

FY15 Annual Report on *Tethys* Offshore Wind

During FY2015, PNNL staff continued to expand the content and functionality of offshore wind (OSW) on *Tethys*, and initiated the addition of land-based wind (LBW) on the Knowledge Base and Map Viewer.

OSW Peer Review Results:

There were eight respondents to the peer review with a background in offshore wind. In general, the majority of feedback was not content specific. For example, comments included a range of feedback on general attributes within *Tethys* – e.g. page layouts, functionality of the map viewer and knowledge base, and social media platforms. In the few instances where there was input related to wind content, the general theme suggested that wind was underrepresented compared with wave and tidal content. Detailed feedback included suggestions for additional content on wind farm layouts, power rates of various wind turbines, and wind effects on habitats and wildlife. There were also suggestions to include various wind related documents and list government agencies, and institutions involved with wind energy development. Some reviewers also requested improvements to the knowledge base to better facilitate access to wind specific content.

Based on a combination of peer review feedback as well as previously planned work activities, the number of wind documents in *Tethys* has increased significantly during FY15. OSW content now includes over 900 documents and there are nearly 600 newly added LBW documents. In addition to documents, there have been efforts to incorporate wind content throughout *Tethys*. Examples include additions to connections (e.g. organizations and databases), and broadcast pages (e.g. *Tethys* Stories and webinars). The expansion of wind content and integration throughout *Tethys* will continue during FY16. Additional work planned for FY16, based on peer review feedback, includes improvements to the knowledge base that allow users to load only wind content and expands filters to better capture a suite of receptors relevant to wind content.

Performance Metrics for OSW *Tethys*

Performance metrics are collected and analyzed quarterly and annually for *Tethys*. Metrics and goals were defined in the *Tethys* Management Plan, developed in FY14. The metrics have been calculated from October 1st 2014 to September 20th 2015; the last 10 days of September have been estimated and the totals extrapolated to include a full year of data (Table 1). Unadjusted metrics, reports for previous quarters, webinar attendance, and a list of recently added documents are available on *Tethys* at: <http://tethys.pnnl.gov/deliverables>.

Table 1. Annual Performance Metrics for Tethys during FY2015

Metric	Goal	FY2015	Compared to FY2014 Data
Total Visits	10% increase on annual basis, to be tracked on revolving quarterly basis.	39,413 visits	FY2014: 36,653 visits 7.5% increase
Total Pageviews	10% increase on annual basis, to be tracked on revolving quarterly basis.	267,930 pageviews	FY2014: 111,177 pageviews 247.6% increase
Average Pages per Visit	No goal, but activity should be tracked on revolving quarterly basis.	6.98 pages/visit	FY2014: 3.03 pages/visit 230.4% increase
Number of Documents Indexed	Increase by 25 documents per quarter.	2458 documents	FY2014: 1,458 documents +1000 documents; 310 OSW, 195 MHK, 532 LBW
Number of External Websites Linked to <i>Tethys</i>	No goal, as this is outside of our control, but active outreach may increase.	82 domains	FY2014: 34 domains +48 domains
Number of Websites Linked from <i>Tethys</i>	Increase by 10 links per quarter.	2907 links	FY2014: 1598 external links +1309 links
Percentage of Valid Links in <i>Tethys</i>	90% working links at any time.	This number varies by quarter based on the number of broken links. Any broken links are fixed during this quarterly check.	

***Tethys* FY2015 Highlights and Key Findings**

- The number of new *Tethys* users has been gradually increasing, but at a slightly slower rate than occurred in FY14, after the migration to the Drupal site. However, the number of pageviews sharply increased by almost 250%, very clearly showing that we are attracting interested users who are exploring *Tethys* further and longer, accessing the content more deeply.
- Additional *Tethys* features developed over the last year include:

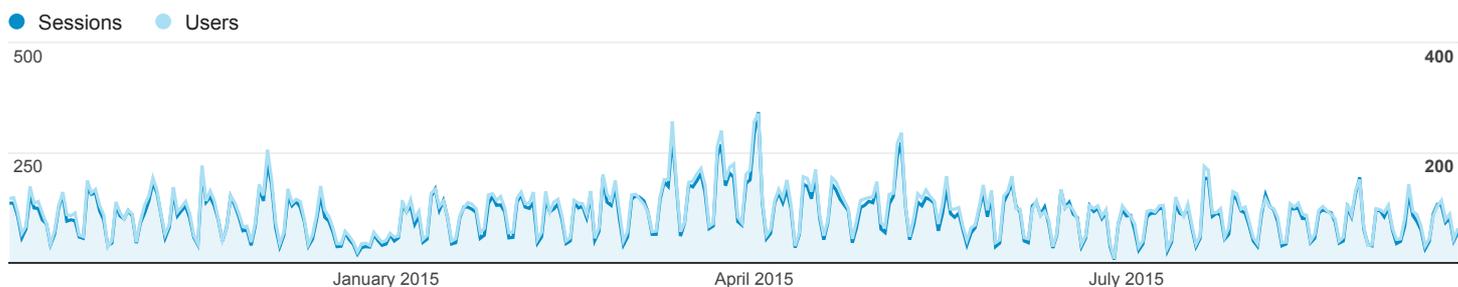
- An interactive calendar was created on the home page that lists events such as webinars, conferences, meetings, workshops, abstract deadlines, and more. This small calendar leads to a full-sized calendar page that shows events in more detail. The calendar works in conjunction with the rotating announcements on the home page to ensure that users are well informed of relevant events.
- WREN material is now hosted on *Tethys*. A password-protected membership page was created to facilitate WREN activities such as white papers and meetings. A public-facing replica of this page provides some limited information and acts as the “home page” for WREN. Almost 600 land-based wind documents were added to *Tethys*, along with over 300 offshore wind documents as part of an effort to reach “critical mass” with environmental wind documents.
- Initial steps have been taken to integrate the wind and water components of *Tethys*, to accommodate users while not overshadowing either industry with the other. Connections and Broadcasts pages have been integrated to allow users to toggle between wind, water, or both.
- Several improvements have been made to the Knowledge Base, including the loading speed keeping pace with the dramatically increased size of the database. Targeted keyword search was added to allow users to select a specific field for searching within. A new notification at the bottom of the *Tethys* page indicates how many documents have loaded and how many remain to be loaded, providing better visual cues to users.
- A new Feedback Box was created in the footer to allow users to more easily communicate with the *Tethys* team. This development required the implementation of new anti-spam tools that have proven very effective thus far.
- Over 300 new organizations were added to *Tethys* as pages that include a description, logo, link, and a table listing all related documents by that organization that are hosted on *Tethys*.
- A new *Tethys* Blast was released every other Friday morning during FY15, for a total of twenty - six *Tethys* Blasts. The list for *Tethys* Blast dissemination grew from 542 to 801 individuals, a growth of 259 new subscribers over the year.
- Five *Tethys* stories were released during FY15. One of the stories generated considerable discussion, as author Cris Hein sought to foster international discussion.
- The effort to contribute to social media has been very low during FY15, with PNNL staff providing occasional posting to announce webinars and *Tethys* stories. The Facebook page currently has 110 likes and the Twitter account has 152 followers and 91 favorites.

Printout for U.S. Department of Energy

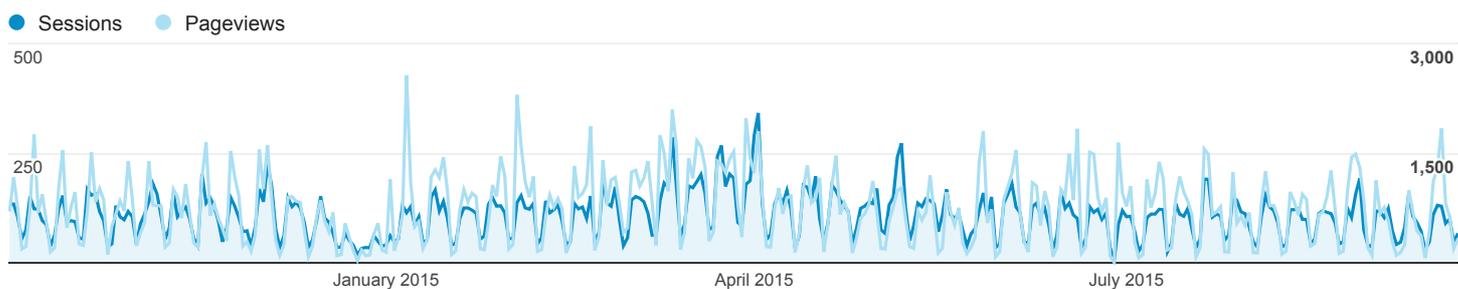
Oct 1, 2014 - Sep 20, 2015

All Sessions
100.00%

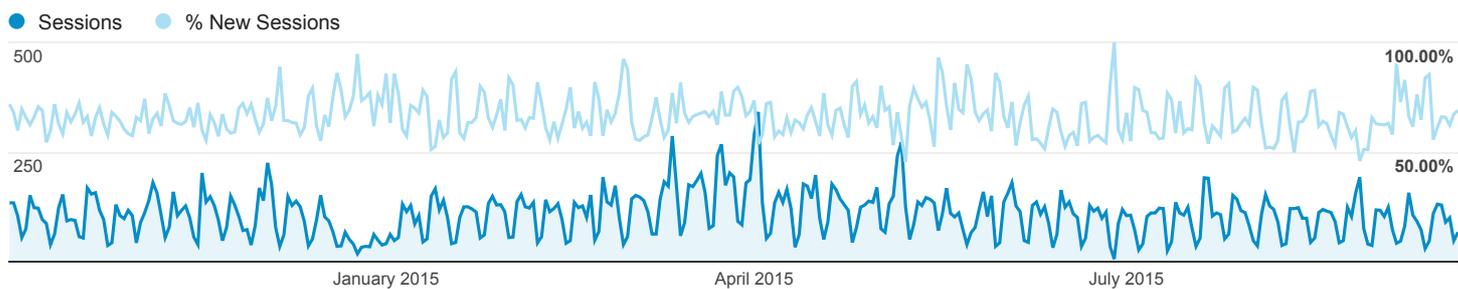
Visits and Unique Visitors



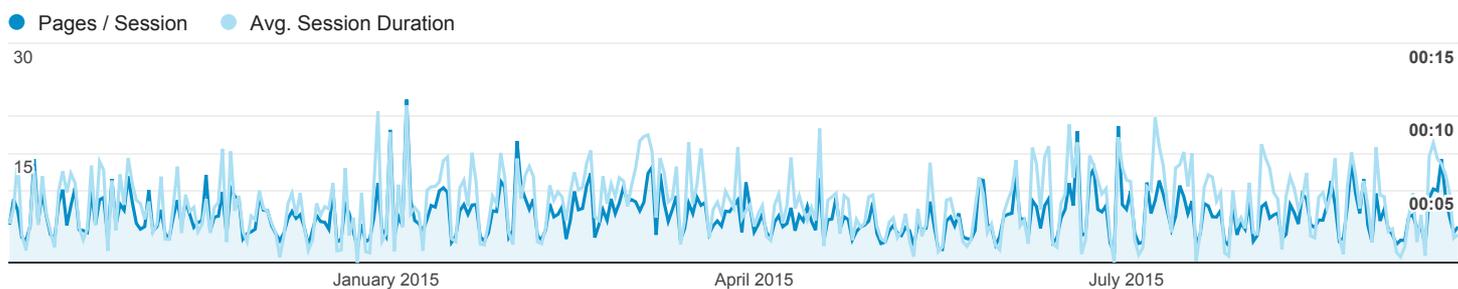
Visits and Pageviews



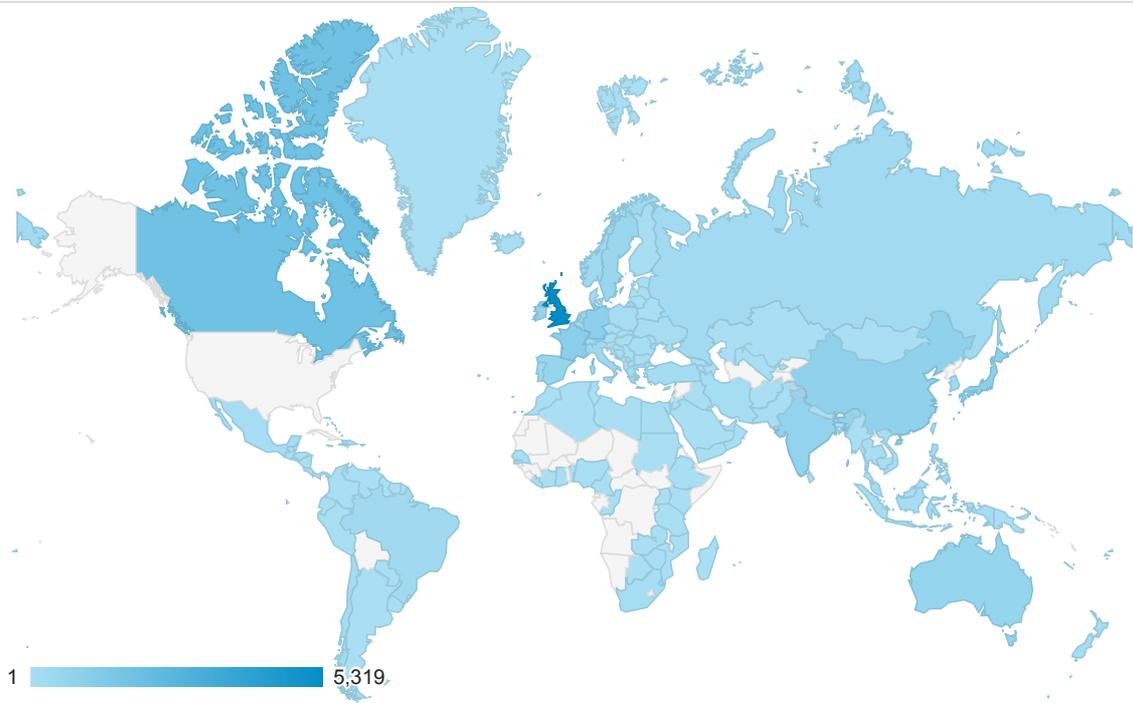
Visits and % New Visits



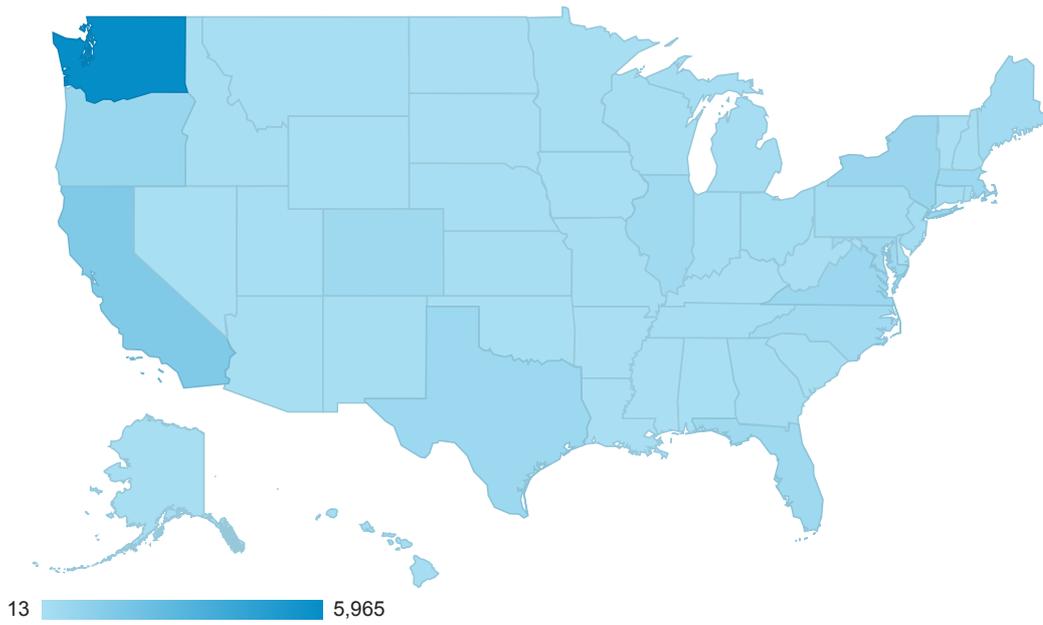
Pages / Visit and Avg. Visit Duration



Visits Per Country (excluding the U.S.)



Visits Per State



Visits and Bounce Rate by Source / Medium

Source / Medium	Sessions	Bounce Rate
google / organic	18,715	0.08%
(direct) / (none)	10,737	7.25%
en.wikipedia.org / referral	1,770	0.06%
bing / organic	930	0.00%
yahoo / organic	594	0.00%
websearch.pnl.gov / referral	435	0.46%
jira.pnnl.gov / referral	338	0.00%
social-buttons.com / referral	333	100.00%
energy.gov / referral	258	0.00%
links.govdelivery.com / referral	223	0.00%

Visits and Bounce Rate by Page

Page	Sessions	Bounce Rate
/	8,076	10.81%
/publications/san-juan-islands-tidal-currents	1,050	0.10%
/events/webinar-3-understanding-avian-collision-rate-modeling-and-discussing-what-means-population	882	0.00%
/technology-type/wave	709	0.42%
/annex-iv-sites/la-rance-tidal-barrage	676	0.30%
/technology-type/tidal	498	0.60%
/knowledge-base	464	1.51%
/events/effects-electromagnetic-fields-marine-animals-webinar	412	0.00%
/events/avian-sensitivity-mapping-and-wind-energy	384	0.00%
/annex-iv-sites/sihwa-tidal-power-plant	381	0.52%