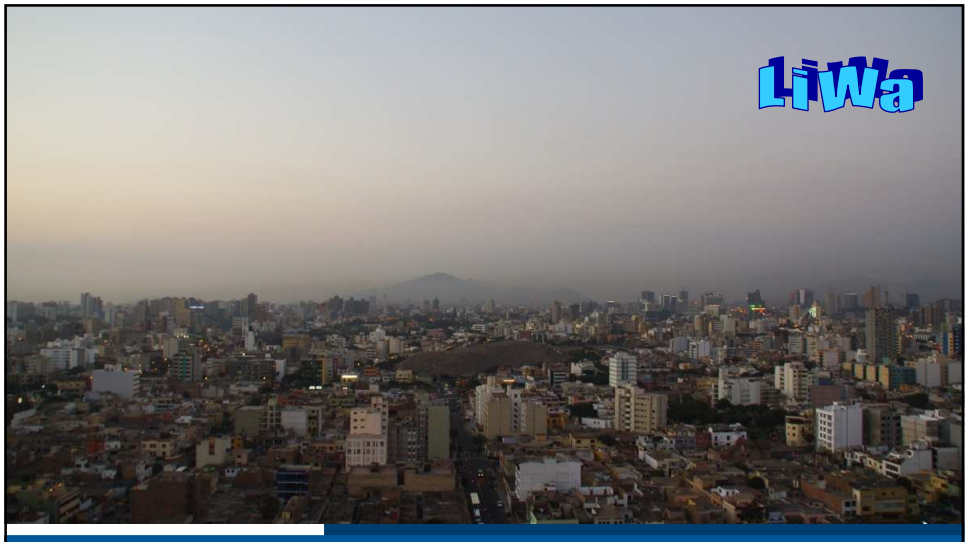

Challenges to Pricing Water Supply and Sanitation in Megacities
The Case of Lima Metropolitana (Perú)

Paul Lehmann, Ana Acevedo, Liliana Miranda

Presentation prepared for the Conference "Megacities: Risk, Vulnerability and Sustainable Development"
Leipzig, 7-9 September 2009

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OUTLINE

- Project
- Issues in Lima's Water Sector
- Evaluation of Water Pricing in Lima
- Conclusion

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LIWA-PROJECT

Sustainable Water and Wastewater Management in Urban Growth Centres Coping with Climate Change - Concepts for Lima Metropolitana (Perú) - LiWa

- Project of the BMBF Megacity Programme, 2008 - 2013

Project tasks:

- Modelling and simulation of water and wastewater systems
- Development of new tools for participative decision-making
- Evaluation of the water pricing system
- Capacity building

LIWA-PROJECT

Project partners

Peru
- SEDAPAL
- Universidad Nacional de Ingenieria
- Foro Ciudades para la Vida
- FOVIDA

Germany
- ifak e. V. Magdeburg
- ZIRN, Universidad de Stuttgart
- IWS, Universidad de Stuttgart
- Universidad de Lüneburg Leuphana
- UFZ – Inst. Medio Ambiente, Leipzig
- Dr. Scholz & Dalchow

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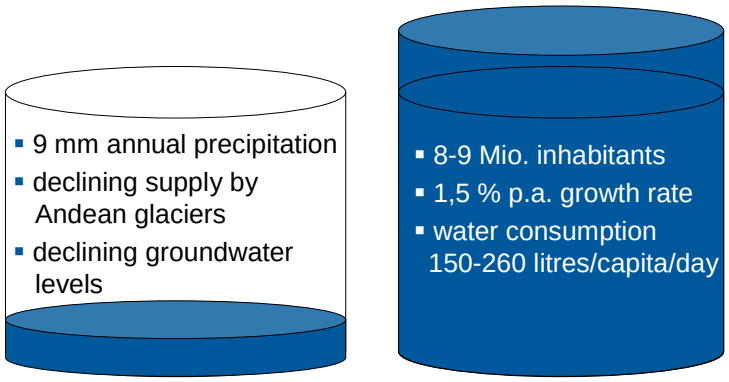
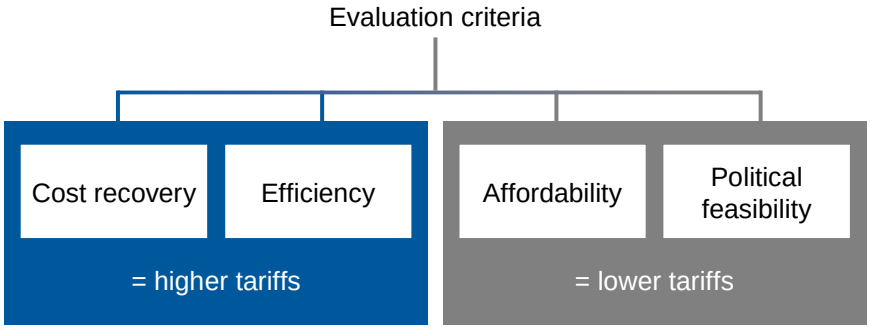
WATER SUPPLY AND DEMAND IN LIMA



INFRASTRUCTURE IN LIMA

	Actual situation 2008
Potable water coverage	91 %
Sanitation coverage	86 %
Continuity of supply	21 h/day
Water losses	36 %
Micro-metering	70%
Wastewater treatment	15 %

IMPLICATIONS FOR WATER PRICING



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WATER TARIFF SYSTEM (2008)

Fixed charge: 4.444 PEN/month

Variable charge:

Category	Range m^3/month	Tariff PEN/m^3
Social	> 0	1,311
Domestic	0 - 20	1,311
	20 - 30	1,735
	30 - 80	2,675
	> 80	4,005
Commercial	> 0	5,291
Industrial	> 0	5,291
State	> 0	2,675

- uniform tariff for water and wastewater
- flat rate for customers without meter
- cross-subsidy from large to small consumers
- determination of tariffs by regulatory agency

- non-network consumers supplied by water tankers, 5-7 PEN/m^3

EVALUATION RESULTS

Challenge 1

- Average water tariffs not corresponding to the full cost of water (investment and external environmental costs not covered)

Cost recovery	Efficiency	Affordability	Political feasibility

Challenge 2

- Lacking differentiation of tariffs between water supply, wastewater discharge and wastewater contamination

Cost recovery	Efficiency	Affordability	Political feasibility

EVALUATION RESULTS

Challenge 3

- Tariff differentiation by consumer categories and consumption (IBT for domestic consumers) with cross-subsidy

Cost recovery	Efficiency	Affordability	Political feasibility

Challenge 4

- Lacking regulation of water prices for customers not connected to the network (in peri-urban settlements)

Cost recovery	Efficiency	Affordability	Political feasibility

Challenge 5

- Prevailing perceptions with respect to water and regulation

Cost recovery	Efficiency	Affordability	Political feasibility

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CONCLUSION: NEED FOR ACTION

Tariff Design

- Increasing average tariffs
- Designing the tariff structure more efficiently
- Addressing affordability more effectively

Broader issues

- Regulating decentral water supply
- Raising the awareness of water scarcity and value

Thank you for your attention!

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