

# Vrijeme je da se prema klimatskoj krizi i krizi bioraznolikosti počnemo odnositi kao prema jednoj nedjeljivoj globalnoj zdravstvenoj krizi


## Time to treat the climate and nature crisis as one indivisible global health emergency


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Više od 200 zdravstvenih časopisa pozvalo je Ujedinjene narode, političke vođe i zdravstvene stručnjake da prepoznaju da su klimatske promjene i gubitak bioraznolikosti nedjeljiva krizu s kojom se treba istodobno uhvatiti ukoštac kako bi se očuvalo zdravlje i spriječila katastrofa. Ova je opća ekološka kriza sada toliko ozbiljna da znači globalnu zdravstvenu krizu.

Svijet trenutačno traži odgovore na klimatsku krizu i krizu bioraznolikosti kao da je riječ o odvojenim izazovima. To je opasna pogreška. U Dubaiju će se uskoro održati 28. *Conference of the Parties* (COP) o klimatskim promjenama, dok će se pak 16. COP o bioraznolikosti održati u Turskoj 2024. godine. Znanstvenoistraživačke zajednice koje prikupljaju dokaze za oba COP-a dosad, nažalost, većinom rade odvojeno, no okupile su se na radionici 2020. godine, kada su zaključile da: „Samo sagledavanjem klime i bioraznolikosti kao dijelova istoga kompleksnog sustava... može se doći do rješenja koja izbjegavaju nedostatnu prilagodbu i maksimiraju pozitivne ishode.“<sup>1</sup>

Razvojem koncepta planetarnog zdravlja zdravstvena je zajednica prepoznala da se prirodni svijet sastoji od jednoga sveobuhvatnog međuovisnog sustava. Šteta nanosena jednom podsustavu može dovesti do povratne sprege koja oštećuje drugi sustav – primjerice, suše, požari, poplave i ostale posljedice rastućih globalnih temperatura uništavaju biljni svijet, što

Over 200 health journals call on the United Nations, political leaders, and health professionals to recognise that climate change and biodiversity loss are one indivisible crisis and must be tackled together to preserve health and avoid catastrophe. This overall environmental crisis is now so severe as to be a global health emergency.

The world is currently responding to the climate crisis and the nature crisis as if they were separate challenges. This is a dangerous mistake. The 28<sup>th</sup> Conference of the Parties (COP) on climate change is about to be held in Dubai while the 16<sup>th</sup> COP on biodiversity is due to be held in Turkey in 2024. The research communities that provide the evidence for the two COPs are unfortunately largely separate, but they were brought together for a workshop in 2020 when they concluded that: “Only by considering climate and biodiversity as parts of the same complex problem...can solutions be developed that avoid maladaptation and maximize the beneficial outcomes.”<sup>1</sup>

As the health world has recognised with the development of the concept of planetary health, the natural world is made up of one overall interdependent system. Damage to one subsystem can create feedback that damages another—for example, drought, wildfires, floods and the other effects of rising global temperatures destroy

dovodi do erozije tla te smanjuje skladištenje ugljika, što pak uzrokuje još veće globalno zagrijavanje.<sup>2</sup> Klimatske će promjene uskoro prestići krčenje šuma i ostale prenamijene zemljišta kao vodeći uzrok gubitka bioraznolikosti.<sup>3</sup>

Priroda ima zadivljujuću moć samoobnavljanja. Primjerice, iskrčeno se područje može prirodnom obnovom ponovno pretvoriti u šumu, a morski fitoplankton, koji djeluje kao prirodno skladište ugljika, stvara više od milijardu tona fotosintetizirajuće biomase svakih osam dana.<sup>4</sup> Briga autohtonoga stanovništva o zemlji i moru također ima osobito važnu ulogu u obnovi i trajnoj brizi za okoliš.<sup>5</sup>

Obnavljanje jednog podsustava može pomoći drugomu – primjerice, obnavljanje tla može pomoći u uklanjanju velikih količina stakleničkih plinova iz atmosfere.<sup>6</sup> No djelovanje koje pomaže jednom podsustavu može raditi štetu drugomu – na primjer, sađenje šuma jednom vrstom stabala može ukloniti ugljikov dioksid iz zraka, ali može naškoditi bioraznolikosti koja je ključna za zdravlje ekosustava.<sup>7</sup>

## Učinci na zdravlje

Ljudsko se zdravlje izravno narušava i klimatskom krizom, kako su časopisi opisali u prethodnim uvodnicima,<sup>8,9</sup> te i krizom bioraznolikosti.<sup>10</sup> Ta će nedjeljiva planetarna kriza imati velike učinke na zdravlje zbog poremećaja koje izaziva u društvenim i ekonomskim sustavima – nedostatak zemlje, zaklona, hrane i vode te pogoršanje siromaštva, što će pak dovesti do masovnih migracija i sukoba. Rastuće temperature, ekstremni vremenski uvjeti, onečišćenje zraka, i širenje zaraznih bolesti neke su od značajnih zdravstvenih prijetnji koje se pogoršavaju zbog klimatskih promjena.<sup>11</sup> „Bez prirode, nemamo ništa“, bile su riječi kojima je glavni tajnik Ujedinjenih naroda António Guterres kratko sažeo stanje na COP-u o bioraznolikosti u Montrealu prošle godine.<sup>12</sup> Čak i kada bismo mogli zadržati globalno zagrijavanje ispod povećanja od 1,5 °C u usporedbi s na preindustrijskim doba, svejedno možemo uzrokovati katastrofalnu štetu za zdravlje uništavajući prirodu.

Pristup čistoj vodi temeljni je čimbenik ljudskoga zdravlja, no zagađenje je oštetilo kvalitetu vode te dovelo do učestalosti bolesti koje se prenose vodom.<sup>13</sup> Zagađenje vode na kopnu također može imati dalekosežne posljedice za udaljene ekosustave kada ta voda dođe do oceana.<sup>14</sup> Dobra se prehrana zasniva na raznolikosti u vrstama hrane, no došlo je do zamjetnog gubitka genetske raznolikosti u sustavu prehrane. Globalno gledano, prehrana i život oko petine ljudi ovisi o divljim vrstama.<sup>15</sup> Smanjenje broja divljih životinja velik je izazov za ove populacije, osobito u zemljama s niskim i srednjim dohotkom. Riba je izvor više od polovice proteina u prehrani u mnogim afričkim, južnoazijskim i malim otočnim nacijama, no acidifikacija oceana dovela je do smanjenja kvalitete i količine morskih plodova.<sup>16</sup>

Prenamjena zemljišta natjerala je tisuće vrsta u bliži kontakt, povećavajući razmjenu patogena i nastanak novih bolesti i pandemija.<sup>17</sup> Gubitak kontakta s prirodnim okolišem u ljudi te rastući gubitak bioraznolikosti povezani su s povećanjem u neprenosivim, autoimunskim i upalnim bolestima te metaboličkim, alergijskim i neuropsihijatrijskim poremećajima.<sup>10,18</sup> U autohtonoga stanovništva briga o prirodi i povezanost s njom osobito je bitna za zdravlje.<sup>19</sup> Priroda je također važan izvor lijekova, pa smanjenje bioraznolikosti stoga također ograničava otkrića novih lijekova.

plant life, and lead to soil erosion and so inhibit carbon storage, which means more global warming.<sup>2</sup> Climate change is set to overtake deforestation and other land-use change as the primary driver of nature loss.<sup>3</sup>

Nature has a remarkable power to restore. For example, deforested land can revert to forest through natural regeneration, and marine phytoplankton, which act as natural carbon stores, turn over one billion tonnes of photosynthesising biomass every eight days.<sup>4</sup> Indigenous land and sea management has a particularly important role to play in regeneration and continuing care.<sup>5</sup>

Restoring one subsystem can help another—for example, replenishing soil could help remove greenhouse gases from the atmosphere on a vast scale.<sup>6</sup> But actions that may benefit one subsystem can harm another—for example, planting forests with one type of tree can remove carbon dioxide from the air but can damage the biodiversity that is fundamental to healthy ecosystems.<sup>7</sup>

## The impacts on health

Human health is damaged directly by both the climate crisis, as the journals have described in previous editorials,<sup>8,9</sup> and by the nature crisis.<sup>10</sup> This indivisible planetary crisis will have major effects on health as a result of the disruption of social and economic systems—shortages of land, shelter, food, and water, exacerbating poverty, which in turn will lead to mass migration and conflict. Rising temperatures, extreme weather events, air pollution, and the spread of infectious diseases are some of the major health threats exacerbated by climate change.<sup>11</sup> “Without nature, we have nothing,” was UN Secretary-General António Guterres’s blunt summary at the biodiversity COP in Montreal last year.<sup>12</sup> Even if we could keep global warming below an increase of 1.5 °C over pre-industrial levels, we could still cause catastrophic harm to health by destroying nature.

Access to clean water is fundamental to human health, and yet pollution has damaged water quality, causing a rise in water-borne diseases.<sup>13</sup> Contamination of water on land can also have far-reaching effects on distant ecosystems when that water runs off into the ocean.<sup>14</sup> Good nutrition is underpinned by diversity in the variety of foods, but there has been a striking loss of genetic diversity in the food system. Globally, about a fifth of people rely on wild species for food and their livelihoods.<sup>15</sup> Declines in wildlife are a major challenge for these populations, particularly in low- and middle-income countries. Fish provide more than half of dietary protein in many African, South Asian and small island nations, but ocean acidification has reduced the quality and quantity of seafood.<sup>16</sup>

Changes in land use have forced tens of thousands of species into closer contact, increasing the exchange of pathogens and the emergence of new diseases and pandemics.<sup>17</sup> People losing contact with the natural environment and the declining loss in biodiversity have both been linked to increases in noncommunicable, autoimmune, and inflammatory diseases and metabolic, allergic and neuropsychiatric disorders.<sup>10,18</sup> For Indigenous people, caring for and connecting with nature is especially important for their health.<sup>19</sup> Nature has also been an important source of medicines, and thus reduced diversity also constrains the discovery of new medicines.

Zajednice su zdravije ako imaju pristup visokokvalitetnim zelenim prostorima koji pospješuju filtriranje zagađenja zraka, smanjuju temperaturu zraka i tla te pružaju mogućnost tjelesne aktivnosti.<sup>20</sup> Povezanost s prirodom smanjuje stres, usamljenost i depresiju te potiče društvene interakcije.<sup>21</sup> Te su prednosti ugrožene stalnim porastom urbanizacije.<sup>22</sup>

Konačno, zdravstveni učinci klimatskih promjena i gubitka bioraznolikosti bit će nejednako raspoređeni među državama svijeta i unutar njih, pri čemu najveći teret često pada na najranjivije zajednice.<sup>10</sup> S time je povezana i nejednakost, za koju se također može reći da potiče ove ekološke krize. Ekološki izazovi i društvene i zdravstvene nejednakosti u ishodima izazovi su koji imaju zajedničke uzroke, pa stoga potencijalno dijele i pozitivne učinke njihova rješavanja.<sup>10</sup>

## Globalna zdravstvena kriza

U prosincu 2022. godine na COP-u o bioraznolikosti donesena je odluka o učinkovitom očuvanju i upravljanju barem 30 % svjetske kopnene površine, obalnih područja i oceana do 2030. godine.<sup>23</sup> Industrijalizirane zemlje pristale su mobilizirati 30 milijardi dolara godišnje kako bi pružile podršku zemljama u razvoju u postizanju tog cilja.<sup>23</sup> Ti su dogovori slični obećanjima i odlukama donesenima na COP-ovima o klimatskoj krizi.

No mnoge su obveze preuzete na COP-ovima ostale neispunjene. Time su ekosustavi pogurani još bliže rubu, znatno povećavajući rizik od dosezanja „točaka bez povratka“, naglih raspada u funkcioniranju prirode.<sup>2,24</sup> Kada bi se to dogodilo, utjecaj na globalno zdravlje bio bi katastrofalan.

Taj rizik, uz ozbiljne učinke na zdravlje koji su već prisutni, znači da bi Svjetska zdravstvena organizacija (WHO) trebala nedjeljivu klimatsku krizu i krizu bioraznolikosti proglasiti globalnom zdravstvenom krizom. Tri su preduvjeta potrebna da WHO neko stanje proglasi Javnozdravstvenom krizom međunarodne važnosti:<sup>25</sup> da je stanje 1) ozbiljno, naglo, neobično ili neočekivano; 2) da ima implikacije za javno zdravlje izvan granica zahvaćene države te da 3) zahtijeva trenutačno međunarodno djelovanje. Čini se da klimatske promjene zadovoljavaju sve te uvjete. Iako ubrzane klimatske promjene i gubitak bioraznolikosti nisu nagli ni neočekivani, svakako su ozbiljne i neobične. Stoga pozivamo WHO da objavi tu deklaraciju prije ili na Sedamdeset sedmoj Svjetskoj zdravstvenoj skupštini u svibnju 2024.

Kako bismo se uspješno nosili s ovom krizom, djelovanje dvaju COP-ova mora biti usklađeno. Kao prvi korak, obje konferencije moraju postići bolju integraciju u državne klimatske planove, uz ekvivalentne planove za bioraznolikost.<sup>3</sup> Kao što je zaključeno na radionici održanoj 2020. godine, koja je okupila znanstvenike koji se bave klimom i bioraznolikošću, „Ključne točke utjecaja uključuju istraživanje alternativnih vizija dobre kvalitete života, preispitivanje konzumacije i otpada, promjene vrijednosti vezanih uz odnos ljudi i prirode, smanjivanje nejednakosti i promoviranje edukacije i učenja.“<sup>1</sup> Sve bi to imalo pozitivan učinak i na zdravlje.

Zdravstveni stručnjaci moraju biti snažni zagovornici obnavljanja bioraznolikosti i nošenja s klimatskim promjenama radi poboljšanja zdravlja. Politički vođe moraju prepoznati i ozbiljnu prijetnju zdravlju uzrokovanu planetarnom krizom te pozitivne učinke na zdravlje koji mogu proisteci iz rješavanja te krize.<sup>26</sup> No prvo moramo tu krizu prepoznati kao ono što ona doista i jest: globalna zdravstvena kriza.

Communities are healthier if they have access to high-quality green spaces that help filter air pollution, reduce air and ground temperatures, and provide opportunities for physical activity.<sup>20</sup> Connection with nature reduces stress, loneliness and depression while promoting social interaction.<sup>21</sup> These benefits are threatened by the continuing rise in urbanisation.<sup>22</sup>

Finally, the health impacts of climate change and biodiversity loss will be experienced unequally between and within countries, with the most vulnerable communities often bearing the highest burden.<sup>10</sup> Linked to this, inequality is also arguably fuelling these environmental crises. Environmental challenges and social/health inequities are challenges that share drivers and there are potential co-benefits of addressing them.<sup>10</sup>

## A global health emergency

In December 2022 the biodiversity COP agreed on the effective conservation and management of at least 30% percent of the world's land, coastal areas, and oceans by 2030.<sup>23</sup> Industrialised countries agreed to mobilise \$30 billion per year to support developing nations to do so.<sup>23</sup> These agreements echo promises made at climate COPs.

Yet many commitments made at COPs have not been met. This has allowed ecosystems to be pushed further to the brink, greatly increasing the risk of arriving at 'tipping points', abrupt breakdowns in the functioning of nature.<sup>2,24</sup> If these events were to occur, the impacts on health would be globally catastrophic.

This risk, combined with the severe impacts on health already occurring, means that the World Health Organization should declare the indivisible climate and nature crisis as a global health emergency. The three pre-conditions for WHO to declare a situation to be a Public Health Emergency of International Concern<sup>25</sup> are that it: 1) is serious, sudden, unusual or unexpected; 2) carries implications for public health beyond the affected State's national border; and 3) may require immediate international action. Climate change would appear to fulfil all of those conditions. While the accelerating climate change and loss of biodiversity are not sudden or unexpected, they are certainly serious and unusual. Hence we call for WHO to make this declaration before or at the Seventy-seventh World Health Assembly in May 2024.

Tackling this emergency requires the COP processes to be harmonised. As a first step, the respective conventions must push for better integration of national climate plans with biodiversity equivalents.<sup>3</sup> As the 2020 workshop that brought climate and nature scientists together concluded, "Critical leverage points include exploring alternative visions of good quality of life, rethinking consumption and waste, shifting values related to the human-nature relationship, reducing inequalities, and promoting education and learning."<sup>1</sup> All of these would benefit health.

Health professionals must be powerful advocates for both restoring biodiversity and tackling climate change for the good of health. Political leaders must recognise both the severe threats to health from the planetary crisis as well as the benefits that can flow to health from tackling the crisis.<sup>26</sup> But first, we must recognise this crisis for what it is: a global health emergency.

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