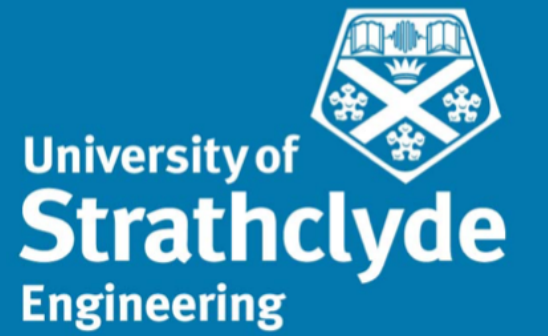




World Water Congress XV
International Water Resources Association (IWRA)
Edinburgh, Scotland. 25 - 29 May 2015



IN THE QUEST OF A SOFT PATH FOR WATER IN THE FOOD INDUSTRY

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ENGINEERING

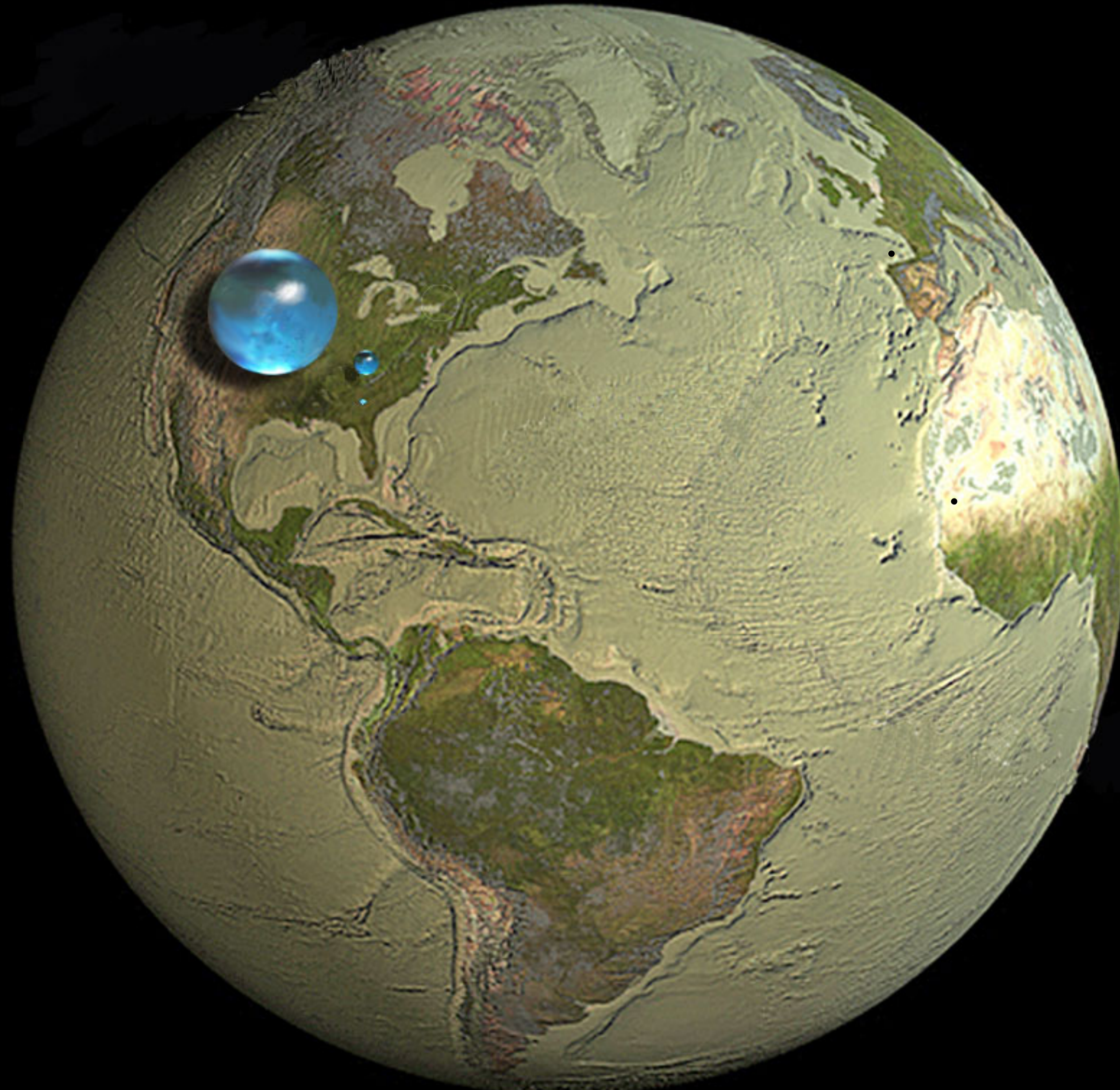
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WHY SHOULD WE CARE ABOUT WATER?

All Earth's water in a bubble

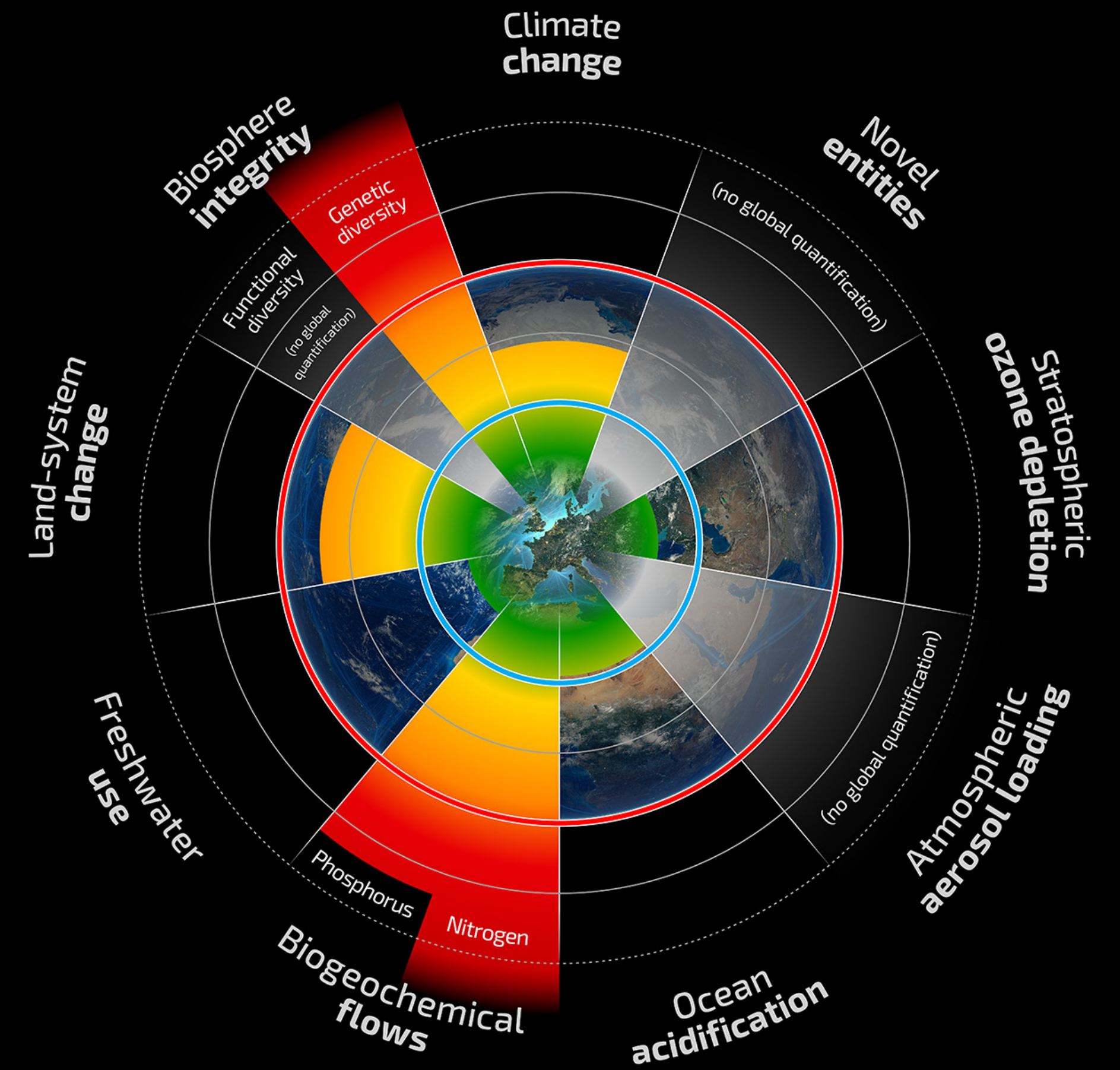
Source: Perlman et al. (2012) [US Geological Survey]



Planetary Boundaries

Source: Steffen et al. (2015, p.736)

Illustration: F. Pharand-Deschênes /Gloabaia



- Beyond zone of uncertainty (high risk)
- In zone of uncertainty (increasing risk)
- Below boundary (safe)
- Boundary not yet quantified

WHY A SOFT PATH FOR WATER?

A SOFT PATH FOR WATER

Is a paradigm shift in water management that
“seeks to improve the overall productivity of water use and deliver water services matched to the needs of end users rather than seeking sources of new supply” - Gleick (2002, p.373)

Principles: (Brandes et al., 2009)

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- water quality should match the requirements of end use
- plan from the future back to the present - “backcast”

WHAT IS YET TO BE DONE?

Soft path analyses have been carried out at regional level in several places. However a soft path for the corporate sector has not been proposed so far.

WHY THE FOOD SECTOR?

THERE'S MORE WATER IN THE FOOD WE CONSUME THAN WE THINK

2400
litres of
water for one
Burger
(150g beef)



140
litres of water
for one cup of
Coffee
(125mL)

4650
litres of water
for one
Steak
(300g)

1000
litres of water
for one jug of
Milk
(1L)

There are vast quantities of water needed for the growth and processing of food products
Of which "92% is green water and 8% is blue water" - Allan (2015)

Water footprint of common products

Adapted from: Waterwise (2007); Allan (2011); Water footprint network (2015)

WHAT WAS CARRIED OUT IN THIS RESEARCH?

METHODOLOGY

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1

**Consultation with experts
to define the soft path
elements for the food
sector**

Sample:

Content analysis of:

Questionnaire: 32 participants

Interviews: 8 participants

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**Construction of a soft path
framework for the food
sector**

Five themes:

- Setting the ground
- Knowing the environment
- Internal action
- External action
- Influence on water governance

**21 indicators in form of a
question that relate to the five
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- External action
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21 indicators in form of a question that relate to the five themes

3

Using the framework for evaluating the water strategies of companies from the food sector

Sample:

67 Companies in the UK committed to the reduction of water

15 Sub-sectors which widely ranged from dairy to soft drinks

Content analysis of:

Questionnaires : 12 participants

Interviews: 8 participants

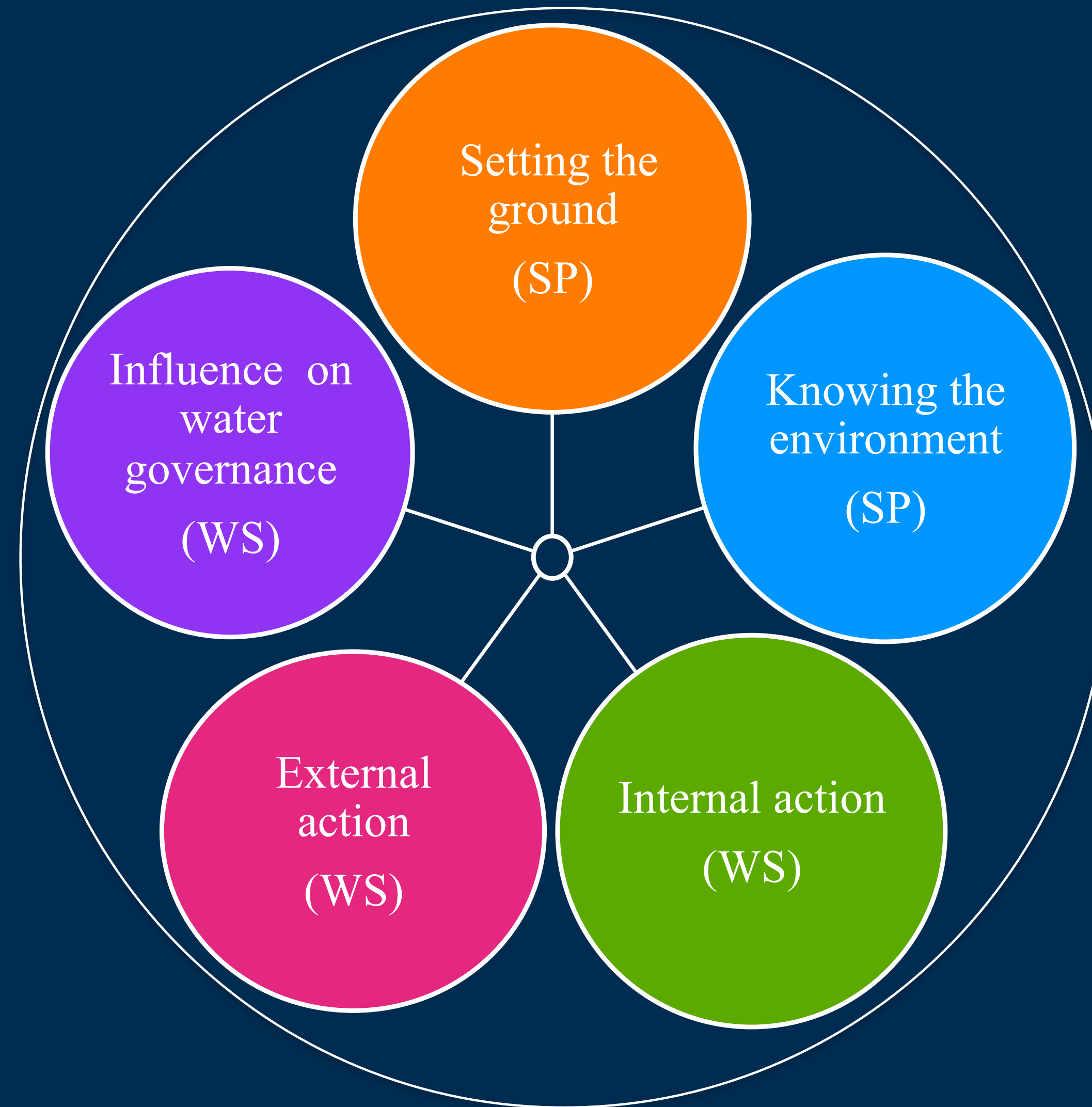
Environmental reports: 32

Websites: 58

Published case studies: 22

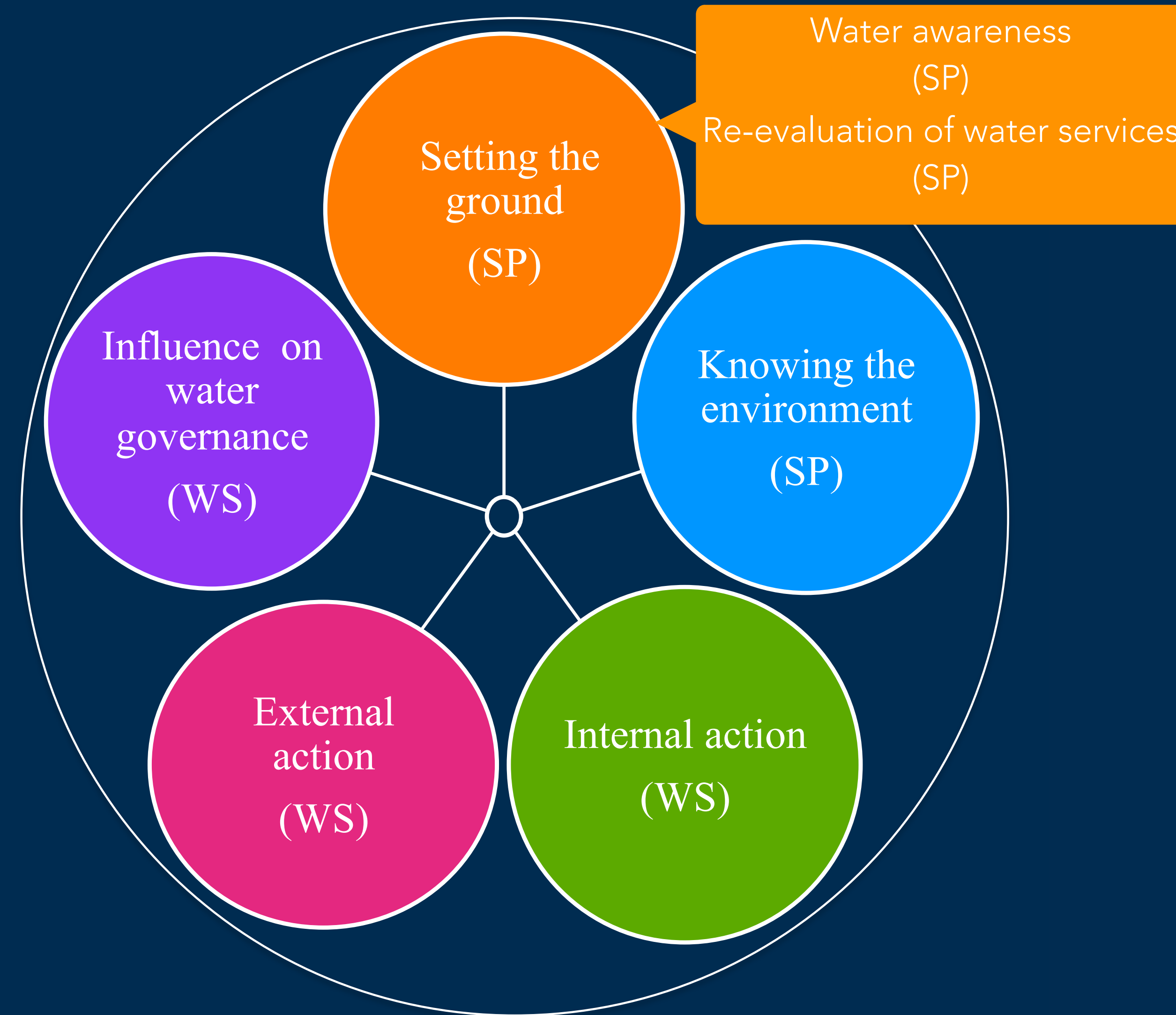
WHAT WAS FOUND IN THIS RESEARCH?

PROPOSED SOFT PATH FOR WATER FRAMEWORK FOR THE FOOD INDUSTRY



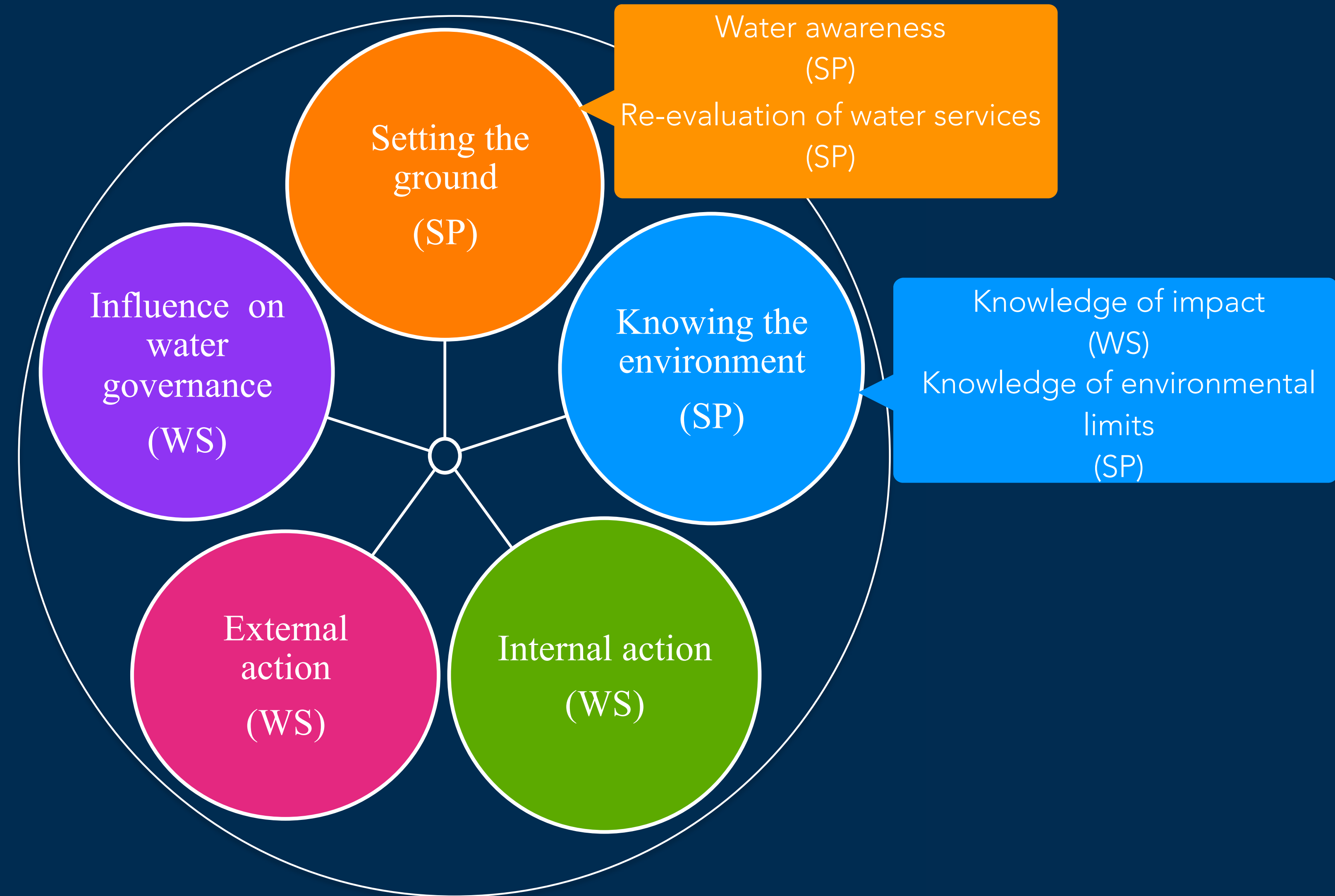
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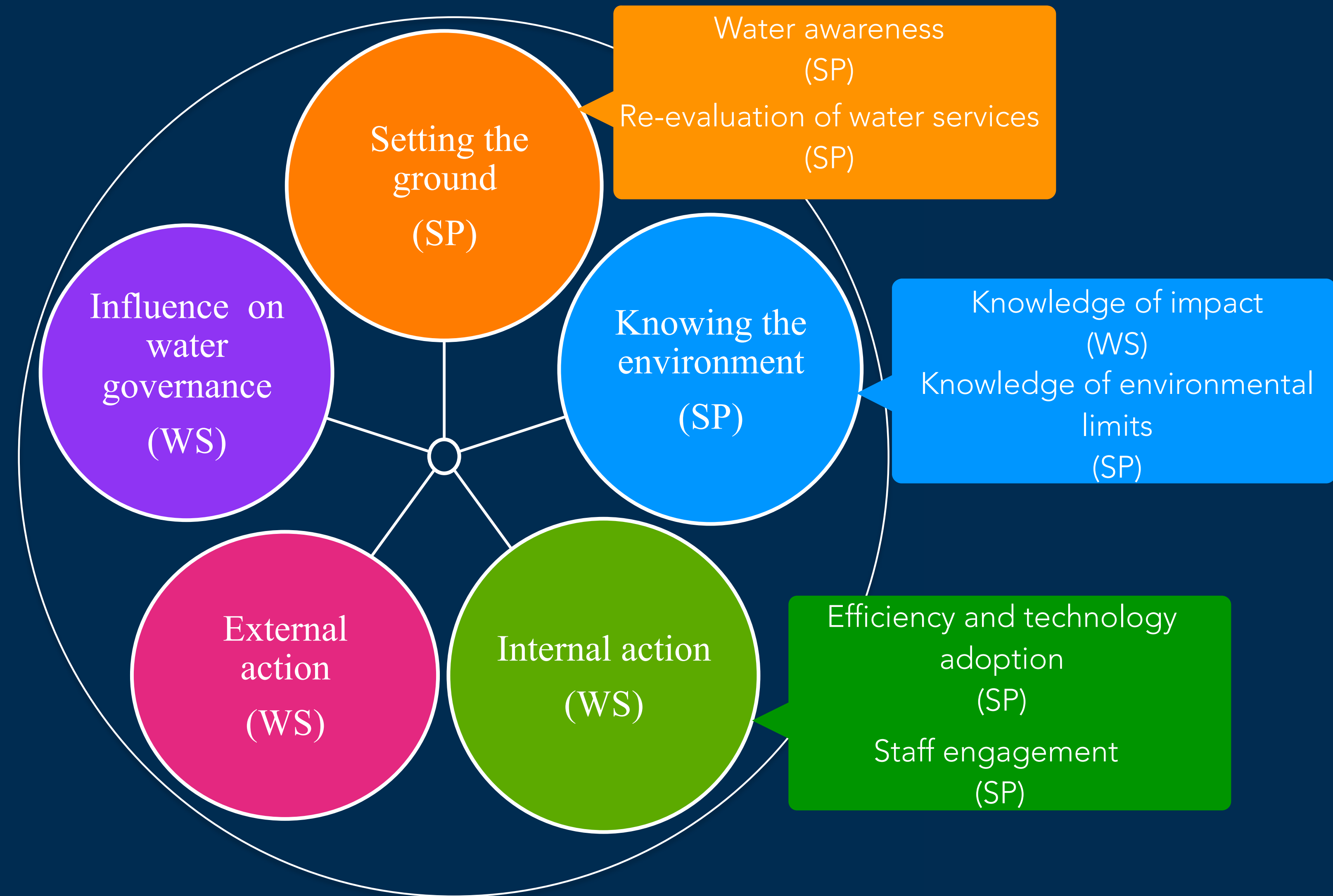
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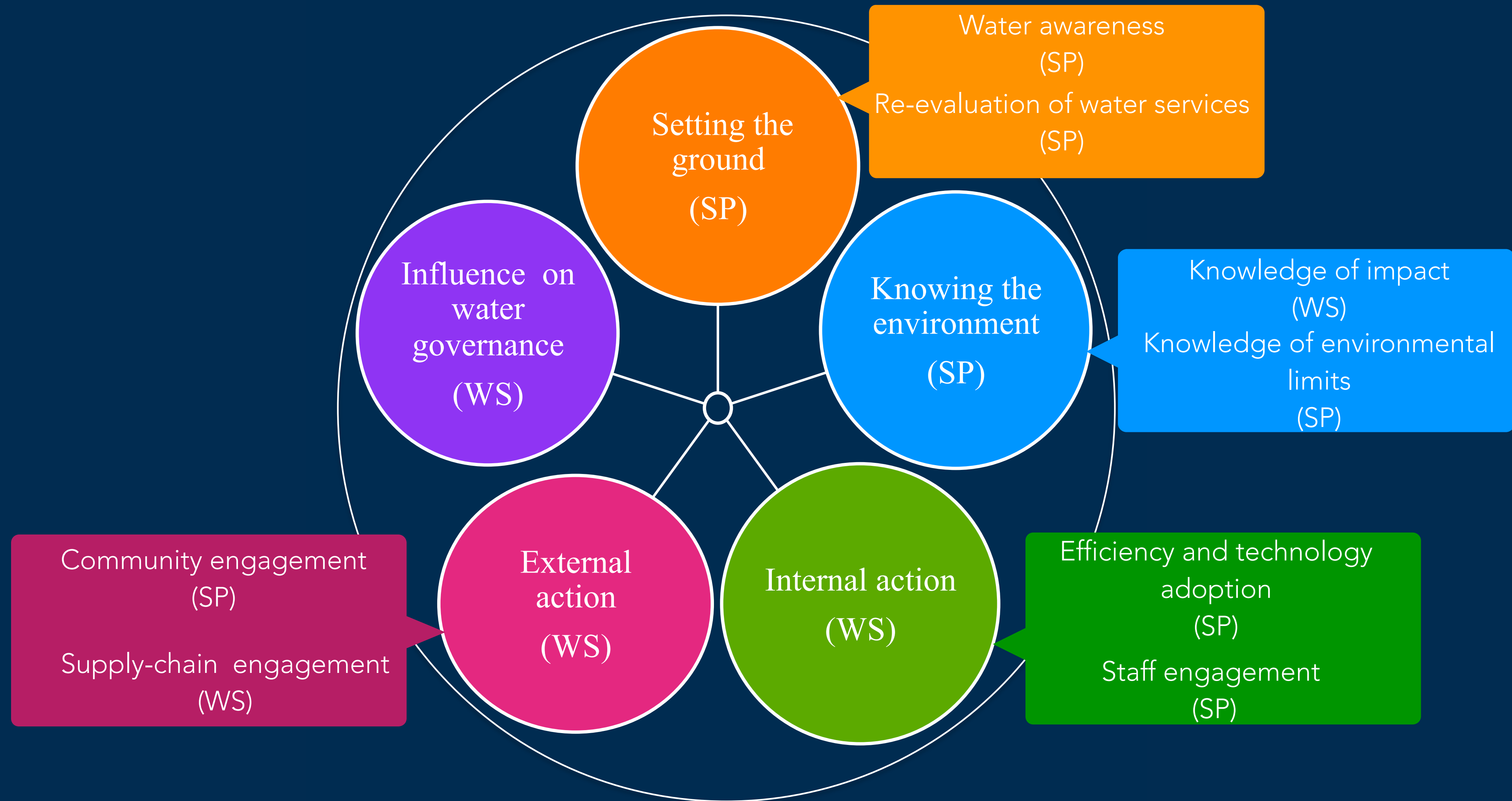
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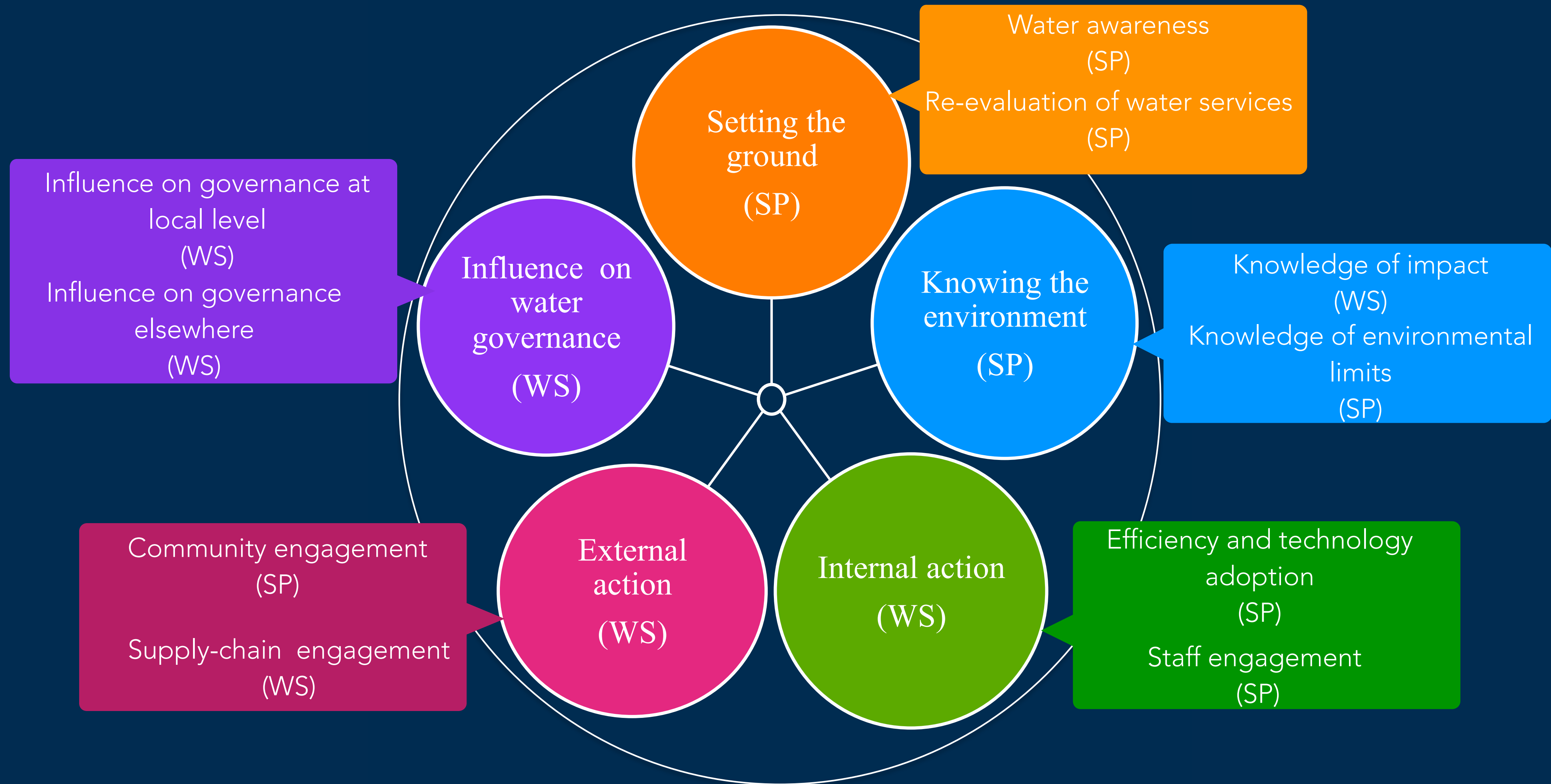
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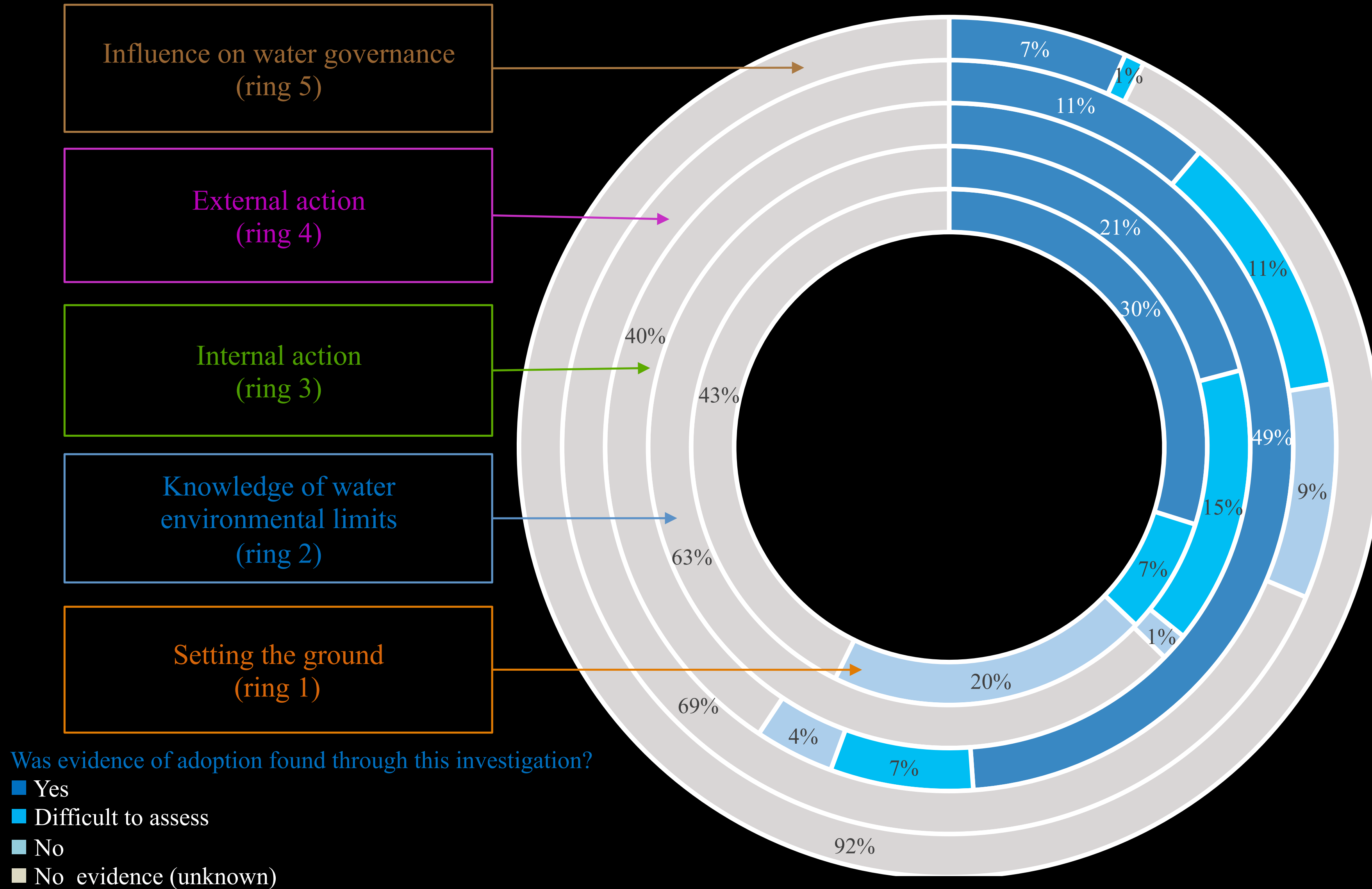
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SUMMARY OF OVERALL FINDINGS PER THEME



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- Work closely with the supply chains, especially with the farmers
- Change the way they think about water
- Better and standardised reporting and disclosure of strategies and achievements
- Go beyond and engage with 'external' bodies

KEY AVENUES FOR FUTURE RESEARCH

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- How can the role of NGOs and watchdogs be enhanced? (checking that soft path principles are truly embraced in companies' strategies and operations)?
- How would a soft path for water look like in other corporate sectors that require vast water flows (i.e textile)?

Thanks for listening

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