

OurPlanet

United Nations Environment Programme

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Environmental Crime

Tackling the Greatest Threats to our Planet



Joko Widodo
Strengthening
environmental
justice

José Sarney Filho
Cutting down
deforestation

Vidar Helgesen
A formidable
effort is needed

Zhang Jianlong
Taking practical
action

**Antonio Herman
Benjamin**
Matters of
judgement

Roraima A. Andriani
Serious, and growing

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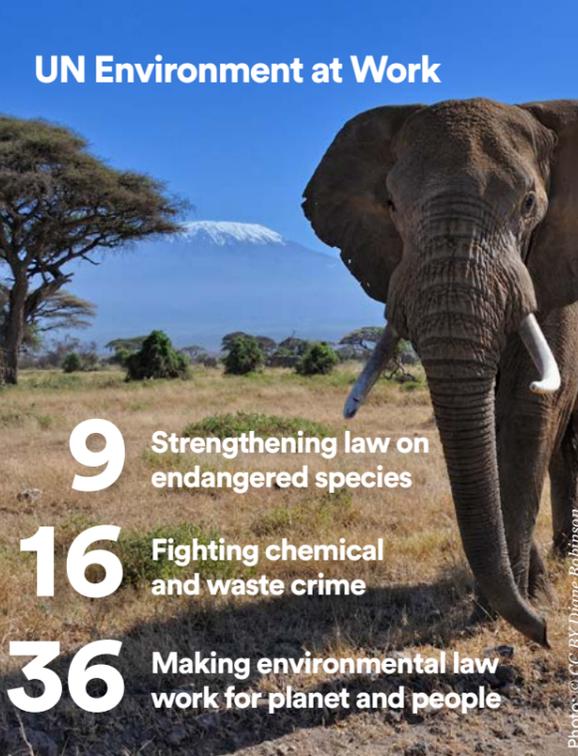
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Photo: © CC BY Diane Robinson

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Reflections



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The people most affected by environmental crime are often the most vulnerable

Environmental crime robs developing countries of the resources – and the tax streams from more regulated trade – that they need to build their economies and societies. That hinders their ability to participate in tackling broader global issues, from international security to climate change.

And local communities and governments in these countries often lack the capacity to withstand the well-organized criminal elements behind this exploitation.

Awareness is part of the solution.

We have made strides in awareness of wildlife crime, including the smuggling of live animals for the pet trade as well body parts for food and “medicinal” use. This is only good news. Recently, the price of ivory took a nosedive, which can be attributed at least partly to sustained campaigns to stop the trade.

We must extend this awareness to the less-appreciated yet more common elements of

environmental crime. Fundamentally, though, the strongest counter to environmental crime will be good laws well enforced.

And it means squaring up to powerful and sophisticated criminal networks. We need international cooperation to do so. These groups operate nimbly across borders. They are often armed and prepared to use force to secure their lucrative profits. They threaten and bribe politicians and law enforcers. And they use lawyers and accountants to hide and protect their fortunes.

Lawmakers are waking up to the reality of these crimes, and are stepping up their efforts. China, importantly, has announced that it will ban the ivory trade by the end of this year. International cooperation to create and enforce legal frameworks is intensifying. Authorities are trying to improve how they gather and share intelligence and coordinate against these criminals.

UN Environment is helping governments translate their treaty obligations into domestic laws and regulations that fight environmental crime, and we are helping develop the capacity to enforce them. International agreements that we host, such as the Convention on the International Trade in Endangered Species of Flora and Fauna and the Convention on Biological Diversity, weave a protective legal fabric around the biodiversity that is vital for ecosystem health.

The UN Security Council has also recognized the serious threat to peace and security posed by environmental crime. UN reports have pointed to armed groups and potentially even terrorists sustaining their finances through this rising criminal industry.

If we are serious about preserving biodiversity and critical ecosystems, ending hunger and poverty, and fostering peace and justice, we must get even more serious about fighting environmental crime.

With the right laws, strong enforcement, and by raising awareness, we will get there.

But we will only do it by working together. Environmental crime affects us all. We all have a role to play in fighting it. ▲



Erik Solheim

United Nations Under-Secretary-General and UN Environment Executive Director

Just after World Wildlife Day this year, armed poachers broke into a French zoo undetected by staff and security, shot a white rhinoceros and stole the murdered animal’s precious horn.

This unprecedented incident was yet another reminder to the world of the far-reaching impact of environmental crime.

Yet the threat posed to human health and security that environmental crime extends far beyond murdered wildlife. This form of crime is a menace that has spread across the globe, and demands an urgent and sustained international response. From illegal logging and fishing that decimate forest, stream and sea, to the smuggling of banned chemicals and the dumping of toxic waste, these threats have reached a frightening scale.

Last year, an assessment by UN Environment and INTERPOL found that environmental crime had become the fourth-largest crime sector. We found that natural resources worth as much as \$258 billion are being stolen annually.

The human cost is also high. People most affected by environmental crime are often the most vulnerable. Poaching removes wildlife assets on which rural communities could build ecotourism businesses. Overfishing deprives coastal people of food and livelihoods. Pollution from unsafe mining practices or toxic dumping can rob them of their health, even their lives.



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Joko Widodo

Strengthening environmental justice

Environmental law enforcement must be one of the highest priorities of government.



Joko Widodo
President of Indonesia

Being rich in natural resources is a tremendous blessing for Indonesia that brings prosperity and hope to the people. In addition to being the world's largest archipelagic country, Indonesia hosts a tropical forest area of more than 120 million hectares, the most extensive in Asia and the world's third largest. Indonesia is also abundantly rich in maritime resources potential: ocean comprises no less than two-thirds of the country's territory. Together, these ecosystems comprise immense mega biodiversity across the country's extensive rain forests and rich coastal and marine areas.

To paraphrase a popular saying, with abundant natural resources comes great responsibility. It is indeed a great responsibility for Indonesia to ensure that they will continue to provide sources of living for future generations. Learning from unfortunate experiences, both current and past, Indonesia is well aware of how richness in terms of natural resources can quickly evolve into a sinister curse for a country, if they are managed unsustainably. The key to success is the application of sound management that ensures benefits for people as well as environmental protection, as stipulated in Indonesia's 1945 Constitution Article 28 H (1) and 33 (4), which state that having a good environment is a human right.

For Indonesia, environmental protection is a matter of national survival, since our environment constitutes the primary source of living for our people. Unfortunately, environment-related criminal activities threaten our natural resources and the foundation of our development, posing a menacing threat not only to Indonesia's biosphere, but also

to state finances, as it undermines state revenues derived from legitimate natural resource use. In short, environmental crimes pose a real threat to our national security, and to our sustainable development.

The threats are staggeringly varied, ranging from illegal logging, forest encroachment, and clearing land with fire, to illegal fishing, poaching and wildlife trafficking. Those are regarded as extraordinary crimes that will eventually need to be countered through extraordinary efforts by law enforcement agencies. The "business-as-usual" approach is no longer acceptable if we are to successfully tackle these problems.

Effective law enforcement is one of the the most significant requirements for preventing environmental damage caused by illegal activities. The Indonesian government realizes that even the best environmental regulations are ineffective without it, and it needs to be strengthened.

Environmental protection and environmental law enforcement have therefore become one of the highest priorities of the Indonesian government, in its attempts to ensure the sustainability of our environment and to provide life-support for the people. Effective environmental regulation is a key component of the government's platform in moving toward inclusive and sustainable economic development aimed at providing food security, energy security, infrastructure development, and sound maritime sector development.

Among other measures, the government has identified and is prioritizing three strategic measures corresponding to our needs, namely: good governance, affirmative actions, and political leadership.

Good governance. Governance has a strong impact on environmental management and protection. The rule of law, citizen's rights of access to information, public participation and equitable access to justice are as important as specific environmental policies or projects in improving environmental outcomes.



Photo: Kadir van Lohuizen / NOOR

\$1.2 billion: the fine imposed on one private corporation that committed environmental crimes.

The government has taken bold measures to improve environmental management by establishing a new Ministry of Environment and Forestry – merging the previously separated ministries of environment and forestry – with the goal of integrating and consolidating management. It is envisaged that, through this fusion, a unified single ministry may take more decisive actions with real impacts and effects.

Unifying the two ministries is also important in consolidating all available resources, especially financial and human ones. This may also bolster its authority, encourage the involvement of all stakeholders and fill in any gaps in the expertise or resources needed to meet the new and common goals.

A special unit at a directorate general level was also created within the new ministry specifically to deal with law enforcement implementation. The new special branch – entitled the Directorate General of Law Enforcement for Environment and Forestry – functions as the main institution responsible for addressing disturbances and threats to environment and forests.

Affirmative Action. Public trust in environmental law enforcement will strongly be cemented only if environmental justice is thoroughly upheld, and is capable of generating long-awaited credible deterrent effects. The government has been undertaking measures to realize just law enforcement through, among other things, intensified supervision and monitoring, application of a 'multi-door' approach, as well as certifying environmental judges.

Intensified supervision and monitoring is particularly necessary to improve management and bolster the prevention of violations by both individuals and corporations. In order to create strong deterrent effects, multiple legal instruments have been applied that include administrative and criminal sanctions. In practice, administrative sanctions have always been applied to violators before criminal ones. Applying a hybrid or 'multi-door' approach in criminal law enforcement has also been continuously developed so as to create a strong deterrent effect on perpetrators. This approach enables the application of other related laws, such as anti-corruption and anti-money-laundering laws, together with environmental laws and regulations in prosecuting illegal actions against the environment and forests. Indeed, this approach will require close coordination and collaboration among law enforcement institutions and agencies.

Among other law enforcement work during 2015-2016 were the confiscation of 6,180 m3 of timber, 23,907 logs, and 176 pieces of wood products. Twenty-four cases have been prosecuted at different stages, including six which ended in verdicts. Over 2,250 specimens of wildlife and their products have also been confiscated from 33 legal cases, of which 13 received verdicts.

Forest and land fires have been subjected to extensive affirmative actions. As a result, supported by favourable weather, the extent of fires dropped by 83 per cent in 2016, compared to the previous year. Efforts include: training 5,288 forest fire brigades, plus 150 in Forest Management



Photo: Kadir van Lohuizen / NOOR

The failures of criminal law in fighting environmental crime result from a lack of political will rather than a lack of regulation.

Units; developing communities against fire involving nearly 10,000 people in over 650 groups; and training nearly 5,000 private company staff and nearly 1,000 military and police officers. Coordination has also been intensified with the military, police, the Ministry of Manpower, and the Ministry of Information (e.g. on the use of cellphones for fire alerts). Joint fire fighting involves the military, police, local governments, the private sector, and communities, together with a fire monitoring system and fire patrols. Fire fighting is carried out on the ground and by planes that can pour 1 million litres of water and 128 tons of salt onto the flames. Over 15,000 canal blocks, over 25,000 ponds, and nearly 1,000 wells have been constructed.

Equipment procured includes vehicles, pumps, GPS, and fire brigade attire. The budget was around 150 billion rupiah in 2015, 250 billion rupiah in 2016, and 170 billion rupiah (\$12.8 million) in 2017. During 2015-2016, 12 forest fire cases were brought to court incurring penalties of up to \$1.2 billion. Also three concessions were revoked; 16 were suspended; 17 were forced to rectify their conduct; and 115 were given written warnings. Rewards have been given as well as punishments, including certificates of recognition. Another scheme for preventing illegal logging is the timber legality assurance system, known as SVLK, which is compulsory for all exported wood products. SVLK certification is credible – being the only one so far recognized by the EU Forest Law Enforcement, Governance and Trade plan – especially for its transparency in involving the public in the process.

Professional certification for environmental judges constitutes another important measure undertaken by the government to uphold environmental justice by creating professional judges fully committed to, and capable of, ruling on environmental laws with the application of the “in dubio pro natura” principle. So far, 577

Indonesian judges have been environmentally certified and the number is increasing.

Political Leadership. Political commitment, from the top, is highly important in creating a positive attitude and emphasis, and in consolidating all necessary resources to create an effective law enforcement system. An environmentally oriented political commitment is crucial for orchestrating coherent policies and approaches in various law enforcement agencies as well as in all levels of government administrations.

The current government has been giving examples of a strong political commitment in environmental law enforcement. The presidential office is directly taking a lead on field visits and giving instructions to the ministers, governors and officials involved in them, and in such policy directives as a moratorium of new concessions on peatlands and the Ministry of Environment and Forestry revoking existing concessions on burned peatlands so that they can be restored by the newly established Peatland Restoration Agency. Another bold policy is to give more rights and access for communities, for example through recognising nine “adat” (customary) forests just a couple of months ago, and through allocating 12.7 million hectares for community forestry.

Strong support has also been given to officials to enable them consistently to do their work in enforcing environmental law in the field, by visiting and giving them direct political support, or “blusukan”. A mechanism of reward and punishment is applied. For example, chief military officers are granted promotion when they have achieved a minimum rate of forest and land fires, and are transferred to less favourable posts when they have not.

Learning from severe forest fires in 2015, the government has undertaken firm action by bringing responsible individuals and corporations before the law for both administrative and criminal sanctions. About 500 cases have already been brought to justice and some of them have received their sanctions, including a historic \$1.2 billion fine to a private corporation proven to have committed crimes against the environment. Anticipatory measures and an early warning system have also been in place enabling the government to prevent the recurrence of similar disasters in 2016, and hopefully in the years to come.

After two years, the government’s hard work in strengthening environmental law enforcement and in realizing better environmental management has started to gain good results. Generally, public trust in environmental law enforcement in Indonesia has so far improved as the government’s work has started to show outcomes and positive impacts towards sound environmental management. Nevertheless, challenges remain. There is no room for complacency. Environmental law reforms and maintaining legal certainty in law enforcement will remain the government’s priorities.

Environmental law enforcement has never been an issue of win or lose. It is part of the government’s vital role in building responsible attitudes among all individuals and entities nationwide, and in creating environmental justice for all, for the benefit of current, and future generations. ▲

UN Environment at Work

Strengthening law on endangered species

Helping countries produce better laws and institutions is vital to countering all kinds of environmental crime



Photo: Rebecca Hart Media www.rebeccahartmedia.com

Law is one of the most effective means of addressing environmental crime. UN Environment is working with countries around the world to strengthen laws and institutions so that criminal acts in violation of environmental laws can be addressed at national and international levels. For environmental law to be effective, environmental crime needs to be clearly defined and institutions empowered to apply the law and to deal with violations through compliance and enforcement.

UN Environment collaborates with national governments, INTERPOL, the World Customs Organization, the Convention on International Trade in Endangered Species (CITES) and the Lusaka Agreement on

Cooperative Enforcement to strengthen legal responses to environmental crime. Through CITES we assist countries to strengthen weak legislation on trade in endangered species by enhancing the understanding of the links between appropriate domestic legislation and preventing and combating illegal trade in wildlife.

This can include work on prohibiting trade in specimens in violation of the Convention and ensuring there are appropriate legal means of penalization and confiscation in place at national levels. Many of the countries we work with in Africa are making good progress on meeting CITES requirements and include Algeria, Benin, Chad, Eritrea, Ghana, Kenya, and Togo. Some are even at

the stage of presenting draft legislation and UN Environment is supporting them in this work.

Countries also grapple with other national and trans-boundary environmental crime besides illegal trade in wildlife and timber, including pollution from sources within and beyond their jurisdiction, illegal dumping of hazardous waste, illegal trade in chemicals and hazardous substances, illegal fishing, and illegal encroachment into protected areas. UN Environment will continue to engage countries, convention secretariats and other partner organizations to strengthen legal and regulatory frameworks and to address the root causes of these crimes. ▲

Vidar Helgesen

A formidable effort is needed

Fighting environmental crime is also about protecting growth, development and global security.



Vidar Helgesen
*Minister of Climate and Environment,
Norway*

Environmental crime does not only hurt animals or forests. It's dangerous for humans too. Many forms of environmental crime are serious, organized and transnational, weakening the very fibre of our societies. Not only is it the world's fourth largest illegal economy, it is also growing many times faster than the legal one. Many forms of environmental crime are profit driven, no-risk, and contribute to financing terror networks, war and armed conflicts. Let's be straight: we are talking about a global security challenge.

Transnational organized environmental crime is a broad term referring to a number of crimes, including wildlife crime; forest crime; illegally mined minerals; fisheries crime; cultural heritage crime; crime associated with carbon trading; and illegal trade in, and treatment of, chemicals and hazardous wastes. These different manifestations of environmental crime are interconnected and there is a need for a comprehensive international approach.

This is not a matter for law enforcement agencies or specifically mandated international organizations alone. Norway has taken initiatives to ensure that wildlife crime, illegal logging and related crimes are treated as serious transnational organized crimes. At the United Nations Environment Assembly we have encouraged closer cooperation between all relevant actors, such as the United Nations Office on Drugs and Crime, UN Environment, INTERPOL, and other agencies and government bodies.

Globally, UN Environment and INTERPOL have estimated the value of environmental crime at \$91-258 billion annually – up to twice the global aid budget. With a growth rate of 5-7 per cent annually, environmental crime is outpacing the growth of our global economy by 2-3 times. Environmental crime does not merely pose a threat to biodiversity, clean soil and clean waters. It also hinders economic development – often for the countries and peoples that need it the most. Fighting environmental crime is about protecting not just the environment, but also national, regional and global security, human and social development and sustainable economic growth – prerequisites for achieving the global Sustainable Development Goals.

Illegal logging, and the trade associated with it, remains the largest category of environmental crime – with an estimated annual loss of resource of about \$50-152 billion. It may have devastating ecological consequences in rainforests due to their unique biodiversity. Local, often indigenous, peoples are affected by illegal logging as their livelihoods are dependent on forest food resources. The Norwegian International Climate and Forest Initiative supports many activities carried out by civil society, the UN and government programmes in our rainforest partner countries that aim to fight illegal logging and trade. These initiatives have already shown results in the form of confiscation of illegally harvested wood, successful prosecution, improved forest monitoring and better cooperation amongst law enforcement agencies. Still, much more must be done.

Transnational organized fisheries crime involves the whole fisheries value chain, including illegal fishing, corruption, document fraud, forced labour, tax and customs fraud and money laundering. It involves all continents; has adverse economic, environmental and social consequences; damages the livelihood of coastal communities in developing



Norway supports initiatives in rainforest partner countries that have led to the confiscation of illegally harvested wood, successful prosecution, improved forest monitoring and better cooperation among law enforcement agencies.

countries; and affects the planet as a whole. According to the latest report by the Food and Agriculture Organization, about 31 per cent of global fish stocks are fished at biologically unsustainable levels.

Greater inter-agency cooperation is essential to combat organized environmental crime and includes police, customs, taxation authorities and labour inspectors as well as fisheries authorities and coast guards. Norway supports and plays an active part in international initiatives to combat fisheries crime, primarily through the United Nations Office on Drugs and Crime and INTERPOL. These have created global awareness about the problem as well as improved cooperation and information sharing between and within states.

The illegal wildlife trade – estimated by some at \$7-23 billion per year – is regulated under the Convention on International Trade in Endangered Species of Wild Fauna and Flora. Nearly 7,000 different species have been accounted for in more than 164,000 seizures affecting 120 countries. Norway acknowledges the convention's importance and the work done to secure legal – and prevent illegal – trade in endangered species. However, its overall achievements will only be as good as its national follow-up, which is thus crucial for its success. Norway therefore supports measures to secure the best possible follow-up of the convention.

The global waste market is estimated at \$410 billion annually. Illegal transboundary movement of hazardous waste represents a major threat to sustainable development at its destinations, releasing hazardous substances that pollute soil, water and air and affect workers. Human health, the environment and long-term economic development are all adversely affected. The Basel Convention, controlling

transboundary movements of hazardous wastes and their disposal, is key to addressing this; illegal shipments must be returned to the country of origin and the exporters held to account.

Norway has amended its legislation to allow the police wider investigative tools and increased the maximum prison sentence. Customs and environment officials need to cooperate in controlling exports; pilot projects have shown that, with limited resources, we can increase the volume and quality of recycled material – thus providing higher incomes, and reducing environmental and human health impacts to a minimum.

UN Environment has played a fundamental role in assisting countries to put into place legal frameworks to fight environmental crime. It has the capability to identify the environmental consequences of this type of crime.

We need to target illegality in the whole value chain – corruption, document fraud, forced labour, and tax and customs fraud – including overseas tax heavens and money laundering. That way, we will help save the environment, support improved governance in fragile and developing states, strengthen the legal economy worldwide and improve global security. Norway will be open to the development of new international law and politically binding instruments and standards to tackle serious and transnational organized environmental crime.

But even the best legal frameworks will not suffice. Everybody has a role to play – from civil society and non-governmental organizations, the private sector, and international organizations, to government authorities who control borders and make laws. Ultimately, it's about a formidable human effort to protect humane societies. ▲

*With a growth rate of **5-7 per cent annually**, environmental crime is outpacing the growth of our global economy by **2-3 times**.*

José Sarney Filho

Cutting down deforestation

Brazil is focused on curbing deforestation in the Amazon.



José Sarney Filho
Minister of the
Environment, Brazil

Amazonia is the largest of the six Brazilian biomes, spanning 420 million hectares – or about 49 per cent of the national territory – of which 320 million hectares are covered by natural forests.

Besides being the largest remaining tropical rainforest in the world, it plays a significant role in sustaining biodiversity and in regulating the regional climate, among other environmental services. Almost half of the Legal Amazonia territory – covering the states of Acre, Amapá, Amazonas, Pará, Rondônia, Roraima, Tocantins and much of Mato Grosso and Maranhão – is covered by Protected Areas (totalling more than 200 million hectares); these consist of Conservation Units (under federal or state responsibility) and recognized Indigenous Lands. The Brazilian government, particularly through the Ministry of the Environment, attaches the highest priority to the prevention and control of deforestation in the Amazon. One of the greatest concerns is related to the conversion of the remaining natural forests to other land-uses – cattle ranching being the commonest, occupying approximately 65 per cent of the accumulated deforested land in the region.

The history of the occupation of the region helps in understanding the complexities of the issue. Many public policies designed to occupy Amazonia increased human settlements in the region: by the mid-1970s, it was home to 7 million people. Significant environmental problems had also begun by

the 1970s, triggered by the expansion of cattle farming. At present, Amazonia has more than 25 million inhabitants and holds the largest cattle herd in Brazil. The Brazilian National Policy on Climate Change, legally established in 2009, foresees actions to reduce emissions from deforestation in the Amazonia and the Cerrado biomes. The goal for Amazonia is to reduce them by 80 per cent in 2020, compared to the average between 1996 and 2005: for the Cerrado, the reduction is set at 40 per cent compared to the average emissions from 1999 to 2008. This implies that the annual rate of deforestation in Amazonia should be less than 400,000 hectares by 2020. More recently, Brazil has provided a vision of the importance of continuing to tackle deforestation by including a specific goal of achieving zero deforestation by 2030 in its Nationally Determined Contribution to the Paris Agreement.

The sharp decrease of deforestation in Amazonia since 2004 – when the first Action Plan to Prevent and Control Deforestation in Legal Amazonia was created – is attributed to concerted efforts carried out by the Brazilian government. In 2004, gross deforestation in Legal Amazonia was 2,777,500 hectares, the second highest since 1995, when it reached 2,905,900 hectares. Fortunately, Brazil has an advanced forest monitoring system that has enabled it to have consistent and verifiable deforestation estimates for the entire Legal Amazonia since 1988. Wall-to-wall assessments using satellite imagery are carried out annually by the National Institute for Space Research, from the Ministry of Science, Technology, Innovations and Communications. The monitoring programme's consistency was fundamental in building national and international trust in the deforestation data produced by the Brazilian government.

Through the Brazilian Institute of the Environment and Renewable Natural Resources (known in Brazil as Ibama)



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and other responsible agencies, the government remains fully committed to combating illegal deforestation. Ibama's environmental surveillance activities have been the foremost means of achieving the sustained reduction in deforestation rates in Amazonia.

The strategy to counter illegal deforestation consists of a set of actions focused on inhibiting and combating violations, so as to promote compliance with environmental rules and regulations. The main lines of action include: carrying out direct surveillance of critical areas; eliminating deforestation resulting from supply chains; preventing timber trafficking; developing robust and transparent national forest monitoring systems; combining remote sensing and ground-based forest surveillance; monitoring financial flows resulting from illegal deforestation; undertaking administrative and criminal investigations; and enforcing the civil liability of those responsible for illegal deforestation.

In 2016, government agencies carried out numerous operations following this strategy under the National Environmental Protection Plan, resulting in over 5,500 proceedings regarding violations and fines of over \$700 million.

After a period of systematic decrease in deforestation rates, data for the period August 2015 to July 2016 indicated an increase of almost 29 per cent from the previous assessment (August 2014 to July 2015). Such a rise is a cause of concern. Its causes are related to the fragile political momentum and economic constraints experienced in 2015/16, which impacted the annual budget of monitoring agencies. These constraints, however, have now been addressed. By December 2016, Ibama and the Chico Mendes Institute for Biodiversity Conservation had recovered their budgetary capacity, while the Amazon Fund provided additional funding for implementing command and control activities. It is expected that the deforestation rates in 2017 will revert to a downward trend.

Since 2004, public policies to curb deforestation have had three main pillars: land tenure regularization and territorial management; monitoring and control; and incentives

for sustainable productive activities. For the period 2016-2020, these will be complemented by an additional pillar – developing normative and economic instruments aimed at strengthening incentives for sustainable practices, including sustainable forest management and restoring degraded land that can alleviate the pressure on forests.

The Rural Environmental Registry has been instrumental in regularising land tenure through geo-referencing rural properties, delimiting Areas of Permanent Protection and Legal Reserve, and identifying consolidated rural areas and areas with remnants of native vegetation. Eighty per cent of any privately owned land in Amazonia is required by the Forest Code to be kept with native vegetation, as a "Legal Reserve Area". The Ministry of the Environment has been actively working with the Amazonian states to implement full coverage of the registry through supporting the elaboration of State Plans to Prevent and Control Deforestation.

Combating deforestation is a shared responsibility of the federal government, states and, municipalities and civil society. Given the increasing level of complexity in dealing with deforestation, broader participation of the private sector, civil society, indigenous peoples and traditional communities is being sought, so as to ensure a more inclusive and participatory processes. This is becoming increasingly important as deforestation is reduced and more complex actions, requiring social control and community engagement, are anticipated and envisaged.

Continuing to reduce deforestation is not a simple challenge. As deforestation rates decrease, moreover, it becomes even more challenging and expensive to maintain and enlarge the portfolio of activities that reduce them further. The Brazilian government has signalled that combating deforestation is not only a national priority but one of the most important mitigation contributions towards limiting the increase of average global temperature, as mandated by the Paris Agreement. Maintaining Amazonia's immense biodiversity and the ecosystem services it provides, which have both continental and global benefits, entails an elevated cost to Brazilian society, which needs to be better ascertained by the international community. ▲

Zhang Jianlong

Taking practical action

How to enhance mutual trust and cooperation and jointly address the illegal wildlife trade.



Zhang Jianlong
Minister, State Forestry
Administration
of China

Wildlife is a crucial part of natural ecosystems, and is directly related to global ecological security, cultural inheritance and sustainable development. Indeed, wildlife conservation is an important symbol of the development of human civilization. Yet, the global illegal wildlife trade is still rampant, and the international community must work together to cope with it. For years, the Chinese government has given high attention to wildlife conservation and made consistent efforts to address the illegal trade. In the first place, it has been constantly improving the laws and regulations and setting severe punishments for illegal hunting, trading, smuggling and using wildlife and its products. A new amendment of the Law of the People's Republic of China on Wildlife Protection has increased punishment for illegal consumption and online wildlife trade. Secondly, we have well established enforcement and coordination mechanisms. Our Inter-agency Joint Mechanism for Addressing Illegal Wildlife Trade, consisting of over 20 departments, has been set up to carry out comprehensive regulation.

Thirdly, we have strengthened management and control measures, including strictly regulating wildlife breeding, utilization, export and import. These also incorporate a system of labeling wildlife and its products, enhancing the verification of online trade and improving technical inspection and identification. Fourthly, we have constantly carried out enforcement operations. An annual inter-agency joint enforcement operation and the timely punishment of people involved in the illegal wildlife trade have had a great deterrent effect; the trade has been declining continuously over

the last three years, with ivory smuggling down by more than 80 per cent. Fifthly, we have carried out extensive public education, particularly on such occasions as World Wildlife Day and Bird-loving Week. Publicity and education activities have been carried out through radio, television, the internet, newspapers and other media, with the aim of popularizing knowledge about wildlife conservation, educating the public consciously to resist the illegal trade, and raising the awareness of the whole society to protect wildlife.

China has also been actively participating in the international process of tackling the illegal wildlife trade and has made important contributions. It has been an active party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora, and has been actively involved in such international initiatives as the International Consortium on Combating Wildlife Crime and the London Conference on Combating Illegal Wildlife Trade, and has made a series of positive propositions. The country has



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A new amendment of the law on wildlife protection has increased punishment for illegal consumption and online wildlife trade.



Photo: CC BY Diane Robinson

initiated and promoted three international enforcement operations under Operation Cobra that have had a significant impact on blocking the illegal wildlife trade chain. Meanwhile, it has carried out capacity building for other developing countries, and given African countries a large number of enforcement facilities to improve their capacity and thus strengthen wildlife protection. China has also carried out publicity activities for overseas Chinese enterprises and Chinese citizens, requesting them to strictly abide by local laws and regulations and resist the illegal wildlife trade. And the country actively participates in enforcement operations launched by international shipping and aviation organizations to block the illegal transport of wildlife and its products. China has also taken a series of major measures in recent years to protect flagship species like elephants. It adopted a one-year ban on imported ivory carvings in February 2015, followed by a year-long ban on imported ivory hunting trophies that October. In March 2016, it adopted a three-year ban on all commercial imports of ivory and its products, except for relics and for the purpose of scientific research, teaching, enforcement identification and cultural exchange. And, on 30 December 2016, the government announced a gradual ban of all commercial processing and sales of ivory and its products by the end of 2017. China expects that these measures could encourage the international community to take further practical actions to protect elephants.

China has always valued harmony between people and nature. Wildlife conservation has become an important part of its efforts to promote ecological civilization. We will continue to improve domestic laws and regulations and strengthen law enforcement and international cooperation. We will take further practical actions with the international community to block the illegal wildlife trade chain and promote protection and habitat restoration at source, so as to make new contribution to maintaining global ecological security. ▲

UN Environment at Work

Fighting chemical and waste crime

Rapid economic growth is greatly increasing the generation of hazardous and other waste: it is projected to reach 27 billion tons worldwide by 2050. Its movement across boundaries is also on the rise across much of Asia and Africa despite the fact that the Basel Convention requires the country of origin, when exporting hazardous and other wastes, to obtain the written consent of the country receiving them. This is largely due to higher recycling costs in countries of origin than in receiving ones where environmental regulations are less stringent and labour is cheaper.

The volume of discarded electronics in East and South-East Asia, for example, jumped almost two-thirds between 2010 and 2015, while United Nations University research shows that e-waste generation is growing fast both in total volume and per capita. Driven by rising incomes and high demand for new gadgets and appliances, e-waste increased by an average of 63 per cent in the five years ending in 2015 across 12 countries and areas analysed – including Cambodia, China, Hong Kong, Indonesia, Japan, and Malaysia. In total, it weighed 12.3 million tons, 2.4 times the Great Pyramid of Giza. China alone more than doubled its generation of e-waste between 2010 and 2015 to 6.7 million tons.

Hazardous and other wastes are smuggled through mis-declaration, false documentation, concealment and other methods to evade the law. Enforcement officers – including customs, police, environmental inspectors and prosecutors – play a key role in preventing and controlling illegal trade in chemicals and wastes. Multi-agency cooperation is needed at national and regional levels to fight this cross-border illegal traffic effectively, as are information and intelligence sharing, joint operations, capacity building and long-term partnership. The Regional Enforcement Network for Chemicals and Waste funded by the Swedish International Development Cooperation Agency and implemented by UN Environment was established to provide this in the Asian region. The network facilitates improved information and intelligence

sharing by providing technical guidance on how to detect suspicious shipments. It makes available – online and through its newsletter – the latest information on chemical and waste crime and counter-measures. It provides technical support to the World Customs Organization's global operation, Demeter III, which has resulted in the seizure of more than 7,000 tons of illegal wastes in 2013. And it trains customs officers for China's Green Fence Operation which resulted in the seizure of more than 900,000 tons of them the following year.

Another of its key objectives is building partnerships within and beyond the region: it supports national and multi-agency cooperation, facilitates inter-regional cooperation, and convenes customs and enforcement officers from around the region for training up to three times a year. It also acts as a partnership bringing together the secretariat of three chemical and waste conventions – Basel, Rotterdam and Stockholm – and a number of international and regional enforcement organizations. ▲



Photo: Global Environment Facility

Green Customs Initiative

National and international crime syndicates earn an estimated \$20-30 billion annually from hazardous waste dumping, smuggling proscribed hazardous materials, and exploiting and trafficking protected natural resources. Illegal international trade in such “environmentally-sensitive” commodities as ozone depleting substances, toxic chemicals, hazardous wastes, endangered species and living modified organisms is an international problem with serious consequences. It threatens human health and the environment, contributes to species loss, deprives governments of revenues, and undermines the success of international environmental agreements by circumventing agreed rules and procedures.

Customs and border protection officers constitute the front line of every country's defence against trans-boundary illegal trade. The Green Customs Initiative is a partnership between UN Environment and several international organisations to cooperate and prevent illegal trade in environmentally-sensitive commodities and substances. Bringing together the secretariats of six Multilateral Environmental Agreements and five international organisations including INTERPOL, the United Nations Office on Drugs and Crime, and the World Customs Organization, the Green Customs Initiative has trained hundreds of customs officers on the detection, seizure and confiscation of illegal environmentally sensitive commodities. New e-learning tools and training materials on an information-packed website ensure customs officers and relevant officials have access to all of the information they need to help address and eliminate environmental crimes through the detection of toxic chemicals and waste and improving species protection.

Photo: Global Environment Facility

Antonio Herman Benjamin

Matters of judgement

The potential for sustainability at the local level is huge, fundamental and achievable.



Antonio Herman Benjamin

National High Court of Brazil (STJ); Chair, IUCN World Commission on Environmental Law; Secretary-General of the International Advisory Council for Environmental Justice of UN Environment

An independent judiciary, in a political and legal system that values integrity and transparency, is vital in addressing environmental degradation and in upholding the environmental rule of law worldwide. In an urban planning case at the National High Court of Brazil, the court stated a view that I believe to be true in all areas of environmental law:

“... as we know, cities will not rise or evolve with words alone. But words spoken by judges can indeed encourage destruction or legitimize conservation, endorse speculation or guarantee urban environmental quality, consolidate the errors of the past, repeat them in the present, or enable a sustainable future”.

The same rationale applies to environmental crime. It cannot be tackled through words alone. We need good laws, we need good legislators to draft them, and we need good administrators to enforce them. Yet the words that we judges write in our decisions, and speak as we carry out our work, can influence the approach of humankind in securing our future through curtailing environmental degradation and crime. Thus, we must embrace our role, despite the challenges we face.

We do have laws in place now. Many national constitutions expressly recognize a right to a safe, clean, healthy, and sustainable environment (the specific terminology and language varies significantly among different constitutional texts). Some, as in Brazil and Colombia, go further to attribute an ecological function to property rights. Wherever rights are recognized – even in countries

that have only recently embraced democracy and the rule of law after decades of military or civil dictatorship – it is unacceptable to do so without also recognizing the connected duties and, more importantly, without agreeing at least in theory to the legitimacy of judicial intervention in guaranteeing those rights. Furthermore, it is impossible in the modern world to separate the environment from the protection of traditional rights and values, such as health and property. Nor can we forget that the rule of law occupies a central place in the new constitutionalism. And the true rule of law cannot exist without ecological sustainability and an independent judiciary.

As a result, we can increasingly see that people can help effect real change through the courts, worldwide. My own country of Brazil, notwithstanding the serious environmental degradation and enormous deforestation of the past, continues to be both our planet’s richest reserve of biodiversity and an experimental laboratory with new and creative models of environmental legislation, in terms of policy design as well as compliance and enforcement. There are many more examples that give us objective reasons for optimism. Over the years, I have advocated the establishment and strengthening of environmental

Establishing and strengthening environmental courts is fundamental for improving environmental governance.

Judges from over 50 countries gathered in Brazil in 2016 to inaugurate the Global Judicial Institute for the Environment.

courts to deal with these planetary issues. I still believe that this is fundamental for improving environmental governance in general. Yet environmental crime presents some of the most sophisticated challenges of this time: solving one piece of the puzzle, while giving immediate relief, may not give the full picture of the crisis we live in. All members of the judiciary, whether or not they are part of an environmental court or chamber, have a part to play in addressing environmental crime. Judges handling corruption cases, for example, apply their legal minds to resolve issues that arise in their jurisdiction, but also have a direct contributing impact on environmental crime. Similarly, judges who analyse and interpret the law in counterfeiting, drug trafficking, cybercrime and financial crime cases have a part to play in building the legal web that can effectively address environmental crime.

When deciding key issues – not only in environmental crime, but in general – judges must apply law developed at different levels: international, national and even municipal. Even when what laws say is clear, which is not always the case, judges constantly face the challenge of weighing and balancing different sources of the law. This also brings to light one of the fundamental issues that judges face: how do we define environmental crime? Since environmental crimes may, in some circumstances, appear to be victimless, judges may be discouraged from finding in favour of protecting ‘diffuse’ interests. Furthermore, judges often have to rely on administrative agencies in deciding environmental crimes cases, which means that even the most independent judge will not go far without a firm political commitment by the executive. Finally, it must not be forgotten that political will enables law-making by parliaments, which affects implementation and interpretation of the law.

Coinciding with the 1st IUCN World Environmental Law Congress – organized in partnership with UN Environment, the Organization of American States and others – judges from over 50 different countries gathered in Brazil in April 2016 to inaugurate the Global Judicial Institute for the Environment. The Institute’s mission is to support the role of courts and tribunals in applying and enforcing environmental laws and in promoting the environmental rule of law and the fair distribution of environmental benefits and burdens.

Composed of actively sitting judges from around the world, and led by an elected council of judges to direct and oversee activities, the Institute will: provide opportunities for exchanging information; create partnerships for collaboration; strengthen capacity; and provide research and analysis on topics important for environmental adjudication, court practices and the environmental rule of law. Key activities will include: judicial capacity building; technical assistance; education programs; and online knowledge-exchange and -sharing for judges. In the coming months, a committee of judges will continue to work on establishing the Institute’s structure to enable it to begin fulfilling its mission. Its formation represents an important step forward for ensuring environmental justice and the effective implementation of laws, policies, and constitutional provisions on environmental protection.

As my good friend and Chair Emeritus of the IUCN World Commission on Environmental Law, Prof. Nicholas Robinson, said: “It is probably utopic to expect that judges by themselves will be able to solve the environmental problems of the planet. But too bad for the planet if it doesn’t have the judges on its side.” ▲



Photo: CC BY Neil Palmer/CIAT for CIFOR

Ma Huateng

Good connections

Information technology has great potential to protect and preserve wildlife and the environment.



Ma Huateng

Chairman and Chief Executive Officer of Tencent

In 2012, I was invited to join a safari at the Lewa Wildlife Conservancy in Kenya. Lion prides, cheetah coalitions and herds of buffalo and giraffes walk freely there. Majestic African elephants also roam the conservancy's terrain, but in far smaller numbers than they once did.

While on safari, I personally witnessed the serious poaching threat that African elephants face. This compelled me to discover the full extent of the illegal wildlife trade's intricate web of smuggling, money laundering and organized crime. Its consequences are devastating: the near extinction of entire species and destruction of biodiversity that threatens entire ecosystems. Worse still, the plundering of resources in poverty-stricken areas only adds to regional destabilization.

I returned to China and learned that the internet was becoming a channel for the illegal sale of wildlife and animal parts. This disturbed me and other Tencent leaders. The connective power of the internet should serve to bless mankind, not be used by a minority to do evil. As a leading provider of internet value-added services in China, Tencent has the responsibility and ability to do more to thwart this network of illegal trade.

Every day, hundreds of millions of Tencent users around the world, primarily in China, communicate, share experiences, consume information and seek entertainment through our integrated platforms. Tencent's core strategy in recent years has been to enrich people's lives by focusing on two goals: first to establish extensively connected social platforms with our two primary instant messaging tools,

Weixin/WeChat and QQ; and second to deliver the best possible platform for providing digital content.

Given the sheer flow of information and the engagement that we have enabled on Weixin/WeChat and QQ's powerful platforms, we have set three goals: to improve our technology to better discover illegal wildlife network chains and shut them down; to produce educational conservation content that resonates with the public and increases their awareness and stewardship of wildlife and the environment;

We have created whistleblowing labels so that users can flag and report any suspect activity related to the illegal sale of wildlife or related to pollution.



Photo: © UNVEP



Photo: © CC BY, NC, ND, Andrew Naumov

and to influence wider groups with messages that dispel outdated beliefs about the health benefits of consuming endangered species.

Beginning in 2015, Tencent has established partnerships with international public welfare organizations in a joint effort to create the public welfare program "Tencent for the Planet", which is designed to educate and to help eradicate the illegal wildlife trade. Tencent has created whistleblowing labels so that users can flag and report any suspect activity related to the illegal sale of wildlife. Through easy-to-use whistleblowing channels, we work collectively with the public and with professional groups to discover and destroy illegal wildlife trading hidden on social platforms more quickly.

Since the program began, user reports have helped us to identify close to 1,000 accounts used to conduct or facilitate illegal trade in wildlife. Reports are promptly acted on and investigated by appropriate institutions, while information about crimes that may lead to arrest is passed to law enforcement. We continually perfect our technologies and algorithms to optimize this process and have also discussed ways to leverage our global business peers to better combat the illegal wildlife trade. Together, we are working to develop better identification, big data analysis and other technologies that will make us even more effective in the future.

There is also other encouraging progress. My colleagues and I were delighted when China announced a ban on all ivory trade by the end of 2017. This is a significant milestone in protecting elephants, including the stately African elephants that live in Lewa. Wildlife protection allies are expanding. The State Forestry Administration, law enforcement and more international organizations are joining together to tackle networks of illegal wildlife traders. Besides the coordinated sharing of information that leads to prosecution, there are stronger joint efforts, with greater impact, to increase public awareness.

Meanwhile, Tencent's own exploration of how to protect biodiversity and empower sustainable development through

the connectivity of the internet and other technological means has just begun. We now also provide a convenient way for pollution whistleblowers to report illegal activity to China's Ministry of Environmental Protection. With our tool, internet users can upload pictures taken with their cellphones that will simultaneously submit geographical location information. This allows departments tasked with environmental protection to quickly obtain sufficient evidence and address the points at which pollution takes place.

We are doing even more to protect the environment in everyday urban life. Our new company headquarters and office buildings in Shenzhen will soon be put to use for rainwater storage as part of the "Sponge City" pilot project, an initiative of the Chinese government to combat flooding and drought, which may one day improve the entire ecosystem of the city. Tencent is also developing a complete set of technical support and public platforms to better detect and analyze meteorological data, rainwater collection and soil humidity through big data and internet-of-things technologies. This data could, in turn, be used to enhance scientific inquiry and urban management.

There is a natural hunger in all people to do good, something Tencent sees firsthand during our annual "9.9 Charity Day" event. Last year, a record 6.77 million internet users donated more than RMB307 million (\$44 million) in the three days around 9 September. Linking trust and technology, the internet has exponentially increased the power of collective good and charitable giving. The donations from the event will be used in hundreds of programs dedicated to the protection of animals and wildlife, environmental development, and poverty and disaster relief. With the internet, we can all lend a hand to transparent, efficient sustainable development.

Our corporate vision has always been to become the most respected internet company. We believe that, in realizing a connected future through the Internet of Everything, we can develop a thriving ecosystem online and in the real world. We will strive to ensure that each precious life on this planet is protected at all times and by all means through our platforms, the internet and our partnerships. ▲

Roraima A. Andriani

Serious, and growing

Environmental crime is a threat to peace and security and requires an organised response.



Roraima A. Andriani

Director, INTERPOL's Organized and Emerging Crimes Directorate

Environmental crime is the fourth largest criminal enterprise after drug smuggling, counterfeiting and human trafficking. But this statistic – perhaps the most commonly cited regarding environmental crime – fails to recognize the nature or scope of the problem, and implies it is less serious than other forms of crime.

Environmental crime is no longer a new or emerging threat. It is a reality – the latest manifestation of an old and familiar form of serious and organized crime. It shares many characteristics with other serious crimes such as drug and firearms smuggling, counterfeiting, human trafficking and financial fraud and is increasingly serious, organized and transnational in nature.

INTERPOL's unique position at the centre of the global law enforcement community allows it to identify and assess emerging trends in international crime. We provide warnings to our 190 member countries about emerging trends – including through INTERPOL notices and intelligence products – in order to facilitate international police cooperation. The intelligence we see in the Organized and Emerging Crimes Directorate is clear: a growing and increasingly sophisticated international network of organized criminals lies behind such environmental crimes as elephant and tiger poaching, illegal fishing, illegal mining and logging, the illegal disposal of hazardous materials and e-waste, and the smuggling, sale and eventual consumption of illicit environmental products.

The networks behind environmental crime employ all the players, tools, structures and methods we find in other types of organized crime: accountants, lawyers, politicians and law enforcement officials; bribery, corruption and fraud; the use of modern technology as an enabler; exploitation of the global supply chain; front companies; off-shore banking; creative concealment methods; and document fraud, to name just a few.

What is most revealing about this list is that none of the items in it are specific to any one type of crime. Technology, for example, is used to facilitate the trade in wildlife, drugs and people as well as to transfer, launder and hide illicit funds. Global networks of registered owners, beneficial owners and front companies are employed to obscure the true beneficiaries of crime, regardless of whether it is illegal logging, financial fraud or drug trafficking. For the right incentive, corrupt accountants, politicians and law enforcement officials assist organized criminals – no matter what type of crime they are engaged in.

The very real and documented links between environmental crime and other serious crimes – including drug and firearms smuggling, human trafficking, maritime piracy, pharmaceutical crime and money laundering – are a further indication that there is a common set of enabling features linked to all forms of organized crime. This highlights the vital need to address the enablers as well as the criminal groups themselves. Tackling these enablers will have an impact not just on environmental crime but on all the forms of organized crime that depend upon them.

Those involved in environmental crime – as in any form of serious and organized crime – are ultimately motivated by money. They aim to make as much of it as possible, as quickly as possible, with the minimum of effort, expenditure and risk, and with absolutely no regard for the environment,



Environmental crime shares many characteristics with drug and firearms smuggling, counterfeiting, human trafficking and financial fraud and is increasingly serious, organized and transnational.

local communities or the law. This is a fundamental characteristic of transnational serious and organized crime regardless of the commodity involved. It highlights the importance of pursuing financial avenues of investigation against environmental criminals and not remaining satisfied just with seizures, arrests and convictions. Last year, a joint UN Environment-INTERPOL report valued environmental crime at between \$91 billion and \$258 billion, so huge illicit profits stand to be made. Freezing, seizure and recovery of the proceeds of crime – whether in the form of cash, property or other assets – are what really hurt the criminals.

The problem of environmental crime extends to public health and safety, food and water security, the economy, sustainability of local communities and even regional political stability. At INTERPOL, we use the term 'environmental security' in recognition of the fact that the impact of

environmental offences extends to issues of national and international security, stability and sustainability. Environmental security is a key component of national security. Law enforcement agencies need to understand and embrace the role they play in ensuring their nation's future prosperity by acknowledging the reality and effects of environmental crime, and by taking proactive steps to tackle them.

Now more than ever, international collaboration and cooperation is needed between law enforcement agencies and their partners in both the public and private sectors. Simple but effective steps could include:

- Multi-agency, multi-disciplinary teams which merge environmental crime investigations with other policing disciplines such as digital forensics and financial investigation;
- Flexible approaches which look for opportunities to investigate enabling offences as well as the environmental crimes themselves; and
- Systematic information collection and analysis to support proactive, intelligence-led enforcement actions.

INTERPOL actively assists its member countries on a daily basis to take the fight to the criminals, and protect the rule of law upon which we all rely. These criminals may be organized, but they are not united.

Together, the global law enforcement community has the capacity and expertise to disrupt and dismantle organized crime groups. By communicating, collaborating and adopting modern, innovative approaches to enforcement we can demonstrate to the criminals that we, too, are not only serious and organized, but united in our efforts to ensure that illegal exploitation of the environment does not go unpunished. ▲

Did you know ...

... it is estimated that **62% of all suspected illegal tropical wood** entering the EU and US arrives in the form of paper, pulp or wood chips, not as roundwood or sawnwood or furniture products as most people assume.

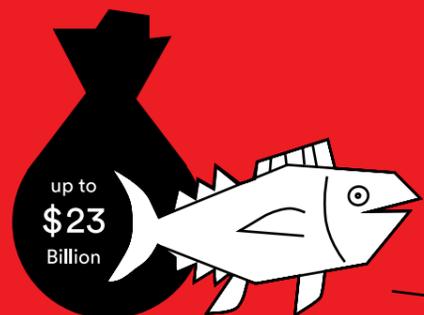
... far over a million pangolins have been killed and trafficked in the last decade, making them one of the world's most targeted animals for the illegal wildlife trade.

... **fish** and fish-farming industry secures the livelihoods of between **10 and 12 per cent** of the global population.

... by the end of next year, the mountain of **e-waste** generated annually across the globe is expected to grow to **50 million tonnes**. That's roughly equal to 20 billion laptops.

... the Government of Colombia has acknowledged that **87 per cent of metal-producing plants** operate illegally.

annual revenue losses



Illegal, unreported, unregulated fishing

At stake:

- Fish stocks depletion
- Loss of revenues for local fishers and States
- Targeted species: tuna, toothfish, sharks



Trade and dumping of hazardous waste

At stake:

- Ecosystem depletion
- Human health



Illegal extraction and trade in minerals

At stake:

- Resource depletion
- Gold, diamond, rare earth ...
- Livelihoods (local communities)
- Loss of raw material for local industry



Wildlife poaching and trafficking

At stake:

- Species extinction
- Livelihoods
- Tourism Revenues



Illegal logging and trade

At stake:

- Livelihoods
- Species extinction
- National economies: Illegal logging between 15 and 30% of the global legal trade
- Climate change emissions from deforestation and forest degradations
- Endangered forests

Major environmental crimes



drivers

- Corruption
- Lack of legislation
- Conflict
- Lack of law enforcement
- Increasing demand
- Crime Syndicates
- Corporate crime

Reinhold Gallmetzer

Prosecute climate crimes

Taking illegal emitters to court is a very cost-effective way of helping to achieve the goals of the Paris Agreement.



Reinhold Gallmetzer

Appeals Counsel, Office of the Prosecutor of the International Criminal Court

Criminal justice can help achieve the objectives of the Paris Agreement on climate change as part of an integrated approach from governments, private businesses, finance, science, civil society and others.

A significant share of global greenhouse gas emissions results from, or is associated with, conduct that violates existing criminal law. Those caused by deforestation and forest degradation are one striking example: a World Bank study on forest crimes found that up to 90 per cent of logging in key producer tropical countries is illegal and involves criminal activity. In addition, INTERPOL's guide on carbon trading crime shows how fraud undermines the carbon market, an essential mechanism for reducing greenhouse gas emissions.

Even when emissions are not directly based on criminal conduct, they may be associated with crimes – such as corruption, trade violations, financial crimes or fraud – committed, for instance, in the context of extracting or trading fossil fuels or timber. Moreover, if there is a concrete causal link between a specific source of emissions and a harmful consequence – such as serious injury to body or physical health or the destruction of property – this may constitute a crime. All these offences can be collectively referred to as climate crimes.

Climate crimes are under-prosecuted due to: a misconception that their prosecution has an uncertain legal basis; the low priority given to them; and their under-reporting in the first place. Yet none of these reasons should stand in the way of significantly scaling up the prosecution of climate crimes. That would repress and deter criminal conduct that

facilitates greenhouse gas emissions, and thereby help achieve the objectives of the Paris Agreement.

Law enforcement authorities are already equipped with the necessary legal tools to prosecute climate crimes effectively. Many legal systems punish environmental crimes such as illegal deforestation or pollution, which may allow direct prosecution of greenhouse gas-emitting activities. Prosecutors may also examine the broader context in which emissions occur, as well as their consequences, and target them indirectly by focussing on crimes commonly associated with, or resulting from, emissions, such as corruption, financial crimes or destruction of property.

Targeting associated crimes offers several practical advantages compared to the direct prosecution of greenhouse gas-emitting activities. This approach may use jurisdiction in countries other than those where the emissions are released, by relying on criminal conduct taking place in third countries or involving their nationals. Moreover, investigating and prosecuting associated crimes is simpler as their factual basis is often narrower. Associated crimes are also more common and less technical, so authorities have more

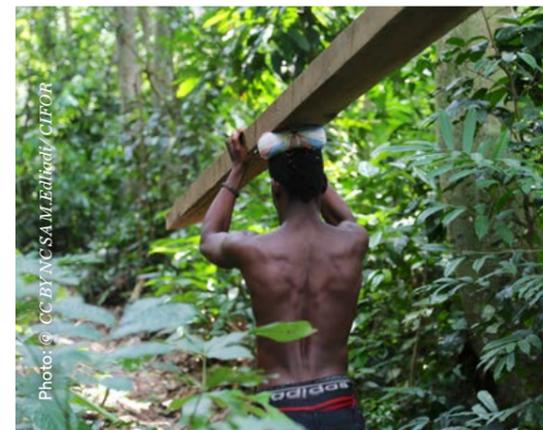


Photo: © CC BY/AGSAMA/Earthwatch/CIPIOR



Photo: © C UN Photo/Albert Gonzalez Barran

expertise and resources to pursue them. Finally, the penalties for associated crimes may be higher, and are thus a greater deterrent.

Up to 90 per cent of logging in key countries involves criminal activity.

Budgetary constraints require investigators and prosecutors to identify priorities when selecting cases. Economic crimes, and crimes against persons and their property, are given higher priority, as they are perceived to affect the core values protected by our legal systems more directly. Climate crimes are often deprioritised, especially when viewed as “only” affecting the environment, because they are not seen to cause immediate harm to persons. However, this does not properly take into account the impact that climate crimes can have on human life, on global security and on the economy, especially in the long term.

The International Criminal Court (ICC) cannot directly hear climate crimes, but the Office of the Prosecutor of the ICC has stated – in its recent policy paper on case selection – that war crimes, crimes against humanity or genocide committed through, or resulting in, the destruction of the environment, the illegal exploitation of natural resources or the illegal dispossession of land warrant particular attention when selecting cases for investigation and prosecution before the ICC. Indeed, climate crimes are often intertwined with other serious international crimes. As a result of this link, and through their impact on climate change, climate crimes may represent a threat to international peace and security and potentially affect all of humankind and the very foundations of civilisation. Viewing climate crimes in this way should allow national authorities to reconsider and reprioritise their commitment to investigating and prosecuting them.

Under-reporting of climate crimes to law enforcement agencies – and the fact that information made available by non-government organizations is often insufficient to trigger criminal investigations – are also major reasons for their under-prosecution. This could soon be addressed through a

A significant share of global greenhouse gas emissions results from, or is associated with, criminal activity.

personal initiative by prosecutors and law enforcement agents to establish the Center for Climate Crime Analysis, an independent mechanism that will take an innovative approach to reporting climate crimes by: collecting publicly available information and leads through cutting-edge open-source investigation techniques; collecting additional information through targeted requests and crowd sourcing; conducting legal and forensic analysis of information in light of potential climate crimes; and sharing information, leads and analysis with the competent law enforcement agencies.

The centre's activities are intended to trigger and support concrete investigations and prosecutions by sharing information and analysis which would otherwise only be available to individual law enforcement offices at a substantial financial cost. They will also help preserve information that might otherwise be unavailable to those conducting a formal investigation long after the relevant events. Such activities complement existing projects that support investigations and prosecutions through capacity building and enhanced cooperation.

Scaling up the prosecution of climate crimes is both necessary and possible. It is a highly cost-effective way of helping to achieve the objectives of the Paris Agreement.

The views expressed in this article are not necessarily those of the Office of the Prosecutor (OTP). ▲

Nelly Luna Amancio

Blood gold

Illegal mining is destroying Amazonia.



Nelly Luna Amancio

Founder and Editor-in-Chief of Ojo-publico.com

Day or night? It makes no difference in the Amazon gold rush. The clatter of the hundreds of engines that pump water in search of the precious metal never stops. By day, enormous trucks move the earth where forests once stood; by night, the soil is washed with hundreds of cubic metres of water to extract the gold. Informal mining camps extend into Peru, Colombia, Bolivia and Brazil, destroying the most biodiverse ecosystems in the world and poisoning the land inhabited by hundreds of indigenous peoples with mercury. Huge tracts of tropical rainforest have become graveyards for trees, drenched in the toxic metal.

The devastation was triggered by the increase in the price of gold and weak monitoring. A November 2016 report for the Monitoring of the Andean Amazon Project indicates that 62,500 hectares of forest have been lost as a result of gold mining activities in Peru, where the most gold from informal sources is produced, mainly in the Madre de Dios, Puno and Cusco regions. Eight out of ten people in Madre de Dios – the region most affected by the devastation and pollution, and the origin of a tenth of the country's exported gold – harbour levels of mercury three times higher than the permissible limit.

Half of the deforested and poisoned areas are located in indigenous territories and in the buffer zones of three protected areas: the Tambopata National Reserve, the Bahuaja Sonene National Park and the Amarakaeri Communal Reserve, created to protect the culture and development of the Harakmbut indigenous communities.

As well as destroying the lands of indigenous peoples, informal mining has brought about an illicit economy based on

labour and sexual exploitation, money laundering, organized crime and the trafficking of fuel, mercury and other chemicals used in mining. Those funding the mining activities employ indigenous people or migrants fleeing drought or famine from the poorest regions of southern Peru, such as the Cusco region, for \$10 to \$15 a day.

Labour exploitation underpins this illegal economic activity, and results in other related illicit activities such as human trafficking and sexual exploitation. A total of 307 cases of human trafficking between the Cusco and Madre de Dios regions – representing almost 20 per cent of the national total – were reported between 2010 and January 2014, according to the Observatory of Crime of the Public Prosecutor's Office. In the whole country, 1,800 individuals were prosecuted for illegal mining, of whom 80 were convicted and four imprisoned.

Such informal gold mining has also been observed in Ecuador, Bolivia and Colombia. The Government of Colombia has acknowledged that 87 per cent of metal-producing plants



Photo: © NTB/Scamix



Photo: © CC BY-NC-SA Ministerio del Ambiente

Informal mining camps are destroying the most biodiverse ecosystems in the world and poisoning the land inhabited by hundreds of indigenous peoples.



Photo: © CC BY Juan Carlos Itayllapuma/CIFOR

operate illegally, especially in the Chocó, Caquetá and Amazon regions. In an interview with Ojo publico.com, Óscar Amaya Navas, its prosecutor of environmental crime, said that half the illegal mining trade is associated with organized crime gangs.

Governments have tried various processes to bring mining into the formal sector with the aim of regulating gold extraction in the Amazon and halting the destruction of ecosystems. In 2010, the Government of Peru initiated a process to achieve this and to prosecute illegal mining: dredges were banned, the land was developed and a mining exclusion zone created in the Madre de Dios region, the only place in which it was to be allowed. Two years later illegal mining was included in the penal code as a crime – until then those responsible could only be investigated for pollution – and associated prison terms were stiffened.

After some delays and against a background of protests by miners, the process should have concluded in December 2016, but by then not a single miner in Madre de Dios had become a “formal” one. Meanwhile, over the last two years illegal mining has penetrated into one of the most biodiverse reserves in the world, Tambopata, and destroyed around 450 hectares of forest. In recent weeks the new Government of Pedro Pablo Kuczynski has initiated a new process.

Aerial photos and videos of the area fail to show the full scale of the environmental catastrophe the gold rush has caused in the rainforest and its impact on the lives of the indigenous peoples. More than 30,000 people – including miners, traders, men, women, adolescents and children – are estimated to work in and be exploited every day in Madre de Dios. Gold continues to be extracted illegally, joining a supply chain that has its final destinations in some of the largest refineries in the world. It is blood gold. ▲

<http://maaproject.org/category/gold-mining/>
<http://ojo-publico.com/dirty-gold-chasing-the-trace-of-the-london-bullion-market/>

Gustavo A. B. da Fonseca, Evelyn Swain Making gold greener?

Addressing mercury pollution from small scale, often illegal, gold mining.



Gustavo A. B. da Fonseca

*Director of Programs,
Global Environment
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Evelyn Swain

*Environmental
Specialist, Global
Environment Facility*

Poorly regulated gold mining is spreading around the world. Every day, millions of artisanal and small-scale gold miners work extremely hard in often poor conditions and without the protective framework of formal labour market standards. By evening the vast majority have harvested only minuscule amounts of gold, if anything at all. But the economic incentives are still attractive. Since ancient times, gold has continuously been used as a source of long-term investment, and it has now found its way into modern technologies and industry, including computers, cell phones and medical equipment. Global financial turmoil has helped more than double the price of an ounce of gold from \$500 to well over \$1,000 over the past decade. Many poor people in rural areas have shifted their attention from agriculture to mining as a source of livelihood.

Such mining is now responsible for an estimated 20 per cent of all gold produced globally. It is scarcely regulated and standards are rarely enforced, especially as it is generally spread across remote areas that are difficult to access. It is plagued by illegal practices, often involving child labour – and by a big environmental footprint from deforestation, mercury pollution, and the degradation and sedimentation of watercourses.

Perhaps the most insidious aspect of this, both for people and the environment, is the use of mercury to recover minute gold fragments dispersed in soil and rocky sediments. A heavy metal found in the natural environment, mercury can become highly toxic when used in its elemental – or liquid

– form. Liquid mercury evaporates even at relatively low ambient temperature, and can be dispersed over long distances by the wind. It binds with gold to form an amalgam, which is then heated to a high temperature to vaporise the mercury and extract the precious metal. This is often done with rudimentary equipment such as a blowtorch or – in the worst circumstances – over stoves in the miners' own homes. Sometimes cyanide is used on the mining tailings to extract yet more gold, and it combines with the mercury to make compounds that are easily dispersed in water and taken up in food chains.

Breathing in mercury can damage the nervous, digestive, and immune systems. Ingesting it can cause the condition called Minamata Disease, after a coastal city in Japan where humans and animals ate mercury-laden fish and shellfish from the local bay. Its most notable symptoms are convulsions, loss of muscle coordination, and damage to vision, speech, and hearing. Pregnant women exposed to the toxic metal are susceptible to giving birth to babies with congenital diseases.

In 2013 the global community finally came together to address mercury pollution in a coordinated way, adopting the Minamata Convention on Mercury to control its production and use. The Global Environment Facility (GEF) was named as a financial mechanism to the convention, mirroring similar such mandates from other multilateral environmental agreements. In this capacity, the GEF is helping countries to achieve the objectives agreed under the Convention to address the risks that mercury poses to human health and the environment.

Artisanal and small-scale mining is the single biggest use of mercury worldwide, accounting for a third of the total and,



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Governments will support mining communities with new policies and regulations, mercury-free technologies, and loans to pay for them.

among other things, the Convention aims to regulate and eliminate the practice. A recently approved programme, Global Opportunities for Long-term Development (GOLD) in the Artisanal Small Gold Mining Sector, is designed to help artisanal gold miners eliminate the use of mercury across several countries, and provides an example of concrete action.

Using mercury in mining is also very wasteful. It achieves only about 20-30 per cent efficiency in recovering gold compared to 60-90 per cent from alternative, much cleaner methods. So miners have a big financial incentive to switch, besides protecting their health. However, they often do not know about the alternatives and – if they do – they are unable to invest in them because they find it hard to borrow money from conventional sources.

The GOLD programme is designed to address the situation by providing funds to countries with a sizeable gold mining sector, and where many artisanal miners still rely on mercury for gold extraction. GEF funding amounts to \$45 million, and is expected to attract co-financing of more than \$135 million from governments, international financing institutions, and private sector companies.

Governments will use the money to support mining communities by devising and implementing policies and regulations, introducing new mercury-free technologies, and designing and deploying ways of providing miners with loans to pay for them. Producers will be connected to international markets and supply chains which favour gold that uses less, or no, mercury in its extraction. The programme will build strong partnerships with the private sector, including major jewelers, electronic manufacturers, and gold refiners.

The GOLD programme is being managed by four implementing agencies: UN Environment, the United Nations Development Program, the United Nations Industrial Development Organization, and Conservation International. The first beneficiary countries are: Burkina Faso, Colombia, Guyana, Indonesia, Kenya, Peru, Mongolia and the Philippines. Through this programme, developing countries from three continents are coming together to shine light on artisanal gold and help to rid the world of the harmful effects of mercury. ▲

Emmanuel de Merode

Creating hope

Development is ending wildlife crime in Africa's oldest national park.



Emmanuel de Merode

Director and Chief Warden, Virunga National Park, Democratic Republic of Congo

In a seemingly dark and tumultuous world, I find the greatest beacon of hope here in the Virunga National Park, eastern Congo. Hope that, through the efforts of those working to protect the park, we can maintain an example of a working green economy providing both stability and conservation.

The job of a Virunga ranger is one of the most dangerous in conservation. Comprising over 7,800 square kilometres of forests, savannahs, swamps and glaciated peaks, the park poses significant challenges to those tasked with its protection. Though one of the most naturally rich protected areas in the world, Virunga National Park is situated in one of its poorest regions. Existing between these extremes of economic poverty and natural wealth, the park is an easy target for those looking to make vast personal profits. Poaching has become rampant, as has the clearing of protected rare forests for charcoal. This exploitation also leads to deadly conflicts and threatens not just local populations, but the very existence of the park. Over 150 rangers have laid down their lives in the line of duty over the past ten years, all in the name of protecting this beautiful natural area.

Tragically, the situation in Virunga is not exceptional; wildlife and forest crime is rife within many of the world's most spectacular protected areas. It saddens me greatly to learn that wildlife crime, which I have dedicated most of my life to fighting, has grown into one of the largest transnational organized criminal activities. Thanks to the huge amount of money behind the demand for charcoal, bush-meat and rare furs, the rangers face a rapidly increasing level of violence

and drastic intensification of firepower. The impact of wildlife crime cannot be overstated. The illegal exploitation of natural resources has led to the critical endangering of thousands of species around the world through poaching and the destruction of delicate and vital ecosystems. It also has a profound impact on human populations, strengthening the power and influence of armed groups, undermining the rule of law, threatening national security and locking local communities into cycles of instability.

Yet, despite such challenges, I remain optimistic for the future. In the case of Virunga, I believe the park can play a



Existing between these extremes of economic poverty and natural wealth, the park is an easy target for those looking to make vast personal profits.

key role in providing economic growth in the region. The national park exists in a precarious balance between the demands of development – in a region lacking even basic infrastructure – and conservation. Its protected status prevents access to 1.2 million acres of fertile land, which, if farmed, would offer more than \$1 billion to local people. This reveals the tensions at play, which manifest themselves in illegal and violent activity perpetrated by militias looking for financial or political gain. For the park to survive, an economic model that meets the needs of the population must be put into place, as ultimately, it is the people that live around the park who suffer most. This is where the park's sustainable development initiative, the Virunga Alliance, comes into play. By utilising the park's natural resources in an ecologically responsible way, it aims to attract viable industries that are invested in its on-going protection.

In an area as poor as eastern Congo, the largest expense is energy. So the Virunga Alliance aims to tackle energy poverty by providing a safe and cheap alternative; hydropower. Constructing low impact hydro plants in the park is working to supply reliable and affordable electricity to four million people living near its borders. The plants offer an alternative to the current fuels used by local people and businesses: kerosene, which is costly; and charcoal, which is often poached illegally from within the park.

The pilot 400 kilowatt plant near Mutwanga brought affordable electricity to 3,600 homes and the launch of the 13.6 megawatt Matebe plant in December 2015 has enabled the park to begin delivery of free electricity to schools and hospitals and cheap energy to local homes and businesses. It is estimated that Matebe could bring up to 12,000 sustainable jobs for people in and around the hard-hit region of Rutshuru, highly significant in a country with an 80 per cent unemployment rate.

Many young men see their only way out of poverty as joining a militia group, thus feeding instability in the region and illegal poaching within the park's boundaries. The Virunga Alliance has been undertaking extensive work to help improve infrastructure to encourage investment and new business development, so helping to create more jobs for local people. The hydro facility at Mutwanga powers a local soap factory that brought 400 jobs to the community, and offers increased income to the 8,000 farmers who provide it with sustainably grown palm oil. It is hoped that 60,000 new jobs will be created as a result of similar investment in agro-business. Tourism is another major driver for positive change in the region, and completing the park's Mikeno Lodge has also brought jobs and new infrastructure.

As a conservationist, my job is to protect the park and its huge wealth of flora and fauna. Yet my role in Virunga has shown me that effective conservation also means taking into account the needs of local communities. Only when they begin to see the park as an asset, rather than a restriction, will we be able to ensure its survival. The battle to protect Virunga, and many other protected areas like it, cannot be left to the hard work of park rangers alone.

A concerted, global effort is needed to tackle the causes of wildlife crime in national parks. The Virunga Alliance is pushing for real social and economic change in eastern Congo – the only way to help bring peace and prosperity, and to build a safer future for local people and park rangers alike. ▲

Swatanter Kumar

Clearing the air

Tackling the environmental crime of India's air pollution.



Swatanter Kumar
Chairperson, National Green Tribunal, India

Ninety-eight per cent of cities with more than 100,000 inhabitants in low and middle income countries do not meet World Health Organization (WHO) air quality guidelines, concludes the WHO Global Urban Ambient Air Pollution Database 2016 update. In high-income countries, however, that percentage decreases to 56 per cent. In South Asia, air pollution is especially acute in such countries as China, Indonesia and India, requiring State authorities to take immediate action to safeguard the health of their citizens. Long-term health effects include respiratory diseases like lung cancer and even damage to the brain and an increased risk of heart disease. A WHO study estimated that about 12.6 million deaths in the year 2012 could be linked to an unhealthy environment. India's Air (Prevention and Control of Pollution) Act, 1981 defines air pollution as "the presence in the atmosphere of any air pollutant" and an air pollutant as "any solid, liquid or gaseous substance including noise present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment."

A National Green Tribunal was established under a 2010 Act with a dedicated jurisdiction for effective and expeditious disposal of cases relating to environmental protection. In my time as Chairperson of the Tribunal, two major cases of air pollution have been Vardhaman Kaushik vs. Union of India & Ors. (O.A. No. 21 of 2014) and Vikrant Kumar Tongad vs. Environment Pollution (Prevention & Control) Authority and Ors. (O.A. No. 118 of 2013). Ambient air quality in Delhi has deteriorated significantly over the last few years. This has been the result of a number of factors. The Tribunal noted in the Vardhaman case that:

"There are seven major contributors of air pollution in all these States more particularly NCT, Delhi. These are:

1. Construction activity and carriage of construction Material;
2. Burning of Municipal Solid Waste and other waste;
3. Burning of agriculture residue;
4. Vehicular Pollution;
5. Dust on the roads;
6. Industrial and power house emission including flyash;
7. Emissions from Hot-Mix Plants and Stone Crushers."

The Tribunal has sought to implement various measures to deal with the increasing pollution levels, such as enforcing a ban on 10-year-old diesel vehicles, imposing fines on burning municipal solid waste in the open and not covering construction materials during transportation and construction.

Another measure adopted in Delhi was the odd and even rule, which entailed that cars bearing odd and even numbers ply the streets on alternate days, so as to reduce the number of vehicles on the road and thus vehicular pollution.

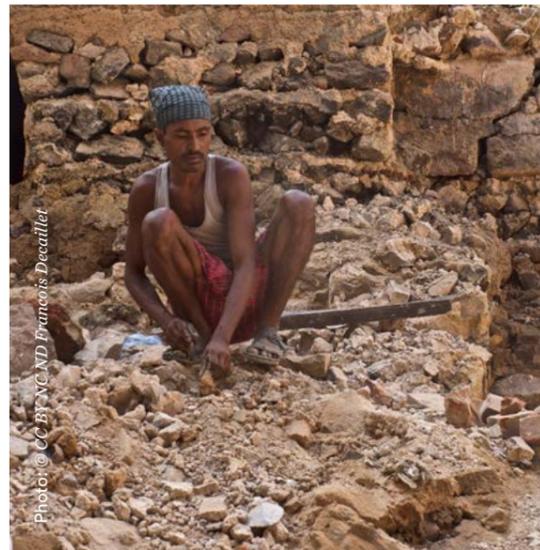


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Photo: © CC BY Title Mathinen

However, this is a short-term solution, impractical to apply on a permanent basis. Crop burning adds to the equation. Burning agricultural residues is a common feature in Delhi and surrounding states like Uttar Pradesh, Punjab, Rajasthan and Haryana. Farmers set fire to the standing straw to clear the fields.

The standard for PM10 is 100 µg/m³, and for PM2.5 60 µg/m³. These were found to be utterly violated after the Diwali festival in 2016: PM10 was recorded as 1,690 µg/m³ and PM2.5 as 885 µg/m³ at Anand Vihar, Delhi. The average values in Delhi were 950 µg/m³ for PM10 and 590 µg/m³ for PM2.5 on 30 October 2016. This led to the Tribunal framing emergency measures that must be undertaken without delay when the parameters reach such dangerous levels. These include sprinkling water from helicopters all over the city and other areas where pollution levels are found to exceed the standards, directing the shutdown of all stone crushers working in the area, and temporarily stopping all construction and demolition activities and transport of construction material until ambient air quality is brought down below severe pollution levels.

Sustainability is the keyword for our times. Development and environmental protection need to be seen as complementary to one another. An either/or approach will only bring about further destruction. As the great nature writer, Henry David Thoreau, aptly stated: "What is the use of a house if you haven't got a tolerable planet to put it on?". The Tribunal's experience in adjudicating these cases has been that there is poor execution of its judgments. The limbs of the state machinery fall short in curbing the menace of environmental pollution caused by industrial and other activities due to lack of coordination between them; lack of information and knowledge about the effects that our activities are having on the environment is another challenge; and ignorance of the various statutes, rules and orders is detrimental to their enforcement. In a country as diverse as India, environment protection cannot be ensured by the Government alone. It needs to be a collective effort where Government and the people come together. In India's

In a country as diverse as India, environment protection needs to be a collective effort where Government and the people come together.



Photo: © CC BY SA M M

constitution, three provisions combine to form an environmental triangle. Article 21 ensures the right to a clean and decent environment, Article 48A puts a duty on the State to protect and improve the environment and Article 51A(g) casts a responsibility on the citizens of the country to protect and improve the natural environment. If these provisions are implemented in their true letter and spirit, a healthy nation free of environmental transgressions is not far away. ▲

UN Environment at Work

Making environmental law work for planet and people



Violations of environmental law, including environmental crimes, can undermine sustainable development and the achievement of agreed goals and objectives at all levels. Though hundreds of treaties, national laws and regulations exist to address environmental problems, there are major challenges when it comes to implementing and complying with them. The fifth Global Environment Outlook reported, for example, that significant progress has only been made on four of the 90 most important global environmental goals and objectives. The consequences of this shortfall can be seen in the increasing environmental pressures from climate

change, biodiversity loss, water scarcity, air and water pollution, and soil degradation, among others. These environmental impacts all have far reaching economic and social consequences and contribute to poverty and growing social inequalities.

The risks of violent conflict increase when exploiting natural resources causes environmental damage, loss of livelihood, or an unequal distribution of benefits. In fact, at least 40 per cent of internal conflicts over the last 60 years have a link to natural resources. Poor people are especially vulnerable, as are women and girls. Conversely, natural

resources that are managed sustainably, transparently, and on the basis of the rule of law, can be the engine for green growth and sustainable development – as well as a platform for peace and justice. But, if this is to happen, the environmental rule of law must be promoted and strengthened at all levels, including through significantly enhanced investments and increases in the capacity of all those critical to implementing it.

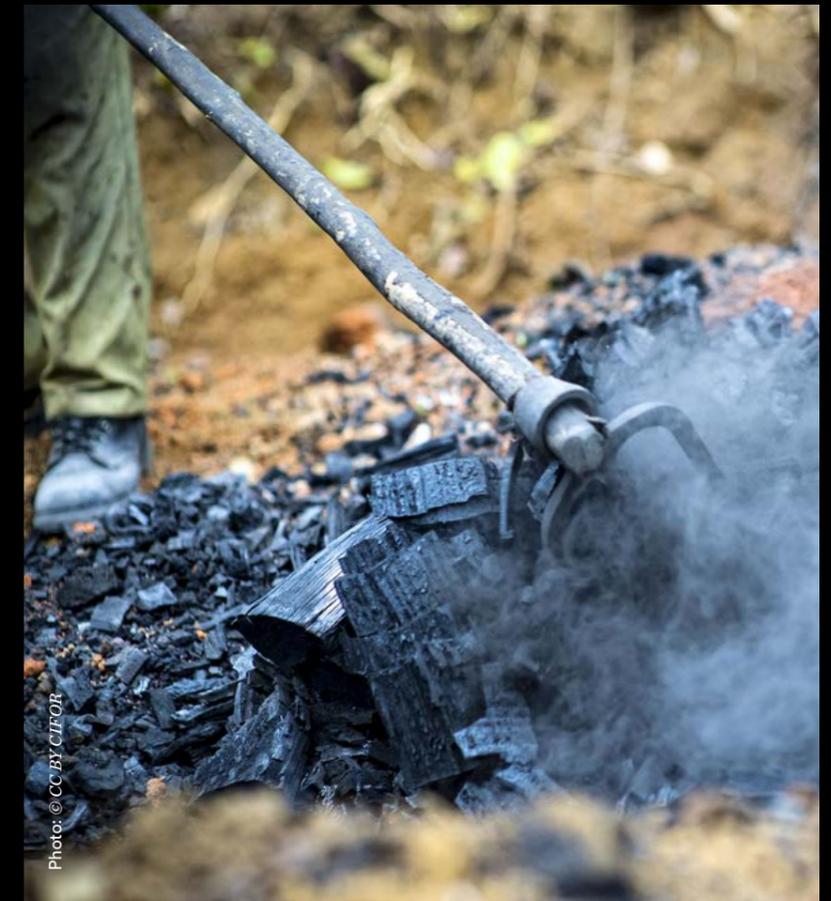
UN Environment can point to an increasing number of examples from its work around the world that make clear how essential the environmental rule of law and

sound institutions are to societies faced with increasing environmental pressures. It supports courts and other tribunals, law enforcement agencies, auditing institutions and other stakeholders at national, sub-regional, regional and international levels. UN Environment has played an important role in supporting efforts to create specialized environmental courts and tribunals, and ‘green benches’. Today there are over 1,200 environmental courts or tribunals in 44 countries at the national or state/provincial level, and about another 20 countries are discussing or planning them. This trend is partly being driven by public dissatisfaction with existing general judicial forums in addressing environmental disputes.

Environmental crime is now the world’s fourth largest illicit enterprise after drug smuggling, counterfeiting and human trafficking and has outstripped the illegal trade in small arms. Yet a common belief that it is a softer crime than these still persists. As Mr. Tony Oposa, President of the Law of Nature Foundation in the Philippines, put it during the inaugural session of United Nations Environment Assembly: “There still exists a general misperception that environmental crime is somehow a lesser offence than other types of crime. On the contrary, environmental crimes that involve pollutants and the disposal of hazardous wastes can destroy local economies and damage human health inter-generationally.”

This misperception is slowly being corrected through the work of UN Environment, in partnership with INTERPOL and others. Last year, INTERPOL and UN Environment surveyed close to 70 countries for a joint report looking at the convergence of threats around environmental crime, peace and security. More than 80 per cent of the participating countries considered environmental crime to be a national priority, with most saying that new and more sophisticated criminal activities increasingly threaten peace and security. In addition, 84 per cent reported a convergence with other serious crimes, such as corruption (42 per cent), counterfeiting (39 per cent), drug trafficking (36 per cent), cybercrime (23 per cent) and financial crime (17 per cent).

Around 98 per cent of the net profits from illegally exploiting natural resources – particularly gold, charcoal and timber – in the eastern part of the Democratic Republic of Congo go to transnational organized criminal networks operating in and outside the country. This finances over 25 armed groups directly operating in the conflict zone. These resources could have been used to build



Around 98 per cent of the net profits from illegally exploiting natural resources – particularly gold, charcoal and timber – in the eastern part of the Democratic Republic of Congo go to transnational organized criminal networks operating in and outside the country.

infrastructure, hospitals and schools, but instead exacerbate and spread further misery for people and communities.

Environmental crime is complex, multifaceted and growing at such alarming rates that it requires a multi-sector response underpinned by collaboration across borders. That is why UN Member States have mandated UN Environment to lead the United Nations system – and to support national Governments on their request – in developing and implementing the environmental rule of law. The goals must be to recognize and address environmental crimes as a serious

threat to peace and sustainable development; to strengthen the environmental rule of law at all levels; to improve legislation at international and national levels; and to increase capacity building and technological support so as to enhance enforcement and adjudication capacities in the area of environmental crime. UN Environment is committed to delivering results for people and the planet, by helping to provide just and sustainable development and by increasing the resilience of the poor and vulnerable to environment-related extreme events. The environmental rule of law is critical to achieving this aim. ▲

Wang Beijing

Delivering on the mission

How China meets its international commitment to halt the illegal wildlife trade.



Wang Beijing

Deputy Director of the International Enforcement Cooperation Division, Anti-smuggling Bureau, General Administration of China Customs

“No matter how minuscule or how vast, only protection will make them last. We need to help the ones that can’t help themselves, because they become extinct so fast.”

Wildlife diversity makes our earth different. However, what is rare is also precious and profitable. China Customs, as an administration at the border, is committed to its mission of wildlife protection and will continue to forge ahead with it.

China implemented the Convention on International Trade In Endangered Species of Wild Fauna and Flora (CITES) in 1981. Ever since, China Customs has endeavoured to protect wildlife through cracking down on smuggling. Its staff, intelligence, machines and dogs provide the most important support for frontline officers at the border.

The quality of personnel is essential. China Customs organizes capacity-building on how to recognize endangered species jointly with UN Environment, the CITES Secretariat and its China Office and non-governmental organizations such as Traffic and WWF in order to raise frontline officers’ awareness. This helps these officers to be familiar with the convention and the species in its annexes, particularly as the annexes change from year to year. They are more alert in making inspections when they have seen actual samples.

Intelligence makes customs smart. As international trade develops, the volume of cargoes, parcels and passengers grows rapidly. In 2015, the value of China’s imports and

exports was 24.6 trillion yuan, compared to 3.9 trillion yuan in 2000. Needless to say, the number of parcels grows even faster with the development of e-commerce. Customs officers need to work smartly, using our intelligence, in the face of such challenges.

China Customs has built up an intelligence database to profile high-risk consignments. It accommodates such different sources of information as entry and exit records, suspicious activity reports, the customs declaration system, and the pool of cases, thus enabling customs intelligence analysts to construct profiles based on different types of crimes.

If an analyst wants to work on the smuggling trend for pangolin scales, for example, he or she will look at the most abused route of trafficking, the modus operandi and online shopping – and then may issue an intelligence report to help frontline officers pick up high-risk flights and routes, and consignments for further inspection. Thus intelligence profiling at the border by Shanghai Customs on 10 December, 2016 identified for inspection a high-risk container imported from Africa. X-ray scanning produced an abnormal, uneven image for the container, whose contents were declared as African afzelia and Customs decided to make a physical inspection. When the container was opened, 101 bags containing 3.1 tons of pangolin scales were found to be piled up behind some afzelia wood – the biggest such haul ever detected by China Customs.

Machines are helpful tools, and innovation and new technology is shaping the future and changing the world. Customs will adapt to new trends and use new technologies to free our hands and improve efficiency. X-ray machines – particularly 3D scanning technology – are quite efficient and effective in helping identify contraband. China Customs has placed 286 large-scale machines at sea ports and 2,000 small ones at



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“No matter how minuscule or how vast, only protection will make them last. We need to help the ones that can’t help themselves, because they become extinct so fast.”

*In 2016, China Customs filed **138 wildlife smuggling cases** in 2016, leading to the seizure of a record **398 tons of controlled species.***

airports and land borders to help raise the efficiency of its inspections. In future, China Customs will use robots and small unmanned aerial vehicles for making inspections and collecting intelligence.

Dogs are friends of China Customs, which has three centres providing detection dog training. We pioneered such training to identify ivory, and deploy dogs in some big ports and airports. On March 27, 2014, one of them, called ‘Jinli’, made the very first detection of ivory at Guangzhou Airport, the first of 16 that year. China Customs will train more wildlife detection dogs in future.

Besides its frontline officers, China Customs has a special task force, the Anti-smuggling Police, authorized by the state to investigate wildlife smuggling cases. In 2016, the Anti-smuggling Bureau of China Customs filed 138 such cases, leading to the seizure of 398 tons of controlled

species, setting a new record. The bureau strengthens cooperation and synergies with the CITES Secretariat, UN Environment, the CITES China Office, INTERPOL and the other domestic and foreign law enforcement agencies in order to crack down effectively on wildlife smuggling.

In 2015, based on internet analysis, China Customs identified a syndicate smuggling cacti from Germany. The smugglers transported the cacti from the USA to Europe and sold them on the internet; after being purchased online they were sent to China in parcels. The Anti-smuggling Bureau shared the information with the German Customs Investigation Bureau and worked with them closely for almost a year – despite a six-hour time difference between the two countries – fixing the time for a joint operation which led to the seizure of 1,400 pieces of cacti and seven smugglers.

As wildlife smuggling is a transnational crime, the Anti-smuggling Bureau cooperates with many enforcement agencies through intelligence sharing, mutual assistance, joint operations, and repatriating fugitive criminals and wildlife – and organizes and participates in many international or regional joint operations. Last year, it received a Clark R. Bavin Wildlife Law Enforcement Award – for the third time – at the CITES conference of the parties in Johannesburg in recognition of China Customs’ great contribution to wildlife protection.

The problem of wildlife smuggling cannot be solved unilaterally. It requires synergy between countries of origin, countries of consumption and countries of process. In Chinese philosophy, we believe that everyone belongs to one family in a united world and that everyone should take responsibility. The Chinese Government’s zero tolerance for the ivory trade reveals its attitude, and China Customs is ready to take on the task and deliver on the mission. ▲

Zakaria Arshad

Ethical business works best

A personal journey to sustainable social and economic development and conservation in compliance with the law.



Zakaria Arshad
 Director and Chief Group President and Chief Executive Officer, Felda Global Ventures, Malaysia

Forty-four years ago my parents joined the Government of Malaysia's settler programme administered by the Federal Land Development Authority (FELDA), a decision that has had a big influence on my life, right up to today.

FELDA was formed in 1956 to reduce poverty. It resettled people and provided them with incomes through cultivating rubber and oil palm with its assistance and World Bank funding. By the time large-scale settlement ended in 1990, the programme had helped resettle 114,400 households, cultivating 853,313 hectares in 12 of the 13 Malaysian states. Each family received a 0.25 hectare housing lot and 4 to 6 hectares of land.

It was hard going because these new settlements were in rural areas far from cities, but FELDA provided the necessary amenities and facilities: retail stores, police stations, schools, mosques and other places of worship, community halls, roads, health clinics, women's associations, public libraries, youth clubs and playgrounds. From humble beginnings, the scheme has successfully raised settlers' incomes well above the \$300 a month national poverty line to a current average of \$700 a month.

FELDA helped settlers market their produce through a network of supply chains provided by its departments. These evolved to become corporations and/or subsidiaries of a company – Felda Holdings Berhad – that it established and exclusively owned. My first job was as an administrative assistant in FELDA in 1984. In the 1980s the original settlers were given a stake in the business. FELDA completely repaid the World Bank's loans before their full term.

In 2007 Felda Global Ventures (FGV) was incorporated, mainly to acquire an international downstream business and diversify FELDA's portfolio. The original settlers, including my parents, are the beneficiaries of a trust that owns 20 per cent of the shares in FGV and thus complements their income.

FGV is now the world's largest producer of crude palm oil, producing more than 3 million tons annually. It continues to source oil palm from the smallholder lands managed by FELDA (which forms almost 35 per cent of our supply base) and remains committed to sustainable production, ensuring that we can increase productivity whilst taking into account the need to safeguard the natural environment as well as the land and our people.

FELDA and FGV take environmental crime seriously. We believe in putting in the extra effort to ensure we comply with all relevant laws and regulations. There are

My views and perspectives have been shaped by an organization that continues this sustainable journey to uplift people's lives.



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no shortcuts for our organization: non-compliance in any legal, social or environmental requirement is both myopic and counterproductive in the long run.

We take every step to ensure that land is not cultivated at the expense of local communities or the environment, through obtaining approvals from the Land Department to ensure designated land is free of social encumbrances; from the Department of Agriculture to ensure soil suitability; and from the Department of Forestry and Geology to ensure no sensitive area is touched. Only designated areas are considered for economic development.

Despite such caution, FGV has faced challenges in managing some areas it reserved for conservation. A local community encroached into High Conservation Value peatland, for example, at one of FGV's properties in West Kalimantan. We have engaged an independent party to study the extent of the damage, and appointed a social mediator to consult with the local people and government to achieve a mutually acceptable solution.

FGV has an immense responsibility to ensure that it has minimal impact on the environment, especially surrounding our estates. Such activities as reducing soil erosion, managing waste, and using a suite of bio-controls to control pests and protect water bodies have long been among our practices. We have almost 100 researchers specialising in biology, biotechnology and applied technology primarily engaged in:

1. Producing plant materials to increase production, including molecular research to supply specific traits such as high yield, low height increment, and tolerance to drought and Ganoderma (a fungus).
2. Minimizing the use of agrichemicals through integrated pest management services, including advising on the latest methods in managing pests and disease.
3. Offering agronomic advisory services for Good Agricultural

- Practices that minimize the use of fertilizers and natural resources in order to reduce environmental degradation.
4. Providing laboratory analytical services to maintain soil fertility through using quality organic and inorganic fertilizers.

The settlers and smallholders are the ultimate beneficiaries of these efforts to increase yield, enhance operational efficiency and reduce overall costs. Ultimately, we endeavour to produce more with less, thus reducing our environmental footprint.

We have been a member of the Roundtable on Sustainable Palm Oil (RSPO) since 2003 and were amongst the first few to test its Principles and Criteria for sustainable palm oil. In 2010 we became the first smallholder organisation in the world to achieve RSPO certification. So far we have certified 60,000 smallholders under FELDA's RSPO membership, almost one-third of the total certified globally. Despite having to withdraw some RSPO certifications due to non-conformities in its supply base, FGV has committed to certify all of its 71 mill complexes by 2021. Realising that we could not solve some sustainability and social compliance issues by ourselves, we initiated – and participated in – roundtable discussions with industry peers, NGOs and regulatory agencies to find pragmatic solutions.

Independent smallholders outside FELDA schemes are brought into sustainable practice by the constant engagement of external parties such as our joint venture partners (Procter & Gamble), smallholder organisations, NGOs, private plantation companies and governmental agencies.

We measure and reduce our carbon footprint and, in 2016, cut the emissions from 15 biogas plants by a total of 87,429 tons of carbon dioxide equivalent. We established the country's first biomass power plant in Sabah in 2011 and were the first company in Asia to receive International Sustainability and Carbon Certification (ISCC), which meets the requirements of the EU Renewable Energy Directive.

FGV works with FELDA to ensure that other environmental issues – such as waste management, Biodiversity and High Conservation Value – are given due attention, and engages the National Wildlife Department, Malaysian Nature Society, Borneo Conservation Trust, National University of Malaysia and the Forest Research Institute of Malaysia to encourage environmentally sound practices among communities surrounding the plantations.

My opportunities in life have been influenced largely by how my family worked the estate that FELDA helped establish. My views and perspectives have been shaped by an organization that continues this sustainable journey to uplift people's lives. Our diligence in complying with relevant legal, social and environmental requirements – combined with our commitment to technology and improvements of agricultural practices – has enabled FGV and smallholder families to develop land sustainably over the long term. I am personally humbled by the magnitude of the responsibility to give something back to this organization that has given so much to me, my parents, siblings, the socially disadvantaged and the nation. ▲

Clare Perry

Smuggling destruction

The illegal trade in ozone-depleting substances and greenhouse gases should be much higher on the international agenda.



Clare Perry

Climate Campaign Leader, Environmental Investigation Agency (United Kingdom)

It was a warm July day in 1997 when a fax arrived at the London headquarters of refrigerant company Trans-Cool Trading from a Chinese chemicals supplier. It was sent in response to an enquiry about the possibility of importing banned chlorofluorocarbons (CFCs) into Europe.

The fax stated: “Frankly speaking, we are supplying F-12 overseas. However, some clients ask us to reduce purity and make F-12 like to be [sic] recycled for the sake of import licence. The above is our secret between you and me. Do not leak it out.”

Unfortunately for the sender, Trans-Cool Trading was a false-front company set up by the London-based Environmental Investigation Agency as part of an undercover investigation to gather evidence on illegal trade in ozone-depleting substances (ODS). Rather than securing a business deal, the offer was published in a report launched at a Montreal Protocol meeting in September 1997, helping to secure an agreement to licence ODS trade.

Global alarm over damage to the ozone layer led to the signing of the Montreal Protocol on Substances that Deplete the Ozone Layer in 1987. Starting with the most potent ODS, the treaty has successfully phased out 98 per cent of them and put the ozone layer on the path to full recovery by 2070.

Despite its success, the Protocol’s track record has been undermined by illegal global ODS trading. Ironically, this has chiefly resulted from one of the Protocol’s most lauded

elements: the concept of common but differentiated responsibilities, which allows developing countries more time to phase out the substances. In creating differing schedules, the architects of the Protocol unwittingly created the conditions for a black market.

The first cases of illicit CFC trade emerged in the mid-1990s. Production and imports of new CFCs were banned in developed countries but a large bank of equipment relying on them still remained, providing a market. Recycled and recovered CFCs were legal but expensive, while a dramatic rise in CFC production in China and India produced large quantities of cheap virgin materials for unscrupulous traders. At the time, it was estimated that 20 per cent of the global CFC trade was illegal.

Our investigations into ODS smuggling have led to Spain, the India-Nepal border, Singapore and China, raising awareness of the scale of the trafficking and assisting law enforcement agencies in understanding smuggling methods and routes.

Despite licensing, training and enforcement efforts, illegal trade persists to this day, driven by high profits and low risks. The focus is now on hydrochlorofluorocarbons (HCFCs), less potent ODS produced as transitional replacements for CFCs. Developed countries have nearly completed the phase-out of HCFCs but developing countries have only started it, aiming for a 35 per cent reduction by 2020. With accelerating demand for refrigeration and air-conditioning, HCFC use is three times greater than peak CFC production so the scale of HCFC illegal trade is likely to be correspondingly larger.

The methods used to smuggle CFCs – false labeling, mis-declaration of documents, concealment, fake recycled materials and transshipment fraud – are now used to trade



Even though all life on Earth depends on the ozone layer, refrigerant smuggling gets less attention than other major transnational crimes such as drug trafficking.

illicit HCFCs. An estimated 50-70 per cent of refrigerants are shipped in large containers, such as ISO tanks, presenting a new enforcement challenge as inspection and detection measures have previously focused on smaller cylinders.

Meanwhile there are still seizures of CFCs, despite their being officially phased out in 2010. In July 2015, two containers with almost 600 canisters of CFCs and HCFCs were confiscated in Rotterdam in transit from China to Russia. Other recent CFC seizures have taken place in the Solomon Islands, Uzbekistan, Belarus, Turkmenistan, Micronesia, Russian Federation and the Philippines.

Since production is meant to have ceased, where are these CFCs coming from? One potential source is the increasing manufacture of these chemicals for feedstocks, exempt from Montreal Protocol phase-out controls: more than 170,000 tonnes of CFCs and 711,000 tonnes of HCFCs were used as feedstock in 2014. This exemption means that countries can continue to produce large quantities of cheap ODS while their use in refrigeration and other ‘emissive’ applications is banned. Since alternative new refrigerants inevitably cost more, there are clear incentives for illegally diverting feedstock.

Last October, after almost a decade of discussion, the Montreal Protocol adopted an amendment to phase down hydrofluorocarbons (HFCs), non-ozone depleting greenhouse gases commercialised as ODS substitutes. The Protocol has arguably already done more to address climate change than any other treaty, as CFCs and other ODS are also potent greenhouse gases and the new phase-down has the potential to avoid almost half a degree of warming

by the end of the century. However, its formal entry into the climate world brings new challenges, not least that countries will have to address controlling HCFCs and HFCs simultaneously.

When developing countries began phasing out HCFCs in 2013 they had already completed the CFC phase-out three years before. The new HFC amendment requires them to cap and phase down HFCs from 2024, when they will be about half-way through the HCFC phase-out. HFC controls will be based on measurements of carbon dioxide equivalency while HCFC controls are formulated on their ozone-depleting potential. And the HFC amendment envisages a phase-down to a level of 15 per cent of the baseline, rather than a complete phase-out of the chemicals. All this adds considerable complexity to enforcement.

Illegal HFC trade has already been identified in Europe, where a phase-down began in 2015. One industry player estimates that HFCs with a warming potential equivalent to more than 10 million tonnes of CO₂ were illegally placed on the EU market in 2015, representing 5 per cent of the total quota.

Even though all life on Earth depends on the ozone layer, refrigerant smuggling gets less attention than other major transnational crimes such as drug trafficking. Illegal ODS trade both threatens the recovery of the ozone layer and exacerbates climate change – just one tonne of CFC-12 has the same impact as 2,300 cars driven for a year. The Parties to the Montreal Protocol will need to rise to these new challenges, apply the lessons learned from over two decades of smuggling and place illegal trade much higher up the agenda if they are to be assured of success. ▲

Just one tonne of CFC-12 has the same impact as 2,300 cars driven for a year.

Faridah Hussein Were Take the Lead on Lead

The toxic metal has devastating health effects, even at low levels of exposure, and must be tightly controlled.



Faridah Hussein Were

Lecturer in Chemistry, University of Nairobi, and Chairperson of the Technical Committee of the Kenya Bureau of Standards on Developing Standards on Paints and Allied Products.

Environmental injustices are mostly experienced by low income groups who are at the receiving end of poor technologies and banned chemicals, and whose main pre-occupation is survival. They handle unknown chemicals using their bare hands, and lack sufficient knowledge of their toxicity. In most cases, the chemicals pose significant health risks to them, their families and nearby communities. The resulting chemical wastes are disposed of directly into the immediate environment. There is little regulation, and access to state social protection, training and social services is limited.

Lead is a very common heavy metal because of its widespread use. Airborne lead is highly persistent in the environment and settles down as dust. It is easily inhaled and ingested, contaminates soil and water and enters human bodies through various food chains.

Lead poisoning incidents involving a poorly controlled battery recycling facility occurred recently in Mombasa, Kenya. The contaminated site requires considerable resources to clean it up, in addition to the cost of medical treatment for those affected, and the long-term legal and socio-economic consequences of loss of life.

Much of the exposure to lead comes from human activities such as manufacturing paints, openly burning materials containing lead, and recycling and manufacturing lead acid batteries. Removing lead from gasoline resulted in a substantial global decline in its levels in blood worldwide, but exposure to the metal in paint is one of the most common causes of clinical toxicity.

Lead paints are widely used thanks to their low cost, good covering power, durability, colour and drying properties. In developing countries, they are mainly used in homes, schools, toys, furniture, playground equipment, industry automobiles and road markings. The painted surface deteriorates over time, peels off and become airborne. Motor vehicle works involving sanding of painted surfaces and welding is another source of exposure. Renovations, demolitions and re-painting activities can also produce dust containing lead. In addition, raw materials in powder form usually become airborne during paint manufacturing, and are blown by the wind.

The World Health Organization (WHO) and other health authorities have acknowledged lead's health impacts, even at very low levels of exposure. The toxic metal is responsible for 674,000 cardiovascular deaths annually. It also affects the IQ of children, with irreversible social and psychological impacts. The estimated loss of IQ points due to preventable childhood lead exposure is projected to cost African nations 4 per cent of their Gross Domestic Product. WHO estimates that about 99 per cent of people affected by lead poisoning are from developing countries. Malnutrition exacerbates absorption of the metal. Developing foetuses are at risk, since lead passes through

Lead poisoning poses long-term health and environmental challenges, and can significantly delay economic and social development.



Photo © UNEP

the placenta. Children under 6 years of age absorb five times as much lead as adults, partly through being outside, hand-to-mouth activities and not having fully developed hygienic habits. It is also partly because of their increased metabolism and the fact that their brain barriers and other essential biological systems are not fully developed.

In general, without intervention, lead poisoning poses long-term health and environmental challenges, and can significantly delay economic and social development. The Global Alliance to Eliminate Lead Paint – a voluntary partnership under the leadership of WHO and UN Environment – is geared towards phasing out lead in paint by 2020. The alliance focuses on establishing legal limits and regulatory frameworks – including compliance, monitoring and

enforcement – to control the manufacture, import, export, sale and use of lead paints and products coated with lead.

Phasing lead out of paint is possible since cost-effective non-lead alternatives are readily available on the market.

About 99 per cent of people affected by lead poisoning are from developing countries.



Photo © UNEP

Phasing lead out of paint is possible since cost-effective non-lead alternatives are readily available on the market. Quite a number of small and large scale manufacturers across the world are successfully reformulating their products. Paint manufacturers are urged to voluntarily produce paint containing less than 90 ppm of total lead content.

It is relatively easy for developing countries to switch to non-lead raw materials since they import these materials, although they may face technical challenges and lack of awareness. More public health resources must therefore be directed to intervention strategies in these countries, along with relevant research to enable paint manufacturers and suppliers to fulfil their responsibilities.

By joining the Lead Paint Alliance and actively supporting the global effort to eliminate lead in paint, individuals, organizations and companies advocate for environmental justice. This will result in more sustainable development with increased economic benefits and reduced costs in terms of healthcare, productivity losses, intellectual disability, and exposure to legacy paint – and ultimately a lead-free world. ▲

Christian Nellemann

Undermining progress

The rise of environmental crime threatens peace, development and security.



Christian Nellemann
Head of RHIPTO Rapid Response, Norwegian Center for Global Analyses

In 1990, at the end of the bush war in Angola and Namibia, we fought criminals and militants involved in trafficking natural resources, who were hiding from the government and police. Of course both these authorities harboured some corrupt individuals: we vividly recall handing over armed suspects to a local police chief in an African border town, only for them to be let out again – with their assault rifles – the day after we left. But now things have changed for the worse.

In 2003, during Nepal's civil war, when investigating the killing of rhinos, I recall having to abandon all our gear in a small hotel and move quietly through another border town, where I knew we had no allies, no one we could trust, since criminals and rebels were colluding with a minister and his handpicked corrupt police officers. The people involved formed opposing parties in the war, yet collaborated on killing rhinos and trafficking their horns, at \$75,000 apiece.

Two years later in a dusty desert town in another country that was a transit centre for shahtoosh wool from slaughtered chiru antelopes, we were faced once again by a mix of corrupt police officers, government agents, bandits and militants. Some took the money to go and fight against a government in a neighbouring nation. Later we found the shahtoosh scarves for sale in the middle of a top-end shopping district of one of Europe's finest capitals.

It has become much harder to identify what we used to call the bad guys. In many situations recently, we no longer had a clue who was after us, though their intent and hostility,

along with their arms, were all too real. But the enemy has developed from merely a few corrupt individuals collaborating with criminals – whether over illegal timber, drugs or minerals – to the proliferating growth of non-state armed groups, organized crime, state officials and even governments and heads of state. Indeed, the smuggling business may finance, even drive, conflict.

Not everything is dark. Development is progressing, albeit not as fast or broadly as is sometimes hoped. There have been improvements in the quality of life by almost any measure, including reductions in poverty and increasing health and access to clean water. Most of this progress has come through dedicated efforts by heads of state, governments, the public, individuals, civil society and a free press – all reinforcing each other. Yet these achievements – based on well-functioning societies and collaboration both within nations and across borders – are being challenged. The last decade has seen an unprecedented rise in threats to peace, security and development.

We all depend on access to credible information, trust in government and the condition of peace – imperative to any sustainable development. The Sustainable Development Goals – to which heads of state, and their nations, are demonstrating commitment – are aspirations intrinsic to every life: peace, prosperity and the hope for a better future, a belief and longing for happiness, trade and sharing common values across the globe. Yet these foundations are fragile and can be eroded. Terrorism, armed conflict and the lack of inclusive access to prosperity and development are triggering unforeseen migrations and flows of refugees. Threats to the environment endanger health, livelihoods and business opportunities, and are exacerbated by the exploitation of natural resources, which increasingly benefits the mix of criminals, corrupt individuals, armed groups and terrorist organizations that have taken over environmental crime.



Photo: © Durren Potgieter

Natural resources – ranging from oil, minerals, gold and timber, to fisheries and wildlife – are a source of development and revenues, and create livelihoods from extractive industries to tourism. Managing them sustainably is critical not just for food production, human health and business development, but for supporting prosperity and inclusive development.

Yet, unless challenged, the new convergence of threats behind rapidly growing environmental crime will undermine the progress that has been made and may deflect hopes of future success. Non-state armed and terrorist groups see extracting, taxing or trafficking natural resources as a way to reach political and religious goals, though they sometimes allow the financial gains to supersede their political objectives. There are many examples. Islamic State has been funded chiefly through extortion, taxes and oil smuggling. Al Shabaab was mainly financed by the illicit charcoal trade. Over 25 rebel groups in the eastern Democratic Republic of Congo help facilitate the extraction and smuggling of such natural resources as gold, 3T minerals (tin, tantalum and tungsten) and timber worth upwards of \$1 billion annually; the profits largely go to a small group of organized criminals. And drug cartels in Latin America are realising that illegal logging can become a lucrative and far less risky source of revenue. As these non-state armed groups diversify, they broaden their traditional sources of income from drugs and kidnapping to environmental crimes, as well as to migrant trafficking and cyber and financial crimes.

Transnational organized crime infiltrates and undermines governments, collaborates with non-state armed groups and not only robs governments and countries of much needed revenue for education, infrastructure and health-care, but deprives citizens and legitimate businesses of a sustainable future. Already some countries and legitimate governments are endangered by the proliferating influence

Timely information and the capacity to share it on issues which transcend national jurisdictions will become critical for the United Nations and its member states.

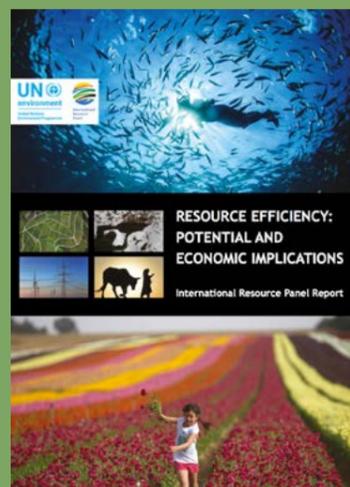
of criminal actors engaged in illegal natural resource extractive industries.

As the world converges on the importance of the Sustainable Development Goals, the need for improved information and analysis becomes even more essential if threats to peace and security are to be prevented and acted on early. The rising diversification and proliferation of organized crime, armed groups and corruption – as highlighted by both the UN Security Council and INTERPOL – may undermine sustainable development, and even destabilise nations, more than ever.

The scale and range of the threat is new, and must be met. The importance of a free and critical press, and of access to improved information on environmental and natural resources crime, will only increase. The ability to act upon, intervene or prevent serious threats to peace, development and security is intrinsically linked to improving our capacity to provide timely information. Improving the capacity for sharing it on issues which transcend national jurisdictions and borders will become critical for the United Nations and its member states.

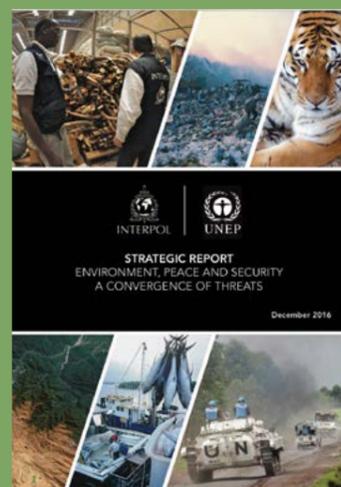
Only through an enhanced ability to provide timely analysis and identify early signs of threats to peace and development can we hope to achieve early intervention and prevention. Understanding the underpinnings of conflicts is often the key. The transnational and sometimes covert nexus of organized crime, armed groups, corruption and state actors will require entire new ways of collaborating – and responding. The United Nations, and its member states, need to strengthen their intelligence capacities to penetrate these entities, and prevent negative forces from benefiting from exploitation of natural resources and threatening state security and development. We cannot afford to remain blinded, or to react too late. ▲

UN Environment Publications



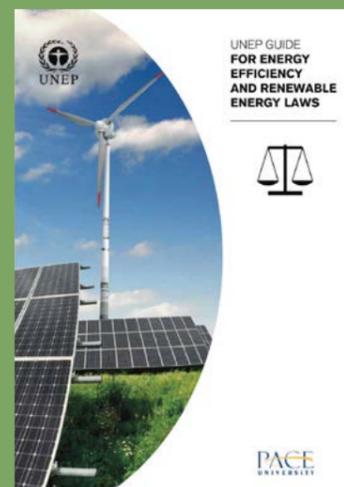
Resource Efficiency: Potential and Economic Implications

This report analyzes four paths that countries could take over the next three decades, ranging from business as usual to a scenario where countries adopt both ambitious climate policies and improve resource efficiency. It finds that smarter use of resources can add \$2 trillion annually to the global economy.



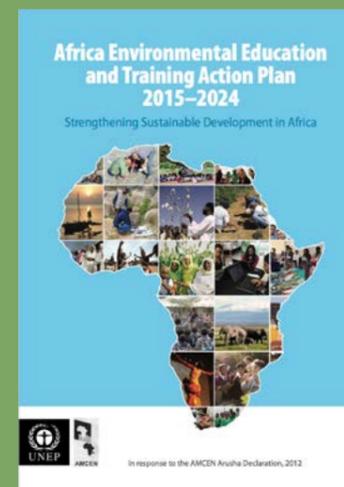
Environment, Peace and Security: A Convergence of Threats

This report summarizes some of the key areas in which INTERPOL and UN Environment are developing their strategies and activities to counter environmental crime – a collective term describing any illegal activity carried out by a criminal entity to generate profits, which results in harm to our ecosystem, by damaging environmental quality, hastening biodiversity loss, and depleting natural resources.



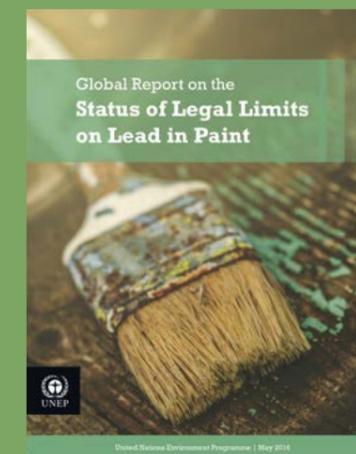
UNEP Guide for Energy Efficiency and Renewable Energy Laws

The Guide describes the key legal issues associated with efficiency and renewable energy resource development, and presents legislative options from both developed and developing countries for dealing with them, including sample excerpts from legislation.



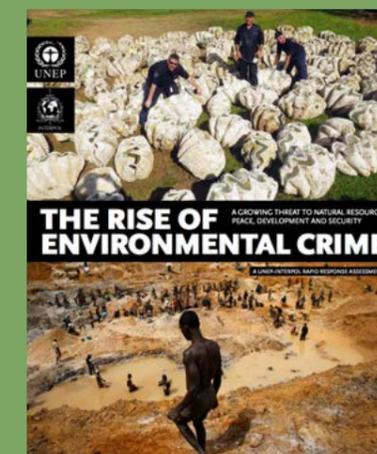
Africa Environmental Education and Training Action Plan 2015-2024: Strengthening Sustainable Development in Africa

The main objective of the Africa Environmental Education and Training Action Plan (AEETAP) is to enhance community environmental education and training within the continent, through various formal education, training, lifelong learning and capacity building programmes and projects, encouraging participation of both males and females equally. These programmes and projects are envisaged to fundamentally improve the environmental, societal and economic state of Africa for the benefit of Africa's people, and are closely aligned to the five AMCEN flagship programmes.



Global Report on the Status of Legal Limits of Lead in Paint

This report provides a global overview on the progress of countries in passing laws and regulations that limit the manufacture, import, export, sale and use of lead paints. It also illustrates a range of legal approaches that attempt to limit the use of lead-containing paint. In so doing, it becomes a valuable reference for countries seeking to establish their own laws and regulations on lead in paint.



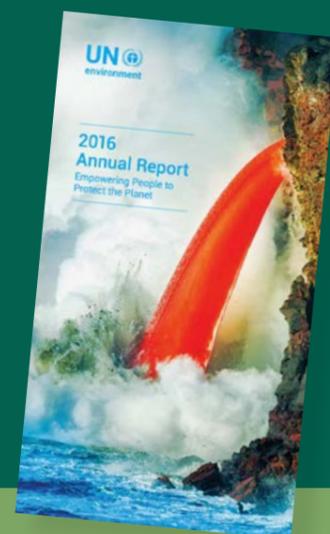
The Rise of Environmental Crime

The environment provides the very foundation of sustainable development, our health, food security and our economies. Ecosystems provide clean water supply, clean air and secure food and ultimately both physical and mental wellbeing. Natural resources also provide livelihoods, jobs and revenues to governments that can be used for education, health care, development and sustainable business models. The role of the environment is recognized across the internationally agreed seventeen sustainable development goals adopted in 2015.

UN Environment Annual Report 2016 – Engaging People to Protect the Planet

The report describes the organization's work for the year, highlighting successes and major accomplishments. It includes important updates on our work to combat climate change, protect critical ecosystems, and promote stable and healthy societies, among many other activities.

An extended version of the report is also available online: <http://web.unep.org/annualreport/2016/>



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WITHOUT NATURE,
WHAT DO WE HAVE?

—
#WithNature

THIS YEAR'S WORLD ENVIRONMENT DAY IS ASKING EVERYONE, EVERYWHERE TO SAY "I'M WITH NATURE". JOIN US ON JUNE 5 AND TOGETHER WE CAN MAKE THIS YEAR'S CELEBRATION THE BIGGEST EVER.