**Research needs expressed in the Decisions of the Conference of the Parties to the Convention on Biological Diversity:
Thematic Work Programme on Forest Biodiversity**

Forests are biologically diverse systems, representing some of the richest biological areas on Earth (http://www.cbd.int/forest/default.shtml). They offer a variety of habitats for plants, animals and micro-organisms. However, forest biodiversity is increasingly threatened as a result of deforestation, fragmentation, climate change and other stressors.

The cited Decisions that express research needs are VI/8, VI/22 (where the expanded work programme is annexed), VIII/19, IX/5, XIII/3 and XIV/30, also checked were Decisions VII/1, VIII/9 and X/36.

Direct research needs

Decision	Paragraph	Chapeau / Heading	Text	Source http://www.cbd.int/decisions/
VI/8	Annex I Part II Planned Activity 8	Forest biological diversity	**Taxonomic studies and inventories at the national level, which provide for a basic assessment of forest biological diversity**.	cop-06.shtml?m=COP-06&id=7182
VI/22	Annex I Programme Element 1 Goal 1 Objective 1	Goal 1: To apply the ecosystem approach to the management of all types of forests.	**Identify key structural and functional ecosystem elements** to be used **as indicators** for decision-making and develop decision-support tools on a hierarchy of scales. **Promote research and pilot projects** to develop understanding of the **functional linkages between forest biological diversity and agriculture** with the aim to developing practices that could improve the relations between forest management and other land use methods. **Promote assessment of functional linkages between mining, infrastructure and other development projects and forest biodiversity,** and develop best practice, guidelines for such development projects to mitigate adverse impacts on forest biodiversity.	cop-06.shtml?m=COP-06&id=7196
VI/22	Annex I Programme Element 1 Goal 2	Goal 2: To reduce the threats and mitigate the	**Improve the knowledge of the impacts of invasive alien species** on forest ecosystems and adjacent ecosystems.	cop-06.shtml?m=COP-06&id=7196

		Objective 1	impacts of threatening processes on forest biological diversity.		
VI/22	Annex I Programme Element 1 Goal 2 Objective 2		**Increase the understanding of the impact of pollution**, e.g., acidification and eutrophication, and other pollutants (such as mercury and cyanide) on forest biodiversity; at genetic, species, ecosystem and landscape levels.		
VI/22	Annex I Programme Element 1 Goal 2 Objective 3		**Promote** monitoring and **research on the impacts of climate change** on forest biological diversity and **investigate the interface between forest components and the atmosphere**.		
VI/22	Annex I Programme Element 1 Goal 3 Objective 2	Goal 3: To protect, recover and restore forest biological diversity.	**Determine status and conservation needs of endemic or threatened species and the impacts of current forest management practices** on these species.	cop-06.shtml?m=COP-06&id=7196	
VI/22	Annex I Programme Element 1 Goal 4 Objective 4	Goal 4: To promote the sustainable use of forest biological diversity.	**Improve understanding of patterns of genetic diversity and its conservation in situ**, in relation to forest management, landscape-scale forest change and climate variations.	cop-06.shtml?m=COP-06&id=7196	
VI/22	Annex I Programme Element 2 Goal 2 Objective 1	Goal 2: Address socio-economic failures and distortions that lead to decisions that result in loss of forest biological diversity.	**Increase knowledge on monetary and non-monetary cost-benefit** accounting for forest biodiversity evaluation.	cop-06.shtml?m=COP-06&id=7196	
VI/22	Annex I Programme Element 3 Goal 3	Goal 3: Improve understanding of the role of forest	**Develop** and support **focused research to improve understanding of the relationship between forest biological diversity and ecosystem functioning**, taking into account forest ecosystem components, structure, functions and processes to improve predictive capability.	cop-06.shtml?m=COP-06&id=7196	

		Objective 1	biodiversity and ecosystem functioning.	**Develop** and support **research to understand critical thresholds of forest biological diversity loss and change**, paying particular attention to endemic and threatened species and habitats including forest canopies. **Develop** and apply **forest ecosystem restoration techniques** to address biodiversity loss at the ecosystem level. **Develop** and support **research on impact of current forest management practices** for forest biodiversity within forests and on adjacent land.	
IX/5	Para 1	The Conference of the Parties		*Urges* Parties to: **Improve forest-biodiversity monitoring, inventorying** and reporting, at all appropriate levels; **identify areas of particular importance to forest biodiversity**, taking into account the target of having at least 10 per cent of each of the world's forest types effectively conserved; Promote multidisciplinary scientific research to **better understand the impacts of climate change**, including mitigation and adaption activities, and environmental degradation on ecosystem resilience, conservation and sustainable use of forest biodiversity and impacts on the livelihoods of indigenous and local communities; **Promote national and international research on agroforestry** and use the results to identify and disseminate good practices that promote the conservation and sustainable use of both forest and agricultural biodiversity; **Authorize the release of genetically modified trees only after completion of studies in containment**, including in greenhouse and confined field trials, in accordance with national legislation where existent, **addressing long–term effects as well as thorough, comprehensive, science-based and transparent risk assessments** to avoid possible negative environmental impacts on forest biological diversity; Further **develop knowledge on forest ecosystem services**, and implement, as appropriate, innovative tools for securing such services, such as Payments for Ecosystem Services (PES), consistent and in harmony with the Convention and other relevant international	cop/?id=11648

Decision	Paragraph	Chapeau / Heading	Text	Source
			obligations;	
XIII/3	Para 54	The Conference of the Parties	*Further encourages* Parties and invites other Governments to use, develop or enhance mechanisms of monitoring and evaluation of the impacts of policies, programmes, plans, projects and strategies relating to forest activities and...to monitor the biodiversity status using different monitoring methodologies, such as forest or biodiversity monitoring systems that provide information on the integral health of forest ecosystems;	decisions/cop/?m=cop-13

Indirect research needs

Decision	Paragraph	Chapeau / Heading	Text	Source http://www.cbd.int/decisions/
VI/8	Annex I Part II Planned Activity 8	Forest biological diversity.	In decision IV/7, the Conference of the Parties agreed that countries would review specific indicators of forest biological diversity derived by the major international processes related to sustainable forest management. **Depending on the selection of the criteria and indicators chosen, additional taxonomic studies and inventories will then be required**. While there is a need to continue **developing knowledge** in many components of forest ecosystems, the least known, and **highest priority**, is the **below-ground biological diversity**.	cop-06.shtml?m=COP-06&id=7182
VI/22	Annex I Programme Element 1 Goal 1 Objective 1	Goal 1: To apply the ecosystem approach to the management of all types of forests.	**Clarify the conceptual basis of the ecosystem approach** in relation to sustainable forest management. **Develop guidance** for applying the ecosystem approach in forest ecosystems. **Develop** and implement guidance to help the selection of **suitable forest management practices** for specific forest ecosystems. **Develop** and implement appropriate **mechanisms for the participation of all stakeholders** in ecosystem-level planning and management. **Promote activities that minimize the negative impacts of forest fragmentation on forest biodiversity**, including afforestation, forest restoration, secondary forest and plantation management, and agroforestry, watershed management and land use planning aimed at providing a combination of economic and environmental goods and services to stakeholders.	cop-06.shtml?m=COP-06&id=7196

VI/22	Annex I Programme Element 1 Goal 2 Objective 1	Goal 2: To reduce the threats and mitigate the impacts of threatening processes on forest biological diversity.	Reinforce, **develop** and implement **strategies** at regional and national level **to prevent and mitigate the impacts of invasive alien species** that threaten ecosystems, including risk assessment, strengthening of quarantine regulation, and containment or eradication programmes taking into account the guiding principles on invasive alien species if adopted at the sixth meeting of the Conference of the Parties.	
VI/22	Annex I Programme Element 1 Goal 2 Objective 2		**Support monitoring programmes that help evaluate the impacts of air, soil and water pollution** on forest ecosystems, and address the impacts of changing environmental conditions on forest ecosystems.	
VI/22	Annex I Programme Element 1 Goal 2 Objective 3		**Develop coordinated response strategies and action plans** at global, regional and national levels. **Assess how the conservation and sustainable use of forest biological diversity can contribute to the international work relating to climate change**.	cop-06.shtml?m=COP-06&id=7196
VI/22	Annex I Programme Element 1 Goal 2 Objective 4		**Develop** and promote the use of **fire management tools** for maintaining and enhancing forest biological diversity, especially when there has been a shift in fire regimes. **Promote development of systems for risk assessment and early warning, monitoring and control**, and enhance capacity for prevention and post-fire forest biodiversity restoration at the community, national and regional levels.	
VI/22	Annex I Programme Element 1 Goal 2 Objective 5		**Develop** and promote management **methods that restore or mimic natural disturbances** such as fire, wind-throw and floods.	
VI/22	Annex I Programme Element 1 Goal 3 Objective 1	Goal 3: To protect, recover and restore forest biological diversity.	**Create and improve** where appropriate international, regional and national **databases and case-studies on the status of degraded forests, deforested, restored and afforested lands**.	cop-06.shtml?m=COP-06&id=7196
VI/22	Annex I Programme		**Develop** and implement conservation **strategies for endemic and threatened species** for global or regional application, and practical	

			systems of adaptive management at national level.	
	Element 1 Goal 3 Objective 2			
VI/22	Annex I Programme Element 1 Goal 3 Objective 3		**Assess the comprehensiveness, representativeness and adequacy of protected areas** relative to forest types and **identify gaps and weaknesses**. **Assess the efficacy of protected forest areas** for the conservation of biological diversity.	
VI/22	Annex I Programme Element 1 Goal 4 Objective 1	Goal 4: To promote the sustainable use of forest biological diversity.	**Develop**, support and promote **programmes** and initiatives **that address the sustainable use of timber and non-timber forest products**.	
VI/22	Annex I Programme Element 1 Goal 4 Objective 4		Develop, harmonize and **assess the diversity of forest genetic resources**, taking into consideration the **identification of key functional/keystone species populations, model species and genetic variability at the deoxyribonucleic acid (DNA) level**. **Monitor developments in new biotechnologies** and ensure their applications are compatible with the objectives of the Convention on Biological Diversity with respect to forest biological diversity, and **develop** and enforce **regulations for controlling the use of genetically modified organisms (GMOs)** when appropriate.	cop-06.shtml?m=COP-06&id=7196
VI/22	Annex I Programme Element 2 Goal 1 Objective 2	Goal 1: Enhance the institutional enabling environment.	**Develop a set of indicators** that might be used in assessing progress in implementing the national biodiversity strategies and action plans and relevant work programmes.	cop-06.shtml?m=COP-06&id=7196
VI/22	Annex I Programme Element 2 Goal 2 Objective 1	Goal 2: Address socio-economic failures and distortions that lead to decisions that result in loss of forest biological	**Develop, test** and disseminate **methods for valuing forest biological diversity and other forest ecosystem goods and services** and for incorporating these values into forest planning and management, including through stakeholder analysis and mechanisms for transferring costs and benefits. **Develop** and disseminate **analyses of the compatibility of current and predicted production and consumption patterns** with respect to the limits of forest ecosystem functions and production.	cop-06.shtml?m=COP-06&id=7196

			diversity.	
VI/22	Annex I Programme Element 3 Goal 1 Objective 1	Goal 1: To characterize and to analyse from forest ecosystem to global scale and develop general classification of forests on various scales in order to improve the assessment of status and trends of forest biological diversity.	**Review** and adopt **a minimum forest classification for forest types**, compatible with remote sensing technologies, that includes broad indicators of biodiversity that can be taken into account in all international and regional forest-related programmes, plans and activities.	
VI/22	Annex I Programme Element 3 Goal 1 Objective 2		**Review existing national forest ecosystem classification systems and maps**. **Develop** and apply national **forest ecosystem classification systems and maps** that include key components of forest biological diversity to be used in assessment reports on forest types including socio-economic and cultural aspects. Use adapted technology, for example geographic information system, to **develop a baseline for assessing levels of deforestation and impacts on biodiversity**.	cop-06.shtml?m=COP-06&id=7196
VI/22	Annex I Programme Element 3 Goal 1 Objective 3		To **identify and prioritize relevant areas to carry out** these [specific forest ecosystems] **survey**s	
VI/22	Annex I Programme Element 3 Goal 2 Objective 1	Goal 2: Improve knowledge on and methods for the assessment of the status and trends of forest biological diversity, based on available information.	**Advance** the development and implementation of international, regional and national **criteria and indicators** based on key measures within the framework of sustainable forest management. **Develop and select** international, regional and national **criteria and** where appropriate quantifiable, **indicators for forest biological diversity**, taking into account, as appropriate, existing work and processes on criteria and indicators on sustainable forest management, as well as the knowledge held by indigenous and local communities. Such criteria and indicators should be used for assessment reporting at least 10-year intervals.	cop-06.shtml?m=COP-06&id=7196
VIII/19	Part B	The Conference of the Parties	*Recognizing* the uncertainties related to the potential environmental and socio-economic impacts, including **long-term and transboundary impacts, of genetically modified trees on global forest biological diversity**, as well as on the livelihoods of indigenous and local	[COP-08&id=11033](COP-08&id=11033)

			communities, and **given the absence of reliable data and of capacity in some countries to undertake risk assessments and to evaluate those potential impacts**;	
XIV/30	Para 35	The Conference of the Parties	*encourages* member organizations of the Collaborative Partnership on Forests to further **coordinate on biodiversity-relevant data and methodologies for the development of spatial assessments** of opportunities to advance on biodiversity commitments through the work of the Global Forest Goals, REDD+, and the Global Partnership on Forest and Landscape Restoration, as appropriate, as well as alternative adaptation and mitigation approaches contributing to forest restoration;	decisions/cop/?m=cop-14