

Possible ways to link land-use to lake water quality: *a cross-sectoral approach*

CLIMATE



ISIMIP 2a/2b

LANDUSE



IMPACT

1. Water physics
2. Biochemistry



WATER FLOW

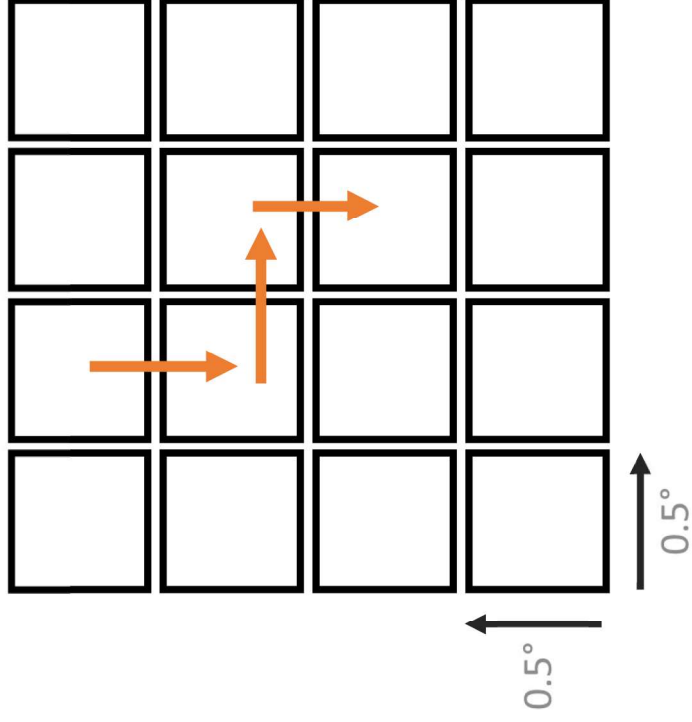
LAKEs



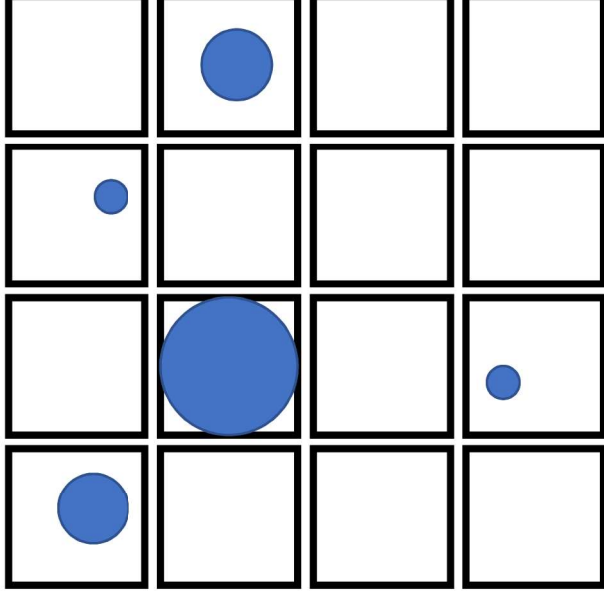
LANDUSE

+

WATER FLOW



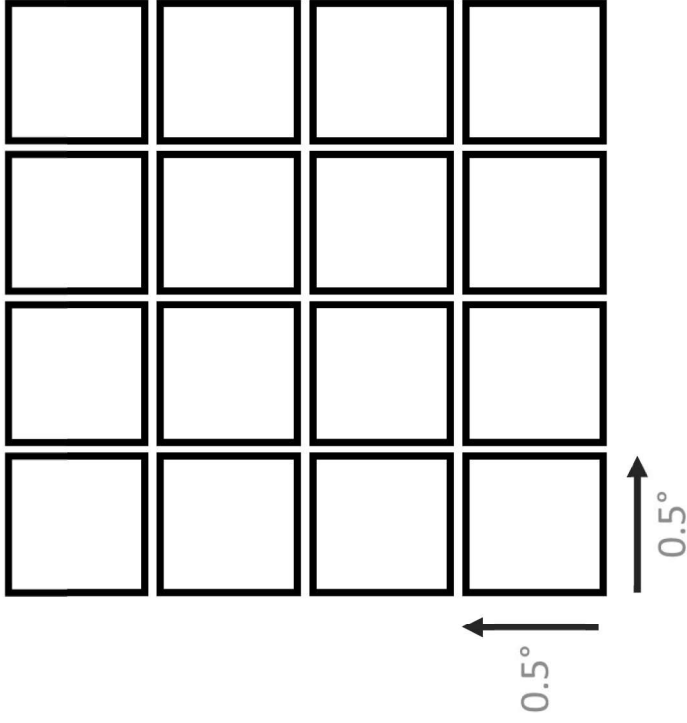
LAKES



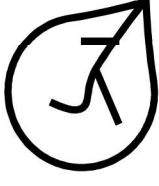
LANDUSE

+

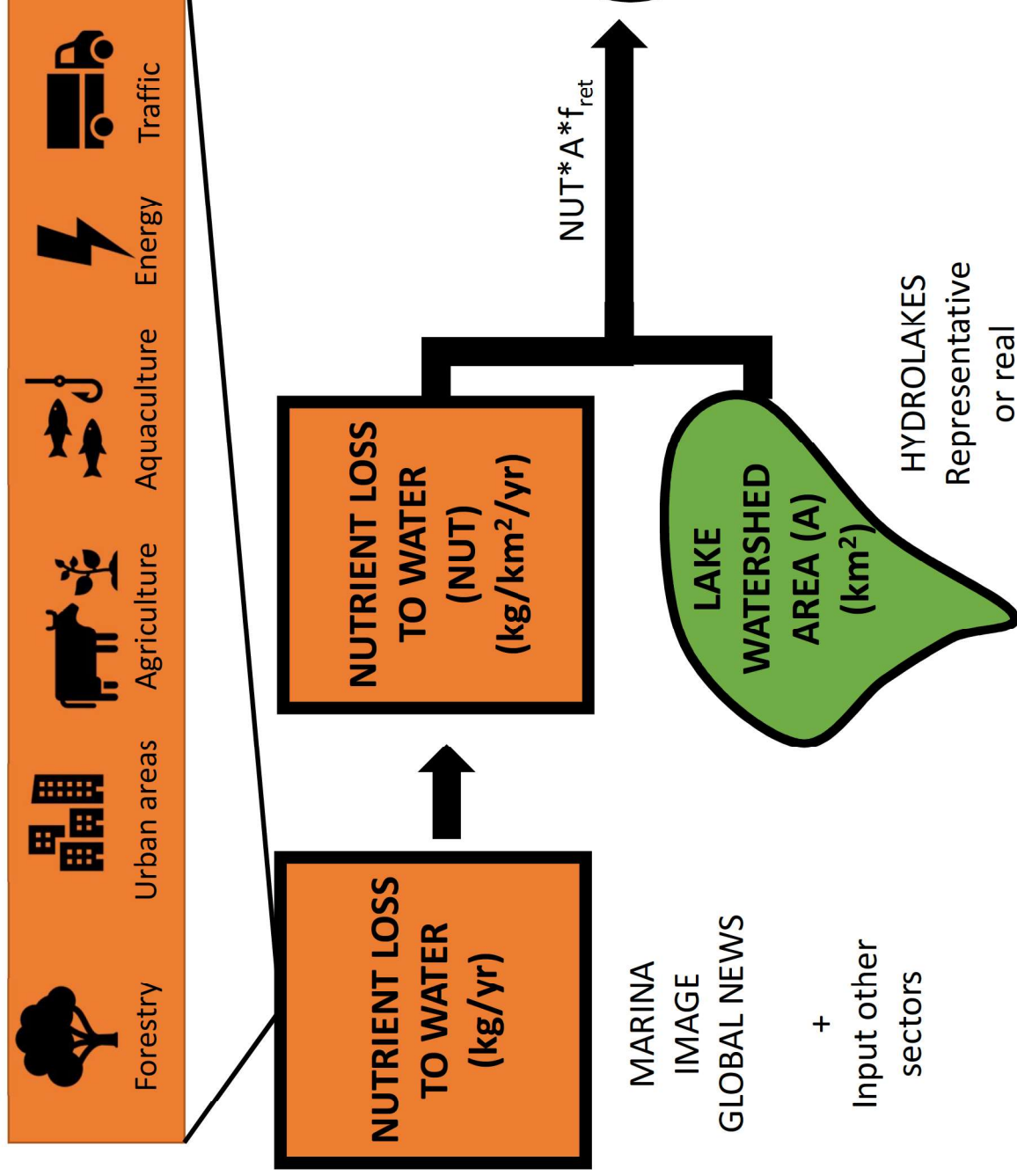
WATER FLOW



LAKE CATCHMENT



- ➔ DIFFERENT SHAPE THAN GRID
- ➔ MOST LAKES SMALLER THAN GRID (~95%, 0.5°)





Work in progress!!!

Comparison with data

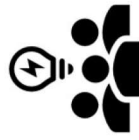


>24000 Lakes

Comparison with expert knowledge

	TP (g/m ³)	TN (g/m ³)	TN:TP
Average	1.38	8.8	18
97,5% upper bound	8.92	66	115
Oligotrophic*	<0.01	<40	-
Mesotrophic	0.01-0.03	40-50	-
Eutrophic	0.03-0.1	50-70	-
Hyper eutrophic	>0.1	>70	-

How to proceed?



- Working groups
 - Land use/water quality group (river sector?)
 - Lake group
 - Real lakes versus representative lakes
 - Methods for downscaling
 - Other...



- Proposals
 - Land-use projects
 - Link between land use and lakes
 - Other...

