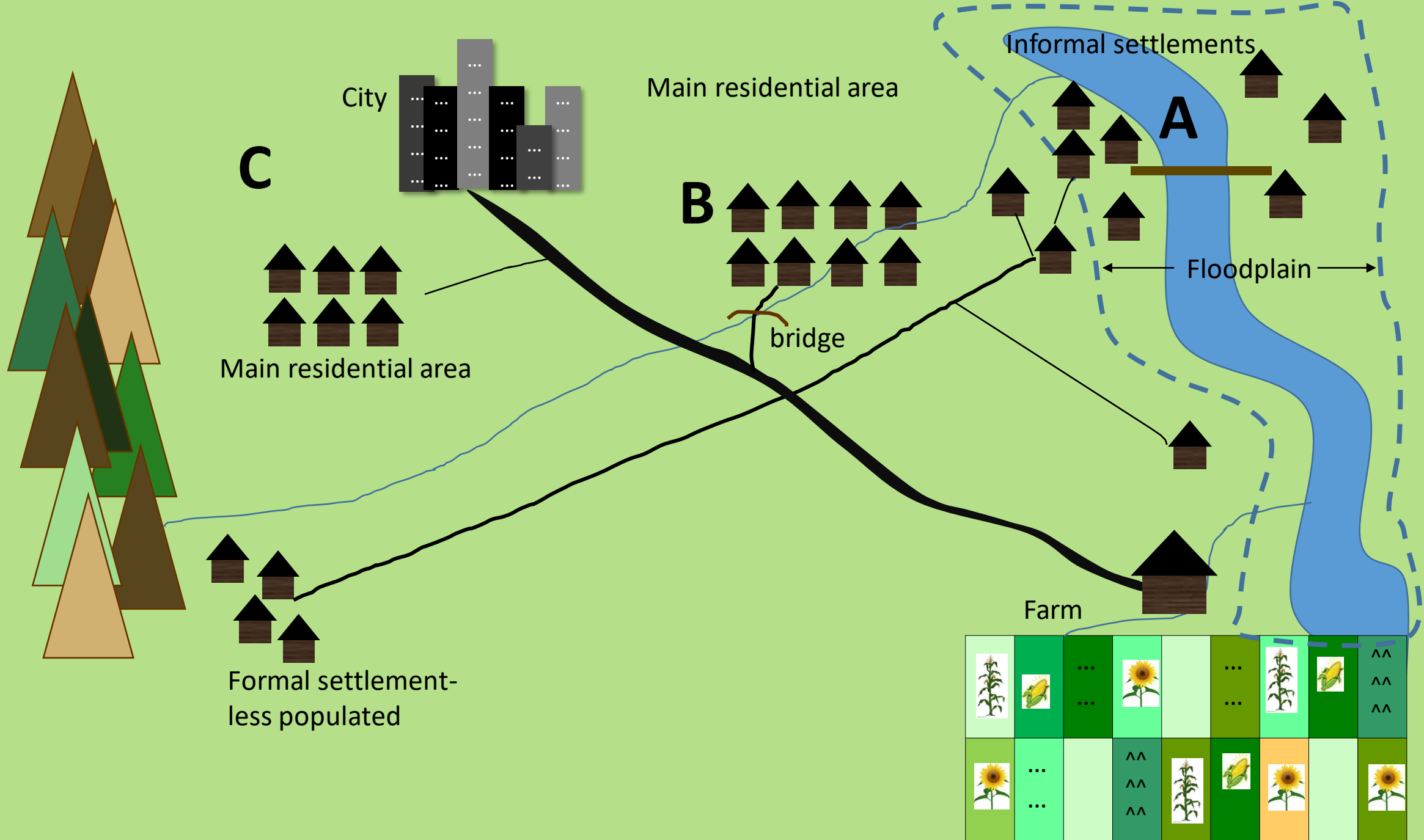


# Vulnerability Assessment Exercise Part 1

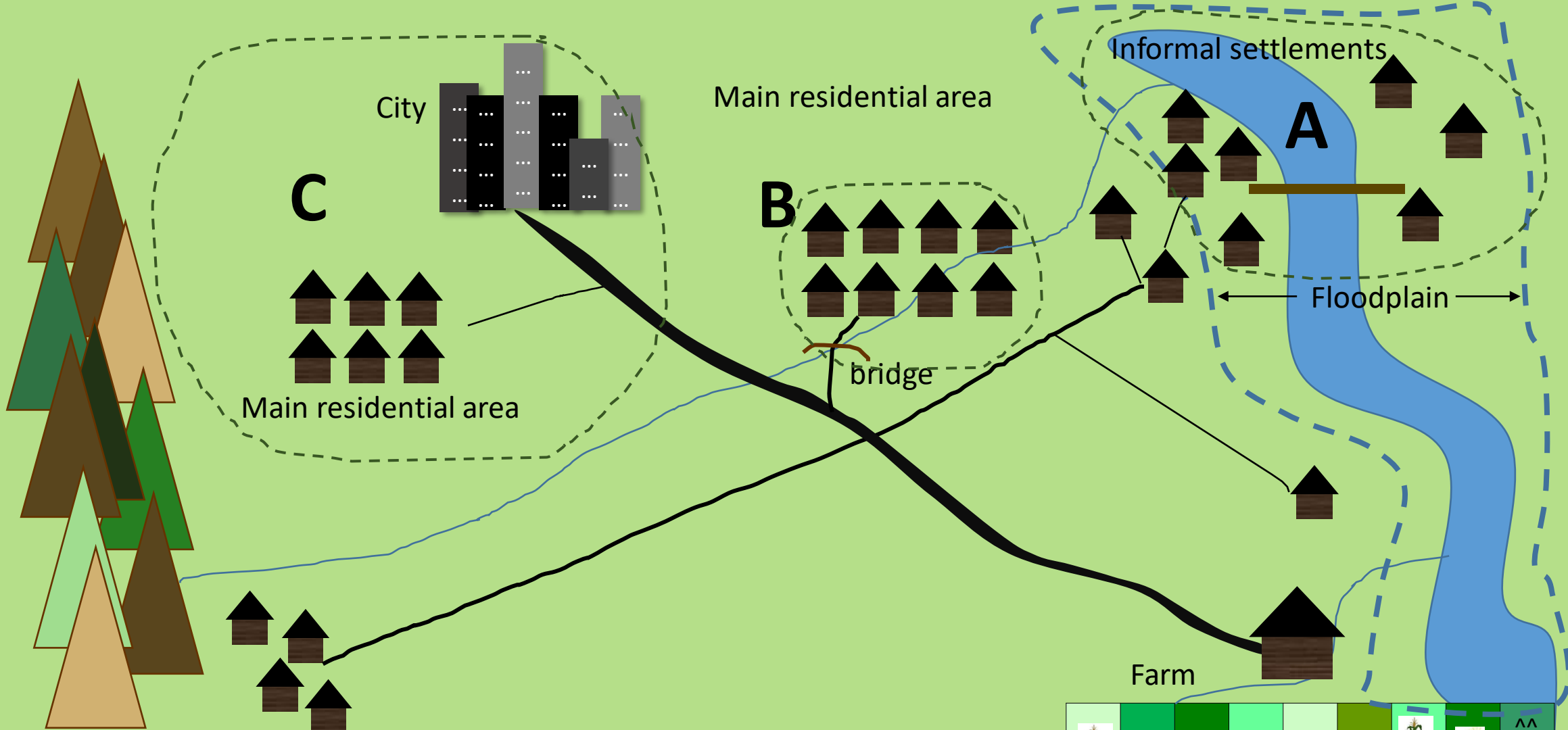
Exercises developed by Elizabeth Viljoen  
South African Weather Service





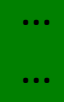







## QUESTION?

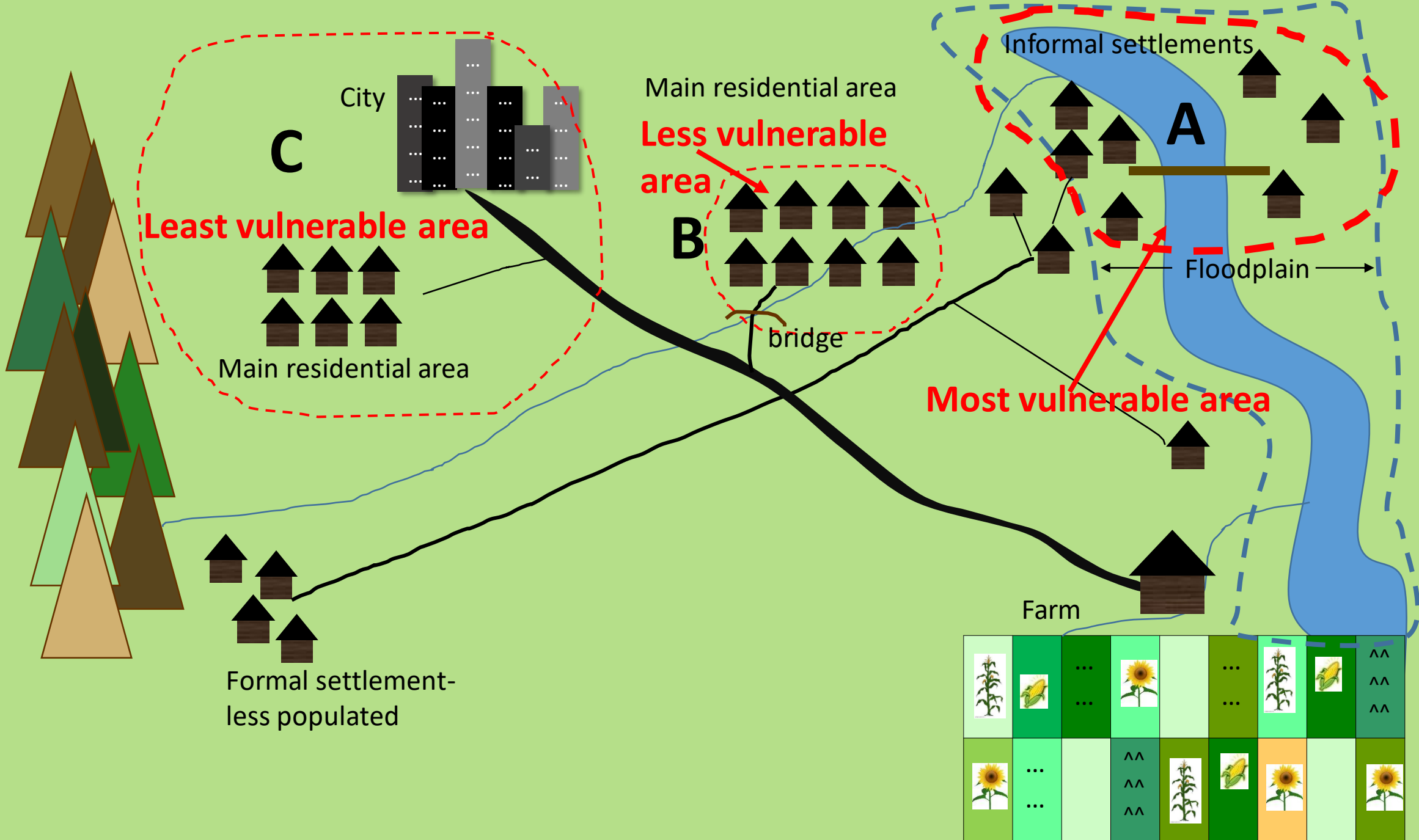
Give the order of vulnerability for the 3 areas marked A, B and C.  
Ranking them from most vulnerable to least vulnerable

As a forecaster, what area is your greatest concern?



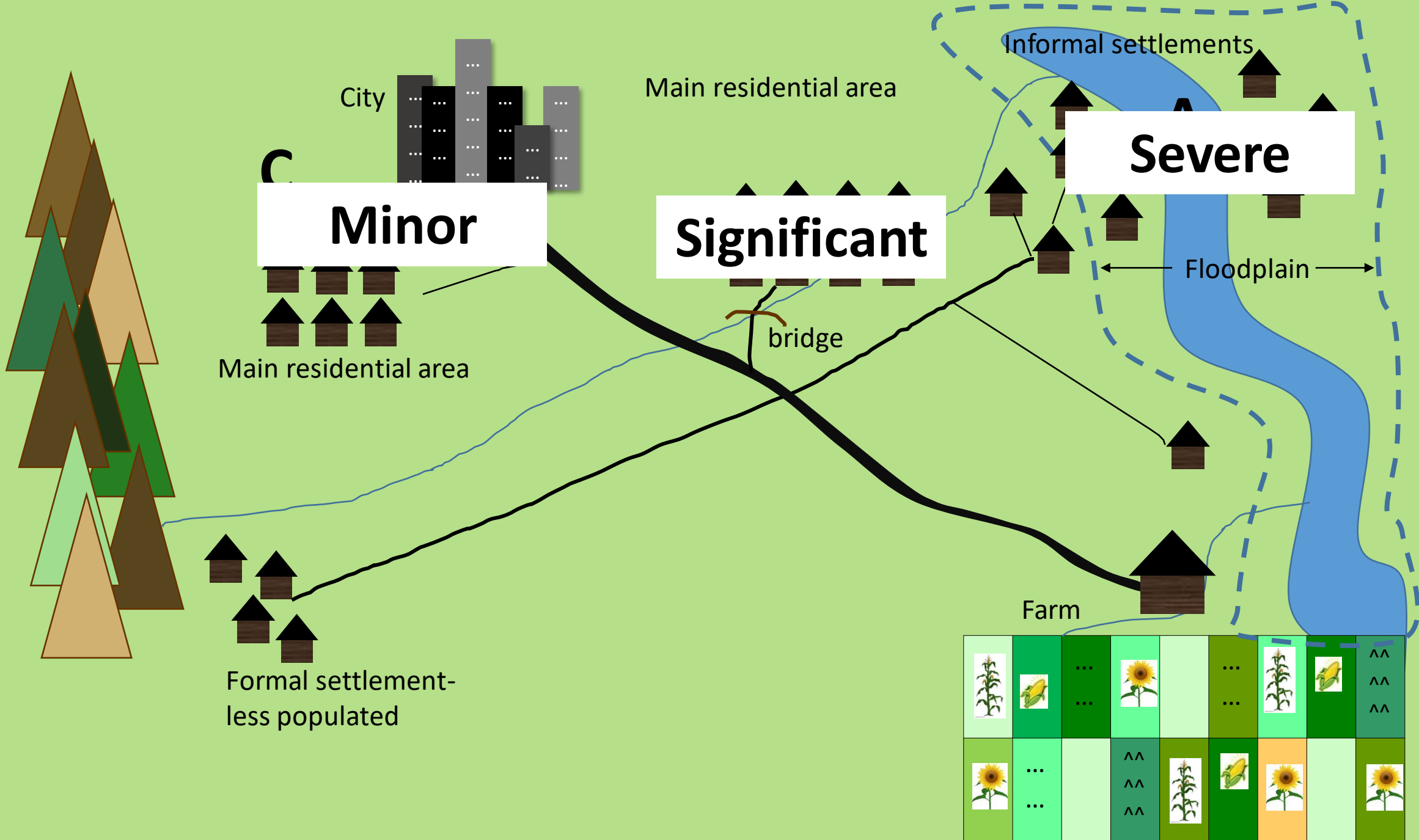
Formal settlement-less populated

		...		...			^^
	...		^^				
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# Forecast:

- 80mm expected in 24 hours across the area
- 40mm of that rain is expected within 3 hours
  
- Use the rainfall impact table to give different impact levels
  - Minimal, minor, significant and severe

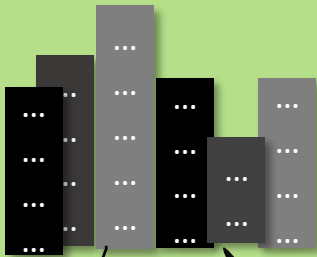
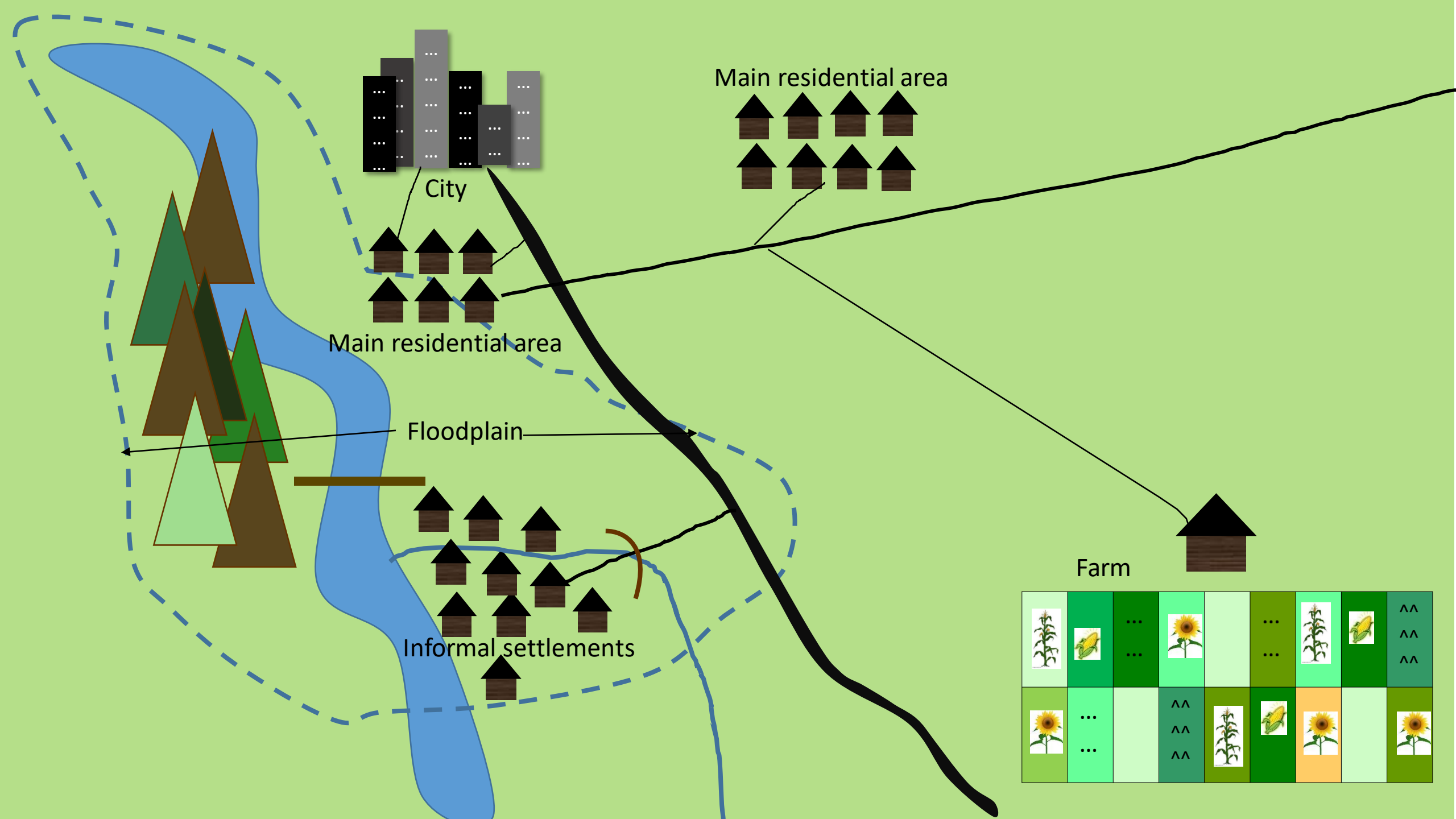


- Area A: Significant
  - Entire community could be flooded and displaced, the area that lies the other side of the bridge could be cut-off
- Area B: Severe
  - Possible damage to roads, communities could be cut-off temporarily if the bridge washes away or is damaged. Roads and settlements would be flooded
- Area C: Minor
  - Major roads affected, but can be used. Travel times increase, minor motor vehicle accidents due to slippery roads



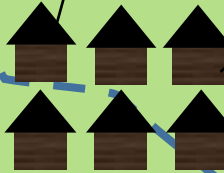
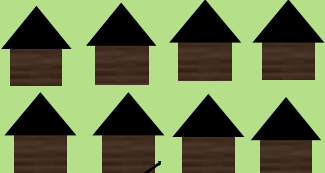
If you had to issue a warning for the entire area (including areas of different impact levels), what would you chose your impact level to be?

Possible answer: You can use Significant and then mention the possibility of higher impacts in a small area that is highlighted



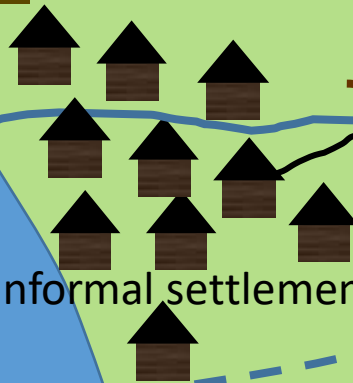
City

Main residential area



Main residential area

Floodplain

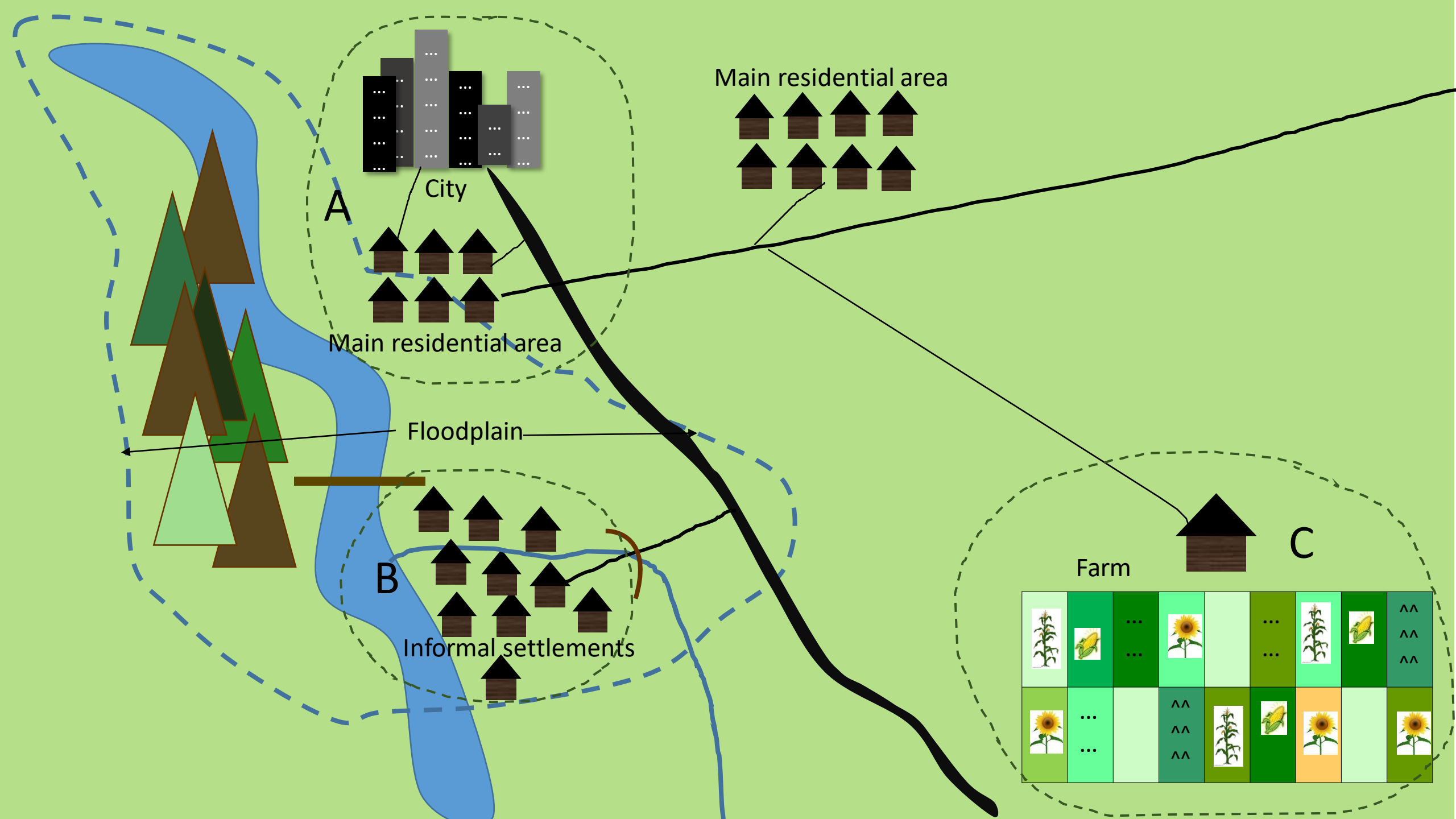


Informal settlements

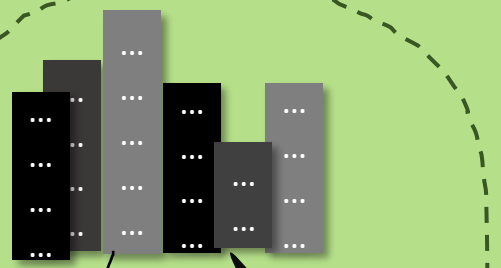
Farm



		...			...			^^
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		...			...			^^
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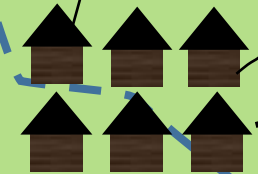
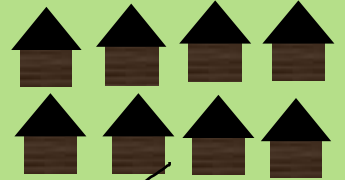


A



City

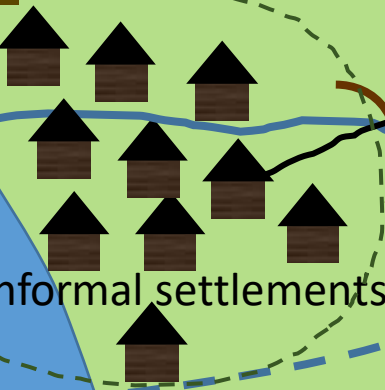
Main residential area



Main residential area

Floodplain

B



Informal settlements

Farm



C

		...			...			^^
	...		^^					
	...		^^					

- We are expecting 100mm of rain in 24 hours across the region
- The river is already at bank full stage

Question: What level of impact would each area marked A, B and C be?

# Levels of Impact

- Area A: Significant
  - Flooding of roads and settlements
  - Major traffic disruption
  - Possible damage to roads
  - Damage to property and infrastructure (due to flooded houses)
- Area B: Severe
  - Widespread flooding of houses (all houses in area will be affected)
  - Widespread transport routes and travel services severely affected
  - Major roads and bridges washed away
  - Large communities not accessible (Bridge could be washed away)
- Area C:
  - Crop damage due to flooding in fields
  - Lack of access to fields

- What would the overall impact level be for the entire region?
  - Would you use 'Most Likely Situation' or 'Worse Case Scenario'???

- Use Most Likely Case
- Significant impacts with highlighting possible severe impacts for certain areas, like area B