WORLD BIODIVERSITY CONGRESS
CONFERENCE REPORT

INTERNATIONAL CONFERENCE
NOV 26 – 30 2013
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World Biodiversity Congress 2013 was held in Chiang Mai, Thailand from November 26-30, 2013. The Congress was held at Empress Hotel, Chiang Mai, Thailand.

WBC was jointly organized by Global Scientific Research Foundation, Bangalore, India and Chiang Mai Rajabhat University, Thailand. WBC-2013 provided a forum for reorienting the policies and programs for more productive and sustainable Biodiversity.

Registration of the delegates was followed by the arrival of the Dignitaries and Guests.

The congress was inaugurated by Professor Dr. Prapan Thummachai, President, Chiang Mai Rajabhat University, Chiang Mai, Thailand by beating the drum. This was followed by the victory dance.

Empress Hotel, Chiang Mai, Thailand

Inauguration by Dr. Prapan Thummachai

Victory Dance
Prof. Emeritus Dr. Kittichai Wattananikorn, Chairman of the University Council, Chiang Mai Rajabhat University, Thailand delivered the Opening Speech.

Dr Anita Mohandas, President WBC-2013 gave the Presidential Address and welcomed all the International Delegates.

Opening Speech by Prof. Emeritus Dr Kittichai Wattananikorn

Presidential Address by Dr Anita Mohandas, President WBC-2013

This was followed by the release of Abstract/ Programme Book of the WBC-2013 by Prof Siriwat Wongsiri, Director, Maejo University.

Dr Shubharani R, Organizing Secretary, WBC-2013 gave the Vote of thanks.
Dignitaries at the Inaugural Ceremony

The Keynote Address 1 by Dr. Suyanee Wessabut, Director of the Queen Sirikit Botanic Garden on Botanic Gardens and Biodiversity Conservation was highly informative and interesting.

The Keynote Address 2 by Prof E. T. Puttaiah, Vice Chancellor, Gulbarga University, India was on Bioscience for the Future.
The three day conference developed an agenda to ensure sustainable livelihood, natural resource use optimization and ecosystem protection through biodiversity conservation. It brought together the international scientific community involved in the study of biodiversity and provided them a unique opportunity to deepen the understanding on the diversity of Fauna and Flora in Thailand and enjoy the wonderful hospitality of Thai People.

The multifaceted themes deliberated upon and discussed in the Congress both in Plenary and in Parallel sessions included the focal theme: Bioscience for the Future and the following sub themes:

- Biodiversity conservation, sustainable utilisation and Management of traditional knowledge for global health.
- Biodiversity, Food security, sustainable agricultural product and agro-ecosystem.
- Biotechnology, Genetic resources, Plant and Biodiversity indicators in Forest Ecosystem.
- Marine ecosystem and oceanographic biodiversity.
- Biopiracy, Bioinvasion, Bioenvironment, Renewable Sustainable energy and global policy.
- Biofertiliser and Biopesticides.
- Insect and Animal biodiversity.
The Valedictory Session of the Seminar was presided by Prof S V S Chauhan, Renowned Plant Reproductive Biologist and Director, Academy of Life Sciences, Agra, India who presented the Scientific Awards.

The Welcome Dinner and Excursion at Chiang Mai Night Safari was an exciting experience for the Delegates.

**Technical Tour:** The Congress finally concluded with a Tour to the Royal Flora Botanical Gardens.

**Dr Basavarajappa Senior Scientist Award**

**Royal Flora Botanical Gardens**

**Chiang Mai Night Safari**
The United Nations has declared 2010 as the International Year of Biodiversity (IYB) to create awareness about the crucial importance of biodiversity to society. Biodiversity and ecosystem changes could be prevented or significantly reduced or even reversed if strong action is initiated urgently, comprehensively and appropriately, at international, national and local levels.

In the International Year of Biodiversity, the need for a common platform in India to assess the status of biodiversity and to discuss strategies and action plans for conservation and sustainable utilization of biodiversity was very much essential.

Convention on Biological Diversity (CBD) is the key for the conservation and sustainable use of biodiversity and for the fair and equitable sharing of benefits. We need a new vision on biological diversity for a healthy planet and a sustainable future for humankind.

WBC 2013, Chiang Mai was the largest colloquium of biodiversity experts in India for discussing the current status of biodiversity in India, scope for using the greater biodiversity of the country for alleviating poverty, to fight globalisation, and to formulate developmental paradigms and policies for conservation and sustainable utilisation of biodiversity besides sharing of benefits as envisaged in Convention on Biological Diversity.
Keeping in mind the intrinsic value of biological diversity and of the ecological, genetic, social, economic, scientific, educational, cultural, recreational and aesthetic values of biological diversity and its components and the importance of biological diversity for evolution and for maintaining life sustaining systems of the biosphere, WBC-2013, Chiang Mai adopts the following recommendations:

1. The conference requested the government to take concerted efforts to achieve “Aichi Target” or the 2011-2020 Strategic Plan of the Convention on Biological Diversity for addressing the underlying causes of biodiversity loss, reduce the pressures on biodiversity, safeguard biodiversity at all levels, enhance the benefits provided by biodiversity, and provide for capacity building.

2. The genetic diversity of agricultural crops should be better documented and the lesser known food crops of the country should be fully utilized to achieve food security.

3. For taxonomy, DNA barcoding technologies can be better utilized to minimize extensive collection and to realize the phylogenetic linkages. Moreover, GIS and remote sensing technologies could be utilized for effective management of ecosystems.

4. The demand driven research should be promoted for biodiversity conservation through building partnerships between academic and research institutions and civil society organizations. Sufficient funds should be earmarked for conservation related programmes which are localized and involving local communities.

5. The Declaration invites to strengthen educational and cultural processes in order to spread knowledge, awareness, sensitivity and operational capacity about the conservation of natural resources and their correct and equitable use.
6. Undertake collaborative research programmes on Biodiversity conservation by Global Scientific Research Foundation and Chiang Mai Rajabhat University, Thailand which includes feasibility studies, training and extension.

7. Light pollution is one of the evils of urbanization and its effects on biodiversity of animals are to be studied. In future, Biodiversity factor is to be compulsorily included in environmental impact assessments linked to infrastructure and other developmental projects in developing cities.

8. An increasing part the global population inhabits coastal regions. Many of the world’s major cities have been built on or near good harbors and have port facilities. Jurisdictions that are landlocked have achieved port status by such measures such as building canals. The Integrated Coastal Zone Management (ICZM) need to be implemented for the sustainable development of these zones.

9. Awareness to be created amongst the tribal to conserve the plants. Gums and resins are secondary metabolites of plants. Their collection provides livelihoods to a large number of people (mostly tribal) living in or around forests, particularly in developing countries. It is used in ayurvedic medicines, textiles, paper and leather industry, petroleum and gas industry and cosmetics. We need to develop a tribal friendly standardized technique for extraction of gum.

10. Trees are source of abundant nectar and help honeybees in energy conservation by limiting their visit to one to one plants before the pollen becomes fragile. Honey bees tend to forage on those plants that give a greater caloric return for the energy expended in the search and extraction. Nectar is important for honeybees because it stimulates their active foraging, brood rearing and rapid colony growth.
Species having high energetics should be cultivated.

11. There is urgent need for research on breeding systems in plants. The number of pollen grains produced for each ovule of a flower reflects the breeding system of the species. Apart from people’s awareness and participation, knowledge of reproductive biology is the key in achieving the required conservation. During last three decades, emphasis has been on the need for studies on Reproductive Biology of Trees for their optimal utilization and it has received a fresh impetus. Reproductive biology of any particular tree species requires collection of comprehensive data on phenology, floral morphology, pollination ecology, breeding system, pollen-pistil interaction, fruit and seed-set and their dispersal and seed germination and seedling recruitment. Pollination results from a complex series of interaction between the plant and vector agent, conditioned by environment. For successful fruit and seed formation plant – pollinator-interaction is also prerequisite.

12. The unique richness of plant bioresources makes it a potential hub of economic growth, if utilized and tapped efficiently. Many of the plants have intrinsic potential and hold important key resource for supplementing floriculture, agriculture, Horticulture, medicine, etc with many plants providing subsidiary food value and other uses. The above knowledge can be used in the evaluation and in creation of awareness of the importance of these plant bioresources.

13. The WBC recognizes that Asia is extremely rich in its Biodiversity. Hence the congress resolves that no effort should be spared in protecting and conserving Biodiversity for sustainable development.

14. The twenty first century is the age of the "Information Technology". Therefore, the latest information technology should be utilized to mobilize
and pool the world's Biological resources. The available knowledge, skills and technology should be used to facilitate scientific research and promote Biodiversity is an important sustainable economic activity. This is also a way of enhancing knowledge and understanding of Biodiversity as vital components of our ecosystem.
The Global Scientific Research Foundation, Bangalore, India extends its sincere gratitude to the Assoc Prof. Dr Prapan Thummachai, President, Chiang Mai Rajabhat University, Prof Emeritus Kitticahi Chitwan, Dr Anodar Ratchawet and Students of Chiang Mai Rajabhat University for extending support for the successful organization of the congress.

We also extend our gratitude to our invitees, contributing authors and all participants for making the "World Biodiversity Congress-2013, Chiang Mai, Thailand" a great success!