



Facilitating the implementation of Nagoya Protocol through Documentation of Traditional Knowledge Associated with Genetic Resources in China

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Contributions to the Aichi Biodiversity Target

Indicator: Number of Ethnic minority people and local communities involved in documentation of traditional knowledge associated with genetic resources;

Indicator 2: Number of ethnic minority people and local communities benefited from ABS arrangements

BEFORE (2015)

AFTER (2018)

Ethnic minorities and local communities did not have much knowledge about their traditional knowledge that associated with sustainable use of genetic resources. Most of them were reluctant to partake the work of documenting TK.

More than 500 minority families and 100 local communities involved in the efforts of categorizing and documentation of their traditional knowledge that associated with genetic resources.

Most of Ethnic minorities and local communities lacked awareness of the importance of their TK in the process of ABS. TK were accessed without PIC and MAT, it was a great loss to local communities.

More than 200 minority families and 20 local communities have benefited from the efforts of categorizing and documentation of their traditional knowledge that associated with genetic resources, and also benefited from the ABS process.

Message to the CBD for post-2020



(1) By 2030, ILCs will be able to participate more broadly in the conservation and sustainable use of domestic biodiversity in accordance with national laws, administrative or policy measures, meanwhile their TK associated with biodiversity conservation and sustainable use is effectively protected.

(2) By 2030, traditional knowledge associated with genetic resources of indigenous peoples and local communities are effectively protected, and the ABS regime for TK associated with genetic resources established by the CBD and its Nagoya Protocol can be effectively implemented.

(3) By 2030, the ability of indigenous peoples and local communities to make free, prior and informed consent, approval and involvement in accordance with national laws, administrative or policy measures and customary practices has been significantly enhanced and their rights to equitable sharing of traditional knowledge-related benefits are guaranteed.

For delivering the outcome, we made two aspects of effort:

Part One

Survey, Catalog, documentation and development of digital database of traditional knowledge that associated with genetic resources in China

Contents



1. Introduction to TK

2. Classification of TK in China

3. Documentation of TK in China

4. Development of TK Database in China

1. Introduction to TK

TK within the framework of CBD

- ❖ **Article 8(j) of CBD (Convention on Biological Diversity):** “knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity”;
- ❖ ***Nagoya Protocol*** in its Preface: Further recognizing the unique circumstances where traditional knowledge associated with genetic resources is held in countries, which may be oral, **documented or in other forms**, reflecting a rich cultural heritage relevant for conservation and sustainable use of biological diversity.

Understanding TK in China

- ❖ China is rich in TK with **oral and documented types**, as China has a long civilized history over 5000 year and a lot of TK have been recorded literally.
- ❖ China has 56 ethnic groups (nationalities). Except Han, the other **55 ethnic groups** are called “**minorities**”, including Tibetan, Inner-Mongolian, etc.
- ❖ The minorities in China is **similar to indigenous and local communities (ILCs)** because they are basically kept their traditional lifestyles.
- ❖ 55 minorities together has less **10% of whole China's population**, but occupying 62% of China's land territory.



2. Classification of TK in China

according to their attributes and usages, TK is classified **into 5 categories**:

- (1) Knowledge for use of traditional genetic resources in agriculture
(e.g. traditional genetic resources)
- (2) Knowledge of traditional medical and medicines
(e.g. traditional medicines knowledge)
- (3) Knowledge of traditional technologies, cultivation modes and lifestyles
(e.g. traditional technology and practices)
- (4) Knowledge of traditional cultures reflecting biodiversity conservation and sustainable use of bio-resources
(e.g. traditional cultures)
- (5) Knowledge of geographical biological indicators
(e.g. traditional indicators, Pu'er tea)



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环境保护部公告

公告 2014年 第39号

关于发布《生物多样性相关传统知识分类、调查与编目技术规定(试行)》的公告

为积极履行《生物多样性公约》，推动《中国生物多样性保护战略与行动计划》(2011-2030年)的贯彻实施，我部编制了《生物多样性相关传统知识分类、调查与编目技术规定(试行)》。现予以发布。请结合实际工作，参考执行。

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附件: [生物多样性相关传统知识分类、调查与编目技术规定\(试行\)](#)

环境保护部

The classification system was issued by the former Ministry of Environmental Protection in 2014

(1) Use of the genetic resources for agriculture

This type of TK refers to:

- knowledge about domesticating, cultivating and using of cultivated plants or varieties and domesticated animal species or breeding varieties, and utilization of other biological resources;
- knowledge created and cultivated by local community and its people through production and living process in long history.
- knowledge of this kind mainly based on the exploit and utilization of biological resources and genetic resources, such as the local crop varieties, indigenous animal breeds, traditional fruit trees and flowers, and their preservation.

(1) Use of the genetic resources for agriculture

❖ It could be further divided into following 8 classes:

- 1) Knowledge of traditional usage of crop varieties
- 2) Knowledge of traditional usage of domestic animal varieties resources
- 3) Knowledge of traditional usage of aquatic organisms
- 4) Knowledge of traditional usage of forest and trees
- 5) Knowledge of traditional usage of ornamentals
- 6) Knowledge of traditional usage of wild plants
- 7) Knowledge of traditional usage of wild animals
- 8) Knowledge of traditional usage of microorganism and others

(2) Use of medicinal species

This type of TK refers to

- knowledge of creative, inherited, cumulative medical knowledge, technology and innovation of using medical biological resources.
- knowledge created and cultivated by local community and its people in the long-term to fight against nature and diseases.

(2) Use of medicinal species

❖ It includes the following 7 classes:

- 1) Traditional medicinal herbs and other organisms
- 2) Traditional medical theory
- 3) Traditional therapy and treatment
- 4) Traditional pharmaceutical technology
- 5) Traditional prescriptions
- 6) Traditional knowledge for health care
- 7) Others

(3) Technical innovations for use of biological resources and traditional farming and lifestyle practices

practical technologies created by ethnic people and communities in long-term agriculture production and life practices. These technologies, which have positive effects on biodiversity protection and sustainable utilization of biological resources and which are valuable for improving food quality and ensuring food safety, are comprised by traditional ecological agricultural technology and biological resources process technology.



The paddy-field-fish-culture

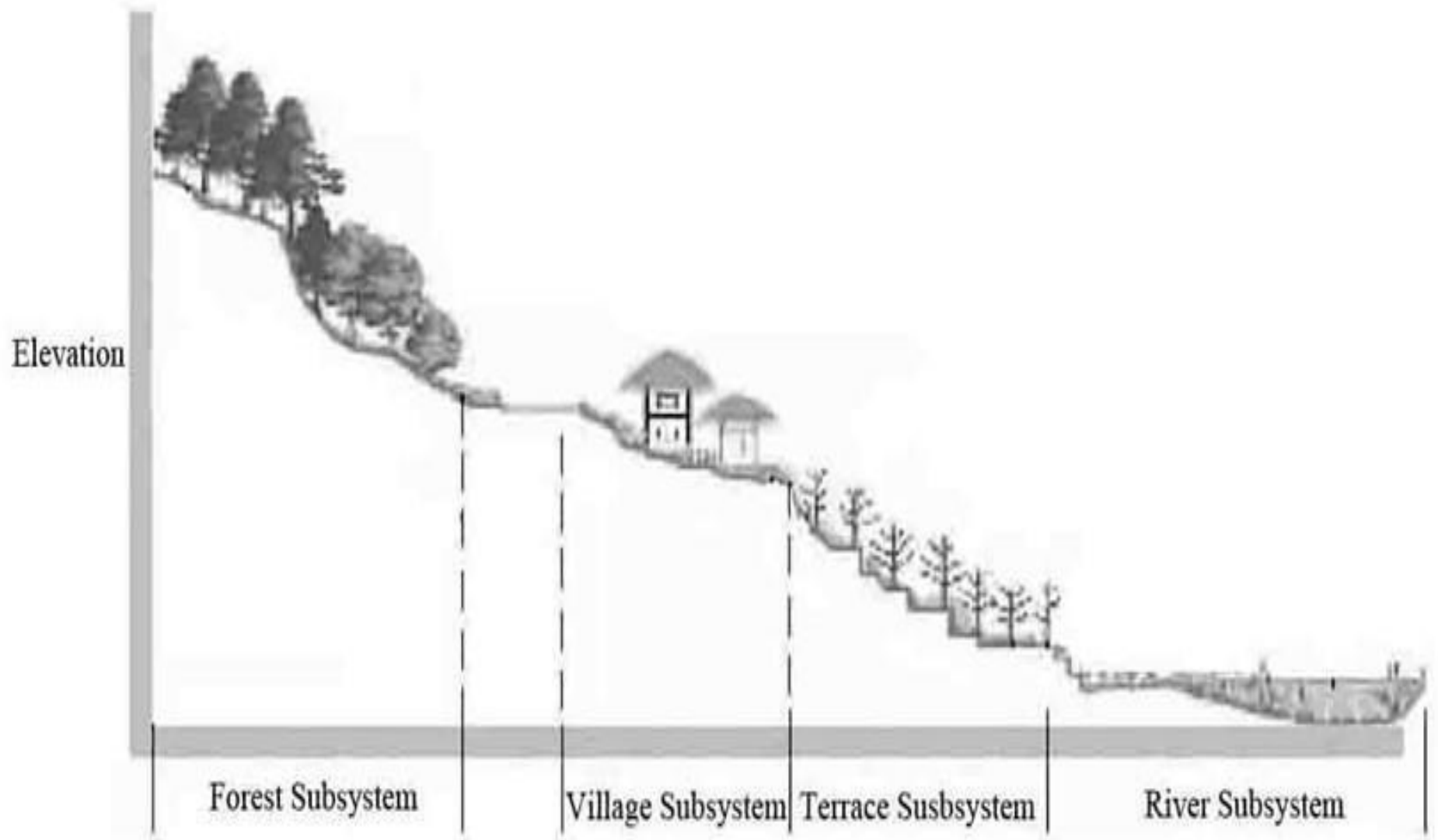


Dongba paper-making

(3) Technical innovations for use of biological resources and traditional farming and lifestyle practices

❖ It includes the following 5 classes:

- 1) Traditional eco-farming system
- 2) Traditional handicraft industrial technology (tie dye, spinning, etc)
- 3) Traditional food processing technology
- 4) Traditional eco-planning and designing technology
- 5) Traditional craftsmanship and others



Traditional farming: Hani terraced fields agro-ecosystem

Traditional cultures and customary laws related to conservation and sustainable use of biological resources

folk art, literature, artificial, and painting that embody biodiversity protection and sustaining use; traditional religion culture, such as totem, religion practices (rituals), and sacred mountains, sacred forest and geomantic omen (Fengshui) with environmental protection awareness in the religion; customary law, village protocol, including biological resources protection and utilization practice of township regulations, clan system, and ethnic customs.



Drung's totemism



Sacred forest

(4) Traditional cultures and customary laws related to conservation and sustainable use of biological resources

❖ It includes the following 6 classes:

- (1) Traditional religious beliefs and ecological ethics
- (2) Traditional festivals and rituals (sacrificial offerings)
- (3) Customary laws (village protocol)
- (4) Folk arts
- (5) Traditional food and drink culture
- (6) Others

(5) Traditional geographical indicators (GI) for biological products

biological resources products in specific areas with excellent reputation and a long history, embodying the special biological resources, environment, social economic and ethnic culture characteristics, blended with traditional variety resources, traditional cultivate technology, traditional sale and diet culture and other TK.



Pu'er Tea



(5) Traditional geographical indicators (GI) for biological products

❖ It includes the following 4 classes:

- 1) Traditional geographic indicators for food products
- 2) Traditional geographic Indicators for medicinal products
- 3) Traditional geographic indicators for art crafts
- 4) Others

3. Documentation of TK in China

The basic unit of TK is vocabulary entry

Each entry contains information as follows:

Title	Specification of TK	Owners	ABS	Conservation & utilization	Evaluation	Proof materials
<ul style="list-style-type: none"> ✓TK name ✓Code ✓Attribute ✓Privilege 	<ul style="list-style-type: none"> ✓Background ✓Description ✓Characteristics of TK ✓Spatial and temporal distribution ✓Others 	<ul style="list-style-type: none"> ✓Family or personal ✓Community or group ✓Unit ✓Nation 	<ul style="list-style-type: none"> ✓Internationally recognized certificate ✓Access progressing ✓Common agreed conditions..... 	<ul style="list-style-type: none"> ✓Status of Utilization ✓Threatened Status and factor analysis ✓Protecting measures ✓Case 	<ul style="list-style-type: none"> ✓Economic sense ✓Cultural sense ✓Ecological sense ✓Threatened level ✓Total 	<ul style="list-style-type: none"> ✓Specimen ✓Images ✓Related database ✓Multimedia ✓References ✓Others

Sample of an entry

Jin ping cao guo(金平草果)

1.Title

Name: Jin ping cao guo

Code: CN HN 160 010

Attribute: Open

Privilege: Public

2.Description

Background: It is an evergreen perennial herbage with a sharp flavor of whole plant, each fruit contains 20-66 seed with rich spicy aroma, and the shape of seed is polygon.

Description: It is closely related to the life of Hani people. It is not only a kind of flavor spices, but also a medicinal plant. As a flavor for dishes of Hani, it can increase one's appetite, removing gamey smell. Especially, Hani people know the edible spicy hot amomum can remove body's raw, enhanced physique and prevent disease in their long-time living environment of Hani people are humid and rainy.

Species name: *Erigeron breviscapus* (Vaniot) Hand.-Mazz.

Common name: Caoguo (amomum)

TK Characteristics:

- 1) Hani people has rich experience in the use of amomum in the long-term production practice ;
- 2) It has wide applications: edible flavor and medicine;
- 3) It can be used in the treatment of nausea and vomiting, abdominal pain, dysentery other diseases .

Spatial and temporal distribution:

- 1)Origin: Jinping County, Honghe Prefecture, Yunnan province.
- 2)Date Back: more than one thousand years ago, “Tu jing de yan yi” (图径的衍义) written by Guan Zongshuang(冠宗爽) in the Song Dynasty.

3、 Owner

Hani people

4、 ABS

none

Sample of an entry

5. Conservation & utilization

Status of utilization: Wild resources of caoguo are reduced ,but artificial cultivation were generally carried out. At the same time , the application of Geographical Indication Products is carrying out.

Threatened status & factors: 1) Habitats destruction ; 2) Natural disasters

Measures: The artificial cultivation of caoguo is benefit for the protection of wild resources, and it is helpful to commercial production.

6. Evaluation

Economy:5 Culture:4 Ecology:3 Threaded level:1 Total:13

7. Materials

Images:



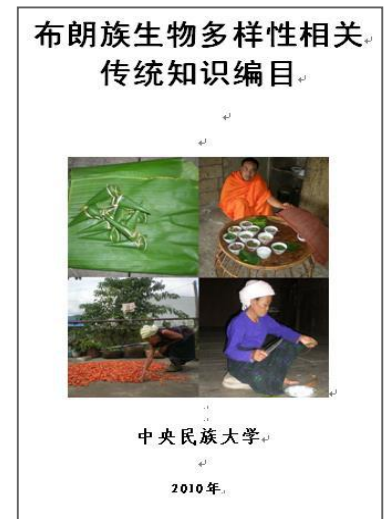
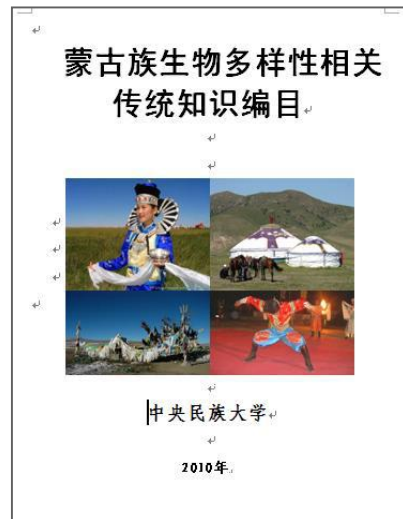
Reference:

(1)(2006). *Hani dictionary of Honghe Hani & Yi Autonomous Prefecture*. Kunming: the Nationalities Publishing House of Yunnan, pp:180.

(2)<http://www.hhzjw.gov.cn/Html/Study/2008-1/25/194029334.html>

Progress of documenting China's TK

Completed	ongoing	To be collected
26	15	14
Maonan, Man, Uighur, Salar, Tujia, Zhuang, Jing, Korean, Bouyei, Mongolia, Dai, Miao, Dong, Ha'ni, Daur.....	Tibetan, Lahu, Yi, Gaoshan, Yugu, Naxi, Mulam, Lahua	Tu, Hui, Tatar, Oroqen, Russian, Moinba, Kirgiz, Uzbek, Jino



4. Development of TK Database in China

➤ Objectives

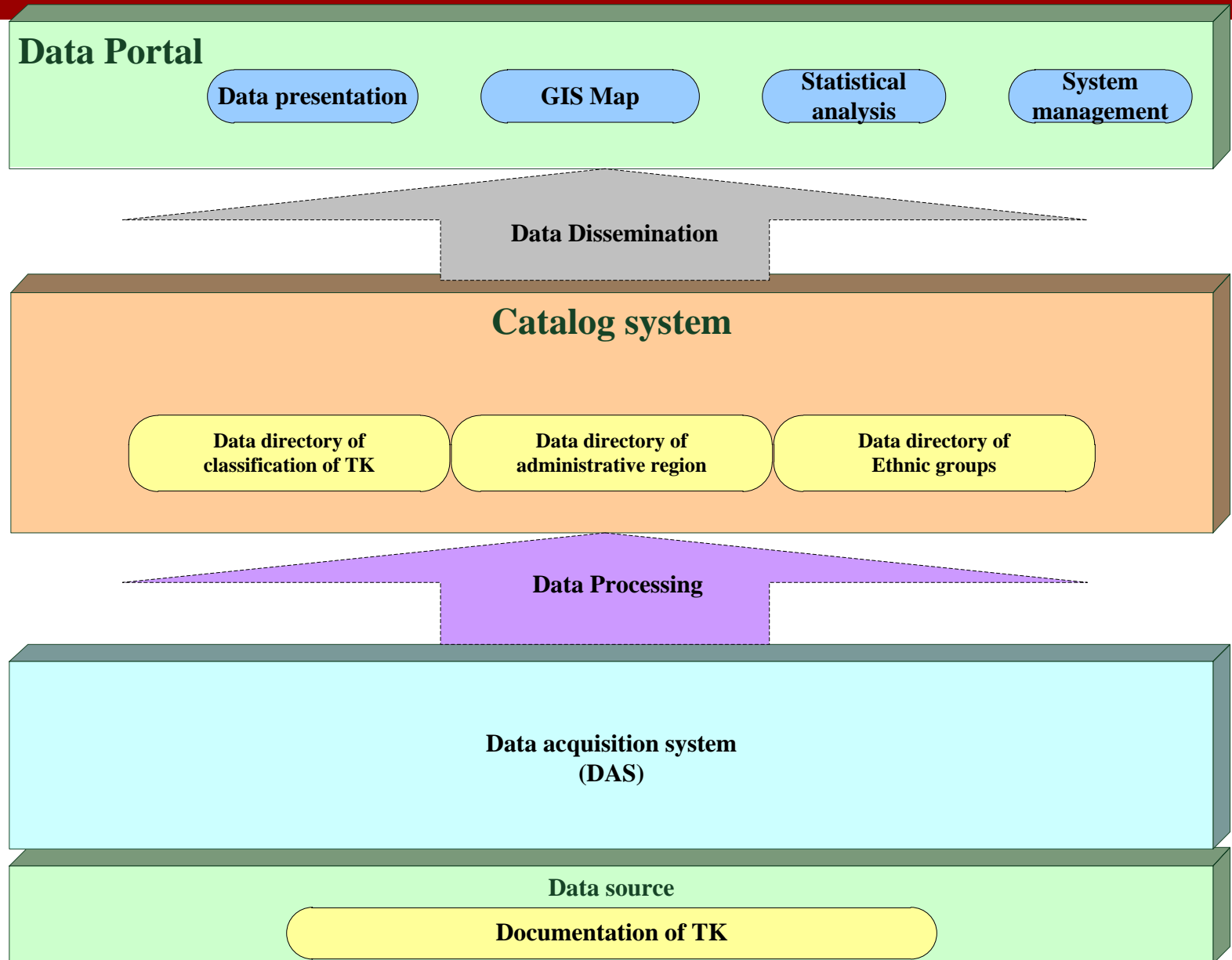
- ◆ Management and protect TK in China
- ◆ Promote the sustainable use of TK widely
- ◆ Link TK to modern scientific and patent literature
- ◆ Use database for defensive and positive legal protection
- ◆ Increase International recognition of TK in China

➤ Target Audience

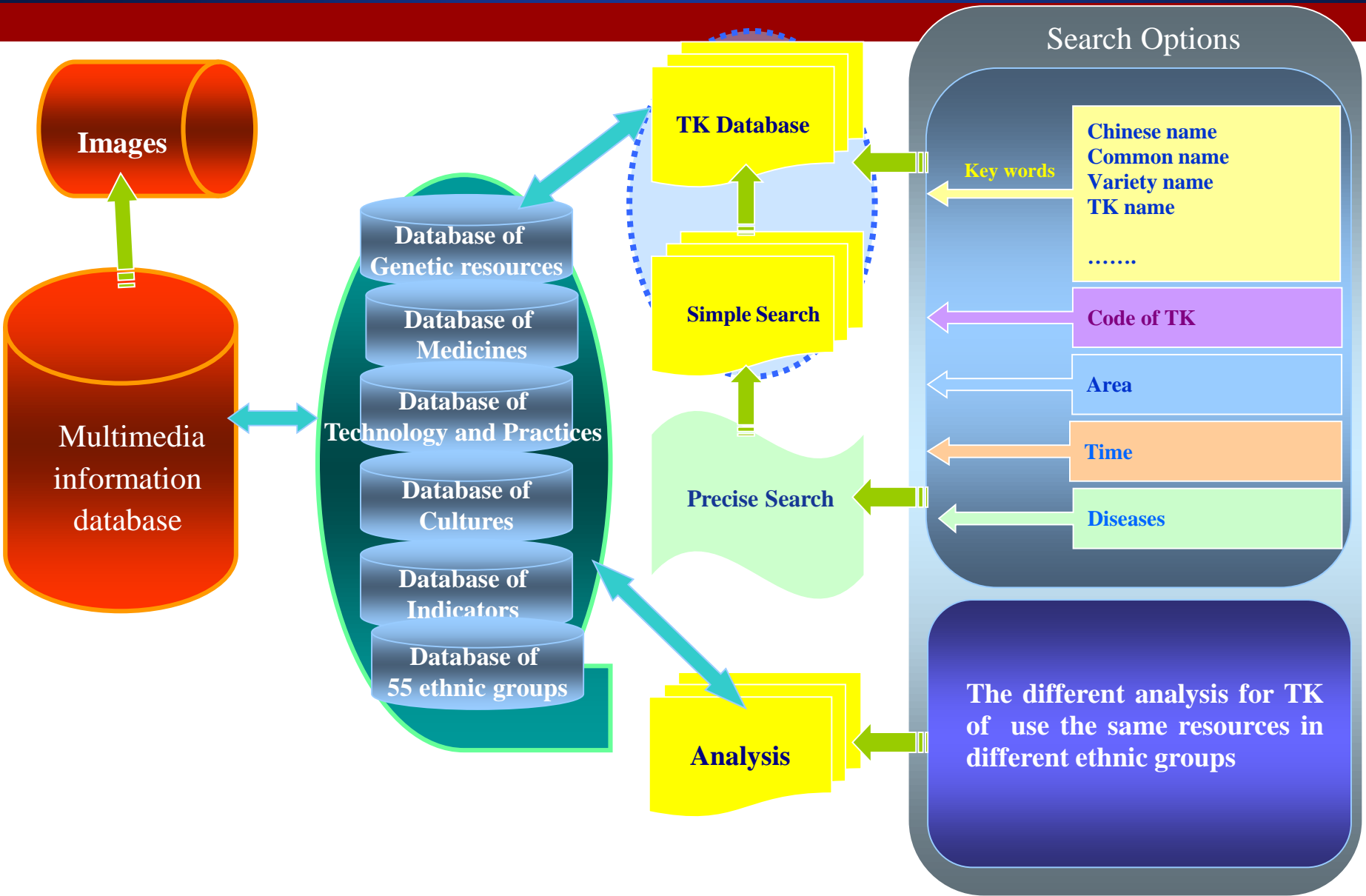
- ◆ International Patent Offices
- ◆ Public
- ◆ Professional Research Experts

- ❖ To identify TK's holder and beneficiary
- ❖ To ensure fair and equitable benefit sharing with the indigenous and local communities in minority areas
- ❖ To protect and inherit TK by generations
- ❖ To promote the IPR protection of TK by the procedure of PIC for TK access, by the system of contracting agreements for benefit sharing under the mutually agreed terms, by “internationally recognized certification” for monitoring TK's follow-up use, and by “disclosure” the TK's source and origin when applying for IPR.

(1) Framework of TK Digital Library



(2) Design of TK Digital Library in China



(3) The index of TK Digital Library in China

According to the classification and documentation system above, we are developing a TK digital library.

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National Digital Library for the Traditional Knowledge Associated Biodiversity in the Ethnic Areas of China

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回族	基诺族	京族	景颇族	柯尔克孜族	拉祜族	黎族
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Trial use of TK digital library

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高级搜索



For delivering the outcome, we did two parts of work:

Part two
Implementing GEF-ABS project

Developing and Implementing the
National Framework on Access to and
Benefit Sharing of Genetic Resources and
Associated Traditional Knowledge

Basic information of GEF-ABS project

Objective is to develop and implement China's national framework on access to and benefit sharing (ABS) of genetic resources and associated traditional knowledge in accordance with provisions of the Convention on Biological Diversity (CBD) and the NP.

Project duration: 2015-2020

Project budget: 5 million US dollars (GEF grant)

Project implementation: Foreign Economic Cooperation Office, Ministry of Ecology and Environment of China

3 components:

- (1) national regulatory and institutional framework on ABS.
- (2) capacity building and awareness raising
- (3) pilot demonstrations on ABS in three provinces

Outcomes

- ❖ Outcome 1: All prerequisites completed to enable accession to the Nagoya Protocol
- ❖ Outcome 2: National ABS regulatory framework is established and operational
- ❖ Outcome 3: ABS demonstration legislation ready to be adopted and operating in two or more pilots.
- ❖ Outcome 4: Overall capacity to implement the National ABS framework improved by at least 20%, as measured by UNDP's Capacity Development Scorecard.
- ❖ Outcome 5: Enhanced awareness and understanding of the ABS regime and the value of GR and TK associated with genetic and biological resources for improved policy making and on-the-ground implementation of biodiversity conservation, sustainable use and fair and equitable sharing of benefits among the stakeholders.

Outcome 6

6 pilots in 6 jurisdictions achieving the following outcomes:

(i) 3 leading agents for new drug production

(ii) at least 3 ABS agreements negotiated between users and providers of genetic resources/derivatives;

(iii) at least 3 ABS agreements negotiated for products already commercialized;

(iv) at least 4 PIC processes with local communities implemented in accordance with the PIC/community protocol supported under component 1; and

(v) enabling that direct financial community benefits be derived from utilisation of their local genetic resources and traditional knowledge.

6 demonstration items

- (1) **Dendrobe** (GR+TK), located in Xishabanna Prefecture, Yunnan Province, development of products based on the dendrobe's medicinal and cosmetic possibilities.
- (2) **Dai Ethno-medicine** (TK + GR), located as above area, development of medicinal preparations based on the Dai documented prescriptions.
- (3) **Luhanguo** (*Sitratia grosvenorii*) (GR + TK), located in Guilin of Guangxi Zhuang Autonomous Region, development of products for beverage, medicine, etc.
- (4) **Golden Camellia** (GR) located in Guangxi for beverage
- (5) **Xiangxi pig** (GR + TK), in west Hunan Province
- (6) **Xiangxi tea** (GR + TK), in west Hunan Province

Concluding remarks

- ❖ The arrangement of TK's ABS is a compromise between providers and users within the NP, so the implementation relies on national legislation and administrative measures.
- ❖ China is rich in biodiversity and associated TK, it is a party to CBD and NP, it. China's ethnic minorities are similar to ILC in nature, therefore, they shall share the benefits accrued from utilization of GR and TK.
- ❖ lacking of a digitalized TK system makes China's ethnic minorities and local communities unable to trace the access and utilization chain of TK, which leads to zero benefit sharing.
- ❖ Survey, catalog, documentation, development of digital database of traditional knowledge, and carry out demonstrations in pilot areas could be useful in facilitating the process of developing national ABS regime and the implementation of NP.



Thank You !