



Alliances for Green Infrastructure

State of Watershed Investment 2016

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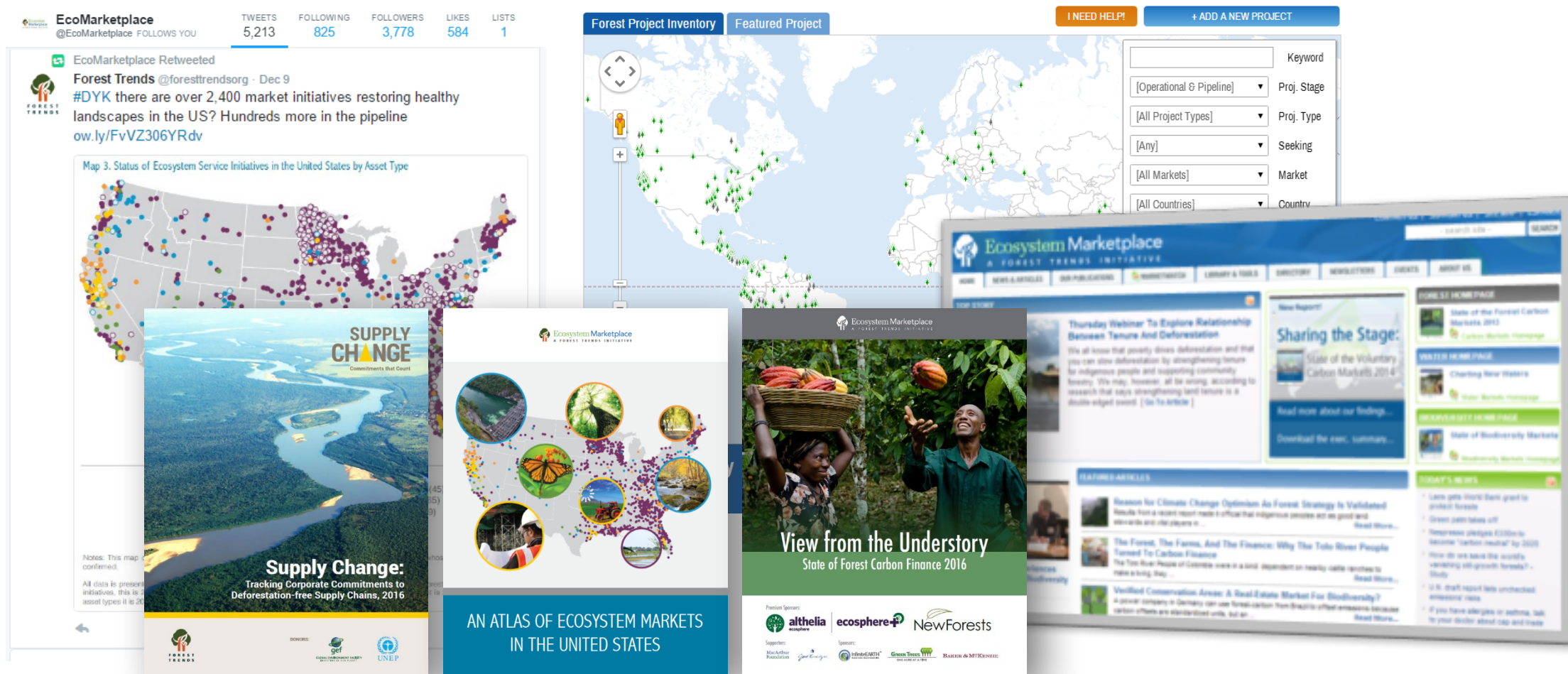
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Map 3. Status of Ecosystem Service Initiatives in the United States by Asset Type

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Tracking Corporate Commitments to Deforestation-free Supply Chains, 2016

AN ATLAS OF ECOSYSTEM MARKETS IN THE UNITED STATES

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WHY TRACK GREEN INFRASTRUCTURE? Healthy natural systems (“green infrastructure”) can complement or substitute for “gray” (i.e., built or hard) infrastructure to support more resilient, multi-beneficial water systems. These hybrid systems can often be implemented at lower cost and incremental fashion.

Figure 2. The Green-Gray Infrastructure Spectrum



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OUR SCOPE: Any transaction between a buyer and a seller where financial value is exchanged for activities/outcomes associated with the maintenance, restoration, or enhancement of watershed services, or natural areas considered important for watershed services. We use the term “investment” in the sense of a long-term investment in an asset, just as a city would invest in upgrades to its waste water treatment plant.

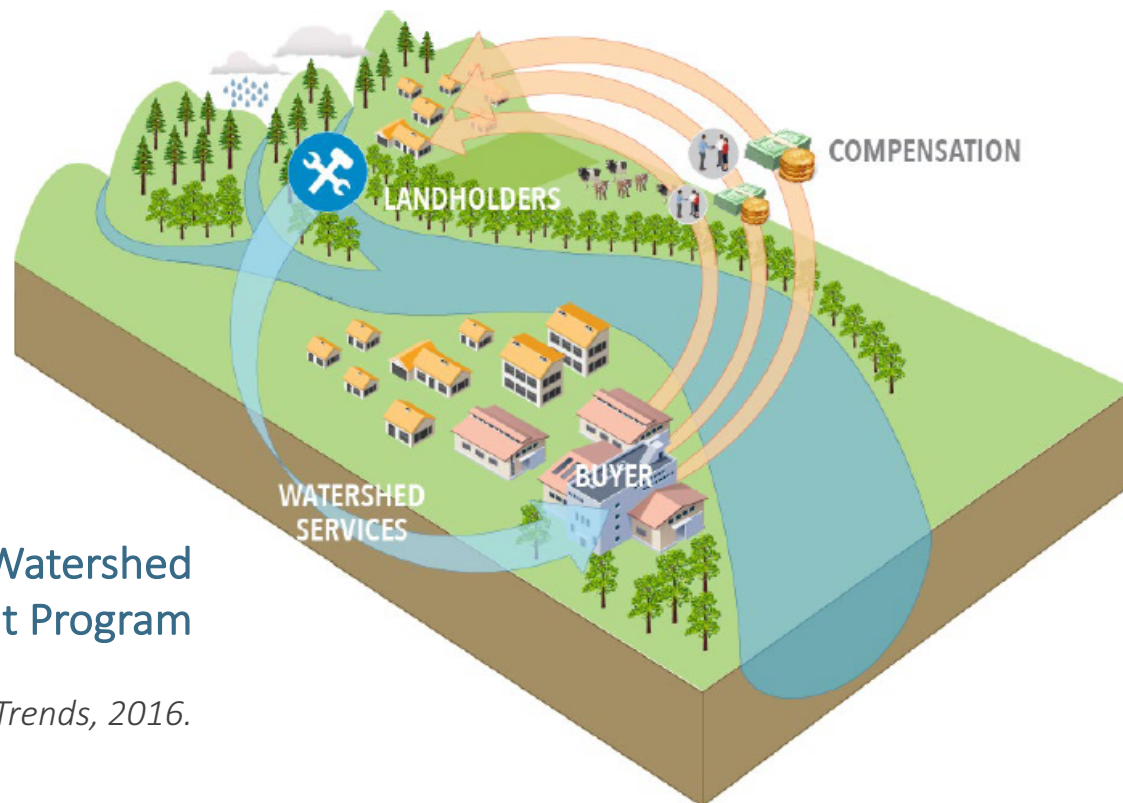
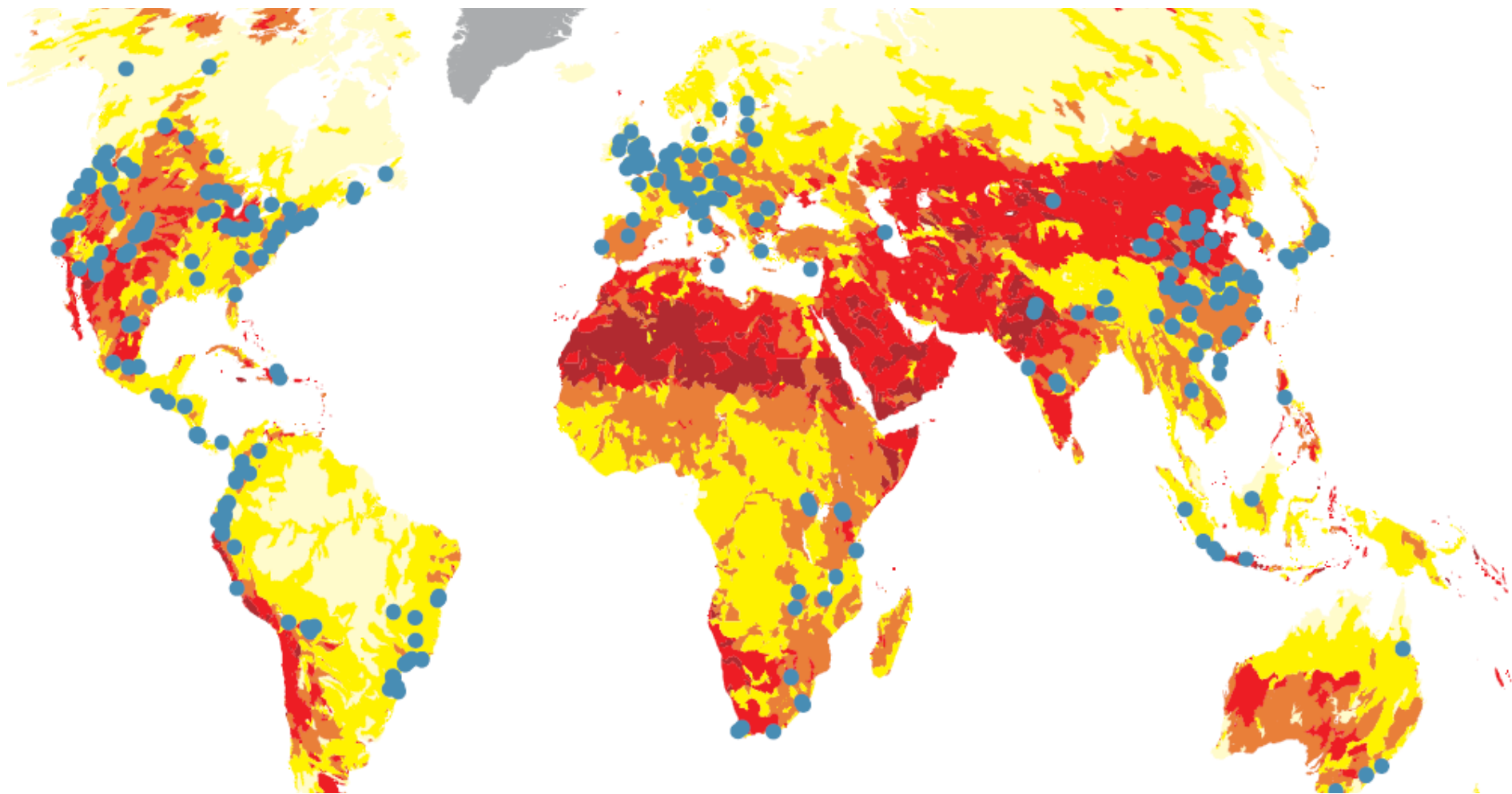


Figure 1. Example of a Watershed Investment Program

Source: Forest Trends, 2016.

METHODOLOGY: This report collected data on transactions for watershed protection in 2014-15 from 472 programs in 62 countries via an online survey instrument, interviews, and desk research, over a four month period in mid-2016.

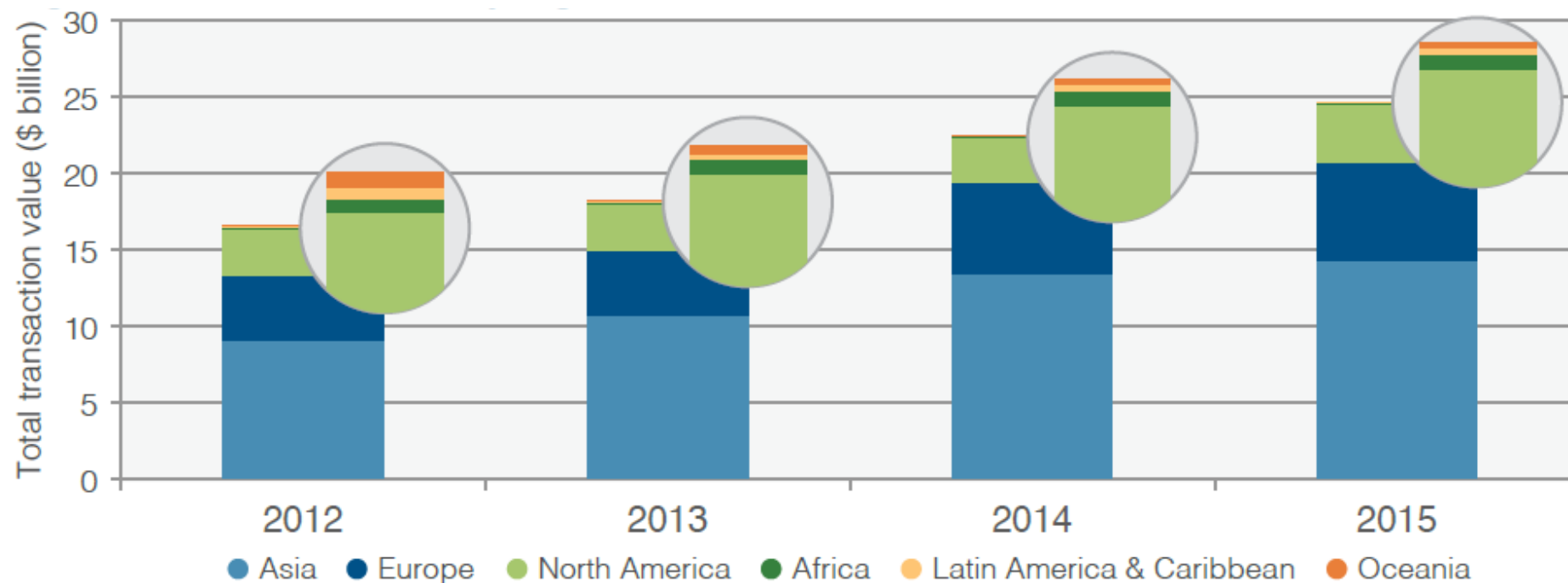
Map 1. Watershed Investment Programs and Global Severity of Water Risk, 2015



Source: Forest Trends 2016;
Gassert et al. 2015.

GLOBAL FINDINGS: We benchmarked nearly \$25B in global transactions in 2015 from “buyers” who believe that green infrastructure is an effective, sustainable, and (often) cost-effective way to ensure clean, reliable water supplies.

Figure 3. Global Transactions by Region, 2012-2015



Source: Forest Trends, 2016.

WATERSHED INVESTMENT 101: We track four core models for watershed investment, which differ in terms of buyer motives and how “market-like” they are.

Table 1. The Big Four: Watershed Investment Mechanisms

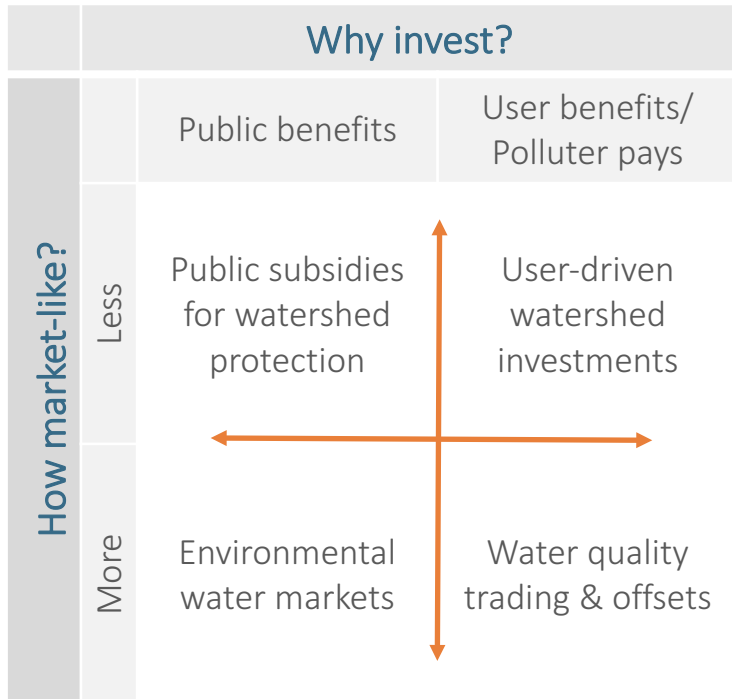


Table 2. Mechanisms Tracked in This Report: Count of Operational Programs, Value, and Area under Management in 2015

	Public subsidies for watershed protection	User-driven watershed investments	Water quality trading and offsets	Environmental water markets
Count of operational programs	139	197	22	20
Value in 2015	\$23.7B	\$656.7M	\$31.1M	\$93.3M
Area in 2015	426.7M ha	11M ha	48K ha	n/a

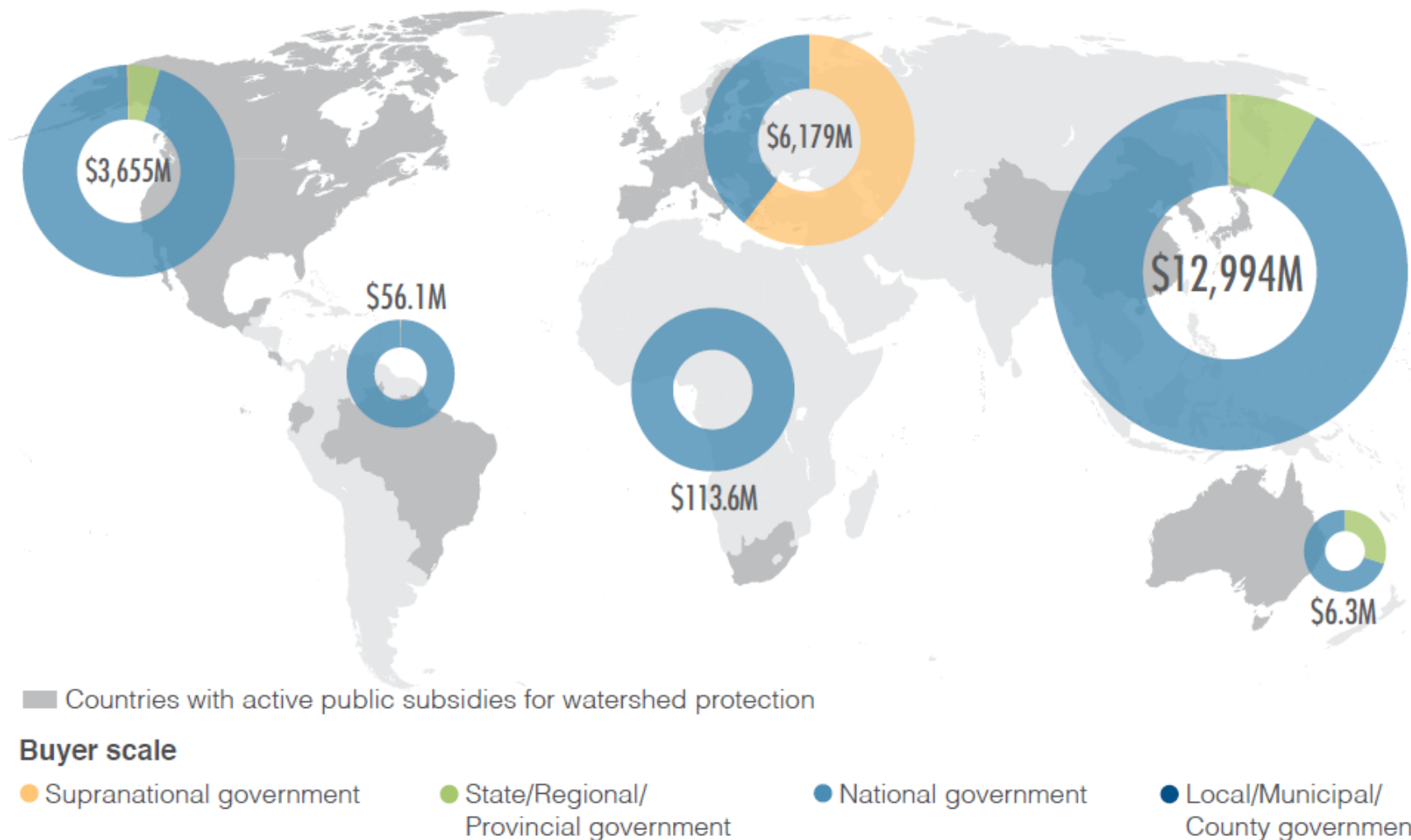
Notes: Based on 378 programs for which information on mechanism type was provided.

Source: Forest Trends, 2016.

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PUBLIC FINANCE: \$23.7B in 2015 in public subsidy payments from governments to landholders to protect and restore water-critical landscapes.

Map 2. Public Subsidies for Watershed Protection in 2015: Countries with Public Subsidies Programs and Buyer Share of Total Value by Region

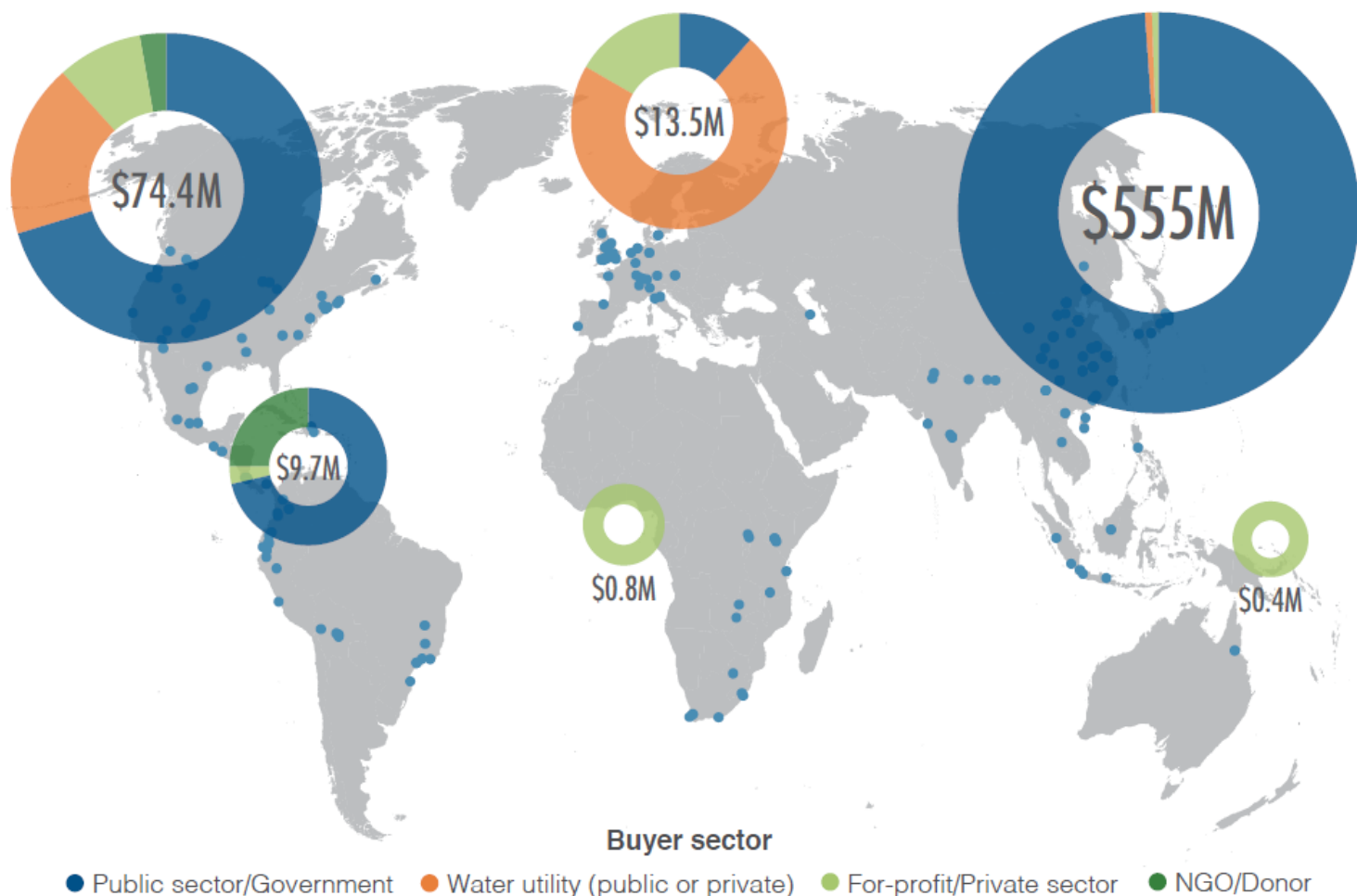


Notes: Based on \$23.0B in transactions in 2015.
Source: Forest Trends, 2016.

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USER-DRIVEN INVESTMENTS: Water users themselves — the cities, companies, or water utilities acting on behalf of customers that directly benefit from watershed investments — spent \$657M in 2015 to manage water risks in their basins. State/provincial and local governments took the lead.

Map 3. User-Driven Watershed Investments in 2015: Total Value and Buyer Share of Value by Region and Sector



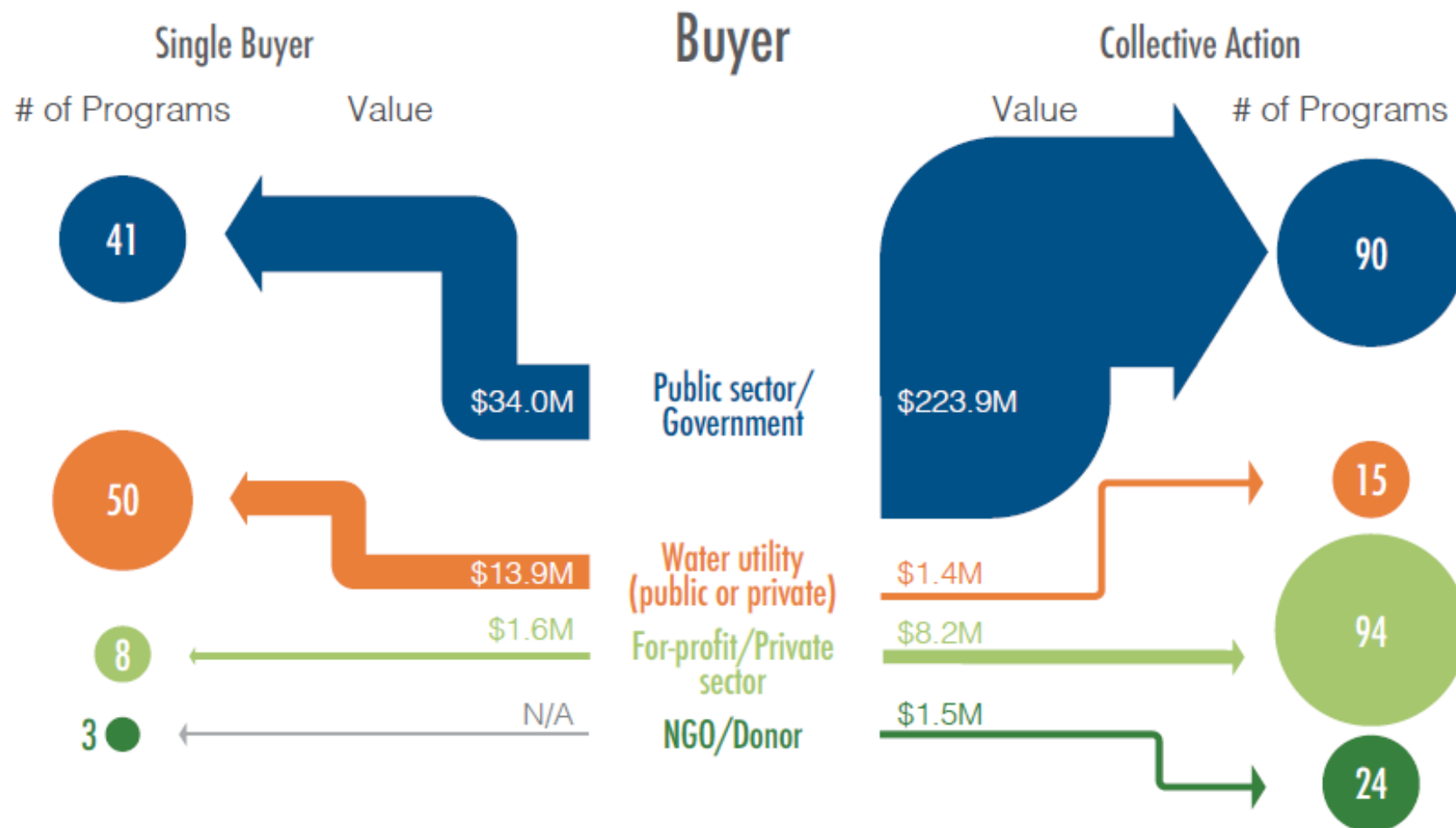
Notes: Based on 653.8M in transactions.

Source: Forest Trends, 2016.

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USER-DRIVEN INVESTMENTS: Nearly nine out of every ten user-driven dollars in 2015 was channeled through collective action partnerships, where water users spanning the public, private, and NGO/donor sectors pool resources and coordinate efforts to address common water challenges.

Figure 4. Comparison of Watershed Investments (by Count of Programs and Transaction Values) for Single Buyer Versus Collective Action Programs by Buyer Type

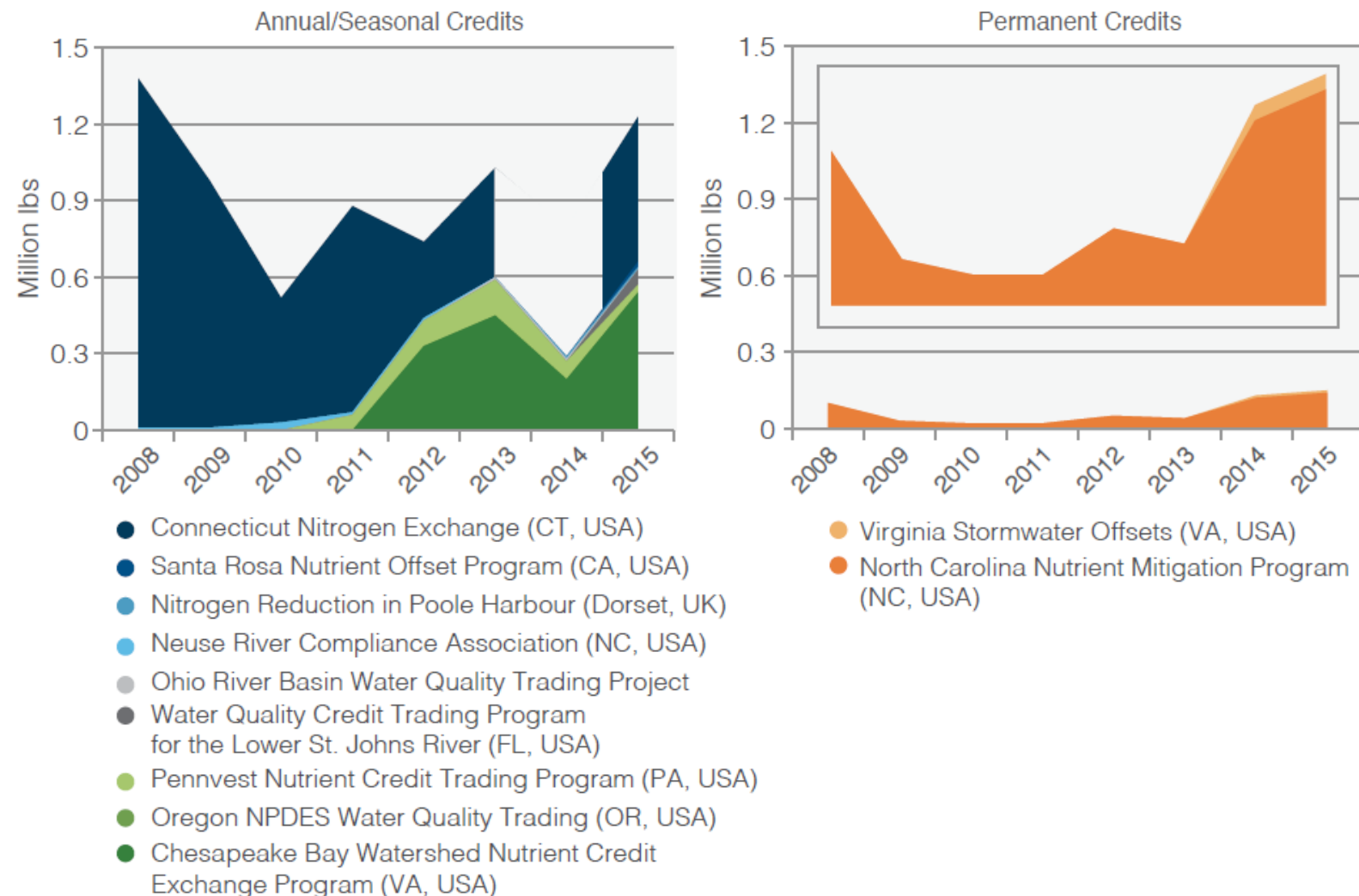


Notes: Data on buyers' specific level of contributions to programs was reported for \$284.5M in transactions, or 43% of total user-driven watershed investments value, in 2015.

Source: Forest Trends, 2016.

TRADING AND OFFSETS: New growth drove overall global transaction values to nearly \$32M in 2015, as private project developers rushed to meet spiking demand for permanent nutrient offsets.

Figure 5. Nutrient Market Volumes for Annual/Seasonal and Permanent Nutrient Credits, 2008-2015



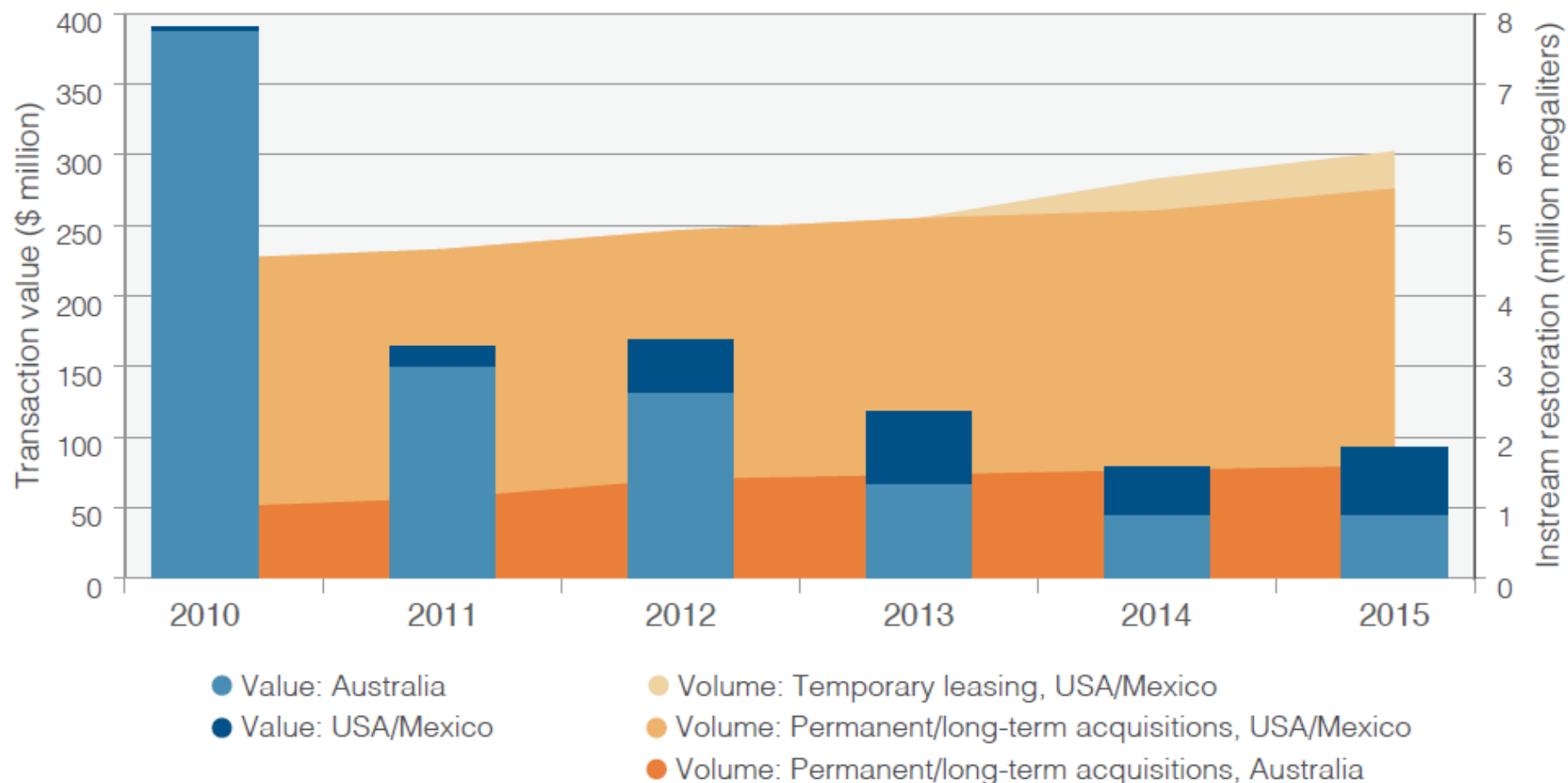
*Notes: 2014 volume data for the Connecticut Nitrogen Exchange could not be confirmed and is not displayed in this figure.
Source: Forest Trends, 2016.*

ENVIRONMENTAL WATER MARKETS: Instream buybacks — i.e., the use of traditional water markets in pursuit of environmental flows restoration — slumped globally as the Australian government dialed back investment in the Murray-Darling Basin. In the US, however, growth of instream buybacks was steady, and value in 2015 for the first time surpassed Australia.

Figure 6. Annual Transaction Value and Cumulative Volume of Environmental Water Transactions in Australia and USA/Mexico, 2010-2015

Notes: Permanent volume is cumulative. Leasing data unavailable for 2010-11. Volume data is only for outcomes reported in volumetric terms (e.g., ML or AF).

Source: Forest Trends, 2016.

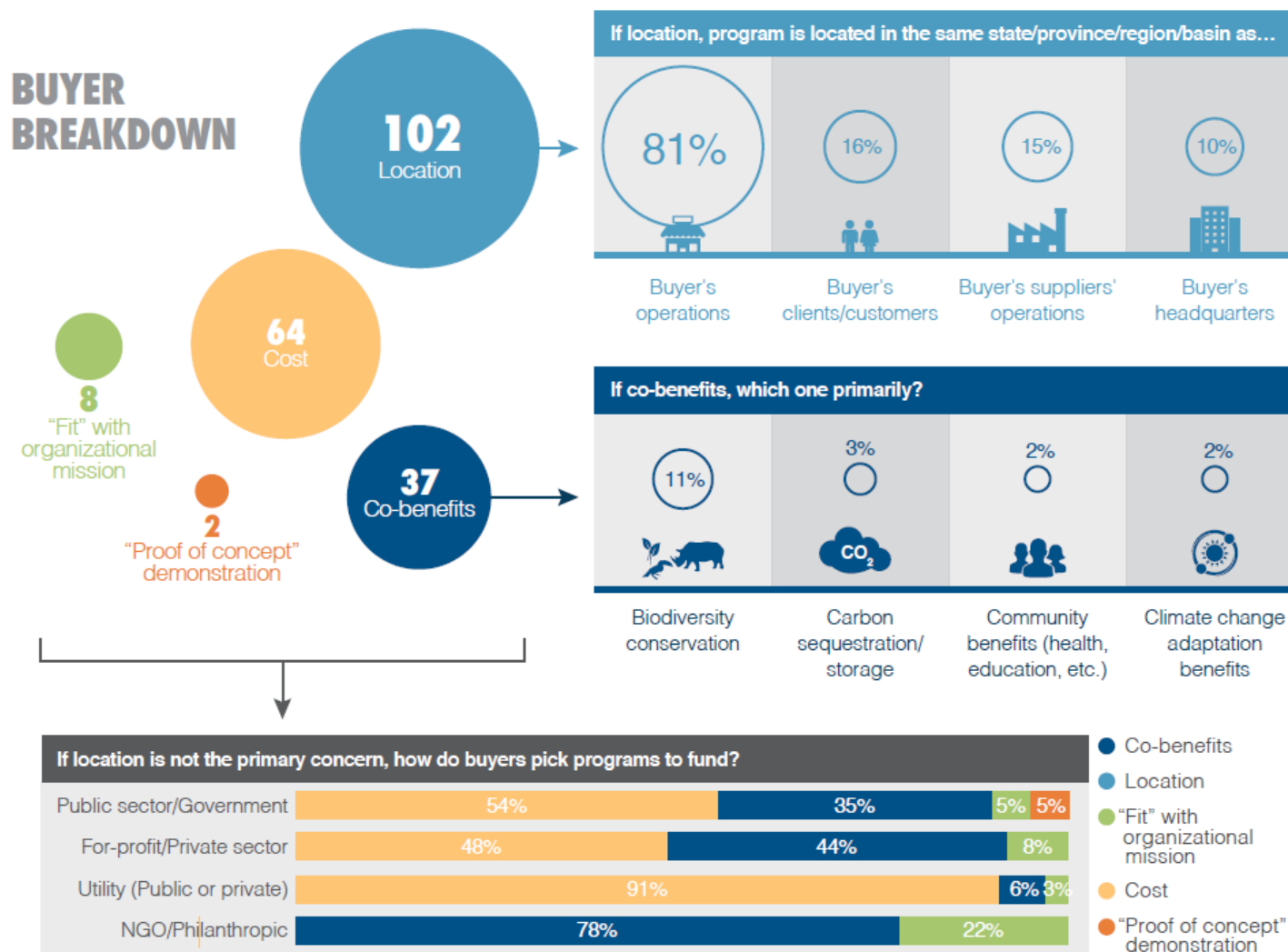


ATTRACTING BUYERS: Location, cost are buyers' top considerations in picking which programs to fund.

Figure 7. Count of Buyers by Primary Concern When Choosing Programs to Fund

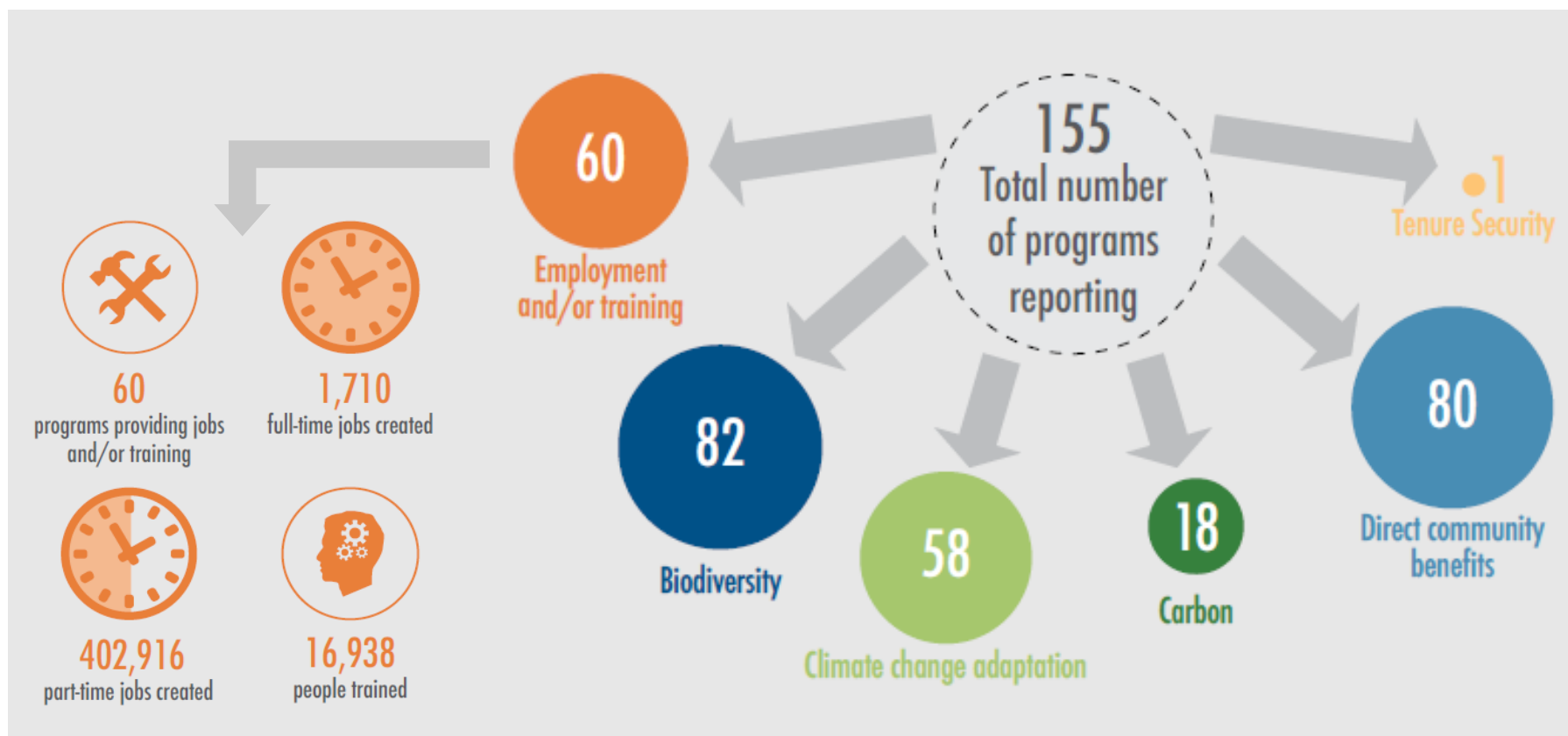
Notes: Respondents could select more than one option regarding location of the program. For buyers primarily motivated by co-benefits, not all respondents reported the specific co-benefit of interest.

Source: Forest Trends, 2016.



CO-BENEFITS: One in three programs also reported monitoring and/or evaluating “beyond-water” benefits, with biodiversity conservation, community benefits, and jobs and training at the top of program administrators’ lists.

Figure 8. Co-Benefits
Reported by Watershed
Investment Programs,
2015



Source: Forest Trends, 2016.

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SCALING UP: Programs reported that a key barrier to scale is a “capacity gap,” a lack of local technical and financial ability to quickly design and implement effective watershed investments on the ground.

Figure 9. Barriers to Scaling up Watershed Investments Reported by Programs



Notes: Respondents were asked to select up to three key challenges. The ten most commonly reported barriers to scale are displayed.
Source: Forest Trends, 2016.

THANKS! Download the *State of Watershed Investment 2016* to learn more.



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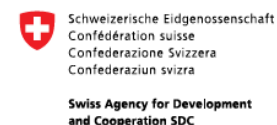
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ALSO COVERED IN THE 2016 REPORT:

- Additional analysis of public subsidies, user-driven investments, trading & offsets, and environmental water markets
- Regional trends and policy developments
- Demand drivers to watch
- Buyer motives and private sector funding for green infrastructure
- Demonstrating performance: MRV practices in 2015
- Standards and certifications for watershed protection
- International funding flows for green infrastructure

Download it here: <http://www.forest-trends.org/releases/p/sowi2016>

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