

“A society that **intensifies** and expands the use of **land** and **water** in urban areas ...



... needs to **rethink** the relation between **spatial planning** and **water** management.”





**NEW GOVERNANCE SCHEMES FOR FRONTIERS OF  
LAND AND WATER  
GOVERNANCE**



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# SPATIAL PLANNING



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# WATER MANAGEMENT





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## GOVERNANCE FRONTIERS

# WATER MANAGEMENT





FRONTIERS OF  
LAND AND WATER  
GOVERNANCE  
IN URBAN REGIONS

# 3

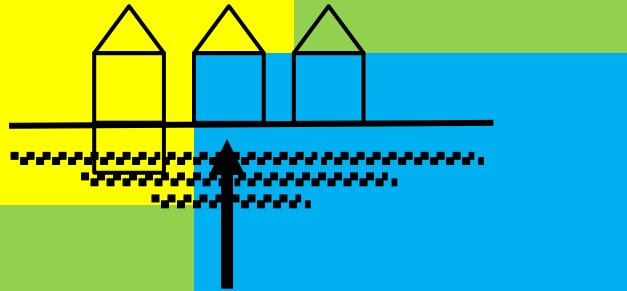
FRONTIERS OF  
LAND AND WATER  
GOVERNANCE  
IN URBAN REGIONS

vertical  
frontier

**1.**



# vertical frontier



**1.**



पब्लिक प्राईवेट पार्टनरशिप कल्याणपुरा जलग्रहण क्षेत्र

सुनहरा कल  
भू-जल सन्तुलन ?

ITC Limited  
ई-चोपलि  
OFES

जवाब और जमान  
इनकी हमें बचाव है

5' x 14' = 77

मो. 98287 731901  
मो. 98282 790475

श्री कल्याणपुरा जलग्रहण क्षेत्र

The sign features a diagram of a water supply system with two wells and two pumps. A yellow arrow points upwards from a dashed line towards the houses, and a red '1!' is overlaid on the bottom right.

1!





1.

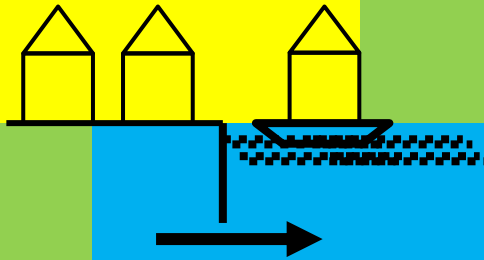


horizontal

2.

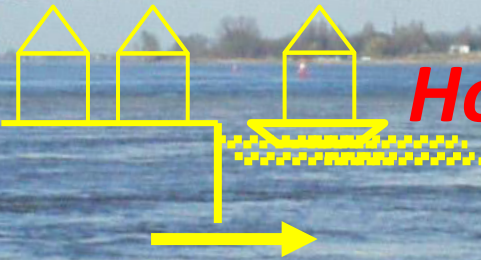
frontier

# horizontal



# 2.

# frontier



*Horizontal frontier*

2.





2

*Horizontal frontier*





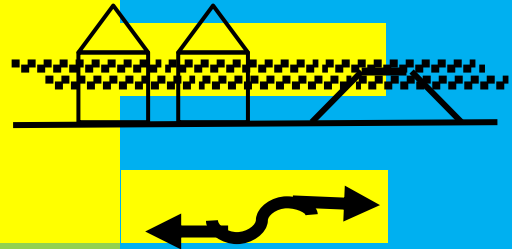
*Horizontal frontier*

2.

fluid **3.**

frontier

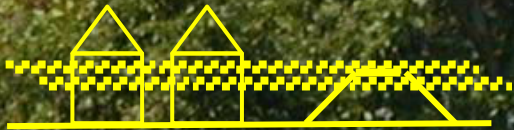
# fluid 3.



frontier



3.







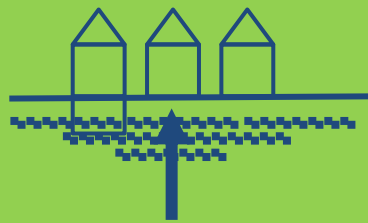
# 3

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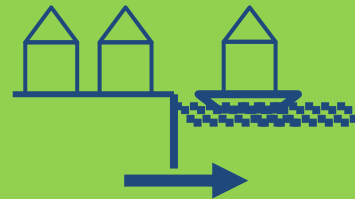


# 3

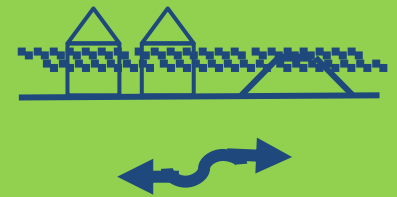
## FRONTIERS OF LAND AND WATER GOVERNANCE IN URBAN REGIONS



*vertical*



*horizontal*

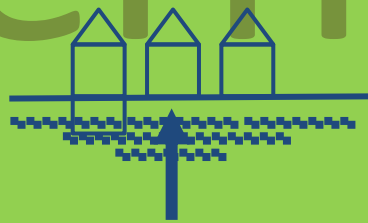


*fluent*

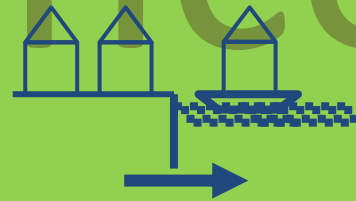
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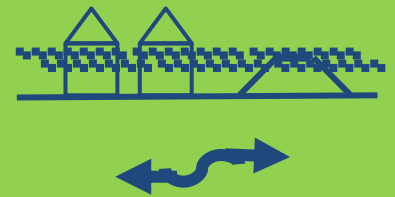
governance



*vertical*



*horizontal*



*fluent*

challenges

governance

challenges



# governance

*legitimacy*

DECISION MAKING

*effectiveness*

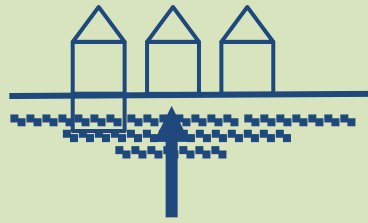
INSTITUTIONS

*efficiency*

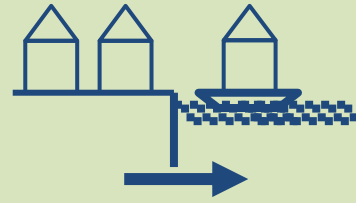
TIME PERSPECTIVE

*fairness*

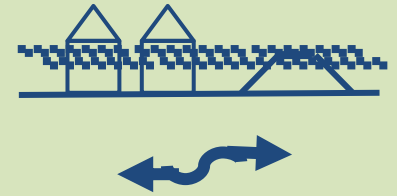
WINNERS & LOSERS



*vertical*



*horizontal*



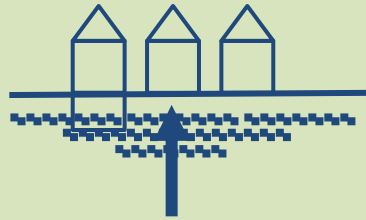
*fluent*

*legitimacy*

*effectiveness*

*efficiency*

*fairness*



***vertical***

***legitimacy***

*knowledge on long term and invisible interconnections  
(expertism)*

***effectiveness***

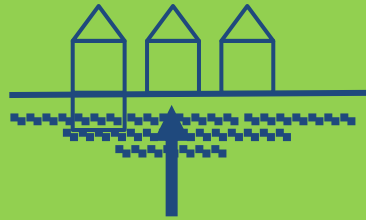
*municipal governance vs. integrated regional approach  
(appropriate scale)*

***efficiency***

*causes and effects are not obvious; long term externalities  
(long term)*

***fairness***

*externalities can appear timely and spatially remote  
(liability problem)*



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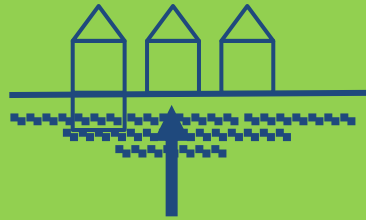
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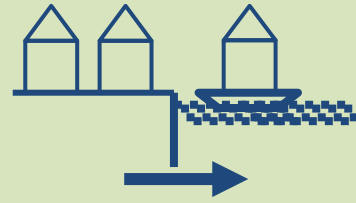
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**horizontal**

**legitimacy**

*norms, values and rationalities shape decision-making  
(direct consent)*

**effectiveness**

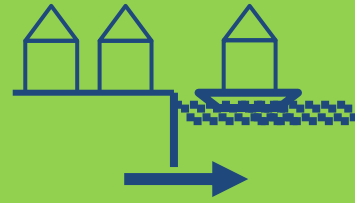
*project-driven implementation,  
public & private stakeholders*

**efficiency**

*high socio-economic dynamics  
(short term)*

**fairness**

*balancing competing interests (economic, social,  
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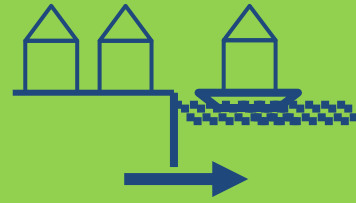
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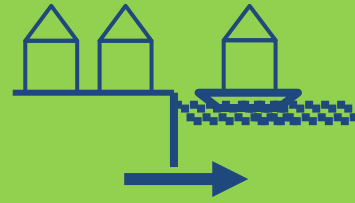
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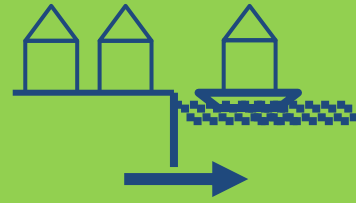
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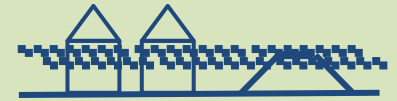
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*fluent*

*legitimacy*

*spatially **disconnected** problem areas (downstream) and solution areas (upstream)*

*effectiveness*

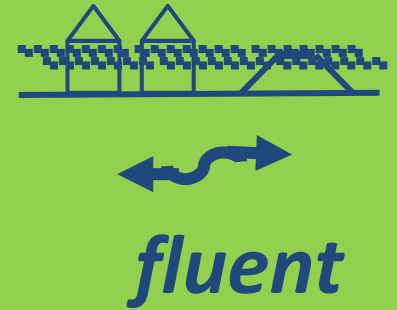
*complex, large scale, trans-boundary institutions  
(**transboundary**)*

*efficiency*

*measures upstream affect efficiency downstream  
(**risk driven**)*

*fairness*

*barely win-win situations possible  
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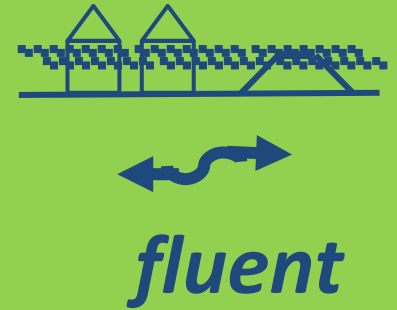
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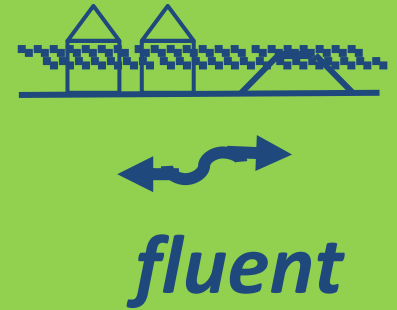
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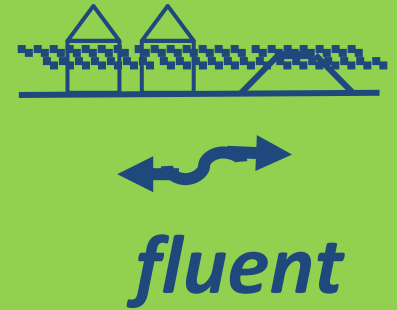
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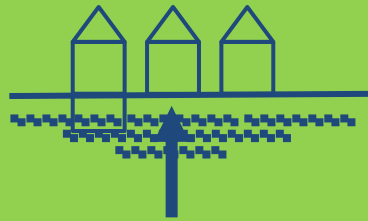
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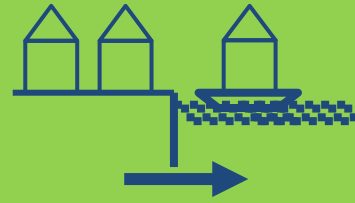
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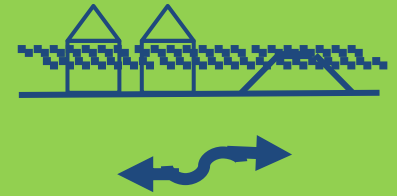
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*vertical*



*horizontal*



*fluent*

*legitimacy*

*expertism*

*direct consent*

*disconnected*

*effectiveness*

*appropriate scale*

*project-driven*

*transboundary*

*efficiency*

*long term*

*short term*

*risk driven*

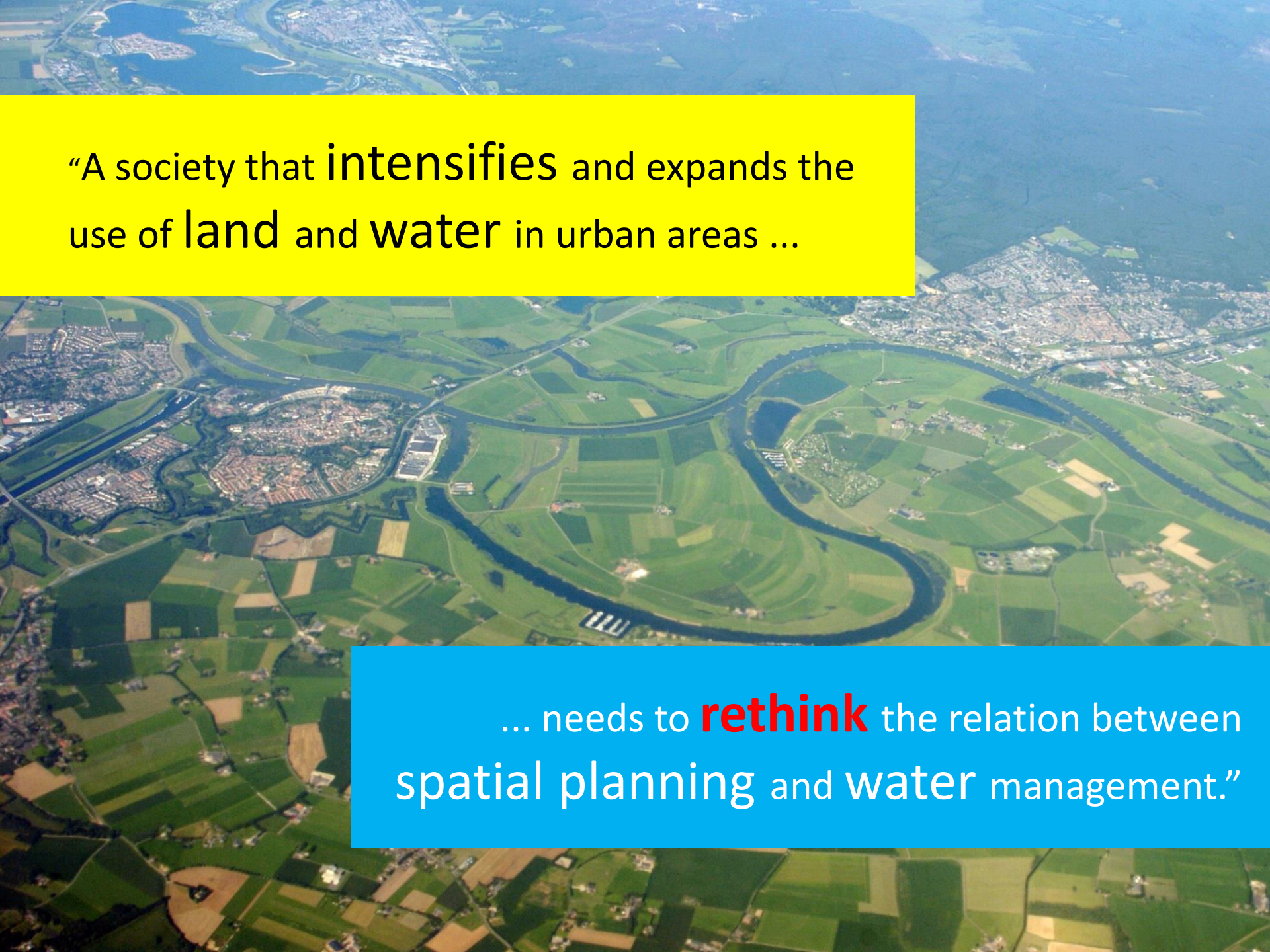
*fairness*

*liability problem*

*balancing*

*Pareto decisions*

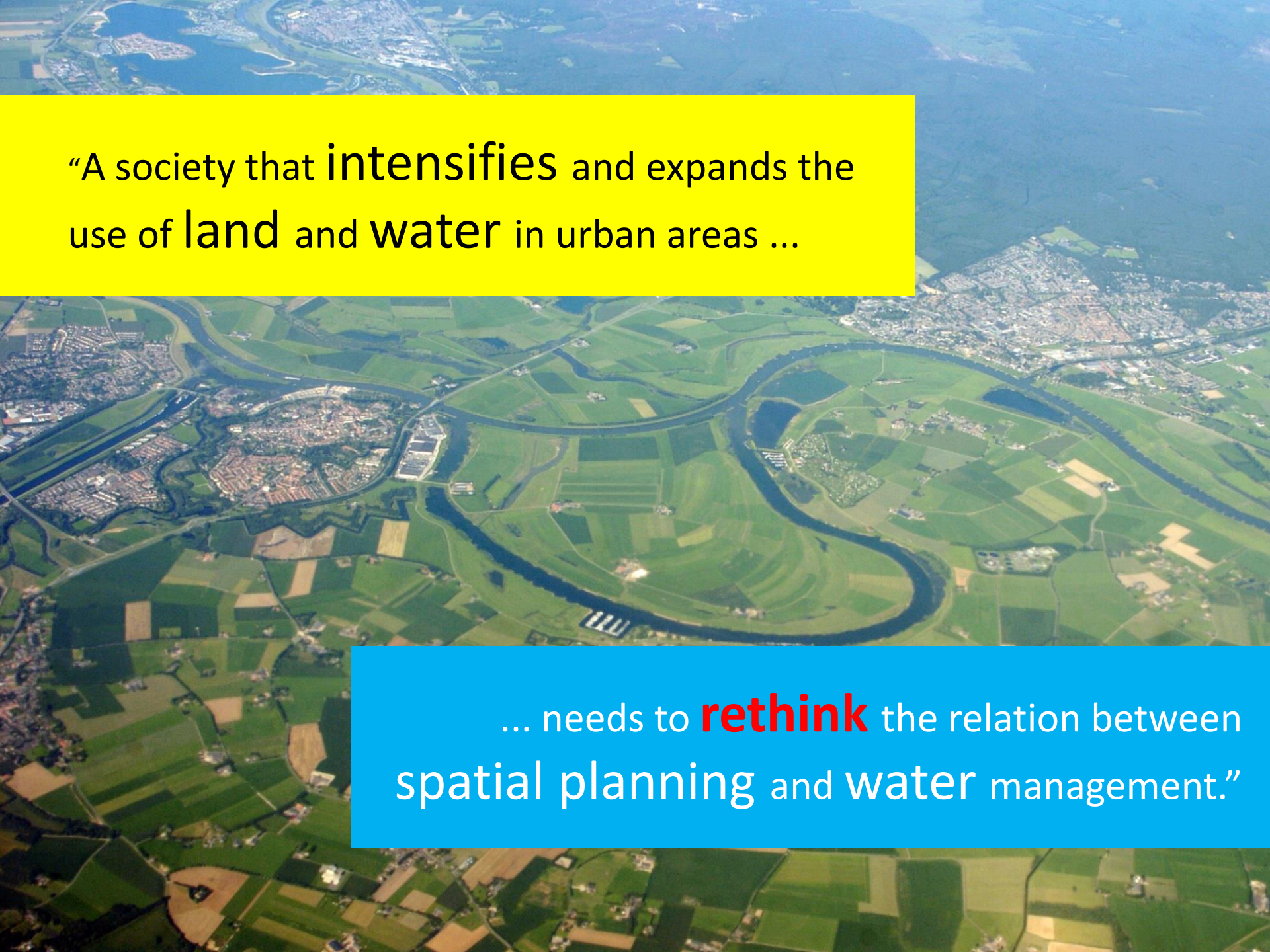


An aerial photograph showing a wide river meandering through a landscape. The river is dark blue and winds through a patchwork of green agricultural fields and some urban areas with buildings. The background shows more green fields and a distant urban area under a clear blue sky.

“A society that **intensifies** and expands the use of **land** and **water** in urban areas ...

... needs to **rethink** the relation between **spatial planning** and **water** management.”



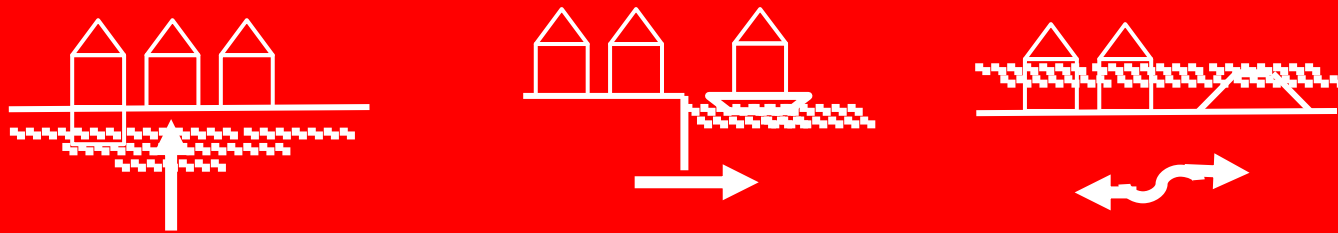
An aerial photograph showing a river winding through a landscape. The river is dark blue and flows through a mix of green agricultural fields and urban areas with buildings and roads. The top of the image is partially obscured by a yellow text box.

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