Prepared by Institute for Biodiversity Network e.V. on behalf of German Federal Agency for Nature Conservation

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

Agricultural biodiversity (http://www.cbd.int/agro/default.shtml) provides not only food and income but also raw materials for clothing, shelter, medicines, breeding new varieties, and performs other services such as maintenance of soil fertility and biota, and soil and water conservation, all of which are essential to human survival. Nearly one third of the world's land area is used for food production.

The cited Decisions that express research needs are V/5 (where the work programme is annexed), VI/5, VI/8, VIII/23, IX/1, IX/2, X/34, X/37, XI/27, XIII/3, XIII/15 and XIV/6 also checked was Decision VII/3.

Direct research needs

Decision	Paragraph	Chapeau / Heading	Text	Source http://www.cbd.int/decisions/
V/5	Annex V Programme Element 2 Activity 2.1	Programme of work on agricultural biodiversity.	**Carry out a series of case-studies**, in a range of environments and production systems, and in each region: To **identify key goods and services** provided by agricultural biodiversity, **needs for the conservation and sustainable use** of components of this biological diversity in agricultural ecosystems, **and threats** to such diversity; To **identify best management practices**; and To **monitor and assess the actual and potential impacts of existing and new agricultural technologies**. This activity would address the multiple goods and services provided by the different levels and functions of agricultural biodiversity and the interaction between its various components, as set out in the appendix hereto with a focus on certain specific and cross-cutting issues, such as: The **role and potential of wild, under-utilized and neglected species, varieties and breeds, and products**; The **role of genetic diversity in providing resilience, reducing vulnerability, and enhancing adaptability of production systems to changing environments and needs**; The **synergies and interactions between different components** of	cop-05.shtml?m=COP-05&id=7147

			agricultural biodiversity; The **role of pollinators**, with particular reference to their economic benefits, and the effects of introduced species on indigenous pollinators and other aspects of biological diversity; The **role of soil and other below-ground biodiversity** in supporting agricultural production systems, especially in nutrient cycling; **Pest and disease control mechanisms**, including the role of natural enemies and other organisms at field and landscape levels, host plant resistance, and implications for agro-ecosystem management; The **wider ecosystem services** provided by agricultural biodiversity; The **role of different temporal and spatial patterns** in mosaics of land use, including complexes of different habitats; **Possibilities of integrated landscape management** as a means for the conservation and sustainable use of biodiversity.	
VI/5	Para 22	The Conference of the Parties	Acknowledges **the need for additional research regarding the potential risks of specific genetic use restriction technologies**;	COP-06&id=7179
VI/5	Annex II Para 3	Plan of action for the international initative for the conservation and sustainable use of pollinators.	**Pollination as a science requires detailed investigation**, and the technological application of management practices is intricate. In most cases, **there is a lack of knowledge about the exact relations between individual plant species and their pollinators**, but studies in this field demonstrate that they are often quite specific.	COP-06&id=7179
VI/5	Annex II Element 1 Activity 1.3	Assessment.	**Assess the state of scientific and indigenous knowledge on pollinator conservation, in order to identify gaps** in knowledge and opportunities for application of knowledge; including: **Taxonomic knowledge; and the knowledge, innovations and practices of farmers and indigenous and local communities in sustaining pollinator diversity and agro-ecosystem services** for and in support of food production and food security.	COP-06&id=7179
VI/5	Annex II Element 1 Activity 1.4		Promote the development of **identification keys for bee genera**.	
VI/5	Annex II	Adaptive	**Carry out a series of case-studies**, **in a range of environments and**	COP-06&id=7179

	Element 2 Activity 2.1	management.	**production systems, and in each region**: To **identify key goods and services** provided by pollinator diversity, the role of components of biological diversity in agricultural and other ecosystems in supporting such diversity, and threats to such diversity including, for example, use of pesticides, habitat change and the introduction of exotic pollinators; To **identify best management practices**; and To **monitor and assess the actual and potential impacts** of existing and new agricultural technologies. This activity would **address the multiple goods and services provided by pollinator diversity and the interaction between its various** components, for example: The impacts of introduction of pollinators; The impacts of alien invasive species on pollinators; The impacts of fragmentation and habitat loss on pollinators diversity, and the ecosystems that support them; The impact of pesticides on pollinators diversity and abundance, including pest control programmes; Sustainable management of pollinators; Decline of Honeybees, other bees and other pollinators; The dynamics of pollinators diversity decline; The interactions between pollination and genetically-modified crops; Conservation and restoration of pollinators diversity; Mainstreaming and stakeholder engagement; Economics of pollination.	
VI/5	Annex II Element 3 Activity 3.4	Capacity building.	**Build taxonomic capacity to carry out inventories of the pollinator diversity** and distribution in order to optimise their management, through, *inter alia*, the training of taxonomists and parataxonomists of bees and other pollinators.	COP-06&id=7179
VI/5	Annex II Element 3 Activity 3.5		This may include developing and updating global and national lists of threatened pollinator species, and produce multilingual manuals on pollinator conservation and restoration for farmers.	
VI/8	Annex I Part II Planned	Agricultural biological diversity.	Within the programme of work on agricultural biological diversity, several areas require taxonomic capacity in order to deliver fully on their objectives. The **need for taxonomy ranges from classical taxonomy**	cop-06.shtml?m=COP-06&id=7182

	Activity 12		**of the species living in agricultural ecosystems, to the taxonomy of wild relatives of agriculturally important species, to access to existing taxonomic information including basic knowledge on the functional relationships between organisms** often recorded by taxonomists. Within the agricultural biodiversity work programme specific taxonomy-related activities are envisaged in the following subject areas: **pollinators; soil and other below-ground biodiversity, to support agricultural production systems, especially in nutrient cycling; and natural enemies of pests and diseases**.	
VIII/23	Annex I Element 1 Activity 1.1	Proposed framework for a cross-cutting initiative on biodiversity for food and nutrition.	Compilation, review and **analysis of**: (a) **Existing scientific information**, indigenous and traditional knowledge on the links between biodiversity, food and nutrition (in a manner consistent with Article 8(j) and related provisions of the Convention) according to national legislation ; (b) **Case-studies on the links between biodiversity, food and nutrition**; (c) The value of biodiversity for food and nutrition.	COP-08&id=11037
VIII/23	Annex I Element 1 Activity 1.2		**Stimulating further research** and the generation and systematic compilation of new data.	
VIII/23	Annex I Element 1 Activity 1.3		**Development of an indicator** (or indicators) on biodiversity in use for food, consistent with decision VII/30.	
VIII/23	Annex I Element 3 Activity 3.2		**Identification** and promotion **of species currently underutilized or of potential value to human food and nutrition**, including those important in times of crisis, and their conservation and sustainable use.	
VIII/23	Annex I Element 3 Activity 3.11		**Research** and conservation **of native plants or animals, local races, wild relatives of cultivated or domesticated species in order to improve the knowledge on their genetic variability**, regarding important traits for agriculture such as: biotic/abiotic resistance, yield and nutritional value.	
VIII/23	Annex II Objective 2 Activity 2.4	International initiative for the conservation	**Mobilize targeted participatory research and development in order to enhance understanding of soil biodiversity functions and ecosystem resilience** in relation to land use and sustainable	COP-08&id=11037

		and sustainable use of soil biodiversity: framework for action.	agriculture.	
VIII/23	Annex II Objective 2 Activity 2.5		**Identify and develop datasets on soil biodiversity** at national level that are important for agriculture.	
VIII/23	Part C	The Conference of the Parties	*Encourages* Parties, other Governments, relevant organizations, and interested stakeholders to: **Continue to undertake further research**, within the mandate of decision V/5 section III, **on the impacts of genetic use restriction technologies, including their ecological, social, economic and cultural impacts**, particularly on indigenous and local communities;	COP-08&id=11037
IX/1	Para 5	The Conference of the Parties	*Invites* Parties and other Governments and relevant organizations to finance and **undertake research** as appropriate to further develop and apply methods and **techniques for assessing and monitoring the status and trends of agricultural biodiversity and other components of biodiversity in agricultural ecosystems, and collect and refine the collated data into a coherent information** set on best monitoring practices;	cop/?id=11644
IX/1	Para 21	The Conference of the Parties	*Invites* the FAO in collaboration with Parties, other Governments and relevant organizations, to continue the implementation of the International Initiative for the Conservation and Sustainable Use of Pollinators (decision VI/5) and, in particular: To **complete information on pollinator species, populations and their taxonomy, ecology and interactions**; To **establish the framework for monitoring declines and identifying their causes**; To **assess the agricultural production, ecological, and socio-economic consequences of pollinator declines**;	cop/?id=11644
IX/1	Para 34	The Conference of the Parties	*Invites* Parties and other Governments and relevant organizations to finance and **undertake research** that would contribute to the implementation of the programme of work on agricultural biodiversity including, for example: To **assess the performance of agricultural policies** in achieving the target of significantly reducing the rate of biodiversity loss; To **undertake multidisciplinary studies to evaluate the capability of**	cop/?id=11644

			different farming systems to conserve agricultural biodiversity and use it sustainably and to provide economic viability; To further **investigate the use of agricultural biodiversity to develop sustainable agricultural systems** that contribute to improved livelihoods, enhance biodiversity and make use of its benefits, as well as conserving the most vulnerable and potentially useful species; To **evaluate and characterize germplasm potentially suitable for adaptation to climate change**; **Research to enhance resilience of agricultural systems**;	
IX/2	Para 5	The Conference of the Parties	*Calls upon* Parties, other Governments, **the research community**, and invites other relevant organizations **to continue to investigate and monitor the positive and negative impacts of the production and use of biofuels on biodiversity** and related socio-economic aspects, including those related to indigenous and local communities,	cop/?id=11645
X/37	Para 7	The Conference of the Parties	*Invites* Parties, acknowledging different national conditions, other Governments and relevant organizations, **bearing in mind ecosystem functions and services**, to: (a) **Develop national inventories so as to identify areas of high biodiversity value, critical ecosystems**, and areas important to indigenous and local communities; and (b) **Assess and identify areas** and, where appropriate, ecosystems **that could be used in, or exempted from, the production of biofuels**; so as to assist policy-makers in applying appropriate conservation measures and **identifying areas deemed inappropriate for biofuel feedstock production**;	cop/?id=12303
XIII/3	Para 29	The Conference of the Parties	*Further encourages* Parties and *invites* other Governments to promote further research and development on increasing sustainable productivity based on ecosystem services and functions directly or indirectly relevant to agriculture	decisions/cop/?m=cop-13
XIII/15	Para 7t	The Conference of the Parties	*Encourages* Parties, and *invites* other Governments and other relevant organizations and stakeholders, taking into account national circumstances, as appropriate, to enhance monitoring of the status and trends of all pollinators, pollinator-friendly habitats and pollinator	decisions/cop/?m=cop-13

			community structure as well as the identification of potential pollinator deficits using consistent and comparable methodologies;	
XIII/15	Para 7u	The Conference of the Parties	*Encourages* Parties, and *invites* other Governments and other relevant organizations and stakeholders, taking into account national circumstances, as appropriate, to build taxonomic capacity on pollinators;	decisions/cop/?m=cop-13
XIII/15	Para 7v	The Conference of the Parties	*Encourages* Parties, and *invites* other Governments and other relevant organizations and stakeholders, taking into account national circumstances, as appropriate, to assess the benefits of pollinators and pollination, taking into account the economic value to agriculture and food production and the value to conservation and sustainable use of biodiversity, as well as cultural and other values;	decisions/cop/?m=cop-13
XIII/15	Para 7w	The Conference of the Parties	*Encourages* Parties, and *invites* other Governments and other relevant organizations and stakeholders, taking into account national circumstances, as appropriate, to undertake research on the socioeconomic implications of pollinator decline in the agricultural sector;	decisions/cop/?m=cop-13
XIII/15	Para 7x	The Conference of the Parties	*Encourages* Parties, and *invites* other Governments and other relevant organizations and stakeholders, taking into account, to promote and share further research to address gaps in knowledge identified in the Assessment, as appropriate and in accordance with national legislation, including the effects of the partial loss of pollinators on crop production, and potential impacts of pesticides, in particular neonicotinoids and other systemic pesticides, taking into account their possible cumulative effects, and of living modified organisms, on pollinator populations, under field conditions, including differential impacts on managed and wild pollinators, and on social versus solitary pollinators, and the impacts on pollination of both crop and non-crop plants over both the short and long term, and under different climatic conditions;	decisions/cop/?m=cop-13
XIII/15	Para 7y	The Conference of the Parties	*Encourages* Parties, and *invites* other Governments and other relevant organizations and stakeholders, taking into account, to promote further research to identify practical ways that pollinator-friendly practices can be integrated into farming systems as part of efforts to increase production and mainstreaming of biodiversity into agricultural production systems;	decisions/cop/?m=cop-13

XIII/15	Para 7z	The Conference of the Parties	*Encourages* Parties, and *invites* other Governments and other relevant organizations and stakeholders, taking into account, to promote further research to identify risks to pollination under climate change and potential adaption measures, including the potential loss of keystone species and their effect on ecosystem resilience;	decisions/cop/?m=cop-13
XIII/15	Para 7aa	The Conference of the Parties	*Encourages* Parties, and *invites* other Governments and other relevant organizations and stakeholders, taking into account, to promote further research and analysis on pest management, taking into account the impact of drivers of pollinator decline, to support development of more feasible and sustainable alternatives;	decisions/cop/?m=cop-13
XIII/15	Para 9	The Conference of the Parties	*Encourages* academic and research bodies, and relevant international organizations and networks to promote further research to address gaps in knowledge identified in the Assessment, including the issues identified in paragraph 7, subparagraphs (t) to (aa), above, to expand research to cover a wider variety of pollinators and to support coordinated global regional and national monitoring efforts and build relevant taxonomic capacity, especially in developing countries, where there have been fewer research and monitoring efforts to date;	decisions/cop/?m=cop-13
XIII/15	Para 13a	The Conference of the Parties	*Requests* the Executive Secretary to promote, as a priority, efforts to address data gaps and capacity for monitoring the status and trends of pollinators and pollination in developing countries, in particular those in Africa, Latin America, Asia and Oceania;	decisions/cop/?m=cop-13
XIV/6	Para 6b)	The Conference of the Parties	*Encourages* Parties and *invites* other Governments To encourage academic and research bodies, and relevant national, regional and international organizations and networks, to conduct further research to address gaps identified in the Plan of Action and to synthesize and communicate information through appropriate channels to support implementation.	decisions/cop/?m=cop-14
XIV/6	Para 6d)	The Conference of the Parties	*Encourages* Parties and *invites* other Governments To develop and deploy monitoring of wild and managed pollinators in order to assess the magnitude of the decline and to evaluate the impact of deployed mitigation actions.	decisions/cop/?m=cop-14
XIV/6	Annex I Section III		**A.1.2.2** Develop, enhance and implement on a regular basis risk assessment procedures (considering field-realistic exposures and longer-term effects) for pesticides, pesticide-coated seeds and living	decisions/cop/?m=cop-14

			modified organisms to take into account possible impacts and cumulative effects, including sublethal and indirect effects, on wild and managed pollinators (including eggs, larva, pupa and adult stages), as well as other non-target species; **A.1.4.2** Develop and promote mechanisms to limit the spread of parasites and pathogens to managed and wild pollinator populations; **A.2.4.4** Develop measures to conserve genetic diversity in managed pollinators; **A.3.3.2** Develop modalities to incorporate pollinators and pollination in true cost accounting of agriculture and food production; **A.4.1.1** Monitor the status and trends of pollinators, with particular focus on those regions currently lacking data; **A.4.1.2** Quantify pollination deficits in crops and in the natural ecosystems, with particular focus on those regions and farming systems currently lacking data, where feasible, and apply consistent and comparable protocols to identify the most effective intervention measures; **A.4.1.3** Monitor the drivers and threats to pollinators in tandem with their status and trends in order to identify the likely causes of pollinator declines; **A.4.1.4** Monitor the effectiveness of interventions in protecting pollinators and managing pollination functions and services; **A.4.2.1** Promote research on non-bee taxa and other wild species of pollinators in natural ecosystems and the ecosystem functions and services provided by them in order to design appropriate management policies and protection measures; **A.4.2.2** Undertake research, including participatory research, on the socioeconomic as well as environmental implications of pollinator decline in the agricultural sector and related businesses; **A.4.2.3** Facilitate the harmonization of protocols for research, data collection, management and analysis, storage and curation of pollinator samples, including modalities for collaborative research; **A.4.2.4** Promote and share further research to address gaps in knowledge, including the effects of partial loss of pollinators on crop production, the potential impacts of pesticides considering their possible	

			cumulative effects, and of living modified organisms, under field conditions, including differential impacts on managed and wild pollinators, and on social versus solitary pollinators, and the impacts on pollination of crop and non-crop plants over the short and long term, and under different climatic conditions, as well as the impact of pollinator loss, on ecosystem integrity and its maintenance; **A.4.2.5** Promote further research to identify ways to integrate pollinator-friendly practices into farming systems as part of efforts to improve yield quantity and quality and mainstreaming of biodiversity into agricultural systems; **A.4.2.6** Promote further research to identify risks to pollination under climate change and potential adaption measures and mitigation tools, including the potential loss of keystone species and their habitats, as well as the role of pollination in wider ecosystem resilience and restoration; **A.4.2.7** Promote further research and analysis on pest management as it interacts with pollination functions and services, taking into account the impact of drivers of pollinator decline, to support the development of more feasible and sustainable alternatives; **A.4.2.8** Promote further research and analysis to identify ways to integrate the provision of ecosystem functions and services and pollinator conservation, beyond food production; **A.4.3.1** Generate data sets through a permanent pollinator monitoring process that allows the creation of regional/national/subnational and local visual maps to indicate the status and trends of pollinators and pollination and crop-specific vulnerability to support decision-making; **A.4.3.2** Assess the benefits of pollinators and pollination, taking into account the economic and other values to agriculture and the private sector, including food companies, cosmetics manufacturers and supply chains; **A.4.3.3** Assess the benefits of pollinator-friendly practices, including the conservation of uncultivated areas of farmlands, and propose alternatives to deforestation; **A.4.3.4** Increase understanding of the consequences of pollinator decline in specific crops, agroecosystems and natural environments;	

			A.4.3.6 Address taxonomic assessment needs in different regions and design targeted strategies to fill the existing gaps;	

Indirect research needs

Decision	Paragraph	Chapeau / Heading	Text	Source http://www.cbd.int/decisions/
V/5	Annex V Programme Element 1 Activity 1.5	Programme of work on agricultural biodiversity. Programme of work on agricultural biodiversity..	**Develop methods and techniques for assessing and monitoring the status and trends of agricultural biodiversity** and other components of biodiversity in agricultural ecosystems, including: **Criteria and guidelines for developing indicators** to facilitate monitoring and assessment **of the status and trends of biodiversity in different production systems and environments,** and the impacts of various practices, building wherever possible on existing work, in accordance with decision V/7, on the development of indicators on biological diversity, in accordance to the particular characteristics and needs of Parties.	cop-05.shtml?m=COP-05&id=7147
V/5	Annex V Programme Element 2 Activity 2.2		**Identify** and promote the dissemination of **information on cost-effective practices and technologies**, and related policy and incentive measures that enhance the positive and mitigate the negative impacts of agriculture on biological diversity, productivity and capacity to sustain livelihoods, through: **Comprehensive analyses in selected production systems of the costs and benefits of alternative management practices** as identified from activity 2.1, and the **valuation of the goods and services** provided by agricultural biodiversity; **Comprehensive analyses of the impacts** of agricultural production, including their intensification and extensification, on the environment **and identification of ways to mitigate negative and promote positive impacts;** **Identification**, at international and national levels, in close collaboration with relevant international organizations, **of appropriate marketing and trade policies**, **legal and economic measures** which may support beneficial practices: **Promotion of neglected and under-utilized species, varieties and breeds**;	

			Promotion of local and indigenous knowledge; **Measures to add value to products of production systems that sustain biodiversity, and to diversify market opportunities**; Access and benefit-sharing measures and intellectual property issues; Economically and socially sound measures that act as incentives, in accordance with Article 11 and consistent with Article 22;	
V/5	Annex V Programme Element 3 Activity 3.2		**Enhance the capacity of indigenous and local communities for the development of strategies and methodologies for in situ conservation, sustainable use and management of agricultural biological diversity,** building on indigenous knowledge systems.	
V/5	Annex V Programme Element 4 Activity 4.2		Support the **development** or adaptation **of relevant systems of information, early warning and communication to enable effective assessment of the state of agricultural biodiversity and threats** to it, in support of national strategies and action plans, and of appropriate response mechanisms.	
VI/5	Annex II Para 4	Plan of action for the international initative for the conservation and sustainable use of pollinators.	In order to secure sustained pollinator services associated with agricultural ecosystems, **far more understanding is needed of the multiple goods and services provided by pollinator diversity** and the factors that influence their decline and activity. It is necessary to **identify adaptive management practices** that minimise negative impacts by humans on pollinators.	COP-06&id=7179
VI/5	Annex II Element 1 Activity 1.1	Assessment.	**Monitor the status and trends of pollinators**, through: The establishment of a global network of cooperators to monitor changes in the diversity, population levels and frequency of pollinators through time in selected areas of the world. The network would share findings and discuss local and global trends in pollinators; The implementation of a pilot global monitoring programme in selected areas worldwide; The development, assessment and compilation of methods for monitoring pollinators, their diversity and efficiency; The progressive development and implementation of a global programme for monitoring pollinator diversity, building upon activities (a), (b) and (c) above.	COP-06&id=7179

VI/8	Annex I Part II Planned Activity 12	Agricultural biological diversity.	Outputs would include: easy-to-use **keys to families, genera and species of pollinators; automated identification systems for pollinators; development of standard methods for identification of soil biodiversity to different taxonomic levels; increased knowledge of soil biodiversity to aid in the identification of indicators of the "health" of below-ground biological diversity**.	cop-06.shtml?m=COP-06&id=7182
VIII/23	Annex II Part C	International initiative for the conservation and sustainable use of soil biodiversity: framework for action.	**Increase understanding of the role of soil biodiversity in agricultural production, traditionally applied land management practices and ecosystem and environmental health.**	COP-08&id=11037
VIII/23	Annex II Objective 2 Activity 2.2		**Develop**, apply and adapt **indicators** and tools **for assessment and monitoring of soil health and ecosystem functioning** for global, regional, and national use and in line with the framework contained in decision VII/30.	
X/34	Para 5	The Conference of the Parties	*Requests* the Executive Secretary [to consider] **Underutilized crops, wild relatives of cultivated plants** and other potential food sources, to improve human nutrition, to address the impacts of climate change and other pressures as well as to contribute to food security; Further **exploring possibilities** for actions, where necessary, **to rehabilitate agricultural ecosystems and landscapes and restore their socio-economic functions** on land where agriculture has declined, or ceased, and where the land was degraded as a result;	cop/?id=12300
X/34	Para 20	The Conference of the Parties	*Invites* to undertake further studies on the valuation of the biodiversity and ecosystem services provided by agricultural ecosystems	cop/?id=12300
X/37	Para 10	The Conference of the Parties	*Encourages* Parties and other Governments to develop and use environmentally-sound technologies, and **support the development of research programmes and undertake impact assessments**, which promote the positive and minimise or avoid the negative impacts of biofuel production and use on biodiversity and impacts on biodiversity that affect related socio-economic conditions;	cop/?id=12303
X/37	Para 11	The Conference of the Parties	*Requests* the Executive Secretary, subject to the availability of financial resources, to: (a) Compile, analyse and summarize information on tools for voluntary	cop/?id=12303

			use, including on available standards and methodologies to assess direct and indirect **effects and impacts on biodiversity of the production and use of biofuels, in their full life cycle as compared to that of other types of fuels,** and impacts on biodiversity that affect related socio-economic conditions;	
X/37	Para 12	The Conference of the Parties	*Requests* the Executive Secretary to **compile information on gaps** in available standards and methodologies identified in the work undertaken in paragraph 11 above;	cop/?id=12303
XI/27	Para 8	The Conference of the Parties	*takes note* of **gaps in scientific knowledge of biofuels** and in relevant tools and approaches, and remaining uncertainties, **in particular the inherent difficulty of measuring and addressing indirect impacts of biofuels on biodiversity**;	cop/default.shtml?id=13188
XIII/15	Para 7h	The Conference of the Parties	*Encourages* Parties, and *invites* other Governments and other relevant organizations and stakeholders, taking into account, to monitor and manage the movement of managed pollinator species, sub-species and breeds where appropriate, among countries, and as appropriate within countries, to limit the spread of parasites and pathogens to managed and wild pollinator populations, and to prevent the introduction of potentially invasive pollinator species outside their native ranges;	decisions/cop/?m=cop-13
XIII/15	Para 7j	The Conference of the Parties	*Encourages* Parties, and *invites* other Governments and other relevant organizations and stakeholders, taking into account, to develop and implement national and as appropriate regional pesticide risk reduction strategies;	decisions/cop/?m=cop-13
XIII/15	Para 7m	The Conference of the Parties	*Encourages* Parties, and *invites* other Governments and other relevant organizations and stakeholders, taking into account, to improve, as appropriate, risk assessment procedures for pesticides and, where necessary, for living modified organisms to better take into account possible impacts, including sublethal and indirect effects, on both wild and managed pollinators, including, inter alia, a wider range of pollinator taxa, beyond honeybees and managed bumblebees, and toxicological studies, in risk assessment protocols, applying the precautionary approach in line with the preamble of the Convention, consistent with international obligations and taking into account climate variations and cumulative effects;	decisions/cop/?m=cop-13