



# Water: The Environmental Outlook to 2050

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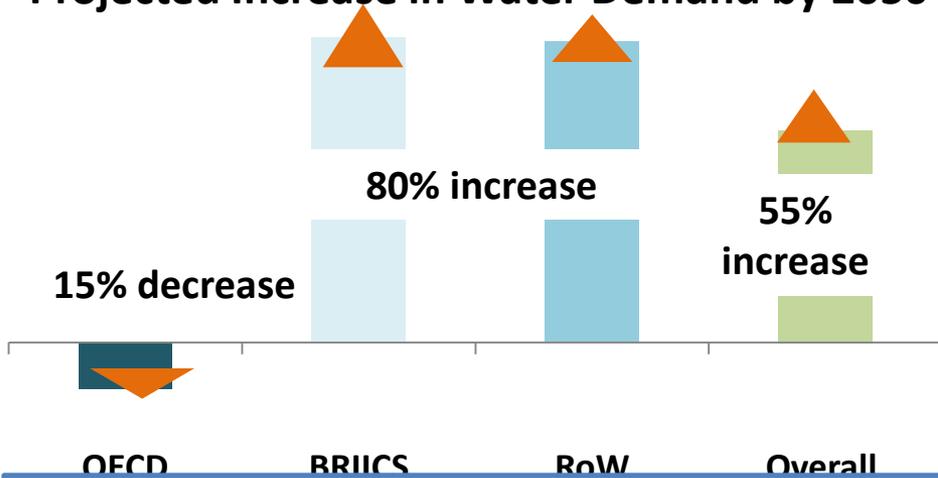
OECD Global Forum on Environment: Making Water Reform Happen  
25-26 October 2011, Paris



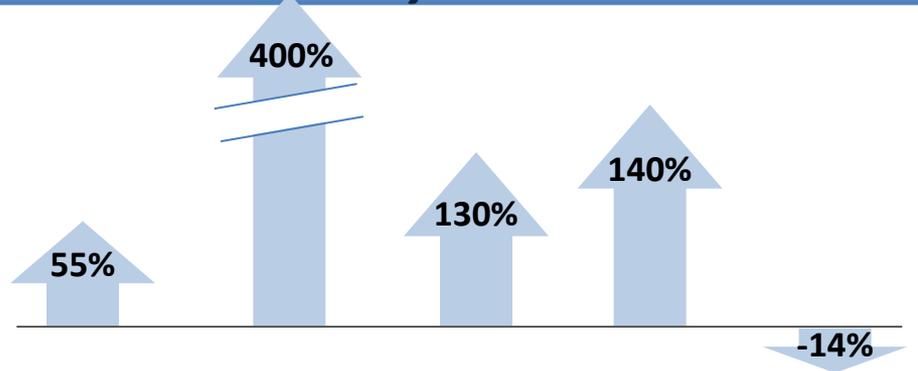
# Presentation Outline

- Environmental Outlook: Key trends and projections
  - Water demand
  - Water stress
  - Water pollution
  - Access to water supply and sanitation
- Key messages and traffic lights
- Policy options: instruments for water policies
- Importance of water pricing

## Projected Increase in Water Demand by 2050



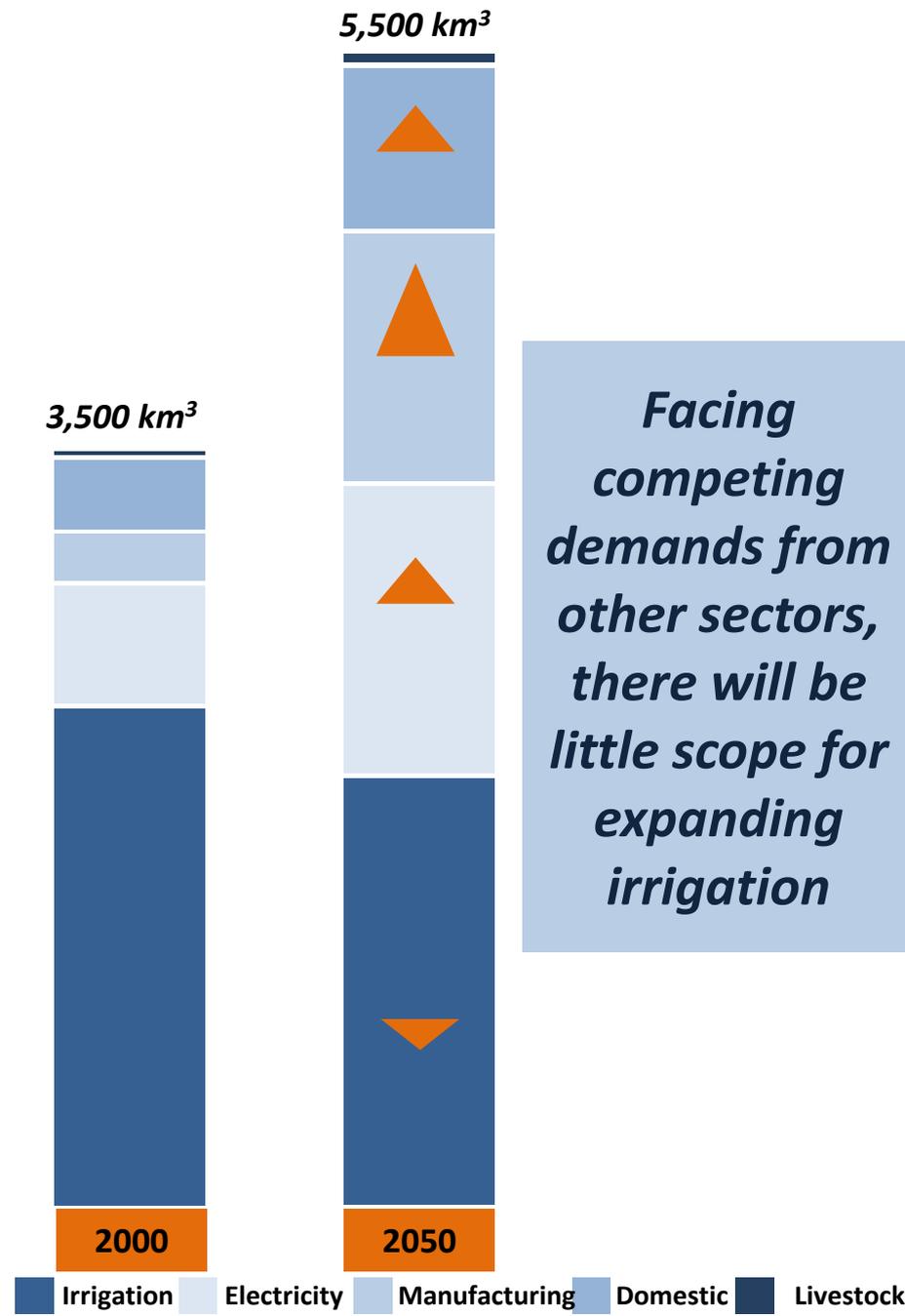
**Water demand will increase by 55% by 2050**



Overall   Manufacturing   Domestic   Electricity   Irrigation

**Growing demand from manufacturing, electricity and domestic use**

## Drivers of Demand

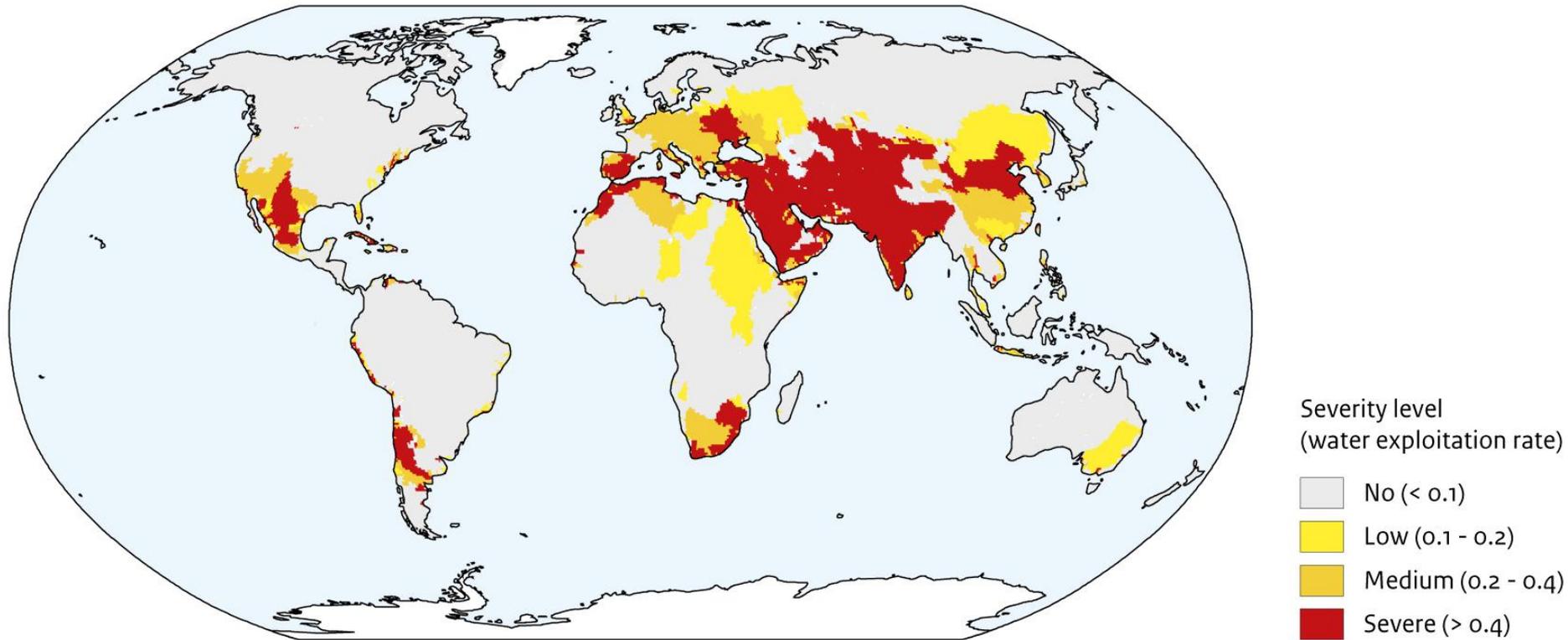


Irrigation   Electricity   Manufacturing   Domestic   Livestock

# Water stress



Under the Baseline, the number of people living in river basins under severe water stress is projected to more than double between 2000 -2050 , reaching 3.9 billion people



# Population living under water stress

2000 (6.1 Bn)

2050 (9.2 Bn)

People under no or low water stress

People under medium water stress

People under severe water stress



*Nearly half of the world population is projected to live under severe water stress*

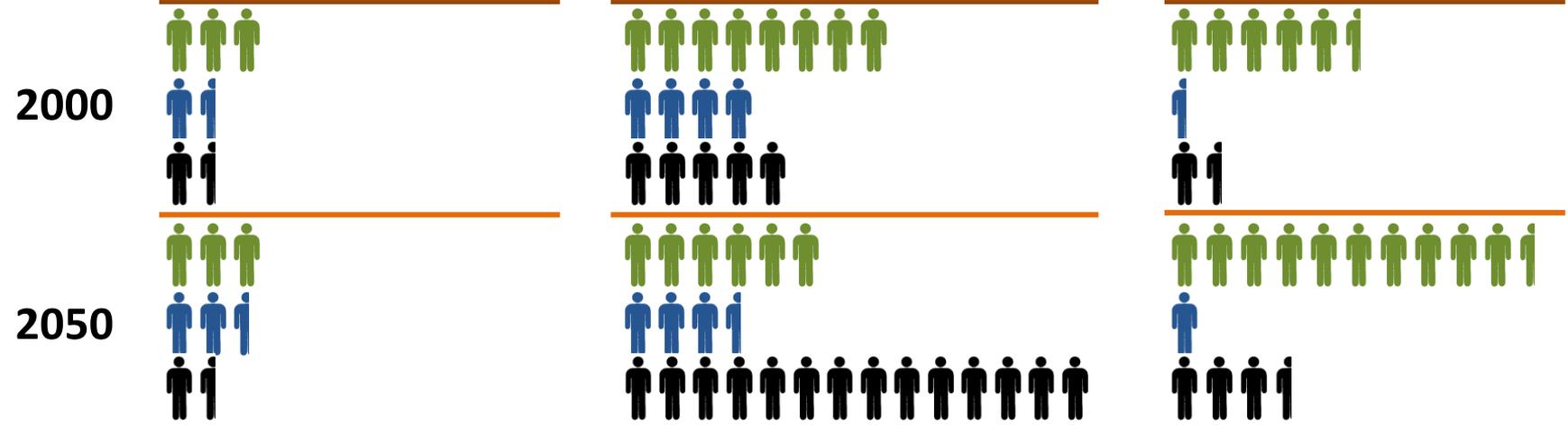


= 200MM

OECD

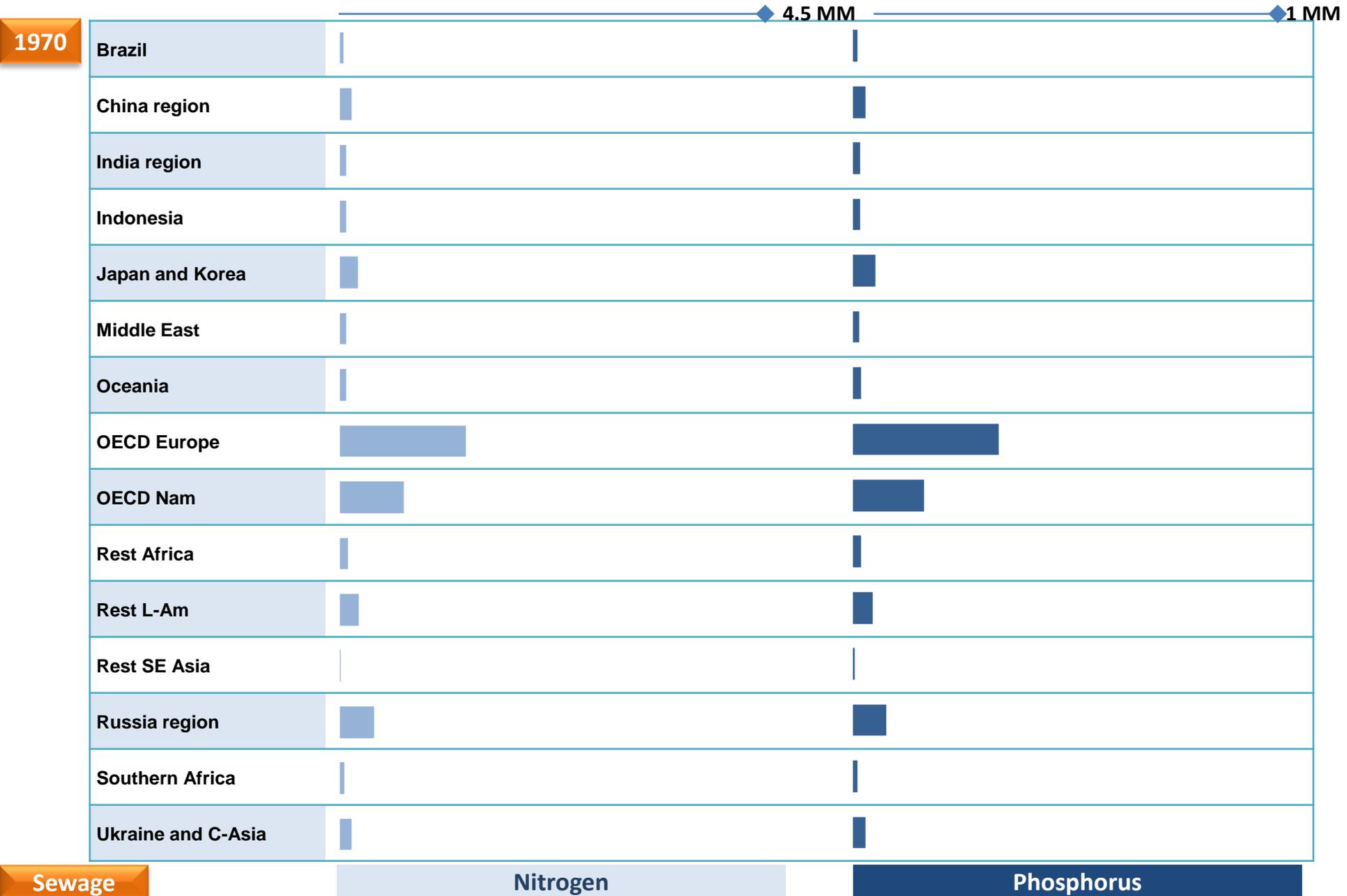
BRIICS

RoW



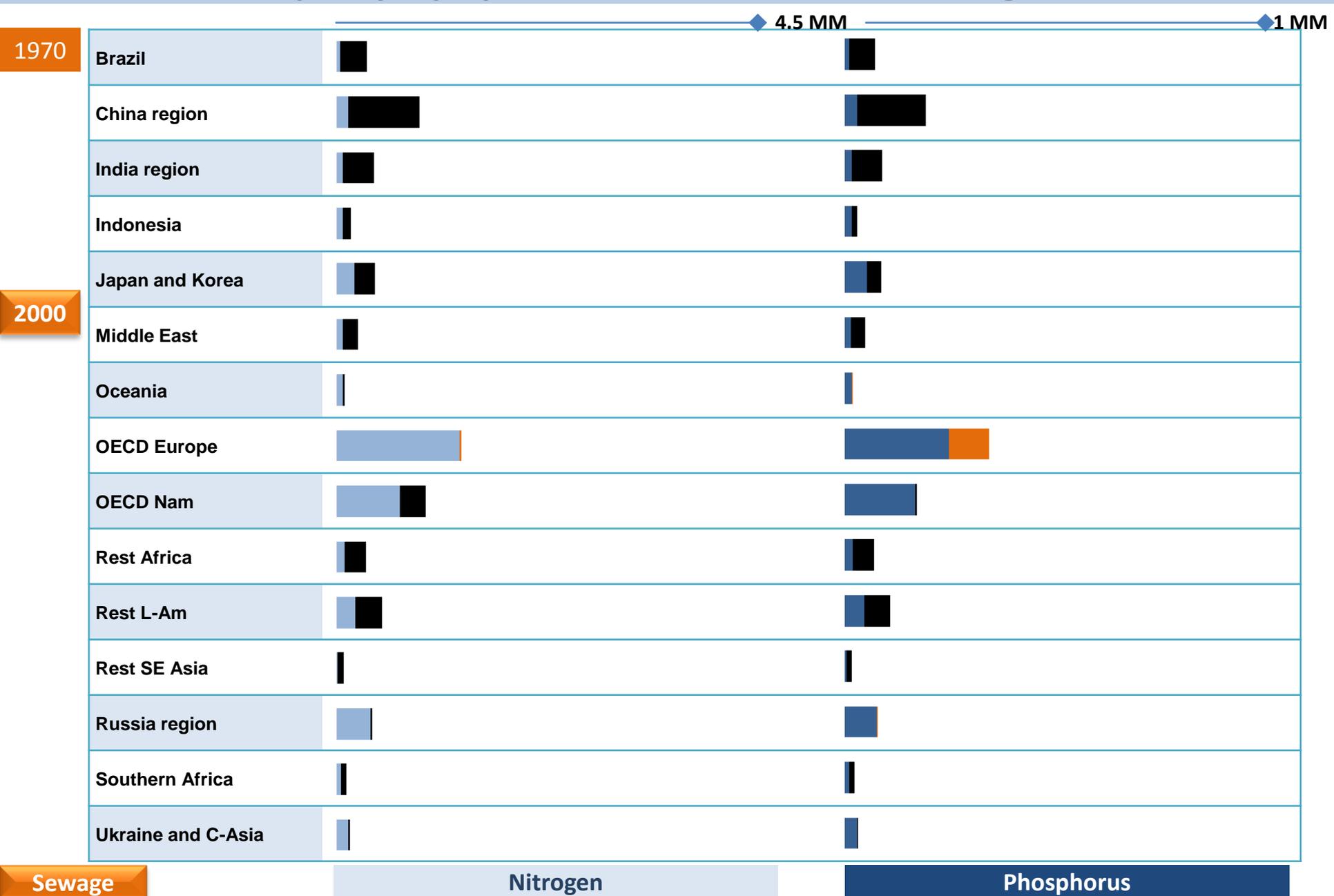
*Water stress is projected to increase significantly and most of this increase occurs in BRIICS*

# Water quality is projected to deteriorate in the coming decades



*Effluent from Nutrients from Wastewater (MM Tonnes Per Year)*

# Water quality is projected to deteriorate in the coming decades

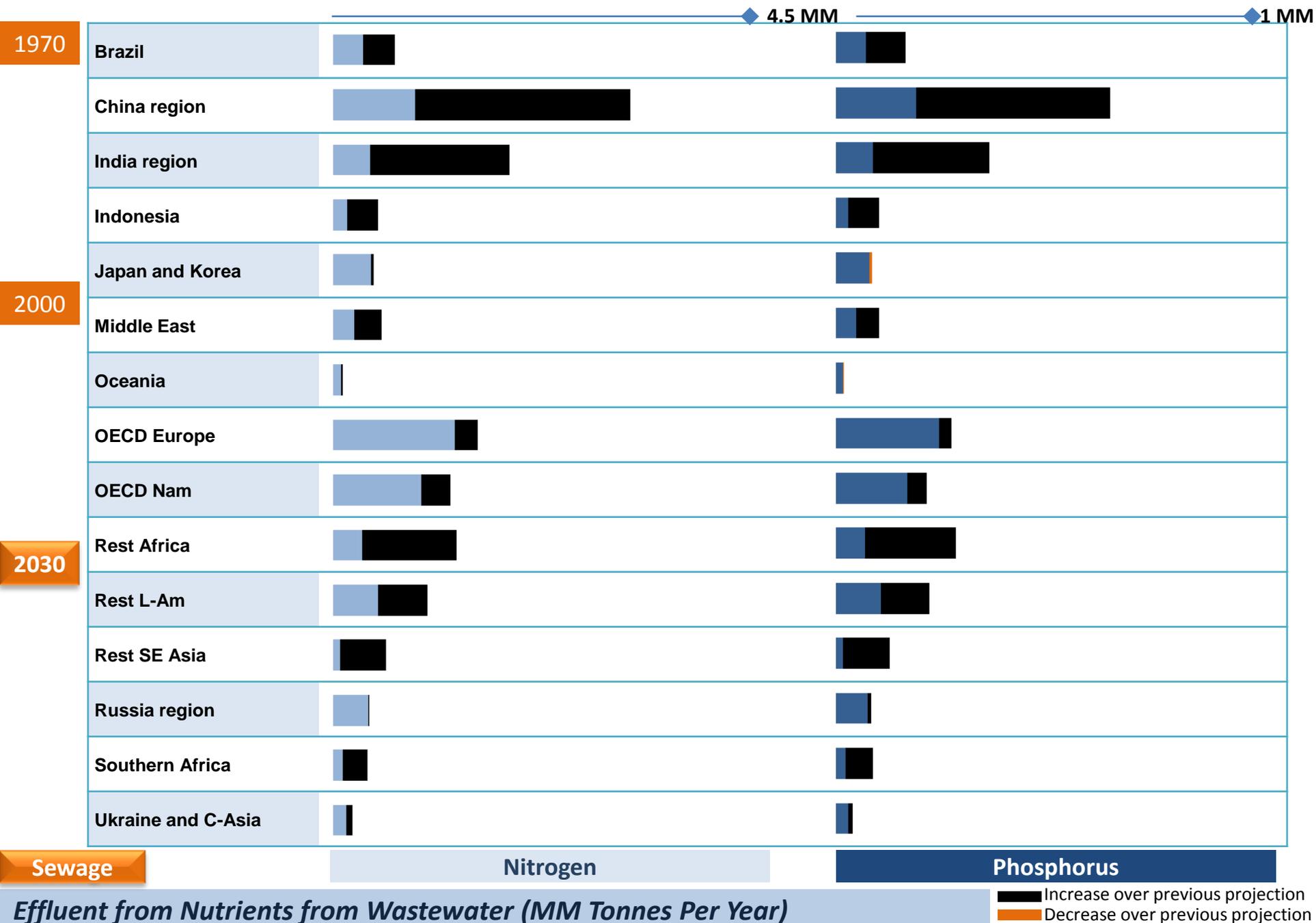


**Sewage**      **Nitrogen**      **Phosphorus**

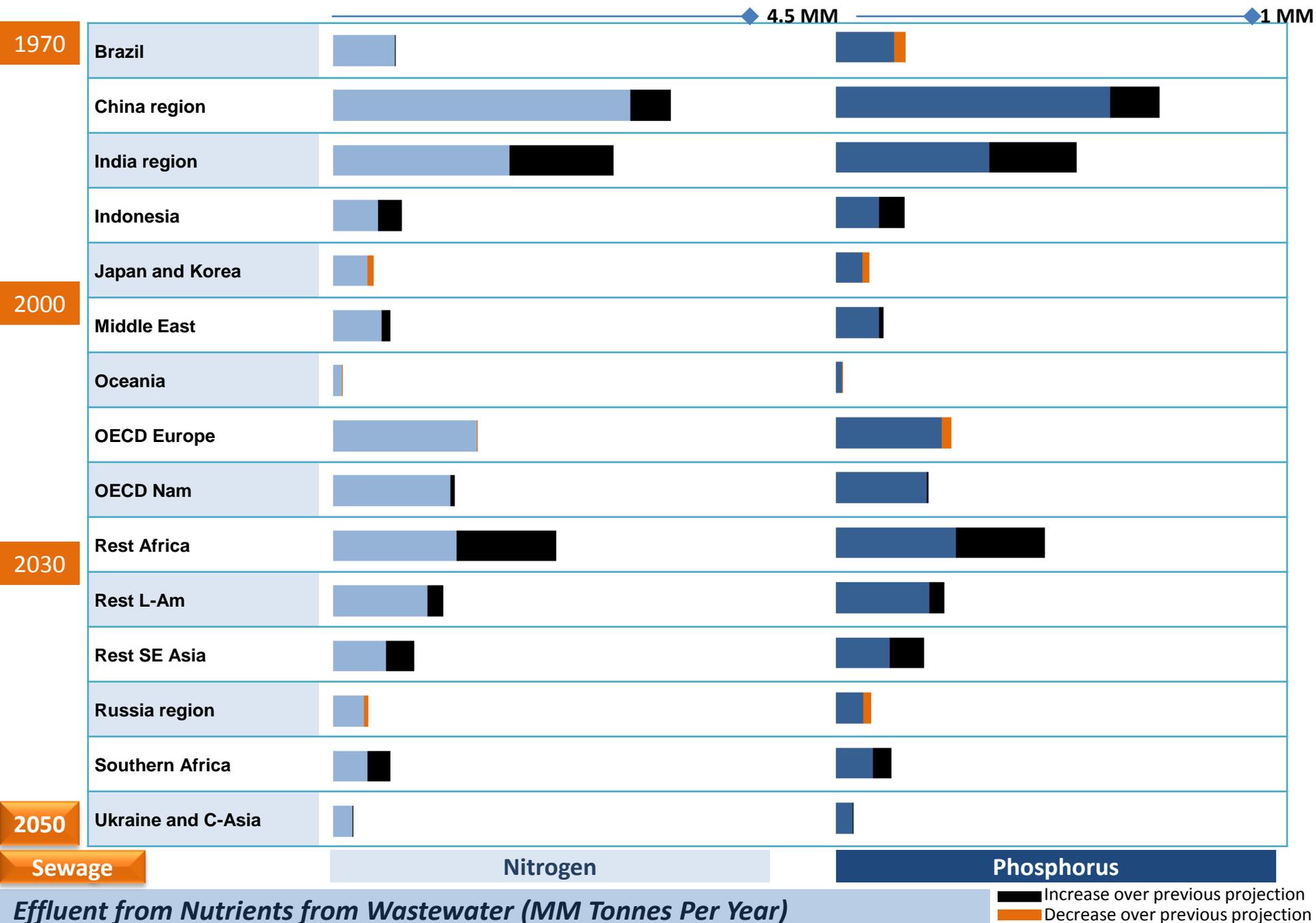
*Effluent from Nutrients from Wastewater (MM Tonnes Per Year)*

Increase over previous projection  
 Decrease over previous projection

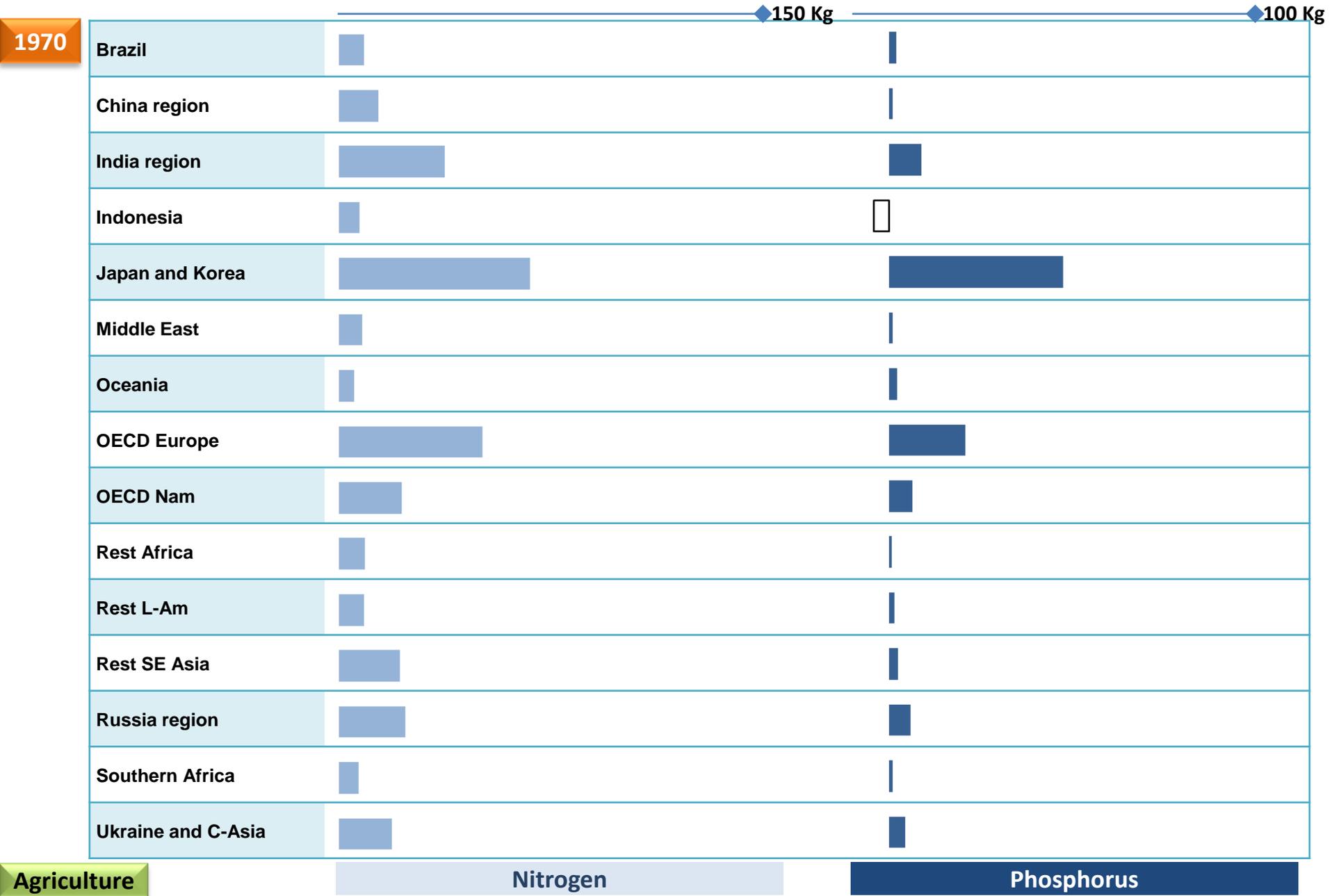
# Water quality is projected to deteriorate in the coming decades



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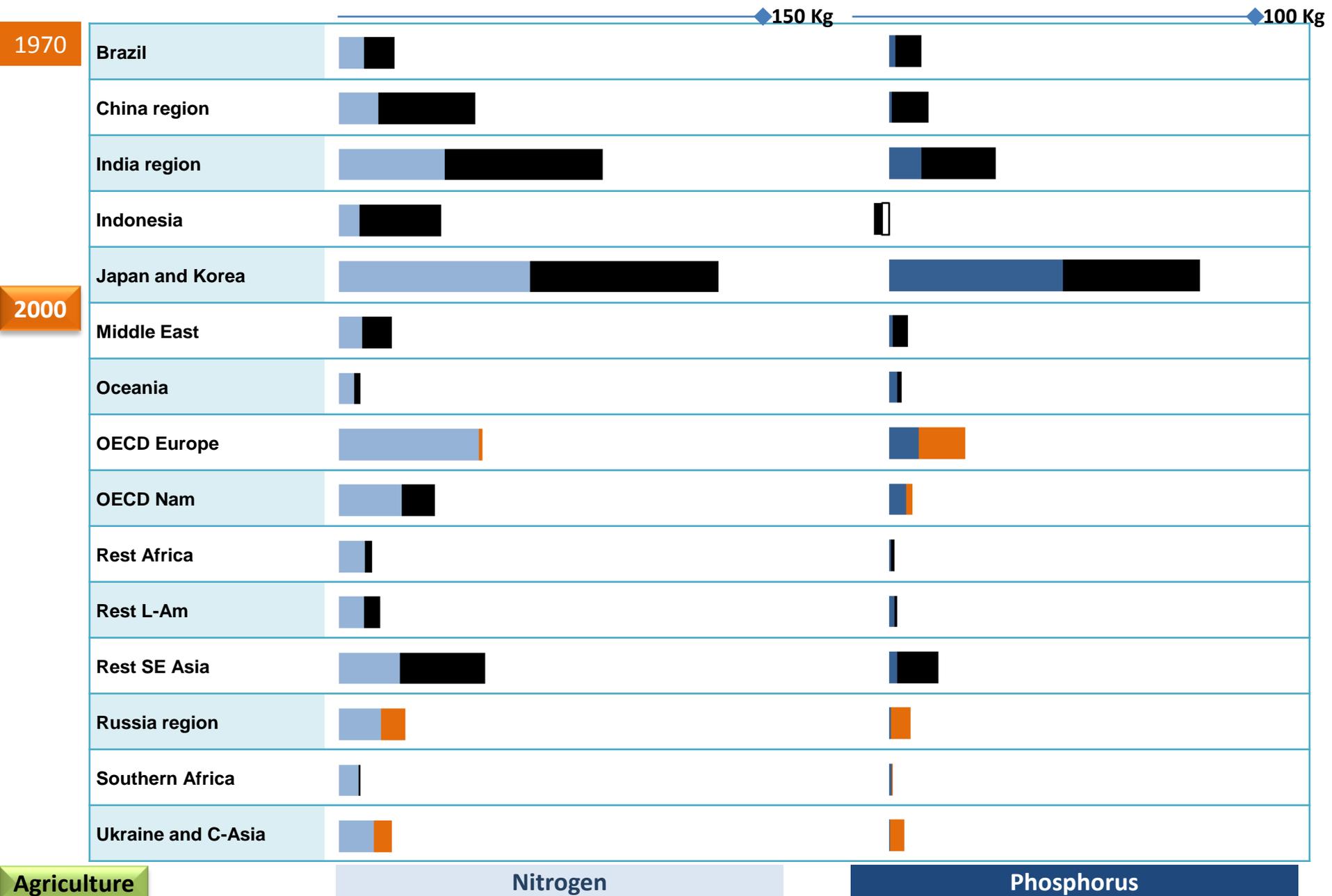


# Water quality is projected to deteriorate in the coming decades



*Effluent from Nutrient per hectare in Agriculture*

# Water quality is projected to deteriorate in the coming decades



Agriculture

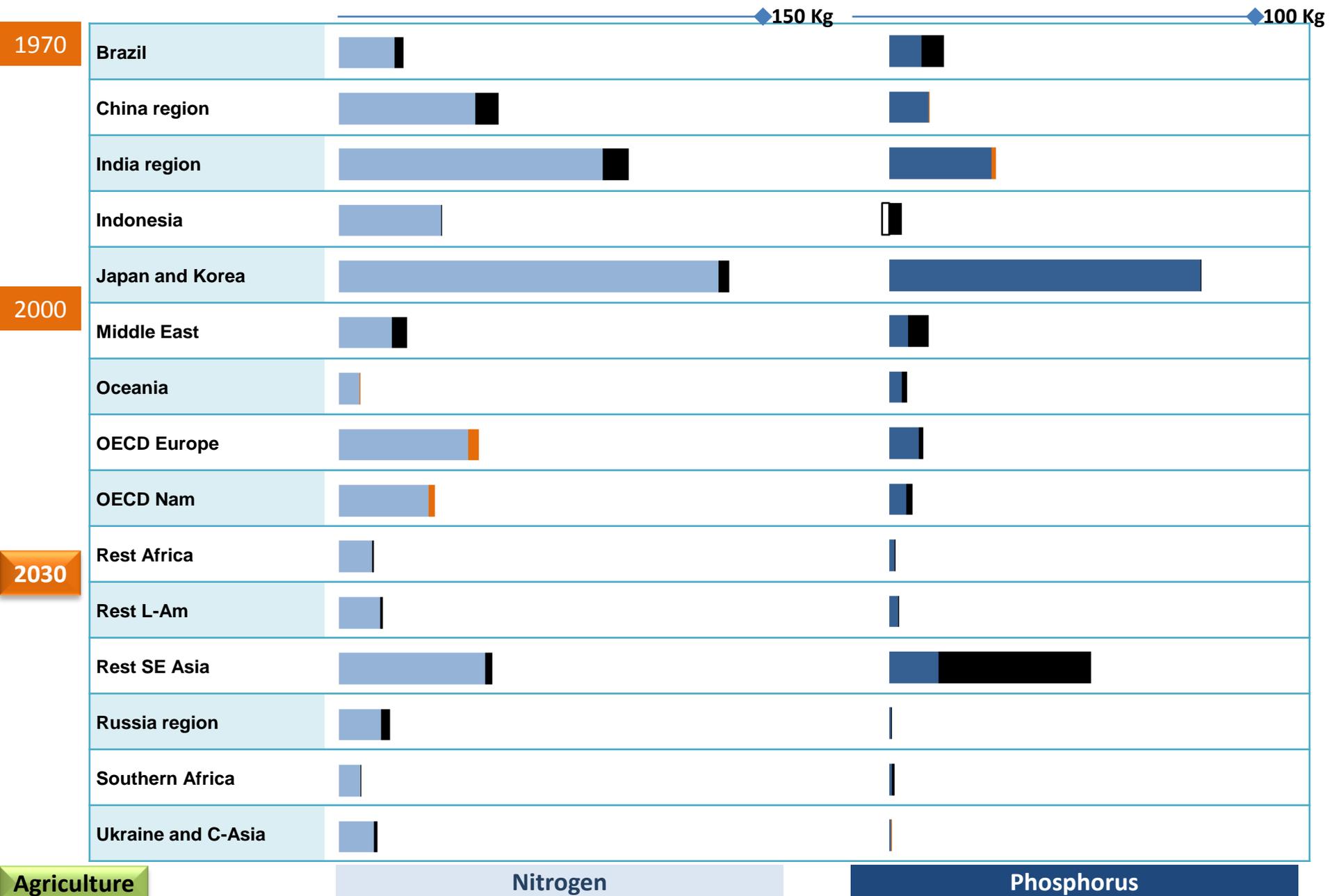
Nitrogen

Phosphorus

Effluent from Nutrient per hectare in Agriculture

Increase over previous projection  
 Decrease over previous projection

# Water quality is projected to deteriorate in the coming decades



Agriculture

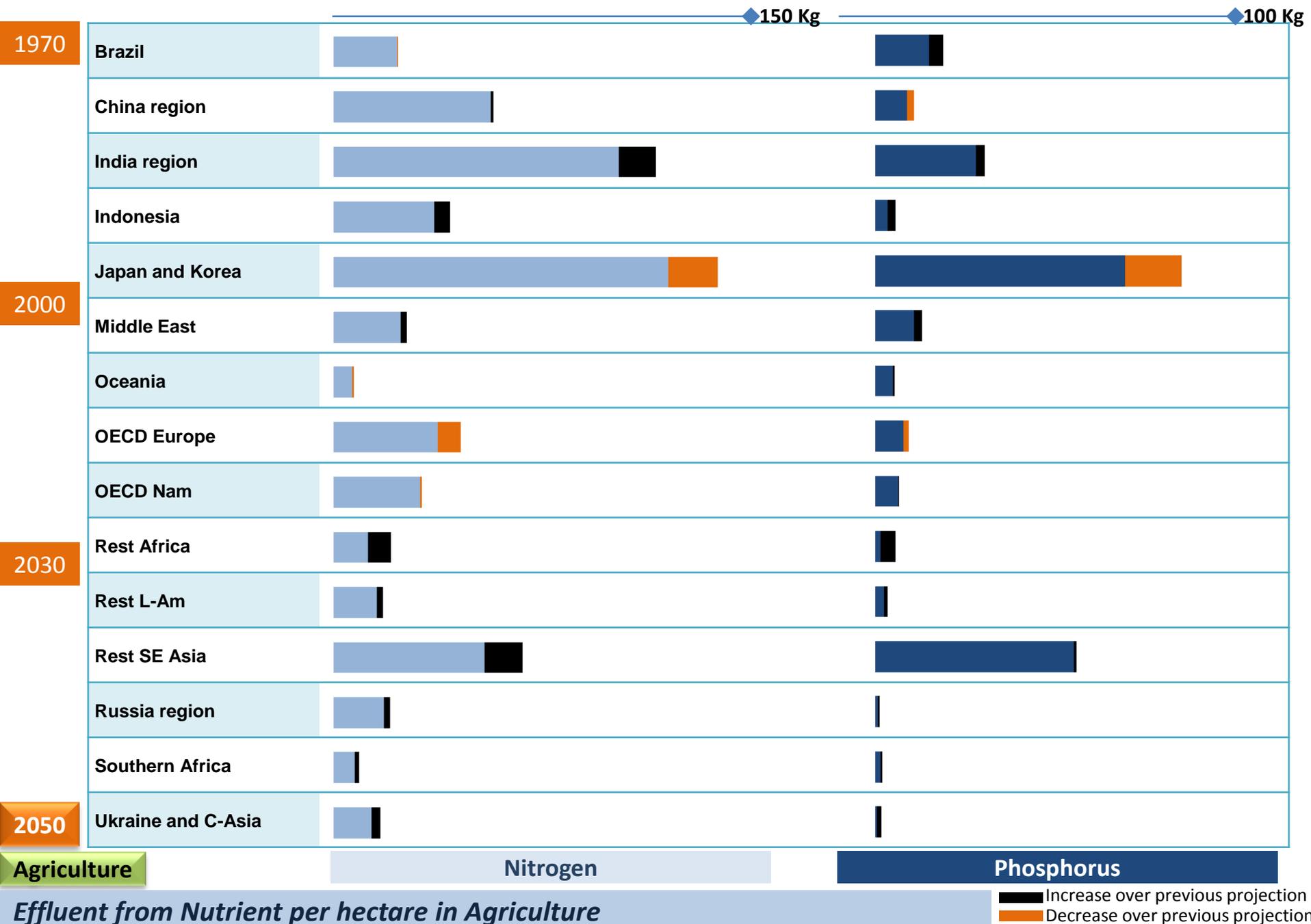
Nitrogen

Phosphorus

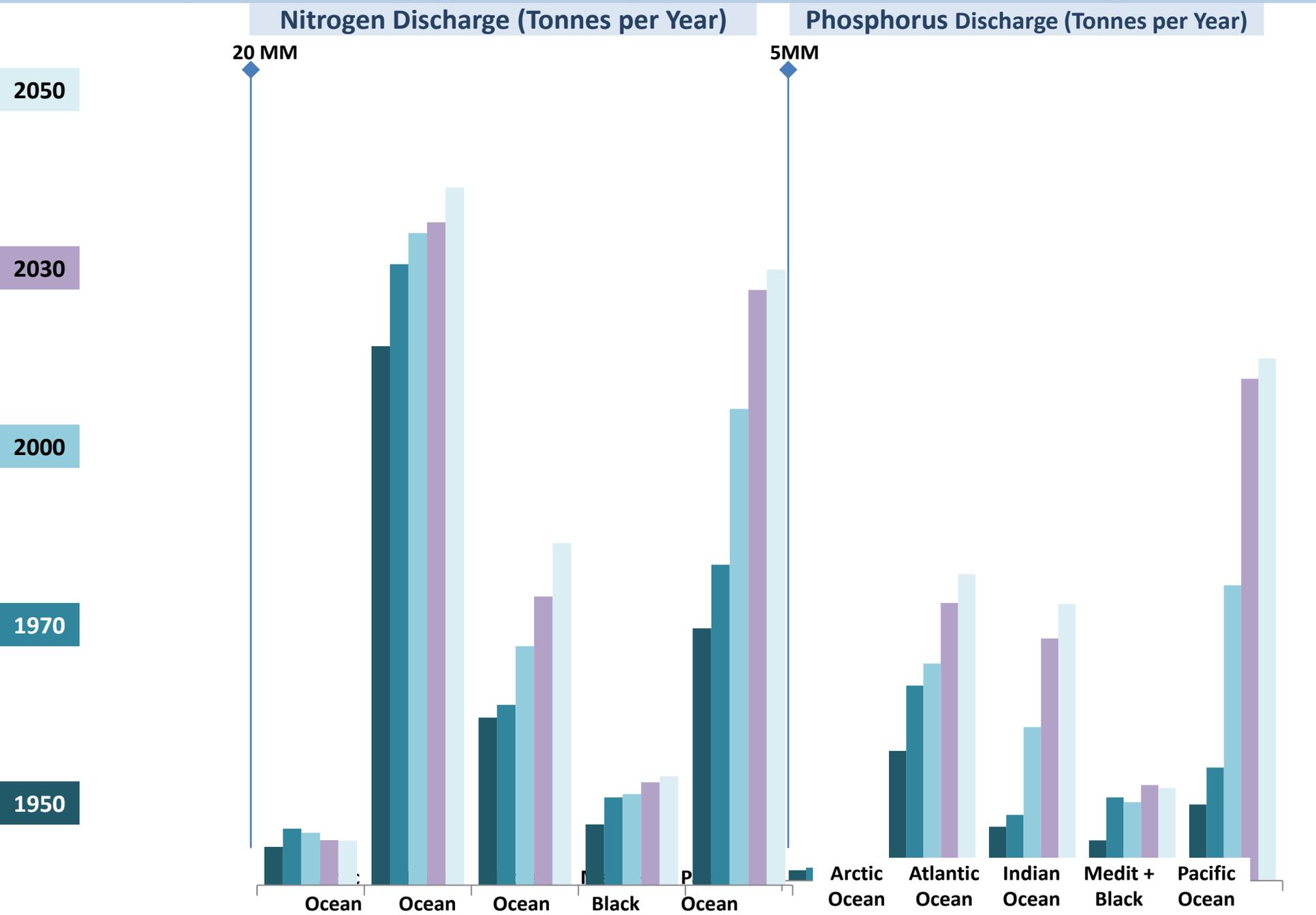
Effluent from Nutrient per hectare in Agriculture

Increase over previous projection  
 Decrease over previous projection

# Water quality is projected to deteriorate in the coming decades



# Level of pollution discharge in Oceans/Seas will increase in the coming decades

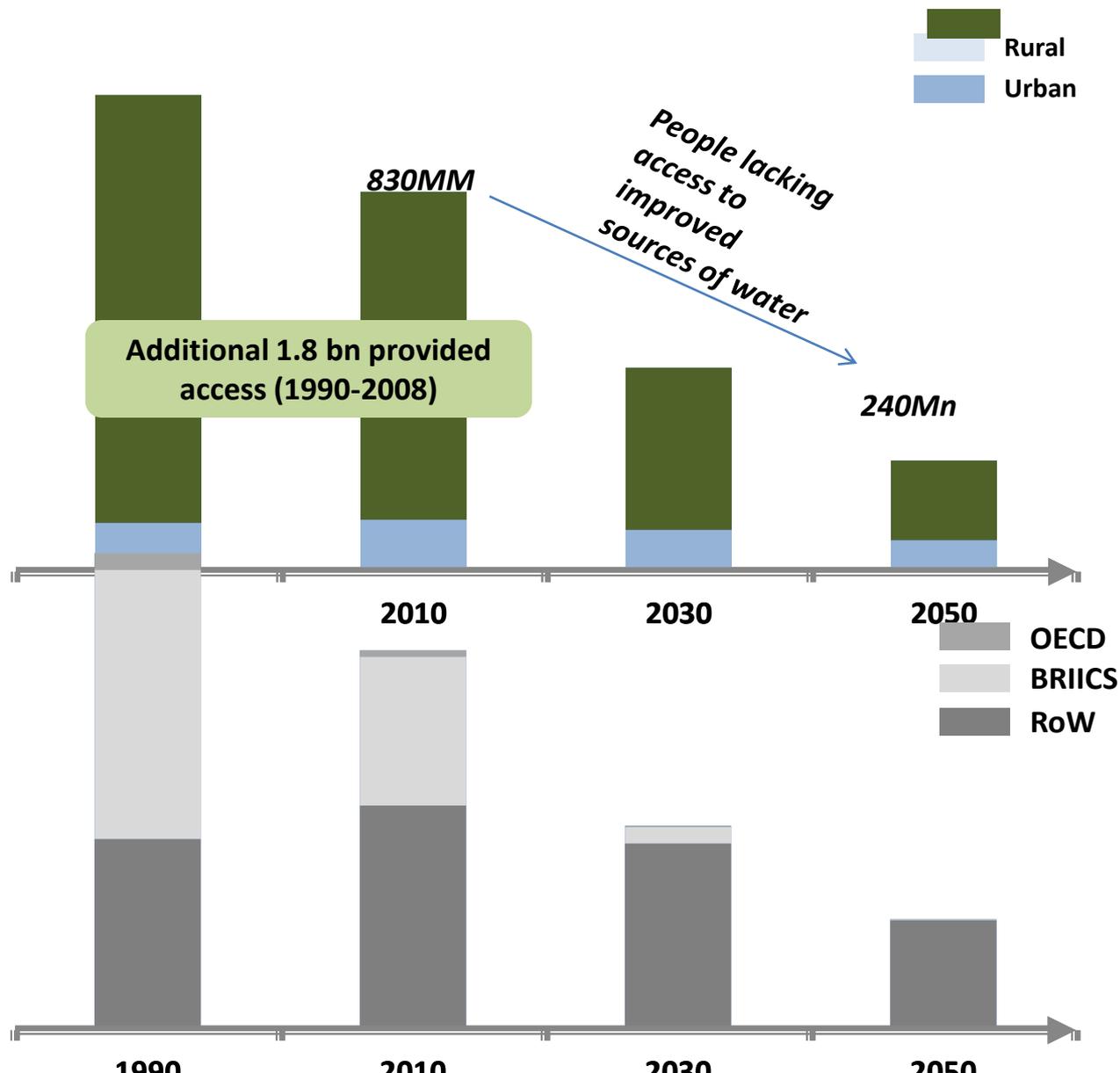




*Significant efforts have been made in improving access to improved sources of water, but...*

*Due to population growth and urbanisation, a large population will continue to lack access to improved sources of water...*

*... with RoW being mainly affected around 2050*



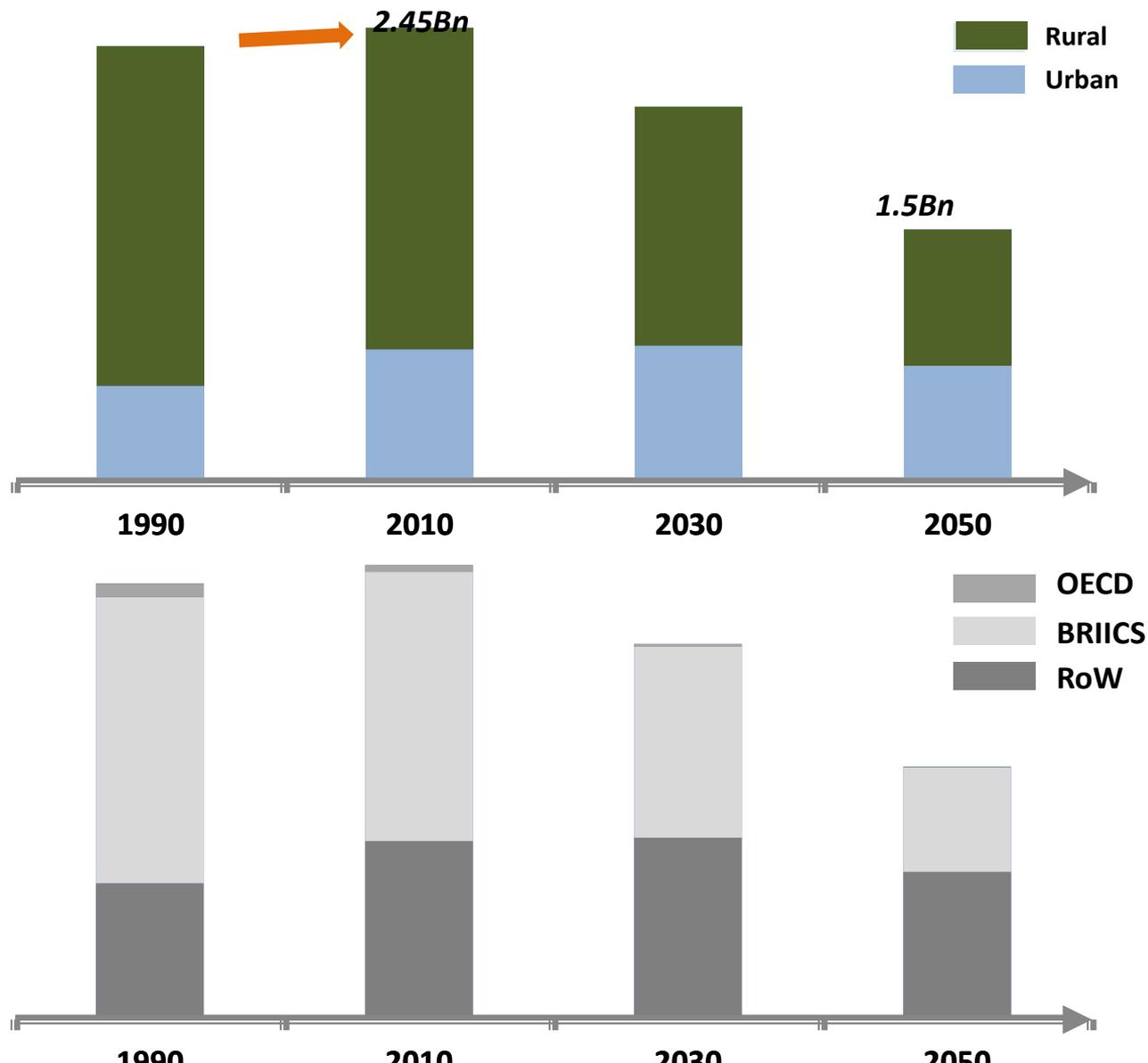
# Access to Sanitation



*People lacking access to improved sanitation will continue to be a challenge*

*Number of people lacking improved sanitation is projected to still be almost 1.5 billion in 2050...*

*... with 60% of them living in the ROW*



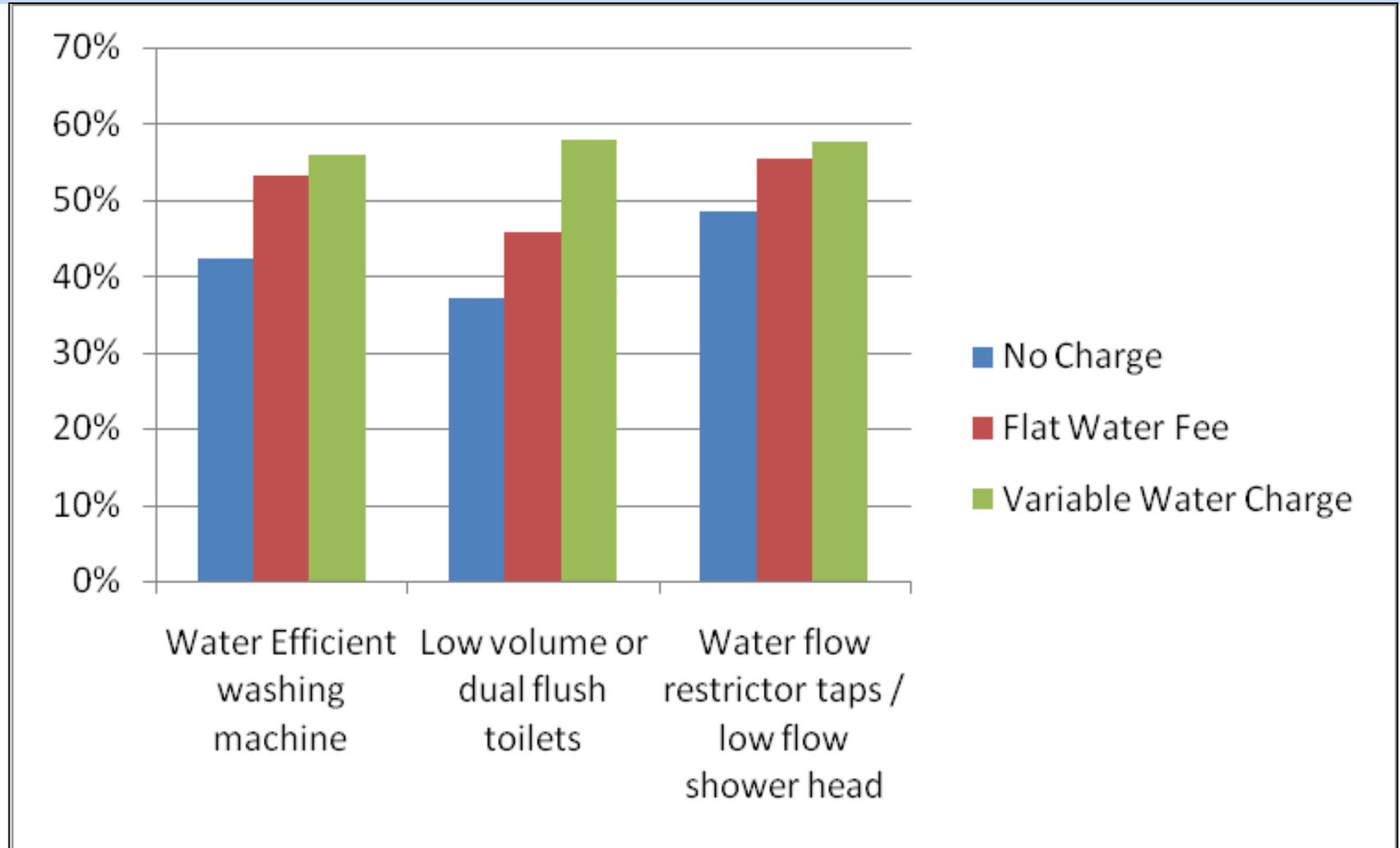
# Key messages and traffic lights

Traffic light	Key messages
	Number of people living in river basins under severe water stress
	Increase in water demand
	Groundwater abstraction
	Number of people at risk of floods
	Restoration of surface and groundwater quality in OECD countries
	Deterioration of surface and groundwater quality outside the OECD
	Improved access to water supply and sanitation in BRIICS
	Number of people without access to water and sanitation in developing countries

# Policy options

Policy option	Measures/instruments
Incentivise water use efficiency	<i>Pricing, cut back perverse subsidies, coherence</i>
Invest in water storage innovatively	<i>Assess conflicts with environment</i>
Reconsider water allocation mechanisms	<i>Water rights reform, pricing</i>
Mitigate water related disasters	<i>Restore natural buffers, reconsider settlement</i>
Improve WW treatment, reduce run-off	<i>Encourage R &amp; D and speed-up diffusion</i>
Accelerate WSS in developing countries	<i>Innovative expansion, PPP, ODA</i>
Improve water governance for coherence	<i>Engage stakeholders, share innovative models</i>

# The importance of pricing: water conservation (% ownership against water fee structure)



Source: OECD (2011), *Greening Household Behaviour: The Role of Public Policy*

**Thank you!**

[www.oecd.org/water](http://www.oecd.org/water)