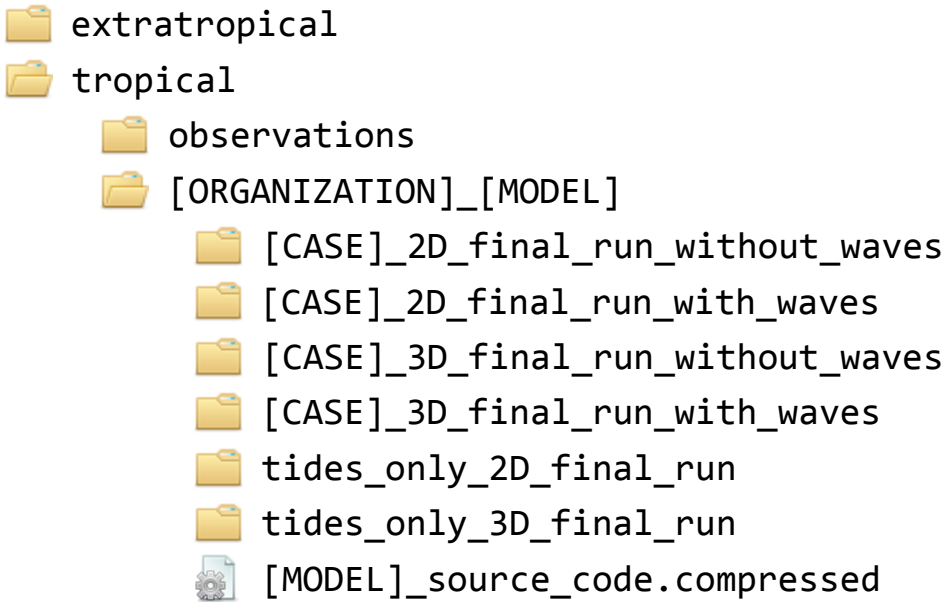
IOOS Coastal Modeling Testbed Inventory

Overview

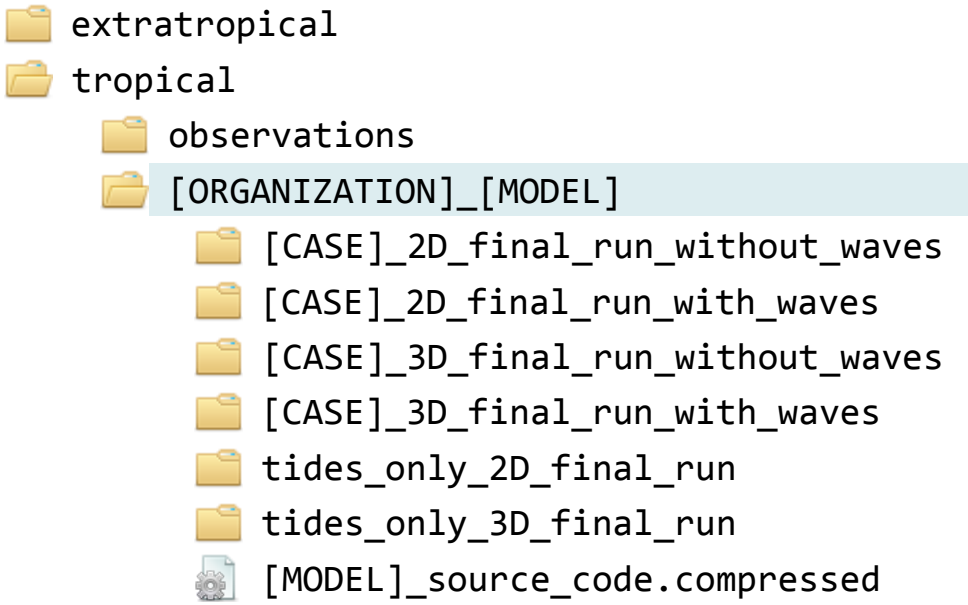
- Directory Template
- Example
- Worksheet to create new model run
- How to execute existing

Directory Template



The following slides will step through each with a brief explanation

Directory Template



Each ORGANIZATION should have a directory for each MODEL tested under the relevant tropical or extratropical directory

Directory Template

- extratropical
- tropical
  - observations
  - [ORGANIZATION]_[MODEL]
    - [CASE]_2D_final_run_without_waves
    - [CASE]_2D_final_run_with_waves
    - [CASE]_3D_final_run_without_waves
    - [CASE]_3D_final_run_with_waves
    - tides_only_2D_final_run
    - tides_only_3D_final_run
    - [MODEL]_source_code.compressed

2D with and without waves *each [CASE]*

Each MODEL should contain:

- CASEs run – 2D

Directory Template

- extratropical
- tropical
  - observations
  - [ORGANIZATION]_[MODEL]
    - [CASE]_2D_final_run_without_waves
    - [CASE]_2D_final_run_with_waves
    - [CASE]_3D_final_run_without_waves
    - [CASE]_3D_final_run_with_waves
    - tides_only_2D_final_run
    - tides_only_3D_final_run
    - [MODEL]_source_code.compressed

3D with and without waves *each [CASE]*

Each MODEL should contain:

- CASEs run – 2D
- CASEs run – 3D

Directory Template

- extratropical
- tropical
  - observations
  - [ORGANIZATION]_[MODEL]
    - [CASE]_2D_final_run_without_waves
    - [CASE]_2D_final_run_with_waves
    - [CASE]_3D_final_run_without_waves
    - [CASE]_3D_final_run_with_waves
    - tides_only_2D_final_run
    - tides_only_3D_final_run
    - [MODEL]_source_code.compressed

tides only, both 2D and 3D *per [MODEL]*

Each MODEL should contain:

- CASEs run – 2D
- CASEs run – 3D
- tides only run – both 2D and 3D

Directory Template

- extratropical
- tropical
  - observations
  - [ORGANIZATION]_[MODEL]
    - [CASE]_2D_final_run_without_waves
    - [CASE]_2D_final_run_with_waves
    - [CASE]_3D_final_run_without_waves
    - [CASE]_3D_final_run_with_waves
    - tides_only_2D_final_run
    - tides_only_3D_final_run
    - [MODEL]_source_code.compressed — source code of [MODEL] (not public)

Each MODEL should contain:

- CASEs run – 2D
- CASEs run – 3D
- tides only run – both 2D and 3D
- source code of model being tested

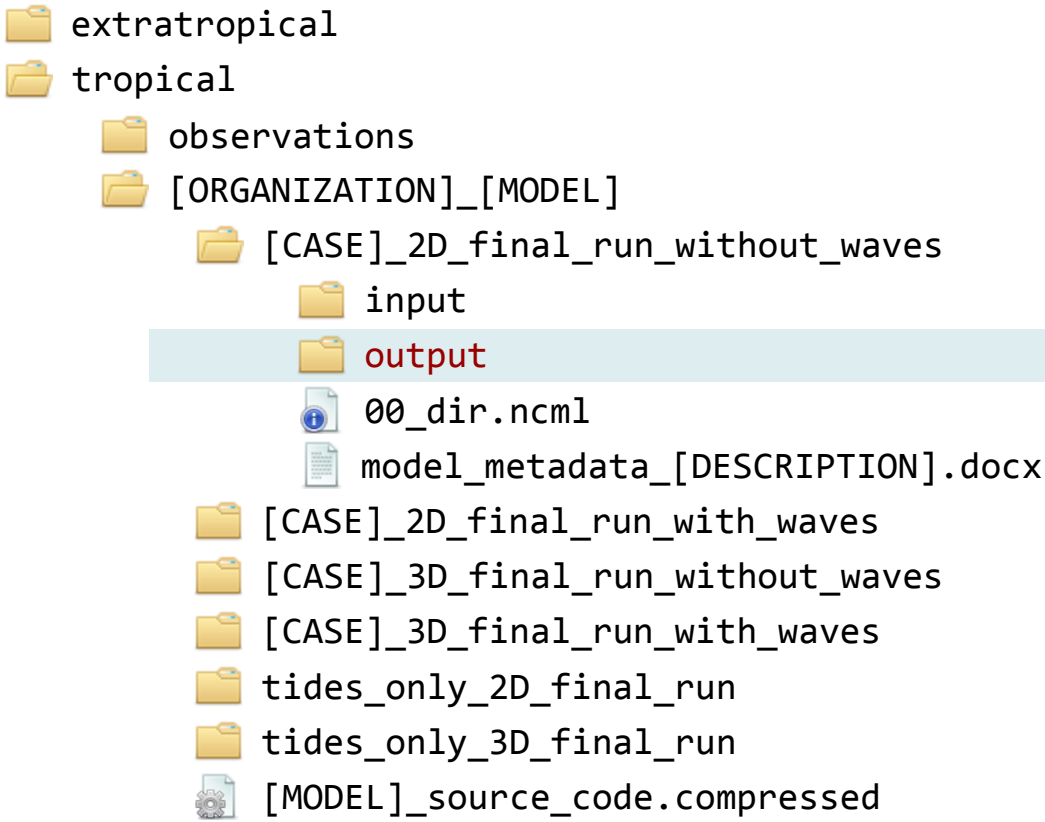
Directory Template

- extratropical
- tropical
  - observations
  - [ORGANIZATION]_[MODEL]
    - [CASE]_2D_final_run_without_waves
      - input — model inputs (configuration and data)
      - output
      - 00_dir.ncml
      - model_metadata_[DESCRIPTION].docx
    - [CASE]_2D_final_run_with_waves
    - [CASE]_3D_final_run_without_waves
    - [CASE]_3D_final_run_with_waves
    - tides_only_2D_final_run
    - tides_only_3D_final_run
    - [MODEL]_source_code.compressed

Each MODEL run should contain:

- An input directory with all necessary data and configuration inputs
  this combined with the binary should allow reproduction of outputs

Directory Template



Each MODEL run should contain:

- An input directory with all necessary data and configuration inputs
  this combined with the binary should allow reproduction of outputs
- An output directory with the model results for comparison and analysis

Directory Template

- extratropical
- tropical
  - observations
  - [ORGANIZATION]_[MODEL]
    - [CASE]_2D_final_run_without_waves
      - input
      - output
      - 00_dir.ncml — NCML (NetCDF metadata)
      - model_metadata_[DESCRIPTION].docx
    - [CASE]_2D_final_run_with_waves
    - [CASE]_3D_final_run_without_waves
    - [CASE]_3D_final_run_with_waves
    - tides_only_2D_final_run
    - tides_only_3D_final_run
    - [MODEL]_source_code.compressed

Each MODEL run should contain:

- An input directory with all necessary data and configuration inputs
  this combined with the binary should allow reproduction of outputs
- An output directory with the model results for comparison and analysis
- An NCML file used for adding metadata and aggregating the datasets **(RELATIVE PATHS)**

Directory Template

- extratropical
- tropical
  - observations
  - [ORGANIZATION]_[MODEL]
    - [CASE]_2D_final_run_without_waves
      - input
      - output
      - 00_dir.ncml
      - model_metadata_[DESCRIPTION].docx — model description document
    - [CASE]_2D_final_run_with_waves
    - [CASE]_3D_final_run_without_waves
    - [CASE]_3D_final_run_with_waves
    - tides_only_2D_final_run
    - tides_only_3D_final_run
    - [MODEL]_source_code.compressed

Each MODEL run should contain:

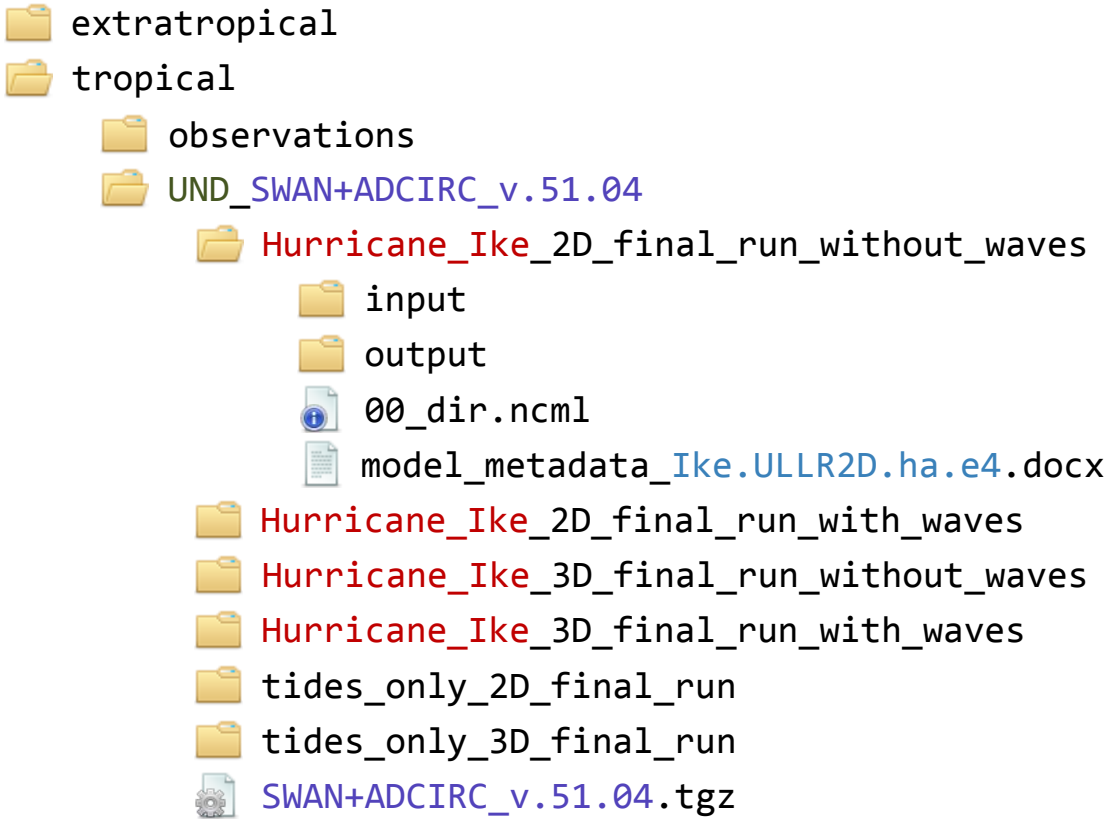
- An input directory with all necessary data and configuration inputs
  this combined with the binary should allow reproduction of outputs
- An output directory with the model results for comparison and analysis
- An NCML file used for adding metadata and aggregating the datasets **(RELATIVE PATHS)**
- Metadata document describing the simulation (DOC or PDF)

Example

UND ADCIRC run of Hurricane Ike - 2D without waves

Field	Value
[ORGANIZATION]	UND
[MODEL]	SWAN+ADCIRC_v.51.04
[CASE]	Hurricane Ike
[DESCRIPTION]	Ike.ULLR2D.ha.e4

Example



[ORGANIZATION]	UND
[MODEL]	SWAN+ADCIRC_v.51.04
[CASE]	Hurricane Ike
[DESCRIPTION]	Ike.ULLR2D.ha.e4

Example

Where possible, include preliminary runs as well
Shown in yellow are various preliminary runs included by UND

- extratropical
- tropical
  - observations
  - UND_SWAN+ADCIRC_v.51.04
    - Hurricane_Ike_2D_final_run_without_waves
      - input
      - output
      - 00_dir.ncml
      - model_metadata_Ike.ULLR2D.ha.e4.docx
    - Hurricane_Ike_2D_final_run_with_waves
    - Hurricane_Ike_2D_preliminary_run_01_spinup
    - Hurricane_Ike_2D_preliminary_run_03_spinup_with_levees
    - Hurricane_Ike_3D_final_run_without_waves
    - Hurricane_Ike_3D_final_run_with_waves
    - tides_only_2D_final_run
    - tides_only_3D_final_run
    - SWAN+ADCIRC_v.51.04.tgz

Worksheet to create new model run

Use this when you have a new model run to upload to the testbed

Field	**Values (*fill in*)**	***Example***
REGION		*tropical or extratropical*
[ORGANIZATION]		*UND*
[MODEL]		*SWAN+ADCIRC_v.51.04*
[CASE]		*Hurricane Ike*
[DESCRIPTION]		*Ike.ULLR2D.ha.e4*

1. Create [ORGANIZATION]_[MODEL] directory under REGION
2. Add [CASE] directories (2D with and without waves, 3D with and without waves)
3. Add tides only (2D and 3D)
4. Add source code [MODEL].tar.gz or zip
5. Add any available preliminary runs
6. Make sure each run directory has input, output, NCML and metadata document

How to execute existing

To execute an already submitted run

1. Obtain source code [MODEL].tar.gz or zip and compile on target machine
2. Download the full content of the input directory in the desired case
3. Execute