Emerging work by financing institutions on climate resilience results metrics

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2017 Forum of the UNFCCC Standing Committee on Finance
"*Mobilising Finance for Climate-Resilient Infrastructure*"
Rabat, 6-7 September 2017

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EBRD adaptation finance for **infrastructure**

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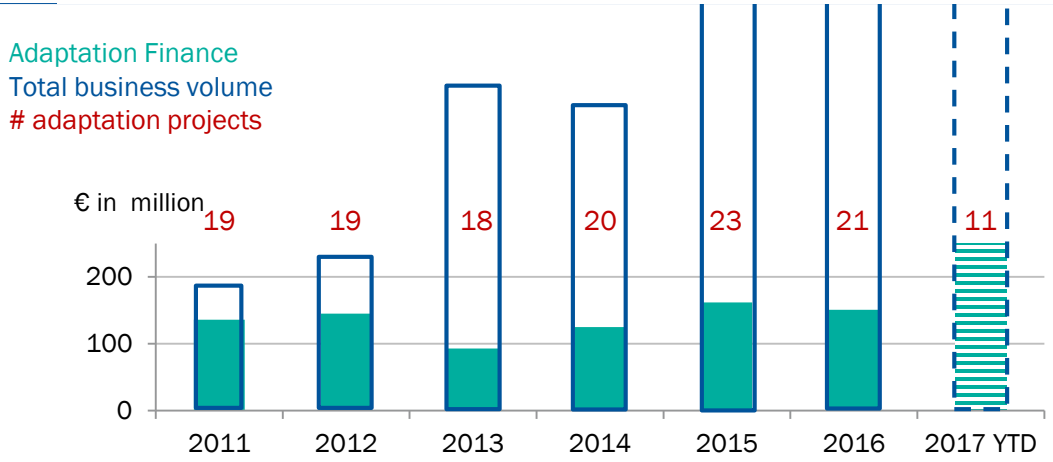
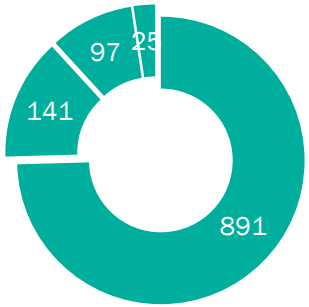


€1.1 billion since 2011 of dedicated adaptation finance for infrastructure.

130 projects signed

€3.1 billion of total ABI

Infrastructure GET adaptation finance: by business area (€m)



Municipal & environmental Infrastructure	891
Power and Energy	141
Transport	97
Property and Tourism	25
Total	1,154

Infrastructure GET adaptation finance: by region (€m)

Central Asia	280
Central Europe and the Baltic states	39
Eastern Europe and the Caucasus	34
Russia	32
South and Eastern Mediterranean (SEMED)	326
South-Eastern Europe	314
Turkey	128
Total	1,154

Outcome metrics exist for mitigation – but not for adaptation

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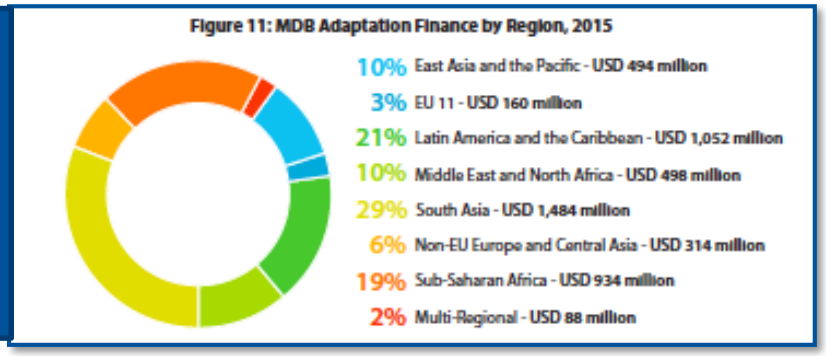
Adaptation and mitigation inputs can be measured in monetary terms ($)



Mitigation outcomes can be measured in tCO_2 reductions – *comparable* and *aggregatable*

But how can we measure adaptation outcomes?

Adaptation is highly sector-specific: are cross-sector metrics possible for adaptation?

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Project- or sector-specific metrics

- Measurable and attributable to project impact
- Short term impact; inferred link to longer-term resilience
- Cannot be compared/aggregated across sectors

Cross-sector metrics

- Comparable between different sectors
- Aggregatable across sectors where possible

Two-tiered climate resilience metrics: i) physical and ii) monetary

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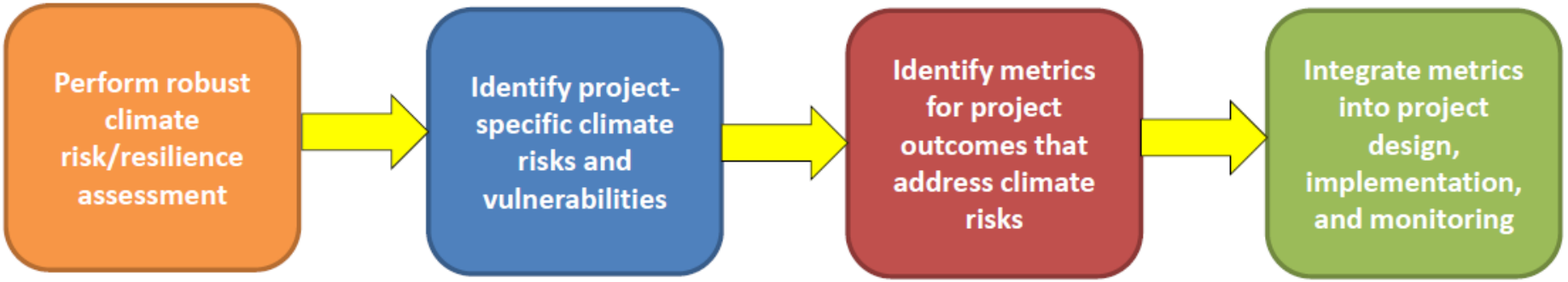

- Drawing upon the Standard & Poors' methodology for evaluating adaptation impact of projects
- The application of outcome metrics needs to be **proportionate** and **scalable** in order to be routinely used in financing operations
- Physical **climate resilience outcomes** are expressed using **project-specific outcome metrics**
- Project-specific outcome metrics are valorised in order to express a **Climate Resilience Benefit** in monetary terms (**cross-sector**)

Case study: Kazakhstan Irrigation

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Kazakhstan irrigation: analysis

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Indicator	Value (units)	Comments
Physical outcome	Reduction in water conveyance losses: 180 million m^3/year	Water conveyance loss reduction was calculated during the Feasibility Study.
Valorisation of physical outcome	USD 35.5 million	Shadow irrigation water tariffs in the project location are around 62 Kazakh tenge per m^3, or USD 0.2/m^3 Therefore, 180 million m^3 x USD 0.2/m^3 = USD 35.5 million
Climate Resilience Benefit	USD 887 million	The design life of the infrastructure being financed is 25 years. Therefore, the Climate Resilience Benefit is calculated as USD 35.5 million x 25 = USD 887 million *NB: no discount rate was applied in this calculation, and the tariff was assumed to be constant.*
Resilience Benefit Ratio	4.93	The finance committed for the project was USD 180 million and the Climate Resilience Benefit is USD 887 million. Therefore the Resilience Benefit Ratio is 887:180 or 4.93

Case Study: Egypt Power Generation

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Egypt Power Generation: analysis

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Indicator	Value (units)	Comments
Physical outcome	i) Reduction in cooling water consumption of 100 million m^3/year ii) Reduction in number of down-days due to insufficient cooling water of 15 days	i) This was assessed against an 'alternative technology' baseline. The alternative water-cooled technology would have consumed 10 million m^3/year, whereas the selected air-cooled technology consumes no water. ii) The alternative water-cooled technology would have experienced insufficient cooling water at least 15 days a year (based on assessments of water-cooled plants in similar locations).
Valorisation of physical outcome	i) USD 27 million ii) USD 216 million	i) The shadow water price in the project location is USD 2.7/m^3. Therefore, the first KPI was monetised as follows: USD 2.7/m^3 x 10 million m^3/year = USD 27 million/year ii) The unit cost to the local population of a down-day is USD 14.4 million. Therefore, the KPI was monetised as follows: USD 14.4 x 15 = USD 216 million NB: no discount rate was applied in these calculations, and the tariff was assumed to be constant.
Climate Resilience Benefit	USD 6.075 billion	The design lifespan of the assets financed is 25 years. Therefore the Climate Resilience Benefit was calculated as follows: (USD 27 million x 25) + (USD 216 million x 25) = USD 675 million + USD 5,400 million) = USD 6,075 million
Resilience Benefit Ratio	30.4	The finance committed for the project was USD 200 million and the Climate Resilience Benefit is USD 6,075 million. Therefore the Resilience Benefit Ratio 6075:200 or 30.4

Further information

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