

## Priority Areas: Wastewater, Nutrients and Marine Litter

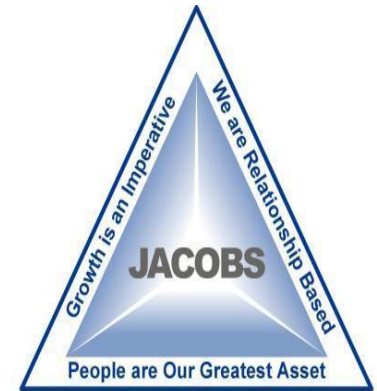
### Where are we?

Steve Ntifo

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## About Jacobs

- Health and Safety - BeyondZero
- Global leader in technical professional services
- 63,500 professional staff
- Relationship based company
- \$11 billion (USD) in revenues
- \$15.9 billion (USD) backlog
- Publicly Quoted Company
- Sound Financial Base
- Ranked as best managed E&C by many analysts
- Fortune 500 – 2<sup>nd</sup> ‘Most Admired E&C’



Zero Incidents    Zero Dissatisfied Clients  
O U R G O A L

## Wastewater - Background and Overview

- Wastewater Opportunities, challenges and **Services** vary across the world
- Essential Pivots – Systems/structures and incentives
- Examples of Wastewater Proofs – Bazelgette, UWWTD, MDG, Renewable Energy (Sludge and Biogas)
- As \$1 = \$3 to \$34 (USD) **300 to 3400% return on investment** (Ref – UNEP/UN Habitat Sick Water Report 2010)
- Globally – 2 million tons of untreated waster is discharged into waterways (Ref Sick Water report)
- **1990 to 2010 – 1.8 million people gained access to improved sanitation** (UN Water - GLAAS 2012 report)
- UNICEF/WHO JMP (2013) – 1 billion people need access to improved sanitation to meet 75% MDG target (2015)

## River Thames and UK Westminster Parliament today



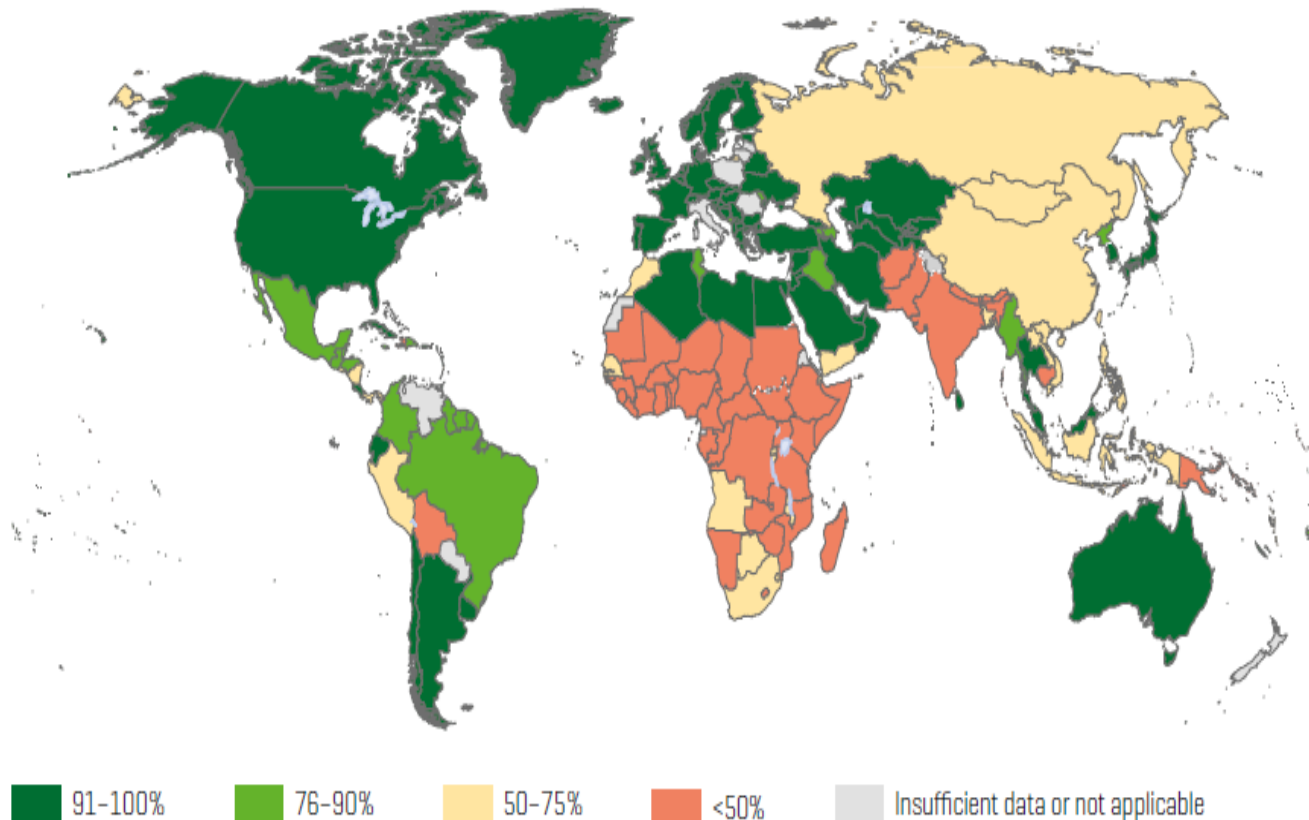
## Wastewater – where are we – information sources?

- UNEP/UN Habitat “Sick water?” report (2010)
- UN Water GLAAS 2012 Report “The challenge of extending and sustaining services”
- WHO/UNICEF “Progress on Sanitation and Drinking Water” 2013 Update
- Regional Status reports
  - EC - 7<sup>th</sup> Urban Wastewater Treatment Directive (7 August 2013)
  - Water Information System for Europe (WISE)
  - Global Water Partnership - Central and Eastern Europe report on “Natural processes for wastewater treatment – actual status in CEE countries”



## Wastewater – where are we - Coverage?

There are 45 countries where sanitation coverage is less than 50 percent

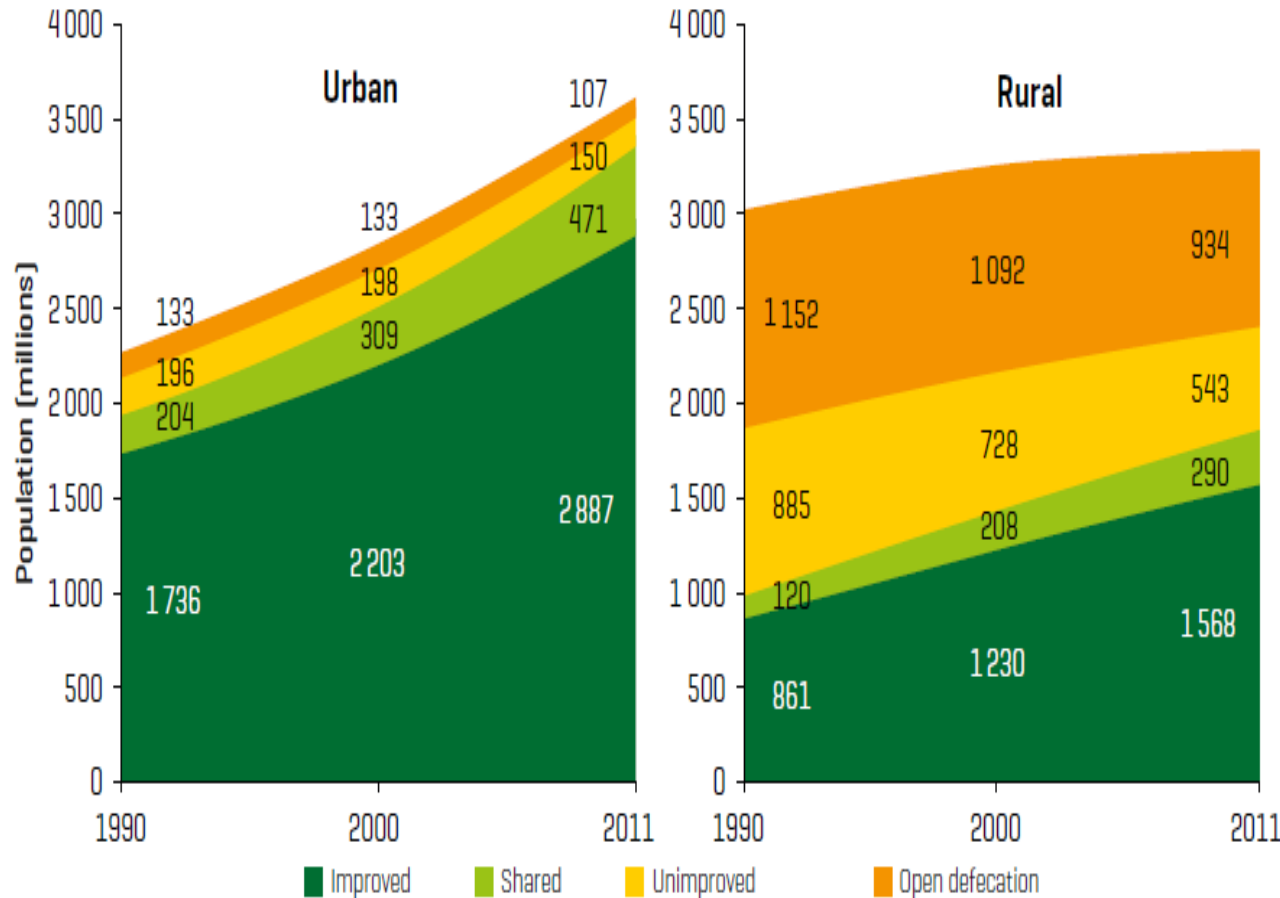


**Figure 1.** Proportion of the population using improved sanitation in 2011.

**WHO/UNICEF – JMP  
Report 2013** (Source)

- Data based on 2011
- Sanitation coverage – 64%
- 75% MDG Target was unlikely to be met
- 2.5 billion people to have improved sanitation by end of 2011
- 15% of World's population still practised open defecation ~ 1 billion

## Wastewater where are we – Access - Urban v Rural?



WHO/UNICEF – JMP  
Report 2013 (Source)

- Better sanitation in urban areas than in rural areas
- More improved access in Urban areas than in rural areas from 1990 to 2011
- Open defecation reducing in rural and urban areas

## Wastewater – where are we?

### UN Water Global Analysis and Assessment of Sanitation and Drinking Water (GLAAS) Report 2012 *(Source)*

Based on the data collected, the report covered where we are in terms of:

- government policy
- institutional frameworks
- the volume, sources and targeting of investment
- sufficiency of human resources
- external assistance - priorities and gaps
- and the influence of these factors on performance



## Wastewater – where are we?

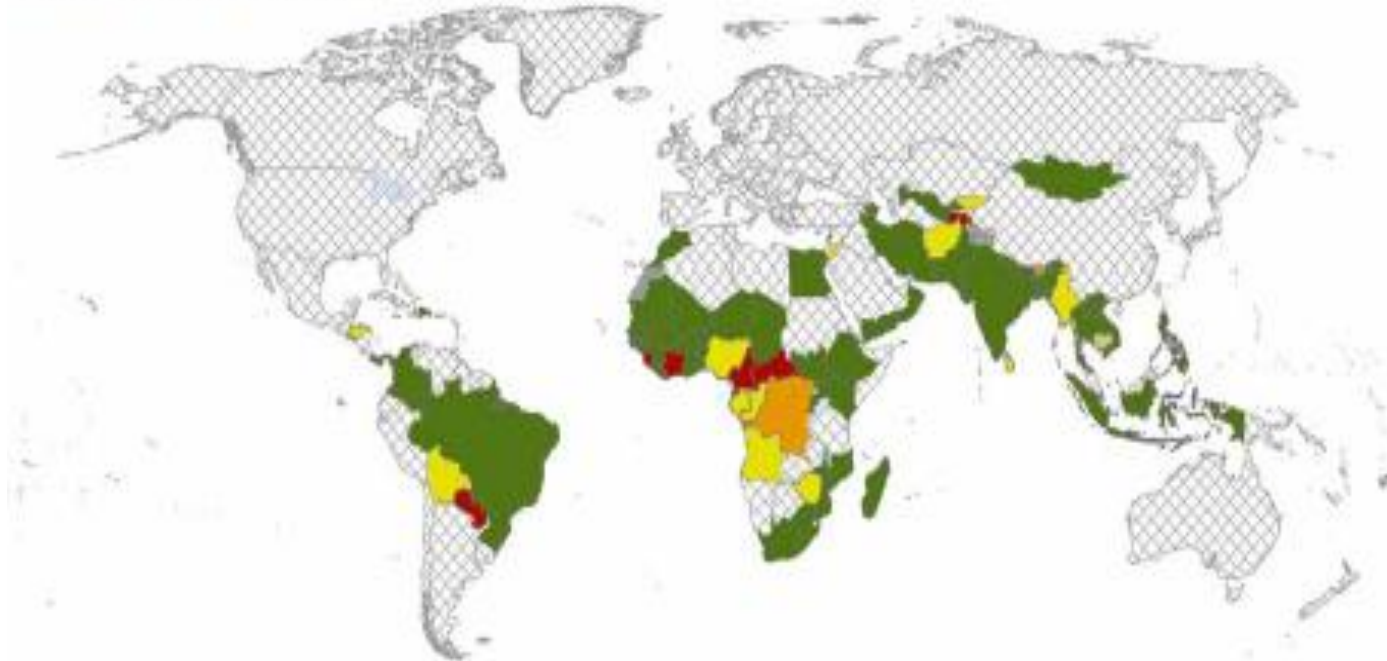
### UN Water Global Analysis and Assessment of Sanitation and Drinking Water (GLAAS) Report 2012 *(Source)*

- 1.8 billion people gained access to improved sanitation from 1990 to 2010
- The report attributes the results to
  - sustained commitment,
  - adequate resources (human and financial)
  - Effective implementation approaches
  - External support provided by development partners
  - Ring fenced financial support even during the financial crisis
  - High level commitment made in the Millennium Declaration

## Where are we – Policy adoption

*GLAAS Report 2012 (Source) – 63% responding countries have adopted and published Urban and Rural Water and Sanitation Policy*

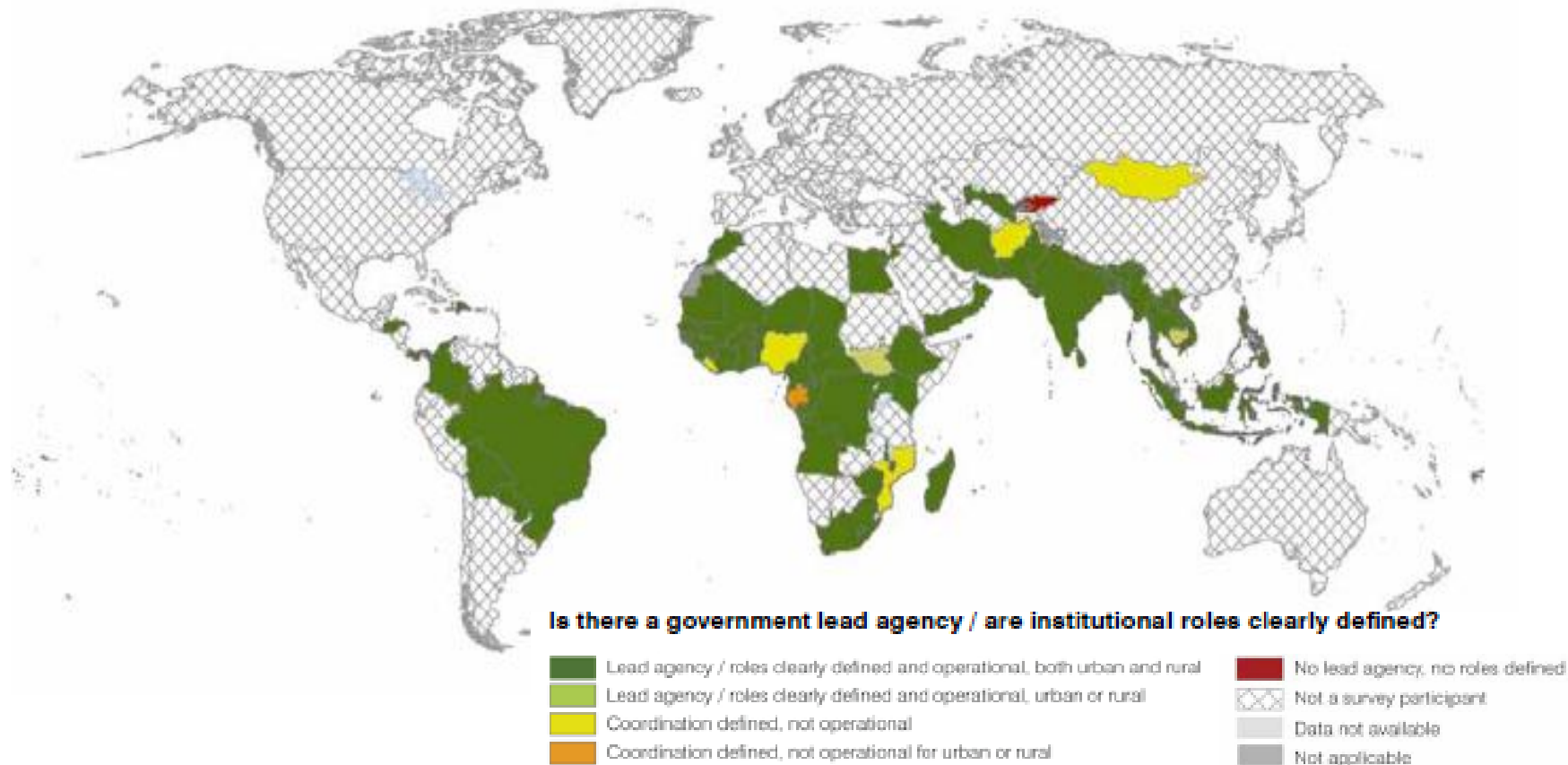
Sanitation, policy adoption, 2011



# Wastewater – where are we – Gov't Lead Agency

GLAAS Report 2012 (Source)

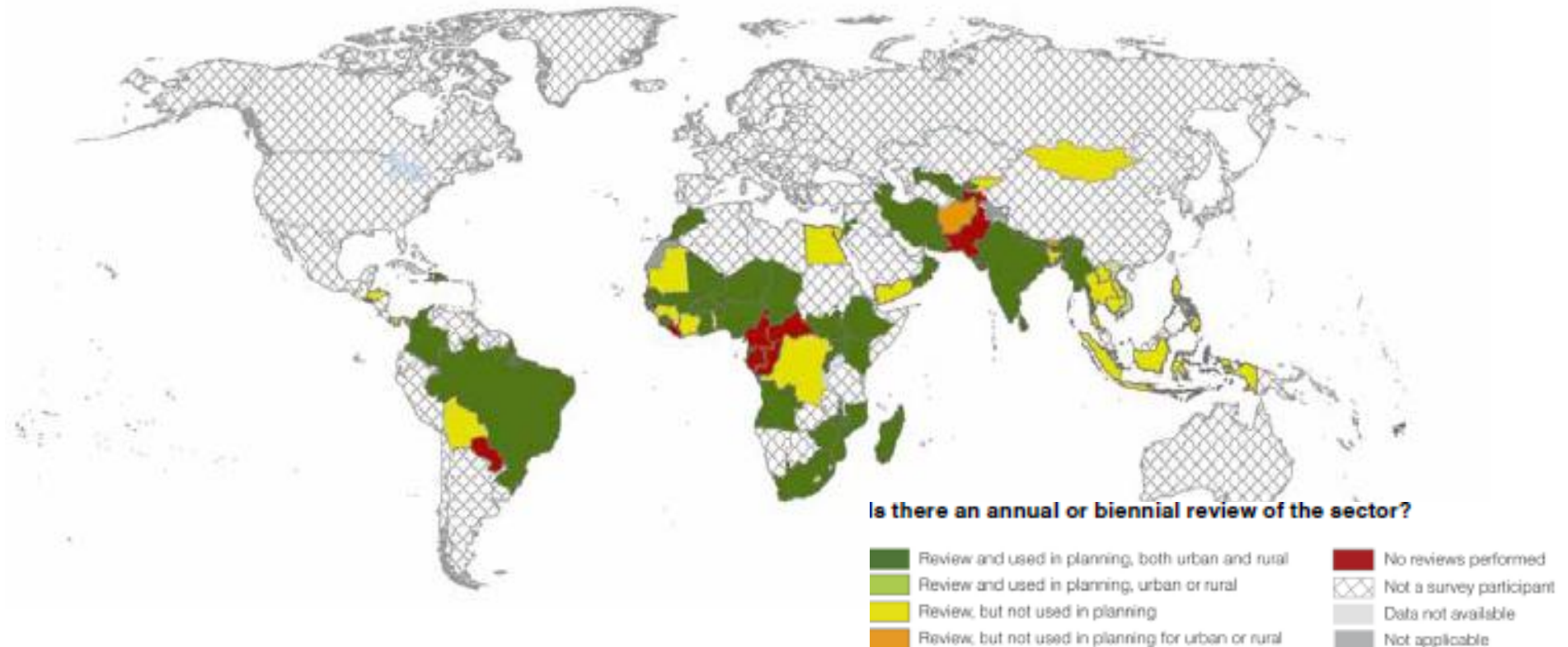
Sanitation, lead government agency in place, 2011



# Wastewater – where are we – Review Monitoring and Reporting ?

GLAAS 2012 Report (Source)

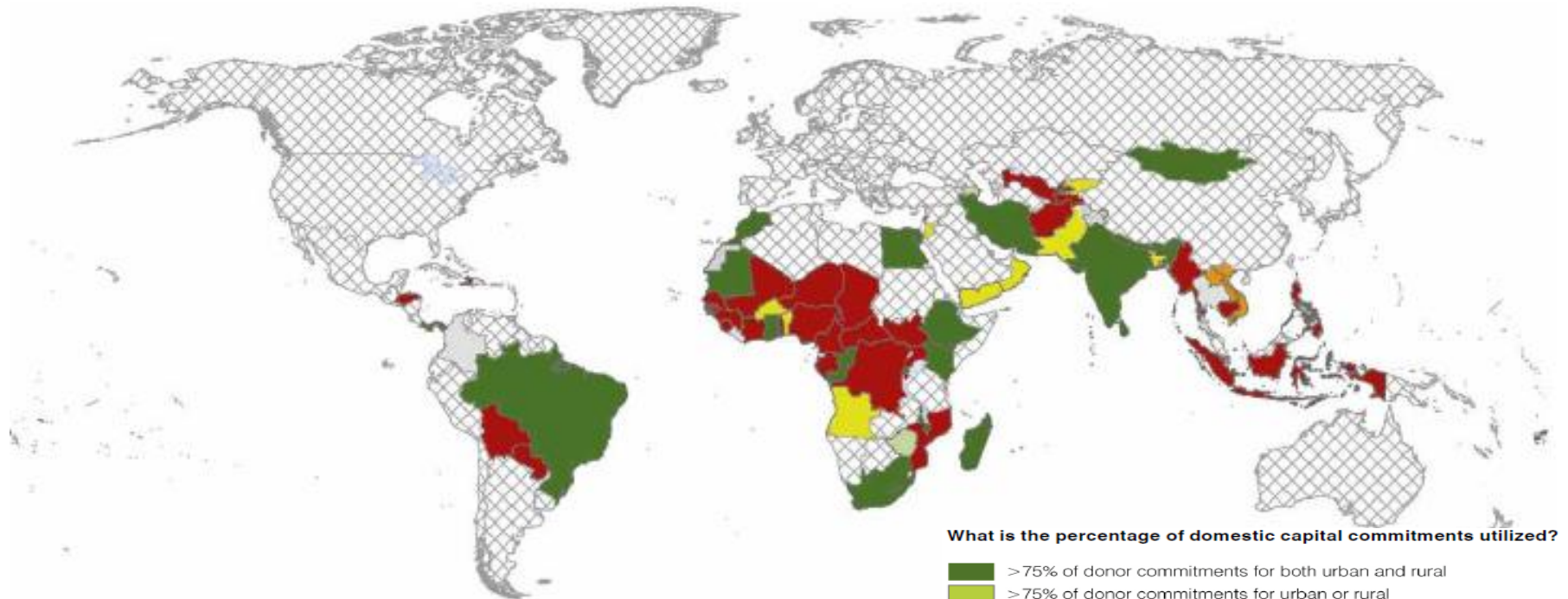
Sanitation, annual/biennial review processes, 2011



## Wastewater – where are we – Committed Domestic Funds?

GLAAS Report 2012 (Source)

Sanitation, absorption of committed domestic funds, 2011



What is the percentage of domestic capital commitments utilized?

- >75% of donor commitments for both urban and rural
- >75% of donor commitments for urban or rural
- 50–75% of donor commitments
- <50% of donor commitments for urban or rural
- <50% of donor commitments for both urban and rural
- Not a survey participant
- Data not available
- Not applicable



## Where are we? - Sustained Success

GLAAS Report 2012 (*Source*)

The report says the key to **sustained success** to improving sanitation were:

- Political will (growing)
- Commitment to action
- Evidence-based planning and policy-making, and
- Sufficient human and financial resources.



## Wastewater – where are we? – EU Focus

Urban Wastewater Treatment Directive (1991)

Characterised by four key areas:

1. Planning
2. Regulation – pre authorisation of discharges (of food processing industry, industrial discharges into UWW collection systems.
3. Monitoring – performance of treatment and receiving waters
4. Information and reporting

## Wastewater – where are we? – EU Focus

Urban Wastewater Treatment Directive (1991)

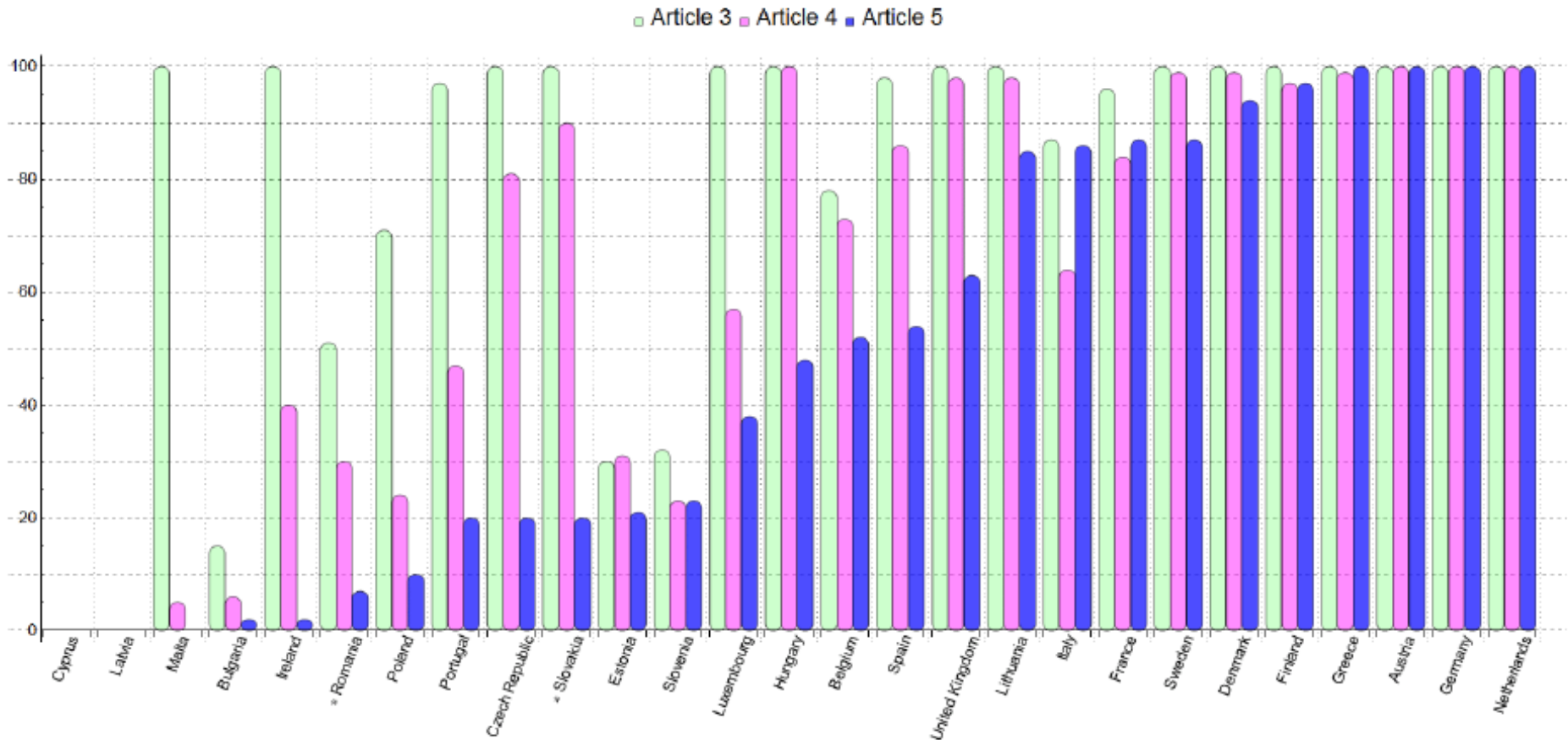
Particular Requirements:

- Collection and treatment of waste water in all “agglomerations of >2000 p.e” – (94% compliance August 2013 Report – EC 7<sup>th</sup> UWWTD)
- Secondary treatment for wastewaters > 2000 p.e. (82% compliance)
- Advanced treatment for >10 000pe in designated sensitive areas (77% compliance)
- Controls of sewage sludge disposal and re-use, and treated waste water re-use whenever it is appropriate.

## Wastewater – where are we? - EU

Source: EC 7<sup>th</sup> UWWTD report – 7 August 2013

Article 3 – Collection System; Article 4 – Secondary Treatment, Article 5 – Tertiary Treatment



## Organizing Wastewater as a Service

- International Organisations and Bodies
- National and Regional Parliaments
- Governments and Civil Services
- Regulators
- Wastewater generators and Service Providers
  - Municipality, Town and Village wastewater
  - Industrial and commercial wastewater
  - Agricultural wastewater
  - Surface water and runoff (Drainage Authorities)
- Legal Enforcement and the Courts
- Funding and financial instruments
- Accountability - Press and Civil Society Groups

## Organizing Wastewater as a Service

- Assured Demand that needs to be met efficiently
- Value of the Service – Health, Environment, Biodiversity, Improve Quality of Life
- Value of the Service – Biogas, Fertiliser and Soil Improver
- Value of the Service – Economic development of the wastewater sector, education, skills, supply chain, construction, operational, financial, management
- Regulatory – policy, enforcement, legal and judiciary

## Summary

- We are improving globally but we really need to do much better globally
- We need help create a wastewater service sector in every country because the value and benefits far exceed the costs
- We need to create and improve existing systems to make it happen – others have done it and are doing it.
- We must meet this assured demand more efficiently.