

TRAFFIC DISPATCHES

Number 16 March 2001

Industrial fisheries crisis in the western Bering Sea

by Nina Marshall, Assistant Director, TRAFFIC Europe

The Bering Sea is the greatest sea basin in the northern Pacific Ocean and it was also identified as one of WWF's Global 200 ecoregions, a science-based ranking of the Earth's most biologically outstanding habitats. The Bering Sea ecoregion is bounded by Russia on its western shores, the Bering Strait which leads northward into the Chukchi Sea, and Alaska and the Aleutian Islands to the east and south, respectively.

This large body of water is biologically one of the most productive seas in the world, and has a diverse and rich supply of fauna and flora, including considerable commercial biological resources such as fish, invertebrates and sea mammals. The Bering Sea is of paramount

Trawler
in the
mist,
Russian
waters
of the
Bering
Sea.



Alexey Vaisman / TRAFFIC Europe-Russia

importance to the USA and Russia as it accounts for a significant proportion of these nations' fishery landings.

Approximately 20% of Russia's marine landings come from the western Bering Sea. Exports of marine products caught in the western Bering Sea have risen in recent years; for the four-year period 1995 to 1998, exports of marine products from Kamchatka Customs totalled 374,000 tonnes, valued at over USD 437 million.

Lucrative fisheries
exploited by many

In recent years, fishing in the western Bering Sea has become fiercely competitive, with Russian, American, Japanese, Chinese and Korean fishing fleets, among others, scrambling to catch the Bering Sea's lucrative marine commodities.

Reports of undocumented, unregulated and illegal fishing are frequent.

Recent estimates of losses resulting from illegal fishing activity in Russian waters vary widely, but what is evident is the magnitude of illegal fisheries, which is estimated to be worth between one to five billion USD annually. These estimates point to the chaotic nature of fisheries in the region and the impossible challenge of managing marine resources when harvest levels are unknown and are very likely to be unsustainable.

Management and regulation in the Bering Sea ecosystem are essential, but often difficult when resource stewardship is shared between nations, and exploitation is undertaken by many. The situation is further complicated by poor socio-economic conditions in Russia, which have contributed to intensified fishing in the western Bering Sea. Political change has resulted in reduced regulation that in the current climate has stimulated unregulated and illegal fishing

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CITES Workshop on 11 Megabiodiversity Exporters: A personal perspective

by Crawford Allan, Global Enforcement Assistance Co-ordinator, TRAFFIC International

Q. What are the implementation needs of the top eleven CITES exporting states that are also among the most biodiverse in the world?

Q. How can the experiences of these Parties to CITES be shared, compared and learnt from?

Q. Will the knowledge and expertise from the CITES Secretariat, the Commission of the European Union and TRAFFIC help to facilitate dialogue, draw out common issues and assist in developing sound recommendations?

These were the critical questions that I asked myself as I jumped on the train to Brussels on 29 January 2001, to be an observer at a workshop facilitated by the CITES Secretariat and funded by the EU Commission. To be honest, from the outset I was not sure if the questions would be

answered but when I stepped back onto the train five days later I had time to reflect and realised that a major event had happened. I will now attempt to explain why.

The delegates were from South and Central America - Guyana, Suriname, Nicaragua (Colombia as observer), Africa - Benin, Guinea, Madagascar, United Republic of Tanzania (South Africa as a positive case study country) and Southeast Asia - Indonesia, Malaysia, Viet Nam. They had been invited to make presentations and prepare papers about the challenges they face in their countries in implementing the CITES treaty. The other participants would then make comments and suggestions and discuss this in the context of their own experience.

This part of the workshop took nearly twice as long as had been

allocated on the agenda. One would think it was a bad thing to over run so much but this was the exception to the rule. It may sound like a cliché but in fact it was a pleasure to witness a real coming together of different countries that shared common problems and learnt from each others ideas on how to solve them.

The dialogue flowed freely, interspersed with comments and direction from the convenors, including the Secretary General of the CITES Secretariat as Chair. We were all learning a great deal. It was a surprise that these countries were so

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TRAFFIC staff news

Welcome

Craig Kirkpatrick has started his work as the new Director of TRAFFIC East Asia in February 2001. Craig joins TRAFFIC with wide experience working in wildlife conservation in China. Most recently Craig has worked in The Nature Conservancy as Biodiversity Specialist for the Yunnan Great Rivers Project.

*

Teresa Mulliken is back in TRAFFIC International after her sabbatical year spent studying. As the Co-ordinator of Research and Policy, Teresa will be providing direction and guidance to TRAFFIC Network research and policy initiatives.

Goodbye

TRAFFIC's Programme Director, *Stephen Nash* will leave TRAFFIC International in April 2001 to take up a new challenge at CITES Secretariat in Switzerland as the Chief of the Capacity Building Unit.

Director *Tom De Meulenaer* is leaving TRAFFIC Europe in April 2001 to commence work as the Fauna Officer of the CITES Secretariat in Switzerland.

Jonathan Vea, Programme Officer left TRAFFIC Oceania in January 2001.

Administrative Officer *Mary Hansford* will leave TRAFFIC International in the end of March 2001.

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TRAFFIC is a joint programme of IUCN-The World Conservation Union and WWF*-World Wide Fund for Nature. It aims to help ensure that trade in wild plants and animals is not a threat to the conservation of nature.

The TRAFFIC Network works in co-operation with the Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

TRAFFIC Dispatches is published by TRAFFIC International to keep the Network's partners and supporters informed about our activities and accomplishments.

* WWF is known as World Wildlife Fund in Canada and the USA.



TRAFFIC examines musk deer farming in China

by Rob Parry-Jones, Senior Programme Officer, TRAFFIC East Asia

Musk deer (*Moschus* spp.) have been hunted for many centuries for musk - used predominantly in traditional forms of medicine, but also in the perfume industry.

Records of the use of musk in traditional Chinese medicine (TCM) date back to the Han Dynasty (200 BC - 200 AD). Musk has a wide range of uses, including stimulation of circulation of *qi* ('life force') and blood as well as being a catalyst for other medicinal materials.

Musk deer are native to Asia, and are distributed from the Arctic Circle to the Hindu Kush/Himalayan region of Afghanistan, Nepal, Pakistan and India in the south, and east to Viet Nam.

Despite national laws in nearly all range States protecting musk deer and international trade regulated by CITES, populations of musk deer continue to decline throughout their range. Illegal hunting and trade of musk for use in traditional medicines poses the biggest threat to musk deer, although habitat destruction is also serious concern.

China's populations of musk deer are listed as Class II protected species under China's Wild Animal Protection Law (1988), and hunting of musk deer in China has been banned since 1989. However, in reality enforcement remains problematic and population estimates for China indicate an alarming decline from over three million in the 1950s to between 200,000 and 300,000 in the 1990s.

China continues to export hundreds of thousands of medicinal preparations purporting to contain musk every year, although the majority of these most likely contain synthetic musk. However, some TCM companies continue to illegally obtain genuine musk for use in certain medicinal preparations.

Captive breeding of musk deer has been suggested by some as a means of meeting demand for musk whilst also alleviating pressure on wild musk

deer. TRAFFIC East Asia recently examined the captive breeding of musk deer in China to assess whether it was a viable conservation tool for wild populations of musk deer. This project was supported by WWF-UK.

Despite improved techniques, musk deer are extremely difficult to raise in captivity and only male musk deer produce musk. Demand in China alone is estimated to be annually in the region of 1000 kg of musk and to produce this amount, approximately 84,000 captive-bred male musk deer would be required.

Although operational since the late 1950s, China's current captive population is approximately 1,400 of which only about 450 are male musk deer, producing a total of about 6kg of musk per year. This clearly does not present a viable means of meeting China's demand for musk. However, with careful management, captive breeding operations could serve as a genetic 'safety' net for wild populations providing that illegal hunting is also brought under control.

Enforcement of China's impressive 'paper' regulations is clearly needed and could be facilitated through better coordination between musk deer breeders, wildlife management authorities and medicinal authorities.

Accurate labelling of medicines is also an urgent requirement, as it would enable consumers to make informed choices when purchasing medicines, as well as facilitating regulation of threatened species in trade.

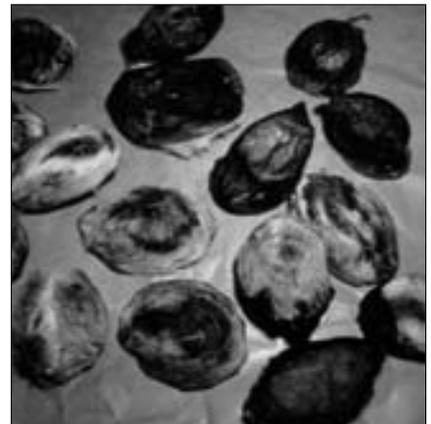
TRAFFIC East Asia's principal recommendation is the establishment of a cross-sectoral coordinating body on wildlife conservation and traditional health care to facilitate understanding and enforcement of the legislation and regulations protecting musk deer in China.

For more information, contact TRAFFIC East Asia. For contact details see page 16.

Photos: TRAFFIC East Asia



Captive breeding compound, Sichuan Institute of Musk Deer Breeding.



Legally acquired musk pods of a Hong Kong trader.



Musk deer in the Musk Deer Captive Breeding Research Group of East China Normal University, Shanghai Chongmingdao Musk Deer Farm.

TRAFFIC leads efforts to improve management of rhino horn stocks in Africa

by Simon Milledge, Senior Programme Officer, TRAFFIC East/Southern Africa

Today legal stocks of rhinoceros horn are found throughout the world. This is mainly accumulated through trade control and anti-poaching efforts carried out in range states, consumer markets and trade entrepôts. In some regions, the stocks are growing quickly, the greatest increase being in east and southern Africa. There is also evidence that some horn quietly, but illegally, filters from such stocks into the hands of blackmarket traders and markets for rhino horn. In the absence of transparent and accountable tracking systems, such instances are rarely discovered, much less deterred. To improve the current situation, TRAFFIC East/Southern Africa (TESA) has undertaken the first systematic effort to identify and track these stocks around the globe.



Simon Milledge, TRAFFIC East/Southern Africa

Northern white rhino
Ceratotherium simum cottoni,
Garamba National Park,
Democratic Republic of
Congo.

In 1998, TESA started to document worldwide legal stocks of rhinoceros horn and other products, as part of a suite of rhino conservation projects funded by WWF Netherlands. Run from the TESA office in Tanzania, the project also provides, where appropriate, technical advice on how marking, registration and tracking systems can be improved in compliance with CITES directives.

The eleventh meeting of the Conference of Parties to CITES last April revised the Resolution Conf. 9.14 (Rev.) “*Conservation of and trade in African and Asian rhinoceros*” which now requires the identification, marking, registering and reporting of horn stocks to the CITES Secretariat.

Further knowledge about rhino horn stocks can also assist the understanding of rhino horn trade dynamics, and could potentially play a useful role in helping to develop credible models of rhino horn consumption and legal production in the future.

Individual accumulation rates vary greatly in east and southern Africa

TESA’s *Rhino Horn and Product Database* currently stores stock information for both government and private sources in a total of 54

countries. One of the best data sets collected to date is for rhino range States in east and southern Africa where over 12,000 kg have been documented, of which almost 1,000 kg is privately-held. But these figures are expected to increase significantly once some outstanding stocks are added to the total. In this region, there is close correlation between government stocks and current rhino populations, with the largest stocks unsurprisingly occurring in rhino strongholds such as South Africa, Zimbabwe and Namibia.

Rhino horn stocks in east and southern Africa are accumulating at the fastest rate in the world. However, individual accumulation rates vary greatly, depending on a number of factors including recovery rates from natural deaths, poaching levels, illegal seizure rates, frequency of dehorning operations, stock security and whether destruction is practised or not.

For example, Botswana's rhino population has increased by 41% between 1993 and 2000 with horn stocks increasing at a rate of 38%, mostly collected from natural deaths and some seizures. On the other hand, Zimbabwe's horn stock, currently one of the largest in Africa, grew by the same rate between 1992 and 2000, although the wild population experienced overall decline during this period. The increase in Zimbabwe's stock was largely attributed to high rates of seizures and large-scale dehorning exercises in the early and mid-1990s followed by successively greater quantities of horns collected from natural deaths as the country's rhino populations recovered.

Different stock accumulation scenarios are found in South Africa (where large numbers of hunting trophies are exported), in United Republic of Tanzania (which traditionally served as a regional trade route and entrepôt), and in Zambia and Kenya (where all government-held rhino horn stocks were destroyed in the early 1990s). Developing this greater understanding of horn accumulation dynamics is helpful when trying to study and predict legal and illegal rhino horn trade dynamics.

More standard marking and registering procedures needed

Another issue which has become clear through the project is that

UK seizure of 127 rhino horns in 1996.



Crawford Allan, TRAFFIC International

procedures for marking and registering rhino horn vary enormously. These range from basic manual ledgers to sophisticated computerised tracking systems forming an auditable trail from the field to the main storage vault.

Clearly, the necessity for more advanced procedures increases with the volume of horn accumulating, but at the very simplest level a standardised system is required. The best systems feature standard weighing on approved scales, standard registers, marking systems, tags, serial numbers, invoices and issue vouchers. However, usage is far from universal in all countries or provinces.

Efficient tracking mechanisms are further necessary to enable checks to be made on who, when, where and how horn was collected and moved to the head office. This is essential to avoid loss or exchange of horns at any point in process, and to enable reconciliation of written records and physical checks. This project is providing recommendations and technical assistance on a country-by-country basis to improve marking and registration systems.

With growing numbers of rhinos in their hands, the private sector in South Africa remains one of the largest untracked sources of rhino horn. The lack of nationally-mandated horn registration procedures means that many horns remain unaccounted for, providing a potential route for

lucrative illegal trade.

TESA is advocating the need for a national legal mechanism that requires the full and timely registration of all private stocks as a means to improve accountability and transparency in that country. Stock monitoring is vital in all countries to track and secure such a valuable commodity against illegal market forces.

Towards closer collaboration with SADC

In addition to the ongoing collection of stock information from around the world, TESA recognises that it is vital that stock monitoring measures are improved before horn volumes get too large to handle. With present accumulation rates, this could happen in some countries within the next few years.

TESA's efforts this year will therefore be focussing on promoting specific improvements to marking and registration of rhino horn stocks in east and southern Africa.

This will be realised through collaboration with the Southern Africa Development Community (SADC) Rhino Programme. Not only are most of Africa's rhinos found in SADC countries, but SADC provides a strong framework for implementing the changes needed to improve management of rhino horn and product stocks.

South Pacific medicinal plants exposed to bio-prospecting

Traditional medicine often a preferred alternative with local communities

by James Compton, Senior Programme Officer, TRAFFIC Oceania



Kava *Piper methysticum* leaves



Kava *Piper methysticum* drink



Nonu (Indian Mulberry) *Morinda citrifolia* leaves



Nonu *Morinda citrifolia* fruit

Photos: James Compton / TRAFFIC Oceania

Medicinal plants and traditional medical systems throughout the South Pacific play an essential role in treating ailments at the local community level. Research coordinated by TRAFFIC Oceania, in conjunction with the WWF South Pacific Programme (WWF-SPP), found that even when Western medicine was available, local people continued to use traditional medicine as a supplementary treatment – and often as a preferred alternative.

Although there is little evidence of organised international trade in medicinal plants from the Oceania region, indigenous control of existing plant genetic resources remains under threat from unauthorised bio-prospecting.

The report, *An Overview of Conservation and Trade of Medicinal Plants in the South Pacific* draws together information from nine developing countries and territories in the region: Cook Islands, Fiji, Kiribati, New Caledonia, Papua New Guinea, Solomon Islands, (Western) Samoa, Tonga and Vanuatu. The study was supported by the Rufford Foundation.

All the countries covered by the study are signatories to the Convention on Biological Diversity (CBD), which enshrines equitable benefit sharing and protection of indigenous knowledge and genetic resources. Despite this, traditional medicinal systems in the region remain open to exploitation by bio-prospectors. Of the countries surveyed, only Samoa has national-level regulations to address these issues.

The complexity of this problem is highlighted by a recent case concerning the Samoan medicinal plant Mamala *Homolanthus acuminatus*, from which the United States National Cancer Institute isolated the drug Prostratin for potential use in combating HIV. The medicinal plant material was collected without prior agreement with the Samoan Government (although this was done in 1989, before the CBD came into force). Last year, with assistance from WWF-SPP, the country put in place bioprospecting regulations, which have since empowered Samoan government agencies in their active policing of “research activities” and collection of biological samples by overseas interests.

To redress the legislative shortcomings throughout the region, WWF-SPP has been working with lawyers from the London-based Foundation for International Environmental

Law and Development (FIELD), the South Pacific Regional Environment Program (SPREP) and national environment representatives. So far, this collective has assisted both the Cook Islands and Vanuatu to draft relevant guidelines. Fiji, while having drafted a Sustainable Development Bill that covers bio-prospecting concerns, has yet to ratify the bill in Parliament.

The report indicated that, despite countries in the South Pacific consisting primarily of island ecosystems, medicinal plants used in the region are not characterised by any high degree of endemism. Many of these plants are non-native species that have been introduced from elsewhere. While many national-level studies exist on the medicinal qualities of plants, information on the conservation status of plants in use by traditional medical practitioners is limited. Environmental statistics on the region indicate that a large number of general plant species are under threat from habitat degradation and loss – factors that adversely affect medicinal plant collection and use at the local level.

Based on a 1999 case study conducted in Fiji during this project, trade in medicinal plants occurs primarily from healer to patient without wholesale movement of component plants or selling through markets. Two plant species that are found in international trade, Kava *Piper methysticum* and Nonu (Indian Mulberry) *Morinda citrifolia* are grown from cultivated stock or, in the case of the latter, commonly found in secondary forests.

TRAFFIC Oceania will use the findings of this report to direct further regional work in this sector, including the provision of advice to Pacific Island countries on regulatory frameworks and precautionary measures.

For more information contact TRAFFIC Oceania Regional office. For contact details see page 16.

Programme directions:

TRAFFIC and ecoregion conservation

Distinct habitats and their characteristic wildlife populations, ecological dynamics and environmental conditions can be grouped into bio-geographic units termed 'ecoregions'. Addressing conservation issues at an ecoregional level makes good sense for biological reasons, where wild populations, key sites, migration corridors, ecological processes and so on are conserved as a whole, and across the artificial barriers of political boundaries. Focusing conservation efforts on outstanding ecoregions representative of all major habitat types is a strategy gaining widespread support. The TRAFFIC Network, in its ambitious new ten-year strategic plan, is working to support ecoregion conservation efforts and has selected this as one of its four main programme elements.

Ignoring national boundaries is not easy, but solving conservation problems and managing and conserving biodiversity at an ecoregional level is a strategy that is gaining in influence and practical application worldwide.

The challenges of addressing biodiversity conservation at this level are many, and actions require close co-operation and co-ordination at international and local levels, which can be difficult to achieve.

From TRAFFIC's point of view, working at this level links biodiversity conservation efforts with identifying and understanding threats to biodiversity, and working collaboratively towards multi-sector, long-term solutions that address human impacts, use, and sustainability.

Our main focus is researching and addressing wildlife trade that may threaten the integrity of priority ecoregions of high

biodiversity value or significance. This involves understanding wildlife trade processes acting on specific ecological landscapes, identifying the real threats and root causes to biodiversity loss; and promoting appropriate solutions to those who can make a difference.

We seek to encourage partnerships with governments, industry, conservation organisations and other stakeholders involved in ecoregion-based conservation efforts.

Our research provides baseline data on trade in wild resources/species in priority ecoregions, and this helps assess and interpret levels of threat caused by wildlife trade to biodiversity in these ecoregions.

Through our communications work we seek to increase awareness in government, industry and the general public concerning threats to biodiversity caused by wildlife trade. At the practical level, we are working to enhance the

implementation of regulatory and other measures used to reduce these threats.

Trade is a good example where threats to ecoregions are not necessarily coming from within the ecoregion itself. While local demand can have an impact on species populations and the environment, very often it is the demand from other places that is the real driving force. Such demand may be driven by urban markets in the same country or consumers in countries on the other side of the globe. Examples of this include demand for fisheries products, tropical timber, reptile skins, medicinal and decorative plants, and live animals for pets.

As a global Network, TRAFFIC is able to apply its expertise at all levels of the trade, involving both producers and consumers, wherever they may be – providing a unique perspective on what is today an effective conservation approach.



Tiger Land – the Russian Far East

The forests of the eastern part of Russia are among the largest and best preserved in the northern hemisphere, and its coastal and freshwater ecosystems may well be the richest and most productive in the world. The southern portion, where sub-tropical Asian wilderness meets the frozen forests of Siberia, is known as the Russian Far East (RFE). It is a land of salmon streams, pristine seashores, natural hot springs, and vast stretches of untouched temperate forest. The RFE is home to animals such as Amur Tigers and Bears, and plants such as Siberian cedar and Asian ginseng.

The geo-political position of the RFE – bordering China, Japan, North Korea and South Korea – is as unique as its biodiversity. The opening up of the former USSR in the early 90s resulted in an unprecedented rush for the natural resources of the RFE, including its forests, fisheries, minerals, oil and gas. Poaching of rare species for Asian wildlife medicinal and food markets, widespread hunting for trophies and subsistence, over-fishing, and ruthless exploitation of the forestry resources intensified.

To tackle this crisis, effective measures have to be promoted and implemented that can lead to the conservation and sustainable use of wildlife in the RFE, and this is what TRAFFIC Europe (TEUR) aims at and contributes to. The Russian and indigenous peoples inhabiting Tiger Land have an opportunity to create an environmentally sustainable economy that can protect ecologically important lands, restore damaged landscapes, and use natural resources within ecological limits for the benefit of local communities. But this will take time, political and public support, commitment, and collaboration.

TEUR has been active in this ecoregion since 1997, investigating the trade in tiger products, musk, and ginseng among others. TEUR's aim for future work is to pursue areas where it has been

most effective – assisting with CITES implementation, maintaining dialogue with enforcement officers and management authorities, and facilitating co-operation with colleagues in cross-border zones and neighbouring countries of the RFE.

Furthermore, TEUR will produce an updated overview of wildlife trade in the RFE mapping out recent developments in the ecoregion and obtaining good base line



R. Malsch/WWF-UK

Tiger Land - The Russian Far East

information for future conservation efforts. Other activities include surveying the region's fur trade, helping to improve regional Musk deer management, and articulating and implementing workable solutions for conserving rare plant resources that are harvested in the RFE.

Linking unique Woodlands with infrastructure development - the Miombo Ecoregion

One of TRAFFIC East/Southern Africa's (TESA) priority ecoregions is the Zambezian Miombo/Mopane/Savanna Woodlands, otherwise known as the Miombo ecoregion. Covering an estimated one million square miles encompassing large parts of twelve nations (Angola, Botswana, Burundi, Democratic Republic of Congo, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe), these dry Caesalpinoid woodland systems harbour a unique flora and fauna, with more than half of its 8,500 plant species found nowhere else on earth. Large-scale conversion of the Miombo ecoregion to agricultural land is occurring, and large numbers of people in the region depend on natural resources for their livelihoods.

Isolated from the major consuming and export market in Dar es Salaam due to poor infrastructure, southern Tanzania, particularly the Kilwa and Lindi districts, harbours one of the largest natural stands of Miombo woodlands in Africa. However, this may all be about to change with the advent of a new bridge across the Rufiji River, which will open up an unimpeded coastal transport route. Previously, the seasonal flooding of the Rufiji almost completely prevented overland transport of timber and other cargo across its banks. Even in the dry season, very little timber got ferried across the river northwards, and the long, circuitous roads charting inland routes to Dar added too much additional cost. Now, the completion of the bridge, scheduled for June 2001, will create a continual link between Dar es Salaam and southern Tanzania.

Once the bridge is open for business, broader plans for road, power and communication developments will necessarily follow. From a conservation perspective, there is little doubt that the exploitation of natural resources, particularly timber, will increase enormously as a result. Altering the face of southern Tanzania in this manner will produce impacts on an ecoregional scale, and ultimately have spin-off repercussions in neighbouring parts of Mozambique and Malawi.

While there may be no stopping these events in their own right, the challenge is to seize the moment and commence a programme to measure the impact of development on biodiversity and natural resource use. With 'fast track' funding from WWF's Miombo ecoregion programme, TRAFFIC researchers are now undertaking a five-month reconnaissance to produce vital baseline data on the scale of current timber and other resource exploitation in southern Tanzania before the Rufiji bridge is completed.

This effort constitutes the initial phase of a larger effort to document timber exploitation in the region over the next few years. Through a WWF-UK GAA funding approach, TESA hopes to commence an ongoing, long-term monitoring programme once the bridge becomes operational. Understanding the situation on the ground at this critical juncture will allow for future assessments that measure the impact of increased accessibility to Miombo woodlands in a general climate of high market demand and inefficient control mechanisms. In this way, TESA hopes to make a solid contribution to WWF's Miombo ecoregion programme and help to mitigate unsustainable exploitative activities on the natural resource base using credible scientific data from its monitoring programme.

A new bridge being built across Rufiji River in Miombo Woodlands.



Sam Kasulwa /
WWF Tanzania Programme Office

Southeast Asia's 'Mother River' – the Mekong

The Mekong River catchment area covers more than 800,000 square kilometres and the river itself is more than 4,200 kilometres long, making it the world's 12th longest. Emanating from headwaters on the Tibetan Plateau, it winds southward through Yunnan China into Myanmar, Laos, Thailand and Cambodia, being fed by thousands of major and minor tributaries along the way before crossing Vietnam and emptying into the South China Sea. It also traverses some of Earth's most spectacular biological and cultural landscapes.

Although the Mekong region continues to maintain a high degree of biodiversity, habitat degradation during the past 20 years has threatened the survival of many species and even the extinction of some. These impacts continue on a wide scale, both geographically and in terms of the number of species affected. Construction of hydroelectric power dams and a range of other developments have had a significant negative impact on aquatic and wetlands ecosystems, as well as the biodiversity of the region. Critical habitats have begun to disappear, and a much larger area is being degraded at a rapid pace, which is alarming in terms of its impact on rare and endangered species. Many species, a number of them endemic, are on the brink of extinction or have become extinct already, e.g. Eld's deer (*Cervus eldi*). Hundreds of others remain threatened.

TRAFFIC Southeast Asia (TSEA) in collaboration with other organisations is developing activities that will contribute to efforts aimed at mitigating the impacts of development and ensuring the conservation of biodiversity in the Mekong region. TSEA is developing a project that will increase knowledge and awareness about wildlife trade impacts

and threats in the region. It will also assist in bringing together governments, government agencies, NGOs, and local communities of the lower Mekong countries to improve dialogue with one another. This is especially important since both local and national developments have an impact on the Mekong region beyond national boundaries. Since wildlife trade crosses borders, international cooperation



TRAFFIC Southeast Asia

Mother River - the Mekong

and increased protection for each nation's wildlife resources is needed to better pursue conservation efforts and prevent illegal trade that threatens the richness of this diverse ecoregion.

Living desert – the Chihuahuan Desert Ecoregion

The Chihuahuan Desert is perhaps the most biologically diverse desert ecosystem in the world. It is particularly known for its botanical bounty as it is home to approximately 23 percent of the planet's known cacti species, many of which are found nowhere else in the wild. Cacti unique to this ecoregion display remarkable morphology and are known for their miniature size and low-growing characteristics, making them irresistible to some collectors.

Thousands of reptiles, primarily lizards and snakes, many of which are endemic, are also collected from the Chihuahuan Desert ecoregion each year to supply the enormous demand for these species.

With support from WWF US, TRAFFIC North America (TNAM) has identified both cacti and reptiles as particularly in need of a study to quantify their exploitation and trade. The threat posed by such exploitation can then be assessed and necessary steps identified to ensure the long-term sustainability of these valuable resources.

Cacti

All cacti are regulated by CITES, with some taxa prohibited from trade. Mexico, where 70 percent of the 800 to 1500 known cacti species occur naturally, prohibits the exportation of wild live cacti and their seeds. The country has placed additional strict measures on collecting, possessing and commercializing endangered, endemic and unique fauna and flora, including cacti.

Despite Mexico's ban, the country has been the target of foreign collectors searching for rare and new species of cacti. Newly discovered and endangered Mexican cacti have appeared in European mail-order catalogues. An unfortunate side effect of overzealous collection of cacti is the decline in wild populations of some taxa. IUCN considers 217 cactus species endangered in Mexico, owing largely to continued looting of rare cacti for sale in local, domestic and foreign markets.

TNA is conducting an initial review of the collection, commercialization and conservation of cacti in the Chihuahuan Desert ecoregion. This project will provide conservationists with the information needed to undertake further work on the extent and biological impacts of trade on species, their wild populations and habitats in this region.

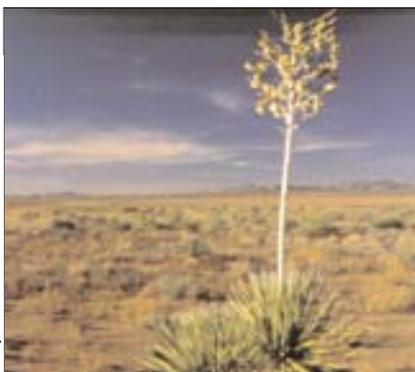
Reptiles

Though there are many factors affecting reptile populations in the Chihuahuan Desert, such as habitat destruction, harvest for trade is seen as one of the primary threats. Among the most sought after taxa are Gila Monsters and Beaded Lizards, the world's only two venomous lizards, which are listed on CITES Appendix II and recognized as Vulnerable by the IUCN. Other taxa frequently harvested for the trade include Horned Lizards, Collared lizards, Rosy Boas, Kingsnakes and Rattlesnakes.

Despite a large and growing demand for reptiles from the Chihuahuan Desert, there is little regulation of harvest and trade within this region in both the United States and Mexico, with little focus on the protection of these species by wildlife law enforcement agencies.

The project undertaken by TNAM will provide well-documented, comprehensive data and information on the status of these reptile species and the impacts of harvest and trade on the long-term sustainability of current populations. Our results will allow conservationists and state and federal governments to be proactive in their efforts to further protect these species.

Living desert - the Chihuahuan



Gerry Ellis / WWF-US

TRAFFIC's ecoregional world

Ecoregions linked to current or planned projects of the TRAFFIC Network :

- T1. Andaman Islands and Sea – TRAFFIC India
- T2. Alta Sayan Region – TRAFFIC Europe
- T3. Bering Sea – TRAFFIC Europe
- T4. Central Andean Yungas – TRAFFIC South America
- T5. Chihuahuan Desert – TRAFFIC North America
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All material published in "TRAFFIC and ecoregions" special section originates from staff of the respective TRAFFIC regional programmes. For further information regarding ongoing ecoregional work and future plans, please contact the respective regional office directly. For contact details, see latest copy of Dispatches, our website www.traffic.org or contact TRAFFIC International, 219c Huntingdon Road, Cambridge CB3 0DL, tel. +44 (0)1223 277427, fax +44 (0)1223 277237, email: traffic@trafficint.org.

TRAFFIC is a joint programme of IUCN–The World Conservation Union and WWF*–World Wide Fund for Nature.

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* WWF is known as World Wildlife Fund in Canada and the USA.



Alexey Vaisman/
TRAFFIC Europe-Russia

Biologically one of the most productive seas in the world - the Bering Sea ecoregion

TRAFFIC will be publishing a report *Trawling in the Mist: Industrial Fisheries in the Western Bering Sea* by Alexey Vaisman of TRAFFIC Europe-Russia, as part of TRAFFIC's *Species in Danger* (SID) series by mid-2001. It is hoped that the information contained in this report will contribute to the overall body of knowledge pertaining to Bering Sea fisheries, and, most importantly, will assist fisheries managers to achieve the goal of sustainable utilisation of marine resources in this vital ecoregion.

The Bering Sea is the greatest sea basin in the northern Pacific Ocean and identified among the 61 marine ecoregions included in WWF's Global 200 ecoregions. This large body of water is biologically one of the most productive seas in the world, and has a diverse and rich supply of fauna and flora, including considerable commercial biological resources such as fish, invertebrates and sea mammals.

Recent estimates of losses resulting from illegal fishing activity in Russia all point to the chaotic nature of fisheries in the region and the impossible challenge of managing marine resources when off-take levels are unknown and are very likely to be unsustainable.

With support from WWF-US TRAFFIC conducted a six-month review in 1999/2000 of industrial fisheries in the region, with a focus on activities off the Kamchatka peninsula. The project revealed that Kamchatka's fishing sector is in a crisis situation characterised by a sharp drop in production potential, and a deteriorating financial return. This situation has encouraged the illegal harvesting of marine biological resources.

Based on the findings of this study, strategies and recommendations to address unsustainable and illegal harvest and trade in marine resources were developed.

For more information on the study see cover story (Dispatches #16). For future updates on the report, see our website www.traffic.org or contact your nearest TRAFFIC office.

Medicinal Plant News

BMZ-funded workshop held in Hong Kong

A one-day stakeholder workshop entitled *Medicinal Plant Trade and Sustainable Use* was held in November 2000 to discuss the role of Hong Kong in the medicinal plant trade. The event was organised by TRAFFIC East Asia under the auspices of a project supported by Germany's Federal Ministry for Economic Co-operation and Development (BMZ).

Participants included members of the local trader associations as well as representatives from the Hong Kong CITES Management Authority, the Department of Health, and Hong Kong Chinese University's School of Chinese Medicine.

The final report, *The Role of Hong Kong in the Regional Medicinal Plant Trade in East Asia* (in Chinese) will be made available to all participants and other identified stakeholders in the region.

The purpose of the workshop was to obtain information from the traders to complement documented trade and customs data collected and analysed by TRAFFIC East Asia. The workshop also aimed to involve stakeholders in the research and to alert them to possible future regulatory developments. The results of the process are, for TRAFFIC East Asia, more accurate information on the trade and, for other stakeholders, increased understanding of the relationship between conservation, CITES, and trade in medicinal plants.

-- Samuel Lee, Programme Officer,
TRAFFIC East Asia

Proceedings of EXPO 2000 Symposium now available

The proceedings of the symposium *Medicinal Utilisation of Wild Species* that was convened by TRAFFIC Europe-Germany and WWF Germany in October 2000 are now available. For full copies and further information contact *Susanne Honnef* at TRAFFIC Europe-Germany.

Medicinal Plant Action Plan underway in Colombia

The outputs of a workshop *Sustainable Use of and Trade in Medicinal Plants in Colombia* co-organised by TRAFFIC South America, are now to be used as a basis for establishing an Action Plan to regulate the medicinal plant trade in Colombia.

The proceedings of the workshop released last month reveal increasing consumption of plants of Colombian origin, in an environment where the official trade regulation levels are clearly low.

For more information, contact TRAFFIC South America office.

Cultivation initiative becomes a success story in India

A small function was organised at the Village Soda-Raipur Block in a remote area of Dehradun district on 25 January 2001, when farmers who had participated in TRAFFIC-India's pilot project of medicinal plant cultivation in their marginal lands, were remunerated for their crops.

The farmers had taken up 13 medicinal plant species for cultivation, out of which a crop of Konch (*Mucuna pruriens*) was harvested and sold to the traders under a 'buy back' arrangement.

The efforts of TRAFFIC-India and WWF-India in initiating the project were lauded and support for other similar initiatives was highlighted by the Chief Secretary of Uttaranchal, *Mr. Ajay Vikram Singh*.

Mr. Toliya, the Principal Secretary, Forests, also welcomed the initiative of TRAFFIC-India and Vaidya Chandra Prakash Cancer Research Foundation is taking up this work in the interior villages.

Dr. S.K. Mukherjee, Director, Wildlife Institute of India offered to host a stakeholders meeting on medicinal plants conservation in Uttaranchal in order to maintain the momentum built up by this pilot project.

-- Rahul Dutta, Information Officer,
TRAFFIC India

Commonwealth regional workshop in South Africa

A paper *Threatened medicinal plants in East and Southern Africa* was presented by *Nina Marshall*, Assistant Director of TRAFFIC Europe in a workshop organised by *The Export and Industrial Development Division (EIDD) of the Commonwealth Secretariat* on medicinal herbs and their extracts, held last December in Cape Town.

For more information contact TRAFFIC Europe or TRAFFIC East/Southern Africa-South Africa office.



Rahul Dutta / TRAFFIC India

Farmers with their konch crop at the 'buy back' function in Dehradun.

Recent publications

Regulation of Collection, Transit and Trade of Medicinal Plants and other Non Timber Forest Products in India. 529pp. November 2000. TRAFFIC/WWF India.

CITES Listed Medicinal Plants of India. An Identification Manual. 85pp. November 2000. TRAFFIC/WWF India.

Cultivation of Medicinal Plants of India. A Reference Book. 161pp. November 2000. TRAFFIC/WWF India.

All three reports were released at India's fifth and final stakeholder meeting of the medicinal plant project funded by BMZ.

European Eel: Decline of a highly migratory fish

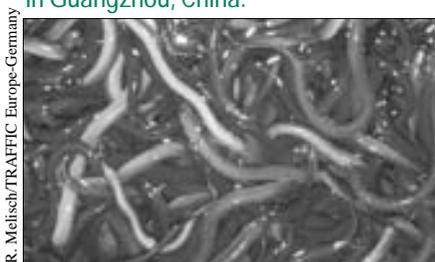
by Stéphane Ringuet, Programme Officer, TRAFFIC Europe-France and
Caroline Raymakers, Senior Research Officer, TRAFFIC Europe

Populations of European Eel *Anguilla anguilla* fisheries have dropped drastically in the past ten years. According to United Nations Food and Agriculture Organisation (FAO) data, the annual catch of the European Eel decreased by over 40%, from 1988 to 1998 with only 7.546 tonnes of eels harvested in 1998. The decline of this unique species that reproduces in the Sargasso Sea and colonises fresh, brackish and coastal waters throughout Europe as well as North and West Africa, is especially worrying since eels are important to many aquatic systems. They are particularly vulnerable due to their long and complex biological cycle, about which much is still unknown. In addition, as many as 25,000 people in rural Asia and Europe depend on the species for their livelihoods.

In an effort to better understand this relatively recent decline, TRAFFIC Europe-France has in the past few months compiled information on European Eel fisheries, trade and conservation measures in France and Europe as well as at the international level. The study also highlights the relationship between European Eel management and the fisheries of other eel species.

It has been suggested that changes in ocean currents might be affecting transatlantic migration of leptocephali (eel larvae) which then contributes to the decline in wild populations. Loss of available river habitats, land-based pollution, as well as alien parasitism, all advance the decline of the species. Also, dams that limit the migration of eels (in “silver eel” stage) back to the sea, and possibly the subsequent reproduction and survival of early larvae together with over-fishing at local rivers and estuaries are thought to contribute to the decline.

Eels for sale on a food market
in Guangzhou, China.



R. Meisch/TRAFFIC Europe-Germany

However, the study found that trade can also play a major role in the future of eel populations. Towards the end of the 1990s, Japanese Eel populations collapsed as a result to the growing demand of the species in the Japanese food market. This contributed greatly to demand of European glass eel (one of the early stages of development of eels) in Asia, encouraging over-fishing and poaching in Europe, with prices per kilogram suddenly surging from USD88 to USD440. In France, which was the first country in Europe to export live glass eels, as much as 80% of commercial glass eels came from illegal fishing in mid-1990s.

During the same time span (1988-98), the world’s aquaculture production of eels doubled from 98,000t to 217,000t, of which 95% was produced in Asian farms. As Europe has increasingly supplied the Asian eel farms with necessary glass eels, the study confirmed that Asia has gradually become more dependent on wild-caught eels of Europe. Eels are mostly caught young in Western Europe and then exported to Asian eel farms in China, South Korea and Japan and then sold and consumed mainly in Japan.

In 1997, for example France exported more than 266t of European Eels to destinations outside EU (amounting to 55% of all EU eel

exports outside Europe that year). With regard to the number of fish caught, this represents a vast amount of eels as 1 tonne of European glass eels can represent as many as 2.5 million glass eels caught in the wild. Eels from Western Europe are also used to restock both Central and Northern European rivers and farming facilities.

This ongoing study is the first attempt to compile information on European eels, such as current management goals of European eel producers as well as international trade and control measures. Recently, the commercial aspects of eel fisheries have also been highlighted in discussions between the FAO Working Group on European Eel of the European Inland Fisheries Advisory Committee (EIFAC) and the International Council for the Exploration of the Sea (ICES) and it is anticipated that further discussions about these issues will follow.

The next step of the TRAFFIC study is to clarify the full impact European eels have on the international eel trade and also to establish an action plan that would hopefully secure the future of this unique species.

This work is to be supported under the TRAFFIC fisheries programme supported by David and Lucile Packard Foundation.

CITES Significant Trade Review process on sturgeon and paddlefish underway

by Caroline Raymakers, Senior Research Officer, TRAFFIC Europe

The entire Order Acipenseriformes, 27 species of sturgeon and paddlefish, has been included in the CITES Appendices since June 1997. The vulnerability of these fish lies essentially in their late maturity, sometimes 25 years, and in the fact that their survival and reproduction depends on a wide range of habitats. They spend the longest part of their lives in coastal brackish and marine waters where they feed and migrate in large rivers to reach their spawning grounds.

In April 2000, at the 11th meeting of the CITES Conference of the Parties (COP 11), 25 species of Acipenseriformes listed in Appendix II were included in the Significant Trade Review. This decision was official recognition of the on-going and increasing problems facing sturgeon and paddlefish fisheries around the world. Experts believe that annual caviar export quotas set by the range States are not based on sound and updated biological and market data.

TRAFFIC received a grant from the CITES Secretariat to undertake the Significant Trade Review of 10 species, 9 sturgeon and one paddlefish, that are most targeted by commercial fisheries and international trade. The Review was based on an assessment of the implementation of CITES listing of Acipenseriformes in 1998 and was carried-out in consultation with 17 countries, including two that are not Parties to CITES. Additionally, the IUCN Species Survival Commission provided input from the experts of its Sturgeon Specialist Group.

In December 2000, at the 16th meeting of CITES Animals Committee, the members of the Committee proposed drastic action that was in line with the recommendations prepared by TRAFFIC: Six species were classified as category 1 species; species for which the provisions of CITES are not

implemented properly by range States (e.g. Caspian Sea, Danube River and Amur River basins) and international trade may therefore be detrimental to the survival of wild populations. The four remaining species were classified to category 2; species for which not enough information had been provided by range States to conclude if the Convention is implemented in a way that ensures that international trade is not detrimental to the species.

In February 2001, a list of detailed recommendations and questions about fisheries management and trade control measures tailored to the country's situation was sent by CITES Secretariat to each Party. For most range States, the major concern is the uncertain basis for establishment of the annual catch and export quotas of sturgeon and sturgeon products. The countries are expected to answer before the end of May 2001, or a maximum 90 days after the recommendations were received.

If Parties do not react, or if their response is considered unsatisfactory by the CITES Secretariat, the CITES Standing Committee at its meeting in June 2001 has authority to recommend that CITES Parties do not accept any shipment of particular species of sturgeon or paddlefish from countries of concern. In short, if range States do not take action to improve their sturgeon fisheries management and trade controls, they may face a CITES prohibition on exports of products and specimens of these species before the end of August 2001.



Caroline Raymakers / TRAFFIC Europe

Caviar Labelling

Resolution Conf. 11.13 *Universal labelling system for the identification of caviar*, was adopted at COP 11 and a working group was formed to look and clarify various concerns related to the resolution. The report submitted by the working group to the members of the Animals Committee in December highlighted among others, that the intent of the Resolution is to apply only to commercial shipments and not to personal effects.

At present there is no universal labelling system for identification of caviar to indicate if products from wild and captive-bred sources have been legally obtained and traded. The outcome of the Animals Committee meeting draws clear guidelines for countries and the private sector to implement and enforce efficient labelling of caviar for better trade controls. This will greatly assist efforts to ensure that consumers are not buying caviar outside the legal trade channels.

... continued from page 1

activities, both of which undermine current efforts aimed at achieving sustainable fisheries harvest and trade.

TRAFFIC study to better understand the impact of exploitation

In an effort to better understand the impact of current exploitation of marine resources in the western Bering Sea, TRAFFIC conducted a six-month review of industrial fisheries in the region, with a focus on activities off the Kamchatka peninsula. The research was supported by funding from the WWF-US. Based on the findings of this study, strategies and recommendations to address unsustainable and illegal harvest and trade in marine resources were also developed.

In 1999/2000, TRAFFIC collected harvest and trade statistics on key marine species caught in the western Bering Sea, and specifically looked at 23 species in nine resource groups: pollack, cod, herring, rockfish, halibut, flounder, crab, shrimp and squid.

Information was collected on biological characteristics of the species, stocks, quotas and harvest levels, fishing gears, trade, and trends. Agencies and individuals involved in stock assessment, quota setting,

monitoring and regulation were interviewed during this project, in particular to gain an understanding of the illegal activities occurring in the fisheries sector in the western Bering Sea.

Lack of management encouraging illegal harvesting and other activities

The project revealed that Kamchatka's fishing sector, as in the rest of Russia, is in a crisis situation characterised by a sharp drop in production potential, and a deteriorating financial status. This situation has encouraged the illegal harvesting of marine biological resources.

The existence of illicit activities, including catching, processing and storage of fish in excess of quotas allocated per species, is significant at all levels and scales - from sailors on small isolated fishing vessels to organised fleets of large industrial fishing boats.

The total number of infractions detected by the Kamchatka Basin Regional Fisheries Inspectorate from 1993 to 1998 was 191 (on average 32 per year), but in 1999 when control patrols were intensified, the figure rose to 209, with 152 of these infractions committed by Russian vessels.

The most widespread violations include distortion of data by fishermen on the volume and size of fish caught as well as on the species composition of the catch. Other violations include distortion of data by processors on the volume and quality of fisheries products that are processed on board, fishing in prohibited areas, and selling unreported catch without paying customs duties, either at sea or in foreign markets.

Towards sustainable utilisation

This project is nearing completion, and a report containing its results, *Trawling in the Mist: Industrial Fisheries in the Western Bering Sea* by Alexey Vaisman of TRAFFIC Europe-Russia, will be published in TRAFFIC's *Species in Danger* series by mid-2001. Publication costs are to be met from TRAFFIC's fisheries programme supported by the David and Lucile Packard Foundation.

It is hoped that the information contained in this report will contribute to the knowledge pertaining to Bering Sea fisheries, and, most importantly, will assist fisheries managers to achieve the goal of sustainable utilisation of marine resources in this vital ecoregion.

For future updates on the report, see our website www.traffic.org or contact your nearest TRAFFIC office.

Unloading a catch of Alaska pollack on the deck of a Russian fishery vessel.



Alexey Vaisman / TRAFFIC Europe-Russia

Recent reports in the *Species in Danger* series

Far from A Cure: The Tiger Trade Revisited. Kirstin Nowell.
March 2000. 100pp.

*

Slipping the net: Spain's compliance with ICCAT recommendations for Swordfish and Bluefin Tuna. Caroline Raymakers, Jacqui Lynham.
November 1999. 58pp.

*

Searching for a Cure: Conservation of medicinal wildlife resources in East and Southern Africa. Nina T. Marshall. September 1998. 112pp.

... continued from page 2

forthright in explaining their difficulties and this was the key to the success of the workshop.

South Africa explained how it had dealt with the problems of large-scale exports from a megabiodiverse nation and the systems they had developed that had worked well for them. My TRAFFIC colleagues from Tanzania and Brussels joined me to observe the workshop and share our experiences and ideas on good CITES implementation and the common issues that these countries shared in

meeting their CITES obligations. The EU Commission provided a presentation on how the EU as a major 'customer' for wildlife from these countries had imposed stricter domestic measures and how and why these have applied. This information was vital to help exporting nations understand the perspective of consumer states.

From all of these discussions we tabulated the common themes and associated issues and used these as the basis for drawing up recommendations for change and a series of action

points. Time was running out but all of the discussions were covered in the section on solutions. The Secretariat is now working on producing a report of the meeting with an emphasis on these solutions.

I cannot say what will be in the report but I doubt the words will be able to impart the feeling of value and excitement about what the future could bring, amongst people who clearly did care about their jobs and about what CITES means and can potentially achieve. Week-long discussions about how to implement an international treaty in developing countries may not sound too enthralling. However, I will always remember that the debate was mostly lively, sometimes humorous but always engrossing. And it had a tone of urgency and importance for the Parties that were brought from the South to the North, to meet each other.



Crawford Allan / TRAFFIC International

The Secretary General of the CITES Secretariat *Willem Wijnstekers* (second from left) chaired the five-day workshop.

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