| WP No. | WP Leader |
|---|---|
| 1.6 | Jim Hall |

| WP Title |
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| Demonstrating Strategic Flood Management of Estuary Systems |

General description of data sets

Input, cleaned and possibly some output data sets from the Thames decision analysis implemented in WP1.6. Most of these are organised in a single directory tree, along with a set of scripts and a build system that builds everything given the raw inputs.

These include:

- "Raw" (as supplied to Newcastle University) input data sets
- "Clean" input data – processed to address anomalies, merge data sources etc.
- Intermediate data sets –
- Output data

The files are in a variety of formats. Not all are text-based, but all are readable by freely (and readily) available software. Formats include:

- CSV and other ad-hoc text formats
- Python numpy .npy array files, read by the numpy.load function in python.
- ESRI shapefiles
- SQLite3 database files, readable by SQLite with Spatialite extensions http://www.gaia-gis.it/spatialite/ (QGis can read and display data from spatialite files)
- GeoTIFF (TIFF image files with embedded spatial metadata)
- ESRI ASCII format

Specific raw data includes

- IfSAR DEM of London
- NFCDD data set for London tidal defences
- Defence data set from TE2100, as used in IA8 model. This covers the same defences as above, but with changes and with *no shared identifiers* and with a variety of anomalies.
- Fragility curve data from TE2100
- CEH centreline data for Thames.
- Node location
- Multi-coloured manual depth/damage data
- Subset of National Property Database dataset for London

Cleaned and processed data sets:

- Merged and cleaned defences data set, plus the scripts that do the merging and cleaning. A chainage is added, referenced against the CEH centreline extended out into the North Sea.
- Volume/level, level/damage and volume/damage curves by spatial region.
- "Best estimate" fragility curves – half way between lower and upper bounds from TE2100
- ISIS model files for each situation modelled (combinations of barrier option, defence crest levels, barrier operational state) and boundary conditions.

Intermediate/output data:

- ISIS run results for all combinations of barrier option, defence crest levels. Including these may be impractical because of size (remains to be seen), but they cannot be recreated without ISIS Professional and require considerable (weeks-months of?) CPU time.

The build system is tested on Mac OS X and Linux (but not Windows).

Barriers to making data freely available after project.

EA ownership of NFCDD and other defence-related data.
Mixed ownership of NPD.
Ownership of IfSAR DEM

Those inputs appear more-or-less modified form in a range of cleaned/processed data sets. They make up the bulk of the inputs (by volume and by value), so it's not clear how much value there would be in separating them out.