

METHODOLOGICAL APPROACH

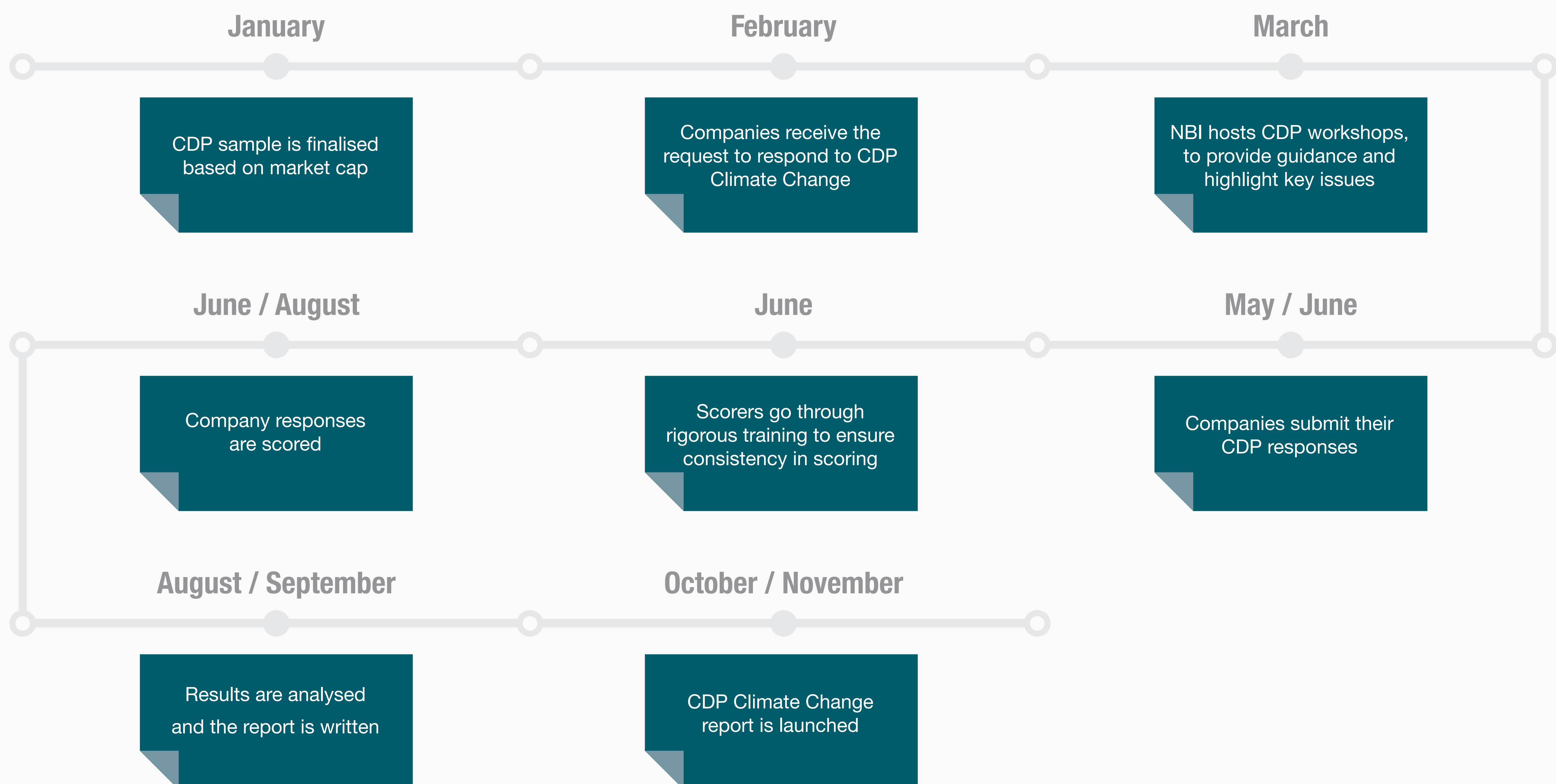
The data must be understood in the context of the methodology applied. Due to its nature the data is not directly comparable and all of the accompanying infographics need to be read in conjunction with the detail and caveats presented here.



THE SAMPLE

2007 - CDP began in South Africa. It focused on the JSE top 40 companies by market capitalization
2008 - 2015 NBI and CDP increased the sample to the JSE top 100 companies

THE ANNUAL CDP PROCESS



DATABASE DEVELOPMENT PROCESS

- ▼ KPMG undertook an initial assessment and identified key messages in 2013.
- ▼ In 2015, working with Resolve enabled us to create a SQL database, which allows us, for the first time, to identify errors, trends and compare data over time and across questions.
- ▼ Eight years of data was imported into the database and cleaning began. Cleaning took six months of intensive work.
- ▼ To clean the data, similar questions over time had to be mapped.
- ▼ This means not every question maps over the full time span. Some questions ceased to be used and new questions were added.
- ▼ Companies had to be mapped as some companies changed their names.
- ▼ Sector classifications change over time (and companies change sectors), so companies are allocated their most common sector.
- ▼ Common answers were identified for qualitative questions where possible, and their occurrence measured.
- ▼ The process resulted in over 960 unique questions of which we have cleaned all quantitative questions; and approximately 25% of qualitative questions.
- ▼ We continue to clean the rest of the qualitative data often in partnership with academic institutions.

This methodology infographic represents one in a series of infographics. All other infographics in the series must be viewed considering this methodology slide. Due to methodology and reporting differences, and as a result of data cleaning, the data reported in these infographics may not be directly comparable to data reported in previous CDP reports.

THE DATABASE: DEVELOPMENT, ANALYSIS AND FUTURE USE



FUTURE USE OF DATABASE

- ▼ It helps demonstrate the impact of the CDP in South Africa.
- ▼ It allows for deeper analysis on key trends and specific issues.
- ▼ It allows for benchmarking over time and can provide company-specific reports highlighting progress made and enabling comparison with peers.
- ▼ It enables us to assess the data for multi-year, multi-variable (question) correlations.
- ▼ It enables better data provision for independent research through partnerships with universities.
- ▼ It allows for bulk interrogation of the data for input into national processes that want to highlight the voluntary impact of business behaviour in South Africa.

DATABASE ANALYSIS

When viewing the infographics, please note the following limitations/exclusions to the dataset

- ▼ Due to questionnaire changes data analysis may span different time periods.
- ▼ The companies at the bottom end of the JSE top 100 change each year, so the sample is not strictly comparable over time.
- ▼ It may be possible that where a company is listed twice or they respond as an independent subsidiary that some data is replicated. We believe that this will not have a material impact on the analysis.
- ▼ The analysis:
 - is based only on responding companies and not the total JSE 100 sample, except when highlighting the response rate. Statistics reported are therefore a % of companies who responded that year;
 - includes both public and non-public responses;
 - excludes companies that responded through a parent company;
 - excludes companies that responded but were not part of the JSE 100 sample;
 - excludes non-listed companies and large parastatals.
- ▼ Reductions are sometimes reported in the context of ERAs and may not represent net company emission reductions.
- ▼ Emissions data needs to be understood in the context that responding companies change over time. Improvements could in some years be explained by large companies exiting the sample (e.g. Evraz in 2012 and Harmony Gold in 2015).
- ▼ Emissions from the sample were calculated using the following 3 approaches:
 - global scope 1 and scope 2 emissions: based on total emissions reported by CDP responding companies.
 - South Africa scope 1 and scope 2 emissions: based on all companies that report South African specific data or report that they do not have emission sources in other countries.
 - scope 1 and scope 2 emissions of companies that consistently reported emissions: total emissions based on a like for like comparison of 45 companies who reported emissions to the CDP from 2009.
- ▼ Cost and emission saving from emission reduction activities (ERAs) are conservative estimates as not all companies include savings for all ERAs listed.