Knowledge Mobilization through Online Information Platform

On October 18th, 2016, Canadian geologist, educator, arctic explorer and public servant, Dr. Ernest Frederick Roots, passed away. With Fred's passing, the BR community in Canada and globally has lost one of our most important contributors. He was a founding father for BRs and a true pioneer. Fred created the Canadian MAB program in the 1960s, served as its chair for decades and was in communication with CBRA until the time of his death. At EuroMAB 2013 in Canada, Fred Roots presented a thoughtful analysis and recommendations for action by EuroMAB in a paper titled "EuroMAB in 2013". Some of the recommendations appear to anticipate the proposal to develop the ICSRC, and in particular, the creation of an online information platform to serve BRs, the science community, related universities and other interested parties. The following extracts from the Roots 2013 paper are of particular relevance:

Some Hard Problems and some Suggestions
(Page 8)
(v) One shortcoming of most BRs in EuroMAB is the distressing paucity of technical or scholarly information or references emanating from the BRs individually or from MAB itself, concerning the researches and monitoring and application of knowledge that is one of the major expected goals or benefits from the whole concept. There is a heavy volume of administrative reports, annual reports to sponsors or assessors etc., but as far as I am aware, there has been little in the science field to show what has been actually been learned form the studies, or monitoring, or assessments of what the science in the BR is leading us to speculate about the changes in the future. Yet, this aspect of MAB and Biosphere is central to the reasons for their existence: note the 1970 objective of MAB quoted above. Each candidate BR, in its application to UNESCO, includes a comprehensive list of scientific researches and monitoring activities carried out in the area up until the time of the application, and statements of planned future research, as part of the justification for being admitted to the World Network. Surely it is logical, and indeed an obligation, for established BRs to collate, record, and make accessible information about the on-going researches and monitoring within or related to their area; yet foremost BRs, this does not seem to happen.

I am fully aware of the slim budgets of BRs, that the managers often do not have time, or capacity, or resources to compile technical reports, and that most of the important scientific work is undertaken by persons who prefer or are obliged to publish in the peer-reviewed scientific literature in the relevant disciplines. Nevertheless, one of the failures of MAB and the BRs is that, although they are the embodiment of UNESCO in the biological and human sciences, they are not themselves major sources of scientific information in the subject fields where they are active. Regularly issued annotated bibliographies or summaries of scientific work in each BR or national MAB activities would go a long way to meet this obligation, and benefit both the BRs and MAB on one hand, and the scientific world on the other. There have been exceptions:- the Mt St Hilaire BR in the 1980s published annotated bibliographies of the scientific researches carried out within its borders (a list of more than two hundred scientific papers, even at that time), and the Vosges du Nord BR in France published a review of its researches in a major scientific journal. But, on the whole, MAB and BRs have done themselves a disservice by not making their own scientific work available in their own name. Perhaps it is time, and opportunity, for the BRs to be seen publicly in

the scientific community, to be centres or collators of scientific knowledge about their area, even if the researches and original results are published elsewhere. Perhaps EuroMAB should look into this.

How to feel, going home?
But if we raise our sights to the current condition and prospects for the planet and its biosphere, to the current numbers and actions of the human species and trajectories of its future behaviour and consequent effects, it will be hard to be realistic and remain optimistic. We should keep these tough questions in mind. But, their seriousness should not deter us from trying our utmost to make things better.

At EuroMAB 2015 in Estonia, the ICSRC Working Group distributed a questionnaire that asked participants to rank in order of priority, a list of possible roles for the proposed "International Centre". The following was ranked as first priority by the process: "Knowledge mobilization and sharing of BR concepts, ideas, case studies, research, and successful application across the EuroMAB network and beyond." Based on this ranking, the ICSRC Working Group has agreed that this "Project Prospectus" should consider the steps necessary to establish an online platform or website to satisfy the need for knowledge mobilization. Our preliminary investigations with industry experts indicate that the creation of a website to serve the information needs of EuroMAB has been facilitated very substantially by those who have preceeded us in the development of a particular type of website called a "wiki".

What is a wiki?

A wiki is a website that provides collaborative modification of its content and structure directly from the web browser. In a typical wiki, text is written using a simplified mark-up language (know as wiki mark-up) and often edited with the help of a rich-text editor. A wiki is run using wiki software, otherwise known as a wiki engine. There are dozens of wiki engines, both stand-alone and part of other software such as bug tracking systems. Some wiki engines are open-source, whereas others are proprietary. Some permit control over different functions (levels of access); for example, editing rights may permit changing, adding, or removing material. Others may permit access without enforcing access control. Other rules may also be imposed to organize content. A wiki engine is a type of content management syatem, but it differs from most other such systems, including blog software, in that the content is created without any defined owner or leader, and wikis have little implicit structure, allowing structure to emerge according to the needs of users. The online encyclopaedia project Wikipedia is by far the most popular wiki-based website, and is, in fact, one of the most widely viewed sites of any kind in the world, having been ranked in the top ten since 2007. Wikipedia is not a single wiki, rather it is a collection of hundreds of wikis, one for each language. There are at least tens of thousands of other wikis in use, both public and private, including wikis functioning as knowledge management resources, note-taking tools, community websites, and intranets. The English-language Wikipedia has the largest collection of articles; as of September 2016, it had over five million articles. Ward Cunningham, the developer of the first wiki software, WikiWikiWeb, originally described it as "the simplest online database that could possibly work." Wiki is a Hawaiian word meaning "quick."

Extracted from https://en.wikipedia.org/wiki/Wiki

Open Source Software – Suggested Option

MediaWiki is a free software open-source package, written in PHP originally for use on Wikipedia. It is also now used by several other projects of the non-profit Wikimedia Foundation, and by many other wikis. The website MediaWiki.org offers complete information on installing and configuring MediaWiki and adding features with third-party extensions. Complete instructions on developing and extending a system are provided including the use of MediaWiki APIs, how to create your own skin or appearance, and how to browse the developer documents and class reference. Current versions of MediaWiki are offered for free downloading. Access to an extensive list of sites using MediaWiki software is provided. Extensive multi-lingual capacity exists. MediaWiki permits control over what is published but not over who can access the information. It is designed to make public information accessible.

Please go directly to the website www.mediawiki.org for detail on the following key topics and more:

- Features and Benefits
- Questions – Is it the right software for us?
- How should we configure MediaWiki?
- Permissions
- Searches and Queries

Installation And Costs

It is recommended that the system software be installed on a cloud-based Virtual Private Server (VPS) and not on a shared server. This will provide for scalability with respect to use and storage capacity as the system grows. Either the VPS Digital Ocean, or the Amazon VPS may be used. Set-up involves downloading the Linux system software on the chosen VPS, configuring the firewall, and setting up the initial administrators and moderation. The set-up process requires the "owners" to review the extensive list of questions and considerations on the software website to provide guidance to the installer of the system. The costs of the system are relatively modest:

MediaWiki open source software	No charge
Software installation (one time fee)	$500
Annual Costs	
Cloud based VPS $10 per month	$120
Domain name	$ 20
Range of annual costs for moderation, administration and encouragement of use and growth (marketing)	$25,000 to $50,000

Recommendations

1. That the ICSRC Working Group form a sub-group of users, including Indigenous groups to review the recommended MediaWiki software and alternatives to ensure that all user needs will be addressed by the final system.

2. That the sub-group report back to the ICSRC Working Group by March 2018 to permit establishment of a system prior to EuroMAB 2019 that will permit training to take place at that event