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**CONFERENCE OF THE PARTIES TO THE
INTER-AMERICAN INSTITUTE FOR GLOBAL
CHANGE RESEARCH
Twenty-sixth meeting
Antigua, Guatemala, 20-21 June 2018
Agenda item 20**

**Report of the Directorate
Computer and network technologies**

1. This document has been prepared by the IAI Directorate.

Background

2. The IAI Directorate undertook a review of the computer and network technologies used by staff with a view to improve work performance, optimize expenses, ensure use of legally acquired software, and increase security.
3. It also undertook a review of the content management system of the IAI website to improve dissemination and access to information, ensure greater coherence of information categories, provide access to previously missing IAI-related information¹, and increase security.
4. Finally, this review took into account projects and activities dependent on computer and network technologies, including, work by the IAI Directorate to develop an Open Data

¹ See document no. IAI/COP/26/20c. Decision XXV/22: Access to official IAI documents

Policy and Principles document and platform², enhance use of social media to increase awareness of the IAI³ and its scientific agenda, projects and activities, and promote use international information exchange formats, protocols and standards.

Review of the computer and network technologies use in the IAI Directorate

5. Beginning in September 2017, a review of software and operating systems was undertaken in the IAI Directorate. This exercise aimed to ensure that all software used by staff was legally acquired, standardized and administered through a central point. Requisite licenses were acquired, doubtful software removed from workstations and staff informed of new policies with regard to the acquisition and use of software.
6. A policy has been instituted that staff cannot install software on their workstations without approval from the information technologies (IT) administrators.
7. In addition, anti-virus software has been installed on all servers and on staff workstations to improve security and to safeguard IAI data.
8. The network system of the IAI Directorate has been reconfigured in its entirety after a forensic review of security issues identified several issues of concern. Network equipment was acquired when necessary.
9. This reconfiguration of the network provided IAI Directorate staff with individual Internet telephony lines. Previously, all staff shared a single telephone line leading to missed calls and difficulty in providing the IAI community better means of telephony communication with the Directorate.
10. A data and information disaster recovery plan for the IAI Directorate was developed and implemented to better safeguard the IAI's information resources and ensure continuous information services to its community. A data and information backup plan for staff has also been implemented.

The IAI website

11. The organization of information on the IAI website went through a review by selected IAI staff. Several concerns were identified and continue to be addressed. Among these concerns are:

² See document no. IAI/COP/26/20a. Decision XXV/6: Open data policy and principles

³ See document no. IAI/COP/26/18, Communications and outreach

- a. Missing information from past meetings of the Conference of the Parties (CoP). The information has been scanned and made available on the website;
- b. Difficulty in locating, accessing and citing past Decisions of the CoP. Decisions have been assigned numerical tags and made easier to locate and access;
- c. Difficulty in finding information about past meetings. A section on the website was created to archive information on future and past meetings organized and attended by the IAI;
- d. Difficulty in finding information on Parties and projects and benefits accrued. A section on the website was created to include Party data-sheets⁴; and
- e. Information on ratification by Parties was also added to the website.

12. However, the above revisions are insufficient for the following reasons:

- a. The website is composed of flat HTML pages. Consequently, each webpage must be updated individually even if the information contained on different web pages is identical;
- b. Categories of information are difficult to harmonize and keep up-to-date. For example, Party information is available through several different web pages when they should be coherently integrated through a single access point;
- c. Locating and accessing information is difficult and the graphical user interface is not intuitive; and,
- d. The content management system (CMS) of the website, Wordpress, does not have sufficient flexibility to address many of the concerns above. Additionally, Wordpress is viewed by many web design experts as providing an insecure platform since many of the tools it offers are dependent on the addition of plugins.

13. Given the above, the IAI Directorate suggests that a conversion of the IAI website to a more flexible and secure CMS should be undertaken with urgency. A conversion of the CMS would result in the website being fully database driven.

14. Use of database technologies on the website would provide opportunities to integrate information more coherently and increase the speed with which new web sections could be created and made available. Moreover, use of database technologies would facilitate the posting and dissemination of information thereby improving communication with the IAI community.

⁴ See document no. IAI/COP/26/20b, Decision XXV/21: Member Country data-sheets

15. In light of the above, Parties are invited to consider the provision of extraordinary funding as contained in Annex 2 of this document to allow for the enhancement and improvement of the IAI website.
16. The IAI Directorate will continue to make efforts to secure external funding to make this activity possible.

Open data policy and principles

17. Parties are invited to review document no. IAI/COP/26/20a on Decision XXV/6: *Open data policy and principles*⁵.

Promote use international information exchange formats, protocols and standards

18. The IAI Directorate works to promote the use of open international information exchange formats, protocols and standards, including but not limited to use of metadata. This work is particularly important given the IAI Directorate's efforts to develop an open data policy and principles document and platform.
19. Adherence to international information exchange standards will facilitate the integration of IAI data on the website and also provide the mechanisms to make this data interoperable with national or international information systems.
20. In support of the above, the IAI Directorate is working with the Belmont Forum on its e-Infrastructures and data management initiative which seeks to promote more coordinated and sustainable policies, procedures and funding mechanisms to support global e-infrastructure for global change research.
21. In this regard, the IAI Directorate participated in the International Organizing Committee of the Latin America and the Caribbean Scientific Data Management Workshop which was convened by World Data System (WDS) and hosted by the Brazilian Academy of Sciences in Rio de Janeiro, Brazil from 17 to 18 April 2018.
22. The Workshop focused on discussions related to data management best practices for data repositories located throughout Latin America and the Caribbean. It mapped initiatives that are either under way or in the process of being developed, their strengths and limitations, and new opportunities for collaboration. It also focused on future trends and perspectives for scientific data systems, as well as criteria and standards for certification of data repositories.

⁵ <http://www.iai.int/wp-content/uploads/iai-cop-26-20a-e.pdf>

Recommendation

23. Conference of the Parties is invited to consider adopting the draft decisions contained in the Annex 1 to the present document.

Draft decisions of the Conference of the Parties

Enhancement of the Website

Directed to the Parties

XXVI/xx. The Parties are encouraged to provide extraordinary resources for the enhancement of the IAI website including use of a new content management system and database technologies.

Directed to the IAI Directorate

XXVI/xx. The IAI Directorate is directed to make efforts to secure external funding for the enhancement of the IAI website.

Annex 2

Financial proposal

The table below summarizes the activities and costs related to the conversion of the website to a new content management system (CMS) and to a fully database driven system.

Item no.	Activity	Approximate days of work	Cost
1.	Review the technical platform of the IAI website and develop a plan of work to enhance the platform through a more flexible and secure CMS	100	20,000 USD
2.	Convert the website to a fully database driven system		
3.	Integrate all categories of information into a database system		
4.	Develop a document management system and information upload facility for the automatic updating of web pages		
5.	Develop a more comprehensive country profile function to provide a one-stop shop on administrative, legal and scientific information for any given IAI Party		
6.	Use PHP (Hypertext Preprocessor), server side scripting language to provide dynamic web pages		
7.	Enhance the mass mailing system to issue notifications, new releases, etc.		
8.	Advise the IAI Directorate on security issues and recommend procedures to secure the website from non-authorized entry		
9.	Design a more intuitive and easier to navigate graphical user interface for the website	10	4,000 USD
10.	Comment on the code and provide a manual on procedures and updating	30	6,000 USD
11.	Develop a disaster recovery plan for the website		
12.	Project management		
	Total cost		30,000 USD

