

Green Biobanking: gaps and challenges

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Introduction:

Biobanks play a crucial role in biomedical research, yet their environmental impact remains a concern. The Green Biobanking Environmental Challenges and Best Practices Survey, conducted under the EvolveBBMRI project, aimed to assess sustainability practices across European biobanks.

Materials and Methods:

The survey involved 50 biobanks from 12 BBMRI member/observer countries. Data were collected on energy sources, waste management, water conservation, and sustainability planning. Quantitative analysis was used to identify gaps and challenges in implementing eco-friendly practices.

Results:

Initial findings revealed that more than half of the participating biobanks use renewable energy, while 41% still depend on fossil fuels, resulting in high carbon footprints. There was also a significant lack of formal water conservation measures, and effective non-hazardous waste management. Although more than half of the participating biobanks reported engagement in recycling programmes, a comprehensive material reuse programs are still limited. Additionally, the majority of the participating biobanks have no long-term sustainability strategies.

Discussion and Conclusion:

The survey identified key barriers such as insufficient funding, restricted access to sustainable products, and inadequate staff training. The study highlights the urgent need for strategic planning, enhanced training, and increased funding to foster sustainable practices in biobanking. By addressing these challenges, biobanks can lead the way in integrating environmentally responsible practices in the biomedical sector.