

Embedding iCOASST Into Practice: Model Evaluations

Model name	COASTAL ME
Evaluation date	November 2016
Version of model and operating system used	CoastalME 0.9.9 - 11 Nov 2016 Build for Intel x86/GNU C++ (14:13:36 Nov 14 2016 DEBUG build) on guinode01
Model filename	coastalme-master.zip
Manual filename and date	The Manual is in the form of a wiki site: http://www.coastalme.org.uk/
Version of windows used for the evaluation	Windows 7 Enterprise Version, 64 bit

Scorings

0: No/ Not met / Unsatisfactory / Inappropriate

0.5: Partially met / appropriate in some aspects

1: Yes / met / Satisfactory / Appropriate



Evaluation not relevant for the user type

MODEL NAME: COASTAL ME					
	E valuation Question	Score (0 / 0.5 / 1)			Comment
		For User Type 1: End User (Coastal Manager)	For User Type 2: Basic modeller (simple input changes only)	For User Type 3: Advanced modeller / model coder (application to entirely new systems / model development)	
A. WEBSITE MODEL INTRODUCTION http://www.channelcoast.org/iCOASST/introduction/	1. Is the model description on the website adequate to understand what the model is for?	1	1	1	There is a simple one line model description which adequately sums up the models function.
	2. Are relevant applications of the model explained?	0	0.5	0.5	The relevant applications of the model has not been explained. There is an example of the model being applied to simple topography, with results shown in a diagram. However, there are no typical applications described such as why a user might run this model.
	3. Are the key model assumptions and limits to the model use explained?	0.5	1	1	Yes, these can be inferred but could be clearer.
	4. Is the level of expertise required to use the model and/or use the results specified?	0	0	0	No.

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http://www.channelcoast.org/iCOASST/introduction/ B MODEL DOWNLOAD	1. Can you download the source code and/or executable/dll?		0	0.5	Yes, the source code is in the download folder acquired from the model download. The .exe is not included as the model needs to be compiled first.
	2. Are there simple instructions to install, with images if needed?	0	0	0.5	<p>Instructions are not included however, to download the model and source code is straight forward enough for these not to be needed. To compile the model requires further instructions which are located in the user manual, and not explained on the website.</p> <p>When compiling the model an extra line of code is needed that is not included in the instructions. The model can then be compiled successfully.</p> <p>NOTE: Having to compile the model after download may be due to the model still being in development.</p>
	4. Are the model boundary conditions explained?	0	0	0	The boundary conditions are not explained on the website.

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C. MODEL USER MANUAL	1. Is the user manual easy to read , user friendly and comprehensive?	0	0.5	0.5	<p>The user manual is user friendly but not easy to read, unless you are a modeller, and not very comprehensive. The user manual is a website and not in a normal pdf format.</p> <p>The user manual mentions that the model combines SCAPE and COVE but does not go into much depth on what these models do or how they work. The basic formula that underpins the model is not shown.</p> <p>There are some good descriptive diagrams and contents page making it user friendly.</p> <p>The language is fairly technical and hard to follow.</p> <p>There is no example of a 'real life' application.</p>
	2. Is there sufficient information provided on what the model is doing and how it works?	0.5	0.5	0.5	<p>The user manual explains what the model does but lacks information on how it works. There is a very brief description of how it works and also goes into minimal detail about the model structure. The basic formula that underpins the model is not shown. The figures within the user manual are very helpful.</p>

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					From the information given a user could run the example inputs through the model but they would find it hard to run a new/different dataset.
D. MODEL INPUTS	1. Is example model input data available to download and enough information provided to understand what they data represents?		0.5	0.5	Example input data can be downloaded and the user manual tells you that the .dat file contains the configuration parameters. It does not explain the other input files. The example (proof of concept example/ not real life) available to download on the CCO website is different from the example inputs and outputs created when the model is compiled from github.
	2. Are all input parameters expanded / explained? Are ranges of values to be used indicated? Are required units provided?		0	0	There is no information as to what the input parameters within the steering file represents. These are partially explained in the steering file itself but not in the user manual.
	3. Are timescales and date stamp inputs explained?	0	0	0	No. These are only indicated within the steering file with comments.

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	4. Are there any errors when you enter the compiled example data/input parameters?		1	1	The model was compiled using github so the inputs tested here are also extracted from there (not from the cco website- tried running the cco website inputs with the compiled model from github but it was searching for the wrong input .dat file so would not run). The example inputs extracted from github run in the model successfully.
E. MODEL RUNS	1. Does the model run successfully with the data provided?		1	1	Yes when using the github download, but not with the CCO download.
	2. Is information provided in the Manual on the operation system required and pre-requisites in terms of software?		0.5	1	Yes these are included in the installation guide.
	3. Is model calibration/validation discussed in the Manual?	0	0	0	No

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	4. Have you been able to successfully run another example that is different to the one provided?		0	0	
	5. Are potential errors and bugs dealt with in the manual?		0	0	
F. MODEL OUTPUTS	1. Are the output file headings explained in the Manual?	0	0	0	It is stated that there can be both raster and vector outputs and there is reference to some example outputs.
	2. Is the meaning of each of the output variables explained in the Manual?	0	0	0	Non-existent.
	3. Is there a description of how to process (tabulate and display) the output data?		0	0	The outputs are shape files and tiffs that can be viewed in ArcGIS, but there is no information about processing or representing the data.

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G. OTHER	1. Does the Manual make further recommendations for reading and supply references?	1	1	1	Yes there are three references listed.
	2. Is the Contact information completed?	1	1	1	Yes.
	3. Is the email address valid ?	1	1	1	Yes, had a reply to test email.

Recommendations table for model developer

Recommendation by HRW	Action response
Inclusion of relevant applications on CCO website.	
It is unclear the level of expertise needed to use the model , especially when there is a fair amount of technical language within the user manual.	
Currently the model needs compiling after download, however, clearer instructions and pre-requisites are needed to do this. It would be preferable to have this model already compiled but this may be due to the fact it's under development.	
Include boundary conditions on CCO website.	
The user manual could include an explanation of SCAPE and COVE, with the formulae that underpins the model.	
More information on the model structure is needed in the user manual (adding detail to how the model works).	
The inputs and outputs sections needs more clarity, by providing definitions, units and examples (currently these are located in the .dat and log file). The log file does not seem to be enough alone to understand the outputs.	
Currently- the model only runs with the example on GitHub and not when using the one from the CCO website. The CCO website needs to be updated when the development is finished.	
There is currently not enough information in the user manual to run the model with another example. A suggestion may be to provide an explanation on how to set up the input files.	
An example plot or description of how to represent the data would be useful within the user manual.	