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Council must do more to protect civilians in armed conflict – UN rights chief



Civilians fleeing after the Lord's Resistance Army destroyed homes and schools in northeastern DRC

11 November - The United Nations human rights chief today called on the Security Council to put more muscle into protecting civilians in armed conflict, citing Israel's war in Gaza and the situations in Darfur, the Democratic Republic of the Congo (DRC) and Afghanistan as examples of the need to end impunity.

“To be effective in the protection of civilians, the Council must consistently work to ensure accountability for perpetrators of war crimes, crimes against humanity and other gross violations of human rights,” High Commissioner for Human Rights Navi Pillay said in a statement delivered by Deputy High Commissioner Kyung-wha Kang.

“The establishment of tribunals for the former Yugoslavia, Rwanda and elsewhere, as well as the referral of specific cases to the International Criminal Court, have helped to send an important signal that even in the ‘fog of war’ impunity is not assured,” she added, stressing that “the corrosive effect of impunity on both human rights and peace” was clearly documented by the UN fact-finding mission's report on the Gaza conflict last winter.

As it began its debate on the protection of civilians in armed conflict, the Council unanimously adopted a resolution reiterating its willingness to respond to cases where civilians are targeted or humanitarian aid to civilians is deliberately obstructed, condemning indiscriminate or disproportionate attacks and the use of the presence of civilians to render areas or forces immune from military action.

In addition, it called for an end to impunity, and noted that civilians continue to account for the vast majority of casualties in armed conflict.

Secretary-General Ban Ki-moon called for reinvigorated commitment by the Council, Member States, and the UN to the principles of international humanitarian law, human rights law and refugee law, laying out “five core challenges.”

These are: strengthened compliance by all parties with international law such as access to conflict zones; more consistent engagement with non-State armed groups to ensure their compliance and safe access to populations; greater ability for peacekeeping missions to protect more effectively such as by active policing of territory; better and safer to civilians in need; and enhanced accountability for perpetrators of crimes and crimes against humanity.

Under-Secretary-General for Humanitarian Affairs John Holmes said engagement with non-State armed groups, “however much we may condemn the aims of their often bloody acts which take many civilian lives,” is critical for access to those in need and enhancing compliance with humanitarian law, and agencies must have the flexibility to engage them.

Mr. Pillay’s statement was the most detailed in its litany of grave violations. Referring to the UN probe on Gaza headed by Richard Goldstone, former prosecutor at the UN tribunals for the former Yugoslavia and Rwanda, she stressed the nature and scope of violations of international human rights perpetrated on the civilian population of the occupied Palestinian territory.

The report, which the Secretary-General has transmitted to the Council, found evidence that both Israel and the Palestinians committed serious war crimes during the hostilities in December and January.

“Israeli forces killed well over 1,000 civilians and attacked homes, schools, mosques, food and water installations, and UN facilities,” she said, noting also the indiscriminate launching of rockets and mortars into southern Israel by armed Palestinian groups in Gaza, killing Israeli civilians and causing terror and trauma among communities in disregard of international law.

“Collective punishment, as evidenced by the crippling Israeli blockade and the devastating military offensive, is a violation of international human rights and humanitarian law, as are the forcible evictions of Arabs, the demolition of homes, and the expropriation of occupied East Jerusalem lands for Israeli settlements,” she added.

“Until meaningful steps are taken to end impunity for these violations and assert the applicability of international law, peace and security will remain illusive for all the people of the region,” she said, urging the Council to embrace the report’s recommendations to secure accountability for all perpetrators, and to fully integrate human rights guarantees into peacemaking efforts.

On the DRC, she called the situation in the east of the vast county “a horrifying reminder of the depths to which inhumanity can spiral if left unchecked.”

Decrying the fact that military operations against residual armed groups have led to massive displacement, the killing of several hundred civilians this year alone, and a drastic increase in sexual violence, including rape, she called for a review of support by the UN peacekeeping mission for the Congolese Army whenever there is a risk of violations of humanitarian law.

On Darfur, where some 300,000 people have been killed and 2.7 million others displaced by six years of conflict pitting rebels against the Government and its allied Janjaweed militiamen, Ms. Pillay said justice remains elusive and violations continue, while the joint UN-African Union peacekeeping mission, known as UNAMID, has been unable to fully deploy due to resource constraints, delayed troop deployment, and political impediments.

Turning to Afghanistan, she said the conflict has repeatedly caught civilians in the cross-fire, as evidenced by the recent attack on a UN guesthouse in Kabul that killed 5 UN staff members and injured numerous others. “Civilian casualties continue to mount, with hundreds killed every year by armed anti-government elements, government forces, and international forces carrying out both air strikes and ground assaults,” she added, noting the continued impunity.

These four country cases demonstrate the gap between policy and practice. “Closing that gap will require a greater

commitment by all to the explicit application of international law, and to its enforcement,” Ms. Pillay concluded. “It will require more political will, and less political exceptionalism – all must be held to a single standard.”

More than 60 countries are scheduled to speak in the day-long debate.

UN ready to work with new Lebanese government, says Secretary-General

11 November - Secretary-General Ban Ki-moon today reiterated the readiness of the United Nations to work with the new unity government in Lebanon in tackling the challenges facing the country.

Mr. Ban spoke by phone today with President Michel Sleiman and separately with Prime Minister-designate Saad Hariri, congratulating them on the appointment of a new Cabinet.

“He expressed his hope that the new Lebanese Government will be committed to the full implementation of resolution 1701,” said UN spokesperson Marie Okabe, referring to the Security Council resolution that helped to end the August 2006 war between Israel and Hizbollah.

The resolution also called for respect for the so-called Blue Line separating the Israeli and Lebanese sides, disarming of militias and an end to arms smuggling.

Yesterday the UN Special Coordinator for Lebanon said that all sides must do more to translate the cessation of hostilities into a permanent ceasefire, citing recent “worrying incidents” in southern Lebanon, including rocket launches and air violations.

“While welcoming the parties’ stated commitment to resolution 1701, which is critical, we also stress the need for more tangible steps to facilitate forward movement in the direction of a permanent ceasefire and a long-term solution,” Michael Williams told the press after briefing the Council on the Secretary-General’s latest report on the implementation of resolution 1701.

UN agency calls for global day-long fast as symbol of war on hunger



FAO Director-General Jacques Diouf

11 November - The United Nations Food and Agriculture Organization (FAO) today called for a day-long, global hunger strike in solidarity with the planet’s one billion people who do not have enough to eat, ahead of next week’s World Summit on Food Security.

“I shall personally begin a 24-hour fast on Saturday morning,” FAO Director-General Jacques Diouf told a press conference in Rome. “We are suggesting that everyone in the world who wants to show solidarity with the one hungry billion people on this planet go on hunger strike next Saturday or Sunday.”

Secretary-General Ban Ki-moon will open the three-day summit in the Italian capital on 16 November, when immediate action will be sought to build momentum to end the scourge of hunger and malnutrition. Heads of State and government from FAO’s 192 members have been invited to attend.

“Given the close inter-relationship between food security and climate change, the Secretary-General will engage world leaders to advance both agendas together,” spokesperson Marie Okabe told a news briefing in New York.

Mr. Diouf said that despite all the promises made, concrete action on hunger has been lacking. “In the absence of strong measures another global food crisis cannot be excluded,” he warned.



Secretary-General Ban Ki-moon (right) with President Michel Sleiman of Lebanon

He also launched an online anti-hunger petition, <http://www.1billionhungry.org/>, where visitors are asked to sign the petition if they agree that 1 billion people living in chronic hunger is unacceptable. Everyone is encouraged to use Twitter or other social media tools to spread the word about the initiative.

“I would urge as many people as possible to sign our petition,” he said. “Each click will serve as another reason, in addition to the billion we already have, for ending hunger. Each click will also serve as a goad to world leaders to ‘walk the talk.’”

During his stay in Rome, Mr. Ban will visit the headquarters of the UN World Food Programme (WFP), where he will participate in a commemoration for the staff recently killed in the attack against the WFP office in Pakistan. He will also meet with the staff of the UN International Fund for Agricultural Development (IFAD) and the FAO.

Djibouti forcibly repatriates 40 Somali asylum-seekers, UN reports

11 November - The United Nations refugee agency has voiced regret at Djibouti’s forced repatriation of 40 Somali asylum-seekers, including 13 women and children, who were rescued by a Dutch ship in the Red Sea last month.

“Based on both UNHCR’s evaluation of the situation in south Somalia as well as the interviews conducted with these individuals, it is clear that the 40 persons were in need of international protection,” the UN High Commissioner for Refugees said in a statement, in which it also thanked Djibouti for accepting its request to allow the group, numbering 43 in all, to disembark.



Somalia refugees and migrants cross into the no-man's land between Somaliland and Djibouti

“Djibouti has long enjoyed the reputation as a generous and welcoming host country for refugees and others in need of protection. This reputation risks being tarnished by the measures.”

The group, mostly from Somalia’s strife-torn capital Mogadishu, landed in Djibouti on 4 November. They were then given medical and security screening by a joint team of officials from UNHCR and the National Refugee Agency of Djibouti (ONARS), followed by registration and protection interviews to assess their eventual protection needs.

“It soon became clear that three males in the group expressed the wish to voluntarily return to Mogadishu,” UNHCR said. “However, according to the evidence collected by ONARS and UNHCR, 40 persons did not wish to return to Mogadishu due to the ongoing conflict there. This group included six women and seven children.”

The whole group, including the 40 who wished to seek asylum in Djibouti, were repatriated on Monday and Tuesday.

“For years, Djibouti has welcomed and offered protection and relief to thousands of refugees,” the agency said. “UNHCR recognizes the legitimate right of a host country in terms of national security. However, UNHCR is concerned by the forced repatriation to Mogadishu of the aforementioned group and the absence of appropriate guarantees for their safety.”

Ban calls on US to put full weight behind agreeing new climate change treaty



Secretary-General Ban Ki-moon at press encounter with US Senators John Kerry, Richard Lugar and Joe Lieberman

11 November - Secretary-General Ban Ki-moon has urged the United States to take a leading role in forging a new international pact to combat global warming, warning that the consequences of failure outweigh the cost of tackling climate change.

“No country is more important than the United States in resolving this climate change issue,” Mr. Ban told reporters in Washington D.C. yesterday after meeting with congressional leaders ahead of the United Nations climate change conference in Copenhagen next month.

“All eyes of the world are looking to the United States and to this august body, the US Senate,” he said at the media briefing, flanked by US Senators John Kerry, Richard Lugar

and Joe Lieberman.

Highlighting that in less than a month world leaders are slated to gather in Copenhagen, Mr. Ban said they must conclude “a robust, global agreement that can serve as a foundation for a climate treaty.”

In Copenhagen, governments are expected to negotiate a successor to the Kyoto Protocol, the 1997 pact – part of a larger UN climate change treaty – which has strong, legally binding measures committing 37 industrialized States to cutting emissions by an average of 5 per cent against 1990 levels over the period from 2008 to 2012.

“From what I heard today, there is great support in the Senate for action on climate change,” said Mr. Ban. “But for some, there are lingering doubts about whether we can afford to take action during this hard economic crisis.”

Acknowledging that there is a price to pay in battling climate change, Mr. Ban stressed that the costs are insignificant compared with the cost of not taking action.

“Inaction will mean a weakened economic recovery, a loss of global competitiveness, increased global instability and further human suffering,” said Mr. Ban. “A global agreement on the other hand will unleash investments that will do more than any single other action could do to jumpstart and sustain global economic recovery.”

Mr. Ban voiced appreciation for the US Government, particularly President Barack Obama, in showing their initiative, leadership and commitment in addressing a climate change bill, as well as for Mr. Obama signaling a willingness to participate in Copenhagen.

“Copenhagen offers us all an unprecedented opportunity. We must use our time before that historic gathering for maximum effort,” he said.

Universality of global pact on mines and other explosive devices vital, Ban says



Cluster bombs

11 November - Secretary-General Ban Ki-moon today called for greater efforts to expand the number of signatories, especially among developing countries and States in conflict, to a global pact banning the use of mines, booby-traps and other explosive devices against civilians.

Congratulating the 93 States that have consented to be bound by Amended Protocol II of the Convention on Certain Conventional Weapons (CCW), he called on those countries that have not yet done so to ratify the pact as soon as possible.

“The universality of the Protocol remains of vital importance,” he said in a message to the 11th Annual Conference of the High Contracting Parties to the Protocol, taking place in Geneva.

The Secretary-General commended the decision to re-establish the Group of Experts, an informal mechanism that has helped to improve understanding of the impact of improvised explosive devices on civilians and combatants alike, and urged parties to continue to make use of it.

He also called on all States that have not yet done so to ratify the other international treaties in the field of mine action, including the Mine Ban Convention and the new Convention on Cluster Munitions, which is expected to enter into force in the near future.

In addition, he drew attention to the grave threats to civilians posed by mines other than anti-personnel mines, which in many regions are another serious obstacle to the delivery of humanitarian aid, the return to normal civilian life after hostilities, and economic development.

“Although CCW States parties have not yet found agreement on this topic, I consider it my duty to bring this issue to your attention yet again, since the grave effects of such mines continue to be felt,” he stated.

Food shortages incapacitate and kill millions of children each year – UN report

11 November - An astonishing 200 million children under the age of five, almost all in Africa and Asia, suffer from the debilitating impact of stunted growth resulting from a lack of food and the right nutrients, a new United Nations report warned today.

The UN Children’s Fund (UNICEF) report, *Tracking Progress on Child and Maternal Nutrition*, also stressed that undernutrition contributes to a third of deaths of all children under five each year, which in 2006 stood at almost 10 million globally.

“Undernutrition steals a child’s strength and makes illnesses that the body might otherwise fight off far more dangerous,” said UNICEF Executive Director Ann M. Veneman.

“More than one-third of children who die from pneumonia, diarrhoea and other illnesses could have survived had they not been undernourished,” she added.

The report underscored the critical importance for a child’s development of the 1,000 days from conception until the second birthday, when nutritional deficiencies can reduce the ability to fight and survive disease, and damage social and mental aptitude.



An undernourished 18-month-old boy being given a cup of therapeutic milk in Karachi, Pakistan

“Those who survive undernutrition often suffer poorer physical health throughout their lives, and damaged cognitive abilities that limit their capacity to learn and to earn a decent income,” said Ms. Veneman. “They become trapped in an intergenerational cycle of ill-health and poverty.”

The UNICEF report noted that a stunted child is likely to experience a lifetime of poor health and underachievement, pointing to prevention as the only effective strategy to tackle the problem.

It highlighted the benefits of exclusive breastfeeding for the child’s initial six months which significantly improves the chances of survival and reduces the likelihood of stunting, as well as potentially slashing child mortality rates by 19 per cent in developing countries.

While 90 per cent of children who are stunted live in Asia and Africa, the report noted that progress has been made on both continents. In Asia the prevalence of stunting dropped from about 44 per cent in 1990 to an estimated 30 per cent in 2008, while in Africa it fell from around 38 per cent to 34 per cent over the same period.

“Global commitments on food security, nutrition and sustainable agriculture are part of a wider agenda that will help address the critical issues raised in this report,” said Ms. Veneman. “Unless attention is paid to addressing the causes of child and maternal undernutrition today, the costs will be considerably higher tomorrow.”

Lauding Japan’s decision to boost aid to Afghanistan, Ban hopes others will follow



11 November - Secretary-General Ban Ki-moon today welcomed Japan’s intention to increase its assistance for Afghanistan to a total of up to \$5 billion over the next five years, and said he hopes other nations will follow suit.

In a statement issued by his spokesperson, Mr. Ban called the decision by the Japanese Government a “very positive development.”

The Secretary-General appreciates Japan’s “generous and continued contributions to the efforts and commitment of the international community to promote reconstruction and stability in Afghanistan,” the statement added.

Talks on Russian-Georgian conflict resume in Geneva under UN co-sponsorship

11 November - The United Nations and its international partners chairing talks on last year’s Russian-Georgian conflict in South Ossetia today voiced concern over a number of recent detentions but noted that the overall security situation on the ground remained “relatively stable.”

The eighth round of the talks, co-chaired by the UN, the European Union and the Organization for Security and Cooperation in Europe (OSCE), were held in Geneva with Russian and Georgian representatives participating.



The conflict erupted in August 2008, with Georgian troops fighting Russian and separatist South Ossetian forces. Russia later recognized the independence of South Ossetia and Abkhazia, another separatist region in Georgia.

The participants, meeting in two parallel working groups to discuss security and stability in the region and humanitarian matters, agreed to continue their talks in the same format on 28 January, according to a communiqué issued afterwards.

Secretary-General Ban Ki-moon’s Special Representative for Georgia Johan Verbeke told a news conference that the meeting had once again been useful, if difficult, but they were here to solve problems, and it had given them the necessary

material to continue.

Côte d'Ivoire: UN begins transporting provisional voters' list for upcoming polls



Voter registration fingerprinting for the upcoming elections in Côte d'Ivoire

11 November - The United Nations Operation in Côte d'Ivoire (UNOCI) today began transporting the provisional voters' list to polling stations around the country as part of the latest phase of preparations for the upcoming presidential elections.

The country's Independent Electoral Commission handed over the list yesterday to Young-Jin Choi, the Secretary-General's Special Representative and head of UNOCI, who called it an important step toward reaching the end of the crisis in the West African nation, split by civil war in 2002 into a Government-ruled south and a rebel-controlled north.

The elections, originally scheduled for as far back as 2005, are planned for 29 November after repeated postponements, but UN officials have voiced concern at possible further setbacks.

Mr. Choi said he hoped that the remaining tasks in the electoral process – including printing and handing out of voter cards – would be done quickly.

The list will now be distributed to polling stations around the country in order to launch the five-week appeals process that will precede the finalization of the voters' list.

According to UNOCI, the transport of the list to polling stations should end early next week. It will be officially published when it has reached all polling stations.

Funding shortfall hampering relief efforts in storm-battered Philippines – UN

11 November - The United Nations humanitarian wing said today that relief efforts following the recent storms that battered the Philippines are being hampered by funding shortages, noting that only \$26 million of the \$74 million appeal launched last month has been received so far.

The Office for the Coordination of Humanitarian Affairs (OCHA) added that the Flash Appeal is currently being revised and is expected to be finalized in the coming week.

Aid agencies are reporting that funding shortfalls have limited their ability to follow through with humanitarian action plans designed to support life-saving projects and to launch early recovery efforts.

The World Food Programme (WFP) and the Food and Agriculture Organization (FAO) have revised estimates of emergency and early recovery needs, taking into account new assessment data, and these additional needs will be reflected in the revised Flash Appeal.

Agencies are particularly concerned about the estimated 1.7 million people still displaced or living in areas that remain under water or flooded, following the three consecutive typhoons that hit the country in September and October.

Nearly 1,000 people died as a result of the storms, which affected around 9.8 million people and destroyed over 40,000 homes.

Among the key concerns for aid agencies remain access to safe water, sanitation facilities and hygiene items in the relocation camps and in residential areas affected by floods.



Thousands of people in Viet Nam and the Philippines have been affected by Typhoon Mirinae

Another storm – Typhoon Mirinae – pummelled the region almost two weeks ago, bringing heavy rains, causing power outages and communication problems and raising the threat of renewed floods across the Philippines and Viet Nam.

UN honours Nelson Mandela with International Day on 18 July



Nelson Mandela

11 November - The United Nations has declared 18 July “Nelson Mandela International Day” in recognition of the former South African President’s contribution to the culture of peace and freedom.

The resolution was adopted yesterday by the 192-member General Assembly to commemorate the Nobel Peace Prize laureate’s long-standing commitment to promoting conflict resolution, race relations, human rights, reconciliation and gender equality.

The Day will be observed annually on 18 July, Mr. Mandela’s birthday, starting in 2010 when the former anti-apartheid leader will turn 92 years old.

By adopting the resolution, the UN expressed its appreciation for a great man who had suffered for the sake of people everywhere, said Assembly President Ali Treki, recognizing Mr. Mandela’s 27-year imprisonment, most of which was spent in the notorious Robben Island detention centre off the coast of Cape Town.

After his release from prison in 1990, Mr. Mandela became the first President elected in a fully representative democratic ballot in post-apartheid South Africa, holding office from 1994 to 1999 in accordance with the country’s Constitution.

At an event marking his 91st birthday this year, Secretary-General Ban Ki-moon said that “Nelson Mandela is a living embodiment of the highest values of the United Nations.”

Battle against hunger can be won with right policies, says UN report



11 November - While the number of hungry people stands at a record 1 billion, the battle against hunger can be won with the right policies, investment and political will, the United Nations Food and Agriculture Organization (FAO) says in a new report published ahead of next week’s World Summit on Food Security.

“*Pathways to Success*” highlights the progress made by a number of countries that have already achieved the target of halving the number of hungry by 2015 – one of the eight Millennium Development Goals (MDGs) – or are on track to do so.

The report, “through the examples it offers, provides a message of hope – the battle against hunger can be won,” FAO Director General Jacques Diouf said today as he presented the report.

“What is required is an unwavering commitment from developing country governments themselves and strong support from the international community.”

FAO says that rising global hunger figures mask the fact that 31 out of 79 countries monitored by the Rome-based agency have registered a notable decline in the number of undernourished people since the early nineties.

The report details factors underlying the success of four countries that have significantly reduced hunger, namely Armenia, Brazil, Nigeria and Viet Nam.

It cites four common factors to successfully reducing hunger. They are the creation of the right environment promoting economic growth and personal wellbeing; investment in the rural poor and outreach to the most vulnerable; ensuring achievements are maintained and safeguarded against threats; planning for a sustainable future.

Nigeria, for example, through its National Programme for Food Security, succeeded in more than doubling production and incomes of small farmers who practice rain fed agriculture by introducing improved technologies that enabled them to grow two or three crops each year instead of just one.

Boosting agricultural production and eradicating hunger will top the agenda as more than 60 heads of State and government meet in the Italian capital from 16 to 18 November for the food security summit.

Ahead of next week's gathering, Mr. Diouf launched an online anti-hunger campaign, at www.1billionhungry.org, calling on the general public to sign a call for eradicating hunger.

UN official pledges support to tackle copyright challenges for the visually impaired

11 November - The head of the United Nations agency entrusted with protecting intellectual property rights has pledged support for efforts to improve access to copyright-protected works for the world's blind or visually impaired persons.

"Let me assure you that this is a priority area for the World Intellectual Property Organization (WIPO)," Director General Francis Gurry told participants at a conference in New Delhi today.



A portable braille printer

According to the agency, over 314 million blind or visually impaired people worldwide stand to benefit from a more flexible copyright regime adapted to current technological realities.

Individuals with reading impairment often need to convert information into Braille, large print, audio, electronic and other formats using assistive technologies. It is estimated that only 5 per cent of published books in developed countries are converted into formats accessible to the reading impaired.

In India this number is even lower, at only 0.5 per cent, impeding educational and employment opportunities for the country's nearly 70 million reading impaired citizens.

"While, today, sighted individuals enjoy unprecedented access to copyright-protected content, in some contexts, social, economic, technological and legal factors, including the operation of copyright protection systems, can combine to seriously impede access to such works by the blind or other reading impaired persons," WIPO stated in a news release.

The agency added that the widespread use of digital technologies, in particular, has led to discussions on how to maintain a balance between the protection available to copyright owners, and the needs of specific user groups, such as reading impaired persons.

Mr. Gurry noted that innovation and affordability are key considerations when addressing the specific requirements of the visually impaired in developing countries.

He called for joining forces with UN partners, including the World Health Organization (WHO) and the UN Educational, Scientific and Cultural Organization (UNESCO), to make best use of the expertise and skills that are available and move forward on these important questions.

SEAL THE DEAL: Invasive species pose huge threat to ecosystems, UN says



Warmer temperatures have predisposed coniferous forest in western Canada to a severe outbreak of mountain pine beetle

11 November - It's no longer than a grain of rice. But the mountain pine beetle is an insidious environmental predator, laying waste to swathes of forest in north-western Canada and exposing the local ecosystem to what could be a devastating new front in the battle against climate change.

The beetle is one of hundreds of what scientists call invasive species – animals, plants and organisms that “arrive, survive and thrive” in previously inhospitable territory and damage their host environment.

Now, as global warming alters temperature and precipitation patterns around the world, the threat posed by invasive species is rising, and scientists and United Nations officials are calling on participants at next month's climate change conference in Copenhagen to agree to action to strengthen their ecosystems and to protect biodiversity.

“Climate change is creating some difficult conditions for a number of living organisms and most of the invasive alien species are more resistant, more opportunistic than the organisms in a given place,” says Kalemuni Mulongoy, the principal officer of scientific, technical and technological matters at the UN Convention on Biological Diversity (CBD).

The Montreal-based CBD, set up in 1993, is a legally binding agreement between 187 countries, linking traditional conservation efforts to the economic goal of using biological resources sustainably. It covers all ecosystems, species, and genetic resources, and provides technical advice to governments as they try to maintain fragile ecosystems.

The CBD considers the combined effects of climate change and invasive species to be the main drivers of biodiversity loss across the planet.

“It happens in all ecosystem types: freshwater, terrestrial, plants, animal, microorganisms, they span the gamut,” adds Stas Burgiel, policy director at the Global Invasive Species Program (GISP), an international partnership of scientists, non-governmental organizations (NGOs), intergovernmental organizations and policymakers assists the CBD and the UN Environment Programme (UNEP) in decision-making.

Invasive species “can change whole ecosystems by altering hydrology, fire regimes, nutrient cycling, and other ecosystem processes,” according to GISP. “Biological invasions by non-native species impose an enormous cost on agriculture, forestry, fisheries, as well as on human health.”

“As the conditions are changing due to high temperatures, drought or abundant rain, a number of organisms will be outgrown by invasive alien species,” says Mr. Burgiel.

According to the CBD, biological incursions by invasive species result in significant economic losses. In the United States alone, the yearly damage and control cost of invasive species is estimated to be more than \$138 billion. Worldwide, it is estimated at \$1.4 trillion annually.

For the mountain pine beetle, mild winter temperatures have led to increased survival, culminating in the largest epidemic in the history of the Canadian province of British Columbia. In recent years the beetle has also moved to higher latitudes, resulting in the infestation of an estimated 13 million hectares of pine forests, and forecasts predict that it will kill up to 80 per cent of the pine volume in British Columbia by 2015.

Lodging itself in the inner bark of mature trees, the beetle lays eggs that will hatch into larvae and burrow out to the surface. The exit holes then leave the tree vulnerable to fungus which, once established, will overwhelm and kill the pine.

The rotting trees release tons of carbon dioxide as they die, boosting greenhouse gas emissions and nullifying the “sink effect” whereby large forests absorb and store carbon dioxide.

Invasive species are encroaching on fragile ecosystems across the planet. In the Western US and in North Africa, the tamarisk plant is an aggressive colonizer, able to survive in parched and saline soils for extended periods of time. As climate change decreases precipitation in these areas, the shrub sinks its roots deeper into the soil, depleting available water resources and out-competing indigenous plants for nourishment.

In West Africa, an average decrease of 40 to 60 per cent in the flow of major rivers – a result of global climate change – may be a factor contributing to the proliferation of the water hyacinth. The hyacinth clogs numerous lakes and rivers, threatening the survival of fish, and local plant biodiversity to the detriment of the communities and industries that profit from these resources.

Warmer air temperatures and longer growing seasons may also increase the geographic ranges of some diseases as tropical insects adapt to temperate climates, putting new populations at risk.

“Vector-borne diseases such as West Nile virus also have a link to invasives” says Mr. Burgiel, referring to the Asian tiger mosquito and its role in transmitting dengue fever and West Nile virus to Western countries. Since its introduction into Italy eight years ago, the mosquito has spread to 22 of the country's northern provinces.

“When a pathogen hitchhikes on an organism, you get public health issues,” he says.

Given genetic programming that allows them to thrive in a multitude of environments, invasive species are more adept at survival than native species, raising serious concerns about the fate of indigenous organisms in environments where global warming precipitates seasonal change.

“Sea level rise will certainly favour those species that can deal with the change from a freshwater environment to a saltwater environment,” adds Mr. Burgiel, “while some plants may grow faster in rich carbon dioxide environments.”

Since the 17th century, invasive species have contributed to nearly 40 per cent of all animal extinctions, posing the greatest threat to biodiversity on isolated ecosystems, such as islands that lack natural competitors, and predators that usually control populations of the invaders.

In response to these threats, GISP supports implementation of Article 8 of CBD, which calls on parties to “prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats, or species.”

“Recently, there has been a call to think about climate change within a lot of the discussions about biodiversity conservation,” adds Mr. Burgiel. “We urge States at risk to use the precautionary approach, don't make unnecessary introduction of invasives, and prevent those that you can control.”

The biodiversity implications of climate change will be discussed at Copenhagen through the concept of ecosystem-based adaptation, which aims to strengthen ecosystems against climate change by making them as healthy as possible.

“We've starting to get a hand on what the potential impacts and dynamics might be, but in terms of translating that into policy guidance for governments, I think that's where we still need quite a bit more work,” says Mr. Burgiel.

“It's easy to say 'start with precaution,' but a little more detail about what they might need to do at a particular site or with national legislation is where we're struggling. We have some ideas but that needs to be improved.”