Navigating climate challenges in the QUAD cities: comprehensive assessment towards resilience

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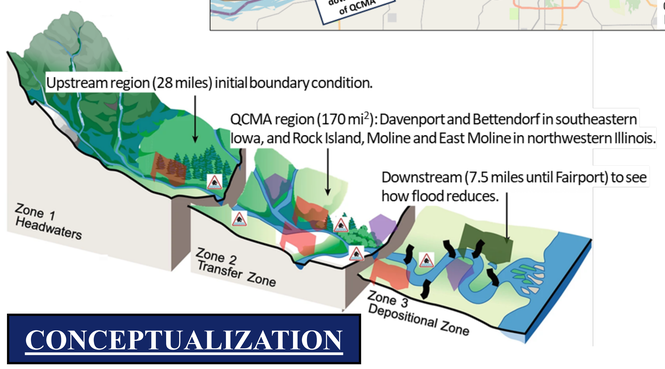
[3]University of Notre Dame, Notre Dame, IN, USA [4]National Wildlife Federation, Austin, Texas, USA

Climate R&D Hub

CONCEPTUALIZATION







Existing Storage Medias to store flood waters in upstream region.

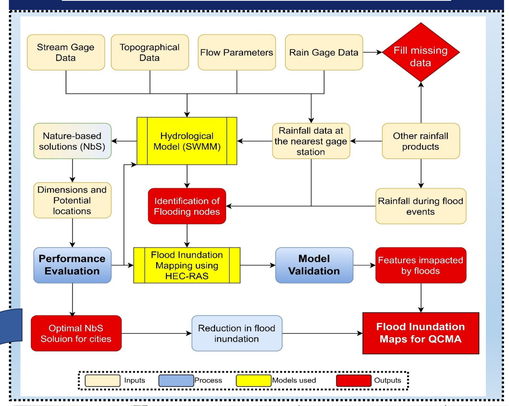
Inland features to store and delay flood waters.

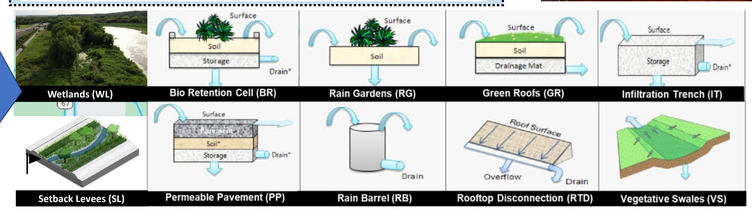
Water bodies to provide cushion during peak floods.

Areas prone to flooding during extreme events.

Urban regions prone to flooding due to in-situ extreme events and extreme factors

ANALYTICAL FRAMEWORK





STAKEHOLDER INTERACTIONS & CLIMATE AWARENESS PROGRAM



Problems Faced by Authorities

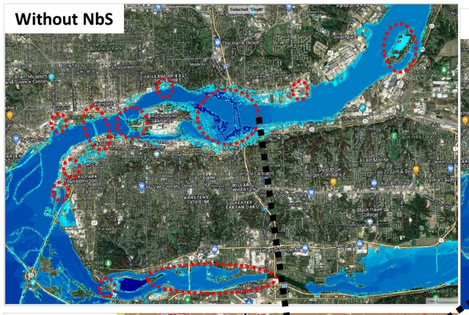


Citizen Feedback

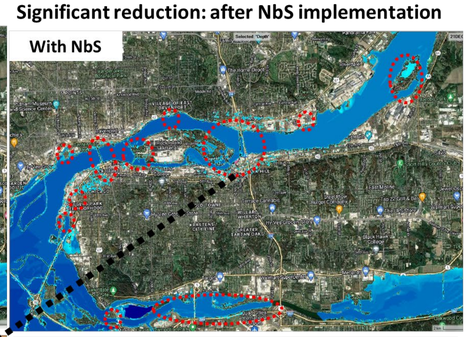


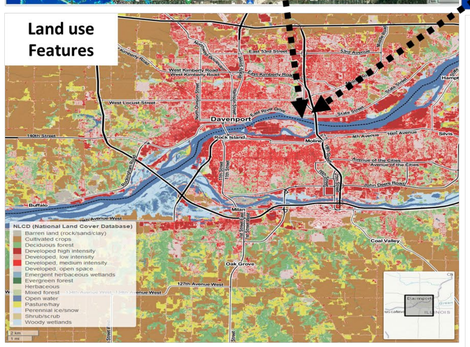
Land use Features and Major crop patterns impacted by 100-yr floods – Rock Island and Davenport

Flood Inundation: 100-yr return period event



Significant reduction: after NbS implementation





Land use Features impacted:

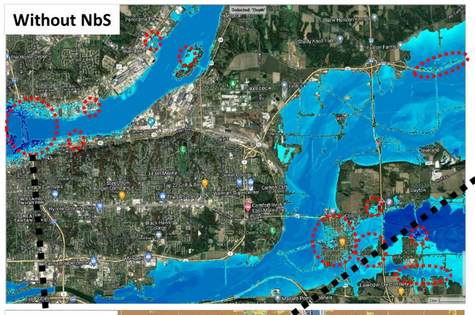
- Populated Regions – High, Medium and Low Intensity
- Developed open space
- Woody Wetlands
- Open Spaces
- Herbaceous

Crop Patterns/Data impacted:

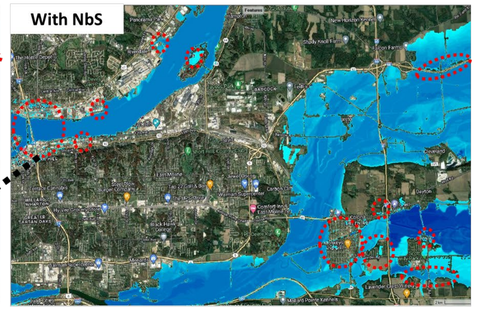
- Grasslands
- Soyabeans
- Other Hay/Non-Alfalfa
- Wetlands

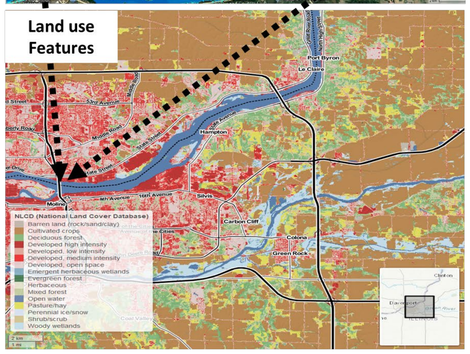
Land use Features and Major crop patterns impacted by 100-yr floods – Bettendorf and Moline

Flood Inundation: 100-yr return period event



Significant reduction: after NbS implementation





Land use Features impacted:

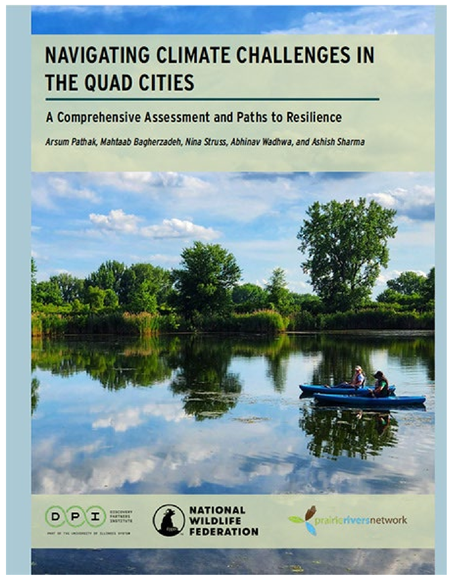
- Populated Regions – High, Medium and Low Intensity
- Green Spaces
- Woody Wetlands
- Open Spaces

Crop Patterns/Data impacted:

- Grasslands
- Soyabeans
- Other Hay/Non-Alfalfa
- Wetlands
- Cultivated Crops

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