

Eurogard VII - Synthesis

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Dear Colleagues

Although I am the only one mentioned in the programme as presenting this conclusion, I would like to start by thanking Suzanne Sharrock and Matthew Jebb who prepared the part concerning the Consortium and the resolutions of this congress.

First of all I would like share with you what a pleasure it has been for me to participate in the EuroGard VII congress. The heatwave that has hit much of Europe has neither upset our discussions nor overheated our spirits. The discussions have been both calm and constructive, and the plenary lectures stimulating.

I summarize the main themes of these plenary conferences in four: the importance of a legislative framework, responsibility in terms of conservation, collaborative work and, finally, maintaining the link to nature.

The importance of a legislative framework

Concerning the importance of the legislative framework, Braulio Ferreira de Souza Dias evoked the importance of the Global Strategy for Plant Conservation as a framework for action to safeguard biodiversity. Dominique Richard reported that the European Union has set targets as part of the development of its Biodiversity Strategy for 2020. At the end of the congress, Peter Wyse Jackson did the same, saying that the Global Strategy for Plant Conservation provides a framework that guides the work of the Botanical Gardens. If half of the objectives are covered by these, one can also find Botanical Gardens for all remaining targets.

But legislation can become heavy and cumbersome, even though the objectives are ethically necessary and, essentially, supported by Botanical Gardens. With respect to the introduction of the Nagoya Protocol, Braulio Ferreira de Souza Dias noted that this is an innovative law which has introduced the recognition of the sovereignty of countries over their natural resources. Nevertheless, Matthew Jebb and Michel Guiraud observed that legislative constraints are generally becoming more severe and there is a risk that they may become too difficult for scientific institutes to overcome. The introduction of the Nagoya Protocol could lead to a paradoxical situation, namely that it may close access to the genetic resources of the very countries that are in need of a better understanding of their biodiversity. Without taking a position on this administrative problem, Braulio Ferreira de Souza Dias affirmed that research requires access to genetic resources in order to highlight the value of biodiversity. Developing countries therefore need such research to give recognition to their biodiversity. In this context, Michel Guiraud highlighted a possible benefit of virtual collections in that they

could provide a response to the complexity of the legislation that is being put in place. On a more general level, Jean-Patrick Le Duc dissected the illegal trade in plants. He attributed to Botanical Gardens the important role of being partners to Customs agencies as Botanical Gardens can house plants that have been seized or confiscated under the correct conditions.

Responsibility in terms of conservation

Paul Smith observed that Botanical Gardens have the tools and competences necessary to conserve plant diversity due their herbaria, seed-banks, in situ and ex situ conservation activities as well as their actions in habitat restoration.

Han Qunli highlighted the great interest of the UNESCO Biosphere reserves. 651 reserves in 120 countries cover more than 10 million km² and include more than 170 million people. These reserves represent very important laboratories for the study of the balance between nature and human populations. Botanical gardens can help in understanding these interactions.

However, Braulio Ferreira de Souza Dias made the bitter observation that we have failed to decrease of the loss of biodiversity, and that it continues. He observed that the reasons for this failure are due to the fact that we did not emphasize the underlying causes. It is necessary to show to society how it can obtain benefits from biodiversity. A common theme running through the presentations is Ecosystem Services.

For Dominique Richard, the complexity of environmental systems may be the cause of a significant time lag before actions come into effect.

Juli Caujapé Castells observed that we often do not know which strategy to use for conservation. We give the impression of a lack of coordination, a lack of clarity in the actions due the fact that certain concepts are elusive. He demonstrated that fragmentation, often the cause of biodiversity loss, can also be at the origin of the appearance of new species in the form of the first haplotypes. He proposed that the notion of population, rather than that of species, should become the official unit for conservation.

Philippe Bardin noted several observations raised by the Federation of Botanical Conservatories of France surrounding the issue of the conservation of threatened species. Sceptical about the probabilities of reaching the objectives of the Global Strategy for Plant Conservation by 2020, and although the results to date are relatively pleasing, he showed that threatened species are relatively poorly represented in the territories placed under protection. He observed that it is necessary to develop new tools for hierarchical organization to increase the efficiency of protective measures and, for example, to add taxon phylogenetic originality and known evolutionary history to the IUCN patrimonial responsibility criteria.

Finally, Hervé le Treut and Marko Hyvärinen evoked the problem of the effects of climate change on the distribution of plants. Marko Hyvärinen suggested that these migrations should be accompanied by ex situ and in situ cultures that are at an appropriate level for Botanical Gardens. However, he asked a number of questions: How should the sensitivity of a

species to climate change be evaluated? How should the species be chosen? How should they be moved? How should the risk of developing invasive species be managed? How will the legality of what we are doing be assured? How can this become a daily activity within Botanical Gardens?

Collaborative work

As more work is done as a network, more true and durable collaborations will appear as a means to strengthen the force of the action of botanical gardens. Braulio Ferreira de Souza Dias observed that Botanical Gardens have the capacity to participate in the global effort, but that, more generally, it is necessary to intensify the efforts to work as a network, and the contacts with politicians. It is necessary to place the protection of the environment in the context of durable development by leaning also on the economy and societal aspects.

On this theme Pawel Kojas presented a method that allows Botanical Gardens to remain coherent with respect to the three pillars of the durable development: environment, economy and social activities.

Eleni Maloupa, by retracing the history of the EuroGard meetings, gave an image of a "family" of Botanical gardens which communicates, exchanges and creates its future during these meetings. This point of view was shared by Matthew Jebb, who remarked that everybody cannot do everything, that it is necessary to work as a network and to define priorities. Meetings, such as those of EuroGard, help us to define these priorities.

Suzanne Sharrock stressed that the network of Botanical Gardens, through their affiliation with the BGCI, represents an important strike force, with around 3000 Botanical Gardens frequented by an estimated 500 million visitors a year. Centralised databases, such as PlantSearch and GardenSearch, contain information that is very useful for the orientation of the action plans of Botanical Gardens, and for the justification of their support by political authorities or sponsors.

Maintaining the link to nature

Paul Smith indicated that nature, which we need to feed ourselves, does not originate in our refrigerators. He expressed the need to maintain our link with nature, vital to the survival of our species, in the context of a society where more than half of the population of the planet lives in urban areas, often disconnected from the natural world.

Eric Joly emphasized the role of zoos and botanical gardens as vectors for maintaining our link to nature, but also as a tool for research, and for in situ and ex situ conservation efforts.

From his side, Philippe Richard noted that since 75-80% of the European population lives in cities it is normal that the Botanical Gardens are located close to them, and that they play an important role in maintaining a link to nature. He redefined the main mission of Botanical Gardens, namely "to make nature accessible and understandable to the public".

At a different level, Laurent Bray highlighted the important work of the City of Paris to the increase green-space in urban areas, and the role of the Botanical Garden in maintaining the link to nature via the planting species of plants from the local Paris region.

Discussion

To end, I will focus on the redefined principal tasks of Botanical gardens that were proposed by Peter Wyse Jackson: 1) to take on the task of conservation in a strategic, justified and effective framework, 2) to build a of knowledge base, 3) to document three times rather than one (“document, document, document”), 4) to diffuse, transmit and educate, 5) to go beyond our comfort zone, 6) to define future policies, and 7) to change the life of people.

In effect, Botanical Gardens must simultaneously protect the diversity of life, contribute to human prosperity and participate in the alleviation of poverty.

To end, allow me to give my personal point of view on the legislative framework.

I think that the signature of the Convention of Biological Diversity constitutes a founding act by nations centred on the raised awareness of the necessity of considering nature as a resource that is necessary for the survival of the human race.

The regional, national and international context is paradoxical in terms of biodiversity. If we do not deny that the disappearance of species is accelerating, infringements on the environment increase, decisions on measures to resolve climate problems are delayed, and that we do not yet know how to address the demographic crisis, when not denied, significant advances at the legislative level give us hope for better days to come.

If I take the example of Switzerland, which I know well, do not ask me why, you can see a transcription of the fundamental concepts into legislation corresponding to the values we attribute to nature. Thus, following the impulses given by the Global Strategy for Biodiversity and the Global Strategy for Plant Conservation, the Federal Council adopted the Swiss Biodiversity Strategy on the 25 April 2012, defining 10 strategic objectives (promote sustainable use of natural resources, ensure an ecological infrastructure, promote the survival of species, preserve genetic diversity, etc.). An action plan is currently being developed at the national level.

The Swiss Biodiversity Strategy has introduced into legislation the fundamental concept of the dependence of human beings on the services provided by nature. It establishes as a rule the fact that nature delivers ecosystem services. It puts people into context within this system, which has consequences on the way in which we evolve within it. In this way we escape from the disconnected view of plants and animals that has prevailed until now. The isolation of territories to place them under protection is no longer the only tool that facilitates the protection of nature. It is the whole that should be considered in order to better conserve biodiversity.

Previously a peripheral subject, biodiversity has become of central concern and with this law is viewed as a framework to respect within which humans register their actions.

Biodiversity is a resource, it is not a luxury.

These important legislative developments, resulting from the work of certain people in this room, whom I thank here discretely but sincerely, show us that Botanical Gardens form a task force that works in favour of biodiversity. By allying with each other, pooling our resources, approaching politicians, acting locally with a global vision, collaborating and exchanging, by cumulating all our small efforts, we have the means to change things.

There is no one better placed than botanists and gardener-botanists, flora-writes, taxonomists, ecologists and biologists, to speak with authority on nature and the plant world. We have a responsibility towards society to inform and to try to convince on the issues that we consider to be vital for the survival of our species, and all species for which we have a responsibility. The Earth has been lent to us, let us leave it complete and in good condition to our children.

These actions involve not only the rigor of our work but also generosity in our actions, and the sharing of our knowledge as widely as possible.

A legislative foundation, collaborative work, conservation and our link to nature, these, for me, are the main themes that have been highlighted during the EuroGard VII Congress, and these will guide most of my actions as Director of the Conservatory and Botanical Gardens of the City Geneva.