

Tethys and Annex IV Quarterly Report Q1 FY2015
Pacific Northwest National Laboratory
December 2014

In Q3 of FY2014, PNNL solicited peer reviews of *Tethys* from Annex IV analysts and other MHK and OSW practitioners. A total of 101 comments were received from eight different countries including, Ireland, Japan, Portugal, Spain, United Kingdom, Canada, Switzerland, and the United States. All comments and feedback were organized into two separate comment matrices; one for all the comments from the MHK practitioners including the Annex IV country analysts, and one for the feedback received from the OSW practitioners. Complete comment matrices for both MHK and OSW comments are attached at the end of this report.

The purpose of this report is to summarize modifications made to *Tethys* as a result of the FY14 peer review. The modifications made to *Tethys* are discussed below and are separated by marine renewable energy type: MHK and offshore wind. This report also provides an overview of the Q1 *Tethys* metrics and goals for FY2015.

Q1 Progress Measure (water):

Tethys performance metrics will be revised, and peer review feedback will be incorporated in the *Tethys* database.

Q1 Progress Measure (wind):

Incorporate results of peer review into *Tethys* and refine yearly performance metrics.

Comments from MHK Practitioners

A total of 76 comments were compiled from seven different MHK reviewers. The following table summarizes the main ideas that were either repeated or determined to be insightful, along with how PNNL addressed each of the suggestions and comments or why these suggestions may not be addressed at this time.

Comment	Response
Some questions identified confusion about how certain <i>Tethys</i> functions work (i.e. discrepancy in numbers between KB and Map).	These questions were clarified in the <i>Tethys</i> FAQ section (http://tethys.pnnl.gov/tethys-frequently-asked-questions).
PNNL and <i>Tethys</i> should send out an email for news, updates, blogs, webinars, etc.	PNNL is now accomplishing this with bi-weekly <i>Tethys</i> Blasts, distributed to the <i>Tethys</i> community. More information on this, including past blasts and registration information, can be found at the <i>Tethys</i> Blasts page (http://tethys.pnnl.gov/tethys-blasts).
Users reported difficulty with finding and using the <i>Tethys</i> commenting function.	PNNL is exploring the option of adding a new commenting feed to display the most recent comments on the home page. This would not only

	allow users to see the most recent comments, but would also promote commenting.
Several users identified new documents and databases that should be added to <i>Tethys</i> .	These additions have been added to the <i>Tethys</i> knowledge base and database list.
Several reviewers felt that “ <i>Tethys</i> Community” and “Institutions” was too duplicative.	“Institutions” will be renamed as “Experts”, and will be manually updated to list researchers and other experts who present at conferences and other scientific gatherings. <i>Tethys</i> Community is automatically populated by user profiles.
Users would like to know the date when Annex IV metadata forms were last updated.	Each Annex IV metadata page now displays the data of when the form was last updated. (http://tethys.pnnl.gov/annex-iv-sites/sotenas-project).
Users expressed the need for <i>Tethys</i> to strengthen its capacity to provide information about its community members.	PNNL plans to improve the landing pages from authors and link user profiles to make the site more dynamic.
<i>Tethys</i> should devote a page for MHK and OSW topics in the news;	PNNL is currently developing an RSS feed for this purpose. This addition should be publicly available in early February.
There was user confusion about the blue clustering method used on the <i>Tethys</i> map viewer.	PNNL may need to revisit the <i>Tethys</i> map viewer, and the overall approach taken to symbolize clusters on the map. There are several different clustering options, and as more content is added, other map additions and modifications may need to be considered.
The Regulations Frameworks needs to be updated.	PNNL will contact country analysts in 2015 to provide more information and assistance with this task.
The experts list is a very useful aspect of <i>Tethys</i> , and should be made more visible for users.	This comment has been noted, and PNNL will continue to think of ways to draw more attention to the <i>Tethys</i> expert’s page.
Commenting on content is an interesting idea, but it may not be very appealing to this professional community. Promoting users to ask questions or opening a dialogue may be more suitable.	This has been noted and PNNL will continue to think of new ways to promote more commenting and dialogue amongst its users. PNNL will also be integrating a new comment box at the bottom of each page to promote users to post general questions and comments. This functionality will not facilitate dialogue between users, but may be helpful with answering questions and receiving feedback.
Users thought it may be useful to conduct a survey on the <i>Tethys</i> community to see what social media outlets are the most commonly used.	The <i>Tethys</i> team has discussed social media strategies with other experienced PNNL scientists, and has decided to remove the <i>Tethys</i> LinkedIn page.
The blog could be more useful if it focused more on discussions or reviews of current environmental research rather than a traditional blog.	PNNL has noted this and is currently in the process of changing the blog to encompass more current research and news, as opposed to a traditional blog. Links will also be included on the home page to give these news stories more visibility.

Comments from OSW Practitioners

A total of 25 comments were compiled from three different OSW reviewers. The following table summarizes the main ideas that were either repeated or determined to be insightful, along with how PNNL addressed each of the suggestions and comments or why these suggestions may not be addressed at this time.

Comment	Response
Users need more motivation and incentives to use the commenting and rating features on a more frequent basis.	PNNL is downplaying commenting and rating until user profiles before more common. At that point, work will be done to publicize.
Users suggested the addition of more technical reports such as NEPA and other permitting documents.	While several of the suggested documents were already in the <i>Tethys</i> knowledge base, several more were added.
Users would like to sort the content the Experts page alphabetically.	This is currently a hard-coded list and not possible. At some point, work will be done to change this to a dynamic page connected to user profiles, at which point many search functions will be added.
External links currently open in the same tab, losing the users original page within <i>Tethys</i> and causes confusion.	PNNL is working on forcing all external links to open in a new tab, and will eventually add a symbol after the link to designate that it is an external link opposed to an internal one.
Users felt that it is important for <i>Tethys</i> to link to other existing or planned services that house project specific or subject matter data.	PNNL acknowledges this comment and will continue to try and expand the list of other related databases, particularly those that have more project specific information.
Users thought the site may be difficult to navigate at first. Suggest possibly creating a <i>Tethys</i> user guide video.	PNNL has added a 'Tips for <i>Tethys</i> ' page, a guide to using <i>Tethys</i> with visuals. Further information is also available in the FAQ.
Several users thought the map should provide access to more specific information for individual offshore wind farms. Additionally, to make the map easier to use, users should be able to filter the map items while the map is zoomed in, and stay focused on the current map.	The map already provides links to more details including reports and research specific to individual wind farms. As PNNL continues to redefine the map, these suggestions will be considered to enhance the user experience with the <i>Tethys</i> map viewer.
Instead of social media, users thought it would be more effective to send out email alerts to notify users of added content and information.	PNNL will continue to maintain social media accounts, but more energy is now being focused on sending out bi-weekly <i>Tethys</i> blasts.
Users thought that it took too long to subscribe to <i>Tethys</i> blasts, and a confirmation should be sent much sooner.	The subscription has been changed. A webform subscription is not possible because of the firewall, so users must send in a blank email as specified on the page. A confirmation email is sent immediately after subscription.

***Tethys* Progress Measures**

The performance and quality of content within *Tethys* are evaluated through three performance measures. These mechanisms are described below, and provide a means for assuring accountability and functionality of *Tethys* and Annex IV.

Activity measures track objectives, directly observable events, performance levels, or similar metrics based on direct observation of programmatic activities. In the context of a web site, examples of activity measures include the number of visits, pageviews, and other such metrics. While activities can play an important role in managing a program, they typically are only indirectly related to actual programmatic outcomes, and often this relationship is not a clear cause-effect relationship.

Outcome measures attempt to directly measure the impact of the programmatic activity in achieving the programmatic goals. In the case of *Tethys*, outcome measures should track improvements in the accessibility of and utilization of environmental information relevant to the wave, tidal, OTEC, and offshore wind communities.

Proxy measures assess inherently subjective goals such as “accessibility” and “effectiveness of collaborations”. These measures are used when a qualitative or quantitative link can be established (or is assumed) between an activity and an outcome. For example, positive feedback from users, increased use of the site, and user commenting on documents and blog entries are all indicators of increased access. Initial reporting for *Tethys* will focus on these quantitative metrics with the goal of identifying and incorporating metrics for the more inherently subjective goals of the site (e.g., putting information into context) as we gain user experience. As a consequence, this plan will be updated annually.

Both activity and outcome measures are evaluated on a quarterly basis through the reporting of the quarterly metrics. These metrics provide insight to how often users are accessing *Tethys*, and how new additions and functionalities to the site are perceived and used by the user community. The proxy measures are qualitative in nature, and are primarily measured on an annual basis through the *Tethys* peer review. While the annual peer review provides a benchmark for the proxy measures on an annual basis, they can be extrapolated for the rest of the year through monitoring the quarterly metrics, along with verbal and written feedback.

Due to the fact that the overall performance of *Tethys* has thus far been evaluated using these three measures, and these measures have provided an effective means of evaluating the performance and content of *Tethys*, PNNL suggests that no changes be made to the current performance measures.

Performance Metrics for Q1 FY2015

The table below lists the metrics and goals identified in the *Tethys* Management Plan, as well as the data collected in Q1 (October 1 2014 – December 31 2014). The last 11 days of December have been omitted from results in order to summarize and report findings by the Q1 deadline. As such, all values before this date were artificially increased by 12% to account for the missing days (11 missing days / 92 days in the quarter = 12%). Performance metrics representing the entire span of Q4 will be available on *Tethys* after December 31st, along with additional information providing past metrics, reports, and a list of recently added documents at: <http://tethys.pnnl.gov/deliverables>.

Metric	Goal	Q1 Progress	Compare to Q4 Data
Total Visits	10% increase on annual basis, to be tracked on revolving quarterly basis.	6,546 users; 9,577 visits	Q4: 6,142 users; 8,872 visits 6.6% increase in users; 7.9% increase in visits
Total Pageviews	10% increase on annual basis, to be tracked on revolving quarterly basis.	64,434 pageviews	Q4: 40,177 pageviews 60.4% increase
Average Pages per Visit	No goal, but activity should be tracked on revolving quarterly basis.	6.73 pages/visit	Q4: 4.53 pages/visit 48.6% increase
Number of Documents Indexed	Increase by 25 documents per quarter.	1551 documents	Q4: 1472 documents +79 documents; 30 OSW, 38 MHK
Number of External Websites Linked to <i>Tethys</i>	No goal, as this is outside of our control, but active outreach may increase.	40 domains	Q4: 34 domains +6 domains
Number of Websites Linked from <i>Tethys</i>	Increase by 10 links per quarter.	1804 links	Q4: 1598 external links +206 links
Percentage of Valid Links in <i>Tethys</i>	90% working links at any time.	98.9% links	Q4: 99.2% links 0.3% decrease

There are also two proxy measures that assess inherently subjective goals. In the absence of quantifiable goals, the PNNL team instead provides examples to evaluate the success of these metrics. The goals and their outcomes are described in the table below.

Metric	Definition	Goal	Outcome
Increased functionality and usefulness of site	<i>Proxy measure</i> – <i>Tethys</i> should constantly be adding and enhancing functionality based on community feedback.	Continued improvements annually; determined by annual peer review of 4-6 individuals. Continued improvements in the site, based on responses to spot surveys.	39 development tickets completed. Notable improvements include (1) the Organization page and associated linkages, (2) the incorporation of WREN into <i>Tethys</i> , and (3) the move to a new PNNL server capable of sending out emails.
Availability of information useful to users	<i>Proxy measure</i> – This perception is based on how well users can navigate <i>Tethys</i> , how clean the information appears, how much information is available, and more. Ratings, comments, and direct feedback may be used as an indicator when available.	The majority of site users are satisfied with the information they retrieved from <i>Tethys</i> .	No complaints were received. Some users submitted documents and expressed approval of <i>Tethys</i> . Feedback during conferences was positive.

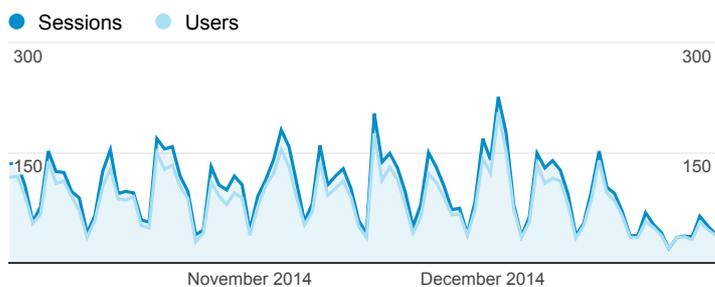
Client Dashboard

Oct 1, 2014 - Dec 31, 2014

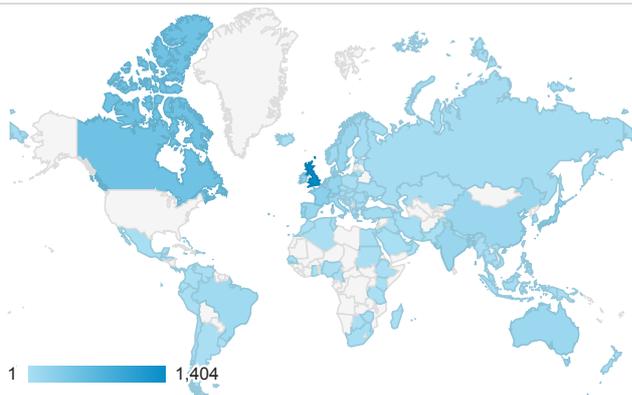
All Sessions
100.00%

+ Add Segment

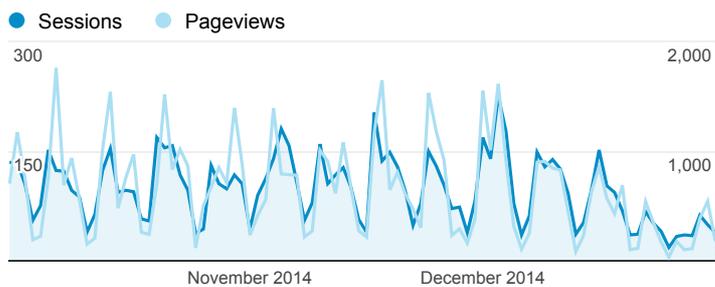
Visits and Unique Visitors



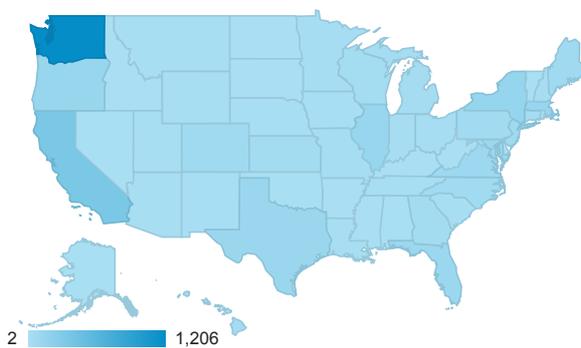
Visits per Country (excluding the U.S.)



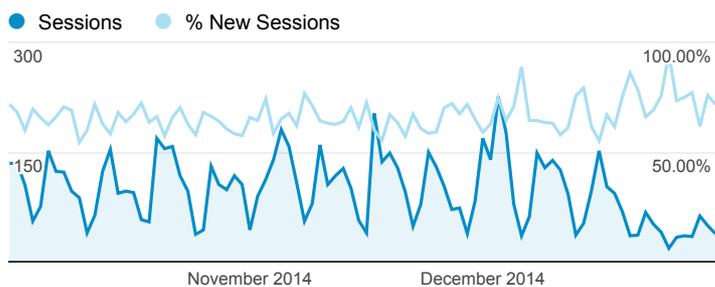
Visits and Pageviews



Visits per State



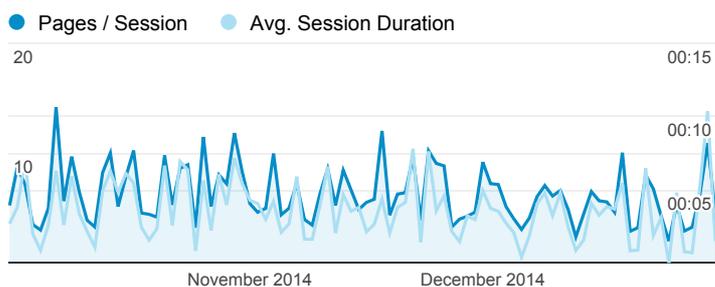
Visits and % New Visits



Top Source / Mediums

Source / Medium	Sessions	Bounce Rate
google / organic	4,680	0.04%
(direct) / (none)	2,089	3.30%
en.wikipedia.org / referral	704	0.14%
bing / organic	210	0.00%
websearch.pnl.gov / referral	137	0.73%
yahoo / organic	113	0.00%
en.m.wikipedia.org / referral	79	0.00%
en.openei.org / referral	75	0.00%
jira.pnnl.gov / referral	73	0.00%
energy.gov / referral	63	0.00%

Pages / Visit and Avg. Visit Duration



Top Pages

Page	Sessions	Bounce Rate
/	2,005	1.05%
/annex-iv-sites/la-rance-tidal-barrage	238	0.42%
/technology-type/wave	212	0.00%
/technology-type/tidal	184	0.00%
/annex-iv-sites/sihwa-tidal-power-plant	179	0.56%
/annex-iv-sites/admiralty-inlet-pilot-tidal-project	114	0.00%
/publications/san-juan-islands-tidal-currents	112	0.00%
/knowledge-base	110	0.91%
/technology-type/otec	102	0.98%
/annex-iv-sites/jiangxia-pilot-tidal-power-plant	84	0.00%