Phase I Climate Vulnerability Assessment for Maryland Agriculture

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Agriculture, Forestry and Local Government Climate Change Response Strategies

Prepared by:

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About the Hughes Center

Founded in 1999, the Hughes Center is a nonprofit affiliated with the UMD College of Agriculture and Natural Resources (UMD AGNR)

Mission: To provide leadership to promote environmentally sound and economically viable agriculture and forestry as Maryland's preferred land use through research, outreach and collaboration.

Research
- Funded more than 70 research projects totaling more than $10 million
- Provides unbiased, science-based guidance

Education and outreach
- Example: Watershed Implementation Plan (MD and Conowingo) outreach to ag and local government sectors

Collaboration
- The Center works with others to maximize resources
- We are not the experts, but facilitators
Core Functions of Agriculture

- Food
- Feed
- Fiber
- Ecosystem Services
- Clean Energy
Climate Impacts

Crops

Livestock

Pollinators

Pests

Invasives

Disease

Infrastructure

Water

Soil

Biodiversity

Insurance

Forecasting
"Business as usual will not be enough"
Phase I Vulnerability Assessment

**Concerns:**
- Climate changing at an accelerating rate
- Maryland and agriculture particularly vulnerable to climate change

**Request:**
- 2021 General Assembly Joint Chairmen’s Report budget narrative
- Study in preparation for a Maryland agriculture climate vulnerability assessment (Phase II)
  - Hughes Center, MDA and MDE
  - What we know (data, experts, expected threats)
  - Who is impacted
  - What are the resources needed for a full study?
- Worked with Project Leadership Team:
  - UMD AGNR and Extension
  - DNR
**Phase I Vulnerability Assessment**

**Scientific consensus predicts climate change impacts are expected to:**
- Continue and intensify
- Impact both in-land and coastal agriculture and many, if not all, agricultural sectors
- Be compounded by sea-level rise
- Necessitate enhanced management of farm operations

**What farmers are telling us:**
- Farmers are already experiencing impacts to their operations
- The varying impacts underscore need for stakeholder involvement as decision-makers seek solutions

**What we need to better understand:**
- Fine-resolution climate data
- Economic impact estimates
- Climate adaptation and mitigation strategies
- Research gaps
Phase II Vulnerability Assessment

Phase II Process:
• Led by UMD AGNR, Hughes Center, state agencies
• Work with Maryland Commission on Climate Change (MCCC) to ensure timely response

Includes:
• Review and analyze recent research/identify future research
• Robust stakeholder engagement
• Identified response strategies to improve resilience, mitigate impacts and reduce greenhouse gas emission
Contact Information

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