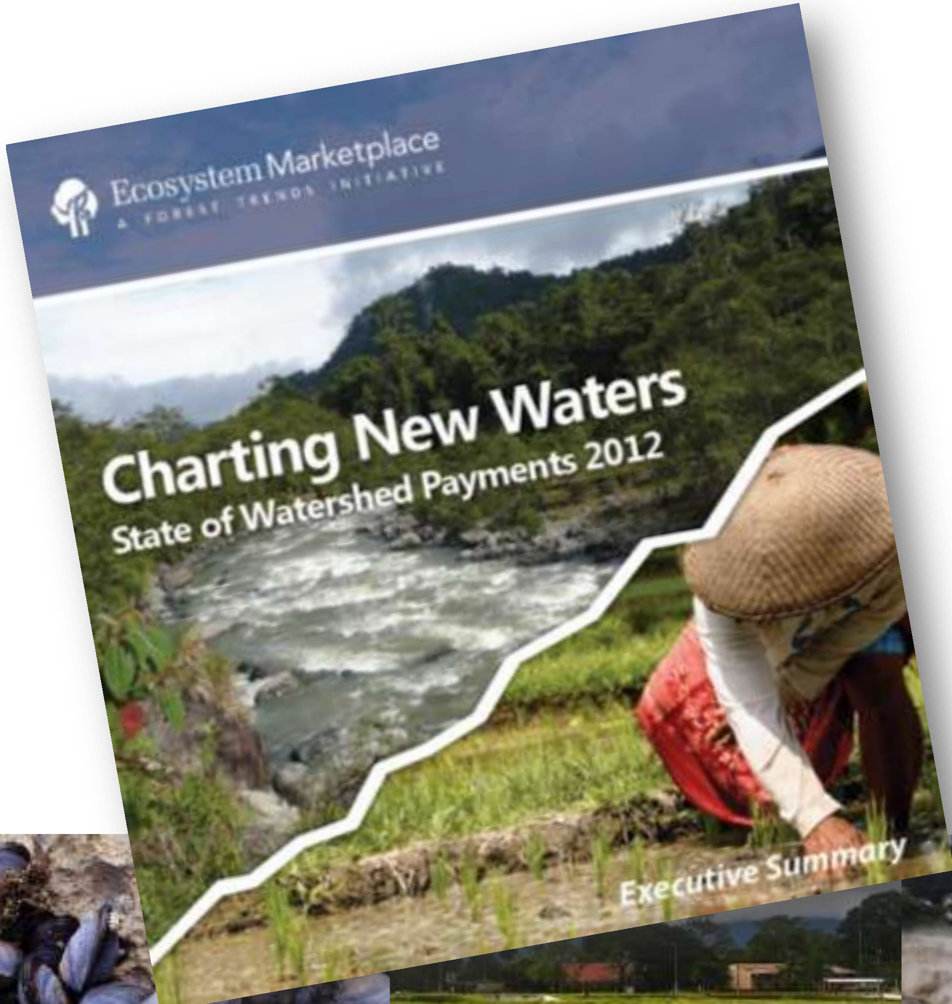

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Charting New Waters:

State of Watershed Payments 2012

January 24th, 2013
The World Bank

With special thanks to our donors:

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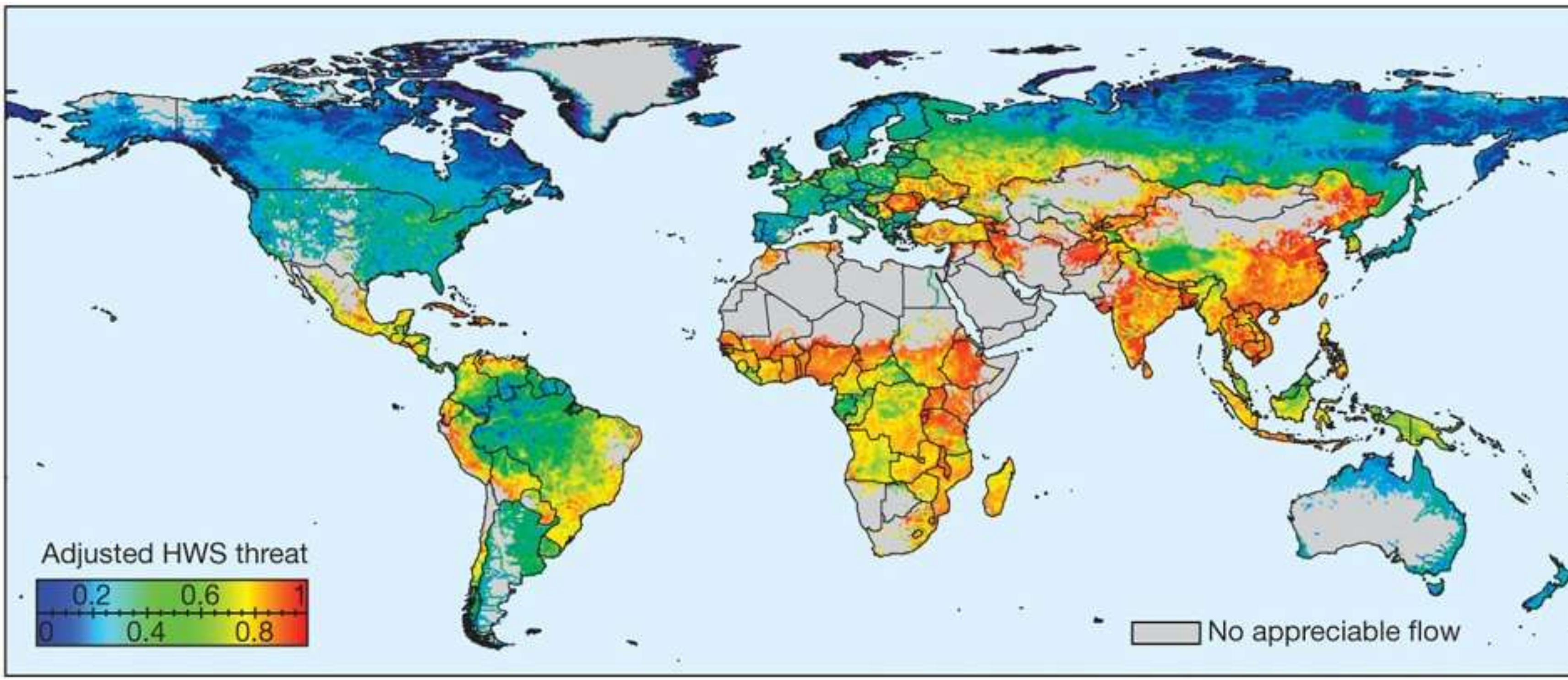
GLOBAL WATER INSECURITY: 80 percent of the world's population currently faces water insecurity.

Global Water Insecurity, Adjusted for Technology Benefits

Access to water infrastructure is out of economic reach for many people.



SOURCE: CJ Vorosmarty et al. Nature 467, 555-561 (2010) doi:10. 1038/nature09440

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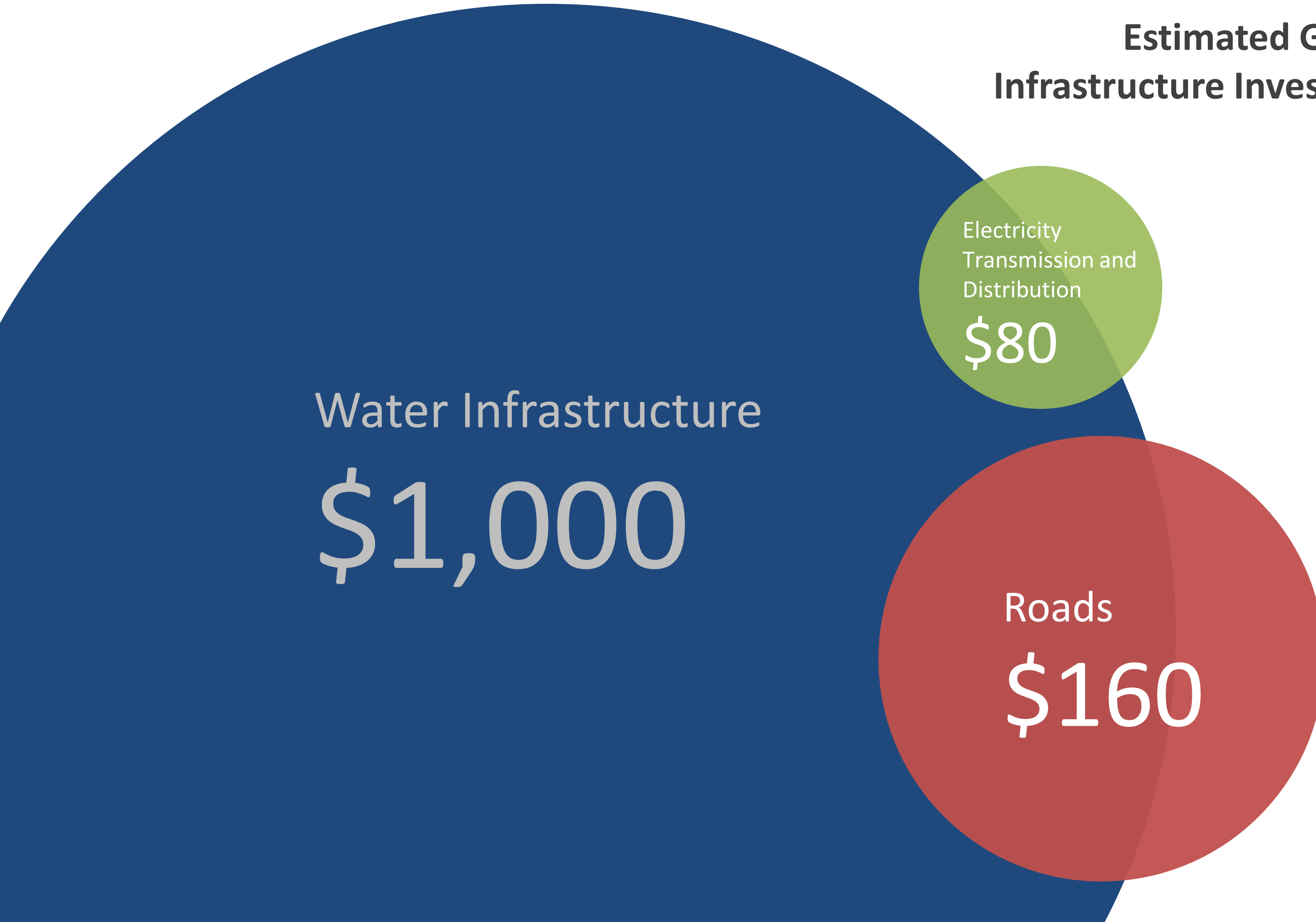
THE INFRASTRUCTURE GAP: $1 trillion in spending is needed for water infrastructure by 2025, dwarfing other infrastructure needs.

Estimated Global Annual Infrastructure Investment Needs by 2030
$ billions



SOURCE: Source: OECD (2006). "Infrastructure to 2030: Telecom, Land Transport, Water and Electricity."

WHAT DO WE MEAN BY WATERSHED INVESTMENTS? Recognizing our natural infrastructure as a valuable asset, and investing in it.

Managing our landscapes as **natural infrastructure**

which means **identifying the services they provide** that we depend on

like pollution filtration or flood control

and **compensating the people** who protect and enhance the delivery of those services

because they're providing us with something of value.

SOURCE: Charting New Waters: State of Watershed Payments 2012.

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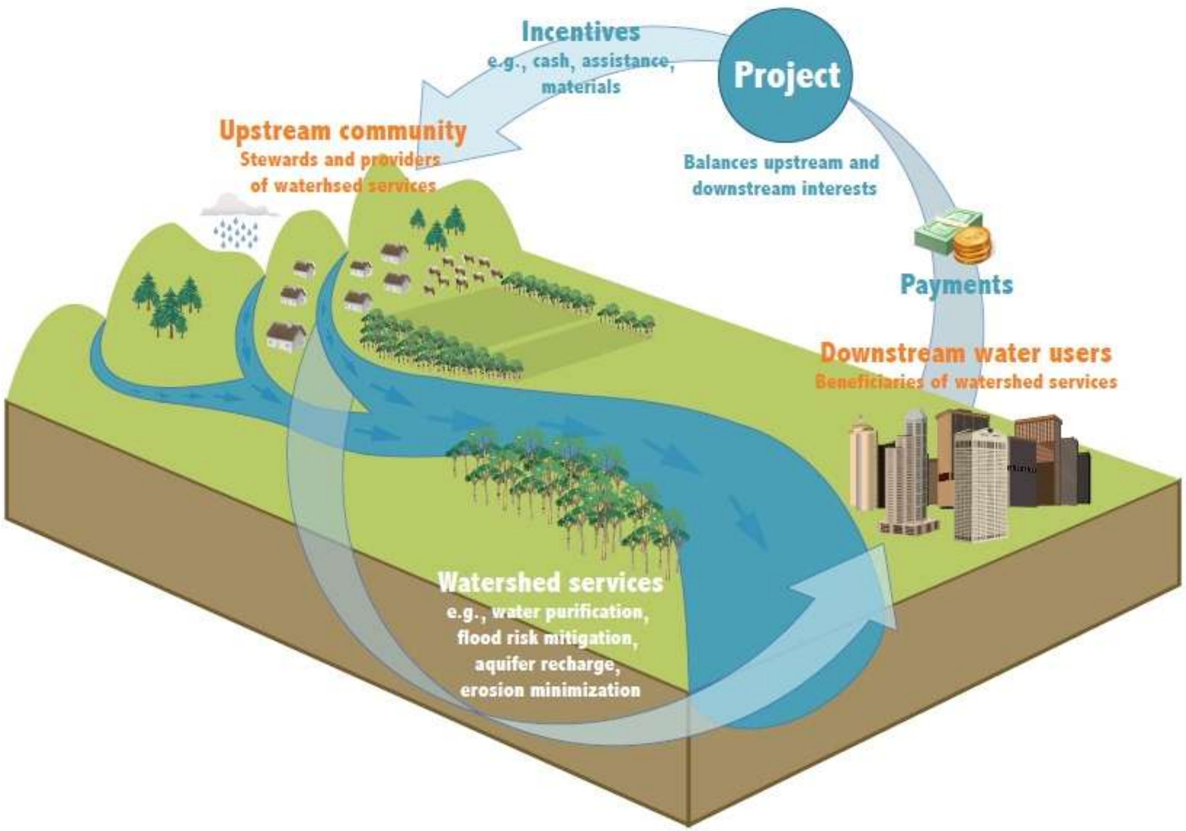
WATERSHED INVESTMENTS: Water users finance land management strategies that protect the watershed services on which they depend.

A Classic Case of Watershed Investment

Water users compensate the upstream community for carrying out projects that deliver improved water quality or flows downstream.



SOURCE: Charting New Waters: State of Watershed Payments 2012.

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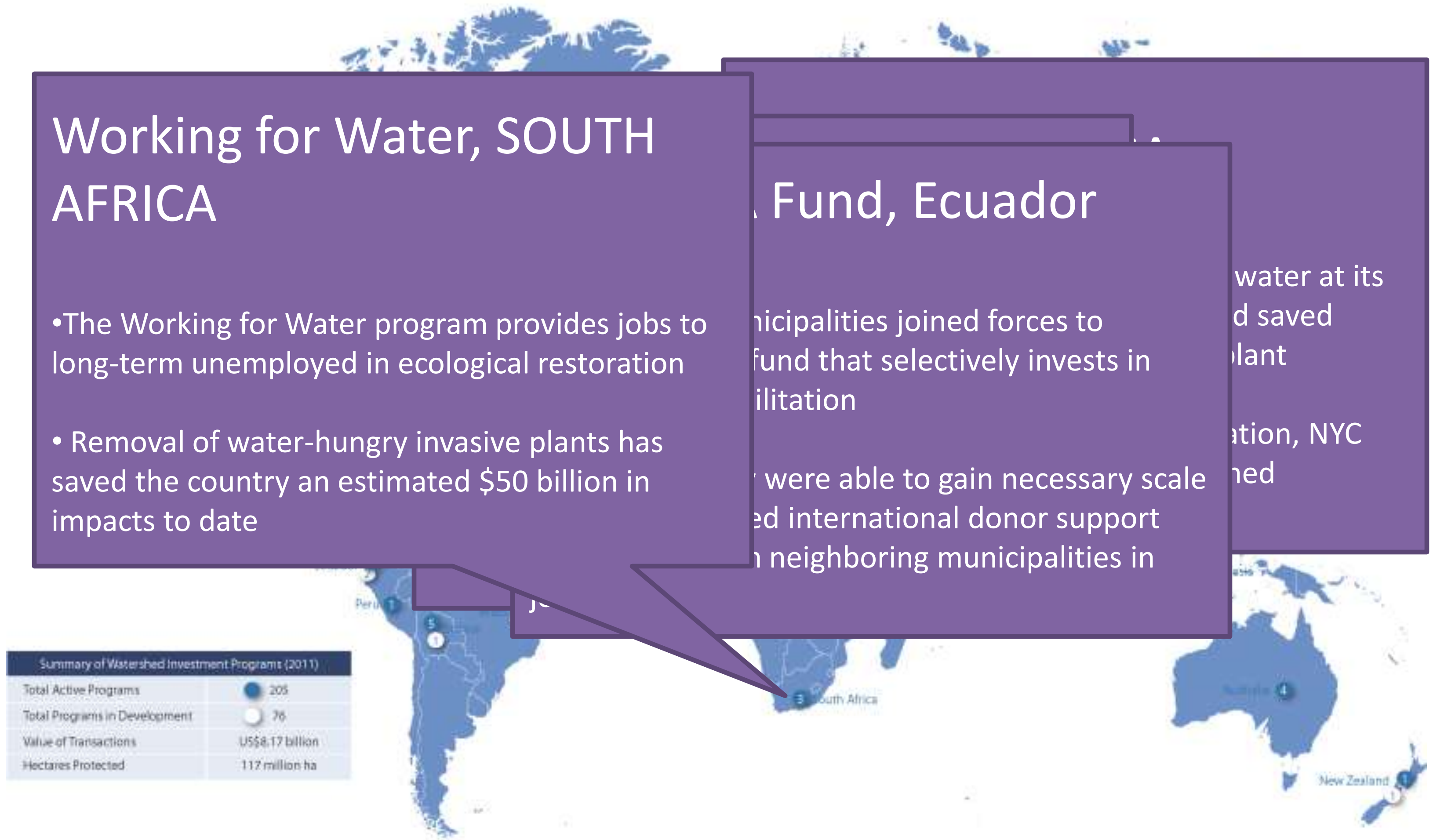
OUR HIGH-LEVEL FINDINGS: Within this world, we see lots of variation in types of programs.



Working for Water, SOUTH AFRICA

•The Working for Water program provides jobs to long-term unemployed in ecological restoration

• Removal of water-hungry invasive plants has saved the country an estimated $50 billion in impacts to date

Fund, Ecuador

icipalities joined forces to
fund that selectively invests in
ilitation

were able to gain necessary scale
ed international donor support
neighboring municipalities in

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SOURCE: Charting New Waters: State of Watershed Payments 2012.

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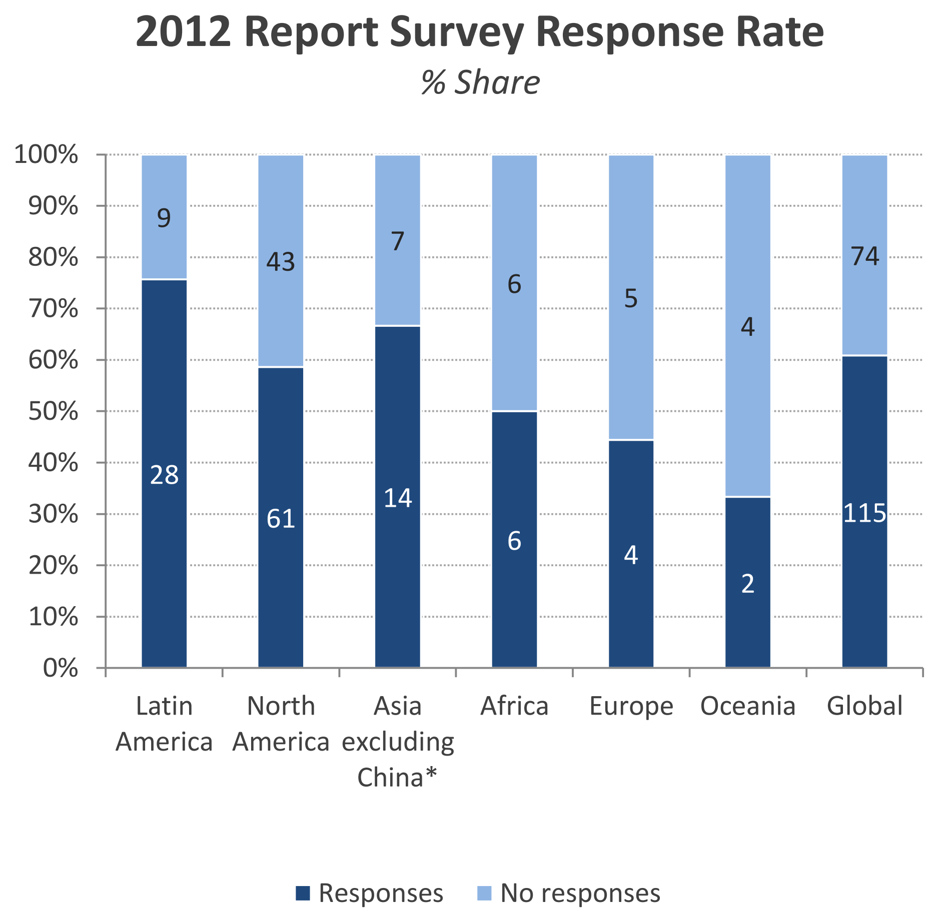
OUR METHODOLOGY: The State of Watershed Payments report series collects data via online survey, interviews and desk research.

- **300+** programs investigated
- **61%** survey response rate globally
- **Regional partners** – including EcoDecisión in Ecuador, FT Senior Research Michael Bennett in China, and CSU doctoral candidate Heidi Huber-Stearns in the USA



*SOURCE: Charting New Waters: State of Watershed Payments 2012. Ecosystem Marketplace. NOTES: *Chinese data was not collected via survey.*

OUR HIGH LEVEL FINDINGS: Number of programs has doubled since 2008; global investments are up $2 billion.

Summary of Watershed Investment Programs, 2011

Count of Programs – Active and Under Development

Summary of Watershed Investment Programs (2011)	
Total Active Programs	205
Total Programs in Development	76
Value of Transactions	US$8.17 billion
Hectares Protected	117 million ha

SOURCE: Charting New Waters: State of Watershed Payments 2012.

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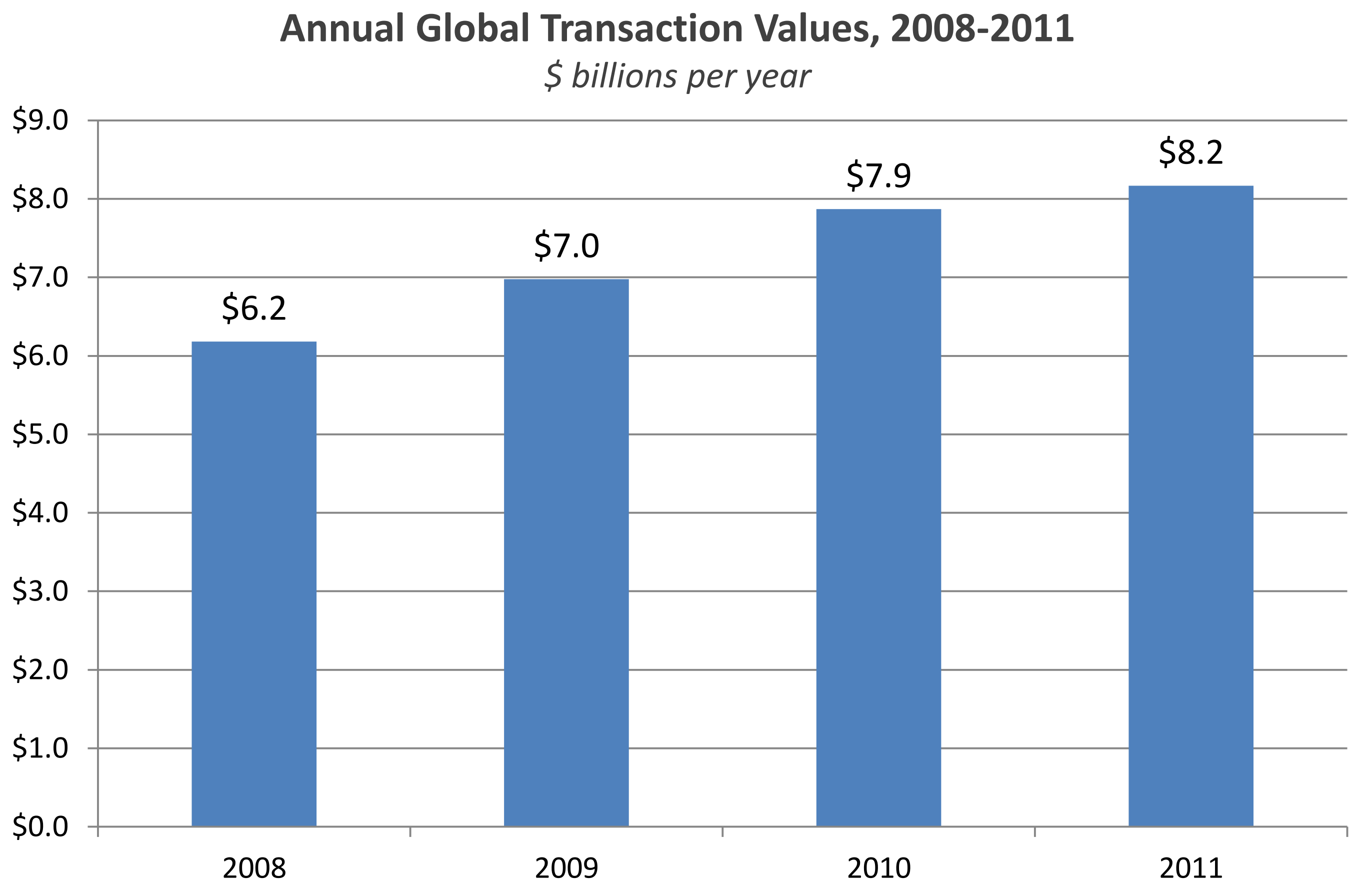
GLOBAL INVESTMENT: We see slow but steady growth since we began tracking investments in watershed services in 2008.



SOURCE: Charting New Waters: State of Watershed Payments 2012.

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REGIONAL INVESTMENT: Total investments added up to $8.2 billion in 2011. More than 90% of payments tracked took place in China.

Value of Watershed Investment Programs, 2011

$ millions

Asia: $7,460

North America: $361

Africa: $109

Oceania: $149

Europe: $3

Latin America: $89

SOURCE: Charting New Waters: State of Watershed Payments 2012.

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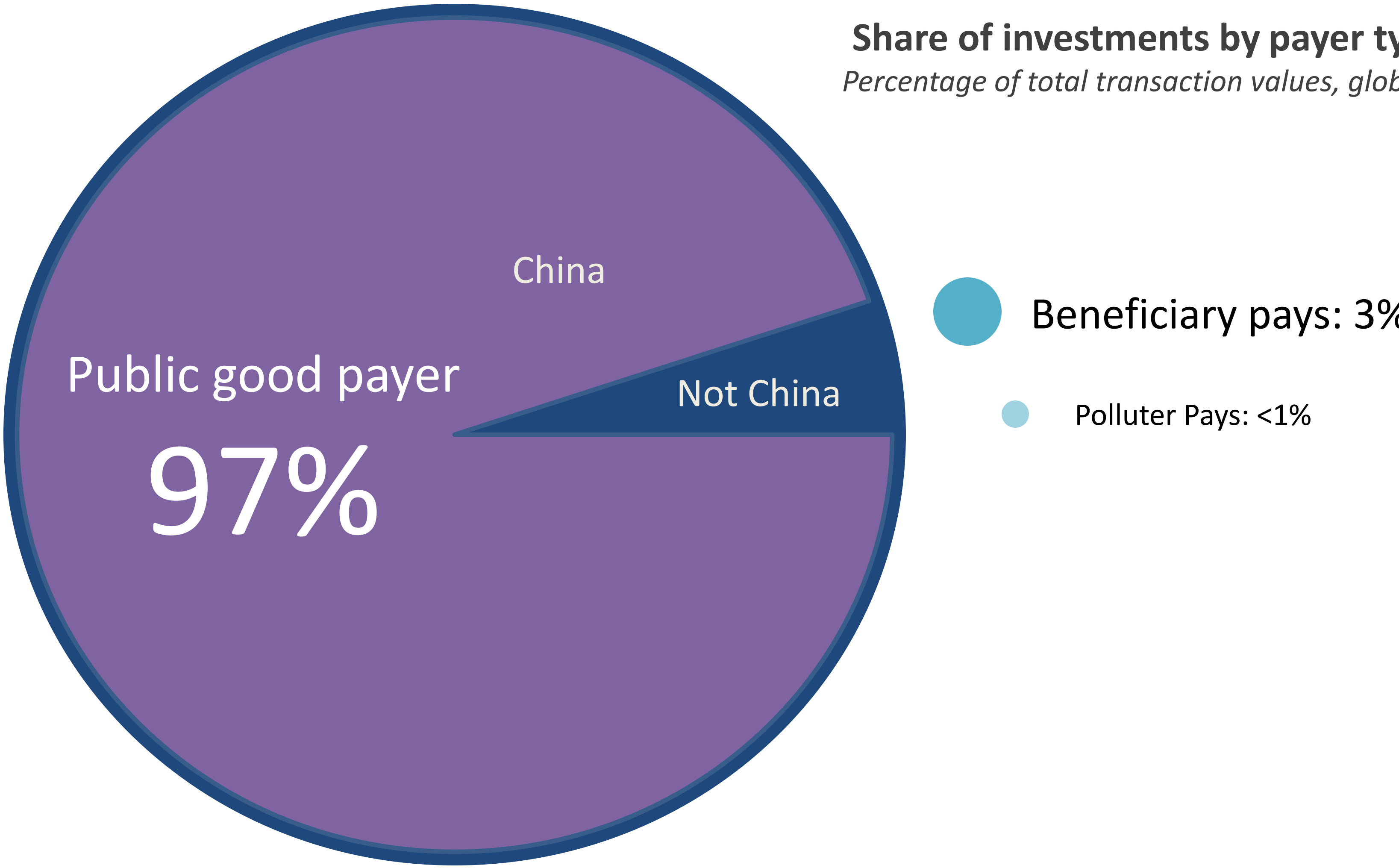
WHO'S PAYING? Most of the funding we tracked in 2011 comes from "public good payers" – like national governments or NGOs – and not the polluters or users themselves.

Share of investments by payer type

Percentage of total transaction values, globally



SOURCE: Charting New Waters: State of Watershed Payments 2012.

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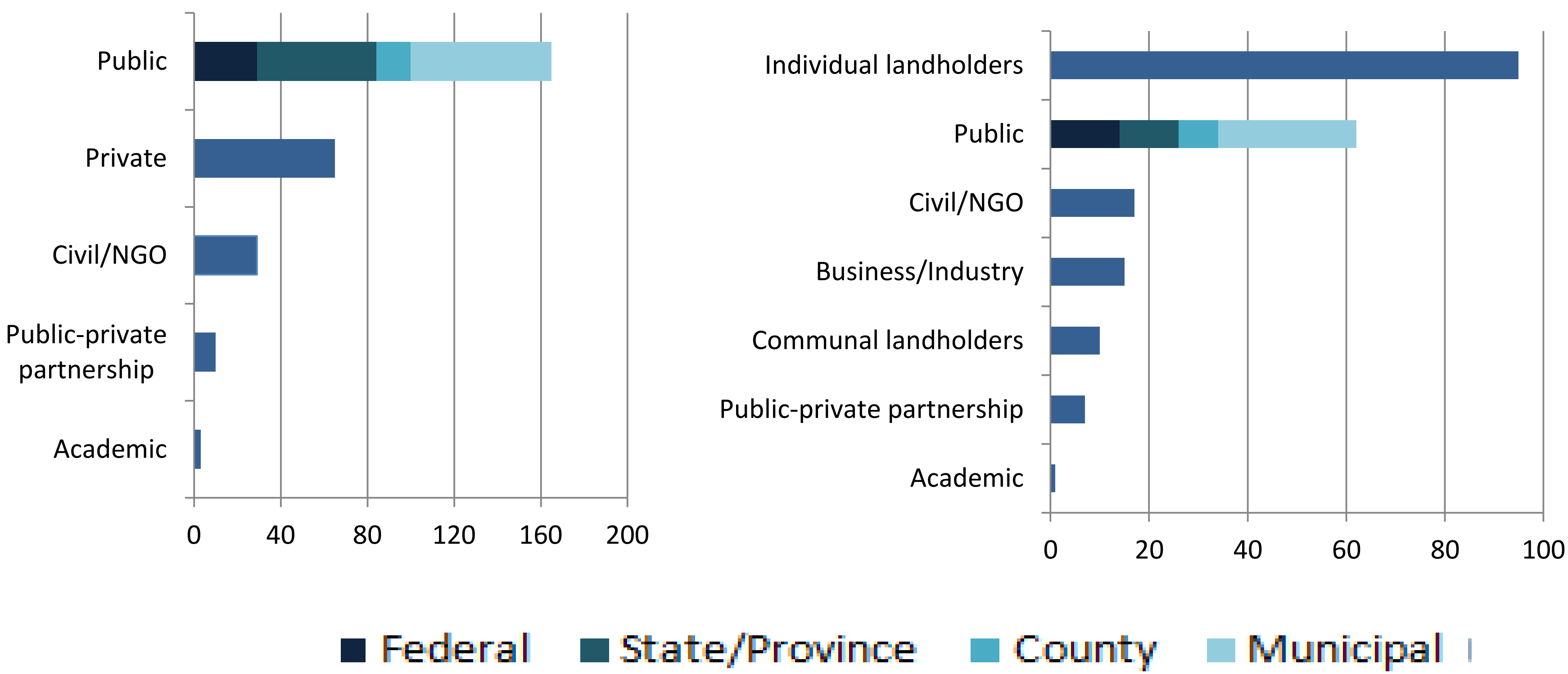
DEMAND AND SUPPLY: Public sector dominates demand; supply picture is a bit more mixed but mostly private landowners.

IWS Buyers and Sellers by Sector, Globally

Number of participants reported by programs

Demand by Sector **Supply by Sector**



SOURCE: Charting New Waters: State of Watershed Payments 2012.

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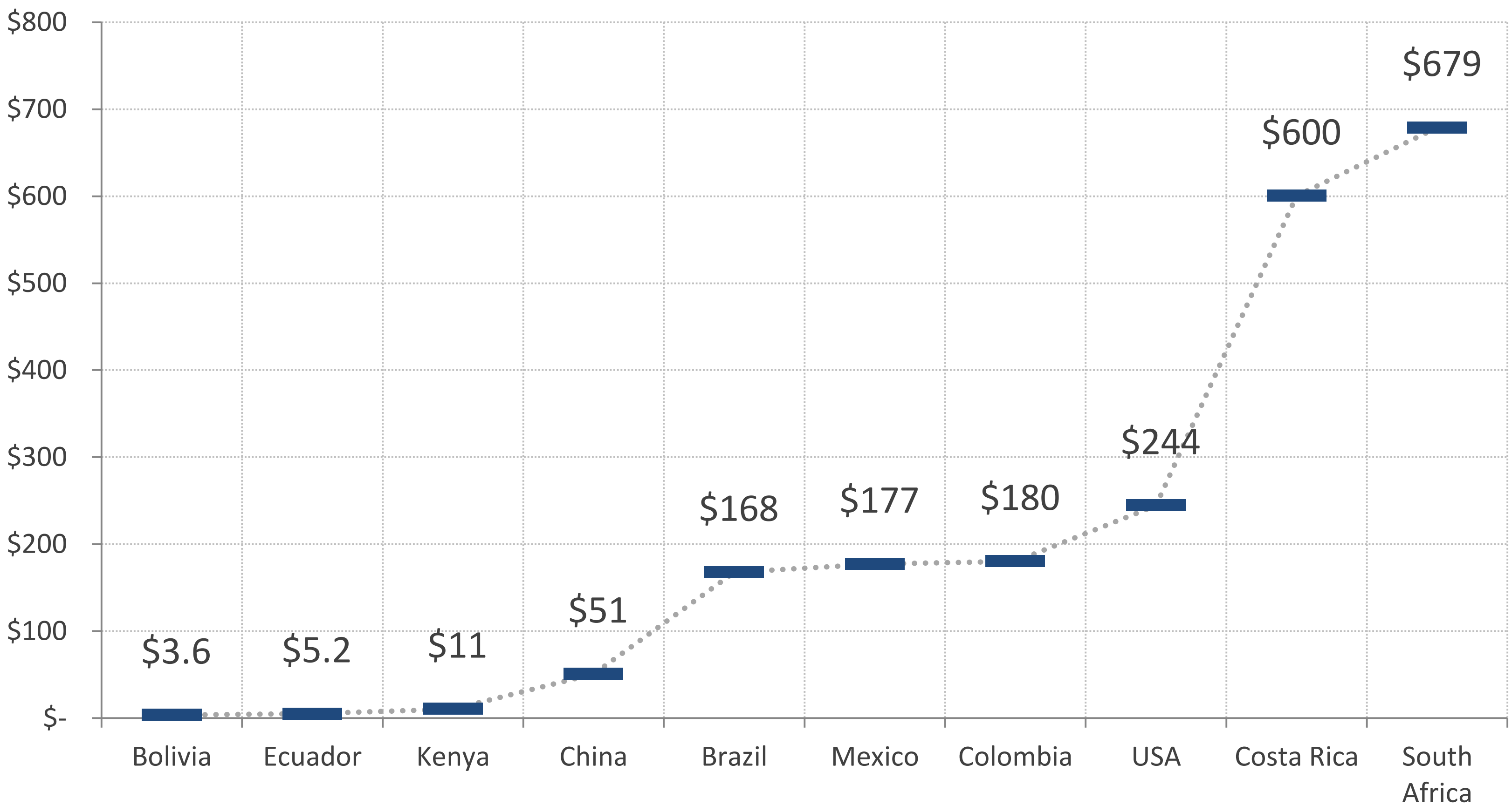
REGIONAL INVESTMENT: Average payments by region varied from $3/ha to $679/ha in 2011, owing to variations in intervention, transaction costs, and other factors.

Average Watershed Investment Dollars Invested per Hectare in 2011, by Country

$ millions



SOURCE: Charting New Waters: State of Watershed Payments 2012.

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PAYMENTS ARE NOT ALWAYS CASH: Agro-inputs, technical training, tenure security, & health insurance are just some of many forms of compensation used.

SOURCE: Charting New Waters: State of Watershed Payments 2012.

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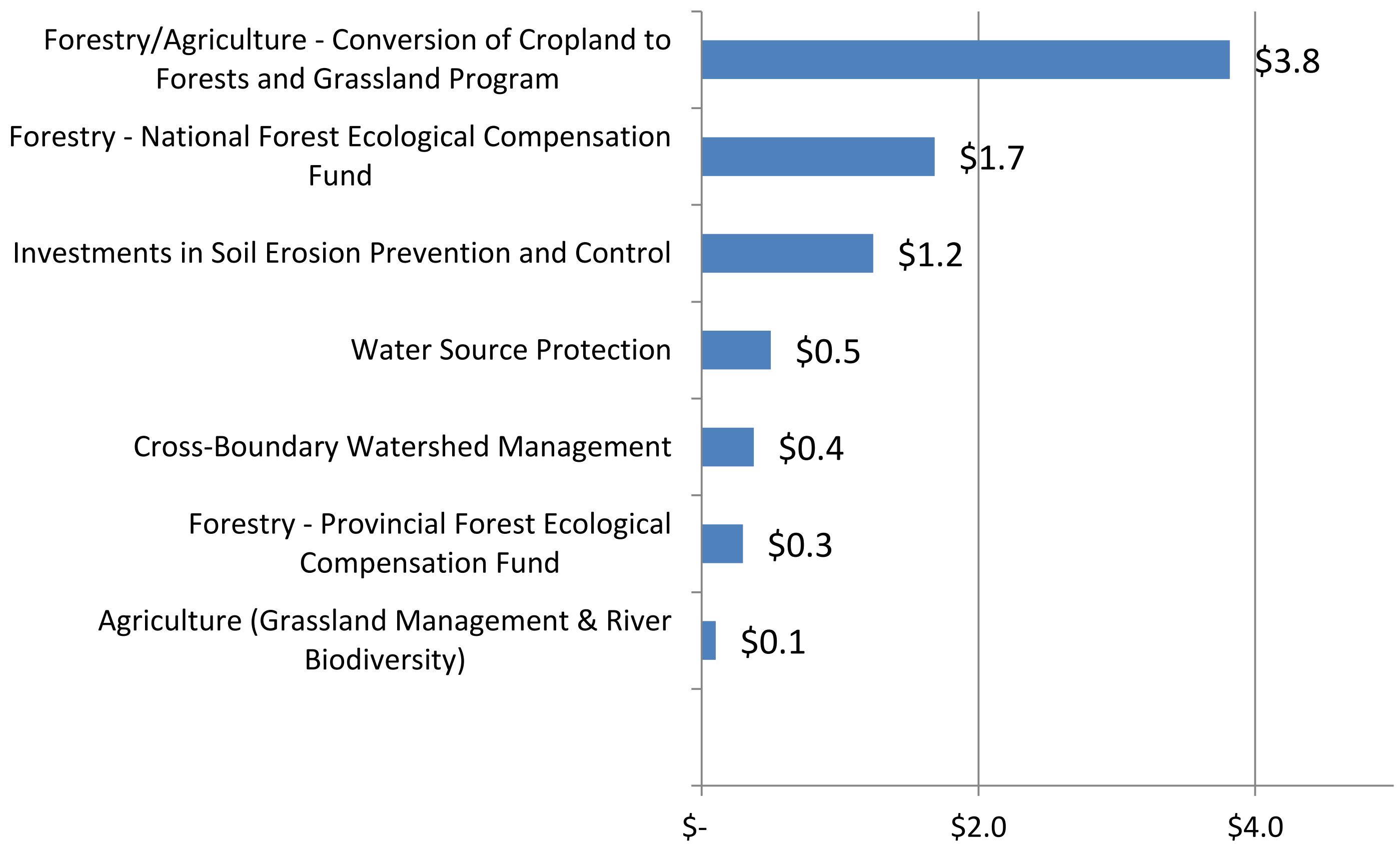
REGIONAL TRENDS: China has rapidly scaled up finance for "eco-compensation," complemented by strong policy backing.

Funding in 2011 for Eco-Compensation by Program Type

$ billions invested



SOURCE: Charting New Waters: State of Watershed Payments 2012.

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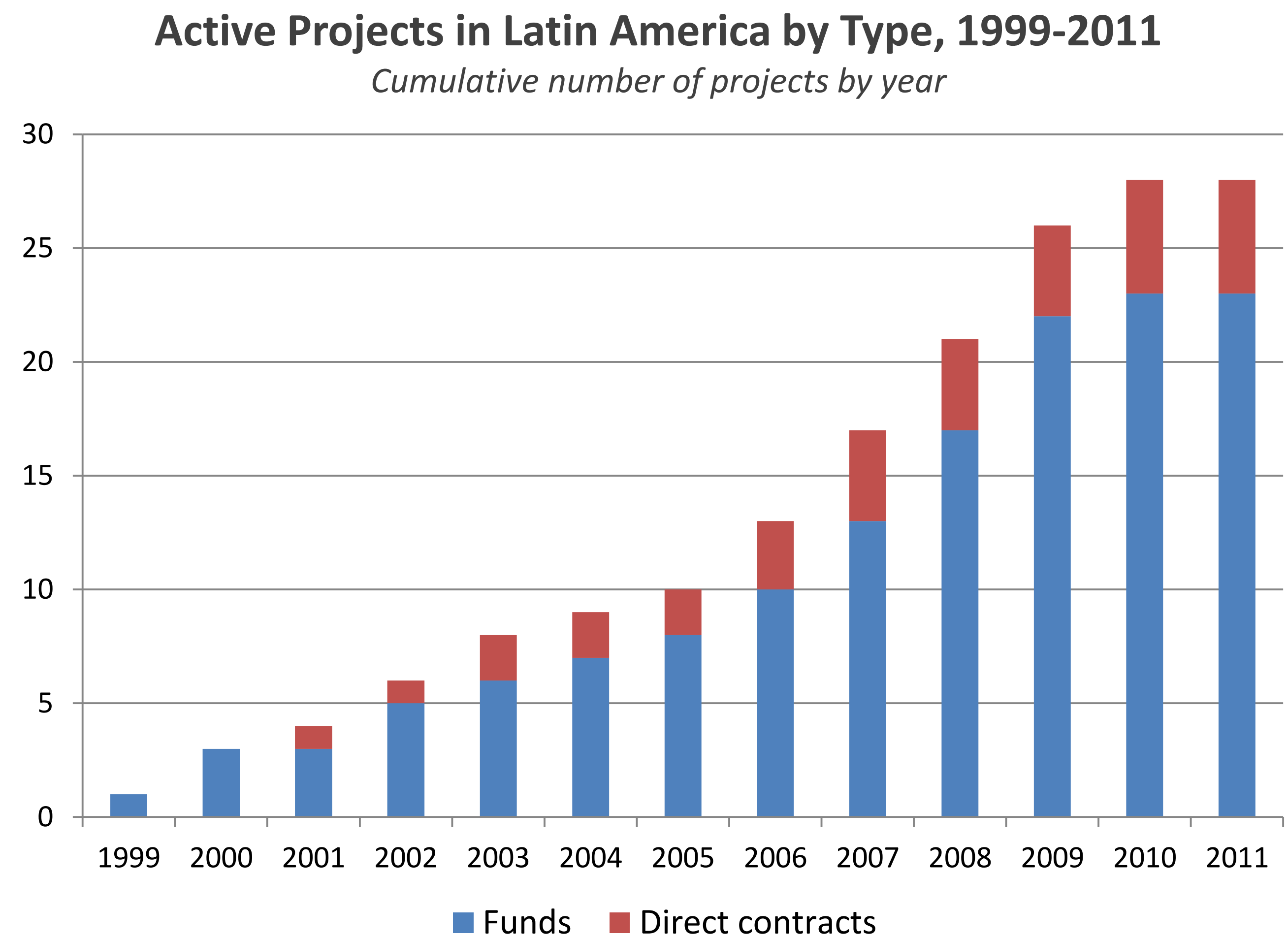
REGIONAL TRENDS: Water funds are the fastest-growing mechanism in Latin America today.



SOURCE: Charting New Waters: State of Watershed Payments 2012.

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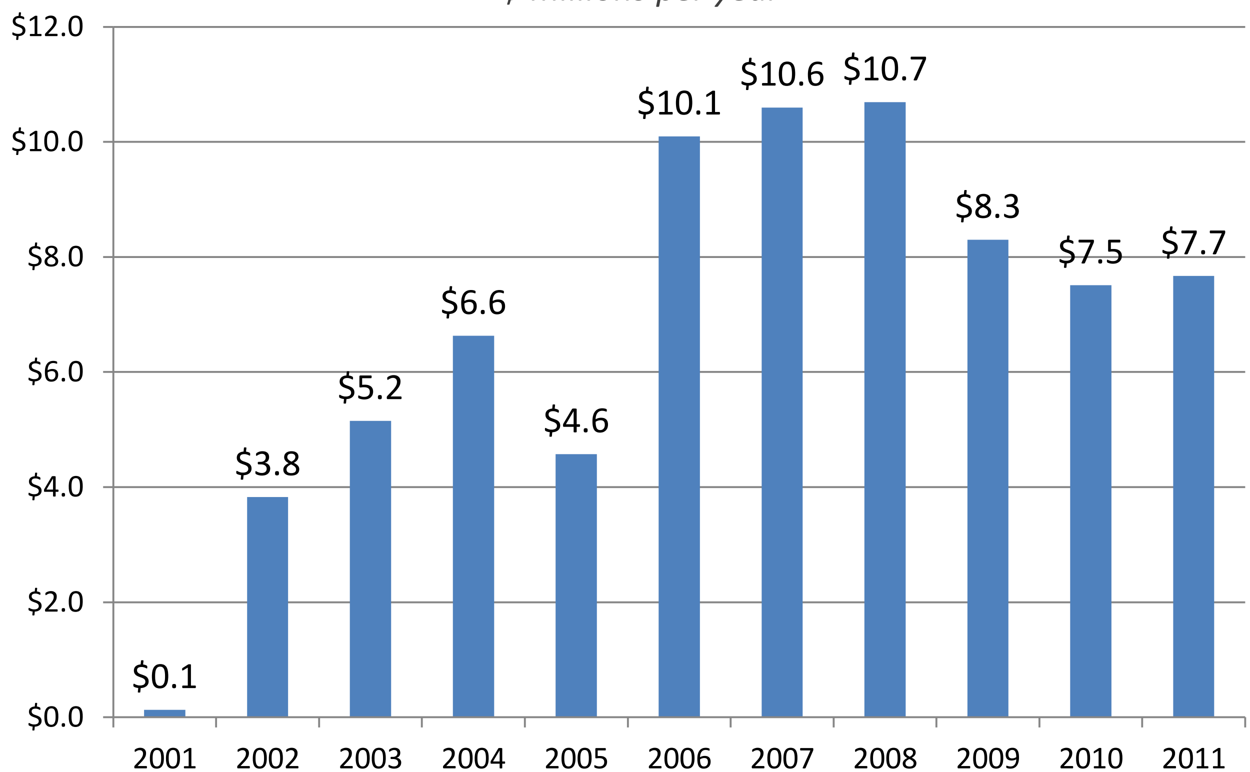
REGIONAL TRENDS: A slow year for water quality trading in 2011, but signs of some new market growth in 2012 and beyond thanks to larger-scale programs and new regulatory drivers.

Water Quality Trading in North America, Transaction Values 2001-2011

$ millions per year



SOURCE: Charting New Waters: State of Watershed Payments 2012.

REGIONAL TRENDS: Climate risk and adaptation are figuring in decisions to invest, which still largely take place at the local level.

Denver, USA: Fire risk

Comarapa, BOLIVIA: Drought-susceptible agriculture

Peru Watershed Services Incubator:
National-level portfolio of demonstration projects and complementary policies

SOURCE: Charting New Waters: State of Watershed Payments 2012.

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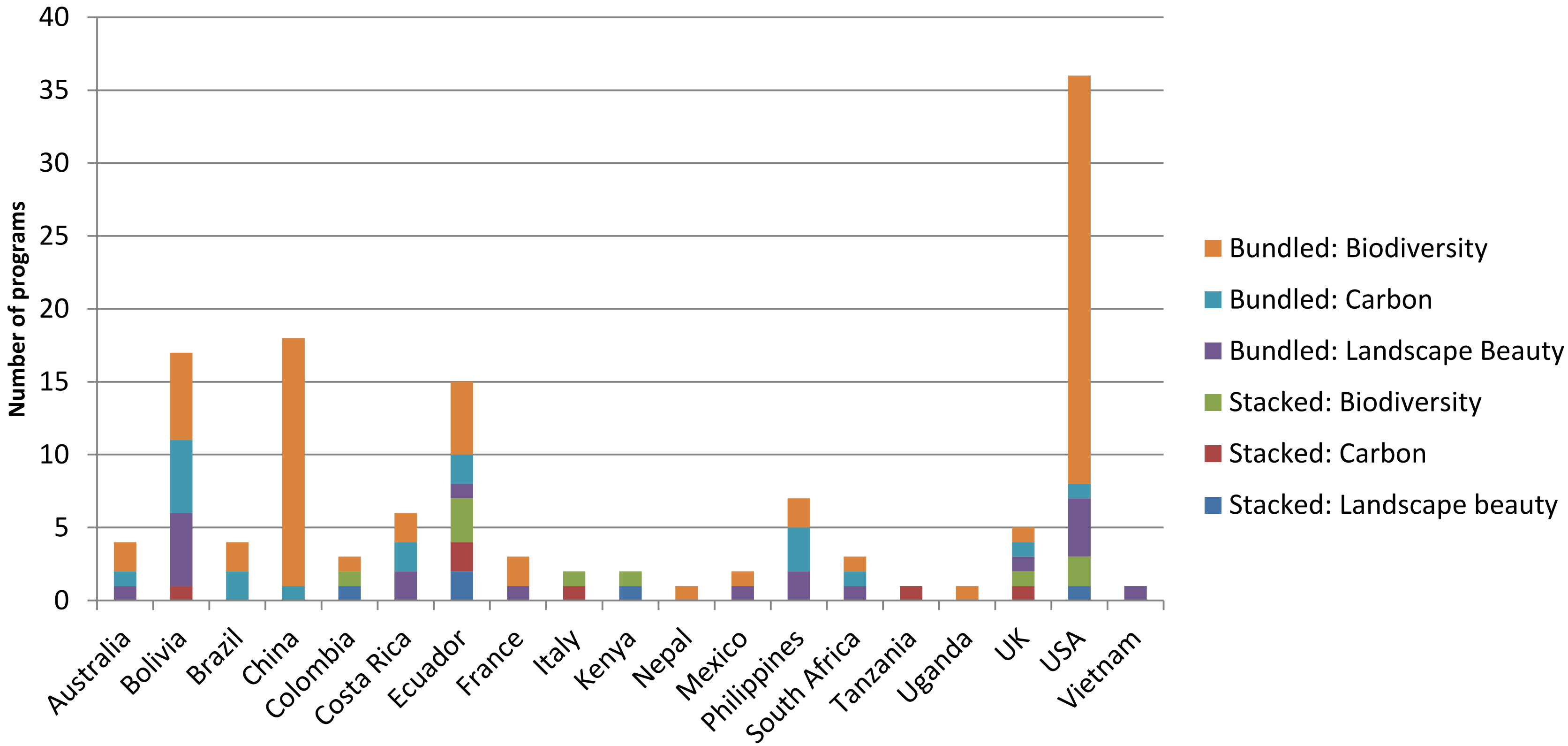
REGIONAL TRENDS: Growing interest in targeting multiple ecosystem services, either as part of payments ("bundling") or via additional payments ("stacking"). But little evidence of linkages with the carbon or biodiversity markets yet…

Stacking and Bundling by Country in 2011

Number of programs reporting targeting multiple ecosystem services



SOURCE: Charting New Waters: State of Watershed Payments 2012.

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REGIONAL TRENDS: Many programs seek to realize social and economic co-benefits from programs, and there is evidence that IWS can deliver these benefits. But social/economic impact monitoring is still rare.

Teculutan Watershed, GUATEMALA:

- WWF/CARE pilot working with farmers on practicing reforestation, protection, and sustainable agriculture
- 19% reduction in extreme poverty
- 30% reduction in unemployment
- 60% increase in total annual family income over a four year period

Lake Naivasha, KENYA

- Upstream farmers receive payment vouchers to buy agro-inputs
- Farmers report purchase of high-value crop seeds have led to harvest revenues 30x higher than the voucher value
- WWF/CARE documented improved food security and higher incomes
- Benefits appear to be shared equally between genders

Uluguru Mountains, TANZANIA

- Landholders receive tree seedlings and agro forestry training, plus annual cash payments based on seedling survival rates
- Participants have reported to PRESA they would participate even without cash payments, thanks to increased incomes from forest products and training received

South Africa: Poverty alleviation, gender equity

Australia: Indigenous management

SOURCE: Charting New Waters: State of Watershed Payments 2012.

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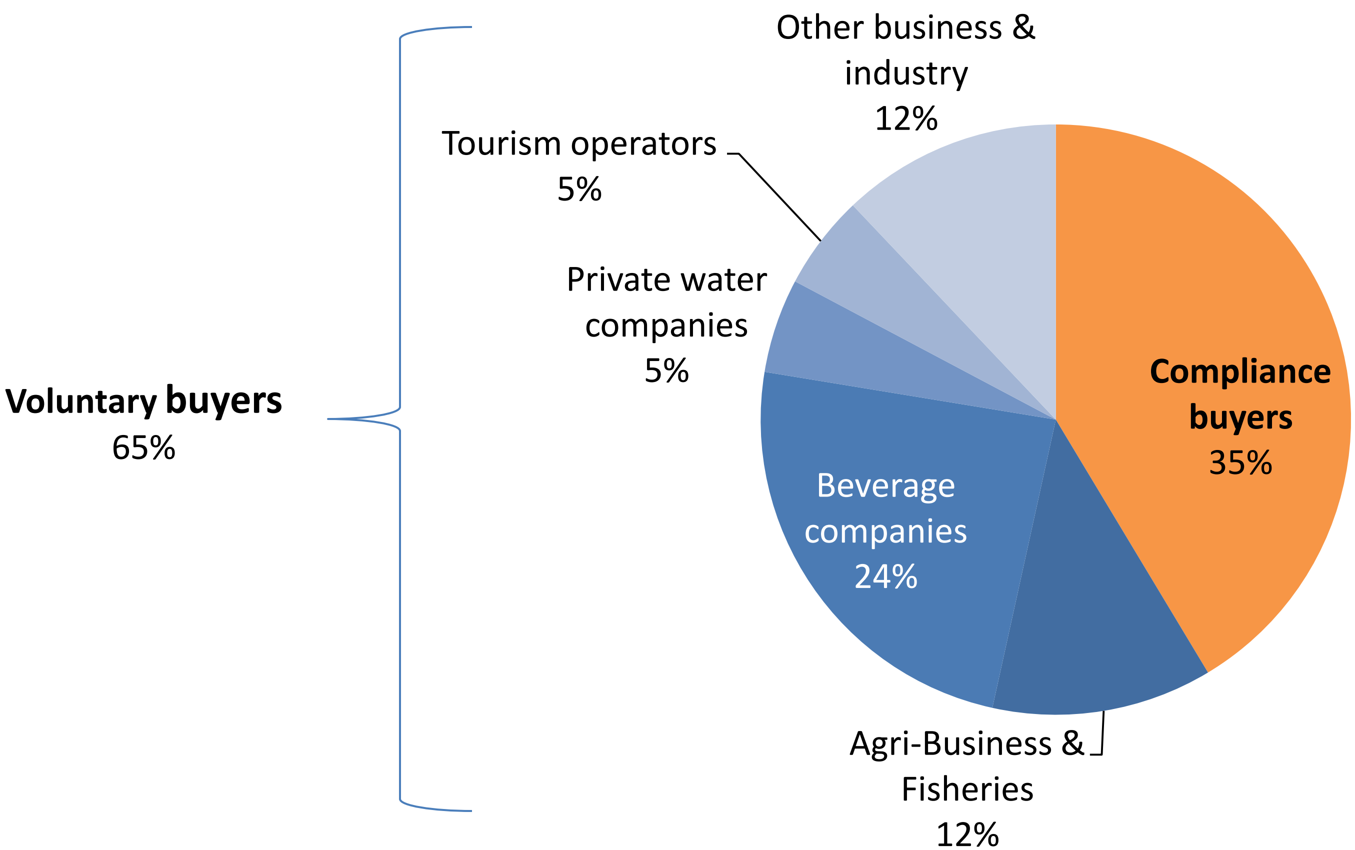
REGIONAL TRENDS: We see strong action from beverage companies and a few others to invest in their watersheds. Outside of these cases, private investments are often regulation-driven and government or NGO-initiated.

Private Sector Buyers by Type in 2011, Globally

Percent of total reported private-sector buyers



SOURCE: Charting New Waters: State of Watershed Payments 2012.

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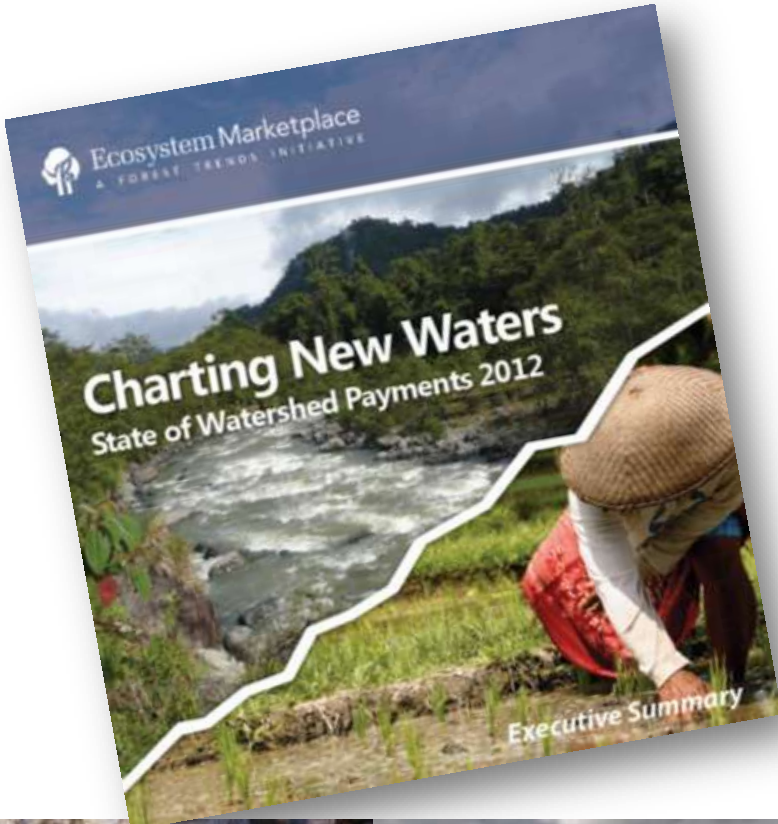

Thank You!

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