **integral part** which requires government response of developing policy models or frameworks fostering adoption of regulated biotechnology applications for example from production of hazardous to bio-degradable pesticides.



Strategies Cont'd

Public awareness about biotechnology

- ❑ This call for significant participation of **all** stakeholders including scientists, policy makers, development agencies and partners, and civil society organisation to promote uptake of regulated biotechnology innovations.
- ❑ Adoption of biotechnological techniques therefore, is directly linked to awareness that often translates into practice.



Strategies Cont'd

Funding for biotechnology

- ❑ Strategic funding investments is **critical** in supporting research and infrastructure development for developing biotechnologies software and hardware and their dissemination.



Strategies Cont'd

Significant research on the biotechnology techniques

- Undertaking research in developing of substitutes of biological origins is key in achieving our desired objectives and purpose. Research stimulates development of new **paradigms** that help offer environmentally friendly biotechnologies such as beneficial bacteria to control pests instead of use of pesticides, among other things.



Conclusion

- ❑ Biotechnology is undoubtedly a viable option for addressing some of the environmental challenges that hinder sustainable development.
- ❑ Development of supportive policy and regulatory framework, research, intense public awareness, and deliberate financing.



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THANK YOU FOR LISTENING



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