World Flora Online 14th Council meeting – Final Report

The 14th World Flora Online Council meeting was held on **29th September, 2020**. Meeting times were 7.00am in St Louis, Missouri, USA; 8.00am in New York, USA; 1.00pm in Edinburgh and Kew, U.K.; 2.00pm in Paris, Geneva and much of Europe; 3.00pm in Istanbul, Turkey and St Petersburg, Russia; 8.00pm in Beijing, China; 10.00pm in Canberra, Australia. The meeting was held virtually using Zoom and was two hours in duration.

Minutes of the Meeting

The participants were welcomed by the Council's co-chairs, Peter Wyse Jackson and Pierre-André Loizeau. The Agenda was adopted. Peter Wyse Jackson mentioned that a report on progress with the World Flora Online project had been included in the Plant Conservation Report, published recently by the Convention on Biological Diversity, outlining progress towards the achievement of the 16 Targets of the Global Strategy for Plant Conservation. He reported that currently only Target 1 on the development of a World Flora is set to be achieved by the end of the year. He also further suggested that the priorities for the WFO in 2020 will be to continue to enhance and build the content of the WFO, further improve the taxonomic backbone and support the growing networks of Taxonomic Expert Networks. He proposed that when the Council has the opportunity to meet again in person, hopefully in 2021 in Meise, Belgium, that a comprehensive strategic planning exercise can be undertaken to outline the further development of the WFO for the coming decade.

The acceptance of an extensive paper on the World Flora Online by the journal Taxon was noted. Its lead author Thomas Borsch was congratulated for his work and leadership in guiding the paper to completion since it was first proposed in 2015.

The Minutes of the last in-person meeting of the Council (St Louis, November 2019) were reviewed and adopted.

Apologies were received from the following Council members who were unable to attend: Valiza Alizade (Azerbaijan), Walter Berendsohn (Germany), Maïté Delmas (France), Alan Paton (UK) and Eric Smets (Netherlands)

An update on the WFO Portal progress was provided by William Ulate. This was followed by Working Group Reports:

- Report from the Taxonomic Working Group - by Mark Watson

- Progress with the establishment and development of Taxonomic Expert Groups (TENs) and the proposed new 'About' the WFO web pages - by Alan Elliott
- Report from the Technical Working Group - by Chuck Miller

A series of recommendations were made by the two working groups and presented to the Council. All of these recommendations were endorsed by the Council and are therefore accepted as Decision. Details of each recommendation are provided below. The status of Action points from the last meeting were reviewed and progress outlined. A new data sharing agreement with WoRMS in relation to the incorporation of Compositae data into the WFO was proposed by Alan Elliott and adopted by the Council. This will be signed by the Co-chairs.

A report and demonstration on progress with the Botalista software was presented by Raoul Palese and Gael Boquet.

There being no further matters to be considered by the Council, the meeting adjourned.

The next meeting of the Council will be held in November, 2020 on a date to be agreed.

COUNCIL DECISIONS

Recommendation 1: Council to approve the renaming of Adoxaceae to Viburnaceae in the Taxonomic Backbone, and delegate authority to the Taxonomic WG for making future purely nomenclatural corrections to the higher classification used in the Taxonomic Backbone.

Recommendation 2: Council to take into consideration the principles put forward by Garnett et al. in their paper '*Principles for creating a single authoritative list of the world's species*' in the post 2020 strategic planning review for WFO.

Recommendation 3: Council to approve the two TENs as proposed by the Taxonomic WG:

Taxon	# spp.	TEN Focal Point
Sapindaceae subfam. Hippocastanoideae	180	Dan Crowley (BGCI) Global Conservation Consortium for Acer
Meconopsis & *Cathcartia*	94	Alan Elliott (E) Meconopsis Group

Recommendation 4: Council to sign the data sharing agreement with the Compositae Alliance [joint recommendation of Taxonomic and Technical WGs]

Recommendation 5: Council to approve the setting up of a virtual server on the WFO Google Cloud for use by RBGE to install the Content Management System and continue development of the new About Pages.

Recommendation 6: Council to encourage partners to submit information on their institution for the About Pages.

Recommendation 7: Council to approve creation of a Technical Working Group subgroup to investigate using the GBIF process for creation of DOIs for WFO data.

All these Recommendations were adopted by the Council and become Decisions.

Attendance
Pierre-André Loizeau, Conservatoire et Jardin Botaniques, Geneva, Switzerland (co-chair)
Peter Wyse Jackson, Missouri Botanical Garden, USA (co-chair)
Rasim Murat Aydinkal, Nezahat Gokyigit Botanic Garden, Resimli Flora Turkey Project
Olaf Banki, Catalogue of Life, Project of Naturalis, Netherlands
Gael Boquet, Conservatoire et Jardin Botaniques, Geneva, Switzerland
Thomas Borsch, Botanischer Garten und Botanisches Museum, Berlin, Germany
John Brinda, Missouri Botanical Garden, USA
Eduardo Dalcin, Instituto de Pesquisas Jardim Botânico do Rio de Janeiro, Brazil
Alan Elliott, Royal Botanic Garden, Edinburgh, Scotland
Peter, Fritsch, Botanical Research Institute of Texas (BRIT), USA
Anne Fuchs, Australian National Botanic Gardens (ANBG), Canberra
Dmitry Geltman, V. L. Komarov Botanical Institute of the Russian Academy of Sciences, St Petersburg, Russia
Adil Güner, Nezahat Gokyigit Botanic Garden, Resimli Flora Turkey Project
Thomas Haevermans, Muséum National d'Histoire Naturelle, Paris, France
Marianne Le Roux, South African National Biodiversity Institute (SANBI), Pretoria
Geoffrey Levin, Flora of North America, USA and Canada
David Middleton, Singapore Botanic Gardens
Chuck Miller, Missouri Botanical Garden, USA
Jim Miller, Missouri Botanical Garden, USA
Joe Miller, Global Biodiversity Information Facility (GBIF), Denmark
Raul Palese, Conservatoire et Jardin Botaniques, Geneva, Switzerland
John Parnell, Herbarium, Botany Department, Trinity College, Dublin, Ireland
Colin Pendry, Royal Botanic Garden, Edinburgh, Scotland
Lauren Raz, National University of Colombia (in Bogota), Colombia
Rashad Salimov, Institute of Botany Azerbaijan National Academy of Sciences, Azerbaijan
Dalila Espírito Santo, European Consortium of Botanic Gardens, Portugal
Marc Sosef, Botanical Garden Meise, Belgium
Rob Turner, Royal Botanic Garden, Kew, UK
William Ulate, Missouri Botanical Garden, USA
Visotheary Ung, Institute de Systematique Evolution Biodiversite, MNHN, Paris, France
Warren Wagner, Smithsonian Institution, Washington D.C., USA

Mark Watson, Royal Botanic Garden, Edinburgh, Scotland

Anthony Whalen, Partnerships and Science Park AU ANBG; Australian Biological Research Study, Australia

Annex 1. Action Points

#	TASKS	WHO?	WHEN?	COMMENTS
1	**Presentations on WFO.** Take advantage of the meetings we attend to promote the WFO. Presentations to be uploaded to WFO Presentations folder in ownCloud.	All	Standing Item	Recent and next presentations: None
2	**Update current signatories.** Secretariat to maintain an archive of hard copies of any formal agreements with WFO. List of Consortium members on the WFO website to be updated.	Peter Wyse Jackson	Standing Item	New signatories since last meeting of Council: None
3	**Update Facebook page.** Keep updating FB page with news and current information.	Comms Working Group	Ongoing	Richelle Wiehe (MBG) will update FB, send images and news items to her.
5	**Videos.** Links to videos by partner institutions to be included on WFO Website.	All	Ongoing	Anyone with videos relevant to WFO, please send to the William Ulate & Alan Elliott.
6	**Enhance Production Portal with Descriptive Data.** Production portal should be enhanced with descriptive data content as advised by Taxonomic WG/Council. Send a tweet as content is loaded to Production.	William	Ongoing When ready, William Ulate will touch base with the intermediary contacts of the Content providers for the next digital resources to bring into the WFO Portal, as determined by the Taxonomic WG in order	See Tax WG report for revised priority list for harvesting. Initial harvesting of content for names matched in first name-matching process prioritized for as many datasets as possible (rather than resolving the residual un-matched names).

#	TASKS	WHO?	WHEN?	COMMENTS
			to increase the diversity of content and geographic coverage.	• Fl. Trop. East Africa & Fl. Trop. West Africa (Kew) – descriptions divided, need to be combined • IUCN Conservation Status – Pending new Version. • Improve Metadata for Images from Solanaceae & Flora of China - Pending Continue to load remaining and new datasets: • Solanaceae Source – New reharvest pending • NYBG – Flora of NE US – Still pending harvesting35,000 descriptions • Catalogo de las Plantas de Colombia –26K names - Name matching in progress (4K unmatched) Waiting for final review from Lauren. • Australian Floras – Names for vascular flora received and matched. Matched sample names from Australian endemics Families. Waiting for descriptive data. Contact? • Flora of Nepal – No data received. • Illustrated Flora of Turkey – New version in 2020 • Illustrated Treatments for Korea: Pending • Fl. Helvetica – Name matching done. Descriptions in French and German received. French harvested, German pending. • Flora do Brazil – more descriptions present In Website– Provider lacks resources • eMonocot descriptions (Kew, TBC) –PalmWeb descriptions pending harvesting

#	TASKS	WHO?	WHEN?	COMMENTS
				• New FNA data (contacted James Macklin and process of getting content has started) • Flora of Central Africa (Meise) Descriptions received - 7993 taxa –Harvesting in Test • African Plants Database – (distributions, ecology, biology) 200K names, 78K taxa. Pending. • eFloramaghreb.org - 6400 taxa – Approval needed • Leon Levy Nature Preserve Flora (Bahamas) - 646 taxa – Harvested in Test • Irish Vernacular Names - 1069 taxa –Harvested in Test
7	**Create a Harvester administration/operations guide.** The development of a Harvester administration/operation guide should be carried out immediately through testing and collaboration.	William	Ongoing	New updates should be included. Created documentation for "Name-Matching" process and made code and SQL Stored Procedures available for Geneva in Github (private MBG-CBI repository)
9	**Complete gap analysis of the portal use cases**. Complete a full analysis of the portal use case gaps, including severity of the gap, difficulty to remediate, resources to mediate and a prioritization.	Technical Working Group	Done	Priority Use Cases were assessed against the portal by the Tax WG during the St Louis meeting and report passed to the Tech WG for comment Review of Tax WG gap analysis completed and updated by Tech WG. Placed in OwnCloud Use Case folder.
10	**Implement Botalista software.** Work together to further develop Botalista as collaborative tool for	Pierre-André and Raoul	November 2020	Project delayed. Raoul would test the ingestion to Botalista of the

#	TASKS	WHO?	WHEN?	COMMENTS
	expert networks to contribute backbone data.			full version of the taxonomical backbone. Interrelated subject areas: 1. Name matching tool (for backbone and content provider seeing name quality control and eventually WFO-IDs) 2. Backbone editing tool (for TEN using Botalista) 3. Backbone ingestion workflow tools • For external TEN • For Botalista TEN 4. TEN Management Tool • Structured communication workflows between Botalista processes, data providers, and TEN Manager Priority: Name matching tool Needs intense communication between Geneva, St. Louis and backbone contributors St. Louis made local Name Matching application's Code and SQL Stored Procedures available for Geneva in Github (private MBG-CBI repository) Project delayed additional 3 months as of 9/18. Decided at Online Sept. Meeting: Discussion about Geneva proposal should

#	TASKS	WHO?	WHEN?	COMMENTS
				continue to be discussed in between meetings.
12	**Provide standards for genus and species of angiosperms and gymnosperms. Address suprafamily classification.**	TEN Manager	Done	Now complete for all groups. Pteridophytes updated to PPG I.
13	**Taxonomic Expert Networks (TENs).** 1) Identify specialists to review parts of the taxonomic backbone. When no networks exist, identify specialists to review parts of the taxonomic backbone and/or assess the quality of the treatment in the current WFO backbone. 2) Make a survey of existing global taxonomic networks and the systems used and ask if they are willing to participate in WFO 3) Update and publish the Order/Family coverage/gap analysis on About Pages of WFO website 4) Engage with WCSP Reviewers for potential TENs 5) Explore links with Yuri Roskov and COL GSDs as potential WFO TENS 6) Build on the offer of a Fern TEN to involve wider community opinions 7) Correct family name Adoxaceae to Viburnaceae	TEN Manager	Standing Item	Several tasks merged into this task. 1) 2 TENs approved by Council September 2020: Sapindaceae subfam. Hippocastanoideae, *Meconopsis* & *Cathcartia* 2) Ongoing 3) Gap analysis for plant families to be updated for higher classifications and for pteridophytes and bryophytes for September 2020. Made available online with potential contacts removed (but kept in internal version). Ongoing. 4) Ongoing. 5) Ongoing. 6) Ongoing. PPG Interested in developing an inclusive Fern TEN 7) New task

#	TASKS	WHO?	WHEN?	COMMENTS
15	**Develop markup Tools for a Toolkit.** Consolidate the Markup Tools being used; develop them to integrate them into a toolkit. - SANBI has developed Markup tools and are available for others to use. Available from GitHub: github.com/rudivs/SpeciesMarkupAddIn	Technical Working Group	Deferred at St Louis	No current update, not priority for 2020, but continue for future
16	**Communicate document on web strategy based on CBD CHM work.** Create a document on web strategy for the next meeting based on the work being done by the CBD CHM. Suggest ideas on materials like meetings where WFO should present a keynote or at least a Symposium on WFO. - Communications Committee will define Communication plan as a bigger topic. - Put someone in charge of the Social Media - Separate production of content from the website administration, tailor-make the strategy for each group in order to facilitate the prioritization. - Launch of our communications strategy to raise awareness when we have a portal that people could use. Communicate key advances and specific strategy. - Demonstrate a joint Consortium web site to promote fundraising.	Comms WG. (Eduardo Dalcin, Barbara Thiers, John Parnell)	Pending	We need to have a clear strategy on how the WFO is integrated into all of the outcomes of CBD, which requires an understanding on how the CBD works and a lot of promotion of the WFO within the CBD Mechanisms. For the Communication Strategy, define what WFO is doing in the next 6 months to be able to know what to communicate. We need to define what audience we want to attend first and use appropriate platforms to reach them. Peter Wyse Jackson may send a message to the Council asking for names of specialists who could collaborate on a Communication Plan, once we know what we want to communicate. • Draft Web Strategy created. – Istanbul • ResearchGate WFO project has been set up

#	TASKS	WHO?	WHEN?	COMMENTS
	-For a Strategy define Who they are? What to tell them? How to tell them? Who's going to tell them? And when are they going to be told? - Create a list of institutions relevant to promote WFO and interact with (previously #19)			
18	**Save the Dates.** Save the date for the 15th meeting	Peter Wyse Jackson	15th Meeting – Online, 17 November 2020	Post the report of the previous Council Meeting on the WFO website Physical meetings at Meise and Canberra deferred
29	**DOIs for datasets and downloads.** Evaluate using GBIF-generated DOIs for WFO contributed datasets and downloads (related to #68 and #75)	Technical Working Group DOI Process Subgroup	Ongoing	Requires code change Creation of metadata for downloads for DOI. Evaluate the adding DOIs to uploaded datasets and downloaded reports. Tech WG recommended in Sep 2020 formation of a DOI subgroup to assess the GBIF DOI process. Adopted by Council.
30	**WFO Darwin Core extensions.** **WFO Terms not included in Darwin Core standard:** 1. **localID:** Record identifier used by the data contributor. E.g. Tropicos ID, Flora of S Africa ID, EDIT ID 2. **Alternate Taxon/Name IDs:** E. g. Catalogue of Life ID 3. **taxonomicStatusReference:** Accepted or Synonym status	Technical Working Group	Deferred at St Louis	Write a white paper on Darwin Core extensions needed for WFO Formally request Darwin Core extensions from TDWG for WFO

#	TASKS	WHO?	WHEN?	COMMENTS
	by/according to publication. E.g. Accepted according to GrassBase 4. **sourceCitation (of the name record):** Not namePublishedIn or bibliographicCitation. E.g. Solanaceae Source is source of the Backbone name record. 5. **VerbatimSpecimenList:** Currently using Specimens extension. 6. **VerbatimDistribution:** Using "Distribution" Description Type in Descriptions.txt file 7. **Protologue:** Using Description Type of Original Publication in Descrriptions.txt file 8. **nomenclaturalNote**			
31	**Send formal request to GBIF for WFO-tailored versions of IPT and DwCA Validator, involving SANBI and Flora do Brasil**	Technical Working Group	Deferred at July 2020	Botalista replaces tailored version of DwCA Validator. Tailored IPT still needed for taxonomic and descriptive data.
33	**Resolve insufficient resources to support:** a) Software development staffing. b) Institution to maintain OwnCloud	WFO Council	Deferred to next meeting	a) Missouri is committed to providing William's role, but we have an issue with software development staffing b) Defer decision to next meeting.
38	**Formalize relation with IAPT**	WFO Council	Deferred to next meeting.	IAPT is a Member of WFO. Patrick S. Herendeen, new IAPT chair, was interested, according to Michelle Price and collaboration was examined during their last meeting in October. 2019

#	TASKS	WHO?	WHEN?	COMMENTS
39	**Catalogue of Life/GBIF**	Pierre-André Loizeau	Ongoing	Pierre-André Loizeau is the WFO representative on CoL Advisory Board GBIF will conduct a comparison between WFO taxonomy and CoL (see #85). Ongoing – delayed due to delays in CoL+ project
42	**New Names.** Implement a mechanism to deal with new names coming from Content Providers or IPNI and updating the Taxonomic Backbone, as recommended by the Taxonomic Working Group. A 'new name' is an Effectively Published name not already in the Taxonomic Backbone. Content Providers only provide one name, their accepted name of the taxon for which they are providing content	Technical Working Group	The Technical WG suggests we need to be deferred due to limitations of eMonocot ingestion process St Louis status: • IPNI IDs in progress. Name Matching done, awaiting corrections. • New IPNI names will be loaded with Status of Unchecked. • New TEN names will be loaded with Status of Accepted, Synonym or Ambiguous	Create a feedback mechanism as needed to alert TENs when a new name is incorporated in the pre-harvesting Taxonomic Backbone (eventually in Botalista). Make an agreement with IPNI to receive their annual updates of new names and new combinations. Treat new names from IPNI as if coming from a non-TEN Content Provider Export new names in the backbone in a data format appropriate for the TENs to incorporate into their own system.
44	**Duplicates.** There were 17.7k name duplications in the Taxonomic Backbone due to TPL artifacts	Taxonomic Working Group	In progress	Significant de-duplication has been done. Remaining duplicate names will be reviewed following the update of the Taxonomic Backbone with IPNI & WCVP Ongoing
47	**Nomenclatural Registration.**	Pierre-André Loizeau	Ongoing	Expression of interest to become a Registration Centre made.

#	TASKS	WHO?	WHEN?	COMMENTS
				Further work pending future developments in other Registration Centres
48	**Make modifications to the Portal** 1. Add Acknowledgements section to About page 4. Add URL Link to External Links higher taxon names to Angiosperm Phylogeny Website (orders and above) and explore similar link for Bryophyte higher ranks. 16. Add responsive GUI (size auto adjustable, upgrade to Bootstrap 4) (code change) low priority 17. Assess if order of Descriptions can be prioritized (for display). 18. Assess how to provide page hit statistics by data provider. 27 On Taxon Page revise wording as follows [with underlined words hyperlinked/popup to definitions/glossary]: • Accepted: 'This name is reported by <TEN Name> as an <u>accepted</u> name' • Synonym 'This name is reported by <TEN Name> as a <u>synonym</u> of <ACCEPTED NAME>' • Ambiguous 'This name is reported by <TEN Name> as <u>ambiguous</u>' • Unchecked 'This name is currently <u>unchecked</u> and awaiting taxonomic scrutiny' 28. Reveal hidden fields (e.g. Basionym) 29. Enable alternate classifications 30. Advise on display options to have descriptive data on the	Technical Working Group	Ongoing	NB Code changes required 1. Project level acknowledgements to be incorporated into the new About Pages (see #73) 4. APG done. PPG1 done. Bryophytes done 16. Not started. Need developers. 17. Pending 18. Pending 27. Ongoing 28. Deferred at St. Louis 29. Deferred at St. Louis 30. Pending

#	TASKS	WHO?	WHEN?	COMMENTS
	Taxon Page with alternate views: order by content provider vs by description type.			
55	**Change Content Contributor Guidelines to add how to add Authors, Editors, or other attributions to Descriptive Data.** • Embed in Source reference Bibliographic Citation	Walter, William, Chuck	Done	Content Contributor Guidelines Version 2.05 includes use of bibliographicCitation for attributions and some added fields. Posted to OwnCloud Documents section.
58	**Assess adding the BGCI Threat Search database** as this includes national level and non-standard conservation assessments **BGCI Global Tree Search** country-level distribution data into mapping in WFO when this functionality is developed (merged from #83).	William	Pending	
59	**Re-run IPNI-WFO Name Matching after the WCSP/IPNI Update** to improve the number of matching names from 68% and analyse the results. **Update Protologue information for matched names using IPNI data** (Related to #44 and #77)	William	WFO/IPNI matching done after WCVP update. Ongoing.	
63	**Review the portal interface prior to and discuss at next Council meeting**	Taxonomic Working Group	Merged with #92	Deferred to 2021 strategic review as priority for 2020 is on data improvements
66	**Negotiate with Kew to add a WFO link to IPNI name pages.**	WFO Council	Ongoing	
68	**Create a data paper of the WFO Backbone data with a DOI. Use this**	Technical Working Group	Ongoing.	

#	TASKS	WHO?	WHEN?	COMMENTS
	DOI for backbone download. (related to #29)			
69	**Explore use of Frictionless Data for backbone data ingestion**	Technical Working Group	Pending more community adoption	Walter is interested.
70	**Assess addition of Annual Snapshot download – "WFO Plant List 2020" - without causing user confusion (**Related to #71 and #72)	Technical Working Group	Ongoing	Available in Data Download on Portal?
71	**Static versions of the Taxonomic Backbone should be produced, to be called 'WFO Plant List <YEAR>'. RBG Edinburgh to lead on developing a prototype for Meise** (Related to #70 and #72)	RBG Edinburgh	Deferred to November meeting of Council	The first version of a WFO Plant List should only be produced when the Backbone data is of comparable quality to WCVP (and Catalogue of Life) - end of 2020? To be reimplemented as JSON webservice and further developed for November meeting
72	**Develop prototype 'WFO Plant List' and Taxonomic Backbone viewer** (Related to #70 and #71)	Roger Hyam (Edinburgh)	Deferred to November meeting of Council	These views to be included in a separate tab on the Portal (as is done for the About Pages), and RBG Edinburgh offers to develop and maintain this area of the Portal At Online Council July 2020: Approved the continued development of the WFO Plant List
73	**Redevelop the 'About Pages' on the WFO Portal** Develop FAQs for TENs for inclusion in the About pages. Provide TEN webpages, linked to the TEN table on About pages, to	About Pages Subgroup	To present at November Council	Peter Wyse Jackson to lead Task Group, including John Parnell, Alan Elliott, and others Added at July 2020 Council • CMS-driven prototype demonstrated using new About Page layout design.

#	TASKS	WHO?	WHEN?	COMMENTS
	give more detailed information on TENs (e.g. membership) for those who do not have their own website. Order TEN table – to be included in About Pages redesign. Suggest the deletion of the FAQ on the About Pages referring to Citation of WFO.			To be further developed for September meeting • RBGE offered to maintain the About Pages subdomain and cover costs of the CMS, if adopted and hosted on WFO Google Cloud • Council extended the remit of the About Pages Task Group to look at the whole WFO website to inform the development of the About Pages. • Council approved continued development of the About Pages and thank RBG Edinburgh for their support in funding this work September 2020 update • Examples of TEN, Project and Partner pages presented. • About Pages content to be reviewed and remaining TEN/Partner pages created • Council members are requested to supply information on their institutes for the About Pages • Server on Google Cloud to be set up and managed by RBGE. • New About Pages to be put to Council for adoption in November 2020
76	**Update the Taxonomic Backbone with data from Kew's WCVP**	WCVP Update Task Group	In process	Procedure has been agreed by task group and test families are underway.

#	TASKS	WHO?	WHEN?	COMMENTS
				Aiming to update the Taxonomic Backbone by end of 2020 so that the WFO Plant List will be at least as good as WCVP Ongoing
77	**Cost/benefit of supressing the display of Taxonomic Status for names above Species in the search results and Taxon Page and adding them to the Taxon Pages**	Taxonomic Working Group	Merged with #92	Deferred to 2021 strategic review as priority for 2020 is on data improvements
80	**Develop Criteria for judging authorisation of potential Content Providers**	Taxonomic Working Group	Pending	Criteria (scientific credibility, completeness, substantial contribution, currency, etc.), similar to those used for assessing TENs
81	**WFO to give percentages of what data have been uploaded from what is published for each source of Content**	Technical Working Group	Pending	
82	**Life form display in the Portal is from BGCI's Global Tree Search, not from the Global Tree Assessment – the WFO reference sources need to be updated to reflect this.**	Technical Working Group	Done	
83	**Look into incorporating BGCI Global Tree Search country-level distribution data into mapping in WFO when this functionality is developed**.	Technical Working Group	Merged with #58	
84	**Contact Consortium Members to solicit additional Content datasets**	WFO Council Co-chairs	Ongoing	

#	TASKS	WHO?	WHEN?	COMMENTS
85	**Review results of the comparison of WFO Taxonomic Backbone with CoL** (Related to #39**)**	Taxonomic Working Group	Pending the completion of the comparison of the two datasets by GBIF/CoL	
86	**Explore formalising WFO's relationship with IPNI with a written agreement covering the nature of the collaboration and the exchange of data**	WFO Council	Pending	
87	**Investigate repurposing the WFO Plant List software developed by RBG Edinburgh as the Taxonomic Browser for viewing the current Public Portal Backbone, replacing the Browse/Classification submenu. (**Related to #72)	Technical Working Group	Ongoing	Roger Hyam has joined the Tech WG. The software is being reimplemented as a JSON Web Service to facilitate use as the Taxonomy Browser
88	**About Pages to include examples of ways WFO provides accreditation of data providers**	About Pages Subgroup	Done in new About page, see #73	Explore accreditation and acknowledgement of supporters at different levels: project, partner, TEN
89	**Data sharing agreement with Compositae Alliance/WoRMS to be signed**	Council co-chairs	October 2020	Data sharing agreement approved by Tax and Tech working groups, and the signing approved by Council
90	**Updating institute information on the new About Pages**	All Council Members	November 2020	Council members are to communicate with the TEN Manager to provide information on their institutes for the new About Pages. TEN Manager to provide a guide to what is needed.

#	TASKS	WHO?	WHEN?	COMMENTS
91	**Google Cloud servers** Credit for use of the Google Cloud will run out in 2021. Investigate options for additional sponsorship by Google and other options for hosting WFO servers	Council	Early in 2021	
92	**WFO post 2020 strategic review and forward planning**	Council to lead	2021	Consider Garnett et al. (2020) '*Principles for creating a single authoritative list of the world's species*' Review the WFO Portal interface (previously #63) – Tax WG Review supressing display of Taxonomic Status for names above Species in the search results and Taxon Page and adding them to Taxon Pages (previously #77) – Tax WG