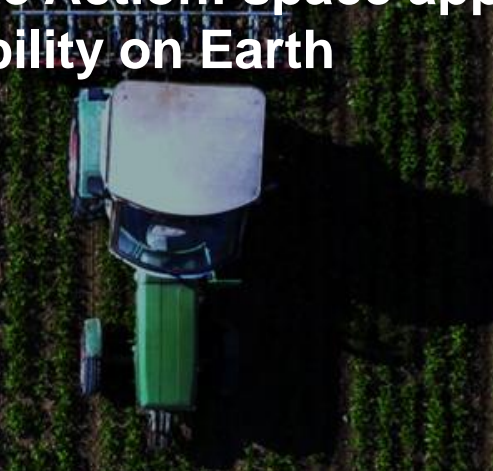


# REVOLUTIONIZING YOUTH-LED AGRICULTURE IN BOTSWANA: Will Botswana's First Satellite be the Answer?

**UN/Austria Symposium 2023 Space for Climate Action: space applications  
and technologies for sustainability on Earth**



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Graduate School Of Social Sciences, Waseda University**



# Challenges Facing Young Farmers in Botswana

CHALLENGE	CURRENT ACTIONS	ACTION DONE BY	CHALLENGES IN IMPLEMENTATION
Climate Change Variation	<ul style="list-style-type: none"> <li>Dryland farming and Rotational grazing</li> <li>Botswana Integrated Mobile Platform</li> </ul>	<ul style="list-style-type: none"> <li>Young Farmers</li> <li>Tertiary Education Institutions</li> <li>Ministry of Agricultural Development and Food Security</li> </ul>	<ul style="list-style-type: none"> <li>Unprecise weather forecasts leading to mismanagement of time and resources</li> </ul>
Lack of Adequate Funding for Projects	<ul style="list-style-type: none"> <li>Youth Development Fund program</li> <li>Pandamatenga Special Economic Zone</li> </ul>	<ul style="list-style-type: none"> <li>Young Farmers</li> <li>Ministry of Youth Empowerment, Sports and Culture</li> <li>Ministry of Investment, Trade and Industry</li> </ul>	<ul style="list-style-type: none"> <li>Lack of accurate monitoring and evaluation of funding programs</li> </ul>
Limited Business Management and Technical Skills of young farmers	<ul style="list-style-type: none"> <li>Youth Development Fund program</li> <li>Youth Not in Employment, Education or Training program (NEET)</li> </ul>	<ul style="list-style-type: none"> <li>Young Farmers</li> <li>Ministry of Agricultural Development and Food Security</li> <li>Tertiary Education Institutions</li> </ul>	<ul style="list-style-type: none"> <li>Lack of commitment by young farmers</li> </ul>

# What is the Botswana Satellite (BOTSAT-1)?



## OVERVIEW

Botswana's first earth-observation cube satellite to be fully domestically owned and delivered by local institutions.

## EXPERT TEAMS

Botswana International University of Science and Technology (BIUST)  
Botswana Institute of Technology Research and Innovation (BITRI),  
Botswana University of Agriculture (BUAN)  
The University of Botswana (UB)  
The University of Oulu (Finland)  
Loon (United States of America)

## AIMS

To strengthen Botswana's capacity development for future projects and help it develop a knowledge-based economy.  
To mine data to reposition Botswana's tourism and agriculture industries.



# The Botswana Satellite (BOTSAT-1) Progress



## PHASE 1

Ground communication station implementation

### Location:

The Botswana International University of Science and Technology

**(Completed in 2 years)**



## PHASE 2

Building the clean room for assembly and testing

### Location:

The Botswana International University of Science and Technology

**(In progress)**



## PHASE 3

Satellite launch  
**(To be announced)**

# Botswana Satellite's Proposed Solutions to Implementation Challenges



## UNPRECISE WEATHER FORECASTS

Reliable data collection on weather patterns, soil moisture levels, and vegetation cover

Reliable monitoring of livestock movements

Precise early warning systems for disease outbreaks



## LACK OF ACCURATE MONITORING AND EVALUATION OF FUNDING PROGRAMS

Data generated from space will be used for accurate market outlooks and projections to enhance monitoring and evaluation

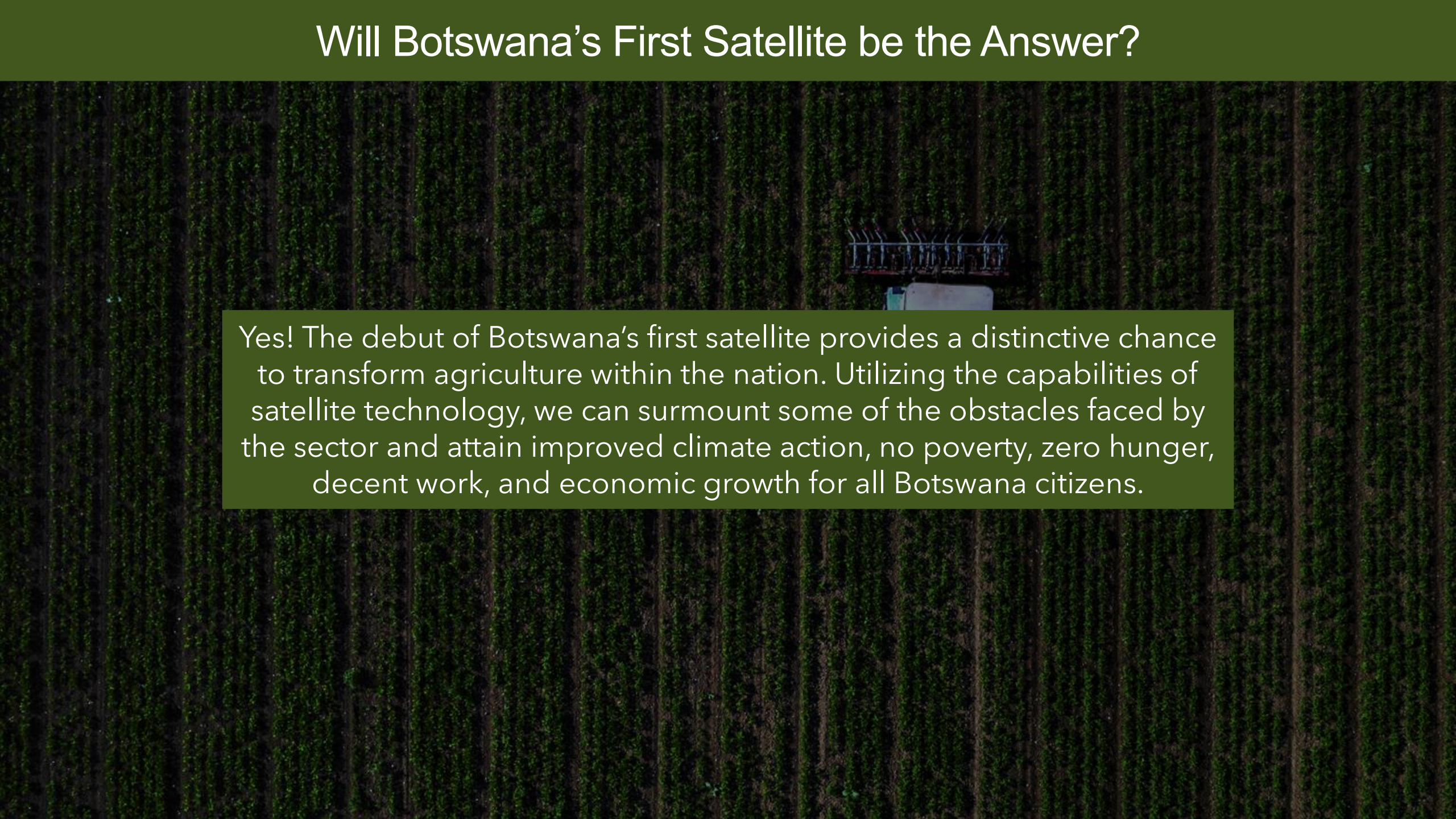


## LACK OF COMMITMENT BY YOUNG FARMERS

Introducing technology-based entrepreneurial training programs (robotics) can allow the use of automation in smart farming



# Will Botswana's First Satellite be the Answer?

An aerial photograph of a large agricultural field with rows of young green crops. A tractor with a tillage implement is visible in the upper right quadrant of the field.

Yes! The debut of Botswana's first satellite provides a distinctive chance to transform agriculture within the nation. Utilizing the capabilities of satellite technology, we can surmount some of the obstacles faced by the sector and attain improved climate action, no poverty, zero hunger, decent work, and economic growth for all Botswana citizens.





THANK YOU

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