

Data Citation Community of Practice

- Use case IPCC -

Martina Stockhause

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Use Case IPCC: Description and Definitions

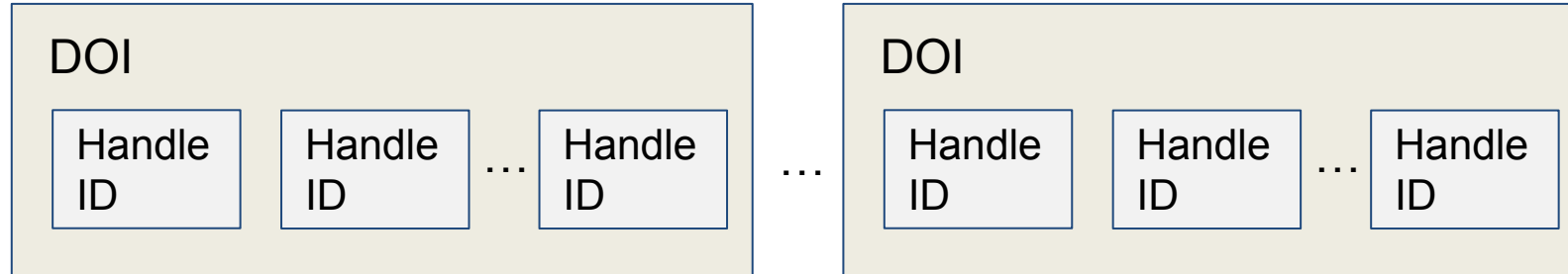
IPCC Sixth Assessment Report (AR6) implements FAIR Guidelines:

Motivation: Enhance transparency of the AR6 and enable traceability of results and the reproducibility of figures.

- FAIR Guidelines Key Points:
 - Reproducibility of figures/tables:
 - Input data usage on dataset granularity is collected for each figure and table in the report.
 - Analysis scripts create final datasets, which are displayed in figures and tables of the report.
 - Credit for input data providers:
 - Input data is cited by their DOIs in the report outside of figure caption for length reasons.
- Partners and Parts:
 - IPCC hosts the [reports](#). The registration of crossref DOIs for reports and its chapters is planned.
 - [Input data](#) (not already archived) and final data are archived in the IPCC Data Distribution Centre (DDC), which is jointly managed by currently 4 DDC Partners (DOI registration for data).
 - IPCC TSUs (Technical Support Units) gather information from authors and take care that analysis scripts are archived in Zenodo, incl. DOI registration.
- Coupled Model Intercomparison Project Phase 6 (CMIP6) provides one of the most important input data for the AR6, with ca. 150 participating numerical models running several experiments.

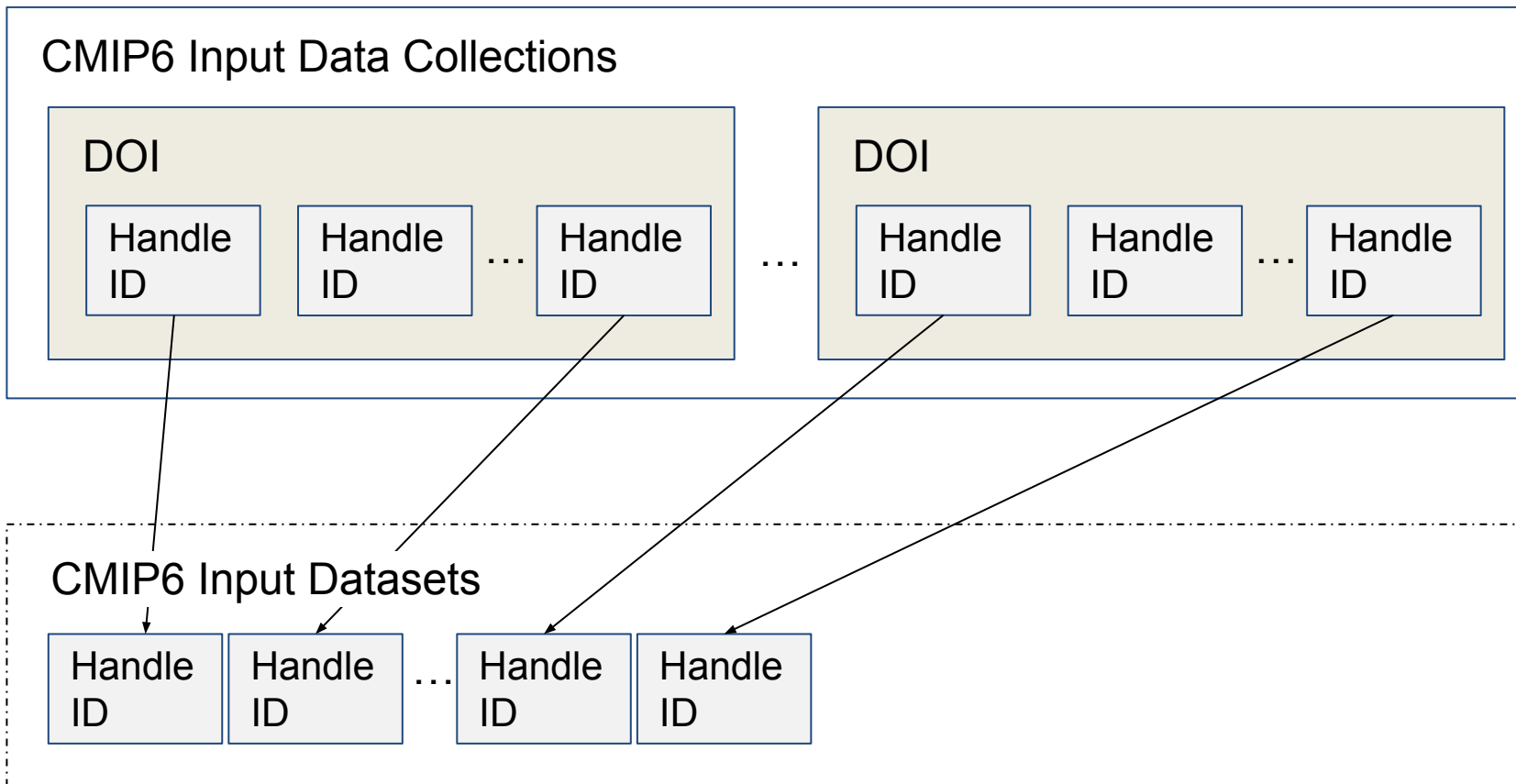
Use Case IPCC: CMIP6 input data structure (Data Provider View)

CMIP6 Input Data Collections



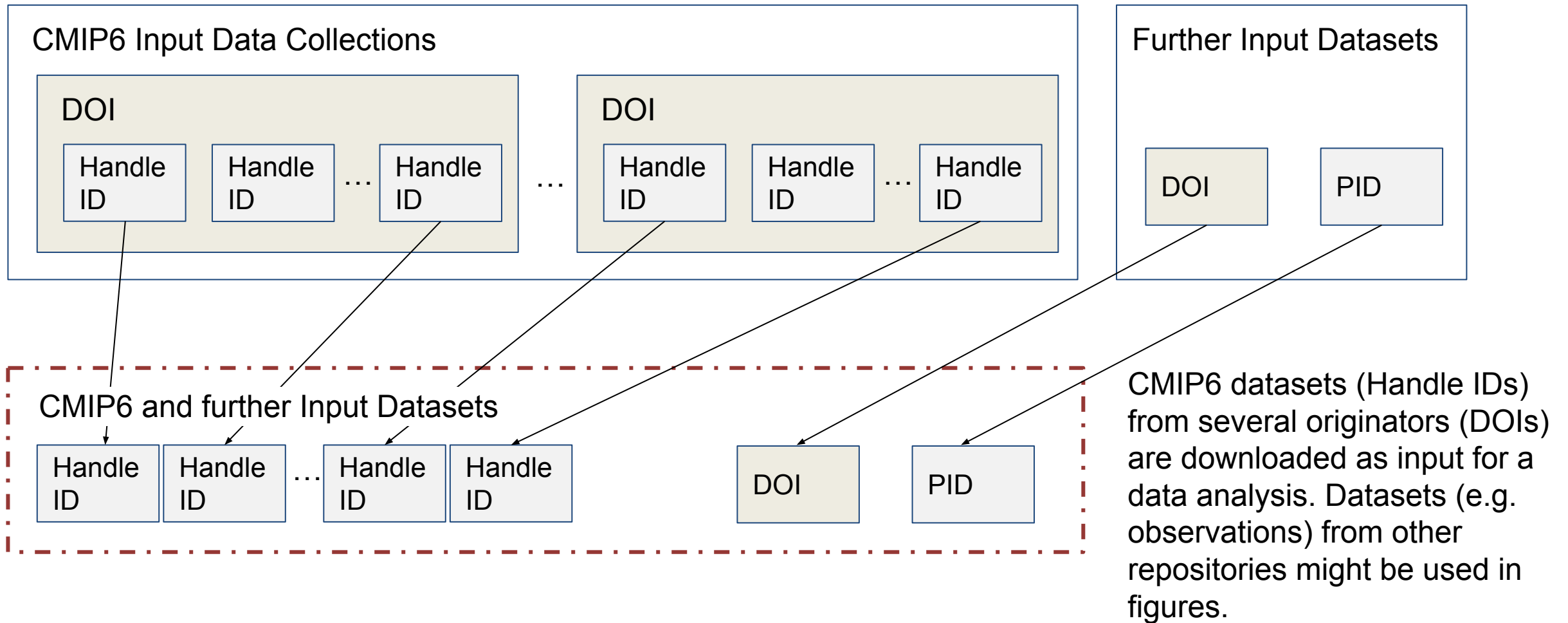
Data contributions are submitted by originators. DOIs are assigned on multiple datasets (model experiments). Datasets are assigned Handle IDs. Handle metadata (will) include the related DOIs. Ca. 2400 DOIs and ca. 5 million Handle IDs are available.

Use Case IPCC: Model Intercomparison Study (Data User View)

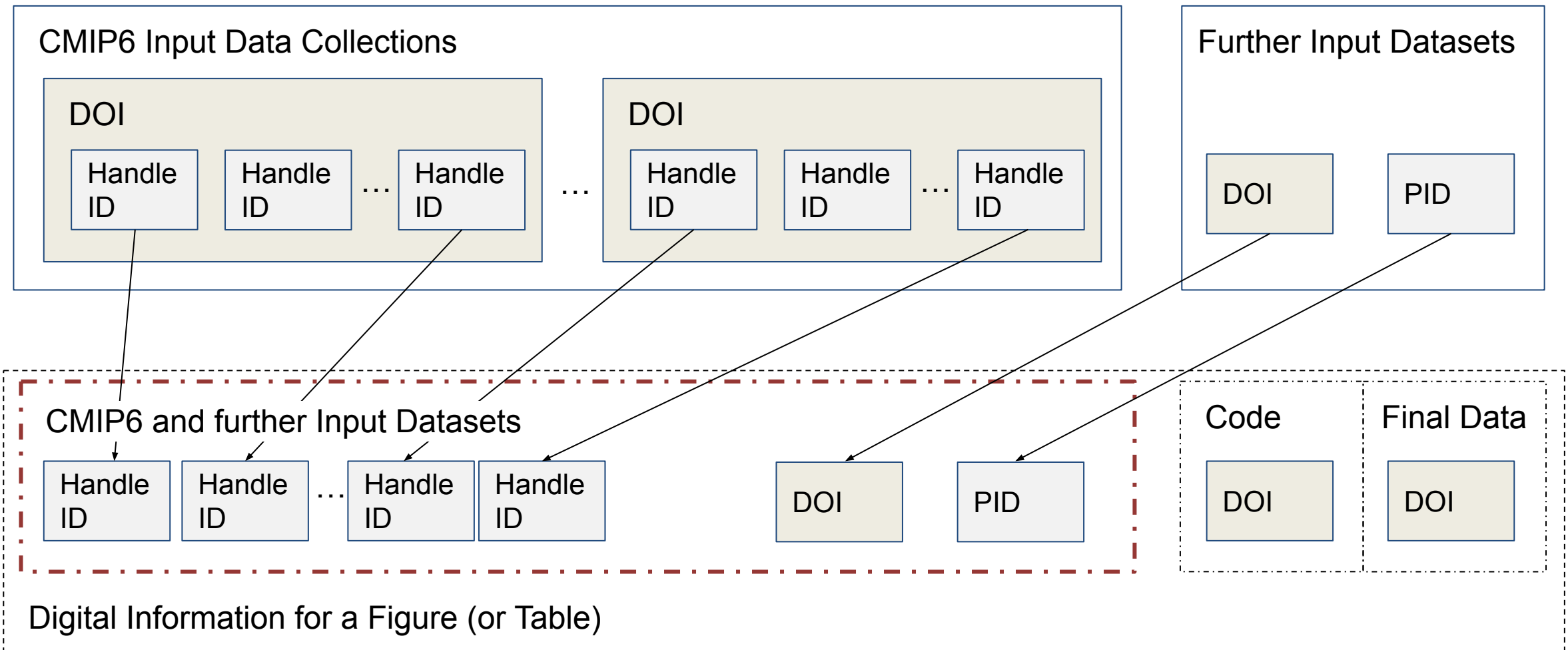


CMIP6 datasets (Handle IDs) from several originators (DOIs) are downloaded as input for a data analysis.

Use Case IPCC: Model Intercomparison Study (Data User View)

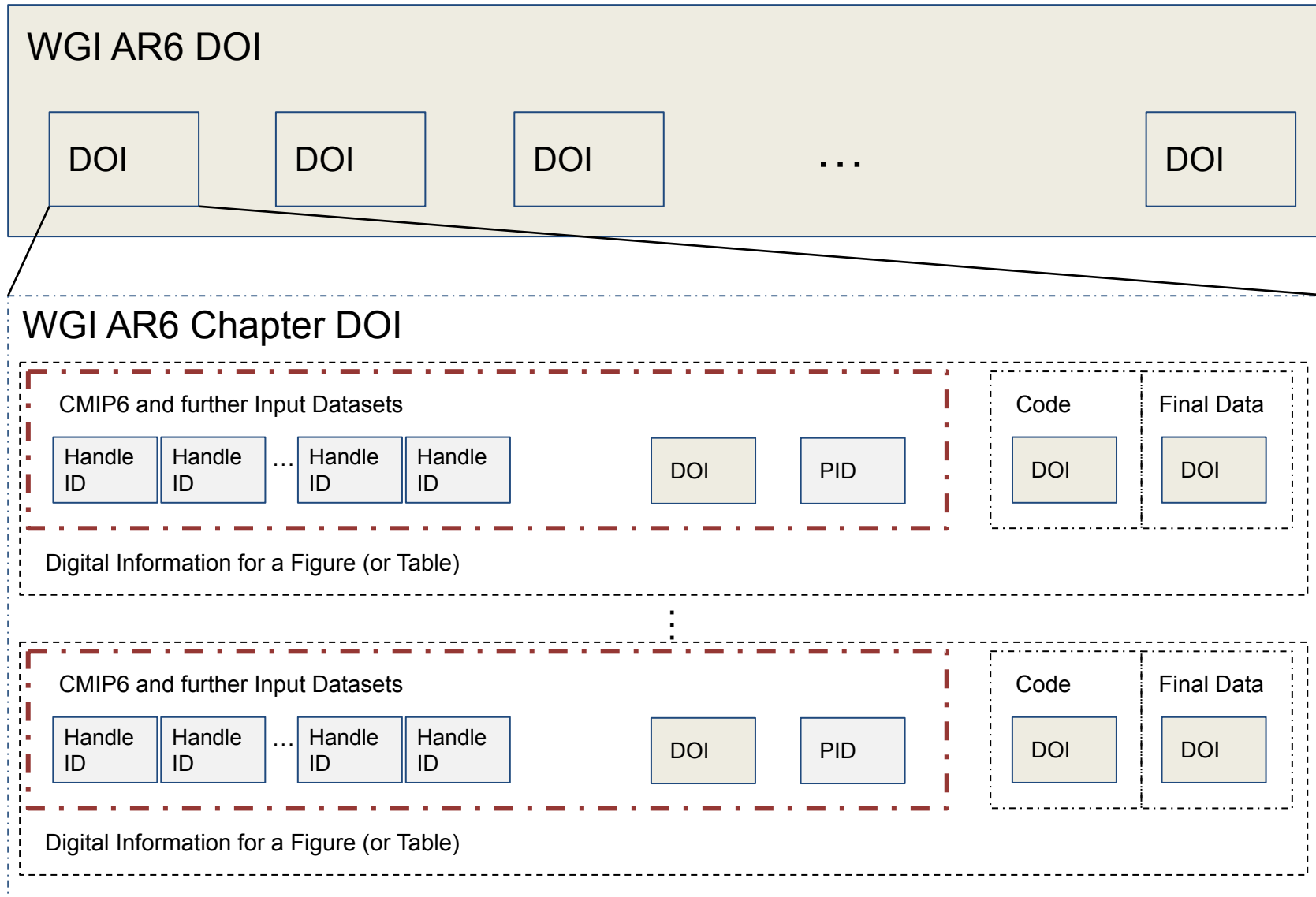


Use Case IPCC: Figure creation (input data, scripts, final data)



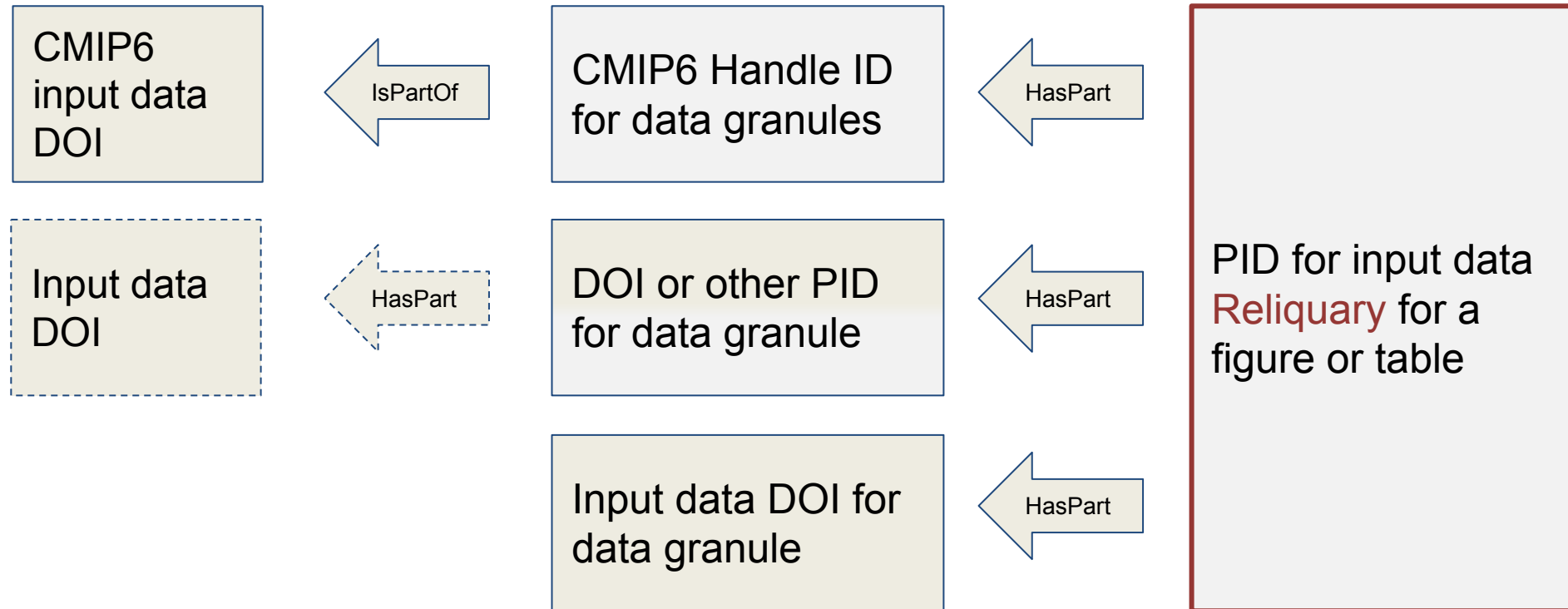
A Reliquary to cite input (source) data in figure (and table) captions is suggested. For the authors' generated code and final data DOIs are not available at time of AR6 publication (archival in progress).

Use Case IPCC: Digital Information for Chapters and Reports



A crossref DOIs are planned for an individual IPCC Report, e.g. WGI AR6, and for each Chapter in the Report.

Credit for creators (PID graph)



The data granules in the input data Reliquary might be hosted at several repositories. Different cases have to be considered, requiring one or two steps for credit allocation:

- Data granule itself is the input data DOI
- Data granule HasPart input data DOIs (see BODC use case)
- Data granule IsPartOf input data DOI (CMIP6 use case; ***doublet treatment required***)