







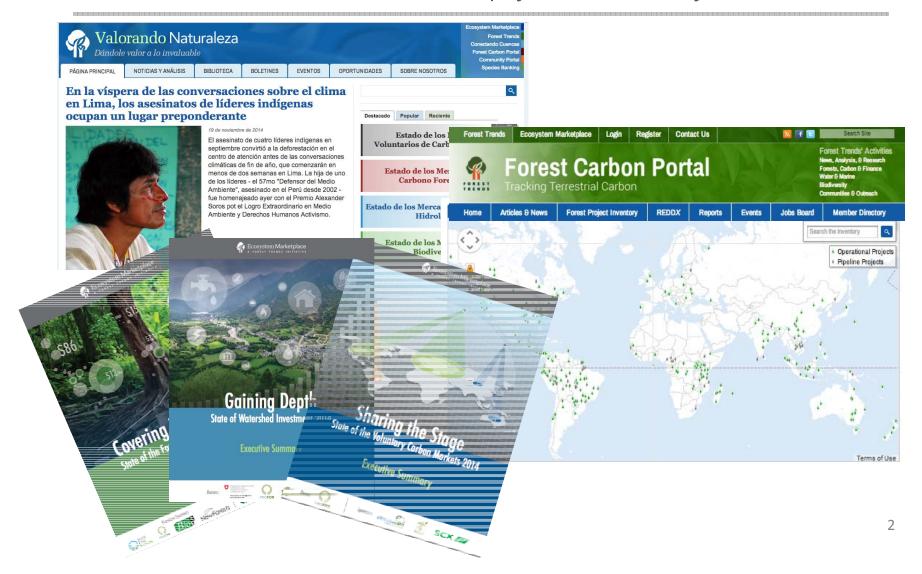
Sponsors:

JPMORGAN CHASE & CO.





ECOSYSTEM MARKETPLACE: A global source for news, data and analytics around environmental markets and payments for ecosystem services





METHODOLOGY: Global survey tracks hundreds of forest carbon offset transactions on voluntary and compliance markets

159 agriculture, forest or land use (AFOLU) projects reported to our global annual survey

Surveyed exchanges, all major registries; surveys in English & Spanish

Agnostic on credit quality, but do conduct extensive due diligence and peer review of preliminary findings

All findings volume-weighted for significance

"Transaction" defined at the point of contract

First quantitative look at co-benefits impacts

CDP climate change data provided further insight into the demand side

Sponsors:





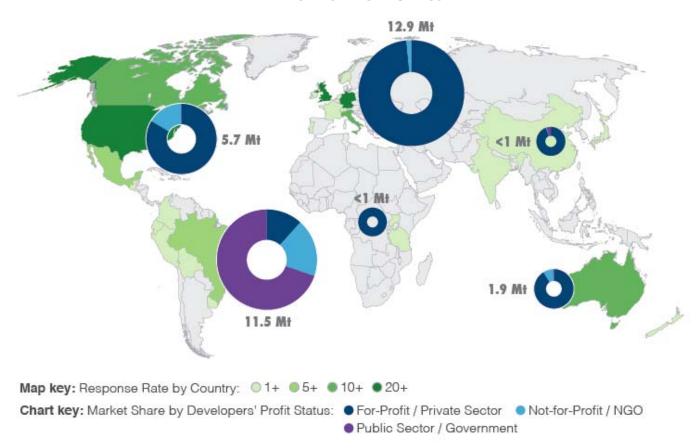
JPMORGAN CHASE & CO.





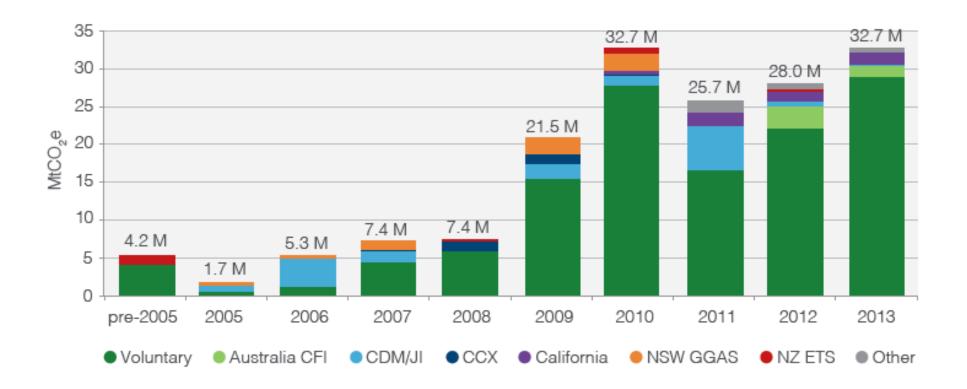
RESPONSE RATE: 159 agriculture, forestry, or land-use projects reported to our survey; suppliers hailed from 39 countries

RESPONSE RATE BY COUNTRY, TRANSACTED VOLUME BY DEVELOPERS' HEADQUARTERS REGION, AND MARKET SHARE BY DEVELOPERS' PROFIT STATUS



MARKET SIZE: 17% growth in demand; 2013's volume tied 2010's for the most-ever emissions reductions financed through the forest carbon markets

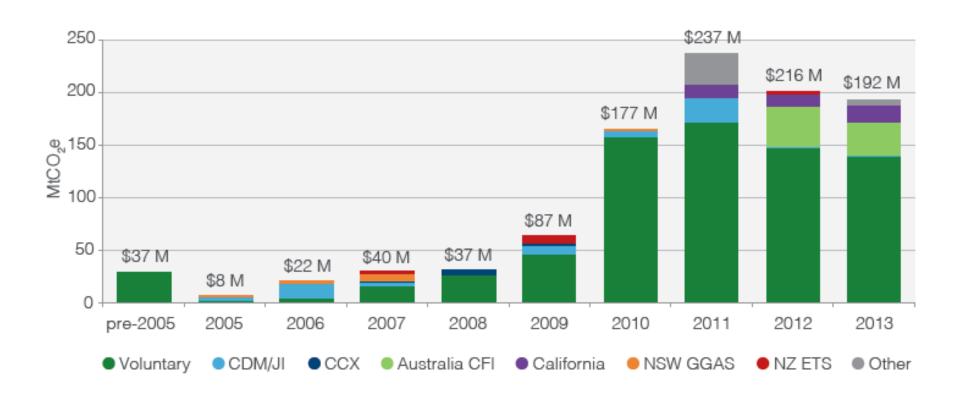
HISTORICAL FOREST CARBON OFFSET TRANSACTION VOLUMES, ALL MARKETS





MARKET VALUE: Market value dipped 11%, to \$192 million; voluntary buyers contributed \$140 million

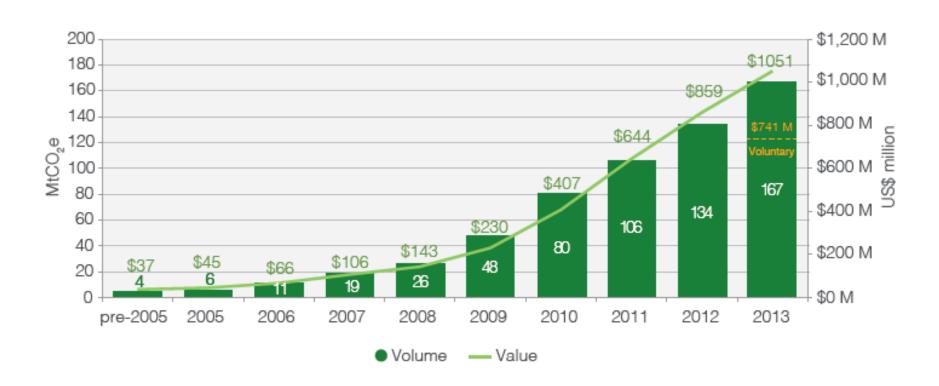
HISTORICAL FOREST CARBON OFFSET TRANSACTION VALUE, ALL MARKETS





MARKET VALUE: Cumulative market value topped \$1 billion; threequarters of total value is attributed to voluntary buyers

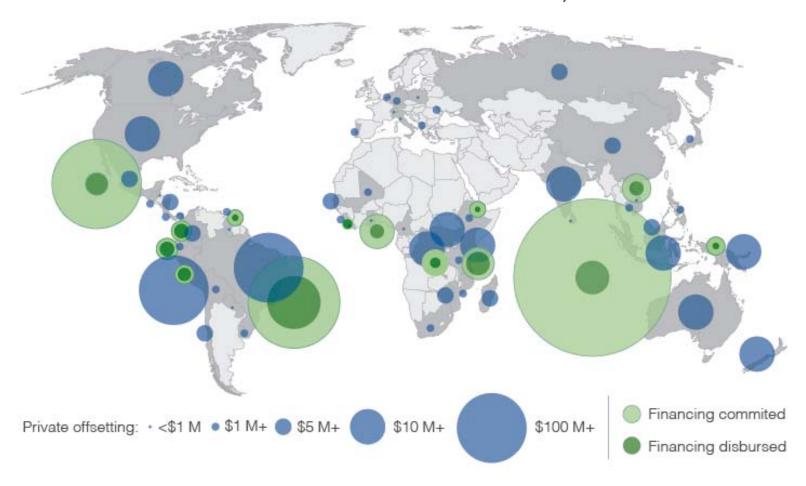
CUMULATIVE FORESTRY OFFSET TRANSACTION VOLUME AND VALUE, ALL MARKETS





FOREST FINANCE: Donors have committed \$4.5 billion to 14 tropical forest countries, but just \$0.6 billion has been dispersed so far

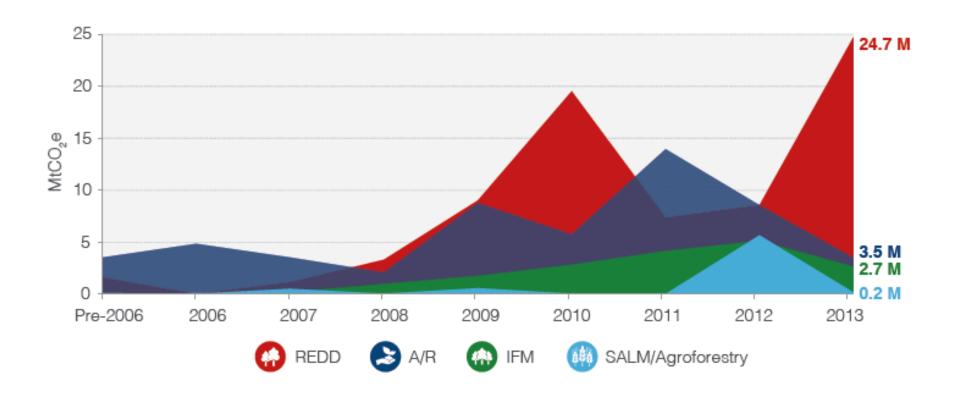
COMPARISON OF PROJECT- AND COUNTRY-LEVEL FINANCE, ALL YEARS





PROJECT TYPES: Offsets from avoided deforestation projects tripled in transaction volumes to 24.7 MtCO₂e

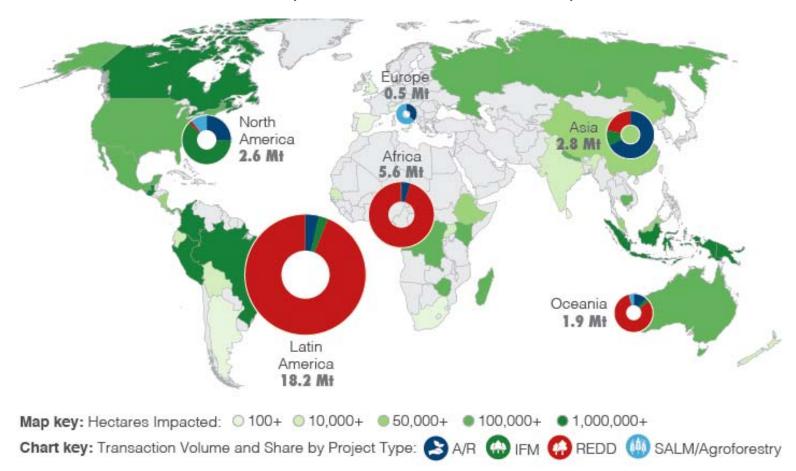
TRANSACTED OFFSET VOLUMES BY PROJECT TYPE, ALL MARKETS, HISTORICAL





IMPACT BY REGION: Latin America and Africa set new records for forestry offset sales; Brazil and Peru were top suppliers overall

HECTARES IMPACTED BY COUNTRY REGION, TOTAL REGIONAL TRANSACTION VOLUME, AND SHARE BY PROJECT TYPE





Co-benefits: Forest carbon projects provided thousands of jobs and protected dozens of endangered species

PROJECT CO-BENEFITS, KEY IMPACTS, 2013



Including (at least)
475*
women

150,000

people trained or involved in capacity-building

\$41M

in livelihood benefits

+\$4.8M

in direct payments to communities

Climate change adaptation across

YM hectares Watershed protection across

> 10M hectares

Protecting at least

13M

hectares of habitat

for endangered

species

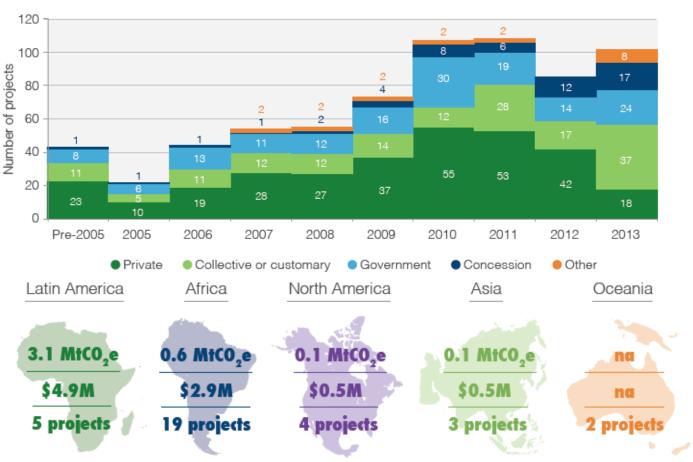
26

species



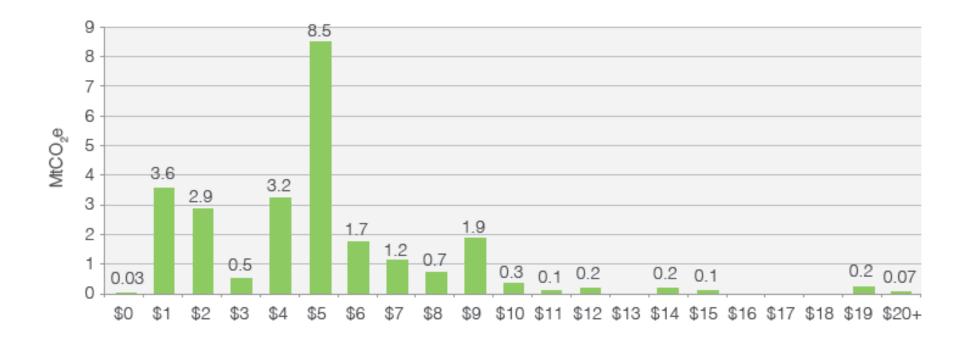
COMMUNITY OWNERSHIP: Record 37 projects situated on community-owned land; communities earned more than \$8 million in offset sales

TOP: HISTORICAL NUMBER OF PROJECTS REPORTING TENURE TYPE
BOTTOM: VOLUME AND VALUE OF CARBON ASSETS TRANSACTED AND OWNED BY COMMUNITIES, BY REGION



PRICING: Global average prices for forest carbon offsets fell from \$7.8 per tonne in 2012 to \$5.2 per tonne in 2013

VOLUME TRANSACTED BY OFFSET PRICE, 2013





SUPPLY AND DEMAND DYNAMICS: Volume and price on the forest carbon markets have been inversely related over the past four years

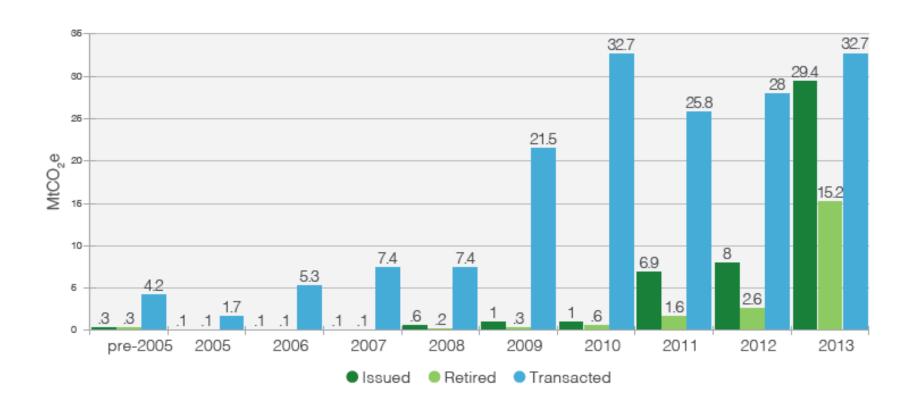
RELATIONSHIP BETWEEN VOLUME AND PRICE IN FOREST CARBON MARKETS, 2010-2014





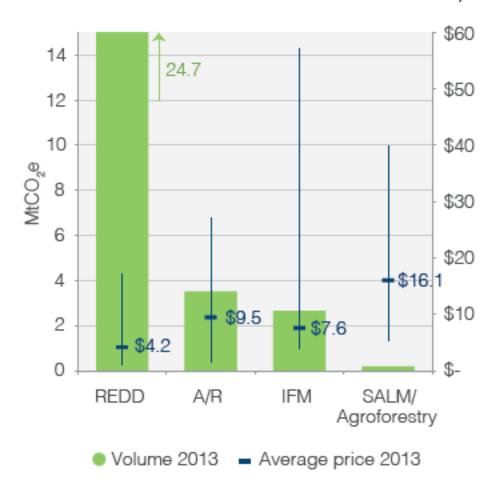
ISSUANCES & RETIREMENTS: 29.5 MtCO₂e issued, tripling volumes from last year as many projects reached maturity

HISTORICAL ISSUED, RETIRED, AND TRANSACTED OFFSET VOLUMES



PROJECT TYPES: REDD prices drop to \$4.2/t, down from \$7.8/t in 2012; IFM prices also dropped by almost \$3/t

TRANSACTED OFFSET VOLUMES AND AVERAGE PRICE BY PROJECT TYPE, 2013





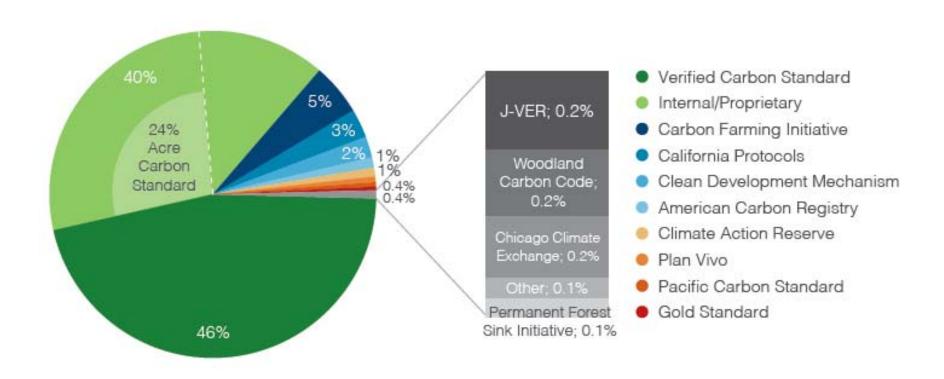
PROJECT SIZE: "Large" (or bigger) projects sold 90% of offsets last year, but the smaller the project, the higher the prices





CARBON STANDARDS: The Verified Carbon Standard held 46% market share but internal and proprietary standards made a comeback

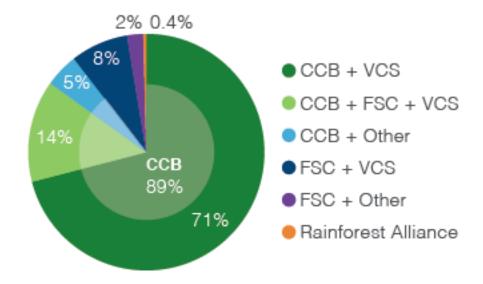
MARKET SHARE BY STANDARD/CERTIFICATION TYPE, ALL MARKETS 2013





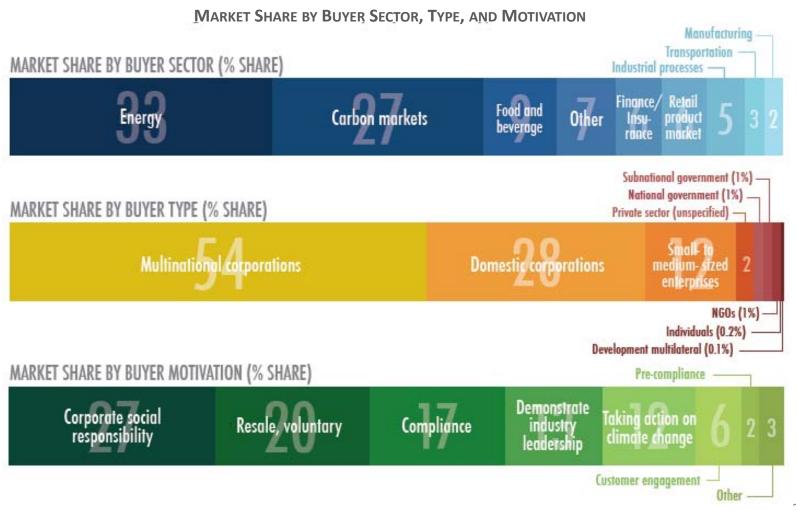
CO-BENEFITS STANDARDS AND LAND-AREA CERTIFICATIONS: 89% of VCS offsets co-applied CCB or FSC, or both

MARKET SHARE BY STANDARD/CERTIFICATION TYPE, ALL MARKETS 2013





BUYERS: Corporate social responsibility now top buyer motivation; energy and food & beverage companies are prominent offset buyers





BUYERS: 96 companies reporting to CDP in 2013 purchased forest carbon offsets; they perceived slightly higher climate risks

RISKS BY THE NUMBERS

55% of forest carbon offset buyers are concerned about reputational risks &

46% foresee changing consumer behavior related to climate change

40% anticipate cap-and-trade regulation &

11% anticipate a carbon tax

40% view changes in precipitation extremes and droughts as a risk that could affect business;

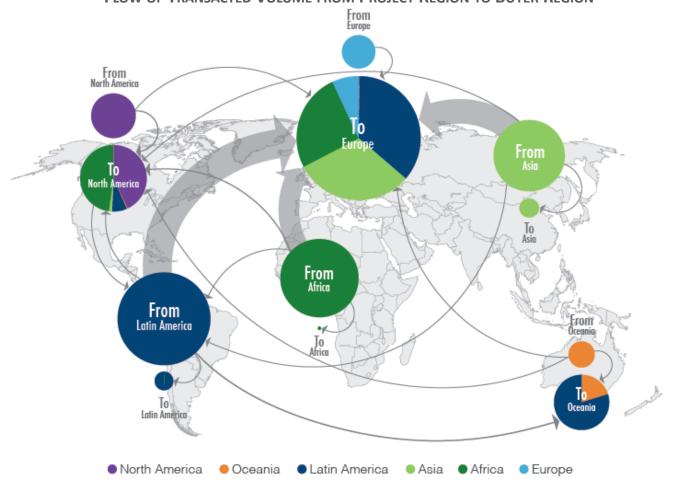
22% forecast induced changes in natural resources

33% face emissions-reporting obligations



BUYERS: Two-thirds of buyers are European; North American voluntary demand shrunk, though California compliance ramped up

FLOW OF TRANSACTED VOLUME FROM PROJECT REGION TO BUYER REGION



PREDICTIONS: Developers anticipate the market for forest carbon offsets to reach 70 MtCO₂e by 2020, tempering previous expectations

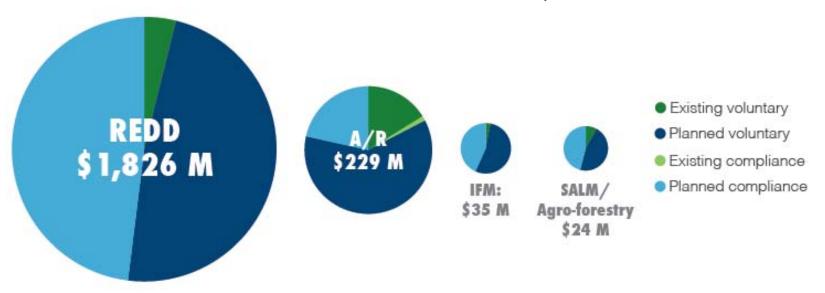
PROJECT DEVELOPER PREDICTIONS, ALL MARKETS, 2012-2013





IN THE PIPELINE: 256 million offsets are "in the pipeline" for development over the next five years – but only if financing materializes

DEVELOPER-ESTIMATED PORTFOLIO AND PIPELINE, ALL MARKETS



VARIOUS ESTIMATES OF MARKET REALITY AND FUTURE NEEDS, 2013 AND BEYOND

\$192 M	\$119 M	\$274 M	\$0.9 - \$1.6 B	\$2.3 B
2013 market value: ACTUAL	Value of unsold offset portfolio	2013 value if developers had received desired price	Developer estimates to fully support existing projects	Value of developers' 5-year pipeline (if sold at 2013 prices)



Questions?





Respondents Panel

Richard Saines
Principal
Baker & McKenzie

Carrie Gombos
Go Zero Operations Manager
The Conservation Fund

Ellysar Baroudy Lead Carbon Finance Specialist The World Bank

Moderator: Michael Jenkins
President and CEO
Forest Trends

