



Australian
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Asia and the Pacific Policy Society Conference 2014 *Confronting the Pacific's health challenges*

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Bridging Health, Nutrition and WASH



Aidan A. Cronin
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Water/Sanitation/Hygiene – “simple” characters in a complex world??



Env (Flora,Fauna)

Human survival

Human development

Climate change

Health, Nutrition

Agriculture

Industry

Sustainability, population growth, Urbanisation, Per capita usage increase

Water Quality

Resource Security & Livelihood security

Technical Understanding

Socio-economic forces, Culture

Targets

Management (IWRM)

Policy, legislation, regulation

National & International
Coordination

Distribution Equity

Water Rights, Equity

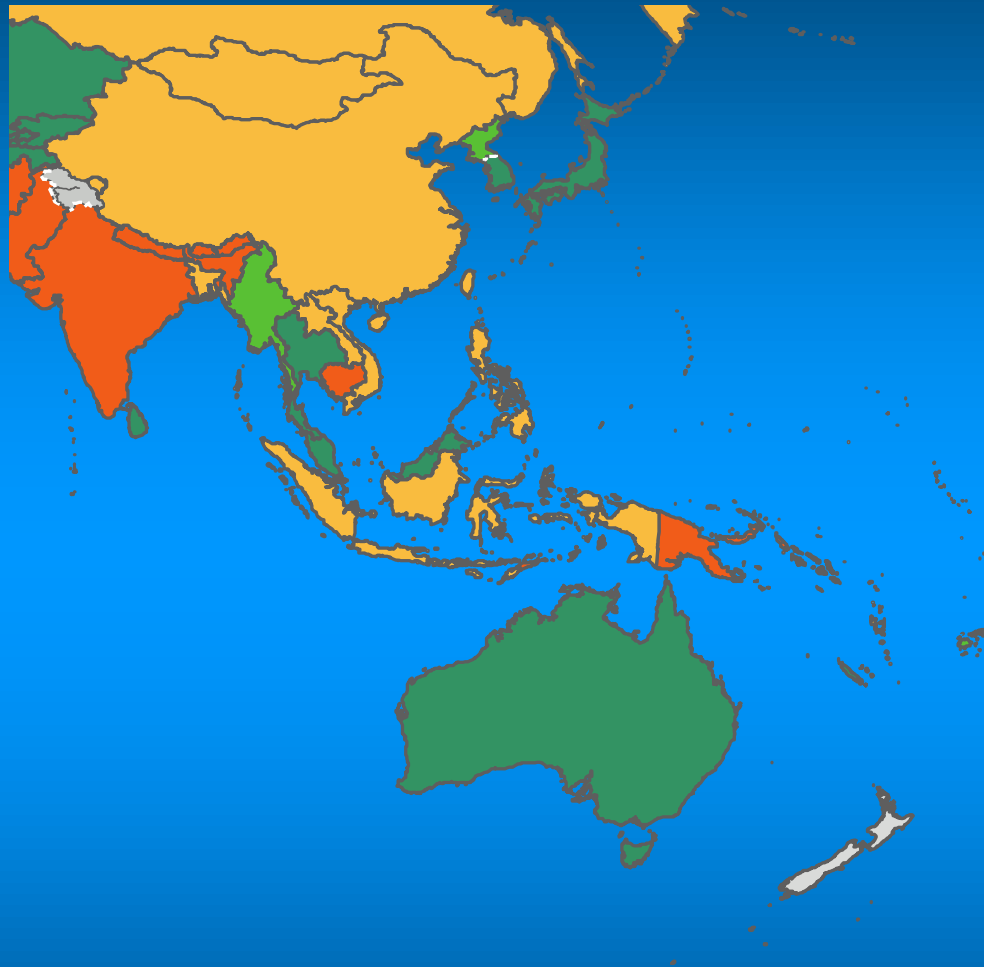
Governance

Capacity

Political Will v. Interference

Sanitation coverage in East Asia and Pacific, 2012

3

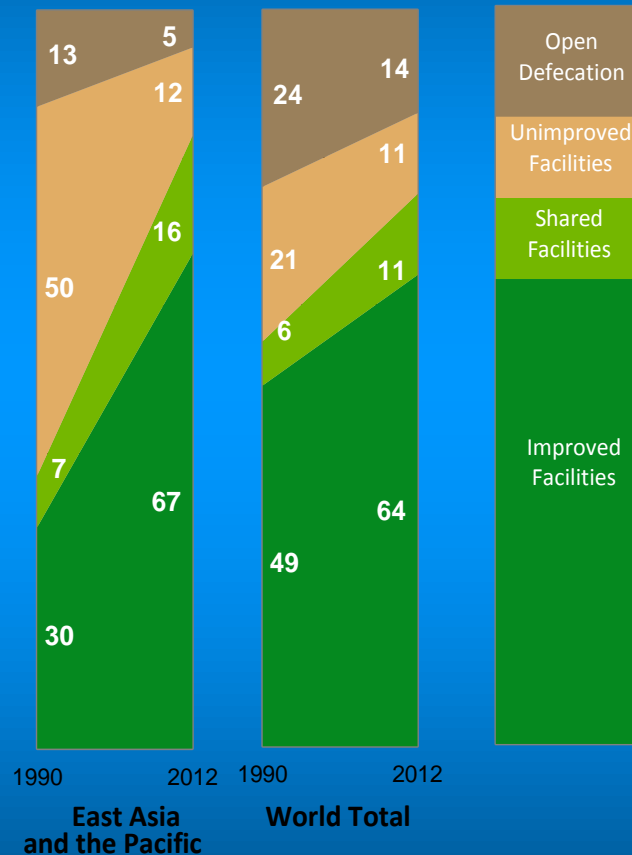


Papa New Guinea (19%)
Cambodia (37%)
Timor-Leste (38%)

91-100% 76-90% 50-75% <50% Insufficient data or not applicable

Progress in the use of improved sanitation in the East Asia and Pacific region 4

Regional and World Sanitation Coverage Trends



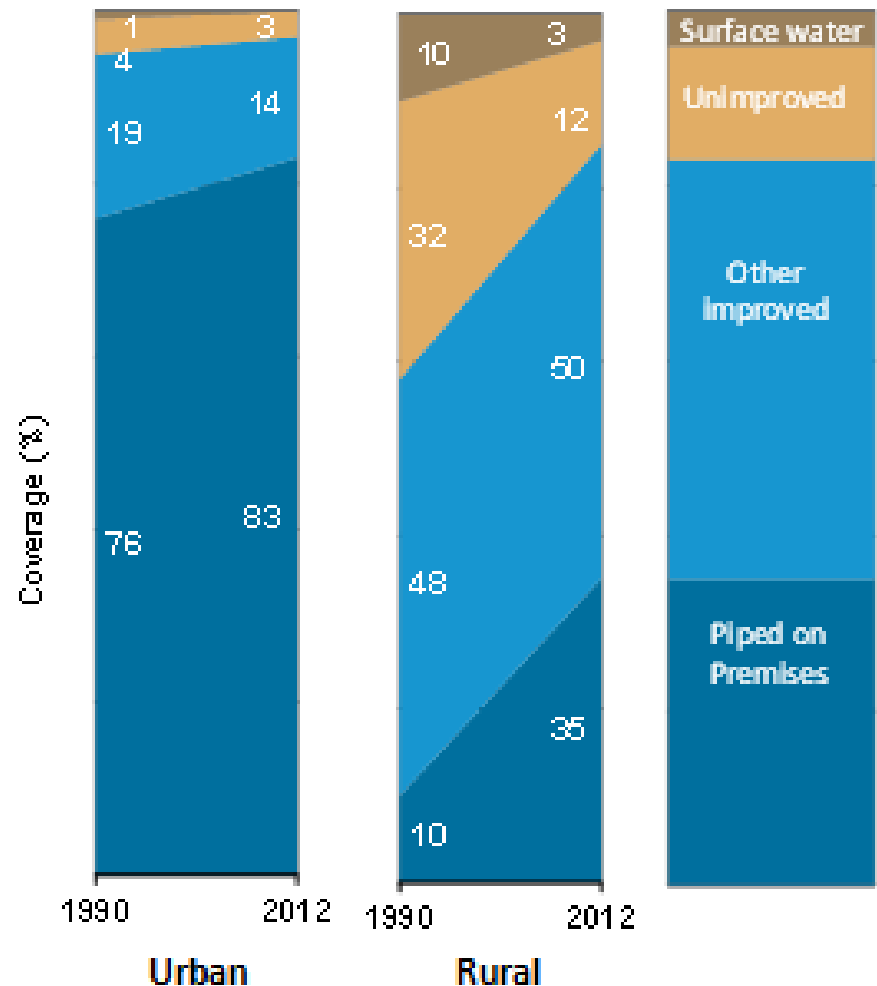
- Use of improved sanitation increased by **37%** between 1990 and 2012
- **More than double** the rate of increase of the world as a whole
- **864 million** more people than in 1990 (*majority in China)

- **11** countries in the region not on track meet the MDG sanitation target
- **5** countries with below 50% coverage
- Outside of China, open defecation rates in the region still quite high: **13%**
- **Inequitable** coverage within countries

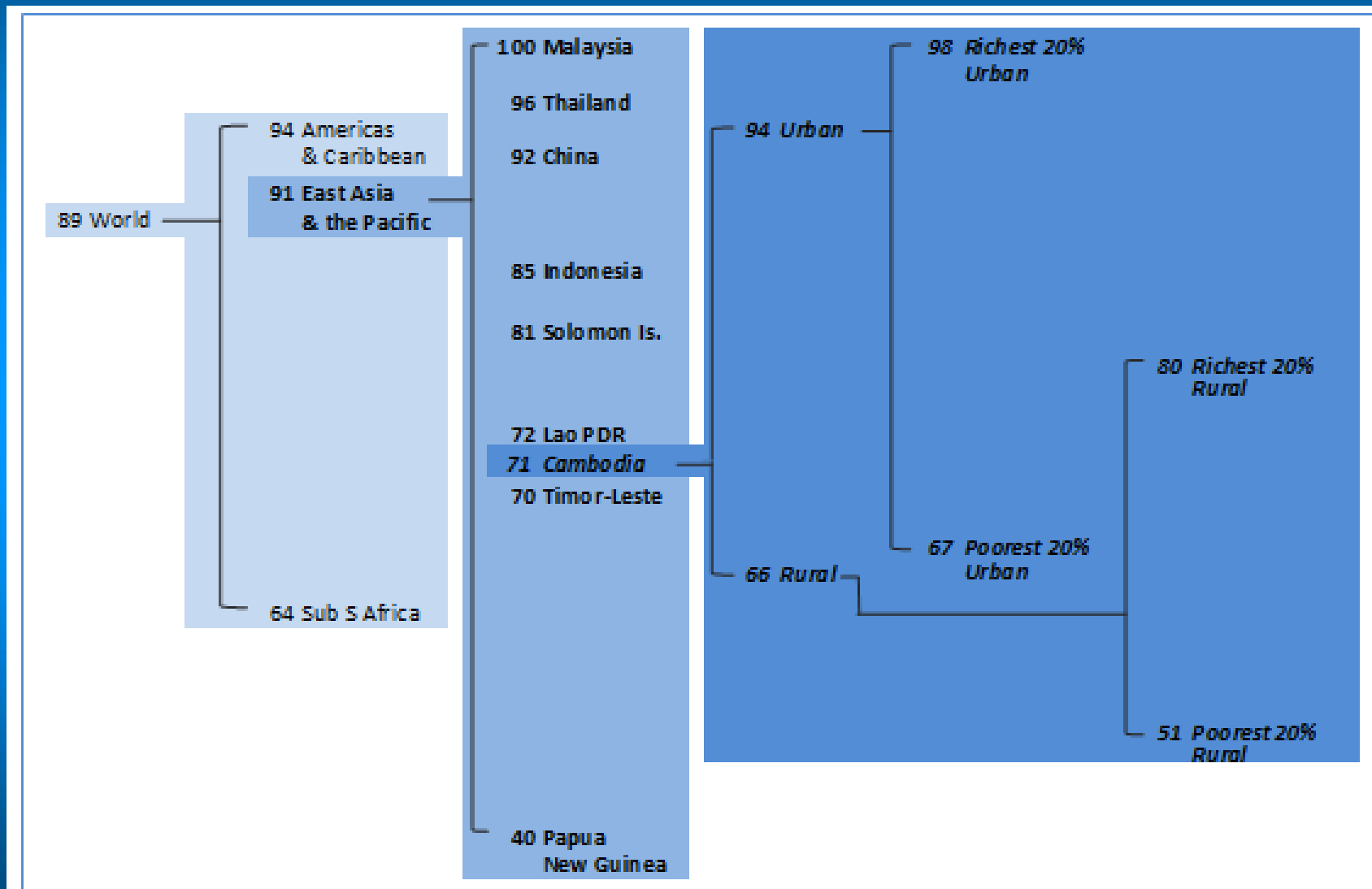
Urban-rural coverage disparity still exists, but gap narrowing

Urban-rural coverage disparity still exists, but the gap is narrowing

- The East Asia and Pacific Region urban-rural drinking water gap has shrunk from 37 percentage points in 1990 to 12 points in 2012
- However, there are still significant urban-rural gaps in some countries, notably in Papua New Guinea (55 percentage points between urban and rural), Kiribati (36 points), Timor-Leste (34 points) and Mongolia (34 points)
- Urban households in the region are more than twice as likely to have piped water on the premises than rural households



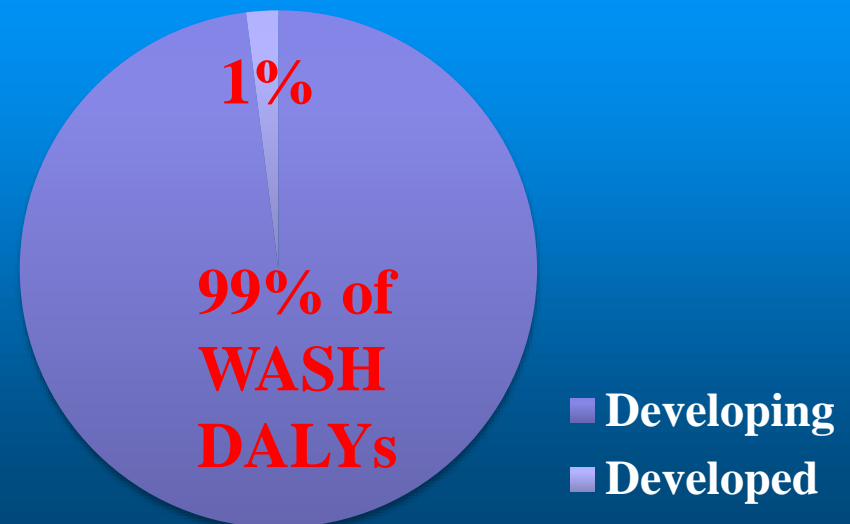
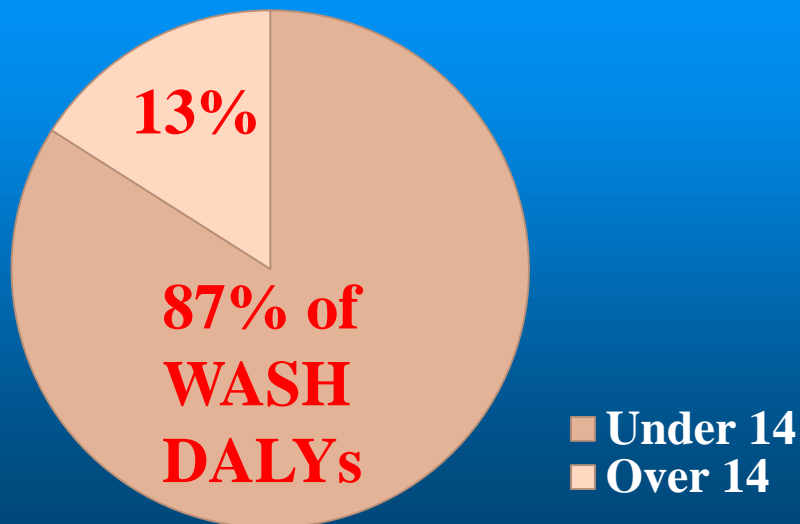
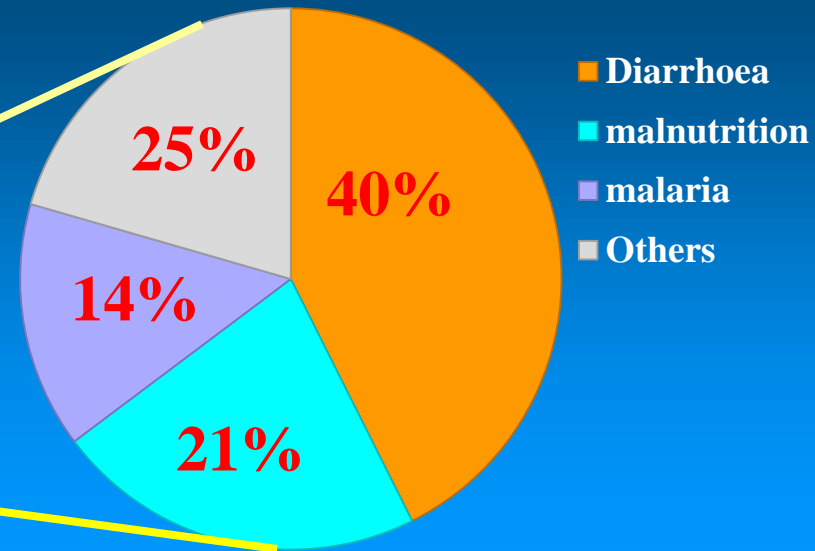
Regional and country averages mask large disparities within countries



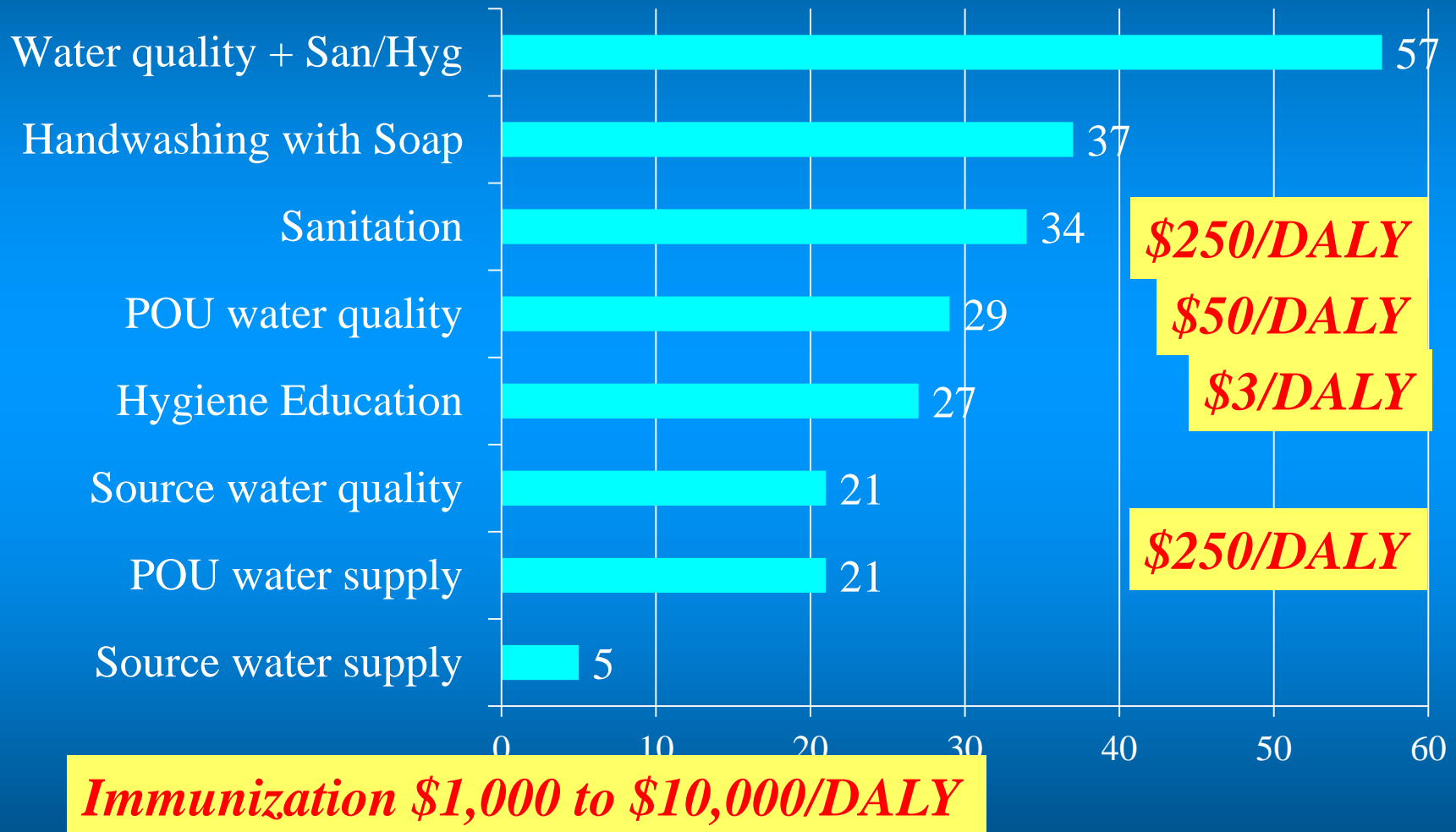
Improved water coverage in Cambodia, per cent. Sources: JMP 2014 and Cambodia DHS, 2010

**Total DALYs lost in
2002: 1.5 billion yrs**

*WASH DALYs (2002)
135 million = 9%*



Effectiveness [%] of WASH Interventions to reduce diarrhea morbidity in Children Under 5 years, 71 studies



Waddington, H., Snilstveit, B., White, H., Fewtrell, L. (2009) Water, sanitation and hygiene interventions to combat childhood diarrhoea in developing countries, *The International Initiative for Impact Evaluation* (3ie)

Editorial

The elusive effect of water and sanitation on the global burden of disease**Wolf-Peter Schmidt***Department of Disease Control, London School of Hygiene and Tropical Medicine, London, UK*

700 000 per year (Walker *et al.* 2013). Focussing largely on diarrhoea (Engell & Lim 2013), the recent GBD estimates that the number of disability adjusted life years lost due to inadequate access to water and sanitation has more than halved since 1990, from 52 to 21 million, as has the number of deaths (from 716 000 to 337 000).

Still, there are reasons to question the figures. The rela-

It is difficult to escape the conclusion that the literature on the impact of water, sanitation and hygiene is unreliable in its entirety, and in any case, it only represents results from

to some. It is not esoteric to believe that water and sanitation are upstream interventions, likely to have a broad impact on well-being and health (Hunter *et al.* 2010; Mara *et al.* 2010). Whether we like it or not, it could be that beliefs, not randomised controlled trials, will determine whether children in slums will continue to wade through open sewage, and whether school-aged girls in the hills will continue to spend most of their mornings fetching water.

WASH impact is not easy to quantify and its far beyond diarrhea!

*WASH-Stunting Nexus: the Evidence*¹⁰

- Stunting impacts bodies, brains and lives
- Association of improved drinking water supply, sanitation, and/or hygiene with improved linear growth has been reported in several non-experimental studies (Esrey, 1992; Esrey, 1996; Checkley et al., 2004; Merchant et al., 2003; Fenn et al., 2012; Ngunjiri et al., 2012)
- Values in the order of 17-27% lower risk of stunting with improved WASH
- Spears (2013) proposes cross-country differences in rates of sanitation explained 54 % of the variation in average child height – density of OD is the key indicator...

Learning from India...

- 3 data sets used to test the association between WASH indicators and child stunting using logistic regression models: 2005-6 National Family Health Survey , 2011 Hunger and Malnutrition Survey and 2012 Comprehensive Nutrition Survey in Maharashtra with N total of Under 2 year olds of over 44,000.
- Compared with open defecation, household access to toilet facility was associated with a 23-44% reduced odds of stunting among children aged 6-23 months, after adjusting for confounders
- Household access to improved water supply or piped water was not in itself associated with stunting.
- The caregiver's practices of washing hands with soap before or after defecation were protective against child stunting. However, the inverse association between personal hygiene practices and stunting existed only among households with access to toilet facility or piped water (for all $P < 0.05$)

Household sanitation and personal hygiene practices are associated with child stunting in rural India;

J.H. Rah, A. Cronin, B. Badgaiyan, V. M. Aguayo, S. Coates, S. Ahmed; BMJ Open (in review)

Indonesia – The Context

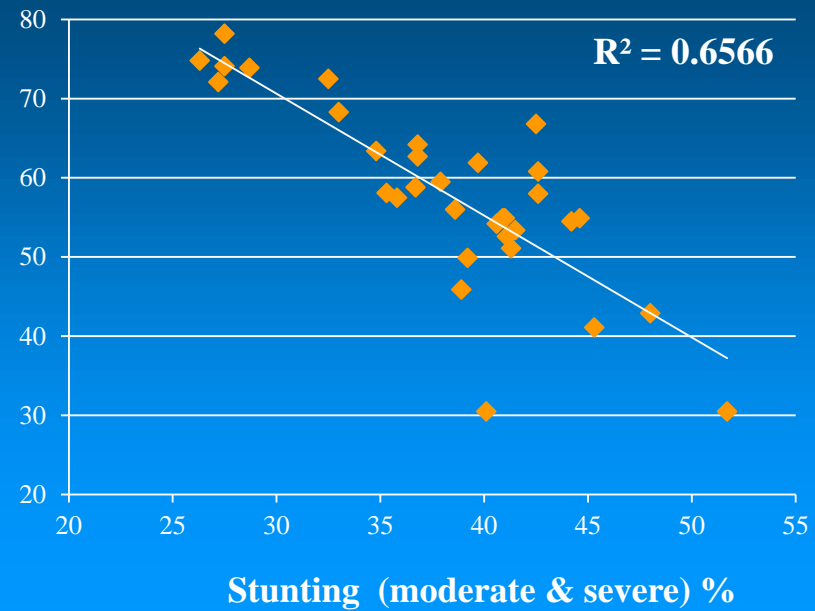
- 55 million open defecators and 9 million children affected by stunting....neither figure is acceptable
- Govt of Indonesia is putting more resources into sanitation and the Scaling Up Nutrition (SUN) Movement is promoting multi-sector approaches to address the high burden of stunting
- Still...Insufficient funding and political attention being given to both issues as well as little or no attention to converging nutrition and WASH actions at subnational level
- One problem is the lack of evidence that links poor sanitation and hygiene with stunting in Indonesia
- UNICEF Indonesia is currently examining the relationship between stunting and poor WASH provision through secondary analysis of national and sub-national survey datasets.

Outcomes/results

Strong inverse correlation between estimates (at province level) of the proportion of households with access to an improved sanitary facility and the prevalence of stunting

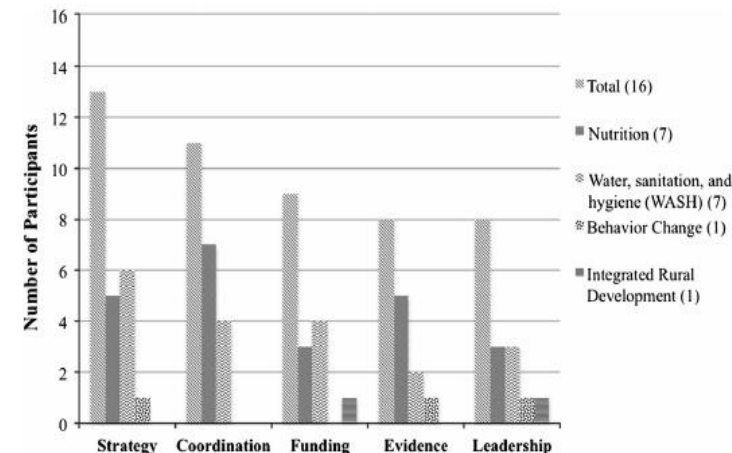
Prelim multivariate regression modelling shows sanitation associated with 30% reduction in risk of stunting, **N = 2023 children, 0-35 months**

Improved sanitation access (by household) %



Source: 2013 National Basic Health Research survey (RISKESDAS)

Fig. 2 Most commonly identified needs for integration, by study participants' area of expertise



Int J Public Health
DOI 10.1007/s00038-014-0580-8

ORIGINAL ARTICLE

Water, sanitation, hygiene, and nutrition: successes, challenges, and implications for integration

Jordan Teague · E. Anna Johnston · Jay P. Graham

Received: 23 April 2014 / Revised: 12 June 2014 / Accepted: 16 June 2014



Policy shifts: MDGs to SDGs

Proposed Goal 6 - Ensure availability and sustainable management of water and sanitation for all

- By 2030, achieve universal and equitable access to **safe** and affordable drinking water **for all**
- By 2030, achieve access to adequate and equitable sanitation and hygiene for all, and end **open defecation**, paying special attention to the **needs of women and girls and those in vulnerable situations**
- Also commitments to **expand capacity building** and **local community participation**

Bottleneck Analysis

Determinants of effective coverage



10-Determinant Framework	
Enabling Environment	1. Social Norms
	1. Legislation/Policy
	1. Budget/Expenditure
	1. Management /Coordination
Supply	1. Availability of Essential Commodities/Input
	1. Access to Adequately Staffed Services, Facilities and Information
Demand	1. Financial Access
	1. Socio-cultural Practices and Beliefs
	1. Continuity of Use
Quality	1. Quality

1. *EAPRO still needs acceleration of WASH – especially in equity terms*
2. *WASH is critical to health & nutrition – whatever way we cut the cake though sometimes we cant measure the thickness of the slice!*
3. *This needs funding but it's a sounds investment*
4. *Convergence offers new possibilities for impact and scale and sustainability!*
5. *Policy will be shaped by post 2015 dialogue but need for higher prioritization, capacity and above all system strengthening to address key bottlenecks (enabling env., supply, demand and quality)*

Thank you

