

## Interpretation and Implementation of the Convention

## Traditional Medicine and CITES

## A DISCUSSION PAPER ON TRADITIONAL EAST ASIAN MEDICINE

1. This document is submitted by the United Kingdom of Great Britain and Northern Ireland, Japan, and the Republic of Korea.
2. Wild animals and plants are commonly used in many forms of traditional medicine. The attached paper discusses their use in the traditional medicine of East Asia and the implications for the conservation status of a range of different species. Previous discussion of this issue by the Parties has been concerned mainly (although not solely) with the impact on critically endangered species such as rhinoceroses, Rhinocerotidae, and the tiger *Panthera tigris*. However, many other species are also used in traditional East Asian medicines.
3. Culturally and historically the treatment methods of traditional medicines in East Asian countries have differed from those of western countries. Millions of people depend on traditional medicines as a primary form of health care, and are likely to do so for the foreseeable future. Rising prosperity may further increase demand. In recent years attention has focused on illegal trade and the importance of effective enforcement of the Convention within both range states and consumer countries, and that should continue to be a major priority. However, an increasing number of Parties now recognize the need for complementary initiatives such as education and research and development of alternatives to the use of endangered animals and plants traditional remedies.
4. The attached paper invites the CITES Parties to explore a collective view on the wildlife trade related to traditional medicines from this wider perspective. It surveys conservation and health care factors and suggests a number of options for possible action. These are offered as a stimulus to debate and are summarized in paragraph 61. The intention is not to question the importance of traditional medicine as a legitimate form of medical treatment, but to encourage the search for ways in which its use can continue without threatening wild species with extinction. Other Parties, especially those already pro-active in this area, may wish to contribute ideas in the light of their own experience.
5. The paper is based closely on work commissioned from TRAFFIC by the UK Government and is put forward jointly with the Governments of Japan and the Republic of Korea. From elsewhere in the Asian Region, the People's Republic of China contributed comments during the paper's preparation. Preliminary drafts were also reviewed by a number of individual experts in the field of traditional medicine as well as conservation.
6. In addition to this discussion paper the United Kingdom has commissioned a more detailed analysis of traditional medicine and CITES from TRAFFIC for circulation before the Conference.

## COMMENTS FROM THE SECRETARIAT

7. This document is very useful and its conclusions and proposed actions should be discussed in depth to determine how CITES should be involved in an issue which in many respects goes beyond the scope of the Convention.
8. A number of specific remarks need however to be made:
9. – The document rightly refers to the necessity to move away from a situation of conflict to one of co-operation between producers and users of traditional medicines and conservationists. This is a fundamental issue, and it is particularly important that adequate consideration be given to the role of the range States of the species involved. All should have the same interest: the conservation of the species, which involves finding the best way to ensure that their utilization is sustainable.
10. – The document shows clearly that the issue does not concern only China or even East Asia. It is world wide. In addition, it does not concern only traditional medicine but the use of plants and animals in medicines in general.
11. – The use of homeopathic medicines in the western world is clearly developing. That the use traditional Asian medicines is also increasing, as mentioned in this document, seems logical in the context of this changing attitude.
12. – The psychological aspects of the use of traditional medicines should not be neglected, because these medicines play an important role in all cultures. The psychology may determine to an important extent specific demands for medicines containing derivatives of particular plants and animals.
13. – The document does not mention the need to make a distinction between the real East Asian medicine and the "folk medicine" (tonics, etc.). Professionals rarely use "folk medicines" because they frequently lack vital or essential compounds. But they use large quantities of basic materials.
14. – Captive breeding, ranching and artificial propagation are mentioned as a possible solution to the demand for basic materials for the preparation of traditional medicines. It is mentioned in the document that these potentials should be reviewed, but these seems a reluctance to go further than that. Assessment of the contribution of these innovative measures should be included in the list of possible CITES actions.
15. – In paragraph 47, it is indicated that China's official pharmacopoeia lists the horn of the water buffalo *Bubalus bubalis* as a viable substitute for rhinoceros horn. Unfortunately it is not indicated whether the wild form of this species, proposed for inclusion in Appendix I at this meeting, would be more effective than the domestic form as this distinction between wild and captive-bred specimens is considered significant in other species.
16. – Although the use of plants in traditional medicine is regularly mentioned in the document, specific aspects of that trade are not as well documented as for some of the better known fauna species. The

first analysis of the trade in medicinal plants has shown that the volume of trade in some species is considerable, but this analysis is restricted to the species currently included in the appendices. There are, however, many species that are traded in large volumes that are, not yet included in the appendices. Also trade in some species might suddenly increase, as is the case for trade in *Cibotium barometz* (Dicksoniaceae).

17. – In addition to the proposed actions, an inventory of the actual needs in basic materials should also be prepared for a number of species. This would be the first step towards finding a balance between the needs and the potential supply, and would avoid over-harvesting for storage and speculative purposes.

**Doc. 10.79 (Rev.) Annex**

Traditional Medicine and CITES – A Discussion Paper on Traditional East Asian Medicine

1. Many countries, cultures and health care systems use wild fauna and flora as medicine. In fact, plant and animal ingredients are common in traditional medicines as well as in allopathic or so-called “western” medicines. But where western medicine depends largely on synthetic versions of these ingredients, traditional medicines – by definition – depend on ingredients from nature. Wildlife-based medicine systems include Muti medicine in Africa, Jamu medicine in Southeast Asia and Ayurvedic and Unani medicines on the Indian subcontinent, as well as scores of other indigenous medicine systems worldwide. Among these, traditional East Asian medicine – especially traditional Chinese medicine – holds the international spotlight where wildlife conservation is concerned. This focus is due, in part, to the fact that traditional East Asian medicine has utilized derivatives of several highly endangered mammals, including rhinoceroses, *Rhinocerotidae* and the tiger *Panthera tigris*, although some countries in East Asia and elsewhere have now banned trade in these species.
2. The use of endangered wildlife for medicinal purposes in East Asia has been an issue of both concern and confusion since it was brought to the forefront of international attention in the 1980s. Many studies, investigations, political actions and publicity campaigns have been aimed at stopping this use and the trade that supports it, as well as censuring the countries that stimulate it. In general, these approaches have met with limited success, partly because they have not taken into account the importance and complexity of traditional medicine as a health care system.
3. Certain endangered and threatened species, some of which are listed in the Appendices of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), are used in traditional medicines and folk treatments in East Asia. The significant impact of the demand for these medicines and treatments on wild populations is an important wildlife conservation issue. Furthermore, the very nature of the trade in wild species for traditional medicine poses enormous problems for CITES implementation and enforcement.
4. The socio-economic factors inherent in use of endangered wildlife for medicinal purposes in East Asia and the myriad complications of regulating this trade under CITES must be considered before realistic solutions to related conservation problems can be found. This discussion paper aims to examine traditional East Asian medicine as a case study to acquaint Parties to CITES with the main conservation and technical issues relating to traditional medicine in the CITES context and to suggest a series of possible actions for consideration by the Parties.

Traditional East Asian Medicine

5. Effectively addressing the conservation problems posed by the use of wild species in traditional East

- Asian medicine must start with a clearer understanding of East Asian health care systems. Oversimplification and misrepresentation of traditional East Asian medicine in western media have led to misunderstandings that have hampered well-meaning conservation initiatives.
6. Most traditional medicine systems in East Asia were derived from traditional Chinese medicine (often abbreviated as TCM). These systems use health care practices based on holistic approaches to curing illness as a malady of the whole body, rather than as a manifestation of specific symptoms or pathogens in the way that western allopathic medicine does.
7. TCM is a rational body of knowledge, a coherent system of thought and practice developed over several millennia. It is an important part of the systems of health care in East Asia. Based on ancient texts, it is the result of a continuous process of critical thinking and extensive clinical observation and testing. It represents a thorough formulation and reformulation of material by clinicians and theoreticians. However, it is also rooted in philosophies, logic, sensibilities, habits and a heritage mostly foreign to non-Asian cultures (Kaptchuk, 1983<sup>1</sup>).
8. In addition to TCM, traditional East Asian medicine encompasses Korea's *hanyak* and Japan's *kampo*. All are based on the principle of bringing the body into balance. However, despite use of the term “traditional,” TCM is a contemporary health care system that continues to evolve and innovate, based on modern research and extensive clinical experience.
9. While some traditional medicinal formulas contain parts and derivatives of threatened or endangered species, the consumption in Asia of endangered wildlife species for medicinal purposes is not limited to medicines prescribed by medical practitioners. Much of the consumption of wild species as tonic foods and self-prescribed folk medicines are not, in themselves, a formal part of TCM – just as western folk remedies are removed from western medical science.
10. The therapeutic value of TCM can be appreciated by the fact that today it is still used extensively by Asian people. More than one-fifth of the world's five billion people depend to various degrees on TCM for health care (Rosenthal, 1981<sup>2</sup>). In the People's Republic of China, government policy mandates that both traditional medicine and western medicine be developed (Wang, 1996<sup>3</sup>), and both medicines are practised side by side or in complement with one another. At present, traditional medicine provides 40% of all health care in the P.R. China (Anon., 1996<sup>4</sup>). Of all medicines sold in the P.R. China on the retail level, 55% are traditional (Anon., 1996<sup>5</sup>).
11. Simply because traditional East Asian medicine does not fit with “modern” western ideas of effective medicine does not mean it can be dismissed as superstition

or lacking in therapeutic effect. In fact, a number of well-known and widely-used western medicines have been "discovered" in TCM. Some examples are ephedrine, a plant-based drug used as a decongestant in western medicine (But, 1995<sup>6</sup>), and ursodeoxycholic acid, which is found in bear bile and used (in synthesized form) in western medicine to dissolve gallstones without surgery (Bachrach and Hofmann, 1982a<sup>7</sup>; Bachrach and Hofmann, 1982b<sup>8</sup>). In recent years, traditional East Asian medicine has gained increasing acceptance outside its historic constituency, particularly in northern Europe and North America (Dharmananda, 1996<sup>9</sup>). For example, the number of TCM clinics in the United Kingdom have increased three- or four-fold in the past three years (S. Zhong, *in litt.*, 31 December 1996).

#### Traditional East Asian Medicine and Conservation

12. Traditional East Asian medicine has reached prominence as a wildlife conservation concern because it once utilized large quantities of rhinoceros horn and tiger bone. Official trade records indicate that East Asian countries imported at minimum, more than 46,000 kg of rhino horn between 1960 and 1985 (Leader-Williams, 1992<sup>10</sup>). While official figures for international trade in tiger bone are less complete, records show that the region imported more than 10,000 kg of tiger bone between 1970 and 1993 (Mills and Jackson, 1994<sup>11</sup>). In the early 1990s, just before most East Asian States banned domestic as well as international trade in these materials, CITES reports documented millions of units of medicines said to contain rhinoceros horn and tiger bone in international trade (Mulliken and Haywood, 1994<sup>12</sup>). Despite trade bans in most TCM consuming countries, illegal trade in these products continues at some level today, as documented by numerous law enforcement cases. In addition, the TCM industry continues to legally consume large volumes of raw materials derived from other wild animal and plant species of unknown conservation status.
13. Animal ingredients make up less than 20% of the animal, plant and mineral ingredients used in TCM. It is estimated that 1,000 plants are in common use for TCM in the P.R. China and that 80% of those are wild harvested (Anon., 1996<sup>13</sup>). The parts of more than 80 CITES-listed animal and plant species and taxonomic groups are included in the various traditional East Asian *materia medica* in print today (see Anon., 1977<sup>14</sup>; Anon., 1995a<sup>15</sup>; Bensky and Gamble, 1993<sup>16</sup>; Kennett and Parry-Jones, *in prep.*<sup>17</sup>; Lin and Chen, 1988<sup>18</sup>; Reid, 1993<sup>19</sup>; Wu and Raven, 1994<sup>20</sup>; Wu and Qiu, 1993<sup>21</sup>; Yen, 1992<sup>22</sup>). Among these are some CITES Appendix I cetaceans, deer, birds, turtles, reptiles and plants, as well as the more publicized rhinoceroses, bears *Ursidae* and the tiger. However, it should be noted that only nine (11%) of these CITES-listed ingredients were deemed "essential" by a group of Hong Kong TCM physicians and traders consulted in late 1996. The group deemed another 28 (34%) "rarely used," while the rest were classified as either not used or easy to substitute. It is also important to recognize that the official pharmacopoeia in countries such as the P.R. China no longer list rhinoceros horn and tiger bone, due to their highly endangered status.
14. Although the extent to which parts of wild animals are used in TCM may be exaggerated at times, demand for some animals and plant materials does far outstrip supply in some cases. Official government estimates of harvest volumes and demand volumes in the P.R. China illustrate this gap (Anon., 1995b<sup>23</sup>). In the late 1980s the P.R. China introduced legislation prohibiting collection of the most endangered species and setting

quotas on the consumption of others. New reserves were established specifically to safeguard wild medicinal resources. In addition, there was promotion of research into substitutes for the use of certain ingredients, for example rhinoceros horn, and the synthesis of others, for example musk and tiger bone.

15. However, for several taxa, the demand is far greater than can be supplied from captive-bred or even wild taken sources, with predictable conservation results. In the 1980's, the P.R. China's demand for musk *Moschus spp* exceeded the supply from captive-bred and wild sources within China by more than 2,000 metric tonnes per year (Anon., 1995b<sup>24</sup>). Some sources estimate that the P.R. China's musk deer populations have declined by more than two-thirds since the 1950s (Anon., 1995a<sup>25</sup>). During the same period, the demand for pangolin *Manis spp.* scales exceeded captive bred sources by more than 206 tonnes (Anon., 1995b<sup>26</sup>), although the conservation impact of this trade is not certain. Of 388 plant species listed as endangered in the China Plant Red Data Book, 69 are used in traditional East Asian medicine and 22 are in common use (Kennett and Parry-Jones, *in prep.*<sup>27</sup>), although some of these are now artificially propagated. The traditional medicine industry in the P.R. China alone is estimated to use more than one million tonnes of plant material annually (Anon., 1996<sup>28</sup>).
16. The trade in animals and plants to supply traditional East Asian medicine is not only substantial and increasing, but it is also illegal in many cases. In Canada, 80% of all illegal wildlife products seized by government authorities are TCMs (E. Martin, *pers. comm.*, October 1996). In 1996, the Republic of Korea intercepted more than 600 kg of musk pods and more than 130 kg of bear gall bladders in illegal trade for medicinal purposes (H. Yoon, *pers. comm.*, October 1996). Of 1.8 million medicine items imported into the United States from 1984 to 1992, about 30% contained or purported to contain protected species and were confiscated by government authorities (Gaski and Johnson, 1994<sup>29</sup>). These seizures merely provide snapshots of the illegal trade; the whole picture can only be surmized.

#### Traditional East Asian Medicine and Culture

17. TCM dates back as far as 3494 BC (Gaski and Johnson, 1994<sup>30</sup>), and remains integral to East Asian cultures as well as East Asian health care systems (Hong, 1989<sup>31</sup>). Most people growing up in East Asia either have tried traditional East Asian medicine or have family members who have tried it or recommend its use. At the same time, concern about the conservation impact on the species used in TCM and its derivations is relatively recent and the expression of this concern, initially from sources outside East Asia, has not always taken a form likely to gain understanding from practitioners and users.
18. Public awareness initiatives by consumer countries in East Asia and elsewhere have begun to increase understanding of the conservation dimension of TCM use. However, some TCM specialists still do not recognize TCM as a factor contributing to the probable extinction of rhinoceroses and tigers. At the same time, TCM users may know little about the ingredients in the medicines they take (Nowell, *et al.*, 1992<sup>32</sup>; Mills, 1993<sup>33</sup>). Thus, in some cases neither practitioners nor patients necessarily recognize the conservation implications of their medical choices.
19. In fact, some TCM practitioners, traders and users view themselves as victims of wildlife conservation (Choy, *in prep.*<sup>34</sup>). They believe their health care practices have become scapegoats for the decline of spe-

cies such as rhinoceroses, the tiger and bears (Yuan, 1994<sup>35</sup>; Hong Kong Association of Traditional Chinese Medicine, *in litt.*, 20 July 1995; Wan, 1996<sup>36</sup>). Furthermore, some view TCM as an "endangered species," due to that fact that more and more of its ingredients are being banned from international trade or placed under trade controls for the first time in history (Leu, 1995<sup>37</sup>; Mui, *in prep.*<sup>38</sup>). International criticism of the use of rhinoceros horn and tiger bone has prompted some in the TCM community to believe that conservationists are anti-traditional medicine, ranking wildlife above all else, including an ancient culture and the well being of the human race (Choy, *in prep.*<sup>39</sup>)

20. At the same time, there has been a growing resurgence of traditional healing practices in some East Asian countries (Hong, 1989<sup>40</sup>). Attacks on traditional East Asian medicine are perceived as attacks on East Asian culture and belief systems (Hong, 1989<sup>41</sup>; Ng, unpublished<sup>42</sup>). In this defensive atmosphere, the arguments for wildlife conservation can become secondary to issues of cultural sovereignty.
21. Some in the traditional medicine community in East Asia have been alienated from CITES, at a time when its co-operation is urgently needed, if not essential (Ng, unpublished<sup>43</sup>; Lee, 1994<sup>44</sup>). This alienation was underscored by TCM experts from the P.R. China, Hong Kong, Japan, the Republic of Korea and Singapore who attended the International Symposium on Traditional Chinese Medicine and Wildlife Conservation in Hong Kong in 1995. Speakers voiced frustration at being misunderstood and overlooked in the CITES process, though some acknowledged that supplies of wild medicinal materials were declining due to overuse (Choy, *in prep.*<sup>45</sup>; Mui, *in prep.*<sup>46</sup>; Chan, *in prep.*<sup>47</sup>)
22. A TCM researcher at the 1995 symposium in Hong Kong suggested that education concerning the use of wild species in traditional East Asian medicine should be two-way so as to conserve wildlife but also preserve and develop an indigenous health care system with potential benefit to all humankind (But, *in prep.*<sup>48</sup>). This suggestion began to be realised in October 1996, when the IUCN World Conservation Congress in Montreal included a workshop entitled *Wildlife Trade and Traditional Medicine in North East Asia*. The Chinese panellists underscored to conservationists the merit of TCM and why it is a wildlife conservation issue worthy of their respect and attention. The head of the P.R. China's CITES Scientific Authority explained that "the challenge we are facing is not whether we should use wildlife as TCM, but how we should use it... TCM and the use of wildlife will continue" (S. Wang, pers. comm., October 1996). Given that fact, Wang stated, a favourable outcome for wildlife conservation depends on communication and collaboration between TCM and wildlife conservation interests.

#### CITES and Traditional East Asian Medicine

23. Flagging traditional medicine as a special CITES issue is not unprecedented. CITES fora have increasingly recognized the trade in traditional East Asian medicines as a potential threat to the long-term survival of certain species. References to traditional medicine appear in Resolution Conf. 9.13 and Resolution Conf. 9.14. Resolution Conf. 9.13, Conservation of and trade in tigers, recommends that the governments of consumer states "work with the traditional-medicine communities and industries to develop strategies for eliminating the use and consumption of tiger parts and derivatives." Resolution Conf. 9.14, Conservation of rhinoceros in Asia and Africa, "urges . . . the consumer states to work with traditional-medicine communities

and industries to develop strategies for eliminating the use and consumption of rhinoceros parts and derivatives."

24. The Standing Committee, at its September 1993 meeting, noted that it had "received information on the plight of rhinoceros and tiger populations which, despite listing in CITES Appendix I, have been subject to considerable pressure from poaching, in particular to supply an illegal trade for use in oriental medicines..." The Committee further noted "the progress that has been made by the authorities in consumer countries to strengthen domestic control of this illegal trade and to educate their communities about the risk that it places on the survival of rhinoceroses and the tiger from continued demand for parts and derivatives for use in such medicines." At its March 1994 meeting, the Standing Committee reiterated the threat posed to rhinoceroses and the tiger by "oriental medicine."
25. In November 1994, the Conference of the Parties directed the Plants Committee to start a study on the international trade in medicinal plants.
26. In September 1996 the Animals Committee adopted a decision entitled *Illegal International Trade in Parts and Derivatives of CITES-listed Bear Specimens* which underscored the impact of traditional East Asian medicine on the conservation of vulnerable bear species. The Animals Committee requested Secretariat to issue a Notification to the Parties requesting that all range states and countries of import (re-export) and consumption of bear parts and derivatives "... submit to the next meeting of the Conference of the Parties any available information on ... wild bear populations ... trade threats ... enforcement efforts ... efforts to promote the use of substitutes in traditional medicines, and public education programmes ...". Notification No. 946 was issued by the Secretariat on 18 November 1996. In December 1996 the Standing Committee accepted recommendations in the Animals Committee's decision "... to strongly urge all Parties, as well as non-Parties, to endeavour to eliminate the illegal trade in bear parts and derivatives ..." and "... to encourage all States that are consumers ... whether they are Parties or non-Parties, as well as non-governmental organizations in those countries, to co-operate closely with the traditional Asian medicinal and other consumer communities within their countries. Both to educate consumers about the conservation of bear species, and to work co-operatively to seek substitutes for bear parts and derivatives in traditional medicines, as appropriate.
27. In December 1996, the Standing Committee adopted a decision entitled *The Tiger*. The Committee concluded that "a number of Parties have improved their legislation on tiger trade and conservation ... but that urgent action is still needed in some range and consumer States ...". The Committee further concluded that "... the level of enforcement and educational activity has increased, but poaching and illegal trade continue to be a problem ...". The Committee recommended, among other things, that "... all Parties make further efforts to improve levels of awareness of tiger conservation requirements on the part of manufacturers, traders, practitioners and users of traditional medicine ...".

#### CITES procedures and trade in traditional East Asian medicines

28. All medicines that include parts or derivatives of CITES-listed species are considered CITES specimens and, therefore, are subject to the provisions of the Convention. This is because a specimen, as defined by Article I, paragraph (b) of the

Convention, is an animal or plant, alive or dead, or any readily recognizable parts or derivatives of plant or animal species. Thus all recognizable parts and derivatives of species included in CITES appendices are CITES specimens (with some exceptions for plants).

29. The term "readily recognizable part or derivative" includes any specimen that appears from an accompanying document, the packaging or a mark or label, or from any other circumstances, to be a part or derivative of an animal or plant of a species included in the appendices, unless such part or derivative is specifically exempted from the provisions of the Convention (Resolution Conf. 9.6). For instance, a vial of bear bile salts, identified as such from the packaging, is a CITES specimen, subject to CITES controls and permit requirements, as much as if it were a raw gall bladder, or the entire bear itself. Very often, with traditional East Asian medicines in processed form, the packaging and ingredients list offer the only clue to the contents and their significance to CITES controls.

30. For traditional East Asian medicines that contain parts or derivatives of species included in Appendix I, international trade is prohibited, except in exceptional circumstances (where the purpose of the import must be non-commercial). As a result, any legal commercial trade in traditional East Asian medicines that contain parts or derivatives of species included in Appendix I is highly unlikely. For traditional medicines containing parts or derivatives of species included in Appendix II, international trade for commercial purposes is allowed but controlled by CITES permit requirements.

#### CITES-enforcement initiatives aimed at traditional East Asian medicines

31. Some Parties have taken the step of adopting national legislation that makes it explicitly illegal to trade in medicines that claim to contain endangered species, regardless of whether they actually do. This approach facilitates law enforcement efforts, and puts the onus on traders to show that medicines conform with the law, as opposed to the State being burdened to prove through costly laboratory analysis that medicines contain CITES-listed ingredients.

32. Parties such as the P.R. China, the Republic of Korea and Hong Kong (United Kingdom) and member countries of the European Union have taken stricter measures than those required by the text of the Convention, banning domestic trade in medicines containing derivatives of highly endangered species – specifically rhinoceros horn and tiger bone. However, some CITES Parties do not regulate the domestic trade in traditional medicines containing CITES-listed species, and some do not apply the definition of readily recognizable parts and derivatives (as per Resolution Conf. 9.6) to manufactured medicines in international trade.

#### Multiple-ingredient manufactured medicines and CITES controls

33. Manufactured traditional medicines, if they contain a CITES-listed plant or animal specimen, are subject to the provisions of the Convention. For raw or even semi-processed materials used in the manufacturing of medicines, the CITES procedures are relatively straightforward. However, processed traditional East Asian medicines may contain a mixture of CITES-listed plant and animal specimens, from various sources. These medicines may

not contain all of the stated ingredients, or they may contain undeclared ingredients from CITES species. Trade in processed medicines containing CITES-listed species requires valid CITES documents – but how those documents can be completed to accurately reflect the contents of the processed medicines including more than one CITES-listed species has never been clarified.

34. This problem of combined ingredients is also relevant to national legislation for the implementation of CITES. As stated earlier, some States include medicines containing CITES-listed species in their CITES-implementing legislation. The authentication of CITES-listed contents in medicines is at this time difficult and costly, and is not possible for all contents. Not all States are equipped to carry out the advanced testing required to identify the contents of processed medicines, and such testing is sometimes inconclusive or not species-specific.

35. Traditional medicines may contain parts or derivatives from captive-bred, ranched or artificially propagated sources, and CITES provisions and procedures for these may be different in some cases. Exported medicines may also contain a mixture of derivatives from native species and derivatives from imported specimens. In this case, the medicines would contain a combination of exported and re-exported specimens, further complicating CITES provisions and procedures.

#### Traditional medicines made with parts and derivatives from captive-bred and artificially propagated sources

36. There are currently no captive-breeding facilities registered with the CITES Secretariat specifically for the production of animal species used in traditional East Asian medicine. Although there are nurseries producing plant species used in East Asian medicine, such as *Saussurea costus* (Appendix I) and *Panax quinquefolius* (Appendix II), there are currently no nurseries registered with the Secretariat for the production of traditional East Asian medicinal ingredients by artificial propagation.

37. It is theoretically possible to have a traditional medicine industry entirely based on artificially propagated plants and captive-bred animals. However, under current Resolutions, commercial captive-breeding operations for Appendix I animal species destined for international commercial trade must be registered with the Secretariat. If even one Party objects to an application for registration of a commercial captive-breeding operation for Appendix I animals, the application can only be approved by a two-thirds majority at the Conference of the Parties. Trade in parts and derivatives from Appendix II listed captive-bred specimens would require a permit or captive-breeding certificate issued by the relevant Management Authority.

38. In addition, Resolution Conf. 8.15, Guidelines for a procedure to register and monitor operations breeding Appendix I animal species for commercial purposes, recommends that Parties ensure that registered captive-breeding operations, and the processors and manufacturers of byproducts from these operations, adopt a marking system that meets, as a minimum, the requirements of the uniform marking system described in Resolution Conf. 5.16, Trade in ranched specimens. This resolution recommends that each product unit (the smallest single item of any product of the operation that will be individually marked, packaged and

entered into trade) and/or primary container (any container used to immediately contain a product of the operation) entered into trade be indelibly marked with a unique identification number meeting the minimum requirements of the uniform marking system. The uniform marking system requires, as a minimum, inclusion the ISO code for the country of origin, a unique identification number and the year of production. The difficulty with this requirement arises when parts and derivatives from multiple species, and from a variety of sources, are combined into one product, as in the case of most manufactured East Asian medicines.

## Discussion

### Use of endangered species in traditional medicines

39. Some of the most endangered medicinal species are part of a long tradition of use: tigers for a thousand years (Mills and Jackson, 1994<sup>49</sup>), and rhinoceroses and bears for several thousand years (Nowell *et al.* 1992<sup>50</sup>; Mills and Servheen, 1991<sup>51</sup>). Longevity of use and alleged efficacy make devoted users reluctant to accept bans on trade in items such as rhinoceros horn (Mui, in prep. <sup>52</sup>). However, not all wild species currently used in TCM are part of a long tradition of use. In fact, a tradition of use in Chinese medicine does not preclude the adoption of alternative substances if these can be shown to have an identical or better effect. The traditional Chinese *materia medica* change according to clinical research, and many species described in classic TCM texts are no longer in use today. This makes possible the discovery and adoption of substitutions for medicines derived from threatened or endangered species.
40. It is also important to recognize that the issue of medicinal use of wildlife is broader in scope than just traditional East Asian medicine, which is but one of many traditional medicine systems worldwide. The World Health Organization estimates that as much as 80% of the world's human population depends on traditional medicines for primary health care, and WHO promotes their use (Anon., 1993<sup>53</sup>). This fact underscores the actual and potential conflicts between wildlife conservation and medicinal security for humans and the need for conservation efforts to address the socio-economic, medicinal, and biological factors involved.

### Communication and public education

41. The view that TCM is primitive and outdated, and that the only utilization of wild species for medicinal use takes place within the practice of TCM are two persistent fallacies that have helped entrench both sides of this debate (Wan, 1996<sup>54</sup>). Many people fail to understand how traditional – sometimes interpreted as “antiquated” – medicine can compete on equal ground with western medicine. On the other hand, some supporters of TCM feel that campaigns aimed at stopping the use of wild species in medicines do not recognize traditional medicine as a valid system of health care, equal to western systems. By attacking the idea and philosophy of TCM as much as the use of certain species, these campaigns elicit an automatic defensive reaction in people who otherwise may listen to valid conservation concerns.
42. Misunderstandings and ethnocentrism pose hurdles to the effective implementation of CITES and, thus, increase the likelihood of unsustainable and illegal trade. Improved communication, especially through programmes facilitating public awareness, education and exchange of varying viewpoints, is key to overcoming these obstacles, and a number of Parties have

taken important initiatives in this regard. It is imperative to introduce the traditional East Asian medicine community to CITES, just as it is important for the Parties to CITES to be aware of the biological and cultural significance of the trade in traditional medicines. Increasing communication with traditional East Asian medicine user groups (as recommended in Resolutions Conf. 9.13 and 9.14) in their own languages is a basic step towards enlisting their co-operation.

43. In terms of economics, traditional East Asian medicine can be a high-profit industry – whether operating through legal or illegal markets. People in the range States for many of traditional medicine's most vulnerable raw materials are among the world's poorest and, in some cases, make windfall profits from poaching a single animal or plant (Mills and Jackson, 1994<sup>55</sup>; Mills, *et al.*, 1995<sup>56</sup>). Meanwhile, people in some consumer states are among the world's richest, able to afford nearly any price to get the medicines they want and/or need (Mills, *et al.*, 1995<sup>57</sup>; Mills and Jackson, 1994<sup>58</sup>). In 1995 the production value of the traditional medicine industry was more than USD 2 billion (Z.K. Lu in litt., 21 January 1997) or more, while, the P.R. China's legal exports of traditional medicines and raw medicinal materials were worth USD 620 million (Z. K. Lu, in litt., 21 January 1997). Any actions aimed at controlling, limiting, reducing or, in some cases, replacing traditional East Asian medicines must consider the financial importance of the industry to the countries concerned.

### Captive breeding, artificial propagation, farming

44. Supplying traditional medicine ingredients from captive bred, artificially propagated, or farmed sources is commonly advocated as a means of meeting demand and addressing conservation concerns. The P.R. China has been farming and/or attempting to farm medicinal wildlife for decades (Bai, 1986<sup>59</sup>). Chinese authorities advocate farming of wildlife as a conservation tool, but they caution that the conservation merits of farming must be decided on a species-by-species basis, since all species do not flourish in captivity (S. Wang, pers. comm., October 1996). At the same time, some TCM users insist that wild specimens are superior to farmed or propagated ones. For example, the gall bladder from a wild bear is said to be worth ten times that of the gall bladder from a captive-bred bear in the Republic of Korea (S. Kang, pers. comm., October, 1996).
45. Many conservationists worry that farming of medicinal wildlife will stimulate demand for derivatives of protected species, while increasing incentives for poaching specimens from the wild, both for their parts and for breeding stock (Servheen, 1995<sup>60</sup>). Some animal welfare groups object to farming of animals on the basis of inhumane capture methods, transport, living conditions, extraction methods and slaughtering techniques (J. Robinson, International Fund for Animal Welfare, *in litt.*, 9 January 1997). In the case of plants, artificial propagation may not be successful in every case. Soil and other local conditions may have an impact on the plant that is difficult or impossible to reproduce under controlled artificial conditions. In other cases, consumer preference may override acceptance of anything other than wild specimens.
46. However, captive breeding, artificial propagation and farming are an acknowledged part of the CITES arena, and Resolution Conf 8.15 recognizes that captive breeding may create “a source of specimens to relieve pressure on wild populations”. Consideration of such techniques should be based on a careful assessment of the conservation benefits or risks to each species concerned.

#### Use of substitute ingredients

47. Another common suggestion for displacing the use of threatened wild species is to employ the use of substitutes. While some traditional East Asian medicine experts claim there are no substitutes for such ingredients as rhinoceros horn (Mui, in prep.<sup>61</sup>) and bear gall bladder (Mills, 1995<sup>62</sup>), others endorse substitutes (Lo, 1995<sup>63</sup>). The P.R. China's official pharmacopoeia now lists water buffalo *Bubalus bubalus* horn (not CITES-listed) as a viable substitute for rhinoceros horn (H. Chen, State Administration for Traditional Chinese Medicine, Beijing, pers. comm., 1996), and Chinese researchers claim to have found an animal with bones as efficacious as tiger bone in treating some illnesses (Zhang, in prep.<sup>64</sup>). However, where substitutions are accepted by user groups, it is essential that the shift in demand does not endanger other wild species.
48. Chinese delegates to the International Symposium on Traditional Chinese Medicine and Wildlife Conservation (Hong Kong, 1995) expressed interest in collaborative research on substitutes for medicines from endangered species and to clinically document the efficacy of traditional East Asian medicines so that more effort could be placed on supplying efficacious materials, while ineffective medicines could be dropped from the Chinese *materia medica*. However, it is important to note that traditional medicine specialists are more likely to trust research on the efficacy of substitutes from traditional medicine researchers. Indeed, the P.R. China requires its own government testing before substitutes are entered into the official pharmacopoeia of traditional medicines.

#### CITES implementation

49. As mentioned above, traditional East Asian medicine poses an important technical complication in the CITES context. Particularly difficult is the control of parts and derivatives of listed species that are often difficult to recognize, traded in small quantities and/or incorporated as ingredients in manufactured medicines. Animals and plants may be traded whole, as derivatives in the form of body or plant parts (such as horns, bones and roots), in semi-processed form (powders or extracts), or in fully manufactured form (pills, liquids, ointments, powders and plasters). Identification of these various forms can be difficult, and the variety of forms and number of different medicines in itself makes identification a major problem. CITES-listed specimens are often mixed with many other plant, animal and/or mineral ingredients, making identification, costly and, at times, impossible. The co-operation of traditional medicine traders and manufacturers would be invaluable in assisting CITES enforcement in this regard.
50. There may be a case for reviewing permit procedures for the legal commercial trade in parts and derivatives of Appendix II and III species, including the use, where practical, of labelling and marking schemes to assist in monitoring of trade volumes, routes, markets and sources. Experience points to a need to improve identification and forensic-testing techniques to enhance law enforcement efforts.
51. Taking into account the recommendations in Resolution Conf 9.6, there may also be a case for re-examining national CITES implementing legislation in the context of trade in manufactured traditional medicine products.
52. It should be remembered that effective CITES enforcement depends on the co-operation of the traditional medicine community and that the community, including users, has a vested interest in keeping

medicinal species from declining to the point of being listed in Appendix I.

#### Conclusions

53. It seems timely for the Parties collectively to consider wildlife trade related to traditional East Asian medicine and other traditional medicines from a wider perspective than they have previously. Millions of people are likely to continue to depend on traditional East Asian medicine for the foreseeable future. The health care market in the P.R. China alone is expected to increase by 60% between 1995 and the year 2000 (Anon., 1996<sup>65</sup>). In addition, traditional medicines from the P.R. China are used in 130 countries and territories around the world (Anon., 1996<sup>66</sup>).
54. Several of the issues involved are cultural, but at their root are over-reaching issues of human health care and the world's medicinal security. Any attempts to control trade or prevent detrimental trade in wild animal and plant species used for medicinal purposes must consider the tenacious sociological, political, economic and technical factors unique to the consumptive use of wild fauna and flora as medicine. Health care is sacrosanct. For most people, health is considered the first of all liberties and health care an inherent right. The sanctity of traditional East Asian medicine is further enhanced by its 5,000 years of history (Reid, 1993<sup>67</sup>).
55. The control and even restriction of wildlife products with medicinal value forces the conservation debate into new territory, encompassing moral and ethical grounds. Some advocates of traditional East Asian medicine believe that the Appendix I listing for rhinoceroses (and its effective ban on international trade in rhinoceros horn) has denied health care to people suffering from life-threatening illnesses. This moves the trade debate away from the issues prevalent at the birth of CITES some 25 years ago – such as trade in spotted cat furs, exotic reptile leather, and the exotic pet trade. Where traditional medicines are concerned, the physician prescribing rhinoceros horn or any medicine containing wild species may well be motivated by the desire to save human lives and ease human suffering.
56. On the other hand, in addition to threats from habitat loss and other factors wild species are being threatened (and even driven to the brink of extinction) by over-harvesting for the traditional East Asian medicine trade. Bears, rhinoceroses, the tiger and other species are being erased from their habitats faster than nature can replenish them. While strong arguments can be made for using wild species for medicine the current rate of use may make some medicinal species unavailable to everyone – patient and wildlife conservationist alike.
57. There is a strong case for the Parties to urgently consider measures which will buy time – and ideally long-term survival – for wild species most critically affected by the medicinal trade. Action could include enhancing controls in the wild, in the urban landscape and at national borders, while launching education campaigns aimed at promoting conservation principles and research into clinically and culturally-appropriate substitutes. Initiatives by governments and conservation organizations should be based on a policy of inclusion, under which the traditional East Asian medicine community – from physician to patient – is not treated as an adversary but as a partner in wildlife conservation efforts.
58. Urgent action to determine, in advance, which species are utilized in excess of their supply would enable measures to be taken to prevent a repeat of the crisis

management scenario of the tiger, bears and rhinoceroses. Some medicinal species may deserve some level of CITES protection, if they are not already listed in the appendices.

59. The farming, ranching and propagation of wild species for medicinal purposes are other options which could be examined and discussed. These options are endorsed by some CITES Parties and the highly-controlled, well-managed use of captive-bred and/or propagated medicinal materials may buy precious years until awareness programmes, substitution initiatives and *in situ* conservation and protection efforts can be strengthened. On the other hand, it may increase demand for wild-caught species, which would prove detrimental to conservation.
60. Other issues to be addressed include the problems of identifying parts and derivatives of wild species used in traditional East Asian medicine which are easily concealed and difficult to detect or even identify in their raw state and semi-processed and processed forms; the problems of multiple wild/captive and artificially-propagated sources; and related weaknesses in national laws.

#### Possible CITES Actions

61. The problems caused by over-use of certain wildlife species in traditional East Asian medicine are complex. The search for solutions calls for a mix of actions by Parties collectively and at the national level in line with the Preamble to the Convention, which recognizes the sovereignty of countries in protecting their own fauna and flora but also the need for international co-operation. Issues involving and affecting access rights by over one billion people (over four billion people, if all traditional medicine systems are counted) will not be easily addressed, but there are several initiatives the Parties could take to begin a process of responding systematically to these problems. The following possible actions could assist in tackling the biological, social, and procedural components of the international trade in traditional East Asian medicines containing wild species. Some of these actions would require external funding and would, therefore, be dependent on the willingness of donor countries and other organizations for their completion.
62. – The Conference of the Parties could formulate a resolution on trade in traditional medicines containing wild species, aimed at:
- i) bringing attention to the issues discussed in this paper, recognising the case for human healing through the use of wild animals and plants where they can be harvested sustainably, while endorsing prohibitions on the use of endangered species;
  - ii) encouraging the participation of the traditional medicine community in the CITES forum both internationally and through national and regional education work with practitioners, traders and consumers;
  - iii) encouraging Parties to ensure their CITES-implementing legislation effectively controls trade in all readily recognisable parts and derivatives of medicinal species, in accordance with Resolution Conf 9.6;
  - iv) endorsing the importance of the effective enforcement of legislation prohibiting trade in endangered species and the value of such action in focusing public attention on the conservation issues involved, as well as facilitating greater awareness of consumers;

- v) encouraging research and use of substitutes and alternatives;
- vi) encouraging the development of identification and authentication tools for semi-processed and processed medicines for law enforcement purposes;
- vii) encouraging conservation awareness programmes in processing and consuming States; and;
- viii) promoting an international commitment to effectively address the conservation, regulatory and ethical considerations involved.

63. – The Conference of the Parties could direct the Animals Committee to include within the implementation of Resolution Conf. 8.9, Trade in wild-caught animal specimens, a review of significant trade in animal species for medicinal use (primarily involving traditional East Asian medicine), in particular to establish the conservation impact of the trade on particular species;
64. – As a matter of urgency, the Conference of the Parties could consider providing the resources necessary to complete the study on international trade in medicinal plants that the Conference of the Parties directed the Plants Committee to initiate in 1996;
65. – The Conference of the Parties could direct the CITES Secretariat to convene a technical workshop in order to establish priority actions for addressing the complex problems of utilization of CITES-listed species in traditional East Asian medicines. These may include a review of farming, ranching and artificial propagation for medicinal purposes, a review of identification and authentication techniques, and/or directing applied research into substitutes for critically threatened species;
66. – The Conference of the Parties could decide to include within the continuing implementation of Resolution Conf. 8.4, National laws for implementation of the Convention, a review of measures taken by Parties in their national legislation to control the import/export of medicinal products containing CITES-listed species;
67. – Parties could also be encouraged to examine the need for harmonising food and drug legislation with CITES-implementing legislation in order to protect wild species from over-utilization and protect traders from unknowingly participating in the extinction of species;
68. – The Conference of the Parties could encourage more effective implementation of Resolutions Conf. 9.13, Conservation of and trade in tigers and 9.14 Conservation of rhinoceros in Asia and Africa, adopted at its ninth meeting (Fort Lauderdale, USA, 1994), and monitor progress in their application;
69. – Finally, the Conference of the Parties could encourage donors, whether Parties, non-parties or non-governmental organizations, to support all of the measures mentioned above, including the research of substitutions for medicinal materials from highly endangered species.
70. These recommendations are offered for discussion by the Conference as a possible basis for practical actions to be taken before the Eleventh Meeting of the Conference of the Parties.

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## Interpretation and Implementation of the Convention

## TRADITIONAL MEDICINE AND CITES

RECOGNIZING that wild fauna and flora are used in many forms of traditional medicine and that continued and uncontrolled use of several endangered species in these medicines has been the subject of concern among range States and consumer countries in view of the potential threat to the long-term survival of these species and the development of traditional medicine on a sustainable basis;

RECOGNIZING that most traditional medicine systems in East Asia were derived from traditional Chinese medicine which is a rational system of thought and practice developed over several millennia and involving extensive clinical observation and testing;

AWARE that the World Health Organization has acknowledged the importance of traditional medicines to the world's medicinal security and that millions of people depend on these medicines for primary health care;

CONVINCED of the need to improve understanding about the significance of traditional medicines in the world's health care systems whilst addressing the problems of over exploitation of certain wild species;

ACKNOWLEDGING that many forms of traditional medicine depend on the sustainable harvesting of wild species for human healing;

RECALLING resolutions Conf. 8.15 and 9.19 which acknowledge that pressure on wild populations may be relieved by captive breeding and artificial propagation;

RECOGNIZING the importance of research into the use of substitutes for endangered species;

BELIEVING that adequate measures should be taken to conserve wild species at risk of over-exploitation to avoid their becoming threatened to the point where more severe measures may be necessary as in the case of the rhinoceros and the tiger;

CONVINCED of the importance of comprehensive national legislation and its effective enforcement for the implementation of the Convention in all Party states;

THE CONFERENCE OF THE PARTIES TO THE  
CONVENTION

RECOMMENDS the Parties to:

- a) work closely with traditional medicine practitioner and consumer groups in developing public education and awareness programmes towards the reduction and eventual elimination of illegal use of endangered species and the need to avoid over-exploitation of other wild species;
- b) to ensure that, in accordance with resolution Conf. 9.6, their national legislation effectively controls trade in all parts and derivatives of species used for healing pur-

poses and in medicinal products containing or purporting to contain them;

- c) strengthen efforts to enforce legislation governing trade in threatened and endangered species and capitalize on the value of such action in focusing public attention on the importance of safeguarding wild populations;
- d) promote the development of techniques, including the application of forensic science, for identifying parts and derivatives used in traditional medicines;
- e) investigate the potential for further use in traditional medicines of substitutes for threatened wild species ensuring that this does not lead to other species becoming threatened; and
- f) consider the application of artificial propagation and, in certain circumstances, captive-breeding, to meet the needs of traditional medicine and relieve pressure on wild populations of species;

DIRECTS:

- a) the Animals Committee, in its implementation of Resolution Conf. 8.9 to review trade in animal species for use in traditional medicines to assess the implications for wild populations; and
- b) the Secretariat to:
  - i) include within the implementation of Resolution Conf. 8.4, a review of measures taken by Parties in their national legislation to control the import and export of medicinal products containing parts and derivatives of species listed on the Appendices of the Convention;

and, subject to the availability of funds, to:

- ii) review the need for measures to improve implementation of the Convention for monitoring trade in parts and derivatives of species listed on Appendix I and II which are traded in semi-processed form, manufactured form, or in manufactured medicinal products;
- iii) collate information on proven identification techniques for parts and derivatives and the availability of substitutes for threatened wild species, including opportunities for further research; and
- iv) review the role of captive-breeding and artificial propagation in the supply of products for traditional medicine;

and report to the Standing Committee before the 11th Conference; and

URGES potential donors to assist with funding actions to implement the measures in this Resolution.

## Interpretation and Implementation of the Convention

## TRADITIONAL MEDICINE AND CITES

FLORA, FAUNA AND THE TRADITIONAL MEDICINE COMMUNITY:  
WORKING WITH PEOPLE TO CONSERVE WILDLIFE

1. This document is submitted by the United States of America.

Background

2. At the ninth meeting of the Conference of the Parties, the United States committed itself to action in support of CITES Resolutions Conf. 9.13 and 9.14, which charge consumer States to work with their traditional medicine communities and industries to develop strategies for elimination of tiger and rhino use and consumption. Since that time, the United States has reported twice to the Standing Committee on its activities (Doc.SC.36.14 Annex 9, and Doc.SC.37.Inf.). This report is being submitted as an addition to those documents to summarize our activities, both nationally and internationally, in response to Resolutions Conf. 9.13 and 9.14, and document our outreach efforts in conjunction with the traditional medicine communities here in the United States. This document is formally submitted pursuant to the item on the agenda of CoP10 dealing with trade in CITES-listed species for traditional medicines.
3. The drastic decline of wild tiger and rhino populations worldwide has had many causes, chief among them habitat destruction, human encroachment, and the illegal trade in their parts and products. Globally, governments have taken action, introducing legislation, strengthening law enforcement efforts, and increasing scientific research, to forestall the possible extinction of these species. As a result, important contributions have been made, and some populations of tigers and rhinos have benefited. Efforts to strengthen local anti-poaching efforts and law enforcement activities in range states, as well as domestic trade bans in consumer states have substantially contributed to the conservation of these species. However, these efforts are chiefly regulatory in nature, and have not attempted to enable consumers to understand the impact of excessive use on endangered species.
4. Indeed, many consumers and vendors are unaware of the conservation implications of some of their commerce. Therefore, to fulfil the goals, objectives, and requirements of Resolutions Conf. 9.13 and 9.14, the United States has committed itself to creating a partnership with its traditional medicine community that helps to promote understanding between the community and the United States Government, and that involves community representatives fully in an educational outreach effort.
5. Our experience with such programs to date indicates that, while many concerned groups have approached traditional medicine issues, they have not done so at a grassroots level. In these instances, the traditional medicine community has not had direct access to discussions about issues that not only concern them but to which they have much to contribute. Perhaps in part because of their exclusion from such discussions worldwide, consumer/vendor communities have distanced themselves from the implications of species' consumption. To redress this significant oversight and to begin to build a foundation of mutual respect and co-operation, the Fish and Wildlife Service, as the agency of the U.S. Government responsible for CITES

implementation, publicly recognized the traditional medicine community for its vast body of knowledge, both cultural and medicinal, preserved by practitioners in Asia and around the world. In its printed material and at meetings, the Service expressed its respect for and acknowledgement of the significant contributions that traditional medicine has made to human health. The United States is interested in the link between medicinals and endangered species, and is convinced that the best way to ensure the sustainable use of certain plants and animals is to work closely with those individuals who rely on them.

National Activities

6. United States activities pertaining to tigers and rhinos have evolved since passage of Resolutions Conf. 9.13 and 9.14. The Service has taken action in the areas of law enforcement, legislation and education, as well as in the development of a conservation awareness program at the grassroots level specifically designed to educate adult consumer communities.

Law Enforcement

7. The Fish and Wildlife Service is committed to the interdiction of products labelled as containing rhinoceros horn or tiger bone at ports of entry. In addition, shortly after October 1995, the Fish and Wildlife Service met with the U.S. Customs Service to form the Los Angeles-based Asian Medicinal Task Force. Representation is broad-based, covering ten State and Federal agencies at the present time: U.S. Customs Service, U.S. Fish and Wildlife Service; U.S. Department of Agriculture; U.S. Food and Drug Administration; U.S. Public Health Service; U.S. Attorney's Office; Los Angeles City Attorney's Office; California Food and Drug; California Public Health Service, and the California Department of Fish and Game.
8. Accomplishments to date include:
  9. – regular monthly meetings providing multi-agency training and projects designed to identify illegal trade routes;
  10. – trade compliance seminar attended by more than 80 members of the customs broker and importing community;
  11. – two multi-agency inspections on Southeast Asia mail and 3 passenger flights from China, uncovering 45 violations; these inspections have resulted in:
    12. – an increased number of protected species-related medicinal cases being discovered and, in the case of bear bile, successfully prosecuted; and
    13. – the interest of other task force participants have been increased by the discovery of pertinent violations other than endangered species violations.
    14. – plans are being made to look at air and ocean cargo in the same way; U.S. Customs is prosecuting a large herbal medicine

importer for smuggling through ocean cargo.

15. – U.S. Customs is looking at possible funding for the task force and expanding the concept to other ports in the U.S.

#### Legislation

16. The Rhinoceros and Tiger Conservation Act, passed by the United States Congress and signed by President Clinton in 1994, resulted in allocation of USD 200,000 in fiscal year 1996 and USD 400,000 in fiscal year 1997 to be used to support conservation efforts for these species. As the primary agency in the Department of the Interior responsible for implementing programs associated with endangered species, the Fish and Wildlife Service has designed a program to solicit and review proposals to increase rhino and tiger conservation through habitat management, surveys and monitoring, conservation education, wildlife inspection, investigative and forensic efforts, protected area law enforcement and sustainable development in buffer zones surrounding tiger/rhino habitat (see attached). The first projects submitted under this process have been reviewed by a panel comprised of representatives of the Service's Office of Management Authority, Office of Scientific Authority, Office of International Affairs and the U.S. Agency for International Development.

17. Forty-two proposals were reviewed in the first quarter of fiscal year 1997. Twenty-five of these were rejected, ten (totalling USD 205,520) set aside for further consideration upon receipt of additional information, and seven (totalling USD 126,575) approved for funding. Topics included provision of equipment and training for personnel guarding rhinos in Africa and Asia, investigation into poaching and illegal tiger trade in India, and conservation education for persons living in the vicinity of tiger and rhino habitat.

#### Education

18. The Service's educational initiative launched in Los Angeles contained an element that proposed educational outreach to schools with high Asian populations. The focus of this initiative was to provide wildlife trade education to school groups, ultimately pairing this effort with the education provided to adult consumers. In 1996, the Service completed an initial round of teacher training workshops in collaboration with World Wildlife Fund U.S. (WWF), the Los Angeles Zoo, and the American Zoo and Aquarium Association. To encourage teacher attendance by enabling them to attend during the work week, the Service paid the salaries of substitute teachers to fill in for attendees during the workshop.

19. Two workshops were held to:

20. – test the effectiveness of a wildlife trade education curriculum developed by World Wildlife Fund;
21. – familiarize teachers testing the curriculum with the concepts involved; and
22. – develop a core group of teachers to serve as advisors as the curriculum is refined and its effectiveness evaluated.

#### Traditional Medicine Community

23. The Fish and Wildlife Service is committed to the development of an educational program that

actively involves the traditional medicine community in strategies devised collaboratively by the community and the Service to conserve endangered flora and fauna. Many traditional medicine community members have felt excluded on issues directly related to them, and have expressed concern that the media and conservation organizations tend to report stories concerning the connection between traditional medicine practices and diminishing numbers of endangered plants and animals in the wild, without consulting the community or without fully understanding the traditional uses of many plants and animals. The Service has acknowledged that real change can only come from the community, and therefore is working closely to develop a community-focused, community-based program that actively incorporates the community needs into discussions on plant and animal conservation. It is hoped that a strong partnership with the community will fuel change at levels more fundamental than those that are available through standard interdiction activities.

24. To begin this process, the Service has provided community leaders with basic conservation information on CITES issues, using the plight of tigers and rhinos to illustrate the ways in which species survival can become jeopardized by unsustainable trade. Distinctions between Appendix I and Appendix II species also have been clarified. The goal has been to empower the community to identify and, through their practice, safeguard flora and fauna for which demand may be increasing, so as to help ensure that Appendix II species in trade and others than may be in heavy use but not yet listed do not follow the same process as tigers and rhinos.

25. Direct involvement with the community is beginning to create a well-grounded partnership in which genuine discussions are taking place and where varying points of view are acknowledged. Among community members, energetic discussions have begun, concerning the development of alternatives and substitutes for key ingredients in traditional formulas. A desire to develop principles for self-regulation has been expressed by community members for whom endangered species issues is just one of many pressing concerns involved with their daily medical practice. Endangered species issues are becoming a key point of discussion as the traditional medicine community considers the forces shaping and changing traditional healing practices.

26. To be fully successful, a project of this sort must be fully endorsed by the leadership of the traditional medicine community and carried out by its members, who understand better than anyone else how best to go about discussing and reaching consensus on such complex issues. Working from within the community, these leaders have the ability to reach the heart of their community, to stimulate respectful discussions, and to urge appropriate action. Community-based education promotes change that takes place slowly but that, significantly, is real change, not imposed from the top but incorporated into daily life by the people who live in the community. If such an approach can encourage the traditional medicine community to consider, discuss, and take action to reduce and ultimately eliminate consumption pressures on endangered species, then the community will be making an extraordinary contribution to the survival of endangered species in the wild, a contribution on a par

with those they already have made to the health and welfare of humanity.

27. Accomplishments to date include:
28. – meetings with the traditional medicine community in which their representatives were engaged in discussions on CITES and endangered species as these relate to relevant traditional medicine flora and fauna. The Service determined this was necessary to effectively determine common ground so that, as strategies are developed, they are built on areas of mutual interest and concern.
29. To accomplish this, the Service has begun the important process of listening to the community, as well as exchanging basic information on its own role and interest in traditional medicine, the impact of unsustainable consumption on wildlife, and the purpose of CITES. It has participated in discussions on the role of wildlife in traditional medicine practices, the feasibility of developing or promoting substitutes or alternatives, and impact of bans on the consumptive use of certain wildlife parts and products. Community representatives expressed particular interest in labelling and toxicity issues as these pertain to traditional medicine.
30. – presentations at national conferences of traditional medicine to advance the importance of partnership with the community and reach those in a position to take leadership roles on endangered species issues in the community.
31. The Service was invited to national conferences as a result of initial discussions with community members. Its goal was to begin to be seen as a presence at community functions—to be recognized as an agency of the federal government interested in and willing to listen to community issues. During these conferences, a variety of views were expressed, chief among them support for the federal program, and various questions asked about CITES, toxicity, labelling and endangered species.
32. – development and dissemination of fact sheets, species lists, and other information so as to develop foundation documents establishing the Service's intent to work as an equal partner with the community, providing basic data on endangered species, and determining conduits for distribution.
33. The Service created a fact sheet acknowledging the community's many contributions to human health so as to ensure the community's awareness of the Service's support and respect (see attached). Our intent is to engage the community as a fully involved partner, so that, working together, we are able to maximize our mutual contribution to biodiversity. On the one hand, traditional medicine has received global disapproval for its use of endangered species, while on the other, a huge portion of the world's population relies on traditional medicine for health. Yet traditional medicine has been criticized for its use of endangered species as if practitioners deliberately used these species in their formulas because they were endangered. Traditional medicine's roots in its respect for nature's abundance is a strong force within the practice, and clear conservation information goes a long way toward reconnecting practitio-

ners with the source of their formulas, or at least encouraging them to ask questions.

34. – discussions with leading representatives of the community to identify some immediate areas of community concern and possible approaches, as well as areas in which the Service may be able to support community action. The Service likewise recognized the need to create culturally appropriate materials for distribution to diverse populations, as well as to develop a mechanism allowing for an understanding of CITES issues within the community while providing for the regular flow and exchange of conservation, regulatory, and enforcement information on relevant species.
35. The practice of traditional medicine in the United States is multi-cultural, with different ethnic populations requiring information specific to their needs. As the Service distributed its CITES data, it determined that this material needed to be presented in a manner appropriate to community use. It is engaging community members to review materials and determine the most useful format to convey the data to the community.
36. – begin development of an outreach education component with law enforcement to be used in the community to build understanding of CITES regulations.
37. This portion of the Service's efforts is still under development. Discussions have been held with community leaders to determine culturally appropriate means to communicate information, and various information has been supplied to portions of the community. Initial discussions with members of the Korean, Vietnamese, Cambodian, and Chinese communities are underway. The Service's participation on the Asian Medicinal Task Force and its leadership role as part of that multi-agency group illustrate the expansion of its law enforcement commitment.
38. Discussions with the traditional medicine community have made clear the established links between traditional medicine as practised in the United States and its practice in other countries. Community members have extensive professional ties with colleagues in Asia, Europe, and Latin America. This makes it critical to co-ordinate and solidify traditional medicine activities with the community at the local, national and international levels.

#### International Activities

39. Since CoP9, the United States has provided a number of CITES training and enforcement workshops/ seminars with a very strong enforcement component, including aspects of interdiction as well as the identification of shipments containing rhinoceros horn, tiger bone, and bear gall bladder. These have taken place in: India, Nepal, Bangladesh, Indonesia, Philippines, Russia, Honduras, Taiwan, and China. In addition, the U.S. hosted and provided funding for an international enforcement training workshop in November 1995. Several of these workshops were in co-operation with the CITES Secretariat. The Service has received funding for a 1997 law enforcement undercover training workshop.

40. Although law enforcement, training and education are central to the Service's international activities, and although it has carried out and supported many international programs focusing on tigers, rhinos and other critical species, the Service wishes here to focus on the development of co-operative ties with the Ministry of Forestry in China, because of China's closeness to traditional medicine issues and the importance of creating a cohesive voice both for biodiversity and traditional medicine.

Report From China

41. Under the auspices of the U.S./China Nature Conservation Protocol, a four-person team serving as the U.S. Delegation to China met with representatives of the Ministry of Forestry. Representatives summarized China's progress regarding trade in parts and products of rhinos, tigers, and bears. China has a long history of rhinoceros horn consumption, though extensive research currently is being done on substitutes. The Ministry of Forestry indicated that no import permit has ever been issued for rhino horn coming into China, and that all rhino horn stocks were imported prior to China's accession to CITES in 1981. On May 30, 1993, China issued a circular banning all trade in rhinoceros horn and tiger bone. The circular also prohibited manufacture of medicines containing rhinoceros horn. In addition, all references to rhinoceros horn for traditional medicine usage were deleted from medical books.
42. The Ministry of Forestry involved the delegation in discussions concerning the historic use of traditional medicine in China, noting traditional medicine's more than 5,000 years of history versus the 300-year history of Western medicine in China. The Chinese practice of traditional medicine uses wild animals and plants in its formulas, though captive breeding has been used to supply species required for traditional medicine use for more than 1,000 years. In particular, deer have been farmed successfully for centuries, and musk deer breeding

is well established. There is also a long history of plant cultivation, with sixty percent of all plants used in traditional medicine being cultivated. China is actively working on the use of substitutes and synthetics for certain plants and animals: great progress had been made on substitutes for rhino horn, and artificially synthesized musk also has been successful. China is working to meet its internal demand for traditional medicine products, and bans the use of particular products if, in the case of endangered species, substitutes or alternatives cannot be found.

43. In addition, China has a new Detecting Center located at the College of Wildlife Resources at Northeast Forestry University in Harbin, China. The Center is dedicated to research in wildlife forensics, species identification, and CITES enforcement and implementation. It is a potential partner with the Service's own Forensics Laboratory.

Recommendations

44. The Service believes that it is vital to continue such discussions with China and other Asian governments so as to increase co-operation and understanding about the uses of plant and animal species in traditional medicine. The Service looks forward to continued and increased co-operation with China on wildlife law enforcement in general, and CITES enforcement and implementation in particular.
45. Bilateral and multilateral funding for projects identified by rhino and tiger range states as priorities for conservation, including anti-poaching, scientific research and community outreach.
46. Work in co-operation with the traditional medicine community locally, nationally and internationally to provide support for 1) increased understanding of the linkages between traditional medicine and endangered species issues, and 2) the authentic voice of the community as it takes positive action for the conservation of global biodiversity.