



## Mapping of the Information Management Processes on Biological Diversity in the Research Institute of the Peruvian Amazon

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The Information System on Biological and Environmental Diversity of the Peruvian Amazon (SIAMAZONÍA) works as a decentralized and organized network of entities and specialists that generate or manage relevant information. The organizational structure of SIAMAZONIA is by nodes and there is a facilitating node in charge of the technical and administrative tasks of the system.

The Research Institute of the Peruvian Amazon (IIAP) is emerging as the facilitating node in charge of the technical and administrative work of the network; and now it is also expected to be presented as the methodological model for managing content related to biological and environmental diversity in the Peruvian Amazon.

The main nodes are the entities that participate the most. Its decentralized structure allows participating institutions and researchers to maintain ownership and autonomy of the information they provide. It also has a directory of institutions and specialists.

### SIAMAZONIA

SIAMAZONIA started in 2001 as one of the components of a cooperation project called BIODAMAZ. In 2013, as part of another cooperation project called BIOCAN, it was technologically updated and basically that is the version that we currently have online at <http://siamazonia.iiap.org.pe>



*Interviews with specialists in biological diversity of the Peruvian Amazon at IIAP headquarters*

Since 2015, SIAMAZONIA has not been able to adapt to the processes of the Institute and after the periods of cooperation financing, very little has been added to the content and the technology update has been almost none.

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Since 2016, it began to form new information products and services for which it has had better acceptance by users, such as: <http://repositorio.iiap.org.pe>, <http://visores.iiap.org.pe/publicaciones/>, <http://visores.iiap.org.pe/inventarios/>, <http://folia.iiap.org.pe>, among others.



**SIAMAZONÍA works as a decentralized and organized network of entities and specialists that generate or manage relevant information.**

SIAMAZONIA currently consists of: Species Bank, Specimen Bank, Publications Bank, Multimedia Resource Bank and Amazon Map Bank.

The Information and Knowledge Management Research Directorate (GESCON) guarantees the availability of the service, enabling that the other IAP Research Directorates have access to consult the system's information banks.

The other IAP Directorates are: Research Directorate for Terrestrial Biological Diversity in the Amazon (DBIO) that provides information on inventories and files of flora and fauna species; Directorate for Research in Aquatic Ecosystems in the Amazon (AQUAREC) that provides information on inventories and archives of fish species and Directorate for Research in Integrated Forest Management and Ecosystem Service (BOSQUES) that provides information on permanent production plots, and the functional team of the territories (TERRA) that provides thematic maps of the Amazon.

IAP is permanently consulted on: uses for medicinal plants; prospecting species with potential for use,

natural products and bioactive substances; technical opinions for fishing authorization; the greater use capacity of the territory, etc.

Figure 1 illustrates the collaboration process of SIAMAZONIA. All applications are generally requested with rush by regional, local governments and other development organization. The frequency of these requests sometimes exceeds the availability of the researchers' schedule. Sometimes they turned into some extra-programmatic activities that take researcher's time away from the execution of research projects contemplated in the Annual Institutional Operational Plan.

### Strengthening and Interoperability

The Biomazonía Project contributes to the conservation of the Amazon Biodiversity and the species especially included in CITES, by increasing the efficiency and effectiveness of the management, monitoring and control of species of wild fauna and flora, threatened by trade in ACTO Member Countries. Considering that one of the Project's action lines is strengthening and

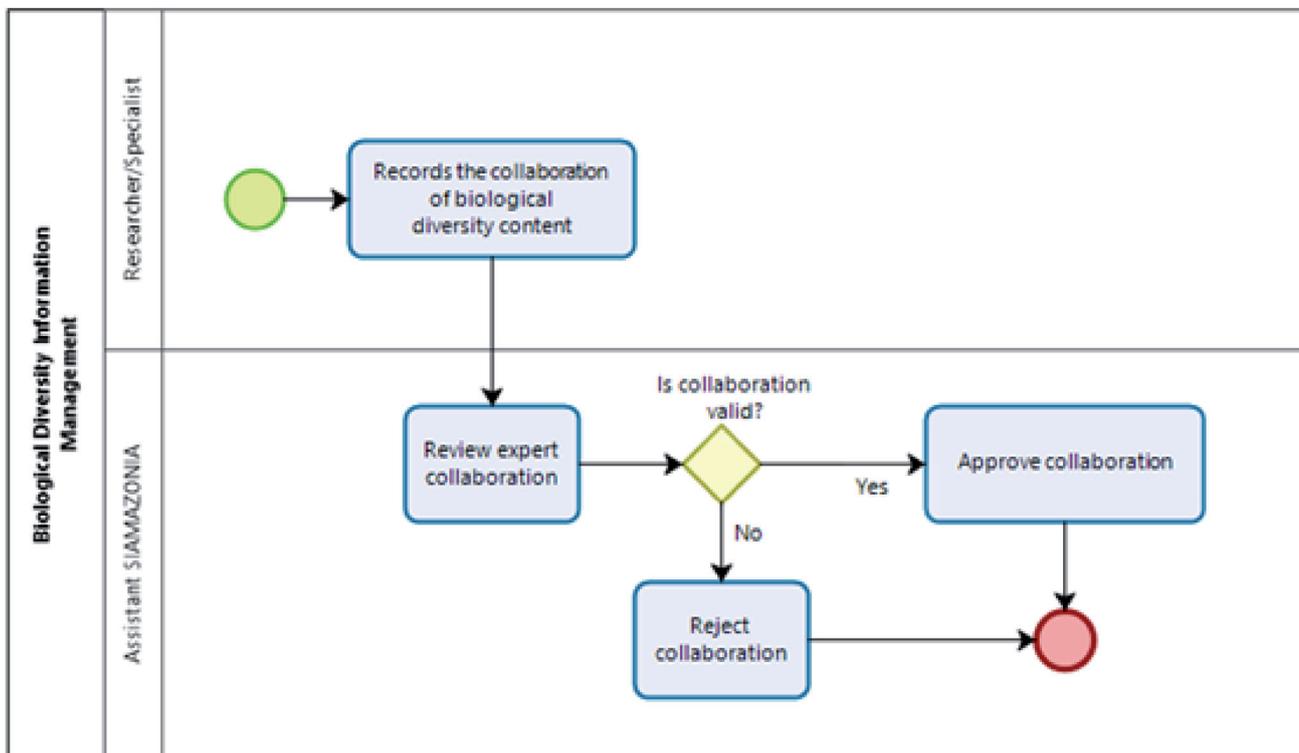


Figure 1. Collaboration Process on Information of Biological Diversity of SIAMAZONIA.

interoperability of national information and knowledge management systems, a mapping of SIAMAZONIA processes was conducted using the Business Process Management (BPM) methodology as a starting point for the improvement of the platform.

Thanks to the mapping of the processes of information management on biological diversity, it is proposed to consolidate in SIAMAZONIA, a computer platform that not only allows managing the content of biological diversity properly, but also helps to ensure that information management is of quality and allows analysis and relationship between content or services; for such purpose the contents will be based on standards.

In addition to the mapping of the processes, the work reached a high-level analysis for the new SIAMAZONIA proposal where the data model, information technology architecture (Figure 2), was developed, which has interoperability as a principle, in addition to prototypes of the services that serve as a starting point for the development of the platform planned in this next stage.

Standards of scientific content to be managed in SIAMAZONIA will allow the exchange of information with other entities in different senses, both to obtain more information through new nodes or to align themselves with national or international proposals as information providers, through web services as proposed in the proposed architecture.

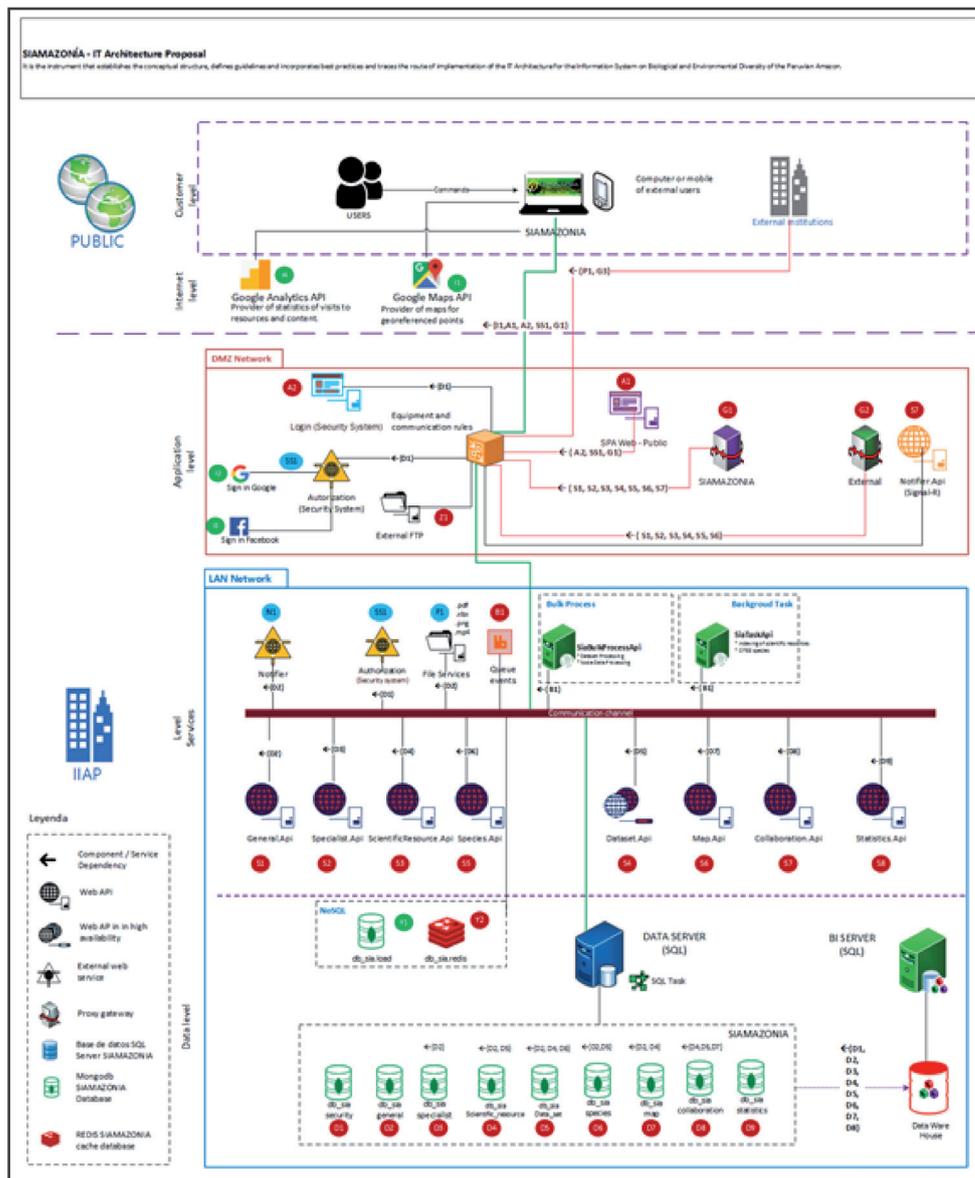


Figure 2. Information technology architecture for SIAMAZONIA.

A component is proposed to highlight the CITES information, which will allow not only to identify the CITES species of the Peruvian Amazon (Figure 3) and the appendix to which it belongs, but also to index, geo-reference, relate and categorize other content with CITES.

The data model to be adopted will allow identifying what information belongs to the Peruvian Amazon, although it is true that the platform may have information related to biological diversity from other

areas.

From the interviews with specialists, the existence of information on biological diversity which can be characterized as sensitive was identified, which is why the proposed database model supports the privacy feature for this content.

Finally, a statistical component that allows feedback from the system based on indicators such as number of visits, content assessment and specialist participation is proposed.

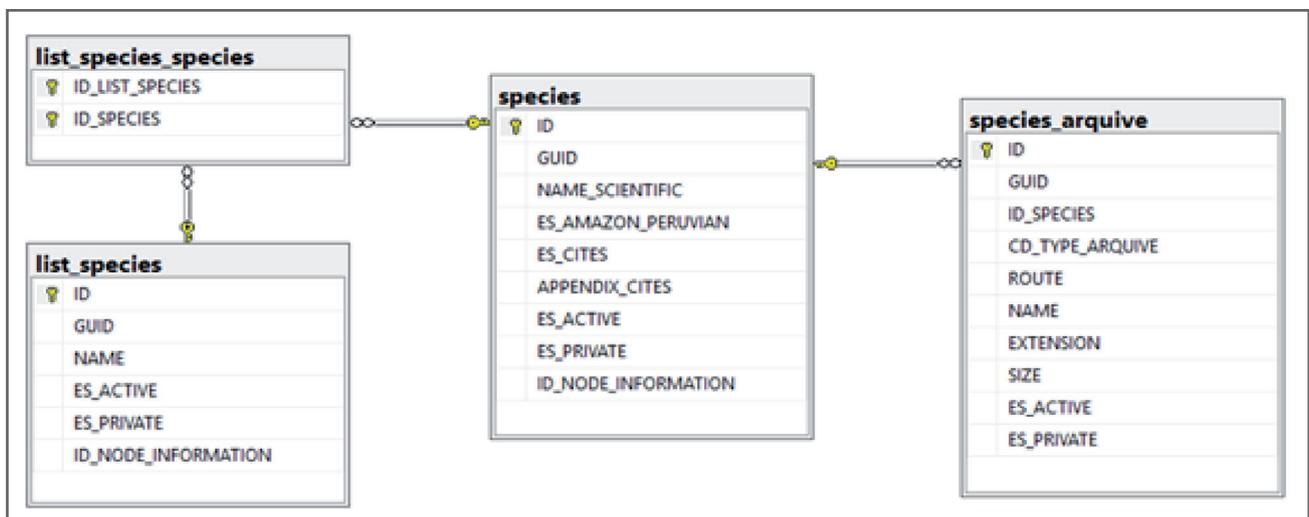


Figure 3. Species data model for SIAMAZONIA.

## Bioamazon Project

The regional project for management, monitoring and control of species of wild fauna and flora threatened by the trade (Bioamazon Project) has the objective of increasing the efficiency and effectiveness of management, monitoring and control of wild fauna and flora species threatened by trade in the ACTO Member Countries, with contribution to the conservation of Amazonian Biodiversity and especially the species included in the CITES.

It is based on a Financial Cooperation Agreement between the Federal Government of Germany and the ACTO, through the German Development Bank- KfW, and it is carried out by the Permanent Secretariat of the Organization of the Amazon Cooperation Treaty (PS/ACTO) jointly with the National Institutions of Coordination of the Member Countries.

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