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REPUBLIC OF SOUTH AFRICA

Training workshop for anglofone African countries: Deep dive into tracking NDC mitigation commitments under the Paris Agreement

Presentation: Data needs and dealing with insufficient data

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UN environment programme | copenhagen climate centre

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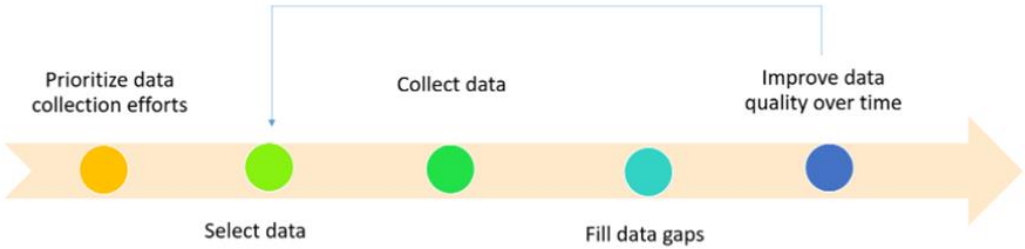
1) Relevance of data

Regardless of the approach adopted, the need to gather good quality data is paramount to perform transparent and valuable mitigation assessments. presents a typical cycle of data management to perform mitigation assessments.

Cycle of data management to perform mitigation assessments



Adapted from WRI. Policy and Action Standard (2014).

Source: adapted from WRI. Policy and Action Standard (2014).

Sources of data

Bottom-up data is measured, monitored, or collected at the source, facility, and entity or project level.

energy used at a facility (by fuel type) and the output of the facilities production.

Top-down data can be macro-level statistics collected at the jurisdiction or sector level.

national energy use, population data, GDP, sectoral production and fuel prices.

Table 4: Origin and characterization of data used for mitigation assessments

Type of data	Description	Examples
Measured data	refers to direct measurement	smokestack measurement
Modelled data	refers to data derived from quantitative models	models representing emissions processes from landfills or livestock
Calculated data	refers more specifically to data calculated by multiplying activity data by an emission factor	multiplying natural gas consumption data by a natural gas emission factor
Estimated data	refers to proxy data or other data sources used in the absence of more accurate or representative data sources	behavior of people in a region to estimate waste emissions

Source: adapted from WRI. Policy and Action Standard (2014).

high-quality datasets

- Quality assured: Reliable, peer-reviewed datasets
- Credible: from recognized, credible and verifiable sources
- Comprehensive: high number of locations or contexts
- Relevant and Complete: also addresses normal fluctuations in data (seasonal, annual variations)
- Representative:
  - Technological representativeness
  - Time period representativeness
  - Geographical representativeness

The quality of the data used to prepare these projections is critical - poor data yields poor results.

As countries work on making their transparency systems, and by extension mitigation assessments, more effective, investing in the Quality Assurance and Quality Control of the data is gaining relevance.

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2) Dealing with insufficient data

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Conditions leading to problems of data

- Inconsistency in data: maintain sources, methodologies, datasets
- Incomplete data: all GHG sources and sinks are not covered, limited geographical coverage
- Changes in activity data
- Changes in emission rates
- Changes and gaps in data availability

Dealing with insufficient quality data

If data of sufficient quality is not available, or no data is available at all, some inferences about the possible impact of the actions, policies and measures can still be reported by employing proxy indicators / data.

The use of proxy data helps fill data gaps in the preparation of baselines or mitigation assessments, by including data from a similar activity/geographic area/country as a stand-in for the activity being assessed.

However, technical experts should identify which data could be employed as a proxy and how it should be reported

Overcoming quality data problems

Techniques to fill data gaps: Splicing techniques

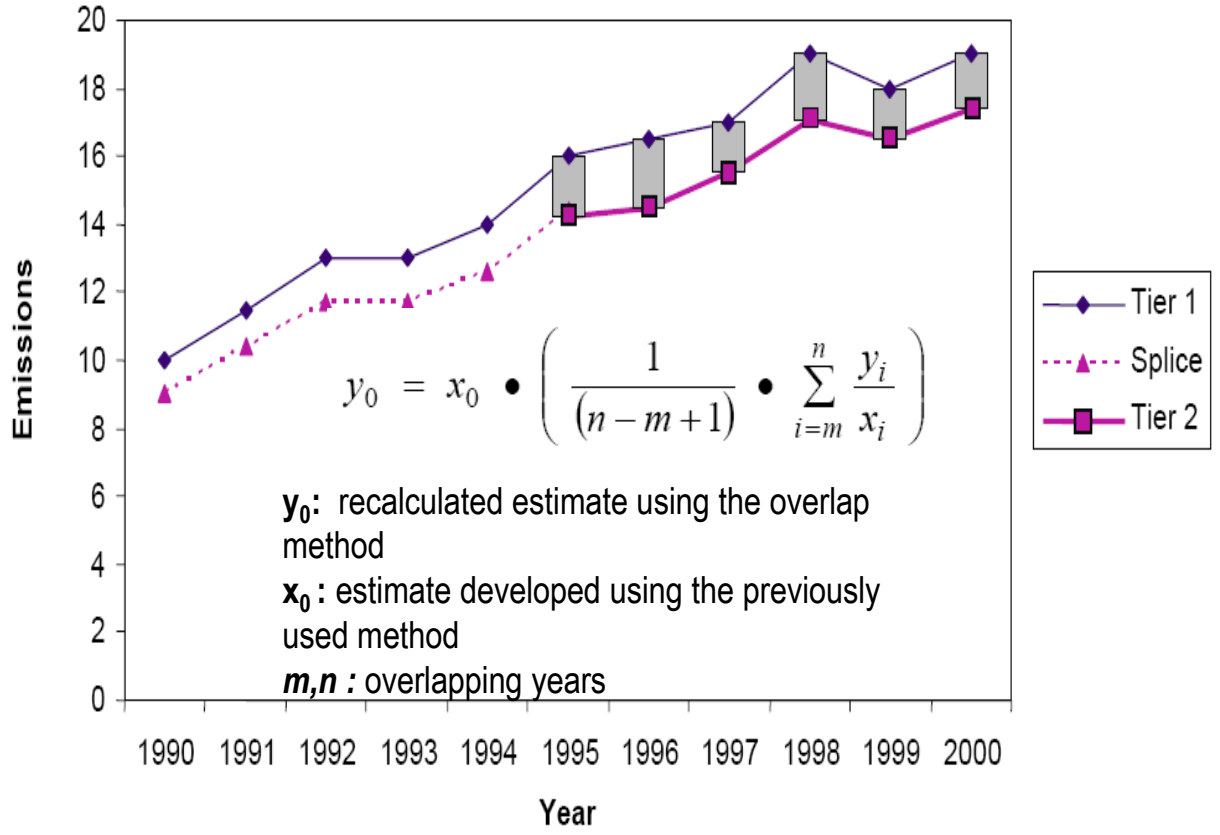
Presented in the 2006 IPCC Guidelines for National GHG Inventories:

- Overlap
- Surrogate
- Interpolation
- Extrapolation

Selecting a technique requires an evaluation of the specific circumstances and a determination of the best option for the particular case

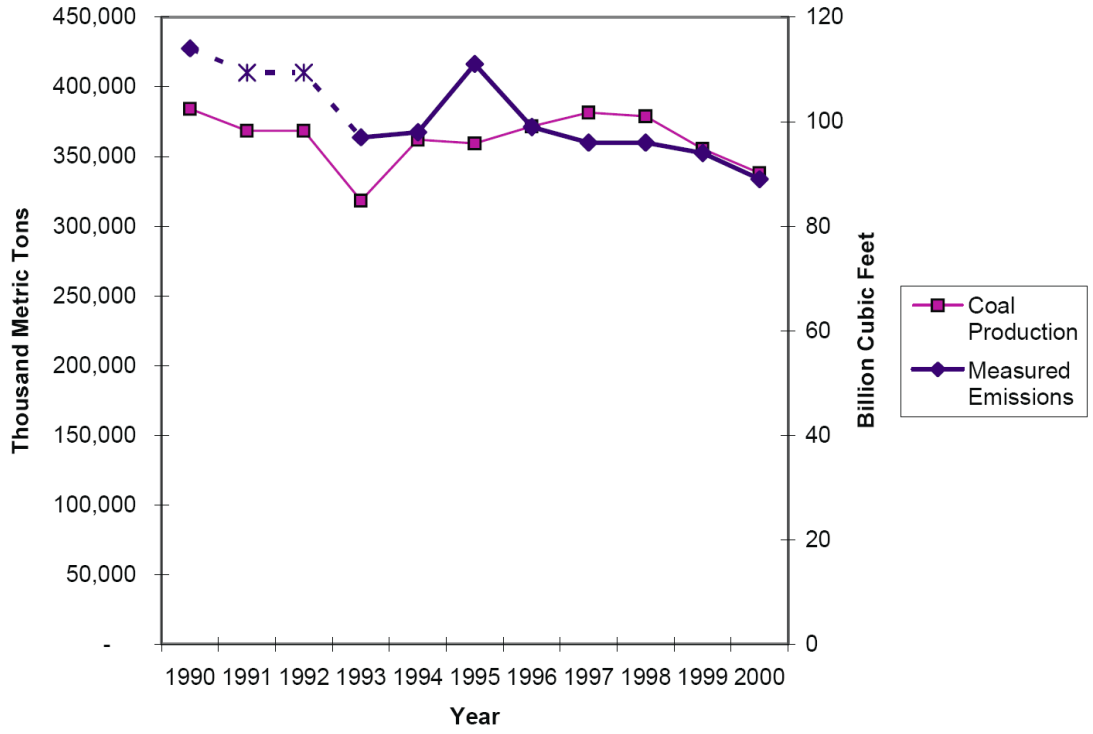
Splicing technique: Overlap

- New method is introduced
- Consistency between 2 methods
- Data not available for the early years for the new method



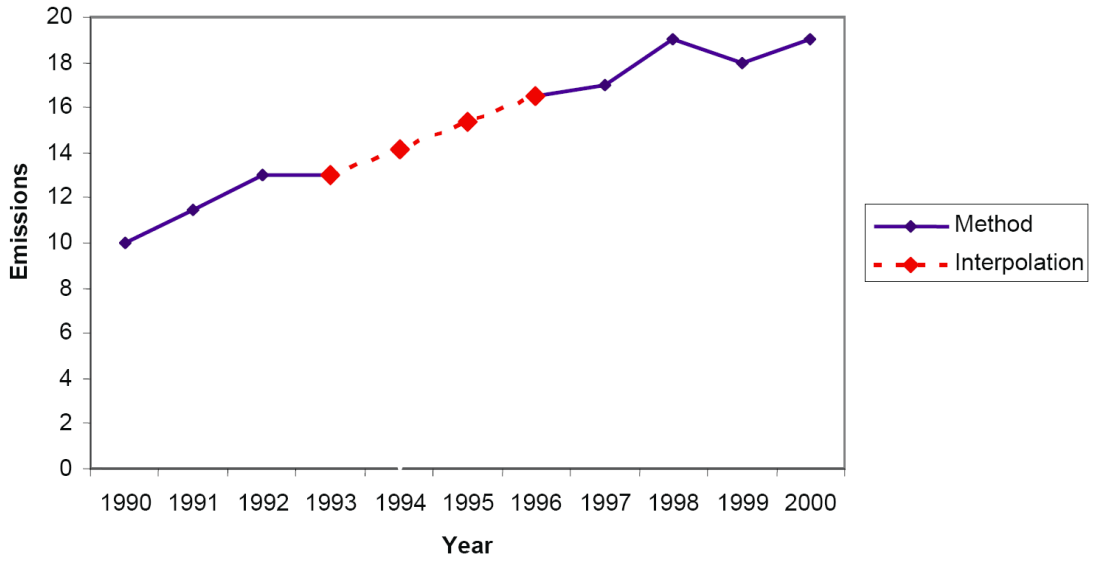
Splicing technique: Surrogate

- The surrogate method links an information to underlying activity or other indicative data
- Changes in these data are used to simulate the trend in the needed information



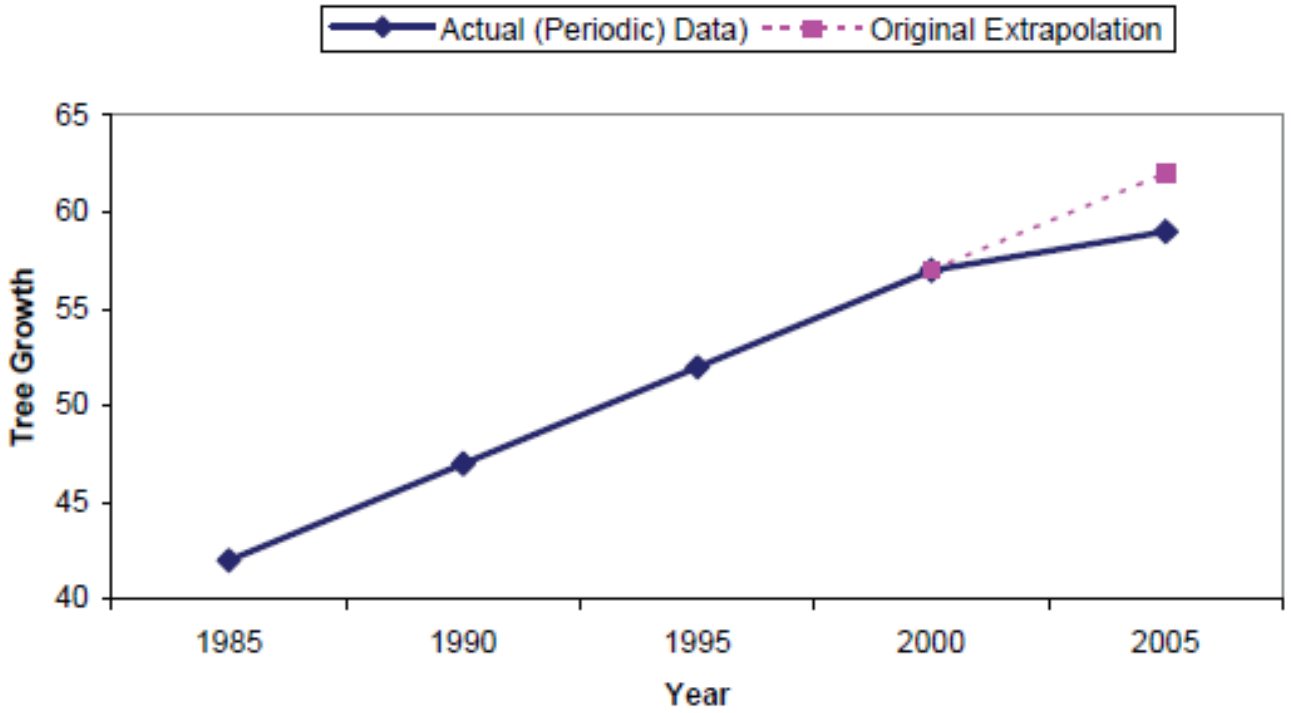
Splicing technique: Interpolation

- Information is not available for some years in the middle of the series



Splicing technique: Extrapolation

- When data for the base year or the most recent year are not available
- assuming trend in emissions/removals remains constant over the period of extrapolation
- Analyse the character of trend – e.g. linear or more complex



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Thank you

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