



Report of the WoRMS Steering Committee meeting

8 June 2015

Venue:

Hellenic Centre for Marine Research (HCMR) – Heraklion, Crete

Present:

Geoff Boxshall, Jan Mees, Mark Costello, Serge Gofas, Andreas Kroh, Geoffrey Read, Mary Kennedy, Tammy Horton, Sabine Stöhr (by Skype), Francisco Hernandez, Leen Vandepitte, Bart Vanhoorne, Nicolas Bailly, Emmanuelle XYZ (local technical support)

Apologies for absence:

Bert Hoeksema, Michelle Klautau, Gary Poore, Claude de Broyer, Gustav Paulay, Nicole de Voogd

The WoRMS Steering Committee meeting was hosted at the Hellenic Centre for Marine Research (HCMR) at Heraklion, Crete. It was held back-to-back with an EMODnet Biology workshop dealing with traits.

The report on the traits workshop is currently being prepared and will be distributed to the WoRMS SC once it is available.

<i>Status & progress since the last SC meeting (December 2012)</i>

This was presented by the DMT. The full presentation is available as PDF (see attachment to this report). Only the items that raised discussion and questions or required SC input will be discussed here, including a list of agreed action points.

Website:

ACTIONS

- DMT: add a news item on the overview and results of the LifeWatch data grants to the website

- DMT: take the current glossary page offline, as this is outdated and contains errors. In due time, it will be replaced by the trait vocabulary which is currently being developed within the EMODnet Biology project.
- DMT: provide link from WoRMS to Lifewatch page where WoRMS statistics are grouped

Progress (content & IT):

ACTION

- A number of the newly developed technical tools need to be re-communicated to the editors: the tool to de-duplicate sources & how duplicate source information can be removed is enormously helpful in keeping WoRMS up-to-date and clean, but awareness of this tool is low along the editors.

Editor gaps:

The list of remaining editor and content gaps was discussed extensively:

- **Branchiopoda:** Geoff Boxshall had volunteered for this temporarily. He will pick up on this and look for a permanent editor for this group.
- **Plantae – Tracheophyta:** a number of existing online lists were mentioned. The DMT will investigate and contact people where relevant.
- **Protozoa** is currently incomplete in WoRMS and there are also issues with the higher classification. Geoff Boxshall will approach the Protozoan Society and see if they would be willing to collaborate to fill this gap (contact through Alan Warren, former editor of the Ciliophora and vice-president of the Protozoan Society).
- **Arachnida:** it was suggested to compare the content in WoRMS with the content of the Catalogue of Life (CoL). As this group has very few marine representatives, the Global Species Database(s) of CoL could be a valuable source of information on this.
- **Bacteria:** it is suggested that the DMT follows up on the journal literature on this group. As there is only 1 journal dealing with Bacterial-related publications, it should be feasible to keep up with this. It needs also to be taken into account that Bacteria are more and more studied with molecular techniques, something WoRMS is not dealing with.
- **Echiura:** It was noted that the Echiura will soon move into the Polychaeta and will then be under the Polychaeta, thereby resolving the current activity gap.
- **Myxozoa:** this group has moved to the Cnidaria. A WoRMS editor has pointed out a new book chapter on this group: http://link.springer.com/chapter/10.1007/978-3-319-14753-6_5 which can help fill the gap. In addition Geoff Boxshall will attend a conference in September, where he will approach some experts and check if they are willing to contribute to WoRMS for this group.
- **In general:** the list of editor gaps will be sent to the editor mailing list. All editors will be asked for input to be able to fill these gaps.

- **Inactive editors:** it was suggested to contact these people and ask if they can help looking for additional people or for a replacement if they are unable to contribute actively.

Content gaps:

- **Unchecked taxa:** a little over 11.000 accepted species remain unchecked by editors. The DMT will contact the relevant editors and ask for input.
- **Missing authorships:** it was pointed out that this is partly related to phony entries or published spelling errors for which the authorship is not completed. However, there are still 1.962 accepted species names without authorship which need to be addressed.
- **Missing environment flags:** There are still 34.710 accepted species without this information. It was pointed out that for e.g. the Amphipoda, the environment information can be given at the family level, greatly simplifying the work. In addition, the SC has agreed to make the environment flag a mandatory field for newly added, accepted species.
- **Original descriptions** are agreed as being important. The goal is to have (at least) the reference of the original description linked to every accepted name in WoRMS. The DMT will compare the WoRMS literature module with available publications in the VLIZ library. This will help identify e.g. available pdfs in the VLIZ library which are not yet linked to WoRMS and will make an update of the WoRMS literature possible.
- **Type localities:** the information on type locality can currently be entered in 3 different locations:
 - o Notes, with as note type 'distribution' or 'type locality'
 - o Specimen module, where locality information of several type specimens can be completed
 - o Distribution module, as 'type locality'

The SC agreed to recommend completing this information at only 1 location, being the specimen module. All 3 options will however remain available, as removing these other options will result in loss of information.
- **Group-specific content gaps** are largely related to the lack of an (active) editor. Given the planned actions to fill these gaps, these listed gaps should (semi-automatically) be resolved in the future.

ACTIONS

- DMT to make environment flag a mandatory field for newly added, accepted species
- DMT to contact editors with unchecked taxa, asking for validation
- DMT to follow proposed action plans for missing authorships, environment flags & original descriptions (for details, see ppt)
- DMT to compare VLIZ library with WoRMS library, looking for additional pdfs for WoRMS
- DMT to recommend editors to only use the specimen module to add type locality info

Content priorities

Based on the gap analysis and editor & user input over the past year, the DMT has proposed a list of 9 content priorities for the near future of WoRMS.

The SC recognizes and agrees with the priorities listed by the DMT:

- Have at least 1 active editor per taxonomic group (cfr. Bacteria, Protozoa)
- Mark (accepted) species as “checked by editor”
- Document basionym (original name)
 - Forward-looking: make this information mandatory
 - Backward-looking: priority to make this complete
- Complete missing authorships
- Document original description of each (accepted) species
- Complete the environment flags
- Document higher classification according to:
 - Internationally accepted standards (editor input)
 - Management classification for CoL, recently published by Ruggiero *et al.* 2015, where there is no editor available
- Document type localities
- Document type species

ACTIONS

- DMT to inform editors of this priority-list
- DMT & editors to focus gap-filling efforts on or related to these priorities

Technical priorities

- Attributes

The DMT will fine-tune the database structure to cope with taxon traits. Related to that, a search interface, statistics and web services will be created.

- Identification keys

A group discussion on identification keys took place. The main conclusion was that the chosen software is unlikely to cause problems, but keeping an online key up-to-date is very time-consuming. So, the bottleneck is likely to be adding new content as new taxa appear. The

combination of available software and the support provided by the DMT is seen as a major advantage, and might help to convince editors to create online keys.

Some groups already have keys available in Delta-software (e.g. for Amphipoda). The DMT will investigate if an easy import from Delta to the VLIZ-used software is possible.

Next to online keys, the SC also stressed the importance of documenting sources for existing paper keys.

- **Gender field**

The SC agreed that an extra field needs to be added to the taxon details page: Gender. Four options should be made available: male – female – neuter – unknown. Related to the genus.

ACTIONS

- DMT to configure database to deal with traits
- DMT to fix remaining bugs in the identification key software
- DMT to communicate on existence of this tool to editors and provide support where needed
- DMT to add “keys” to WoRMS menu & group the already available keys there.
- DMT to add field ‘gender’ to taxon details page

Succession planning

It was noted that succession planning will become more and more important towards the future, as our pool of editors is aging. The most desired approach is that the current editor can help looking for replacement, once they retire from their WoRMS activities.

Communication & outreach

An overview of the current communication & outreach activities and initiatives was given (see ppt).

The DMT suggested to prepare - on a yearly basis - a short communication on WoRMS, giving an overview of the species described and added to WoRMS in the past year, including some highlights. In this same communication, retired editors will be thanked for their contributions and new editors will be welcomed. This could be sent to the WoRMS editor network, requesting each editor to spread this further through known (e.g. institutional) channels. In addition, this can be communicated to related initiatives and their mailing lists, such as e.g. LifeWatch.

The SC agreed to this, under the condition they can provide input to a draft version.

ACTION

- DMT to prepare short outreach action on new additions, on a yearly basis

Traits

The ongoing traits work was presented. Species traits are being added to the Aphia database, both by taxonomic/thematic editors and ecological experts (through the EMODnet Biology project). A separate traits-portal is under development. Traits are grouped on the WoRMS species pages as 'attributes'.

In general, the SC is very positive about this evolution in WoRMS, but they point out that some items – such as the inheritance functionality – need to be approached with care.

It was agreed that 'traits' will be a new menu-item on the website, giving access to a trait-based search. In addition, a thematic portal will focus in more depth on all the trait-related initiatives and possibilities. In the near future, combined trait searches will be possible through web services.

The SC recognizes that a strategy is needed to get traits into WoRMS, and that this could be best done with help and input coming from ecologists. Through the thematic portal, thematic and taxonomic editors could all get involved. The quality flag system should also be applied to the traits. Where possible, traits should be assigned to a higher taxonomic level than species. An example that was raised was 'diet': in most cases, this can – at least – be assigned to the genus level.

It was agreed that the way forward is to clean up the existing traits (e.g. benthos/plankton), and not to hide them. A condition is that all traits have to be source-related, to allow traceability. It was also pointed out that we need to aim for reachable goals in documenting the traits: the trait work is currently being financed through the EMODnet Biology project, but this project will probably not continue to fund the trait work. In that light, the focus might be put more on 'data management traits', which are easier to document and can help to reveal errors or verify doubtful information, e.g. coming from other data systems.

ACTIONS

- DMT / EMODnet Biology to check possible collaboration with SeaLifeBase, as SeaLifeBase already has plenty of ecological traits available.
- DMT to communicate outcomes of this discussion to EMODnet Biology

Portals

Several portals were launched in the last 2 years, and a few more portals are in development.

During the SC meeting, Nicolas Bailly briefly introduced a proposal for a new thematic portal dealing with marine cave species. The SC agreed in principle to host this portal within WoRMS, but requested the full proposal to be circulated to the SC. It was pointed out that similar initiatives already exist and that contacts and agreements need to be made with these custodians, to avoid duplication of effort.

A parasites portal has long been on the agenda. Geoff Boxshall will speak at workshop during an upcoming fish parasite conference and will explain what WoRMS can do for this community. This could then possibly be the start of this thematic portal.

ACTIONS

- Nicolas Bailly to circulate proposal to SC
- Nicolas Bailly to check with other existing marine cave initiatives
- DMT to follow up on Marine Caves thematic portal
- Geoff Boxshall to discuss WoRMS options with fish parasite community

Relation of WoRMS with other data systems and/or projects

Running projects

A brief overview of currently running projects in which WoRMS is involved was given (see ppt).

ACTION: *none*

Overview existing contracts

- Thompson Ecology: the programmer has left the institute and nothing more is happening in relation to the usage of WoRMS. Their last download dates from 2014. No action is needed.
- AlgaeBase: VLIZ has come to an agreement with Mike Guiry. WoRMS can integrate and show all AlgaeBase data through the WoRMS website, but is prohibited from further distribution of these data. The current contract runs for 3 years, with yearly extensions.

ACTION: *none*

Overview existing Memoranda of Understanding

All existing MoUs have been signed by SMEBD, and SMEBD no longer exists. There is thus a need to review these MoUs.

It was agreed that the MoUs would only be reviewed if the other party is requesting this. MoUs need to be in place for Encyclopedia of Life (EoL), Global Biodiversity Information Facility (GBIF) and Catalogue of Life (CoL). Francisco Hernandez is currently negotiating a new MoU with CoL.

In relation to CoL, it was also agreed that the DMT should no longer ask for permission from the responsible editor to send data to CoL. The editors have in principle agreed to CC-by license. The question of “ok to send to CoL” will be changed to a notification that it will be sent to CoL.

ACTION

- Renegotiate/renew existing MoUs for EoL, GBIF & CoL

Overview links & (possible) collaborations with other data systems

Several collaborations with external (taxonomic) databases are already in place. A brief overview of the current situation was presented (see ppt).

Related to PaleoDB, the SC agreed that MolluscaBase should negotiate a collaboration with them, specifically for the fossil Molluscs. In general, it was noted that fossils need to be clearly excluded from the general WoRMS search.

For the Hexacorallians of the World database, there is concern over stagnation of the database – specifically for the groups that Daphne Fautin was editing – as Daphne can no longer update her own database.

ACTIONS

- DMT to check with MolluscaBase how the collaboration with PaleoDB can be shaped
- Mark Costello to talk to Daphne Fautin & Bert Hoeksema in relation to the updating and management of the Hexacorallians managed by Daphne

WoRMS downloads, archived versions & DOI

A summary of the download requests was given by Sabine Stöhr & Andreas Kroh.

In general, the download request system works fine and can be continued.

The financial statement however needs to change. Jan Mees has explained that VLIZ has been recognized as a charity, meaning that it can accept financial contributions. The VLIZ website will list projects where contributions can go to. Who-ever decides to give a financial contribution through the download form, will be able to decide which project his/her money should go to. The possible projects will be subdivided into large categories: tagging, citizen science, taxonomy ... Any financial contribution coming in through the download form can then be assigned to any of these projects. The money can also be allowed to accumulate over several years. The mechanism for this is already in place, so this can be done very soon.

It was agreed that DOIs will be assigned to archived versions of the database, and that the archived versions will not be directly downloadable, but will only be available upon request. It was pointed out

that this caution is needed: the online version is the most up-to-date version of the WoRMS database. If archived versions are made available, they should not be too easy to retrieve. Catalogue of Life has had issues with this in the past, where people kept using the outdated versions (with potential errors) instead of the latest online version.

The archived versions will only contain taxonomy and the archive format will from now on be Darwin-Core. VLIZ will assign the DOIs for each of these versions.

ACTIONS:

- Jan Mees to reformulate the financial contribution statement
- DMT to implement this in the download form
- DMT to assign DOI to monthly archived versions of WoRMS
- DMT to transfer archived versions to DarwinCore (taxonomy only)

Organisation of 2015 SC elections

The current system for organizing the SC elections was positively evaluated and will be used in the future.

For the **upcoming elections**, 4 positions are open, based on the agreed 3-year rotation of Bert Hoeksema, Gary Poore, Geoffrey Read & Nicole de Voogd.

The 3 existing ex-officio positions will disappear: Mary Kennedy, Claude de Broyer & Tammy Horton. They are eligible for nomination for election as one of the official SC positions.

According to the new ToR, the election is open to taxonomic editors, thematic editors and data provider head managers (from externally hosted databases)

The SC will give guidance to editors concerning the elections, with respect to e.g. expertise currently missing within the SC.

Generally related to the SC, it was decided to target 2 SC meetings per year: 1 virtual and 1 physical, preferably back-to-back with a conference or workshop. This way, decision making can take place each 6 months. When no clear decision can be made through email communication, the decision making will be postponed until the next SC meeting. Ideally, decisions will be made through consensus. The first virtual meeting should take place in December.

Consultation with the whole community of editors will be carried out only for very important issues. For more routine matters editors have elected the SC to take decisions on behalf of the WoRMS community..

For the **Terms of Reference**, a pop-up window will be created, so (new) editors can easily get access. It was noted that the new ToR does not mention anything related to liability or copyright. To accommodate to this, the DMT will add a disclaimer, CC-By and clear citation to the website. Regarding copyright, Tjess Hernandez & Jan Mees will formulate a statement, saying that WoRMS SC maintains oversight over the copyright of the WoRMS database content.

In future, discussions started in the SC mailing list should be followed up by the initiator. A conclusion on a discussion should be formulated and brought forward to the next SC.

ACTIONS

- Geoff Boxshall to prepare email to introduce new elections, emphasizing expertise currently missing from the SC.
- DMT to initiate next SC election in June and finalize by the end of July
- DMT to add election year(s) to each SC member on the website, to clarify rotation
- DMT & Chair: prepare first virtual SC meeting (preferably in December).
- DMT: create pop-up window with ToR, each time an editor signs in (and has not yet signed the ToR)
- DMT: add disclaimer + CC-by + citation
- Francisco Hernandez & Jan Mees: write statement on copyright of WoRMS content & circulate to SC.

Questions from OBIS

WoRMS type localities as a dataset in OBIS

OBIS is requesting a dataset from WoRMS, containing the type localities of marine species. It was agreed that sharing data with OBIS is beneficial and WoRMS will make this available to OBIS, under the CC-by license. The dataset will only include records where an actual lat-long and a reference is available.

The citation of these data would be:

WoRMS editorial board (2015). Type locality distributions from the World Register of Marine Species. Available from <http://www.marinespecies.org> at VLIZ. Accessed YYYY-MM-DD.

In the long term, the DMT will investigate more options to send type localities to OBIS, e.g. when the latitude-longitude would be missing.

In addition, it was asked to look at the possibility to show all species type localities of a specific genus or family (or other level) on one map.

OBIS distribution map on the WoRMS species details page

OBIS has requested the opportunity to show their species distribution data on the WoRMS species pages. This option is already available for some Global Species Databases, but it is now recommended by the SC to make this option available across the whole of WoRMS.

The OBIS data will not be visible immediately on the WoRMS distribution map, but will be hidden behind an extra click, in order to ensure that users do not get confused.

ACTIONS:

- DMT to extract relevant data from WoRMS and send to OBIS.
- DMT to investigate option to show all type localities of a selected genus or species on 1 map
- DMT to implement 'show OBIS data' on the WoRMS species distribution maps

WoRMS representation at conferences/workshops/... by editors

We know where the DMT is representing WoRMS (through DMT activities reports), but it would be very interesting to also know where SC members and editors are representing WoRMS through presentations, posters, workshops, networking activities... this could then also be added to the yearly report. It was agreed that the DMT will check with the editors on this.

In relation to this topic, the SC raised that it would be good to have some general WoRMS powerpoint presentations available, that can easily be downloaded, used and adapted by the editors.

The upcoming World Conference of Marine Biodiversity (WCMB) in 2018 was already mentioned as a good opportunity to represent WoRMS and to get WoRMS editors involved, e.g. through a special session. This conference will be held in Montreal (Canada) from May 20-23, 2018.

ACTIONS

- DMT to make a general ppt presentation on WoRMS available on the website
- DMT to ask for overview of attended conferences/workshops by editors, where they have represented WoRMS.
- DMT to check which conferences editors will attend. This can help to check for possible – adhoc – editor meetings and back-to-back opportunities for meetings.

WoRMS distinguished editor award

The idea to have a WoRMS distinguished editor award was launched in the SC late 2014 by Mark Costello, but no final decision was reached. The discussion was opened during the SC.

Mark Costello explained that the primary metric could be how much they have contributed to WoRMS content, either directly or through the DMT. At first, several awards could be given to recognize that some editors did a lot of work in the past, such that their group needs less attention recently. The outcome would be formal recognition of individuals contributing and this may inspire other to contribute more.

It was agreed that this was a good idea and it should be taken forward. A small working group will be established, and they will need to come up with a list of selection criteria. These criteria will then be evaluated by the DMT (e.g. how easily can these be measured and how objective are they). A call will then be launched in the editor mailing list, asking for nominations. Self-nominations will not be accepted. These nominations will then be compared to the selected metrics, so a decision can be made. This award will be handed out only once a year. If there are no outstanding candidates, the award does not need to be given every year.

ACTION:

- Mark Costello to compile a working group on this topic. Volunteers: Geoff Boxshall, Jan Mees, Tammy Horton & Andreas Kroh.
- Working group to draft a list of possible selection criteria
- DMT to evaluate the selected metrics

Other items brought to the agenda

Online editing guidelines

Early 2014, an online editing manual – which focuses on how to deal with things content-wise – was drafted by Serge Gofas and circulated in the SC. Due to circumstances, it was however never finished. It was agreed that this should be picked up again and that these should become the editor-guidelines, specifically aimed at helping the editor with the different options for information input (content-wise). The online manual of the DMT will keep existing, as this focusses on how the online system works.

The version of Serge will be updated – in collaboration with Tammy Horton – and will be circulated in the SC for feedback.

ACTION

- Serge Gofas & Tammy Horton to revise the draft version of the editor guidelines
- SC to provide feedback, so this can be finalized and sent to the editor community.

Higher classification

Editors sometimes struggle with the higher classification they should implement in WoRMS. SC agreed that it is not necessary to reflect every minor change and update in classification and that the approach to higher classifications should be somewhat conservative. However, when the taxonomic editor judges the evidence to be convincing then it is the editor's decision to adopt any new classification scheme.

For orphan groups within WoRMS, it is recommended that the higher classification of the recently published by Ruggiero et al. (2015) is used. Full reference: Ruggiero, M.A.; Gordon, D.P.; Orrell, T.M.; Bailly, N.; Bourgoin, T.; Brusca, R.C.; Cavalier-Smith, T.; Guiry, M.D.; Kirk, P.M. (2015). A higher level classification of all living organisms. PLoS One 10(4): e0119248.

hdl.handle.net/10.1371/journal.pone.0119248

The SC also recommends that WoRMS works together with the CoL authors on the next version of this higher classification, which is aimed to be re-worked every 5 years.

Editors and users should also recognize that there are conceptual changes: there is not always a 1-to-1 synonymy.

ACTIONS

- Serge Gofas & Tammy Horton to include paragraph in editor guidelines on how to deal with higher classification changes
- Geoff Boxshall/DMT to inform Mike Ruggiero that WoRMS would like to be involved in the next update of the higher classification publication
- DMT to cross-check publication hierarchy with current WoRMS hierarchy for orphan groups and make changes where relevant

Images:

How editors can deal with images should become part of the editor guidelines (currently under revision). The major concerns relate to the quality of images and the (lack of) metadata.

The need for an image-“editor” was raised, which could be someone from outside the SC. It was suggested to create working group on this topic that should analyze possible bottlenecks and other issues related to images in WoRMS.

In general, the potential and importance of the WoRMS images in relation to outreach & communication should be underestimated. SC is aware that amateurs can provide good identifications and thus trustworthy images. This is one of the issues that the working group will consider.

Several suggestions were made:

- Collaborate with FishBase, as they have excellent fish images available. This will be followed up by the DMT.
- Provide an annotated filter on Google images. This was not recommended by the DMT, as this can be very instable and will lead to problems.
- If images come from known individuals, they could well be OK, but channels are needed so that editors are aware of this. The general experience with drawings is that they are OK to add to WoRMS.

ACTIONS

- Geoff Boxshall to initiate this working group and invite Mary Kennedy (volunteer) and Claude Nozères (non-SC) to become part of this. More people from the SC or outside the SC can be invited to participate. Appoint a responsible for this working group.
- Working group to make a small general analysis of what we have in WoRMS + include one editor that needs to check images.
- Working group to be present at the next SC meeting

Indexes mentioned on the homepage:

ACTIONS

- H-index: DMT will check what this actually means
- Idem "cited publications": DMT will check what is actually calculated