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Meeting the MDG Water Target in Asia: The
role of regional co-operation

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Meeting the MDG Water Target in Asia: The Role of regional co-operation

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The context

■ Worldwide

- Without access to water 1.1 billion people
- Without access to sanitation 2.6 billion people

■ In Asia

- Without access to water 670 million people
- Without access to sanitation ~ 2 billion people

MDG target

- Target 10: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation

MDG target

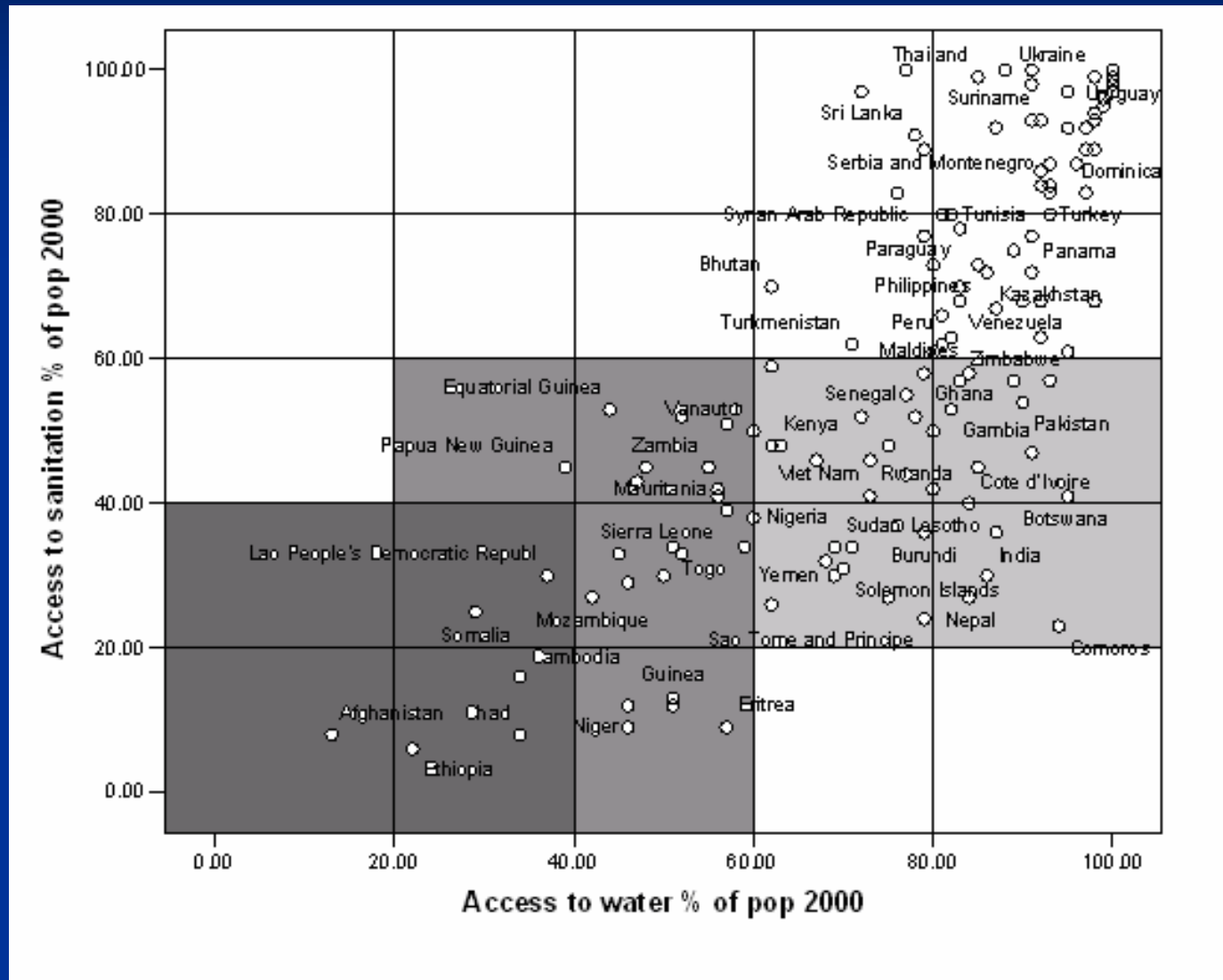
- Target 10: Halve, by 2015, the proportion of people without *improved* access to safe drinking water and basic sanitation
- Worldwide
 - Proportion of population with access to water increased
 - From 77 per cent in 1990 to 83 per cent in 2002
 - Proportion of population with access to sanitation increased
 - From 49 per cent in 1990 to 58 per cent in 2002

Does it matter?

- Potential impact of improving water and sanitation on
 - Poverty, hunger and vulnerability (MDG1)
 - Child mortality, maternal mortality (MDGs 4 and 5)
 - School attendance (MDG2)
 - Promoting gender equality (MDG 3)
 - Sustainability (other aspects of MDG 7)
- Potential benefits of water and sanitation far exceed the costs
 - Hutton and Haller (2004) and Rijsberman (2004)
 - Benefit cost ratios of well above 2.0
- Water essential for well-being, functionings, capabilities, and human development
- A human 'right' to water (UN,2002)

Figure 1: Synergy?

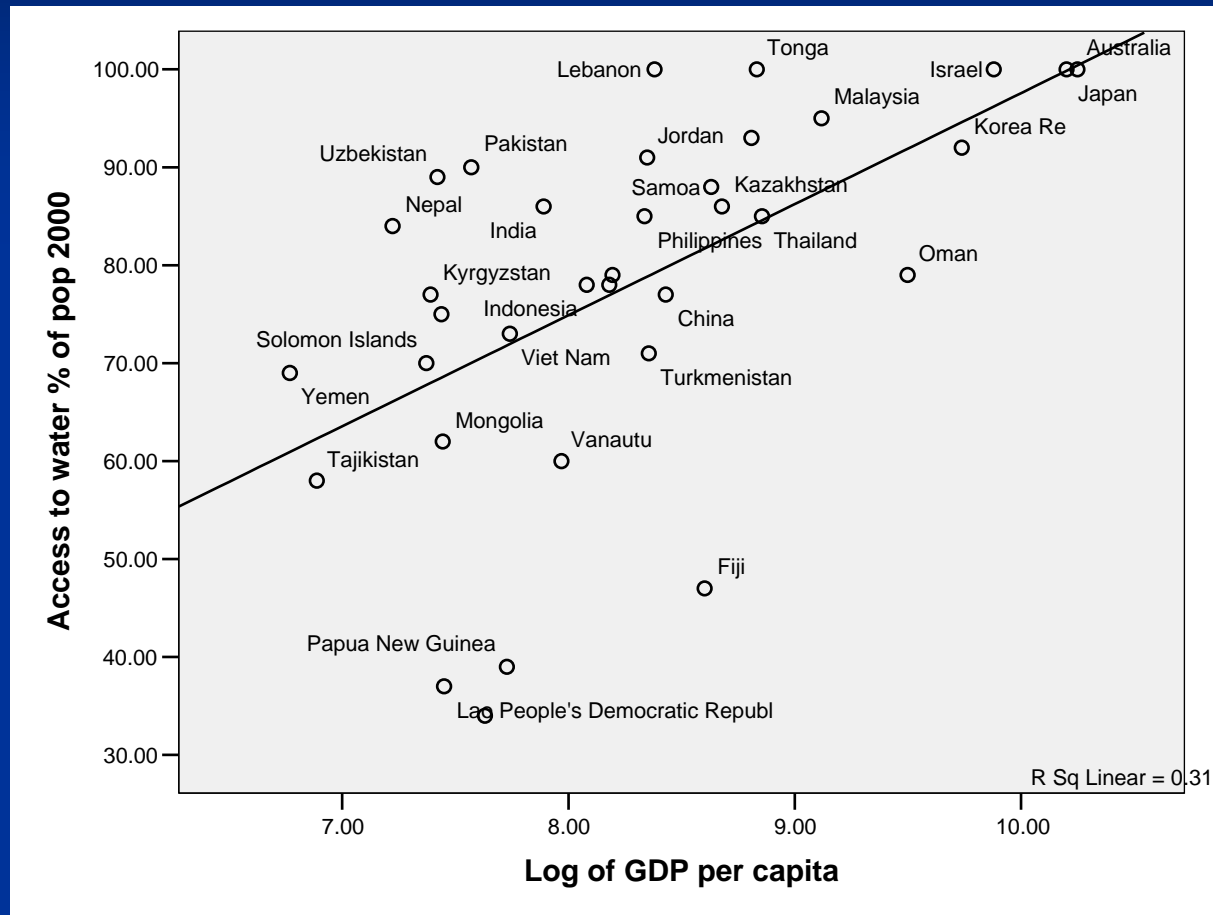
Source: Anand P.B., 2007, Scarcity, entitlements and the economics of water in developing countries, Cheltenham: Edward Elgar



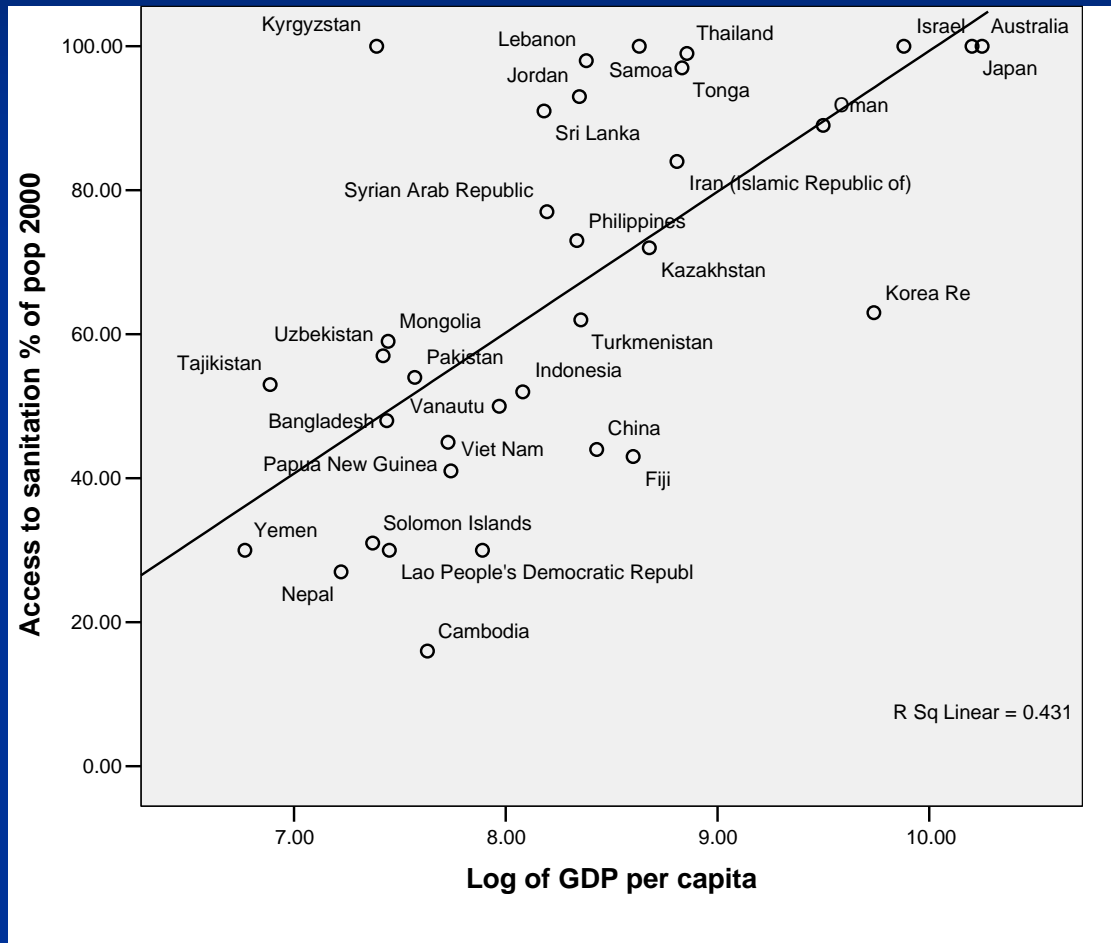
Messages from figure 1

- Most Asian countries with access to water for 60 per cent or more of the population
- Is there path dependence or sequence?
 - First improve access to water
 - Then improve access to sanitation

Income and access to water



Income and access to sanitation



Give it a bit of time?



Strategic imperatives

- *Group 1*: countries with significantly high proportion of population (>60%) having access to both water and sanitation
 - Sri Lanka, Thailand, Oman, Iran, Syria, and Kazakhstan...
- *Group 2*: countries where access to water has improved significantly but access to sanitation remains low
 - India, Pakistan, Viet Nam and Nepal...
- *Group 3*: countries where access to both water and sanitation remains low
 - Lao PDR, Cambodia, Afghanistan...

Strategic imperatives

- *Group 1*: To sustain the investments already made
- *Group 2*: To continue improving access to water but more importantly to focus on sanitation as an urgent priority
- *Group 3*: To invest in both water and sanitation sectors and exploit synergies and scale economies

Are Asian countries on track to achieve Target 10?

- Data – the major constraint to forecast
 - Available only for 2 points in time 1990 and 2002 from WHO-UNICEF
- Method used by WHO-UNICEF

$$dw = w_{it2} - w_{it1}$$

$$w_{it3} = w_{it2} + dw$$

$$\text{MDG} = 0.5(100 - w_{it2})$$

On track if $dw > \text{MDG}$

Off track if $dw < \text{MDG}$

Are Asian countries on track to achieve Target 10?

- An alternative approach

$$\begin{aligned}w_{it2} &= f(w_{it1}, \mathbf{X}_{it1}) \\ &= a + \beta_1 w_{it1} + \beta_2 \text{GDP}_{it1} + \beta_3 \text{GDP}_{\text{growth}_{i,t1,t2}} + \\ &\quad + \beta_4 \text{HealthGDP}_{it1} \dots\end{aligned}$$

- Estimate the above equation for data from 1990 and 2002
- Use parameters of this equation to forecast for 2015 based on data of 2002

$${}^e dw = w_{it32} - w_{it2}$$

$$\text{MDG} = 0.5(100 - w_{it2})$$

On track if ${}^e dw > \text{MDG}$

Off track if ${}^e dw < \text{MDG}$

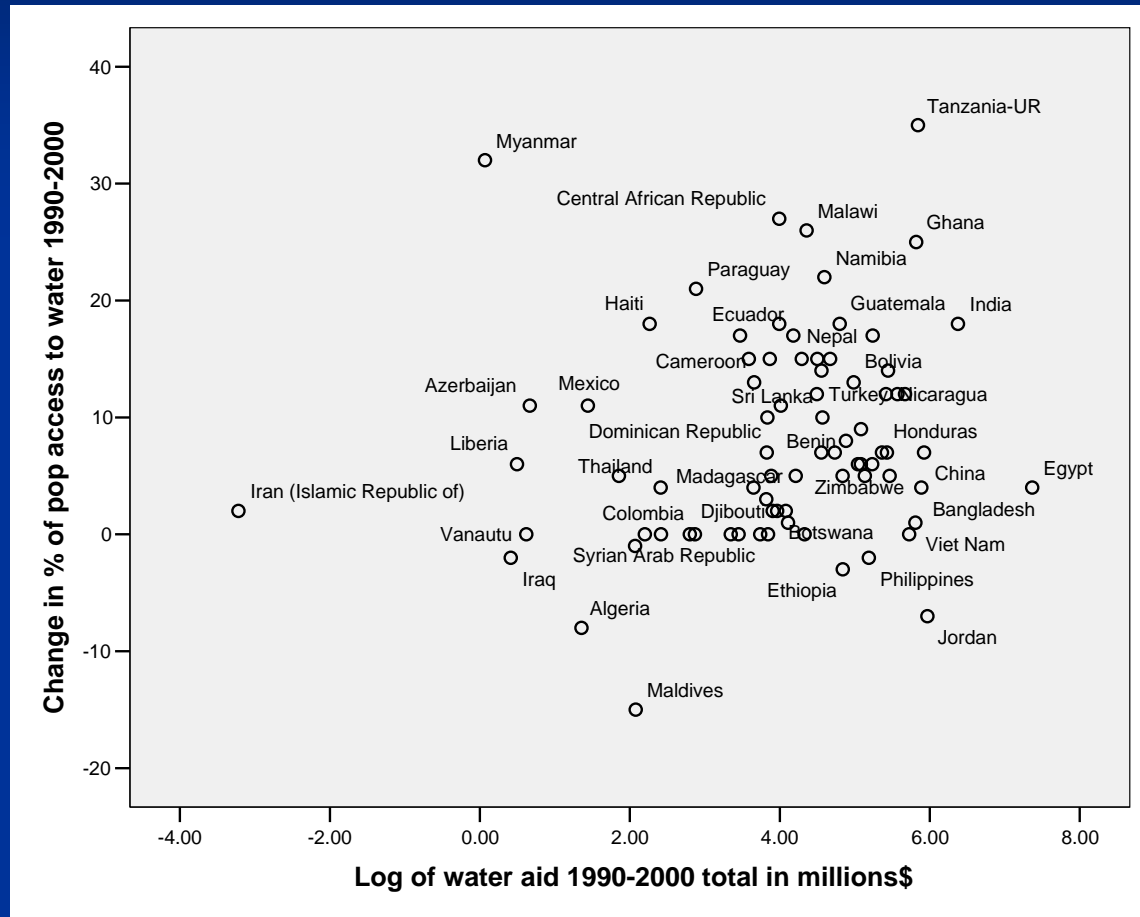
Forecasts and implications

- Regression models in the appendix to the paper
- Forecasts in tables 1 and 2
- Countries where water target is likely to be missed (by more than 6 % of population)
 - Bangladesh, Viet Nam, Turkmenistan, Yemen, Mongolia, Tajikistan, Lao PDR, Cambodia
- Sanitation target is likely to be missed by several countries (table 2)

Financing issues

- Volume of finance
- Mix of instruments
 - Loans
 - Grants/ aid

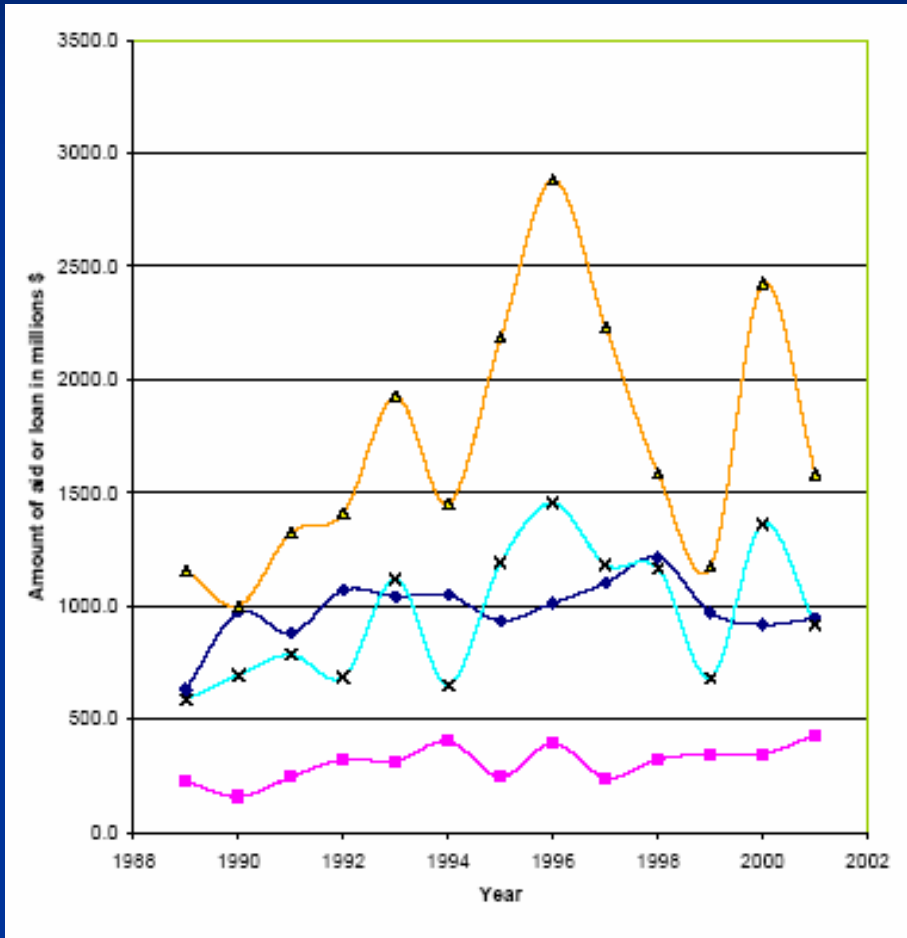
Does aid help?



Financing for water and sanitation

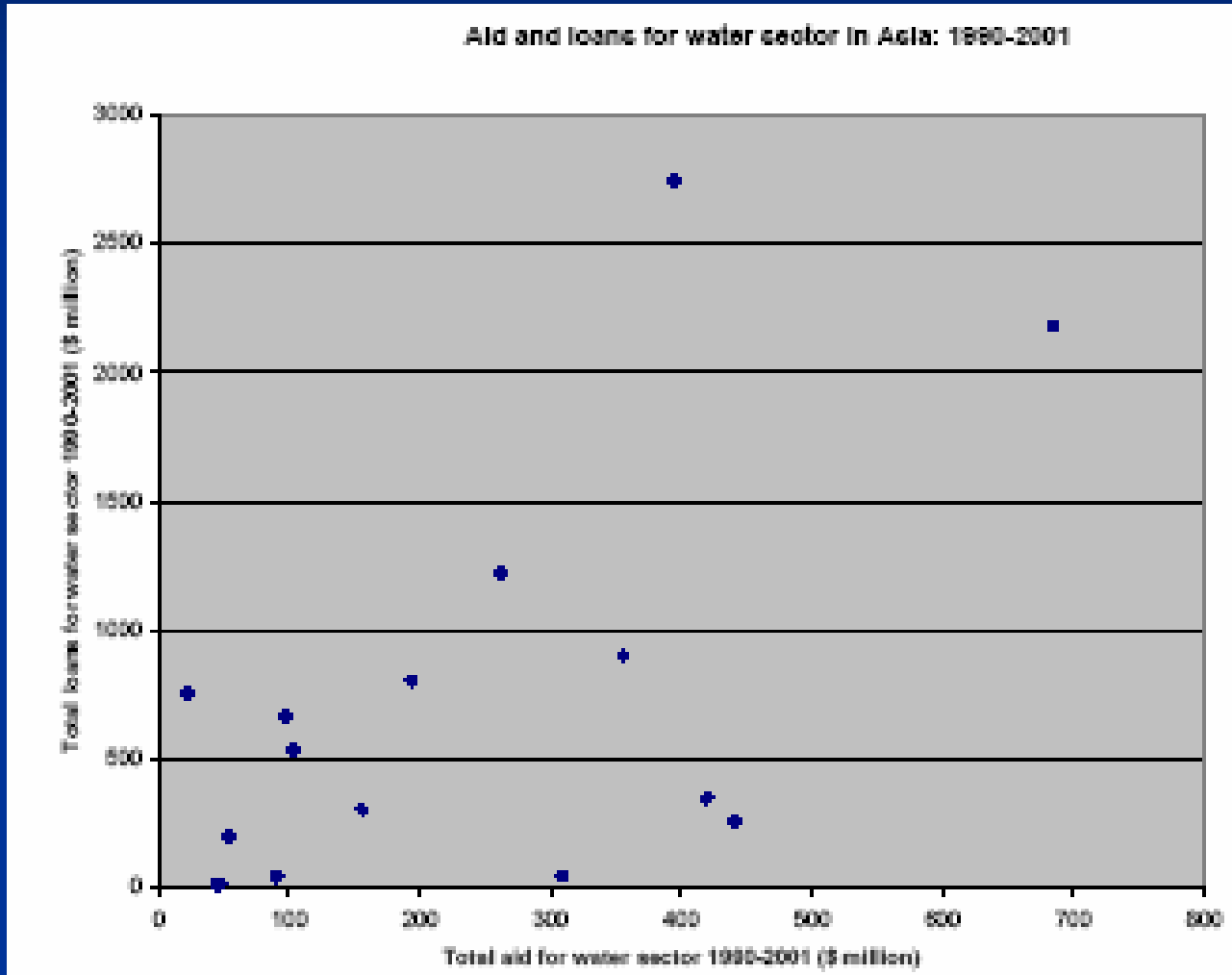
- OECD-CRS data for 1990-2002
- Data relates to commitments
- Aid
 - Worldwide approx US\$ 1 billion per annum
 - Asian countries received approx US\$ 300 million per annum
- Loans
 - Worldwide approx US\$ 1.8 billion per annum
 - Asian countries received approx US\$ 900 million per annum

Financing mix: Aid or loans?



- ◆ Total -1990-2001- aid for water
- Total aid - 1990-2001- for water -Asia
- ▲ Loans- world total- 1990-2001- water sector
- × Loans-Asia-1990-2001-water

Aid and loans in Asia:1990-2002



Financing mix: implications

<p><i>Volume of aid – low</i> <i>Volume of loans - high</i></p> <p>Malaysia, Thailand</p>	<p><i>Volume of aid – high</i> <i>Volume of loans –high</i></p> <p>India, China, Philippines, Indonesia, Viet Nam, Jordan</p>
<p>(a) Sri Lanka, Pakistan, Nepal, Syria, Iran, Myanmar (b) Lao, Uzbekistan, Turkmenistan, Tajikistan, Bhutan</p> <p><i>Volume of aid - low</i> <i>Volume of loans – low</i></p>	<p>Bangladesh, Yemen</p> <p><i>Volume of aid - high</i> <i>Volume of loans - low</i></p>

Financing mix- Privatisation

- Privatisation of water utilities
 - Malaysia, China, Philippines
- Private sector involvement
 - Construction
 - Billing and collection
 - Service contracts
- Windfall incomes from privatisation of other infrastructure (table 3)
 - Such income seems to have mattered (san)

Financing mix - implications

- A need for a regional strategy
- Aid may be crucial for Group 3 countries
 - And for improving sanitation in some Group 2 countries
- Continuing water sector reforms in Group 2 countries
 - Increasing use of loan financing
 - Implications for water charging and inequality

Other policy implications

- The role of economic growth ([table in A1](#) in appendix)
- Per capita GDP matters (and hence, aid issues)
- Improving water and sanitation can contribute to reducing inequality
- Water resources per capita (natural resource constraint) is not significant
- Governance matters ([figure 8](#))

Regional co-operation

- For aid to be more effective, a regional approach to Target 10
 - Priorities different for Group 3 v Group 2 countries
- For loans to be more effective, the need for a regional network
 - Benchmarking of performance indicators
 - More than information dissemination
- International water resources and co-operation issues
 - Preliminary indications
 - Institutions for regional public goods

■ Thank you.