Explanatory notes on the non-detriment findings and attempts to integrate local traditional knowledge of the ESSC

This document is prepared at the request of the Traditional Knowledge Working Group of the CITES Technical Advisory Group (TAG) for Non-Detriment Findings (NDF) to share China's experience and attempts in the incorporation, weighing and integration of various knowledge systems, including local, traditional, and indigenous knowledge, and participatory species monitoring and management in the making of NDF.

China is one of the 12 countries with mega-biodiversity. When CITES came into force, the Chinese government designated the China CITES scientific authority (CNSA) in the Chinese Academy of Sciences, also known as the Endangered Species Scientific Commission of the People's Republic of China (ESSC).

There are currently 40 members with different backgrounds, such as botanists, ichthyologists, herpetologists, ornithologists, mammalogists, geneticists, administrators, ecologists, behaviourists, etc., who have expertise on species of different taxonomic groups of interest to CITES. In addition, reviewers and consultants from various fields are hired to review and determine the international trade of wild species and make comments on technical issues related to the CITES Convention.

Regarding the procedures for CITES NDFs in China

NDF is a type of scientific advice provided by the ESSC. The following is extracted and translated from the 2020 edition of the *Implementation Solution for Scientific Advice on International Trade in Wild Fauna and Flora under China State Key Protection and CITES Appendices* of the ESSC.

Under the requirements of *the Letter of Inquiry for International Trade in Wild Fauna and Flora under China State Key Protection and/or CITES Appendices*, issued by the Endangered Species Import and Export Management Office of the People's Republic of China (CNMA) and local offices thereof, the ESSC provides scientific advice on a case-by-case basis and performs the duties and responsibilities of the national scientific authority for CITES in this regard.

According to the commission of the relevant departments, the ESSC provides scientific advice on the following related matters：

1 For the export of specimens not from artificial propagation/captive-breeding, advises that the export will not be detrimental to the survival of the species;

2 For the import of specimens of species included in Appendix I, advise that the import will be for purposes which are not detrimental to the survival of the species involved;

3 For specimens introduced from the sea, advises that the introduction will not be detrimental to the survival of the species;

4 For the import of live specimens of Appendix I species, satisfies that the proposed recipient is suitably equipped to house and care for the live specimens;

5 For the import of live animals of African elephants and white rhinos listed in Appendix II, satisfies that the proposed destination is "suitable and acceptable".

6 For the export specimens reported as being from artificial propagation/captive-breeding, satisfies that the production of specimen is in line with the CITES definition of ''artificially propagated'' or ''captive bred''.

Regarding the integration of the local and traditional knowledge

Background

While there is a lack of instructions on how to integrate local and traditional knowledge in the CITES decision-making, a few resolutions and related documents have highlighted a number of possible guidelines.

- In resolution Conf. 16.6 (Rev. CoP18) on *CITES and livelihoods*, CoP recommends recognising that community and traditional knowledge should be considered, as appropriate and in accordance with the provisions of the Convention and national laws, regulations and policies when empowering the rural communities.
- CoP also recognises to encourage empowerment of rural communities through recognising resource tenure and ownership, and traditional knowledge of or in rural communities associated with CITES-listed species, subject to any applicable national or international law;
- In paragraph F of x of paragraph 1 of resolution Conf. 16.7 (Rev. CoP17) on *Non-detriment findings*, CoP recommends that local knowledge on trade could be one of sources of information when making a non-detriment finding.
- In *the Sustainable Use of Biodiversity Addis Ababa Principles and Guidelines of* resolution Conf. 13.2 (Rev. CoP14), Practical principle 4 states that adaptive management should be practiced based on science and traditional and local knowledge.
- In the Annex to resolution Conf. 16.5 on *Cooperation with the Global Strategy for Plant Conservation of the Convention on Biological Diversity*, objective III of

the Global Strategy for Plant Conservation 2011-2020 is that plant diversity is used in a sustainable and equitable manner with target 13 that indigenous and local knowledge innovations and practices associated with plant resources, maintained or increased, as appropriate, to support customary use, sustainable livelihoods, local food security and health care.

- Decision 18.300 on *Trade in medicinal and aromatic plant species* directed to the Secretariat to analyse challenges and opportunities by examining case studies involving local and traditional knowledge, participatory assessments, monitoring and management of CITES-listed medicinal and aromatic plant species.

Local and traditional knowledge is an important source and component of biodiversity information and one of the key topics under *the Convention on Biological Diversity* (CBD). The ESSC has attached great importance to cooperation with the CBD China focal point and promoting synergy between the two conventions at the national level. Since 1990, the ESSC has received support to search ancient books and articles and collate relevant traditional knowledge when reviewing background information on trade and the use of listed species.

Through a series of trials and reviews, the ESSC identified a list of materials for scientific advice and confirmed that traditional knowledge and local information shall be considered during the scientific advice.

Materials required for NDFs need to consider ITKs

Scientific advice requires a review of a set of materials. For example, according to the 2020 edition of *the Implementation Solution for Scientific Advice on International Trade in Wild Fauna and Flora under China State Key Protection and CITES Appendices of the ESSC*, the materials required for the on-site survey of the collection/harvest area for NDFs are as follows:

Types	Materials	Explanations	Notes
Supporting materials	Materials related to the trade chain of specimens	Provided by the enterprise, including but not limited to contracts, invoices, receipts, and other valid documents that can prove the origin of specimens	This involves a series of purchase, processing, distribution and even retail processes from raw materials to finished products. If there are multiple resales, each bill must be true and valid and correspond.
	Certificates of the source of specimens	Provided by the enterprise, issued by the local authority with the	It should typically have been obtained when applying for an administrative license.

		signature of the relevant department	
	Other supporting materials	Other materials are supplemented by enterprises following the requirements of the review experts. It needs to be signed.	The review experts identify the information that needs to be added.
Assessment materials	Background on the concerned species	The ESSC office summarises relevant studies and reports based on a literature review as the scientific basis for NDFs of concerned species.	A brief description of the species' life history, biological characteristics, trends in population and distribution, intrinsic risks, utilisation, harvest pressures, cultivation techniques, environmental conditions, trade, threats and conservation and management effectiveness. Where local and traditional knowledge is involved, it should be collated and cited appropriately.
	Survey reports on collection/harvest areas	The ESSC office organises field surveys and prepares reports.	There are seven sections, including background, when, where, who, methodology, findings, and recommendations. Consideration should be given to using socio-economic and ethnobiological tools to understand local and traditional knowledge, local economies, and community livelihoods.
Review materials	Expert comments	Review experts' comments on each assessed issue and sign the survey reports.	Issues include but are not limited to the source of raw materials, harvesting or collection methods, estimated resources, domestic and international trade, concerns, and concluding recommendations.
	Process recommendations	The ESSC office proposes the following steps	It may be supplemental supporting documentation, supplemental background or

		based on expert comments.	field survey, or draft conclusions.
Conclusion	Conclusion of the Scientific Advisory	The ESSC office prepares a decision on the applicant based on the above documents.	The Executive Deputy Director deliberates and signs.

Integration of ITK in the assessment of wild medicinal plants

Here are some of our specific cases and reflections. The ESSC has reviewed background and case studies of some wild medicinal plants. In the evaluation and analysis, we collated and quoted records of traditional medicine documents, conducted expert questionnaire surveys among local herbal medicine experts, collected multiple sources of information, and carried out specific ethnobiological surveys and socio-economic research.

Traditional knowledge is an essential source of information for the identification of medicinal plants

Botanical identification is the first step in NDFs and assessment of sustainable harvest and trade of wild medicinal plants. *The Pharmacopoeia of the People's Republic of China* (referred to as *the Chinese Pharmacopoeia*) is the code of the state for formulating the quality standards of Chinese medicines, which is the legal basis for the production, operation, inspection and supervision of traditional Chinese medicines, and the basis for the development and utilisation of traditional Chinese medicine resources. Since the first edition was promulgated in 1953, *Chinese pharmacopoeia* has been continuously improved and revised. However, there are still many problems with the classification and name reference of herbal plants. Chinese botanists and pharmacists have been studying the correspondence and overall adjustment of the classification system.

Take *Jatamansi*, for example. Although the 1986 version of Flora of China (Vol. 73) believed that there were three species within the genus *Nardostachys*, the 2011 version of Flora of China (Vol.19) treats the *N. chinensis* as the synonym of *N jatamansi*. The CITES PC 22 recognised that *Nardostachys* is a monotypic genus. The Chinese Pharmacopoeia distinguishes the ''Gansong'' *N. jatamansi* and ''Zhizhuxiang'' *Valeriana jatamansi*. However, in Tibetan medicine, the original plant of ''Bangbei'' includes *N. jatamansi* and *Valeriana tangutica*, and the latter is described and illustrated as the original plants of ''Bangbei'' in one of the local herbal compendia, the *Yutuo Materia Medica*. Herb collectors and researchers in many places believe there are two kinds of ''Gansong (jatamansi)'' in China, which differ in traits and distributions. Although *N. jatamansi* is assessed as the least concern (LC) in China, the preferences and knowledge systems of people using and trading in a particular region may affect wild populations in certain areas.

Historical regional data is derived from county records and local knowledge

As a traditional herb, the local county chronicle provides historical acquisition statistics. Some research studies of local trade, utilisation, and population trends use ethnobiological surveys, including understanding the natural knowledge, daily time allocation, income changes of local people, etc.

When doing our background assessments, we also refer to news reports or non-fiction writing that summarise or paraphrase the knowledge and experiences of local people. Unlike the previous two types of sources, this type of news or writing is treated as grey references.

The case study of the sustainable trade of highland herbs focuses on the collection of local knowledge

To this end, in subsequent case studies, we use sociological survey methods to collect local knowledge and experiment to understand the preferences of local communities in terms of use, gathering, and trade. In addition to setting up field surveillance samples, surveying population and community characteristics, and conducting harvest intensity and resilience experiments required for ecological surveys, the project conducted semi-structured interviews, questionnaire surveys and group discussions on local traditional knowledge and livelihood with local pastoralists.

Through discrete choice experiments and analysis of local collectors, an understanding of harvesting preferences and behaviours in local communities related to sustainable use and management of *N. jatamansi* have been described and published as scientific papers. Once more data is available, adaptive management projects will be carried out in collaboration with local governments and based on the ecological worldview of local communities.

These are sustainable harvesting and trade studies carried out after the completion of an NDF case and will help to carry out rapid NDFs when the local company applies for export permits in the future.