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GLOBAL BIODIVERSITY INFORMATION FACILITY

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PRESS RELEASE

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Building global collaboration for biodiversity intelligence

Public to play major role in mobilizing expanded range of data needed to preserve vital functions of life on Earth, conference concludes.

Copenhagen, Denmark – A landmark conference has agreed key priorities for harnessing the power of information technologies and social networks to understand better the workings of life on Earth, focussing on how biodiversity can continue to sustain human lives and livelihoods.

The Global Biodiversity Informatics Conference (GBIC), gathering some 100 experts from around the world from 2-4 July, identified critical areas in which greater investment and better coordination could give society much better, innovative tools to monitor and manage biological resources. These tools will be designed to support vital functions such as food security, human health and more sustainable economic development.

The overall aim is to build global collaboration on biodiversity observation, uniting many partners and initiatives, capable of detecting and enabling responses to short-term changes and long-term trends in biodiversity and ecosystems. This collaboration will connect diverse sources of data on genetic variability, occurrence and abundance of species, traits of organisms and many other factors. It will address a wide range of policy needs including the Aichi Biodiversity Targets agreed by governments in 2010 as part of a 10-year strategic plan to halt biodiversity loss.

Donald Hobern, Executive Director of the Global Biodiversity Information Facility (GBIF), host of the conference said: "Information networks support and permeate nearly every aspect of our daily lives in areas such as banking, commerce and entertainment. We still do not have this kind of rich, globally-interconnected system for understanding and monitoring life on Earth.

“We know a lot about species, genetics, and ecology, but we can't easily put this information together into a working knowledge system. This conference has given us a roadmap toward this goal."

The capabilities discussed by the participants at GBIC, who came from a range of disciplines including biodiversity science, policy and informatics, will now be developed in consultation with the science and policy communities into an outlook document. It will set priorities for biodiversity informatics for the coming decade with a view to establishing an effective and agile system of forecast and rapid response – equivalent to weather forecasting or earthquake detection.

A number of specific areas were identified for development in the outlook, each to include achievable outcomes over a five to ten year timeline, building on and integrating many existing initiatives and contributing to the overall vision of a global biodiversity intelligence system. They include:

- Making best use of the huge potential for the public to become part of a global biodiversity knowledge network as both contributors and beneficiaries, using latest technologies, social networks and local/indigenous knowledge;

- Capturing through all available technologies the complexity of interactions among species – for example predators/prey, parasites/hosts and pollinators – as well as their traits. The technologies will include acoustic monitoring and remote sensing, and will help analyse these interactions to establish their importance in providing ecological services to people;
- Greatly improving the capability to provide predictive modelling across different scales, estimating the impact of specific environmental changes on biodiversity for any point on Earth, and the resulting disruption of ecological services to people and communities;
- Expanding the current network of linked data from species names and museum collections up to satellite images of ecosystems and down to DNA in micro-organisms;
- Shining a light on hitherto hidden layers of biodiversity, for example using gene sequencing capabilities to understand the millions of kinds of microbes inhabiting the air, oceans, soils and higher organisms throughout the world, and their role in controlling the life support systems of the planet.

Donald Hobern continued: "Over the last quarter century, thousands of talented people have been working hard to bring essential biodiversity data onto the web. Much has already been achieved or is under development.

"GBIC has reinforced how important these activities are, and at the same time has outlined a path for us to build from where we are and deliver a rich globally-connected system for understanding and monitoring multiple aspects of biodiversity.

"I want to thank the attendees for working so hard over the last few days and encourage all others with an interest in biodiversity informatics to respond to the upcoming outlook document, and help to refine this as a shared vision."

Erick Mata, executive director of the Encyclopedia of Life and also a member of the GBIC organizing committee, added: "The five to ten year research and development roadmap that emerged from our discussions in Copenhagen will be a living document. We want researchers, policy makers and the general public with interest in biodiversity to contribute their ideas and get involved in implementation."

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Notes to editors:

- Formal presentations at GBIC including an opening message from the Executive Secretary of the Convention on Biological Diversity (CBD), Braulio Dias, can be found at http://www.gbic2012.org/documents.html/

- A more detailed account of the workshops held during GBIC, together with an outline of each of the project areas identified for development in the outlook, will be circulated in coming weeks.

- A draft of the outlook document, provisionally called the Global Biodiversity Informatics Outlook, will be issued for consultation by early September 2012. A complete version is anticipated to be launched at the CBD COP11 meeting in Hyderabad, India in October 2012. It will be discussed with a range of stakeholders at a number of meetings over subsequent months, including an anticipated larger conference on the issue earmarked for later 2013.

- GBIC was hosted by the University of Copenhagen and sponsored by GBIF (http://www.gbif.org/), the Creative-B project (http://creative-b.eu/), the JRS Foundation (http://www.jrsbdf.org/v3/home.asp) and the Aage V. Jensen Foundation (http://www.avjf.dk/). Organizations represented on the organizing committee and team of co-chairs include: GBIF; Creative-B; Encyclopedia of Life; Natural History Museum of London; Consortium for the Barcode of Life; Alexander von Humboldt Institute for Research on Biological Resources (Colombia); Bioversity International; Centro de Referência em Informação Ambiental (Brazil); European Commission Joint Research Centre; Georgia Tech College of Computing; JRS Foundation; NERC Centre for Ecology and Hydrology (UK); South African National Biodiversity Institute; UNEP-World Conservation Monitoring Centre; University of Glasgow; The Wallace Initiative and ClimaScope.

- The Global Biodiversity Information Facility (GBIF) was established by governments in 2001 to encourage free and open access to biodiversity data, via the Internet. Through a global network of 57 countries and 47 organizations, GBIF promotes and facilitates the mobilization, access, discovery and use of information about the occurrence of organisms over time and across the planet.