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11.307 Beijing Urban Design Studio  
Summer 2008

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## Revitalizing Shougang: urban agriculture as a social, economic, and physical force

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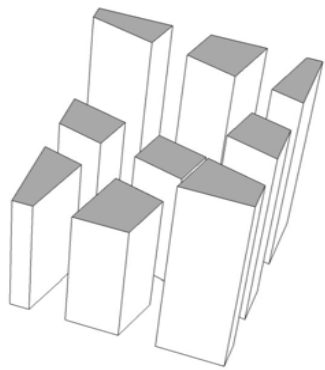
# problems

explosive and sprawling growth  
loss of industrial economy  
site contamination  
integrity of industrial structures  
dependence on imported food products

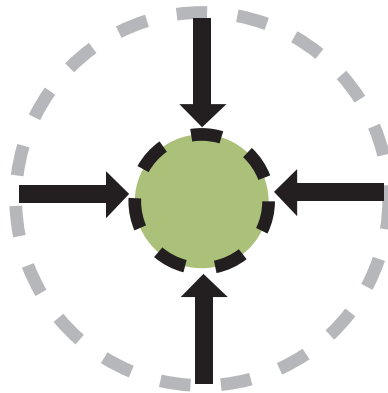
# solution

develop a new global center for research surrounding brownfield remediation and urban agricultural production

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28% increase in population



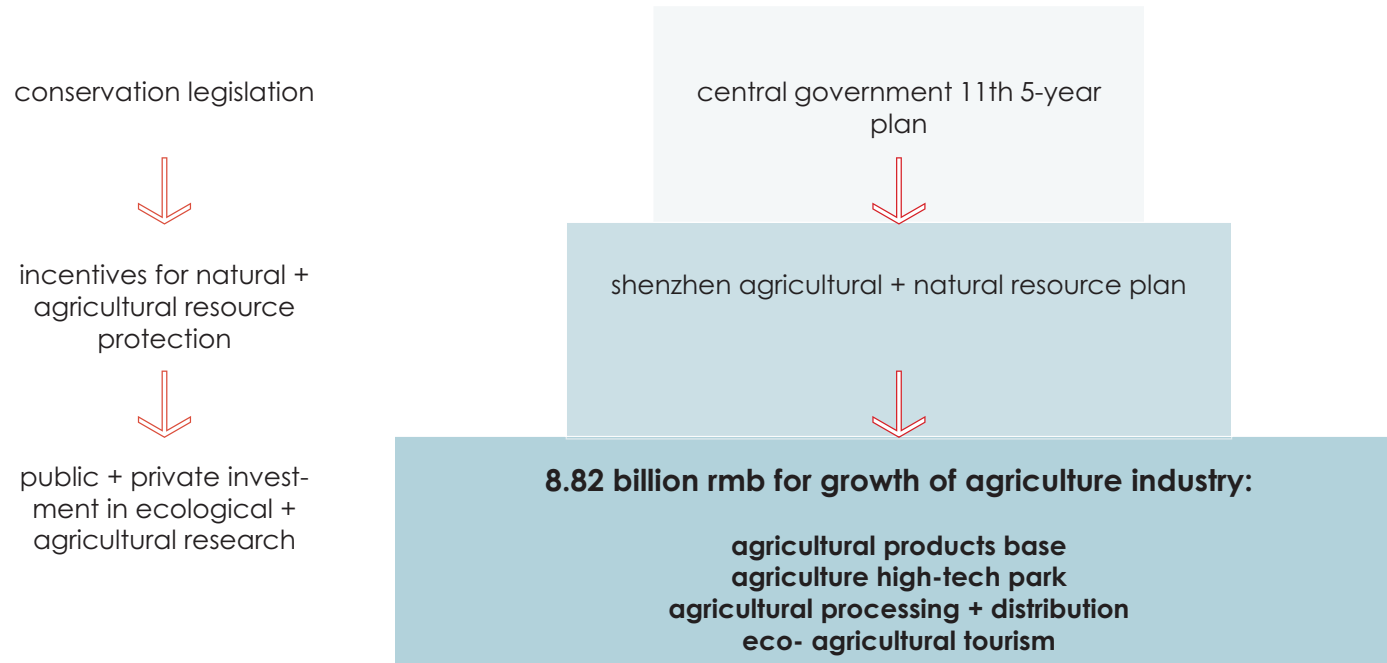
32% decrease in agricultural land



skyrocketing food prices

rapid population growth creates conflicting land use demands

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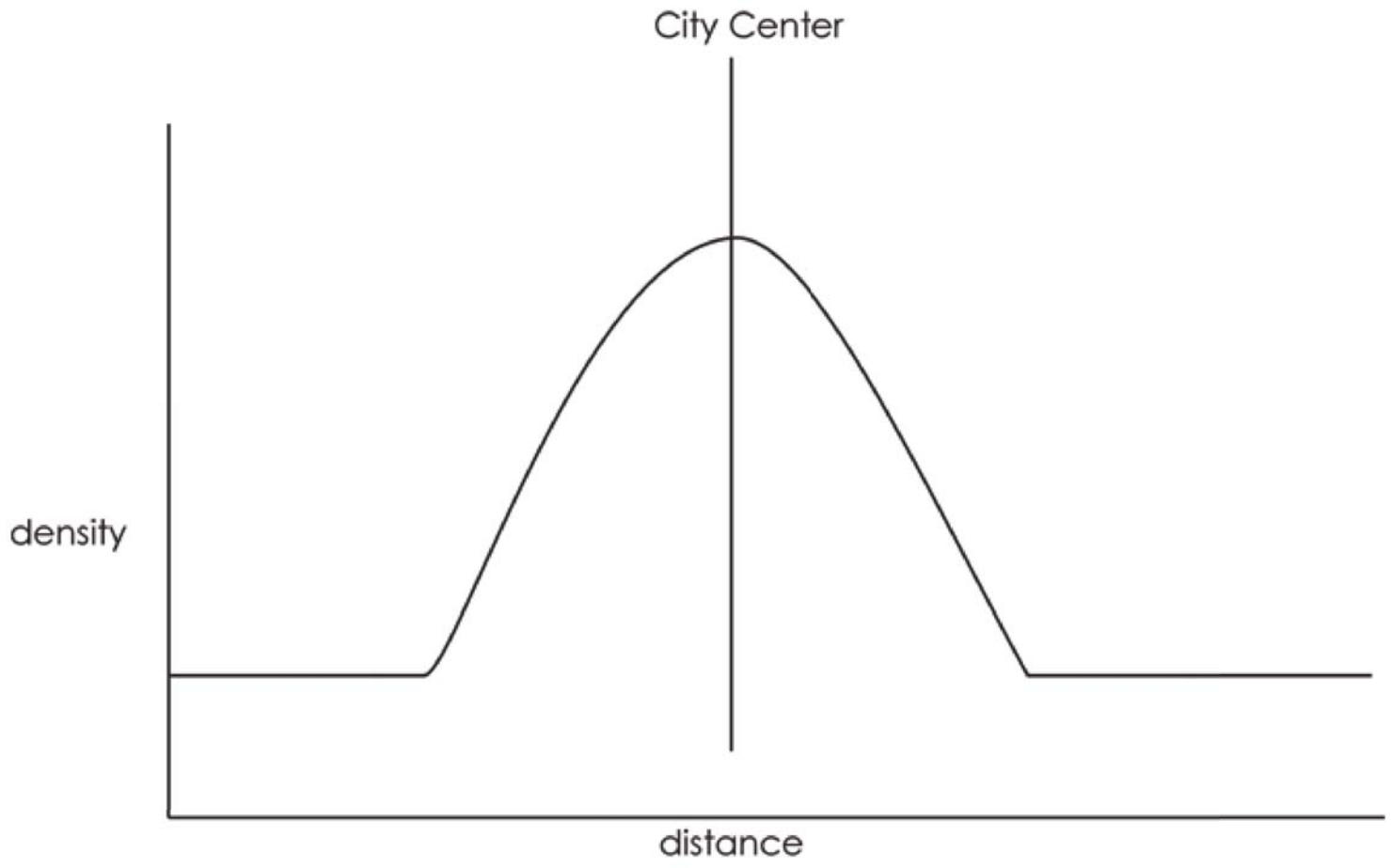


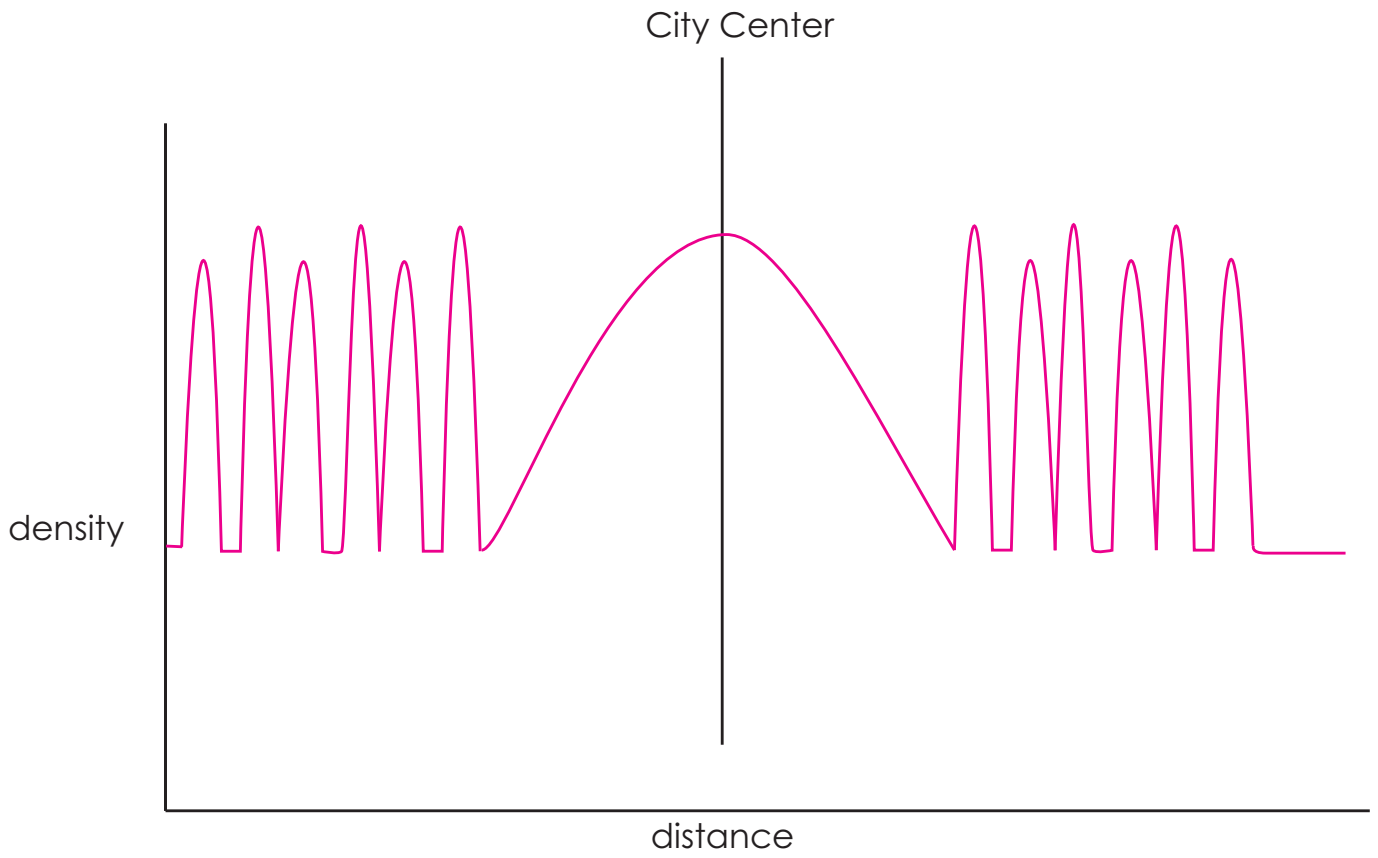
case study: shenzhen

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China's national agricultural research system is the largest publicly funded and administered research system in the world. About 60,000 researchers and technicians work in about 400 research institutes and 70 agricultural universities distributed across China.

remediation + agriculture + research hub = international knowledge cluster

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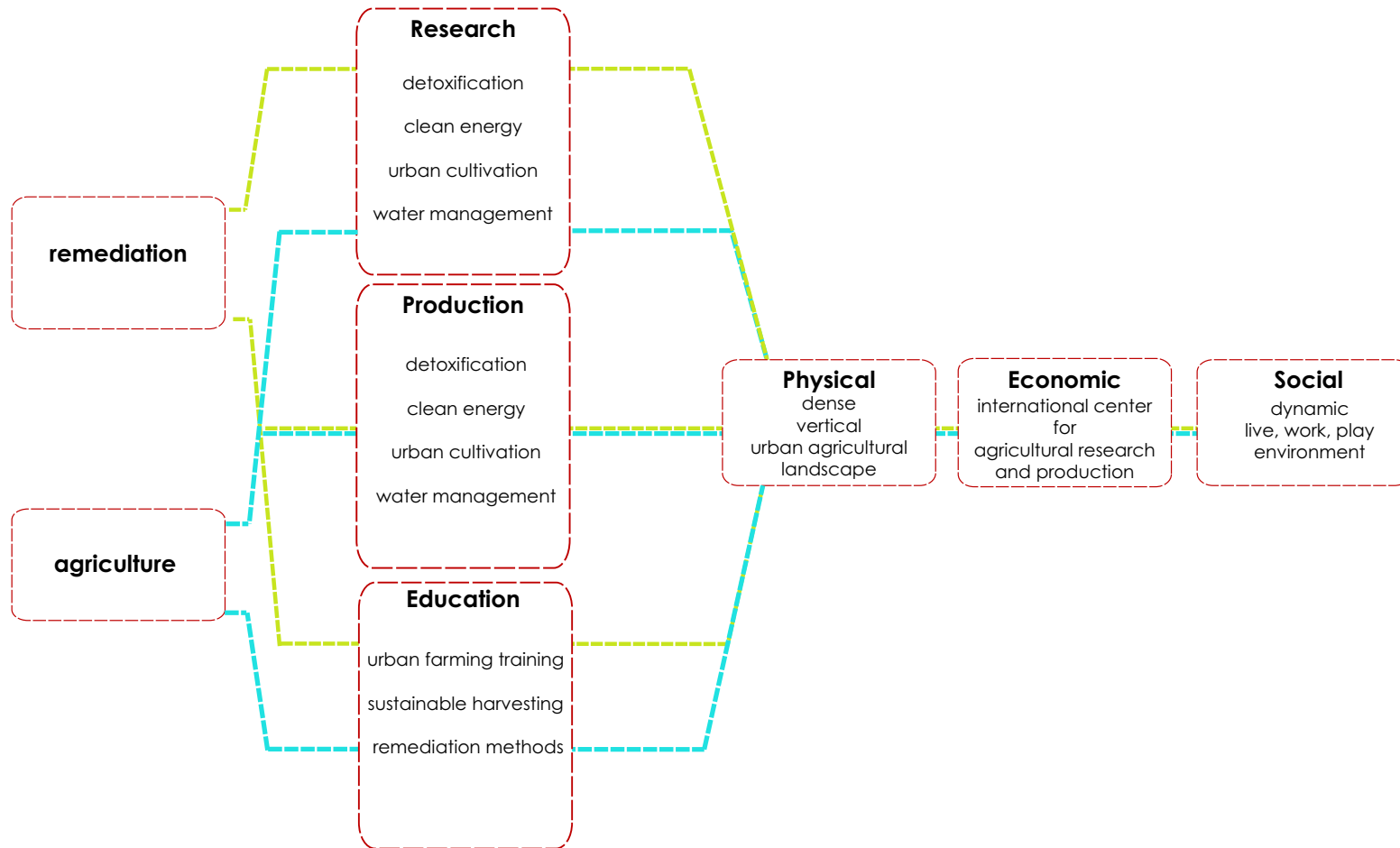
Catalysts



Industry



Revitalization



remediation + agriculture + research = international knowledge cluster



development projections:

- 40% research facilities
- 25% office facilities
- 5% education facilities
- 6% flat agricultural space
- 10% recreation space
- 3% retail spaces
- 1% convention space
- 10% residential units

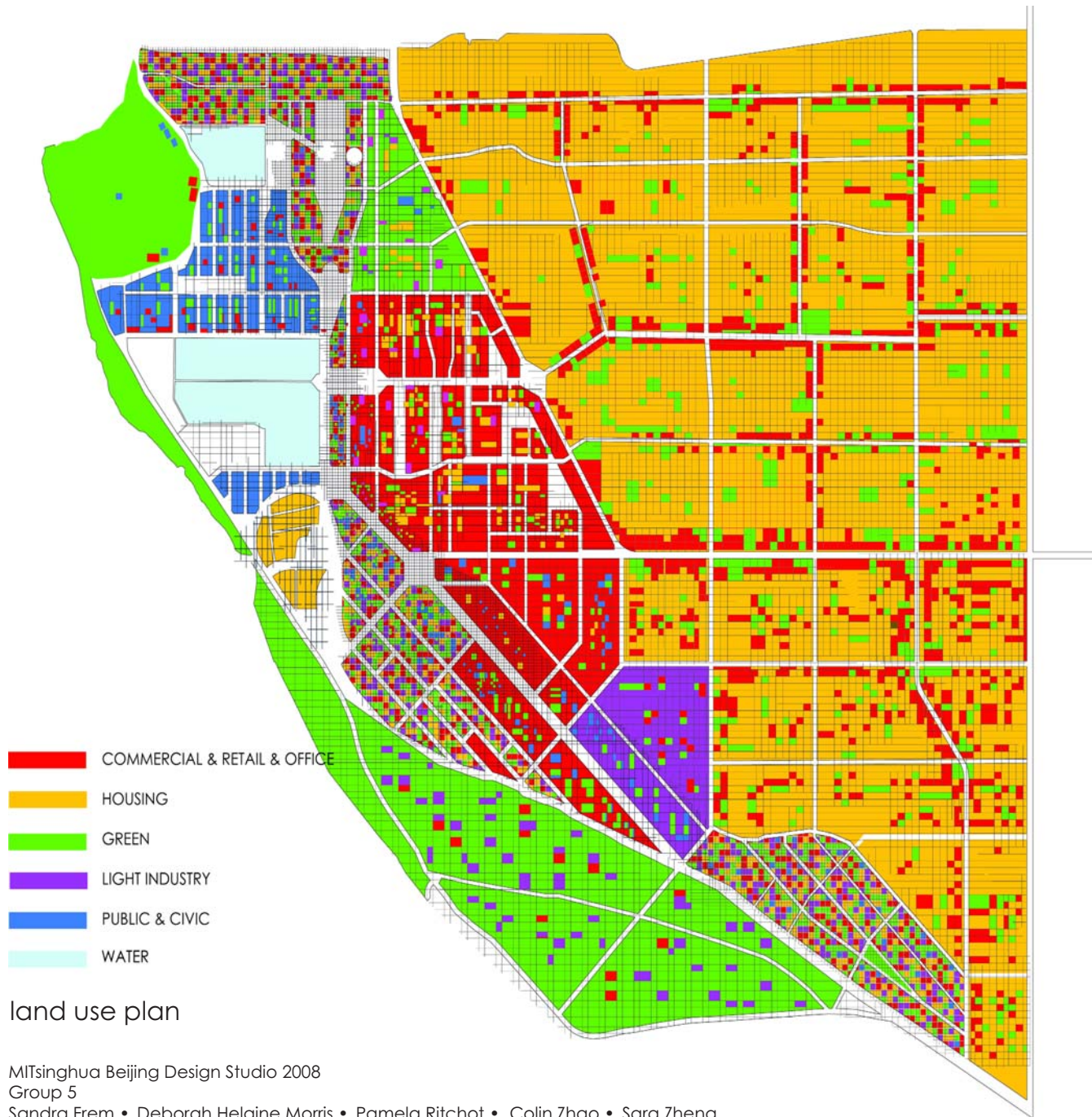
employment types:

- land maintenance (unspecialized)
- land maintenance (specialized)
- agricultural workers (unskilled)
- custodians
- administrative support
- remediation lab technicians
- climate-control technicians
- researchers
- engineers
- agri-business technicians
- managers
- educators
- retail staff
- restaurant staff
- tourism service

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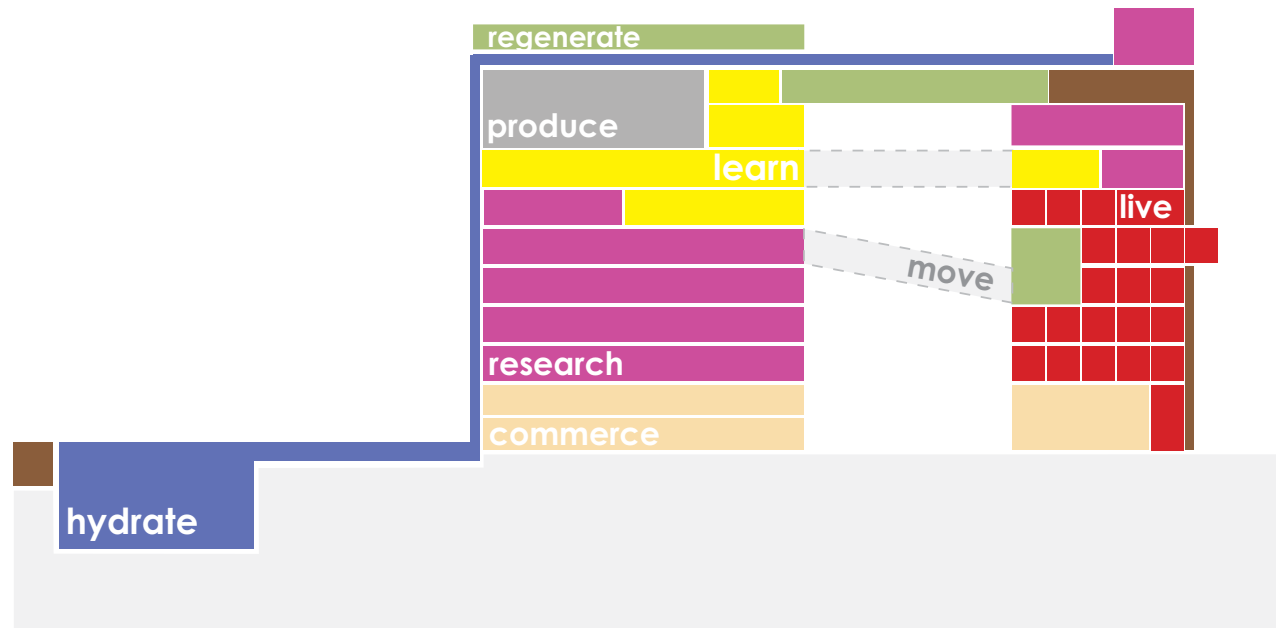
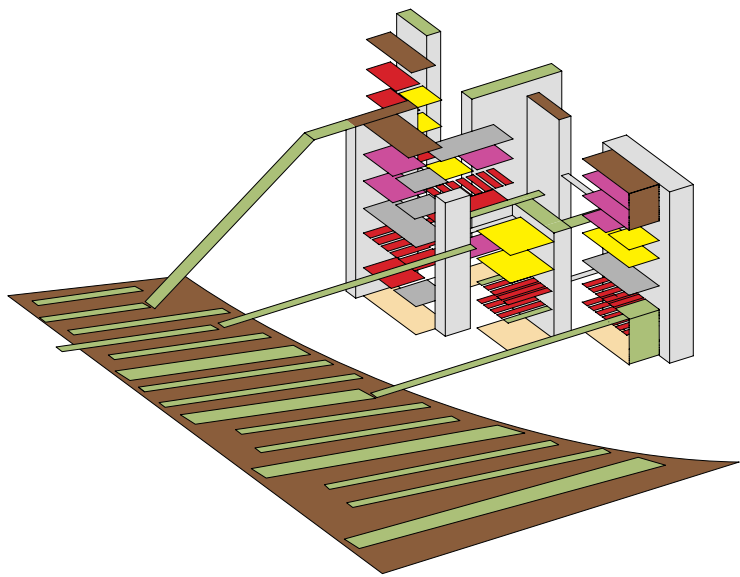
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land use plan

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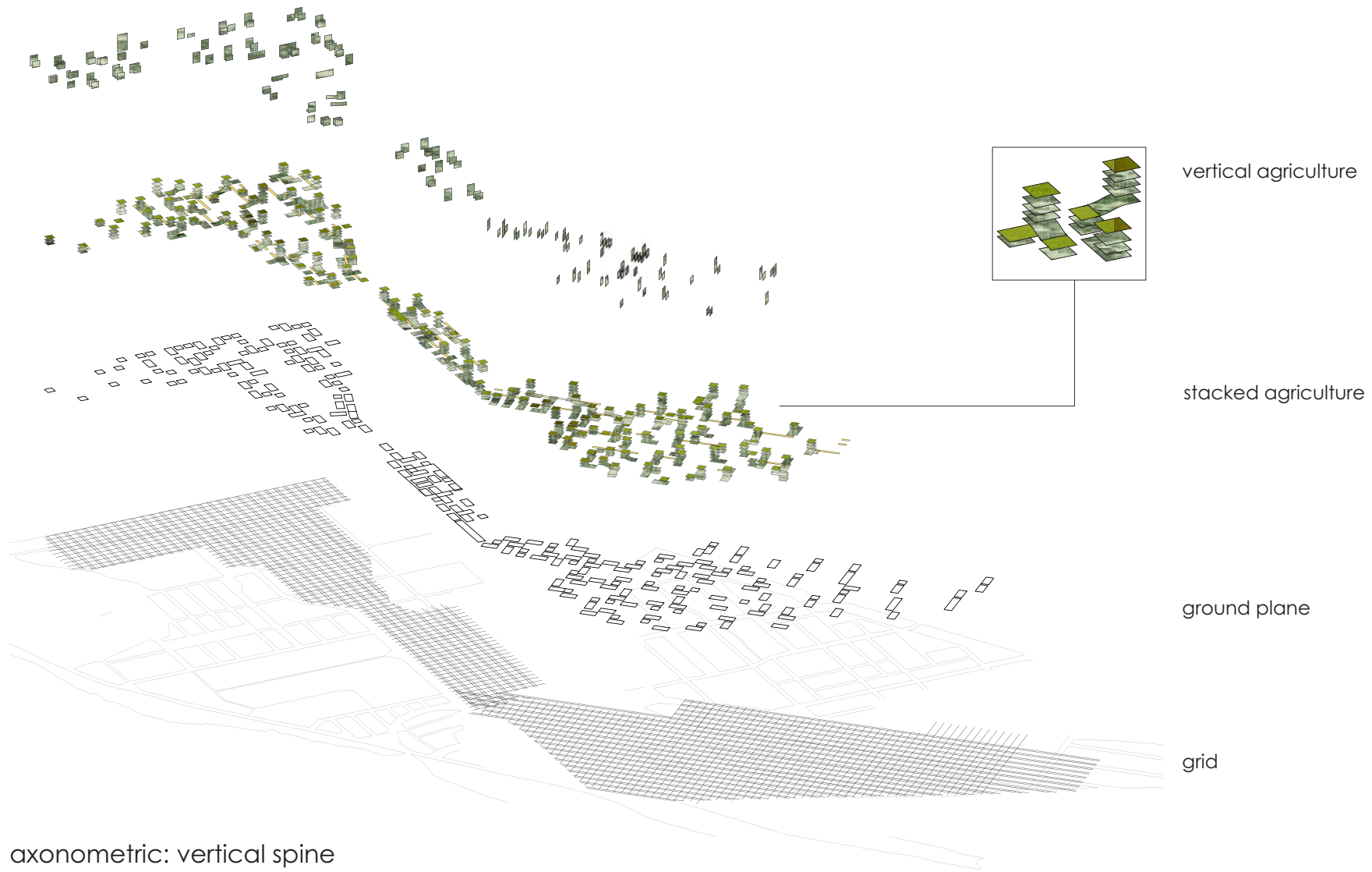


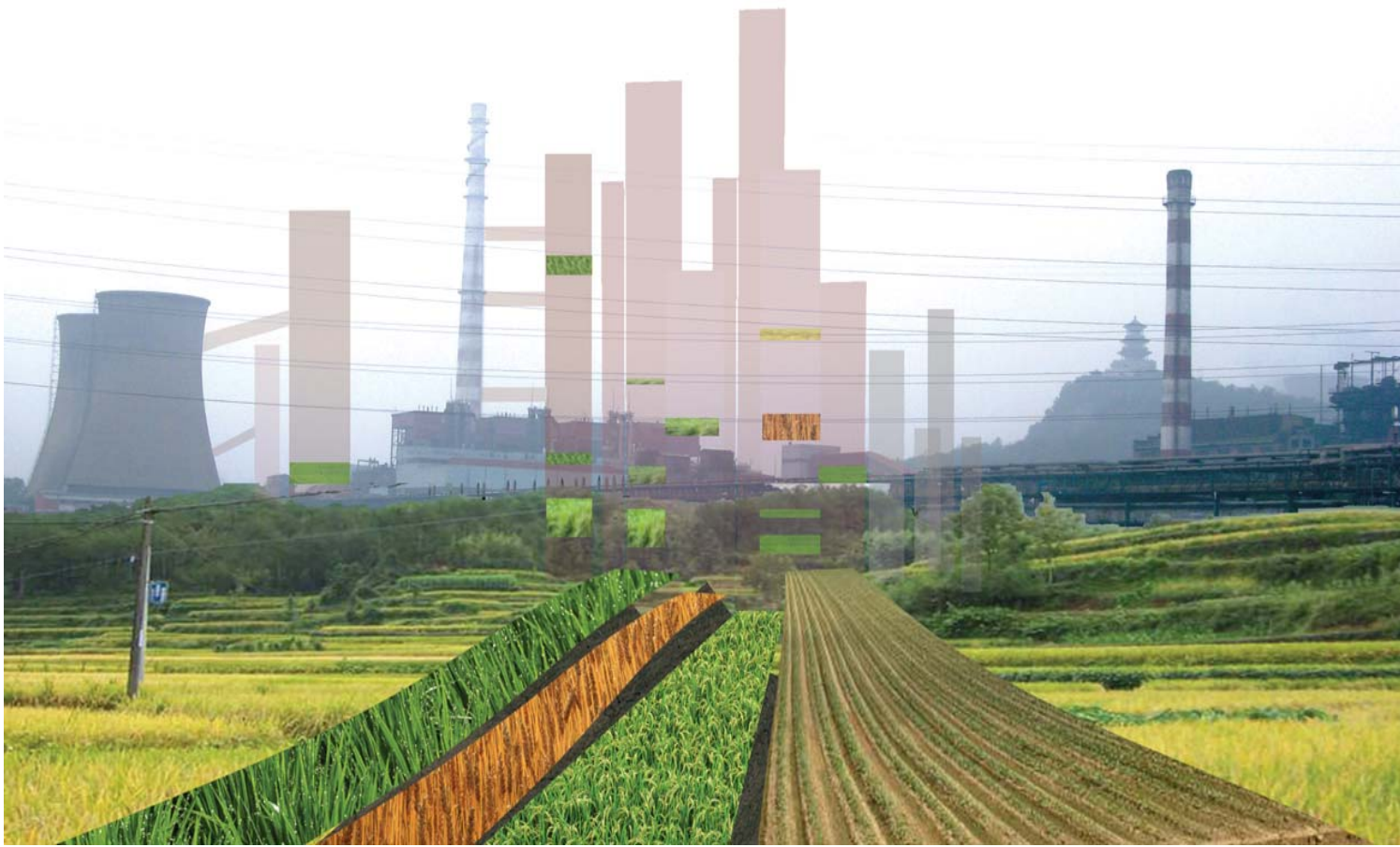
## opportunities of stacked uses

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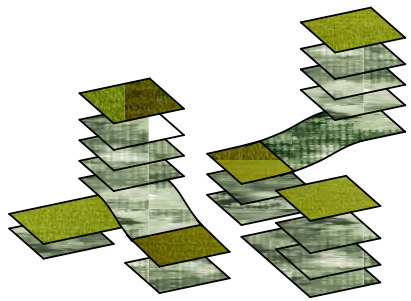
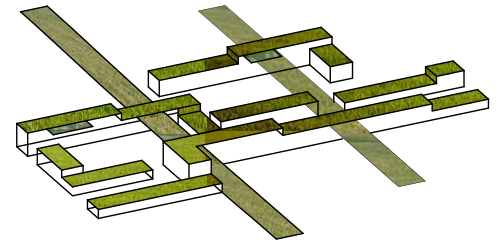
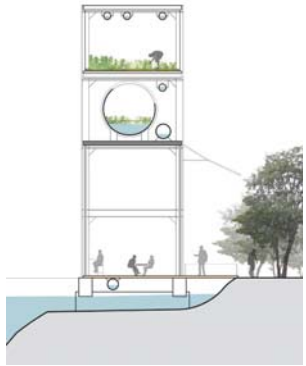
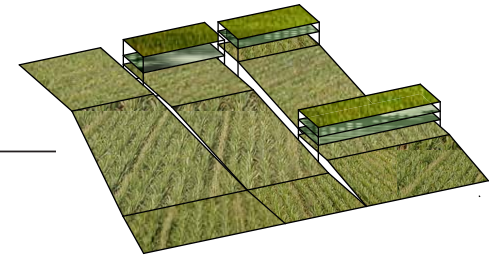
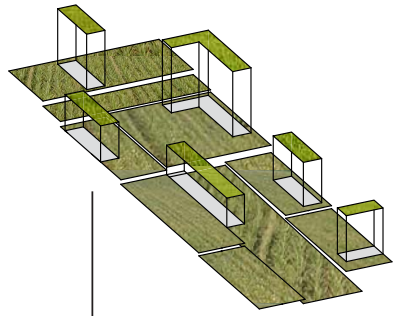




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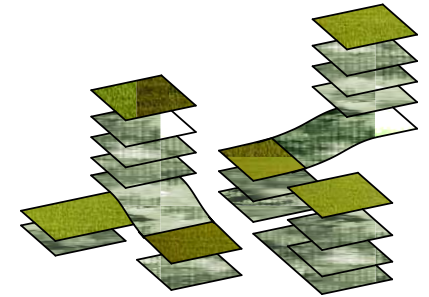




remediation crops:  
mustard, alfalfa, sunflowers, bamboo

food crops:  
soybeans, potatoes, cabbage and greens

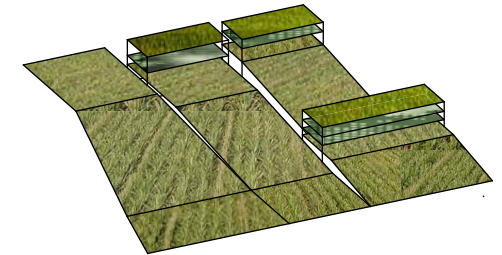
suggested development:  
3,000,000 m<sup>2</sup> research facilities  
1,000,000 m<sup>2</sup> office facilities  
100,000 m<sup>2</sup> education facilities  
500,000 m<sup>2</sup> agriculture facilities  
10,000 m<sup>2</sup> retail spaces



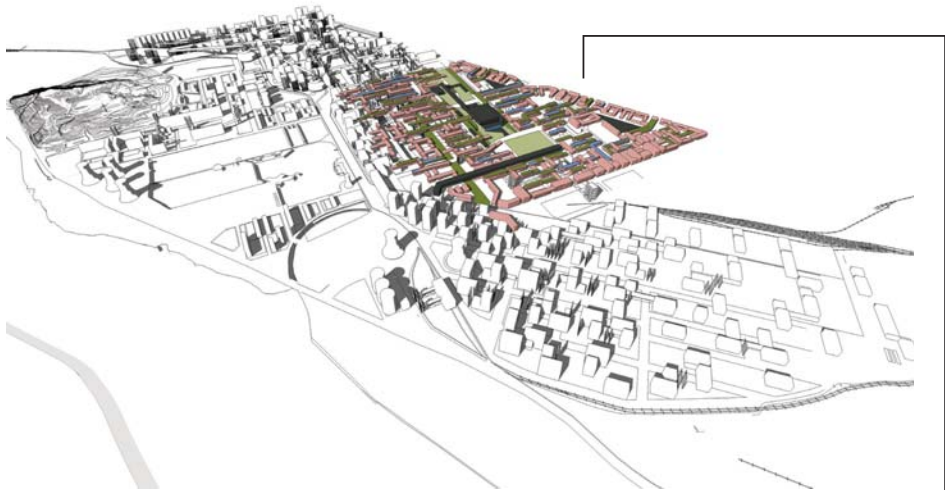
remediation crops:  
indian mustard, alfalfa, sunflowers, bamboo

food crops: soybeans, potatoes, cabbage and greens

development ratio:  
20% agriculture facilities  
30% recreation/open space  
15% tourism facilities  
20% residential units  
15% hotel rooms



zones of development

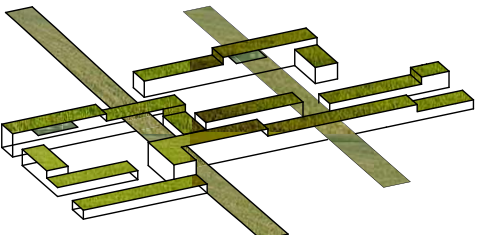


zones of development

key remediation crops:  
indian mustard, alfalfa, sorghum, barley, and rye

key agricultural products:  
soybeans, potatoes, cabbage, greens, fruits.

- suggested development:
- 1,000,000 m<sup>2</sup> research facilities
  - 1,000,000 m<sup>2</sup> office facilities
  - 100,000 m<sup>2</sup> agriculture facilities
  - 50,000 m<sup>2</sup> retail spaces
  - 100,000 m<sup>2</sup> convention space





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