

BRIEFING PACK

How these 3 COPs Can Help Prevent Pandemics

COP27 (Climate Change), COP19 (CITES), and COP15 (Convention on Biodiversity):
Their Relevance to Preventing Future Zoonotic Outbreaks



EndPandemics
Investing in Planetary Health

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SECTION 1

Overview:

How these 3 COPs Can Help Prevent Pandemics

**COP27 (Climate Change), COP19 (CITES), and COP15 (Convention on Biodiversity):
Their Relevance to Preventing Future Zoonotic Outbreaks**

Between November 6 and December 17, 2022, nearly every nation on our planet will participate in, and make decisions at, three back-to-back environmental Conferences of the Parties (COPs) that will affect our global ability to prevent more global disasters like COVID-19 from striking again.

Most governments are still tackling pandemics through vaccination and virus surveillance programs, while prevention has taken a backseat. How are these COPs relevant to pandemics, and how can they help ensure that pandemic prevention is prioritized?

A relatively new concept called “**One Health**” will be discussed at these COPs. **One Health** recognizes that the health of people, animals and ecosystems are connected. This approach encourages nations to employ a “whole-of-government-and-society approach” to suppress wildlife trafficking and consumption of commercialized wildlife; promote ecologically friendly and sustainable agriculture; and prioritize nature protection. These steps help reverse global warming and species and biodiversity loss, while improving livelihoods and mitigating pandemic risk. **The One Health approach can save governments time, money, and lives.**

As a matter of global security, governments must adopt and implement the One Health approach to truly prevent pandemics. As of November 1st, 2022, COVID-19 has infected 625 million people, killing 7 million. The world’s economy has suffered a loss of \$13 trillion (12.5% of the global GDP) and that number continues to rise. The impact on lives and economies of a new outbreak would likely be worse. A well-respected study published last year estimates that it would cost \$26 billion a year to prevent spillovers, while improving ecosystem health.¹ Even if this number were quadrupled, it represents less than 1% of the economic damage inflicted thus far by COVID-19.

COVID-19 was zoonotic in origin, meaning the virus was passed from an animal to a person, the same way pandemics occurred before. While it can be difficult to pinpoint the exact origin of these outbreaks, experts agree they share one thing in common - humans tampering with nature.² The way in which spillovers start is also directly relevant to the ways in which we tackle global warming, biodiversity loss, and species extinction.

The spillover of animal-borne viruses to humans occurs when wildlife is pushed out of its natural ecosystem through habitat destruction, hunting, and encroachment that put them into contact with humans. This can occur directly (eg, through wildlife trade) or indirectly, (eg, through farmed animals, often raised in cramped industrial settings having contact with infected wildlife). These same factors led to HIV, SARS, Ebola, MERS, and other outbreaks.

New pandemics will continue, and get worse, until we address their root causes.

Many governments still view and address pandemics, climate change and biodiversity loss as separate issues, but they are connected. These two facts that can save time, money, and lives:

1. **Common Drivers:** The drivers of pandemics, climate change, and biodiversity loss

1 Dobson, et al. “Ecology and Economics for Pandemic Prevention,” Science. 24 July 2020.

2 See “Roadmap to End Pandemics”, by Endpandemics, August 2021. Enclosed.

are largely the same: Habitat destruction; industrial agriculture; and wildlife trade.

2. Prevention Pays: Preventing pandemics is possible, and costs less than 1% of, what the world is spending to recover from COVID-19.

The “One Health” approach attempts to break down silos by connecting and protecting the health and preservation of people, animals and ecosystems. Taking a One Health approach to frontline activities across different sectors also reduces costs and improves impact exponentially.³

To better understand how pandemic prevention encompasses and supports reversal of global warming, as well as species and biodiversity loss, the **EndPandemics** campaign alliance has created critical resources developed by our experts in nature protection, animal wellbeing, wildlife trade, and regenerative agriculture. The following materials are in this **Briefing Pack**:

- **Roadmap to End Pandemics**
- **Message to World Leaders on Ending Pandemics**
- **Stop The New Global Terror: Pandemics**
- **What Individuals Can Do to Prevent Pandemics**
- **EndPandemics Campaign 2021**

EndPandemics draws attention to these additional COP-related documents:

- *UNFCC How Can a Post COVID World Recover Better?*
- *CITES Doc 23.1: Role of CITES in Reducing Risk of Future Zoonotic Emergence from IWT.*
- *CITES DOC 36: Wildlife Enforcement Support in West and Central Africa.*
- *CITES Doc 55: Registration of Operations Breeding App I species for commercial purposes.*
- *CITES Doc 67: Big Cat Task Force.*
- ◆ *CITES Doc 71.1 and 71.2: Pangolin Report of Standing Committee and Recommendations from UK.*

For more information: www.endpandemics.earth

EndPandemics is a global alliance of organizations representing conservation, climate, health, finance, security, agroforestry, business, technology, and communications that have launched a global coordinated campaign to reduce the risks of pandemics by addressing the root cause of all zoonotic outbreaks - rampant wildlife trade and destruction of wild habitat.

See the EndPandemics video: <https://www.youtube.com/watch?v=DOLKNhmKQrg>

³ An example of One Health in action is the development of a new approach to tackling rabies. By encouraging cross-sectoral collaboration, combining disease monitoring in wild and domestic animals, targeted vaccination programmes in domestic animals and people, and culturally-relevant education programmes, authorities in several South Asian countries have drastically reduced rabies deaths, which had persisted despite decades of intensive interventions. The key was understanding that human, animal and environmental factors all contribute to rabies outbreaks, and must therefore all be considered in tackling the disease.

SECTION 2

Message to World Leaders: 3 Steps to Global Recovery & Regeneration

ACT NOW TO PREVENT NEW PANDEMICS

APPEAL TO G20 LEADERS: REDUCE RISK OF NEW PANDEMICS BY ADDRESSING THEIR ROOT CAUSES

THREE STEPS TO GLOBAL RECOVERY AND REGENERATION

As the world continues to reel from the harmful impacts of COVID-19, it is imperative that our leaders urgently find ways to prevent new devastating zoonotic outbreaks.

Global experts and change leaders convened on September 2, 2021, at a roundtable¹ co-hosted by the Vatican COVID-19 Commission, EndPandemics and United for Regeneration to discuss specific recommendations that G20 Leaders can take up at their summit in Rome in October 2021. These discussions² build on earlier expert proceedings, including the recently published *Roadmap to End Pandemics*,³ the WC20 Declaration,⁴ and other reports,⁵ and are summarized by the roundtable co-chairs as follows:

→ Acknowledging that COVID-19 has inflicted more acute harm to the planet than any terrorist act or natural disaster in the last 100 years, representing the greatest current threat to national and international security;

→ Acknowledging the limitations of post-spillover interventions, such as vaccines, that are only good for one disease, disproportionately benefit the rich, and offer no ancillary benefits;

→ Acknowledging that the root causes of pandemics are over-exploitation of nature, including commercial trade of wild animals, and the conversion of wild habitat for commercial use – factors that also drive biodiversity loss and climate change;

→ Acknowledging that the annual cost of preventing pandemics is less than 1% of the cost of recovering from COVID-19;

→ Acknowledging that all of these threats can be mitigated by investing in nature-based solutions and green recovery that also positively impact local communities;

→ Acknowledging that G20 and other nations have already committed to environmental targets that, if implemented, will mitigate the risk of pandemic recurrence;

The Co-Chairs of this Roundtable recommend the following three sets of actions enabled by a finance mechanism that will save the global community trillions of dollars:

1. Prevent Risk of Pandemics from the Trade in Wild Animals

i. Create an Independent Panel to determine the legal options for international and domestic trade in wild animals (including wildlife farming) going forward, including whether to ban all commercial trade in wild animals, or to ban trade in 'high-risk' species only.

¹ [Vatican IHD. 2 September 2021.](#)

² [The Independent. 4 September 2021.](#)

³ EndPandemics. June 2021. [Roadmap to End Pandemics: Building It Together.](#) <https://endpandemics.earth/>.

⁴ [WC20 Declaration. 20 November 2020.](#)

⁵ [Harvard Global Health Institute. August 2021.](#)

Note: No ban would impact indigenous use or subsistence hunting.

- ii. Pause international and domestic trade in wild animals until the Independent Panel concludes.⁶
- iii. Institutionalize campaigns to reduce commercial demand for wild animals.⁷
- iv. Support amendments to: (a) CITES to include additional requirements to address health risks; (b) the UN Convention on Transnational Organized Crime to address wildlife crime; and (c) the International Criminal Court's Rome Statute to include ecocide as an international crime.

2. Prevent Risk of Pandemics Caused by Destructive Land Use Practices

- i. Adopt and implement the 30x30 target of the UN Biodiversity Convention's Post-2020 Global Biodiversity Framework to ensure that at least 30 percent globally of land areas and of sea areas are conserved by 2030.⁸
- ii. Support UN Food Systems Summit 2021 recommendations for a sustainable food future, namely: (a) increase food production without expanding agricultural land; and (b) protect and restore natural ecosystems and limit agricultural encroachment and land-shifting.⁹
- iii. Incentivize regenerative agriculture practices because they strengthen biodiversity, mitigate risk of zoonotic outbreaks, sequester carbon, sustain livelihoods, and produce healthier foods that improve individual and global immunity. Reduce and convert a portion of industrial agriculture subsidies to investments in regenerative agriculture, saving significant money and mitigating pandemic risk.

3. Establish Planetary Health Defense Funding Mechanism

- i. Finance the above-listed nature-based solutions through a Planetary Health Defense Fund that can be established by repurposing certain items within the existing national budgets at the levels equivalent to a tiny fraction of the costs of the current pandemic.¹⁰ Most of this funding will also benefit climate, biodiversity, local economic development, rule of law and other shared priorities.
- ii. Mandate that any pandemic recovery and preparedness program shall include targeted funding for context-specific pandemic prevention solutions.

Steven R. Galster, Roundtable Co-Chair
Walter Link, Roundtable Co-Chair

⁶ Offer legal dealers one-off compensation for their loss in income and to help transition into new livelihood. Use funds from the new Planetary Health Defense funding mechanism described in 3.

⁷ Increase government support for, and involvement in, social behavior change communications campaigns, partly by promoting transition to safer and more sustainable alternatives.

⁸ [UN CBD Secretariat. 5 July 2021](#). CBD/WG2020/3/3. Especially areas where diseases are most likely to emerge.

⁹ [World Resources Report 2019. Creating a Sustainable Food Future](#).

¹⁰ [Science Magazine. 24 July 2020](#). Gross prevention costs are estimated between US\$22 and 31 billion per year.

立即采取行动以预防另一场大流行病

呼吁二十国集团领导者：

通过解决问题根源以减少另一场大流行病发生的风险

实现全球复苏和再生的三个步骤

随着世界持续性地受到 COVID-19 的有害影响，迫切地需要领导者们立即找到应对方案来预防另一场具有破坏性的人畜共患疾病的爆发。

2021 年 9 月 2 日，全球专家和变革领导者在梵蒂冈 COVID-19 委员会¹，与终止大流行病联盟和联合再生共同主办的圆桌会议上，讨论了二十国集团领导者在 2021 年 10 月罗马峰会上可以采纳的具体建议。这些讨论²建立在早期专家会议的基础上，包括最近出版的《终结大流行病路线图》³，WC20 宣言⁴和其他报告⁵，并由圆桌会议联合主席做出如下总结：

→ COVID-19 对地球造成的危害比过去 100 年的任何恐怖行为或自然灾害都要严重，是目前对国家和国际安全最大的威胁。

→ 疾病溢出后干预措施（例如疫苗）的局限性，只对一种疾病有效，让富人获益超出了正常范围，并且没有提供任何附加的益处；

→ 大流行病发生的根本原因是对自然的过度剥削，这包括野生动物的商业贸易，以及将野生栖息地改造成商业用地-这些因素也造成了生物多样性的丧失和气候变化。

→ 每年用在预防大流行病的费用还不及从 COVID-19 中复苏费用的 1%。

→ 这些威胁都可以通过投资基于自然的解决方案和绿色复苏来消除，这同时也会给当地带来积极的影响。

→ 20 国集团和其他国家已承诺环境目标，如果这些目标得到落实，将降低大流行病再次发生的风险。

本次圆桌会议的联合主席建议采取以下三组由金融机制推动的行动，这将为全世界省去数万亿美元。

1. 预防野生动物贸易带来的大流行病风险。

(1) 建立一个独立的小组来决定今后国际与国内野生动物贸易（包括野生动物养殖厂）的法律抉择，包括是否禁止所有野生动物的商业贸易，或只禁止“高风险”物种的贸易。

注：任何禁令都不会影响原住民的使用或自给性狩猎。

¹ [梵蒂冈人类全面发展部 2021 年 9 月 2 日](#)

² [《独立报》2021 年 9 月 4 日](#)

³ 终止大流行病联盟，2021 年 6 月，[终结大流行病路线图：携手共进](#) <https://endpandemics.earth/>

⁴ [WC20 宣言 2020 年 11 月 20 日](#)

- (2) 在独立小组得出结论以前，暂停国际与国内野生动物贸易⁶。
- (3) 发起制度化运动以减少对野生动物商业需求⁷。
- (4) 支持以下修改：(a)《华盛顿公约》，包括解决健康风险的额外要求；(b)《联合国跨国组织犯罪公约》，以解决有关野生动植物犯罪问题；以及(c)《国际刑事法院罗马规约》，并将生态灭绝列为国际犯罪。

2. 预防因具有破坏性的土地使用方式而引发大流行病的风险

- (1) 通过并实施联合国《生物多样性公约》2020年后全球生物多样性框架的30x30目标，以确保到2030年全球至少有30%的陆地和海洋区域得到保护⁸。
- (2) 支持2021年联合国粮食系统峰会关于未来可持续粮食的建议：(a)在不扩大农业用地的情况下加大粮食产量；(b)保护与恢复自然生态系统，限制农业侵占和土地转移⁹。
- (3) 激励再生农业实践，因为再生农业加强了生物多样性，减轻了人畜共患疾病爆发的风险，封存了碳，维持了生计，并生产出更健康的食物，提高了个人和全球的免疫力。减少并将部分的工业化农业补贴转移为对再生农业的投资，从而节省大量资金并降低大流行病发生的风险。

3. 建立星球健康的防卫筹款机制

- (1) 通过星球健康防护基金为上述基于自然的解决方案提供资金，该基金的设立可以通过重新利用现有国家预算中的某些项目经费，其占比将相当于当前大流行病所耗费成本的极小部分¹⁰。这笔资金的大部分也将有利于气候、生物多样性、地方经济发展、法治和其他共同优先事项。
- (2) 任何大流行病的恢复与准备方案都必须包括针对具体情况的大流行病预防解决方案的专项资金。

史蒂文·R·加尔斯特，圆桌会议联合主席
沃尔特·林克，圆桌会议联合主席

⁶ 向合法贸易商提供一次性补偿，以弥补他们的收入损失，并帮助他们过渡到新的生计。使用行动3中描述的新的星球健康防卫筹款机制

⁷ 通过部分转变为更加安全和更可持续的替代方案，来增加政府对于社会性行为改变沟通运动的支持和参与

⁸ [联合国《生物多样性公约》秘书处 2021年7月5日](#)，CBD/WG2020/3/3，特别是疾病最有可能出现的地区

⁹ [2019年《世界资源报告》创造一个可持续粮食生产的未来](#)

¹⁰ [《科学杂志》2020年7月24日](#)，估计每年的预防总成本在220至310亿美元之间。

JETZT HANDELN, UM NEUE PANDEMIEN ZU VERHINDERN

AUFRUF AN DIE G20 STAATS- UND REGIERUNGSCHEFS: DURCH URSACHENBEKÄMPFUNG DIE RISIKEN NEUER PANDEMIEN MINIMIEREN

DREI SCHRITTE ZUR GLOBALEN WIEDERHERSTELLUNG UND REGENERIERUNG

Da die Welt weiterhin unter den katastrophalen Auswirkungen von COVID-19 leidet, ist es zwingend erforderlich, dass unsere Staats- und Regierungschefs schnellstens Wege finden, um neue verheerende Zoonose-Ausbrüche zu verhindern.

Internationale Experten und Pioniere des Wandels („Change Leaders“) kamen am 2. September 2021 zu einem Runden Tisch¹ zusammen, der von der COVID-19-Kommission des Vatikans, *EndPandemics* und *United for Regeneration* veranstaltet wurde, um spezifische Empfehlungen zu erörtern, die von den Staats- und Regierungschefs der G20 auf ihrem Gipfel in Rom im Oktober 2021 aufgenommen werden können. Die Vorträge und Diskussionen² bauen auf vorangegangenen Studien expertenbasierter Sitzungen auf, einschließlich der kürzlich veröffentlichten *Fahrplan zur Beendigung von Pandemien*³, der WC20-Erklärung⁴ und anderen Berichten⁵, und werden von den Co-Vorsitzenden des Runden Tisches wie folgt zusammengefasst:

→ Davon Kenntnis nehmend, dass die COVID-19 Pandemie dem Planeten mehr akuten Schaden zugefügt hat, als jeder Terrorakt oder jede Naturkatastrophe in den letzten 100 Jahren, was die derzeit größte Bedrohung für die nationale und internationale Sicherheit darstellt;

→ In Anerkennung der begrenzten Wirksamkeit von nachträglichen Interventionen wie Impfstoffen, die nur für eine Krankheit Anwendung finden, den Industrieländern überproportional zugutekommen und keine zusätzlichen Vorteile bieten;

→ In der Erkenntnis, dass den Ursachen von Pandemien die Übernutzung natürlicher Ressourcen zugrunde liegt, einschließlich des kommerziellen Handels mit Wildtieren, und die Umwandlung natürlicher Lebensräume für die kommerzielle Nutzung – Faktoren, die auch den Verlust der biologischen Vielfalt und den Klimawandel vorantreiben;

→ Anerkennend, dass die jährlichen Kosten für die Prävention von Pandemien weniger als 1% der Kosten des Wiederaufbaus betragen;

→ Davon Kenntnis nehmend, dass all diese Bedrohungen durch Investitionen in naturbasierte Lösungen und grüne Wiederaufbau-Programme gemildert werden können, die sich auch positiv auf lokale Gemeinden auswirken;

→ Anerkennend, dass sich die G20 und andere Nationen bereits zu Umweltzielen verpflichtet haben, die, falls sie umgesetzt werden, das Risiko einer erneuten Pandemie mindern werden;

Die Co-Vorsitzenden dieses Runden Tisches empfehlen die folgenden drei Maßnahmenpakete, die durch einen Finanzierungsmechanismus ermöglicht werden, welcher der Weltgemeinschaft Billionen von Euro einsparen wird:

1. Verhindern Sie das Risiko von Pandemien, dass vom Handel mit Wildtieren ausgeht:

i. Richten Sie ein unabhängiges Gremium ein, um die rechtlichen Möglichkeiten für den künftigen internationalen und inländischen Handel mit Wildtieren (unter Einbezug von Wildtierzucht) festzulegen,

¹ [Vatican IHD. 2 September 2021.](#)

² [The Independent. 4 September 2021.](#)

³ EndPandemics. June 2021. [Roadmap to End Pandemics: Building It Together.](#) <https://endpandemics.earth/>.

⁴ [WC20 Declaration. 20 November 2020.](#)

⁵ [Harvard Global Health Institute. August 2021.](#)

einschließlich der Frage, ob der kommerzielle Handel aller Wildtiere oder nur der Handel mit „Hochrisikoarten“ verboten werden sollte.

Hinweis: Kein Verbot würde sich auf die indigene Nutzung von Wildtieren auswirken oder auf die Jagd, die geführt wird um den Lebensunterhalt zu bestreiten.

- ii. Unterbrechen Sie den internationalen und inländischen Handel mit Wildtieren bis zum Abschluss des unabhängigen Gremiums.⁶
- iii. Institutionalisieren Sie Kampagnen zur Reduzierung der kommerziellen Nachfrage nach Wildtieren.⁷
- iv. Unterstützen Sie Änderungen von: (a) CITES zur Aufnahme zusätzlicher Anforderungen zum Umgang mit Gesundheitsrisiken; (b) das UN-Übereinkommen über die grenzüberschreitende organisierte Kriminalität um Wildtierkriminalität zu bekämpfen; und (c) das Rom-Statut des Internationalen Strafgerichtshofs, um den Ökozid als internationales Verbrechen aufzunehmen.

2. Verhindern Sie das Risiko von Pandemien, die durch destruktive Landnutzungspraktiken verursacht werden

- i. Verabschieden Sie das 30x30-Ziel des Post-2020 Global Biodiversity Frameworks der UN-Biodiversitätskonvention und setzen Sie es um, damit sichergestellt wird, dass bis 2030 mindestens 30 Prozent der Land- und Meeresflächen weltweit erhalten bleiben und geschützt werden.⁸
- ii. Unterstützen Sie die Empfehlungen des 2021 UN-Gipfels zu Ernährungssystemen für eine nachhaltige Ernährungszukunft, die da wären: (a) Nahrungsmittelproduktion steigern ohne eine Ausweitung der landwirtschaftlichen Flächen; und (b) natürliche Ökosysteme schützen und wiederherstellen und landwirtschaftliches Vordringen sowie eine Verlagerung landwirtschaftlicher Aktivitäten vom globalen Norden in den globalen Süden („land-shifting“) begrenzen.⁹
- iii. Schaffen Sie Anreize für regenerative Landwirtschaftspraktiken, da diese Praktiken Biodiversität stärken, das Risiko von Zoonose-Ausbrüchen mindern, Kohlenstoff binden, den Lebensunterhalt sichern und gesündere Lebensmittel produzieren, welche die individuelle und globale Resilienz verbessern. Reduzieren und wandeln Sie einen Teil der Subventionen für die industrielle Landwirtschaft in Investitionen in regenerative Landwirtschaft um, wodurch erhebliche Kosten eingespart werden und das Pandemierisiko verringert wird.

3. Richten Sie einen Planetary Health Defense Finanzierungs-Mechanismus ein

- i. Finanzieren Sie die oben aufgeführten naturbasierten Lösungen über einen Planetary Health Defense Fund, der errichtet werden kann, indem gewisse Posten in bestehenden Staatshaushalten einer anderen Verwendung zugeführt werden, was nur einen verschwindend geringen Teil der Kosten der derzeitigen Pandemie ausmachen würde.¹⁰ Der Großteil dieser finanziellen Mittel kommt gleichfalls dem Klima, Biodiversität, lokaler ökonomischer Entwicklung, der Rechtsstaatlichkeit, and anderen gemeinsamen Prioritäten zugute.
- ii. Machen Sie es zur Verpflichtung, dass jedes Programm zur Wiederherstellung und zur Vorbeugung einer Pandemie eine gezielte Finanzierung für kontextspezifische Lösungen zur Pandemieprävention umfasst.

Steven R. Galster, Co-Vorsitzender des Runden Tisches

Walter Link, Co-Vorsitzender des Runden Tisches

⁶ Bieten Sie eine einmalige Kompensierung für legale Händler an, um das fehlende Einkommen zu kompensieren, und um sich einen neuen Lebensunterhalt aufzubauen. Verwenden Sie Mittel des neuen Planetary Health Defense Finanzierungs-Mechanismus, beschrieben auf Seite 3.

⁷ Erhöhen Sie staatliche Hilfen für, und Beteiligung an, Kommunikationskampagnen, die eine Verhaltensänderung bewirken, u.a. durch die Unterstützung eines Übergangs zu sicheren und nachhaltigeren Alternativen.

⁸ [UN CBD Secretariat. 5 July 2021](#). CBD/WG2020/3/3. Insb. In Regionen, in denen Ausbrüche am wahrscheinlichsten sind.

⁹ [World Resources Report 2019. Creating a Sustainable Food Future](#).

¹⁰ [Science Magazine. 24 July 2020](#). Die Brutto-Präventionskosten werden auf 22-31 Milliarden US-Dollar jährlich geschätzt.

BERTINDAK SEKARANG UNTUK MENCEGAH PANDEMI BARU

SERUAN BAGI PEMIMPIN G20: KURANGI RISIKO PANDEMI BARU DENGAN MENANGANI AKAR MASALAH

TIGA LANGKAH MENUJU PEMULIHAN DAN REGENERASI GLOBAL

Di saat dunia terus terguncang oleh dampak dari COVID-19, menjadi suatu keharusan bagi para pemimpin untuk menemukan cara mencegah wabah zoonosis baru yang merusak.

Para ahli global dan pimpinan perubahan berunding pada tanggal 02 September 2021 pada diskusi meja bundar¹ yang diselenggarakan bersama oleh Komisi COVID-19 Vatikan, *EndPandemics*, dan *United for Regeneration*. Diskusi tersebut membahas rekomendasi spesifik bagi pimpinan negara-negara G20 untuk dibawa dalam pertemuan di Roma, Oktober 2021. Diskusi² dibangun atas prosiding sebelumnya dari para ahli, termasuk dokumen *Roadmap to End Pandemics*³ yang baru dipublikasikan, Deklarasi WC20⁴, serta laporan lainnya⁵, dan telah dirangkum oleh Pimpinan Bersama Meja Bundar sebagai berikut:

- Mengakui bahwa COVID-19 telah mengakibatkan kerusakan akut yang lebih besar dibandingkan aksi terorisme atau bencana alam dalam seratus tahun terakhir, yang menunjukkan ancaman terbesar saat ini terhadap keamanan nasional dan internasional;
- Mengakui keterbatasan intervensi pasca kejadian, seperti vaksin, yang hanya berguna untuk satu jenis penyakit, menguntungkan masyarakat ekonomi tinggi secara tidak proporsional, dan tidak memiliki manfaat tambahan;
- Mengakui bahwa akar permasalahan dari pandemi adalah eksploitasi berlebihan terhadap alam, termasuk perdagangan komersial satwa liar, dan pengalihan fungsi habitat untuk kepentingan komersial – faktor yang juga mendorong hilangnya keanekaragaman hayati dan perubahan iklim;
- Mengakui bahwa biaya tahunan untuk pencegahan pandemi kurang dari 1% biaya pemulihan dari COVID-19;
- Mengakui bahwa seluruh ancaman tersebut dapat dimitigasi dengan berinvestasi pada solusi berbasis alam dan pemulihan ramah lingkungan, yang juga berdampak positif terhadap masyarakat setempat;
- Mengakui bahwa G20 dan negara-negara lainnya telah berkomitmen pada target-target lingkungan yang, jika diterapkan, dapat memitigasi risiko pandemi berulang;

Pimpinan Bersama Meja Bundar merekomendasikan tiga rencana aksi sebagaimana berikut, dengan mekanisme finansial yang dapat menghemat dana sebesar triliunan dolar dari masyarakat global:

1. Mencegah Risiko Pandemi dari Perdagangan Satwa Liar:

- i. Membentuk suatu Panel Independen untuk menentukan opsi hukum terkait perdagangan satwa liar domestik dan internasional (termasuk peternakan satwa liar) ke depannya, termasuk apakah perdagangan komersial akan dilarang untuk seluruh jenis satwa liar atau hanya pada spesies dengan risiko kepunahan tinggi.

Catatan: Larangan tidak berlaku pada penggunaan oleh masyarakat adat dan perburuan untuk pemenuhan kebutuhan dasar.

¹ [Vatican IHD](#). 02 September 2021.

² [The Independent](#). 04 September 2021.

³ EndPandemics. Juni 2021. *Roadmap to End Pandemics: Building It Together*. <https://endpandemics.earth/>.

⁴ [Deklarasi WC20](#). 20 November 2020.

⁵ [Harvard Global Health Institute](#). Agustus 2021.

- ii. Menghentikan perdagangan satwa liar domestik dan internasional hingga diakhiri oleh Panel Independen⁶.
- iii. Menginstitusikan kampanye untuk mengurangi permintaan komersial terhadap satwa liar⁷.
- iv. Mendukung amendemen terhadap: (a) CITES, untuk mencantumkan persyaratan tambahan dalam rangka menangani risiko kesehatan; (b) Konvensi PBB tentang Kejahatan Terorganisir Transnasional, untuk menangani permasalahan kejahatan satwa liar; dan (c) Statuta Roma Mahkamah Pidana Internasional, untuk memasukkan ekosida sebagai kejahatan internasional.

2. Mencegah Risiko Pandemi karena Penggunaan Lahan yang Merusak

- i. Mengadopsi dan mengimplementasikan target 30x30 dari Kerangka Kerja Keanekaragaman Hayati Global Pasca-2020, Konvensi Keanekaragaman Hayati PBB, untuk memastikan bahwa sedikitnya 30 persen wilayah darat dan laut secara global dikonservasi pada tahun 2030⁸.
- ii. Mendukung rekomendasi KTT Sistem Pangan PBB Tahun 2021 untuk masa depan pangan berkelanjutan, antara lain: (a) Meningkatkan produksi pangan tanpa perluasan lahan pertanian; dan (b) Melindungi dan merestorasi ekosistem alami serta membatasi pelanggaran batas lahan pertanian dan alih fungsi lahan⁹.
- iii. Memberi insentif pada praktik pertanian regeneratif yang mampu memperkuat keanekaragaman hayati, memitigasi risiko wabah zoonosis, menyerap karbon, mempertahankan mata pencaharian, dan memproduksi pangan sehat untuk memperbaiki kekebalan individu dan global. Mengurangi dan mengubah sebagian subsidi pertanian untuk investasi pertanian regeneratif dapat menghemat dana sekaligus memitigasi risiko pandemi.

3. Membangun Mekanisme Pendanaan Pertahanan Kesehatan Planet

- i. Membiayai solusi berbasis alam di atas melalui Dana Pertahanan Kesehatan Planet yang dapat dibangun dengan pengalihan pos-pos dana tertentu dalam anggaran nasional yang ada, pada tingkatan yang hanya mencapai sebagian kecil pengeluaran pandemi saat ini.¹⁰ Sebagian besar pendanaan ini juga akan bermanfaat bagi iklim, keanekaragaman hayati, pembangunan ekonomi lokal, supremasi hukum, dan prioritas bersama lainnya.
- ii. Mengamanatkan bahwa semua program pemulihan dan kesiapan pandemi harus mencakup pendanaan yang disasar untuk solusi pencegahan pandemi yang spesifik terhadap konteks.

*Steven R. Galster, Pimpinan Bersama Meja Bundar
Walter Link, Pimpinan Bersama Meja Bundar*

⁶ Tawarkan kompensasi satu kali kepada pedagang resmi atas kehilangan pemasukan dan untuk membantu transisi ke mata pencaharian baru. Gunakan dana dari Mekanisme Pendanaan Pertahanan Kesehatan Planet pada butir (3).

⁷ Tingkatkan dukungan pemerintah terhadap, dan partisipasi pemerintah dalam, kampanye komunikasi perubahan perilaku, di antaranya dengan mempromosikan peralihan ke alternatif lain yang lebih aman dan berkelanjutan.

⁸ [Sekretariat Konvensi Keanekaragaman Hayati PBB](#). 05 Juli 2021. *CBD/WG2020/3/3*. Khususnya pada daerah dengan risiko penyakit tinggi.

⁹ [World Resources Report 2019](#). *Creating a Sustainable Food Future*.

¹⁰ [Science Magazine](#). 24 Juli 2020. Biaya pencegahan berdasarkan estimasi kotor berkisar antara 22-31 miliar dolar US per tahun.

새로운 팬데믹을 예방하기 위해 지금 행동합시다

G20 리더들께 드리는 호소문:

팬데믹의 근본 원인을 해결함으로써 새로운 팬데믹의 위험 낮추기

글로벌 회복과 재건을 위한 3 단계

전 세계가 코비드 19의 해로운 영향으로 계속해서 휘청거리고 있는 지금, 우리의 리더들은 또 충격을 가져올 수 있는 새로운 인수공통 전염병을 예방하기 위한 방안을 반드시 찾아내야 합니다.

전 세계의 전문가 및 혁신 리더들은 G20 리더들이 2021년 10월 로마 정상회의에서 채택할 수 있는 구체적인 권고사항에 대해 논의하기 위해 2021년 9월 2일, 바티칸 COVID-19 위원회 (Vatican COVID-19 Commission), 엔드팬데믹스 (EndPandemics), 유나이티드포리제네레이션 (United for Regeneration) 이 공동 주최한 원탁회의¹에 함께 모였습니다. 이 원탁회의에서의 논의는² 최근 발표된 팬데믹 종식을 위한 로드맵 (Roadmap to End Pandemics),³ WC20 선언문 (WC20 Declaration),⁴ 기타 다른 보고서⁵ 등을 비롯한 기존에 작성된 전문가 절차 (expert proceedings) 를 바탕으로 이루어졌으며 원탁회의의 공동의장들은 그 내용을 다음과 같이 요약했습니다.

→ COVID-19가 현재 국가 안보 및 국제 안보에 가장 큰 위협이 되고 있으며 지난 100년간 있었던 그 어떤 테러행위나 자연재해보다 지구상에 더 극심한 피해를 입혔음을 인정함

→ 백신 같이 한 가지 질병에만 효과가 있고 부유층에게 불균형적으로 큰 혜택을 주며 부수적인 이점은 없는 확산 이후 (post-spillover) 개입의 한계점을 인정함

→ 팬데믹의 근본 원인은 야생동물의 상업적 거래를 비롯한 자연 남용과 야생동물 서식지의 상업적 사용 등임을 인정함. 이러한 요인으로 인해 생물다양성 감소와 기후 변화도 일어나고 있음.

→ 연간 팬데믹 예방 비용이 코비드 19로부터 회복하는 비용의 1%보다도 적다는 점을 인정함

→ 이 모든 위협이 현지 커뮤니티에도 긍정적인 영향을 미치는 자연 기반 해결책과 녹색 회복에 투자함으로써 완화될 수 있음을 인정함

→ G20 및 다른 국가들이 실현된다면 팬데믹 재발 위험을 완화시킬 수 있는 환경 목표를 달성하는데 이미 전념해 왔음을 인정함

이 원탁회의의 공동의장들은 글로벌 커뮤니티가 수조 달러를 절약할 수 있게 해 줄 금융 메커니즘을 통해 시행될 수 있는 다음의 3가지 조치를 권고함.

1. 야생 동물 거래로 인한 팬데믹 위험 예방:

i. 야생 동물의 모든 상업적 거래를 금지할 것인지, '고위험'종 야생동물의 거래만을 금지할 것인지 여부 등을 포함하여 앞으로 야생동물의 국제 거래 및 국내 거래에 대한 법적인 옵션을 정하기 위한 독립 패널을

¹ [Vatican IHD. 2021년 9월 2일](#)

² [The Independent. 2021년 9월 4일](#)

³ EndPandemics. 2021년 6월. [팬데믹 종식을 위한 로드맵: 함께 구축하기 \(Roadmap to End Pandemics: Building It Together\)](#). <https://endpandemics.earth/>.

⁴ [WC20 Declaration. 2020년 11월 20일](#).

⁵ [Harvard Global Health Institute. 2021년 8월](#).

마련한다.

비고: 그 어떤 거래 금지도 토착민의 야생동물 사용이나 자급을 위한 사냥에 영향을 미치지 않을 것이다.

- ii. 독립 패널이 완전히 마련될 때까지는 야생동물의 국제 거래 및 국내 거래를 중단한다.⁶
- iii. 야생동물에 대한 상업적 수요를 줄이기 위한 캠페인을 제도화한다.⁷
- iv. 다음과 같은 수정을 지지한다: (a) CITES 에 보건 위험 문제 해결을 위한 추가 요건을 포함할 것, (b) 초국가적 조직범죄에 관한 유엔 협약에서 야생동물 범죄를 다룰 것, (c) 국제 형사 재판소에 관한 로마규정에 생태계 파괴를 국제 범죄로 추가한다.

2. 파괴적 토지사용 관행으로 인해 야기되는 팬데믹 위험 예방

- i. 전 세계 육지 면적과 해양 면적의 적어도 30%가 2030 년까지 보존될 수 있도록 UN 생물 다양성 협약 포스트-2020 글로벌 생물 다양성 프레임워크 (Post-2020 Global Biodiversity Framework)의 30x30 목표를 채택하고 시행한다.⁸
- ii. UN 식량 시스템 정상회의의 지속 가능한 식량 미래를 위한 다음과 2021 년 권고를 지지한다: (a) 농경지를 확대하지 않고 식량 생산을 증대한다, (b) 자연 생태계를 보호 및 회복시키고 농업 침식과 토지이용 변경에 제한을 둔다.⁹
- iii. 재생농업 관행은 생물 다양성을 강화하고, 인수공통 전염병 위험을 줄여주며, 탄소를 격리시키고, 생계를 이어갈 수 있게 해주며, 개인 면역과 글로벌 면역을 향상시켜주는 더욱 건강한 식량을 생산하기 때문에 재생농업 관행을 장려한다. 산업형 농업에 대한 보조금을 줄이고 이러한 보조금의 일부를 재생 농업에 투자하여 상당한 양의 돈을 절약하고 팬데믹 위험을 줄인다.

3. 지구 보건 방어 펀딩 (Planetary Health Defense Funding) 메커니즘을 마련한다.

- i. 이 원탁회의에 참여한 전문가들의 전문성을 비롯한 기존의 전문성을 활용하여 상기 나열된 자연 기반 해결책을 위해 지구 보건 방어 펀드를 통해 자금을 조달한다. 지구 보건 방어 펀드는 각 국가의 기존 예산에서 일정 부분을 할애하여 조성하는데, 이는 현재 팬데믹 지출 비용에서 소규모의 비율을 적용하여 특정 목적 예산으로 재설정하여 조성한다.¹⁰ 이 펀드의 대부분은 기후, 생물다양성, 지역경제개발, 입법과 기타 공유 가치를 위해 사용한다.
- ii. 모든 팬데믹 회복 프로그램 및 준비 프로그램에 구체적 상황에 따른 팬데믹 예방 해결책을 위한 펀딩 목표를 포함시킬 것을 의무화한다.

스티븐 R. 갤스터 (Steven R. Galster), 원탁회의 공동의장

월터 링크 (Walter Link), 원탁회의 공동의장

⁶ 합법적 딜러에게는 그들의 수입 감소에 대해 보상하고 새로운 생계수단으로 전환하는데 도움을 주기 위해 일회성 보상금을 제공한다. 3 에 기술된 새로운 지구 보건 방어 펀딩 메커니즘으로부터 나오는 펀드를 사용한다.

⁷ 사회적 행위 변화 커뮤니케이션 캠페인에 대한 정부의 지원 및 관여를 증대한다. 이는 더 안전하고 더 지속가능한 대안으로의 이행을 촉진함으로써 부분적으로 이루어질 수 있다.

⁸ [UN CBD Secretariat. 2021 년 7 월 5 일.](#) CBD/WG2020/3/3.

⁹ [World Resource Report 2019. 지속 가능한 식량 미래 만들기\(Creating a Sustainable Food Future\)](#)

¹⁰ [Science Magazine. 2020 년 7 월 24 일.](#) 총 예방 비용은 연간 220 억불에서 310 억불 사이로 추정된다.

AJA AGORA PARA PREVINIR NOVAS PANDEMIAS

APELO AOS LÍDERES DO G20: REDUZAM O RISCO DE NOVAS PANDEMIAS ABORDANDO SUAS CAUSAS PRINCIPAIS

TRÊS PASSOS PARA A RECUPERAÇÃO E REGENERAÇÃO GLOBAL

À medida em que o mundo continua sofrendo os efeitos adversos da COVID-19, é imperativo que nossos líderes encontrem com urgência formas de prevenir novos surtos devastadores de zoonoses.

Especialistas mundiais e líderes agentes de mudança reuniram-se em 02 de Setembro de 2021, em uma mesa-redonda¹ organizada conjuntamente pela Comissão COVID-19 do Vaticano, pela EndPandemics, e United for Regeneration, para discutir recomendações específicas que os líderes do G20 podem abordar durante a sua reunião em Roma, em Outubro de 2021. Essas discussões² são embasadas em publicações anteriores de especialistas, incluindo o recentemente publicado *Roadmap to End Pandemics* (Mapa de Ação para o Fim das Pandemias)³, a Declaração do WC20⁴, e outros relatórios⁵, os quais foram resumidos pelos co-presidentes da mesa-redonda da seguinte forma:

→ Reconhecendo que a COVID-19 causou danos mais graves ao planeta do que qualquer ato terrorista ou desastre natural nos últimos 100 anos, representando, assim, a maior ameaça atual à segurança nacional e internacional;

→ Reconhecendo as limitações das intervenções posteriores à propagação da COVID-19, como as vacinas, que são efetivas para cada doença, beneficiam de maneira desproporcional os ricos, e não oferecem benefícios adicionais;

→ Reconhecendo que as causas fundamentais das pandemias são a sobre-exploração da natureza, incluindo o comércio de fauna silvestre, e a conversão de áreas naturais para uso comercial – fatores que também impulsionam a perda de biodiversidade e as alterações climáticas;

→ Reconhecendo que o custo anual para a prevenção de pandemias é menos de 1% do custo da recuperação da COVID-19;

→ Reconhecendo que todas estas ameaças podem ser mitigadas através de investimentos em soluções baseadas na natureza e na recuperação ecológica que também impactam positivamente as comunidades locais;

→ Reconhecendo que o G20 e outras nações se comprometeram com metas ambientais que, se implementadas, mitigarão o risco de recorrência de pandemias;

Os Copresidentes desta Mesa-Redonda recomendam os três conjuntos de ação descritos a seguir, habilitados por um mecanismo financeiro que economizará trilhões de dólares da comunidade global:

1. Prevenir o risco de pandemias decorrentes do comércio de fauna silvestre:

i. Criação de um Painel Independente para determinar as opções legais para o futuro do comércio nacional e internacional de fauna silvestre (incluindo a criação em cativeiro), avaliando inclusive possibilidade de proibição de todo o comércio de fauna silvestre, ou apenas do comércio de espécies consideradas de “alto-risco”.

¹ [DHI Vaticano. 2 de Septiembre de 2021.](#)

² [The Independent. 4 de Septiembre de 2021.](#)

³ [Roadmap to EndPandemics](#) (EndPandemics, Junho de 2021 <http://endpandemics.earth/>).

⁴ [Declaração do WC20. 20 de Novembro de 2020.](#)

⁵ [Instituto de Saúde Global da Universidade de Harvard. Agosto de 2021.](#)

Nota: Nenhuma proibição afetaria o uso por parte de populações indígenas ou a caça de subsistência.

- ii. Suspender o comércio nacional e internacional de fauna silvestre até que o Painel Independente tenha concluído sua análise e recomendações⁶.
- iii. Institucionalizar campanhas para reduzir a demanda por fauna silvestre⁷.
- iv. Apoiar as alterações propostas para: (a) a CITES para incluir requisitos adicionais para abordar os riscos para a saúde; (b) a Convenção da Organização das Nações Unidas contra o Crime Organizado Transnacional – UNTOC – para incluir crimes contra espécies silvestres; e (c) o Estatuto de Roma da Corte Penal Internacional para incluir o ecocídio como crime internacional.

2. Prevenir o risco de pandemias causadas por práticas destrutivas do uso da terra:

- i. Adotar e implementar a meta 30x30 do Marco Global para a Biodiversidade Pós-2020 Convenção da ONU sobre Diversidade Biológica (CDB) para garantir que ao menos 30% das áreas terrestres e marinhas em nível mundial sejam conservadas até 2030⁸.
- ii. Apoiar as recomendações da Cúpula dos Sistemas Alimentares de 2021 da ONU para um futuro alimentar sustentável, a saber: (a) aumentar a produção de alimentos sem expandir as terras de uso agrícola; e (b) proteger e restaurar os ecossistemas naturais e limitar a invasão e a conversão de áreas naturais para fins agrícolas⁹.
- iii. Incentivar as práticas de agricultura regenerativa uma vez que fortalecem a biodiversidade, mitigam o risco de surtos de zoonoses, sequestram carbono, representam meios de vida para comunidades e produzem alimentos mais saudáveis, que melhoram a imunidade individual e global. Reduzir e converter parte dos subsídios fornecidos para a agricultura industrial em investimentos na agricultura regenerativa, economizando uma quantidade significativa de dinheiro e mitigando o risco de pandemias.

3. Estabelecer um Mecanismo de Financiamento de Defesa da Saúde Planetária

- i. Financiar as soluções baseadas na natureza mencionadas anteriormente através de um Fundo de Defesa da Saúde Planetária que pode ser criado através do redirecionamento de itens contemplados nos orçamentos nacionais existentes, em níveis equivalentes a uma pequena fração dos custos da atual pandemia¹⁰. A maior parte desse financiamento também beneficiará o clima, a biodiversidade, o desenvolvimento econômico local, o estado de direito e outras prioridades.
- ii. Exigir que qualquer programa de preparação para e recuperação de pandemias inclua financiamento específico para soluções contextualizadas de prevenção de pandemias.

Steven R. Galster, Copresidente de Mesa-Redonda

Walter Link, Copresidente de Mesa-Redonda

⁶ Oferecer aos comerciantes legalizados uma compensação única por sua perda de receita e que os auxilie na transição para um novo meio de vida. Utilizar os recursos do novo mecanismo de financiamento da Defesa da Saúde Planetária descrito no item 3.

⁷ Aumentar o apoio e a participação dos governos em campanhas de comunicação para a mudança efetiva do comportamento social, em parte promovendo a transição para alternativas mais seguras e sustentáveis.

⁸ [Secretaria da ONU da CDB](#). 5 de Julho de 2021. CDB/WG2020/3/3. Especialmente em áreas onde é mais provável que surjam enfermidades.

⁹ [World Resources Institute Report. 2019. Criando um Futuro Alimentar Sustentável.](#)

¹⁰ [Science Magazine. 24 de Julho de 2020.](#) Os custos brutos de prevenção são estimados entre 22 bilhões e 31 bilhões de dólares americanos por ano.

ACTÚE AHORA PARA PREVENIR NUEVAS PANDEMIAS

LLAMADO A LOS LÍDERES DEL G20: REDUZCA EL RIESGO DE NUEVAS PANDEMIAS ABORDANDO SUS CAUSAS PRINCIPALES

TRES PASOS PARA LA RECUPERACIÓN Y REGENERACIÓN GLOBAL

A medida que el mundo continúa sufriendo los efectos adversos del COVID-19, es imperativo que nuestros líderes encuentren con urgencia formas de prevenir nuevos brotes zoonóticos devastadores.

Expertos mundiales y líderes del cambio se reunieron el 2 de septiembre de 2021 en una mesa de diálogo¹ organizada conjuntamente por la Comisión Vaticana COVID-19, EndPandemics y United for Regeneration para discutir recomendaciones específicas que los líderes del G20 pueden abordar en su cumbre en Roma en octubre de 2021. Estas discusiones² se basan en publicaciones de expertos anteriores, incluyendo la *Hoja de Ruta para Poner Fin a las Pandemias*³ recientemente publicada, la Declaración del WC20⁴ y otros informes⁵, los cuales fueron resumidos por los copresidentes de la mesa de diálogo de la siguiente manera:

→ Reconociendo que el COVID-19 ha causado un daño más grave al planeta que cualquier acto terrorista o desastre natural en los últimos 100 años, lo que representa la mayor amenaza actual para la seguridad nacional e internacional;

→ Reconociendo las limitaciones de las intervenciones posteriores a la propagación del COVID-19, como las vacunas, que son efectivas para una sola enfermedad, que benefician de manera desproporcionada a los ricos y no ofrecen beneficios secundarios;

→ Reconociendo que las causas fundamentales de las pandemias son la sobreexplotación de la naturaleza, incluido el comercio de fauna silvestre, y la conversión de hábitats naturales para uso comercial - factores que también impulsan la pérdida de biodiversidad y el cambio climático;

→ Reconociendo que el costo anual de prevenir pandemias es menos del 1% del costo de recuperación de COVID-19;

→ Reconociendo que todas estas amenazas pueden mitigarse invirtiendo en soluciones basadas en la naturaleza y recuperación ecológica que también impactan positivamente a las comunidades locales;

→ Reconociendo que el G20 y otras naciones ya se han comprometido con objetivos ambientales que, si se implementan, mitigarán el riesgo de recurrencia de la pandemia;

Los Copresidentes de esta Mesa de Diálogo recomiendan los siguientes tres conjuntos de acciones habilitadas por un mecanismo financiero que ahorrará billones de dólares a la comunidad global:

1. Prevenir el riesgo de pandemias por el comercio de fauna silvestre:

i. Crear un Panel Independiente para determinar las opciones legales para el comercio nacional e internacional de fauna silvestre (incluida la zoo-cría) en el futuro, incluyendo si prohibir todas las transacciones comerciales de fauna silvestre o prohibir únicamente el comercio de especies de 'alto riesgo'.

Nota: Ninguna prohibición afectaría el uso por parte de los indígenas o la cacería de subsistencia.

¹ [DHI Vaticano. 2 de Septiembre de 2021.](#)

² [The Independent. 4 de Septiembre de 2021.](#)

³ EndPandemics. Junio de 2021. [Hoja de Ruta para Poner Fin a las Pandemias: Construyéndola Juntos.
https://endpandemics.earth/.](#)

⁴ [Declaración de WC20. 20 de Noviembre de 2020.](#)

⁵ [Instituto de Salud Global de la Universidad de Harvard. Agosto de 2021.](#)

- ii. Pausar el comercio nacional e internacional de fauna silvestre hasta que concluya el Panel Independiente.⁶
- iii. Institucionalizar campañas para reducir la demanda comercial de fauna silvestre.⁷
- iv. Apoyar las enmiendas a: (a) CITES para incluir requisitos adicionales para abordar los riesgos para la salud; (b) la Convención de las Naciones Unidas contra la Delincuencia Organizada Transnacional para abordar los delitos contra la fauna silvestre; y (c) el Estatuto de Roma de la Corte Penal Internacional para incluir el ecocidio como crimen internacional.

2. Prevenir el riesgo de pandemias causadas por prácticas destructivas de uso de la tierra

- i. Adoptar e implementar la meta 30x30 del Marco de Biodiversidad Global Posterior a 2020 del Convenio de la ONU sobre la Diversidad Biológica para garantizar que al menos el 30 por ciento de las áreas terrestres y marinas a nivel mundial sean conservadas para 2030.⁸
- ii. Apoyar las recomendaciones de la Cumbre de las Naciones Unidas sobre Sistemas Alimentarios de 2021 para un futuro alimentario sostenible, a saber: (a) aumentar la producción de alimentos sin expandir las tierras de uso agrícola; y (b) proteger y restaurar los ecosistemas naturales y limitar la invasión agrícola y el traslado de tierras.⁹
- iii. Incentivar las prácticas de agricultura regenerativa porque fortalecen la biodiversidad, mitigan el riesgo de brotes zoonóticos, captan carbono, mantienen los medios de vida y producen alimentos más saludables que mejoran la inmunidad individual y global. Reducir y convertir una parte de los subsidios a la agricultura industrial en inversiones en agricultura regenerativa, ahorrando una cantidad significativa de dinero y mitigando el riesgo de una pandemia.

3. Establecer un mecanismo de financiación de la defensa de la salud planetaria

- i. Financiar las soluciones mencionadas anteriormente basadas en la naturaleza mediante un Fondo de Defensa de la Salud Planetaria que puede ser creado reasignando dentro de los presupuestos nacionales ciertos ítems existentes equivalentes a una pequeña fracción de los costos de la pandemia actual.¹⁰ La mayor parte de esta financiación también beneficiará al clima, la biodiversidad, el desarrollo económico local, el estado de derecho y otras prioridades compartidas.
- ii. Exigir que cualquier programa de preparación y recuperación ante una pandemia incluya financiación específica para soluciones de prevención de una pandemia específica para cada contexto.

Steven R. Galster, *Copresidente de la Mesa de Dialogo*
Walter Link, *Copresidente de la Mesa de Dialogo*

⁶ Ofrecer a los comerciantes legales una compensación única por su pérdida de ingresos y les ayude en la transición hacia un nuevo medio de vida. Utilizar fondos del nuevo mecanismo de financiación de la Defensa de la Salud Planetaria que se describe en 3.

⁷ Aumentar el apoyo y la participación del gobierno en las campañas de comunicación para el cambio de comportamiento social, en parte promoviendo la transición hacia alternativas más seguras y sostenibles.

⁸ [Secretaría de las ONU del CBD](#). 5 de Julio de 2021. CBD/WG2020/3/3. Especialmente en áreas donde es más probable que surjan enfermedades.

⁹ [World Resources Report 2019. Creando un Futuro Alimentario Sostenible](#).

¹⁰ [Science Magazine. 24 de Julio de 2020](#). Los costos de prevención brutos se estiman entre US \$ 22 y 31 mil millones por año.

HÃY HÀNH ĐỘNG NGAY ĐỂ NGĂN CHẶN ĐẠI DỊCH MỚI

LỜI KÊU GỌI GỬI CÁC NHÀ LÃNH ĐẠO NHÓM G20

GIẢM RỦI RO TỪ ĐẠI DỊCH MỚI BẰNG CÁCH GIẢI QUYẾT CÁC NGUYÊN NHÂN GỐC RỄ

BA BƯỚC TIẾN TỚI PHỤC HỒI VÀ TÁI TẠO TOÀN CẦU

Khi cả thế giới vẫn bị ảnh hưởng nghiêm trọng do Covid-19 gây ra, các nhà lãnh đạo cấp thiết phải tìm ra những biện pháp ngăn chặn mà những đợt bùng phát bệnh truyền nhiễm từ động vật có sức tàn phá mới.

Ngày 02 tháng 9 năm 2021, các chuyên gia quốc tế và các nhà lãnh đạo chiến lược đã tổ chức Hội nghị bàn tròn¹, đồng chủ trì bởi Ủy ban Covid-19 của Vatican, Chương trình Dập tắt đại dịch và tổ chức Thống nhất để Tái tạo. Tại đây nhóm đã thảo luận những kiến nghị cụ thể mà các nhà lãnh đạo các nước Nhóm G20 có thể đưa ra thảo tại Cuộc gặp Thượng đỉnh trong tháng 10 năm 2021 tại Rome. Các vấn đề thảo luận² dựa trên những tài liệu chuyên môn đã dự thảo trước đây, bao gồm Lộ trình Dập tắt đại dịch được đưa ra gần đây³, Tuyên bố của 20 tổ chức Bảo tồn động vật hoang dã⁴ và các báo cáo khác⁵. Các đồng chủ tọa bàn tròn tóm tắt như sau:

→ Công nhận rằng Covid-19 đã gây ra thiệt hại nghiêm trọng cho cả hành tinh hơn bất cứ hành động khủng bố hay thiên tai nào trong 100 năm qua, thể hiện mối đe dọa lớn nhất hiện nay đối với an ninh quốc gia và quốc tế;

→ Công nhận những hạn chế của các biện pháp can thiệp sau lan truyền, chẳng hạn như vắc xin, chỉ tốt cho một bệnh, mang lại lợi ích không cân đối cho người giàu và không mang lại lợi ích phụ trợ;

→ Công nhận rằng các nguyên nhân sâu xa gây ra đại dịch là do khai thác tài nguyên thiên nhiên quá mức, bao gồm cả buôn bán động vật hoang dã vì mục đích thương mại và chuyển đổi môi trường sống hoang dã để sử dụng cho mục đích thương mại—đây cũng là những yếu tố dẫn đến mất đa dạng sinh học và biến đổi khí hậu;

→ Công nhận rằng chi phí hàng năm cho ngăn ngừa đại dịch là dưới 1% so với chi phí khắc phục hậu quả do Covid-19 gây ra;

→ Công nhận rằng tất cả những mối đe dọa này đều có thể được giảm nhẹ bằng đầu tư cho các giải pháp dựa vào thiên nhiên và phục hồi xanh, đồng thời cũng có tác dụng tích cực cho các cộng đồng địa phương;

→ Công nhận rằng các nước Nhóm G20 và các quốc gia khác đã có cam kết với các mục tiêu môi trường, mà nếu được thực hiện, sẽ giảm thiểu nguy cơ đại dịch tái phát.

Các đồng Chủ tịch Hội nghị đề xuất ba gói hành động, sẽ được kích hoạt bởi một cơ chế tài chính và giúp cộng đồng quốc tế tiết kiệm được hàng nghìn tỷ đô la:

1. Ngăn ngừa đại dịch do buôn bán động vật hoang dã

i. Thành lập Ban hội thẩm độc lập để xác định các lựa chọn pháp lý cho hoạt động buôn bán quốc tế và nội địa đối với động vật hoang dã (kể cả với gây nuôi động vật hoang dã) trong tương lai. Việc này có thể bao gồm cả cấm hoàn toàn buôn bán động vật hoang dã, hoặc chỉ cấm buôn bán những loại động vật hoang dã có “nguy cơ cao”.

Lưu ý: Sẽ không nên có lệnh cấm nào gây ảnh hưởng tiêu cực cho việc sử dụng hoặc săn bắn vì mưu sinh của đồng

¹ [Chương trình phát triển tổng thể con người \(IHD\) của Vatican](#), 02/9/2021.

² [Báo Độc lập](#), ngày 04/9/2021.

³ Dập tắt dịch bệnh, tháng 6/2021. [Lộ trình Dập tắt dịch bệnh: Cùng nhau xây dựng](#). <https://endpandemics.earth/>.

⁴ [Tuyên bố của nhóm 20 tổ chức Bảo tồn động vật hoang dã \(WC20\)](#), 20/11/2020.

⁵ [Viện Y tế toàn cầu Harvard](#). Tháng 8/2021.

bào bản địa.

ii. Tạm dừng buôn bán động vật hoang dã trên phạm vi quốc tế và trong nước cho đến khi Ban hội thẩm độc lập đưa ra kết luận⁶.

iii. Thẻ chế hóa các chiến dịch giảm nhu cầu thương mại đối với động vật hoang dã⁷.

iv. Ủng hộ sửa đổi đối với: (a) Công ước CITES nhằm bổ sung thêm các yêu cầu xử lý rủi ro về sức khỏe; (b) Công ước của Liên hợp quốc về Tội phạm xuyên Quốc gia có Tổ chức nhằm giải quyết vấn đề tội phạm về động vật hoang dã; và (c) Quy định của Tòa án Hình sự quốc tế Rome nhằm công nhận tội phạm môi trường là tội phạm quốc tế.

2. Ngăn ngừa rủi ro về đại dịch do khai thác sử dụng đất đai có tính tàn phá

i. Thông qua và thực hiện mục tiêu 30x30 trong Khung đa dạng sinh học toàn cầu sau năm 2020, thuộc Công ước đa dạng sinh học của Liên hợp quốc nhằm đảm bảo đến năm 2030 có ít nhất 30% diện tích các vùng đất và vùng biển toàn cầu được bảo tồn⁸.

ii. Hỗ trợ các khuyến nghị của Hội nghị Thượng đỉnh Hệ thống Lương thực của Liên hợp quốc năm 2021 cho một tương lai lương thực bền vững, cụ thể là: (a) tăng sản lượng lương thực mà không mở rộng diện tích đất nông nghiệp; và (b) bảo vệ và phục hồi các hệ sinh thái tự nhiên và hạn chế xâm lấn đất nông nghiệp và chuyển dịch đất đai⁹.

iii. Khuyến khích các hoạt động nông nghiệp tái sinh vì chúng làm tăng đa dạng sinh học, làm giảm thiểu nguy cơ phát sinh dịch bệnh do có thể lây lan từ động vật sang người, giảm carbon, duy trì sinh kế và sản xuất thực phẩm lành mạnh nhằm cải thiện khả năng miễn dịch cá nhân và toàn cầu. Giảm và chuyển một phần trợ cấp cho nông nghiệp sản xuất với quy mô lớn sang đầu tư vào nông nghiệp tái sinh. Việc này sẽ tạo ra một khoản tiền tiết kiệm tiền đáng kể và giảm thiểu rủi ro đại dịch.

3. Thiết lập cơ chế tài trợ bảo vệ sức khỏe trên hành tinh

i. Tài trợ cho các giải pháp dựa vào thiên nhiên được nêu trên đây thông qua Quỹ Phòng vệ Sức khỏe Hành tinh. Quỹ này có thể được thành lập bằng cách chuyển đổi mục đích của một số hạng mục trong ngân sách quốc gia, tương đương với một phần nhỏ của các chi phí cho phòng, chống đại dịch hiện tại¹⁰. Phần lớn ngân sách này cũng sẽ đem lại lợi ích cho khí hậu, đa dạng sinh học, phát triển kinh tế địa phương, pháp quyền và các ưu tiên chung khác.

ii. Yêu cầu bắt buộc với bất cứ chương trình phục hồi và chuẩn bị phòng chống đại dịch nào cũng sẽ phải bao gồm ngân sách có mục tiêu cho các giải pháp phòng chống đại dịch theo bối cảnh cụ thể.

Steven R. Galster, Đồng Chủ tịch Hội nghị

Walter Link, Đồng Chủ tịch Hội nghị

⁶ Cấp một lần khoản đền bù thiệt hại cho những người buôn bán hợp pháp để họ chuyển sang công việc sinh sống khác, lấy từ Cơ chế quỹ Bảo vệ sức khỏe trên trái đất đã trình bày tại mục 3.

⁷ Tăng cường hỗ trợ từ chính phủ và tham gia các chiến dịch truyền thông nhằm thay đổi ứng xử trong xã hội, một phần là bằng cách khuyến khích chuyển đổi sang các phương án an toàn và bền vững hơn.

⁸ [Ban Thư ký Công ước về Đa dạng sinh học \(CBD\) của Liên hợp quốc, ngày 05/7/2021](#). CBD/WG2020/3/3. Đặc biệt trong các lĩnh vực mà gần như chắc chắn phát sinh bệnh tật.

⁹ [Báo cáo về các nguồn tài nguyên thế giới 2019. Tao ra tương lai lương thực bền vững](#).

¹⁰ [Tap chí Khoa học, 24/7/2020](#). Tổng chi phí phòng ngừa ước tính từ 22 đến 31 tỷ đô la Mỹ mỗi năm.

โปรดลงมือทันทีเพื่อป้องกันการแพร่ระบาดครั้งต่อไป

ข้อเรียกร้องสำคัญเร่งด่วนต่อผู้นำ G20: โปรดลดความเสี่ยงของการแพร่ระบาดครั้งต่อไป

โดยการระบุดันตของปัญหา

สามขั้นตอนในการกู้คืนและฟื้นฟูโลกของเรา

ในขณะที่โลกเรากำลังฟื้นตัวจากผลกระทบที่สาหัสของ COVID-19 ผู้นำทั้งหลายต้องหาวิธีป้องกันอย่างเร่งด่วนเพื่อไม่ให้เกิดการระบาดของโรคจากสัตว์สู่คนที่ทำลายโลกอย่างมหาศาลครั้งต่อไป เมื่อวันที่ 2 กันยายน พ.ศ. 2564 คณะผู้เชี่ยวชาญและผู้นำการเปลี่ยนแปลงในระดับโลก ได้จัดการอภิปรายแบบโต๊ะกลม¹ โดยมีคณะกรรมการด้านโรคติดเชื้อไวรัสโคโรนา-19 ของวาติกัน, องค์กร EndPandemics และ องค์กร United for Regeneration ร่วมเป็นเจ้าภาพ เพื่อหารือเกี่ยวกับข้อเสนอแนะสำคัญเร่งด่วนที่ต้องการให้ผู้นำ G20 (กลุ่มประเทศที่มีระบบเศรษฐกิจขนาดใหญ่ 19 ประเทศ และสหภาพยุโรป) นำเข้าหรือในการประชุมสุดยอด G20 ที่กรุงโรมในเดือนตุลาคม พ.ศ. 2564

การอภิปรายนี้² เตรียมการมาจากการรวบรวมผลงานจากผู้เชี่ยวชาญสาขาต่างๆ ซึ่งรวมถึง แผนงานเพื่อยุติการแพร่ระบาด³ ที่เพิ่งเผยแพร่ไม่นาน **ปฏิญญา WC20** เพื่อกำหนดการใช้ทรัพยากรธรรมชาติอย่างฉลาดปี 2563⁴ และรายงานอื่นๆ⁵ โดยประธานร่วมทั้งสองของการอภิปราย ได้สรุปใจความสำคัญไว้ดังนี้

→ COVID-19 ก่อให้เกิดอันตรายร้ายแรงต่อโลกมากกว่าการก่อการร้ายหรือภัยพิบัติทางธรรมชาติใดๆ ที่เกิดขึ้นในช่วง 100 ปีที่ผ่านมา ซึ่งแสดงให้เห็นถึงภัยคุกคามยิ่งใหญ่ที่สุดในปัจจุบัน ที่มีต่อความปลอดภัยระดับชาติและระดับสากล

→ ข้อจำกัดของการเข้าแทรกแซงเพื่อแก้ปัญหาหลังเกิดการระบาดแล้ว เช่น การสร้างวัคซีน สารมาลดป้องกันได้เพียงแก่โรคเดียว แต่เอื้อประโยชน์ให้คนรวยในธุรกิจวัคซีนยิ่งรวยขึ้น โดยไม่ให้ประโยชน์อื่นๆ

→ ต้นตอของการแพร่ระบาด เกิดจากการใช้ประโยชน์จากธรรมชาติอย่างเกินขนาด รวมถึงการค้าสัตว์ป่าในเชิงพาณิชย์ การทำลายที่อยู่ของสัตว์ป่าเพื่อผลประโยชน์เชิงพาณิชย์ เหล่านี้ล้วนเป็นปัจจัยที่ผลักดันให้โลกเราสูญเสียความหลากหลายทางชีวภาพและทำให้สภาพภูมิอากาศเปลี่ยนแปลง¹

→ ค่าใช้จ่ายรายปีในการป้องกันการแพร่ระบาดนั้น น้อยกว่า 1% ของค่าใช้จ่ายในการฟื้นตัวจาก COVID-19²

1. ลิงก์การอภิปรายโต๊ะกลม โดยองค์กรวาติกันเพื่อดูแลความยุติธรรม สันติภาพ และสิ่งแวดล้อม เมื่อ 2 กันยายน 2564
2. ลิงก์บทความและวิดีโอการอภิปรายโต๊ะกลมจาก The Independent 4 กันยายน 2564
3. องค์กร EndPandemics . มิถุนายน 2564 แผนงานเพื่อยุติการแพร่ระบาด โปรดมาร่วมมือกัน <https://endpandemics.earth/>
4. ปฏิญญา WC20 เพื่อกำหนดการใช้ทรัพยากรธรรมชาติอย่างฉลาดปี 2563 20 พฤศจิกายน 2563

→ ภัยคุกคามทั้งหมดนี้สามารถบรรเทาได้ด้วยการลงทุนในแนวทางแก้ไขปัญหาที่อิงธรรมชาติและลงทุนใน³

การปฏิรูปสิ่งแวดล้อม ปกป้องและมาตรการต่างๆ เพื่อกู้ความมั่งคั่งกลับคืนมา ซึ่งจะส่งผลดีต่อชุมชนท้องถิ่นด้วย

→ G20และประเทศอื่นๆ ได้ให้คำมั่นต่อเป้าหมายด้านสิ่งแวดล้อมแล้ว ซึ่งหากมีการดำเนินการตามคำมั่น จะช่วยลดความเสี่ยงระดับโลกอีก⁴

ประธานร่วมทั้งสองของการอภิปรายจึงได้แนะนำขั้นตอนที่จะขับเคลื่อนได้ด้วยกลไกทางการเงิน ซึ่งจะช่วยให้ประหยังบของชุมชนหลายล้านล้านดอลลาร์อื่นได้แก่:

1. ป้องกันความเสี่ยงในการเกิดการแพร่ระบาดจากการค้าสัตว์ป่า

1. จัดตั้งคณะกรรมการอิสระ เพื่อกำหนดทางเลือกทางกฎหมายสำหรับการค้าสัตว์ป่าระหว่างประเทศและในประเทศ
สิ่งมีชีวิตจากป่าไว้ในฟาร์มเพื่อการพาณิชย์และขยายถึงการพิจารณาว่า จะห้าม การค้าสัตว์ป่าในเชิงพาณิชย์ทั้งหมด ห
เฉพาะสายพันธุ์ที่มีความเสี่ยงสูงเท่านั้น

หมายเหตุ: ไม่มีข้อห้ามที่จะส่งผลกระทบต่อกรหาของป่าและล่าสัตว์เพื่อการยังชีพของชนพื้นเมือง

2. หยุดการค้าสัตว์ป่าระหว่างประเทศและในประเทศจนกว่าคณะกรรมการอิสระจะได้ข้อสรุป⁶
3. จัดตั้งโครงการรณรงค์ลดความต้องการสัตว์ป่าเพื่อการค้า⁷
4. สนับสนุนการแก้ไขต่อไปนี้:

(ก) การแก้ไขอนุสัญญาว่าด้วยการค้าระหว่างประเทศซึ่งชนิดสัตว์ป่าและพืชป่าที่ใกล้สูญพันธุ์

(CITES) เพื่อรวมข้อกำหนดเพิ่มเติม ที่ระบุความเสี่ยงของการแพร่ระบาดจากการค้าสัตว์ป่าที่มีผลต่อสุขภาพและ

(ข) การแก้ไขอนุสัญญาสหประชาชาติว่าด้วยองค์การอาชญากรรมข้ามชาติเพื่อระบุนาอาชญากรรมต่อสิ่งมีชีวิตในป่าไว้ด้วย

(ค) การแก้ไขธรรมนูญกรุงโรมของศาลอาญาระหว่างประเทศ ให้รวมการทำลายล้างสิ่งแวดล้อมเป็นอาชญากรรมระหว่าง

2. ป้องกันความเสี่ยงในการเกิดการแพร่ระบาดจากการใช้ที่ดินแบบล้างผลาญ

5. ลิงกับความ โดย สถาบันสุขภาพระดับโลกฮาร์วาร์ด สิงหาคม 2564

6. โดยเสนอเงินชดเชยก่อนเดียวให้ผู้ล่าสัตว์ป่าอย่างถูกกฎหมายสำหรับการสูญเสียรายได้และเพื่อช่วยเปลี่ยนไปสู่อาชีพใหม่ โดยใช้เงินทุนจากกลไกการระดมทุน
สุขภาพมนุษย์และสิ่งแวดล้อม ตามที่อธิบายไว้ในขั้นตอนที่ 3

1. ปรับใช้และดำเนินการตามเป้าหมาย 30x30 ของกรอบการทำงานด้านความหลากหลายทางชีวภาพทั่วโลกหลังปี พ.ศ. 2563 ของอนุสัญญาว่าด้วยความหลากหลายทางชีวภาพของสหประชาชาติ เพื่อให้แน่ใจว่า พื้นที่บกและพื้นที่ทางทะเลทั่วโลกอย่างน้อยร้อยละ30จะได้รับการอนุรักษ์ภายในปี 2573⁸

2. สนับสนุนข้อเสนอแนะจากการประชุมสุดยอดระดับผู้นำด้านระบบอาหารโลก UN Food Systems Summit 2021 สำหรับอนาคตของการมีอาหารที่ยั่งยืน ได้แก่ (ก) เพิ่มการผลิตอาหารโดยไม่ต้องขยายพื้นที่เกษตรกรรม และ (ข) ปกป้องและฟื้นฟูระบบนิเวศธรรมชาติ จำกัดการบุกรุกทางการเกษตรและการทำไร่เลื่อนลอย⁹

3. (ก) ให้รางวัลจิตใจแก่เกษตรกรผู้เข้าร่วมระบบเกษตรกรรมฟื้นฟู เพราะจะช่วยสร้างความหลากหลายทาง

ชีวภาพ ลดความเสี่ยงของการระบาดของโรคจากสัตว์สู่คน ช่วยกักเก็บคาร์บอน ฟื้นฟูดังชีวิตของเกษตรกรเองและช่วยผลิตอาหารที่ดีกับสุขภาพกว่าที่เป็นอยู่เพื่อเพิ่มภูมิคุ้มกันของทั้งเกษตรกรเองและประชาชนทั่วโลก

(ข) ลดและแปลงเงินอุดหนุนส่วนหนึ่งของการทำเกษตรแบบอุตสาหกรรมให้เป็นการลงทุนเพื่อระบบเกษตรกรรมฟื้นฟู ซึ่งจะประหยัดเงินได้มาก และลดความเสี่ยงจากการแพร่ระบาด

3. สร้างกลไกการระดมทุนเพื่อปกป้องสุขภาพมนุษย์และสิ่งแวดล้อม

1. จัดหางบประมาณสำหรับแนวทางแก้ไขปัญหาค่าใช้จ่ายด้านสุขภาพที่ก่อขึ้นผ่านกองทุนเพื่อปกป้องสุขภาพมนุษย์และสิ่งแวดล้อมที่สามารถก่อตั้งและจัดหางบประมาณได้ ด้วยการปรับเปลี่ยนการใช้งบประมาณเดิมที่มีอยู่แล้วของแต่ละประเทศ งบประมาณที่จะใช้ไปเพื่อปกป้องสุขภาพมนุษย์และสิ่งแวดล้อมนี้ นับว่าน้อยมากถ้าเทียบกับค่าใช้จ่ายที่สูญเสียไปจากการแพร่ระบาดที่เพิ่งเกิดขึ้น¹⁰ และงบประมาณส่วนใหญ่ของกองทุนนี้ก็จะช่วยสร้างสภาพอากาศที่ดี ความหลากหลายทางชีวภาพ การพัฒนาเศรษฐกิจในท้องถิ่น หลักนิติธรรม และช่วยสร้างสิ่งสำคัญอื่นๆ ต่อชุมชนอีกหลายประการด้วย

2. กำหนดว่า โครงการฟื้นฟูและเตรียมความพร้อมรับมือการแพร่ระบาด จะต้องรวมการสนับสนุนแนวทางแก้ไขปัญหานี้ที่แก้ปัญหากาจากต้นตอของการแพร่ระบาดไว้ด้วย

สเตเวน อาร์. กัสเตอร์ ประธานร่วมของการอภิปราย

วอลเตอร์ ลิงค์ ประธานร่วมของการอภิปราย

8. สำนักเลขาธิการสหประชาชาติ 5 กรกฎาคม 2564 CBD/WG2020/3/3 โดยเฉพาะบริเวณที่มีโอกาสเกิดโรคมากที่สุด

9. World Resources Report 2019. การสร้างอนาคตของการมีอาหารที่ยั่งยืน

10. นิตยสาร Science ฉบับ 24 กรกฎาคม 2563 ค่าใช้จ่ายในการป้องกันโดยรวมอยู่ที่ประมาณ 22 ถึง 31 พันล้านดอลลาร์ต่อปี

SECTION 3

The New Global Terror: Pandemics (Whitepaper)

STOP THE NEW GLOBAL TERROR: PANDEMICS

The Case for a Planetary Security Program



By

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STOP THE NEW GLOBAL TERROR: PANDEMICS

The Case for a Planetary Security Program

It's time to re-examine the most pressing threats to our planet and how governments plan, and spend our money, to stop them.

Later this month, in Rome, Italy, leaders of the world's 20 wealthiest nations will reconvene to address global priorities under the banner "People, Planet, Prosperity." High on this year's G20 agenda is improving COVID-19 vaccine rollout to lower-income countries, and improving preparedness for future outbreaks. This is of course badly needed. But it is equally important to take a step further and examine the root causes of zoonotic outbreaks in order to prevent new, potentially more destructive ones from happening in the first place, sparing us from undergoing entirely new inoculation and recovery efforts all over again.

It's time to re-examine the most pressing threats to our planet and how governments plan, and spend our money, to stop them.

During the current pandemic, G20 nations have spent over \$3 trillion dollars to defend their borders and citizens from "adversarial threats", including terrorism. That phenomenal spend, however, did not prevent 237 million people from getting sick, 4.8 million from dying, and a significant portion of the world's businesses from being harmed or destroyed – all in 21 months. And the deadly COVID clock keeps ticking.

Pandemics now pose the single biggest threat to national and international security. And yet there is no clear plan to stop them.

COVID-19 has inflicted more damage on our planet than any terrorist organization could dream of. Pandemics now pose the single biggest threat to national and international security. And yet there is no clear plan to stop them.

Such a plan would have to unite the fragmented, sometimes competing national security agendas, and link them to environmental and food security, to form a whole-of-planet approach that achieves *global* security and prosperity.

Pandemic mitigation plans are currently delegated to the health community. Emerging infectious disease experts drive discussions on how to prepare for, and scale down virus outbreaks. Environmental and agricultural experts are starting to be engaged more because the virus that causes COVID-19, like many previous pandemics, is assumed to be of animal origin. The rapid rate of species and habitat loss, the extensive wildlife trade, industrial

factory farming, and the proliferation of wildlife farms, are all coming under closer scrutiny as factors that increase the risk of new pathogen outbreaks.

Given the complex drivers of pandemics, the WHO and other UN bodies (FAO, OIE, UNEP) are advising world leaders to adopt a policy approach called “One Health”, which envisions health, environment and agricultural sectors merging efforts to simultaneously protect people, animals and ecosystems, recognizing that they are all interconnected. The United States and Europe seem to be listening as they are ramping up funding through the development community to launch One Health systems in earnest. Corporations are taking up this language, for example in Danone’s vision that is entitled: “One Planet One Health”.

But a new pandemic will strike before One Health takes root if we leave this critical mission solely in the hands of the health and development communities and fail to properly resource the effort. Pandemics are a global threat, and we need a global security response to tackle them.

We need to repurpose our well-funded national security programs and link them to environmental, agricultural, and development programs to scale pandemic prevention efforts. Otherwise, millions more people will suffer and die from preventable virus transmissions, while well-funded militaries continue tracking Islamic insurgents and “enemy” planes and submarines. It’s like installing an expensive security system around your home while it rots from within from termites. Deadly viruses are the new global terror. It’s time to break down the walls between nations and agencies to make One Health the top international security priority.

It’s time to break down the walls between nations and agencies to make One Health the top international security priority.

COVID-19 and 9/11 have a lot in common. In both cases, there was ample intelligence indicating a major threat was imminent. In both cases, the community tracking the threat was fragmented and had no common focal point to report to.

COVID-19 and 9/11 have a lot in common. In both cases, there was ample intelligence indicating a major threat was imminent. In both cases, the community tracking the threat was fragmented and had no common focal point to report to. With 9/11, it was the CIA, FBI, Pentagon, as well as some state authorities that detected signs of a terrorist plot, but their suspicions did not ring alarms at a common control switch. Similarly, for years, disease and wildlife experts warned of a new and disastrous zoonotic outbreak if relentless agricultural expansion and the wildlife trade continued unabated.

As a result of 9/11, the US government created Homeland Security, which brought several agencies under one roof to prevent intelligence from getting stuck in silos and to improve analysis. Other agencies were mandated to pitch in with data sharing and personnel. It’s called the “whole-of-government” approach. The same needs to happen with pandemic prevention, but on a global scale. COVID-19 was a dirty bomb that hit the entire world. G20 leaders need to create a unified Planetary Security Program that pools intelligence and resources, and merges virus defense

We need a “whole-of-planet approach.”

efforts before a bigger viral bomb explodes.

— We need a “whole-of-planet approach.”

Whether COVID-19 emerged from a wild animal market, a wild and exotic animal farm, or a lab experimenting on wild animals, the virus jumped from an animal to a person, so it is zoonotic. We know from previous zoonotic outbreaks – HIV, Ebola, SARS, MERS, Bird Flu, Spanish Flu, the Plague, Leprosy, and others – what drives these outbreaks. Commercial trade in wild animals (including for medical laboratories) and the destruction of wild habitat puts high-risk species in close contact with human communities, where they can shed viruses to people or domesticated animals that have no immunity. It’s called “spillover”.

But our planet has paid scant attention to, and money on, addressing spillover sources. The multi-billion dollar illegal trade in wild animals is a problem left largely to environmental agencies, with modest law enforcement backing and pitifully small budgets, supplemented by the occasional small NGO grant. The legal trade, which dwarfs and masks the illegal trade, is governed by some of the same environmental agencies, together with agricultural agencies, which have little or no oversight over public health considerations.

Destruction of habitat – usually for industrial agriculture – is not only allowed, it is promoted across the world in the name of economic development and hunger mitigation. This is in spite of its negative impact on climate change and biodiversity, and the obvious benefits of regenerative agriculture, which produces healthier food and sustains, rather than clears, natural landscapes.

One Health is indeed the best strategy for a multi-sector, global approach to prevent more COVID-like outbreaks, but it needs muscle and leadership. We need health, environment and agriculture experts on board, working together to guide a pandemic prevention strategy. But their organizations are not structured or budgeted to steer an emergency global effort, nor will they collaborate as intensively as needed without adequate resources and a high-level directive. Like 9/11, international emergencies demand a unified, emergency response that is interagency, international, public-private, and financially sustained.

Such an ask will seem daunting and even confusing to some leaders and legislators, who remain fixated on preparedness for the next outbreak to avoid another public health disaster. While preparedness is critical, it’s not enough. Once a new virus is unleashed, it is very difficult to contain even with the best of pathogen surveillance systems. And current vaccines won’t work against new strains and new diseases. We need to stop treating zoonotic outbreaks like unavoidable natural disasters. We need to go beyond bracing for impact to preventing ignition of catastrophes.

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Catastrophic pandemics are preventable. Health, environmental, agriculture, and national security stakeholders have all developed solutions – many, nature-based – that can significantly reduce the risk of spillovers...

Catastrophic pandemics are preventable. Health, environmental, agriculture, and national security stakeholders have all developed solutions – many, nature-based – that can significantly reduce the risk of spillovers and ring the alarm bell much faster when they start. These solutions fall under five categories:

1. Early detection;
2. Stopping trafficking of wild animals;
3. Reducing demand for wild animals;
4. Protecting natural habitats; and
5. Reforming farming.

But these sectors have not knitted their solutions together for maximum, sustained impact. One reason: Everyone is busy on their own projects, and have little time or incentive to collaborate. Another reason: they compete for funding.

Leaders can mandate the merging of these solutions, pay for them from existing budgets, and accelerate implementation of One Health. Nobody likes to lose their funding to another institution or program, and they don't need to. Budgets can be repurposed, often using existing personnel and technology. This should not be terribly difficult for some countries, like the US, whose Pentagon DARPA program already supports pandemic mitigation efforts (\$500 million a year), currently aimed at keeping soldiers healthy on the battlefield. That battlefield has expanded to every neighborhood across 195 countries, so we are all now soldiers and potential victims.

Agricultural subsidies can also be repurposed without hurting farmers. The US currently spends over \$48 billion a year to buy American produce, France about \$14 billion to its farmers, and other countries pay roughly similar proportions of their GDP.¹ These enormous payments can be gradually repurposed to promote regenerative agriculture, which will improve long-term health of soil, thereby sustaining income for farmers, saving governments money, and producing healthier food for the planet. This shifting of more profits to local farmers also increases the chances that they will preserve soil, while decreasing the chance they will migrate for economic reasons—another threat to international stability.

Preventing wild and farmed exotic animals from mixing with people and domesticated animals requires additional financial and technical resources to stop poaching and trafficking, as well as new wildlife trade regulations. Law enforcement programs in most G20 nations now include a modest focus on environmental security. This focus can be increased by collapsing nature crime appropriately under transnational organized crime (TOC) line items, as Southeast Asia's police network, ASEANAPOL is doing. ASEANAPOL, which focuses on all forms of TOC, has added wildlife

trafficking to its permanent list of targets, making it part of annual work plans. This re-focusing enables police, customs, financial intelligence units, prosecutors and anti-corruption units to start helping rangers halt poaching and habitat destruction, and environmental inspectors catch wildlife traffickers. In due course, law enforcement agencies will discover links between syndicates driving the wildlife trade and other major trans-boundary crimes. They can also seize their criminal assets and reprogram them to reward and sustain nature protection, if and once legislators enable them.

Which points to another set of necessary actions: laws and regulations must also be changed. The massive legal wildlife trade has masked illegal trade and viruses for too long. In fact, whatever the source of this latest outbreak is, it will probably be linked to legitimate trade, as was SARS (farmed palm civets). The inconvenient truth for some is that the commercial trade in wild animals should be at least paused, if not permanently shut down. The G20 can appoint an independent panel² to prevent the risk of pandemics from the trade in wild animals and determine the legal options for international and domestic trade (including wildlife farming) going forward, including whether to ban all commercial trade in wild animals, or to ban trade in ‘high-risk’ species only. *No such ban would impact indigenous use or subsistence hunting.* Specifically the G20 can:

- Pause international and domestic trade in wild animals until the Independent Panel concludes.
- Institutionalize campaigns to reduce commercial, consumer demand for wild animals.
- Support amendments to: (a) the UN Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) to include additional requirements to address health risks from trade; (b) the UN Convention against Transnational Organized Crime (UNTOC) to include wildlife crime; and (c) the International Criminal Court’s Rome Statute to include ecocide as an international crime.

The drivers of pandemics, extinction, and climate change are largely the same.

Climate change mitigation and biodiversity protection will benefit from cross-sector technical collaboration, and their programs and funding should be merged too. After all, the drivers of pandemics, extinction, and climate change are largely the same. Environmentalists need to break down their own internal walls too, and support a unified response to these three existential threats.

Governments will need a lot of help from the private sector, local communities and civil society in creating a planetary security program, which can provide valuable data, and inject critical expertise and innovations. Frontline NGOs and local communities around the world offer sharp insights and institutional knowledge about zoonotic threats and solutions. Businesses, which have much to gain from a pandemic-free world, can support data

Many companies are already reconsidering their supply chain strategies to alleviate profit loss, which if done right can also alleviate pandemic risk.

analytics, like IBM, Cellebrite, and Phillip Morris have done to improve counter-trafficking. Many companies are already reconsidering their supply chain strategies to alleviate profit loss, which if done right can also alleviate pandemic risk. For example, B.Grimm has publicly committed to 'do business with compassion for the development of civilization in harmony with nature' through its environmentally friendly and yet profitable power generation in Asia. Religious institutions can join the effort to rally their constituents to help protect nature. For example, the Vatican's Dicastery for Promoting Integral Human Development did in September 2021 by co-hosting a global webinar on ending pandemics that included experts and change leaders from academia, government, civil society and business.³

This whole-of-planet approach will save the world time, lives, and money. Current projections of COVID's cost to the world top \$12 trillion, or almost \$60 billion per country on average...

This whole-of-planet approach will save the world time, lives, and money. Current projections of COVID's cost to the world top \$12 trillion, or almost \$60 billion per country on average.⁴ A recent estimate in the journal *Science* of costs required to mitigate the risks of new pandemics is between \$22 and 31 billion a year for the entire planet.⁵ This has ancillary benefits of mitigating climate change, conserving biodiversity, strengthening local economic development, and reducing pressures that create economic migration. Last year, the UK, France, India, and Russia spent on average \$55 billion each on defense. China spent an estimated \$252 billion. The United States: \$778 billion.⁶ The money is there. It's time to package and pay our planetary insurance policy.

The US and China could lead the way in repurposing and merging parts of their national security programs to jump-start a planetary defense program...

The US and China could lead the way in repurposing and merging parts of their national security programs to jump-start a planetary defense program. Each of their 2021 defense strategies lists the other as a priority threat to their nation's security. Currently, America and China's billion-dollar satellite, sea and terrestrial surveillance programs can track every 100 meters of movement of the other's fighter jets, war ships, and cargo caravans. Meanwhile, their ill-funded and equipped environmental agencies detect less than 5% of wildlife shipments crossing their borders, en route to the two largest wildlife consumer markets in the world. What better way to improve national and international security than to shift their sights and collaborate against a common, and certainly bigger threat?

COVID-19 has demonstrated that threats to our environment are menaces to national and international security.

COVID-19 has demonstrated that threats to our environment are menaces to national and international security. G20 leaders have a responsibility to their constituents and the world to share skills, technology, and budgets to ensure that we never endure such a disaster again. In the process of repurposing their mission, defense and agricultural sectors can not only save the global community enormous amounts of money and countless lives, they can also help build a sustainable planet.

Endnotes

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 3. Roundtable “End Pandemics: Appeal to World Leaders.” <https://youtu.be/5SRXLfvEwCc>.
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About

Powered by digital intelligence technology and frontline insights, the Analytical Center of Excellence on Trafficking (ACET) is a data fusion center that helps governments, business, civil society organizations, and individuals make sound decisions that reduce trafficking, and save time, money and lives. ACET is run by Freeland (www.freeland.org) in collaboration with other organizations, and has produced a series of studies and white papers on trafficking and transnational crime. www.acet-recovery.com

STOP THE NEW GLOBAL TERROR: PANDEMICS

The Case for a Planetary Security Program



SECTION 4

A Roadmap to EndPandemics (English)

Also available in:

Thai

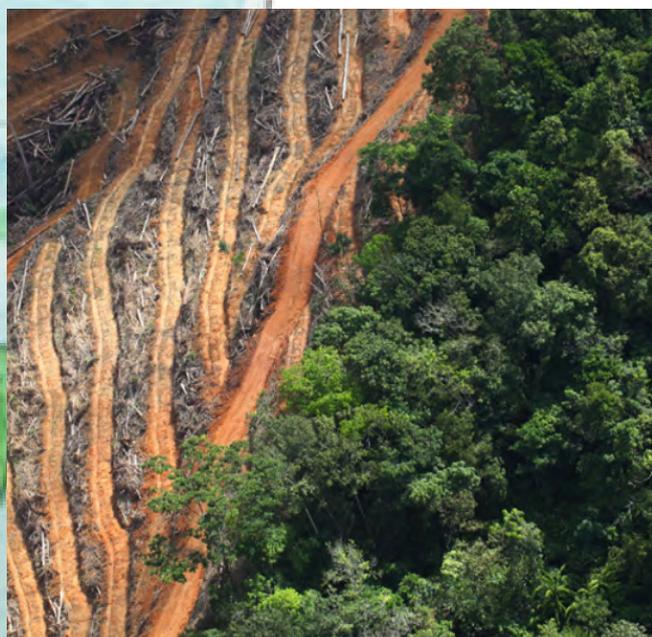
Chinese (Simplified)

Chinese (Traditional)

ROADMAP TO END PANDEMICS



Building It Together





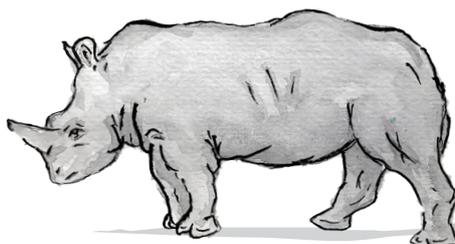
EndPandemics. 2021. *Roadmap to End Pandemics: Building It Together*. (A Living Document Created by the *EndPandemics* Campaign Alliance. Version of August 1, 2021.)
<https://endpandemics.earth/join.html>

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For further information please write to: support@endpandemics.earth

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C. List of <i>EndPandemics</i> shared resources https://endpandemics.earth/participate.html	
D. Guidance for submitting <i>EndPandemics</i> solutions https://support.endpandemics.earth/en/collections/2995762-solutions-map	
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I. PREVENTING THE NEXT PANDEMIC

- Takeaway Messages for
- Governments, Corporations,
- Civil Society, Individuals

- There is no greater cause in our lifetime than preventing the next pandemic.

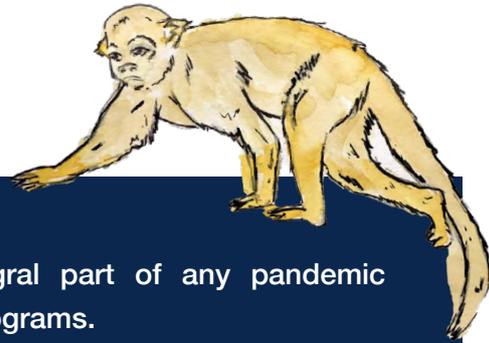
- No-one is safe from pandemics until everyone is safe. We all have a role to play in our global recovery and transformation to create a safer and more resilient world.

- No matter what theory you subscribe to, COVID-19 is a zoonotic disease, now spreading from person to person. We know the triggers of such outbreaks, so we can mitigate the risks of their recurrence.

- The main triggers for zoonotic outbreaks are destruction of wild habitat (often for unsustainable agriculture) and commercial trade (legal and illegal) in wild animals.

- Banning commercial trade in wild animals, transforming our food supply systems, and prioritizing nature protection are the main components of a Planetary Health investment plan that will drastically reduce the risk and intensity of future zoonotic outbreaks.

- Prevention is far less expensive than reaction: A Planetary Health investment plan centered on prevention would cost less than 1% per year of what it is costing the world to fix the pandemic damage.



- Prevention must be an integral part of any pandemic recovery and preparedness programs.

- Prevention must include community actions, changes in public policies and laws, business practices and consumer behaviors.

- A ban on commercial trade in wild animals does not ban subsistence hunting. They are different things.

- A ban on commercial trade in wild animals will not increase poaching or trafficking. Enforced, a ban would decrease the volume of trade, thereby reducing threats to both biodiversity and people.

- A transition from industrial agriculture to agroecology results in improved soil health, increased profits, enhanced resilience of agroecosystems, healthier communities, while yielding safer and more nutritious food.

- There are 11 specific things individuals can do to help prevent pandemics.

- The *EndPandemics* alliance is ready to help implement local, national, regional and global plans to prevent pandemics.

II. WHY Why This Roadmap and How to Use It

Having caused more destruction and disruption than any terrorist act or natural disaster in the last 100 years, COVID-19 has shaken our world and convinced the global community that we must do all that we can do to prevent another pandemic. But how? What exactly can we do to help avert a new catastrophic outbreak? Regenerating our world requires a regenerative approach, which is laid out in this Roadmap.

This multi-language Roadmap is a living, interactive tool designed by *EndPandemics* for governments, organizations, corporations, civil society, and individuals across the globe, providing concrete, practical guidance on how to prevent the next pandemic.

There is no greater cause in our lifetime. Everyone has a role to play in our global recovery, which, if implemented the right way, will result in a more just and sustainable world that greatly reduces the risk of another pandemic.

Through most of the COVID-19 pandemic, the world's focus has been on repairing damage already done, through vaccine rollout and unprecedented economic recovery packages. But instead of reactive, we need to be proactive. How do we PREVENT the next outbreak and avoid even more disruption and destruction of lives and economies? This Roadmap answers that question by explaining how pandemics start, and how to stop them from happening in the first place.

“
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EndPandemics is a “Collaboratory” with expert practitioners creating a formula, or “Roadmap” for a lasting vaccine, which we share in the following pages.

We invite you to review and use this Roadmap, and to join the vibrant global community that created it, as we continually refine and jointly implement solutions. You can draw upon the power of a global movement to chart your own solutions that fit your particular circumstances, needs, and local context. This Roadmap can guide and empower you, those around you, and those who depend on you, to start on the path out of this self-inflicted Pandemics Era, and into a more secure world.

Whether you are a lawmaker or a government official, a community organizer or a “One Health” or “One Welfare” professional, a policy advocate or an international negotiator, a business owner or a fund manager, a farmer or an academic, a technology guru or a media editor, a think-tank researcher or a monitoring officer, or simply a concerned individual – this Roadmap contains practical information regarding the human drivers of pandemics, and how we can all team up to prevent a new one, while creating a safer, healthier, and more equitable planet.

This roadmap serves as a shared asset of *EndPandemics*, a global campaign alliance started by a diverse group of solution-oriented practitioners in early 2020 at the onset of the COVID-19 pandemic. *EndPandemics* aims to prevent future pandemics by addressing their root causes and investing in planetary health.

As the world tries to control the pandemic and recover from its disastrous social and economic impacts in an ongoing race against its mutations, *EndPandemics* focuses on

promoting and scaling up pandemic prevention solutions. These solutions are crucial to any recovery and preparedness actions by governments, businesses, or consumers.

The roadmap is an open tool; you do not have to be an *EndPandemics* participant to make use of it and help in its development and growth.

- Please take a few minutes to read this document.
- Explore a sampling of projects that are helping to prevent diseases in our Solutions Map in Appendix 1 (and browse through our online solutions database for more real-life solutions from those on the front lines around the world).
- Submit your own solution to the Solutions Map and enjoy the interactive support of the *EndPandemics* alliance, to attract global attention and support to make it more bankable.
- Engage with the alliance's communities of practice to expand, shape, strengthen, and promote replicable solutions, monitor and verify their impacts on the ground, and reward progress.
- Have a hand in shaping the future of Earth-positive impact investments by developing the *EndPandemics* Solutions Exchange.

The more people and organizations that use their diverse backgrounds, skills, and goals to implement, build upon, and use this Roadmap – the more useful and powerful it becomes for everyone.

Thank you.

EndPandemics Alliance

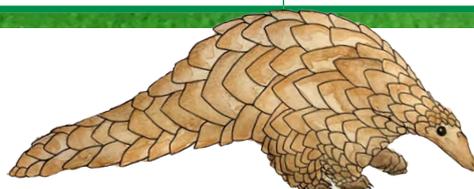
<https://EndPandemics.Earth>

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Why Should I Engage with *EndPandemics*?

IF I AM A:	WHAT'S IN IT FOR ME:
Concerned Individual	Join a vibrant community and help the world
Local Community / Social Entrepreneur	Grow visibility and market value of my solution
“One Health” Agency Practitioner	Connect my local partners to best peer practices
Legislator / Policy Advocate	Validate my policy proposal and gain local buy-in
Government Official	Find credible pilots for my new program delivery
International Organization (IGO/NGO)	Expand my access to local knowledge and partners
Donor / Charity Manager	Increase my pipeline of high-impact projects
Business Executive	Test my new product/service and gain local buy-in
Technology Platform / Fintech Startup	Test my new tool and expand my app ecosystem
Monitoring & Verification Officer	Validate and expand my observation protocols
University / Think Tank Researcher	Harvest empirical data for applied impact studies
Media / Creative Agency Editor	Harvest stories that resonate with wide audiences



***EndPandemics* Participants to Date**

Academia Sinica	Freeland	Peace Journey
ACTAsia	Fundación Entropika	Planetary Health Alliance
ADM Capital Foundation	Generation Blue	PRC Global Pte Ltd
ALERT	Global Ocean Trust	Project Coyote
Animal Defenders International	Global Regeneration CoLab	Rede Latino-Americana de Ministerio Publico Ambiental
Animals Asia Foundation	Global Tiger Forum	Regen Network
Ark Ventures	Green Consumers' Foundation	Save Wild Tigers
AsiaWorks	GreenRope	SEEDS
Asociación de Becarios de Casanare	GTI Council	SmartAgro
B.Grimm	Hemp for the Future	Solidaridad Network Central America
Big.tc	Humane Society International	Sumatran Tiger Project
Blood Lions	Hyphae	Task.io
Blue Sphere Media	International Fund for Animal Welfare	The Corbett Foundation
Born Free Foundation	International Tree Foundation	The Land App
Born Free USA	Lancaster University	Third Avenue Business Improvement District
Catalyze	Land of the Leopard National Park	Threefold.io
China Biodiversity Conservation and Green Development Foundation	Leadership Knowledge Learning	Transparent World
David Shepherd Wildlife Foundation	Liberia Chimpanzee Rescue & Protection	Victoria Falls Wildlife Trust
EarthPulse	Memememeshop	Voices 4 Biodiversity
Education for Nature Vietnam	Michigan State University	WildAid
Endangered Species Coalition	Muktir Bondhon Foundation	WILD Foundation
Endangered Species Protection Agency	National Park Rescue	Wilderness Foundation Global
EndTheTrade	Norwegian Yacht Voyages	Wildlife Alliance
Environmental Investigation Agency	Ocean Conservation Trust	World Agroforestry
For the Animals	Oceanic Preservation Society	World Animal Protection
	Open Hearts Foundation	Worldview International Foundation
	PawPAC	World Youth Wildlife Summit

III. CAUSES

How Do Pandemics Start?

The World Health Organization (WHO) sent a team to China in early 2021 to look for clues of what caused COVID-19. The team concluded that the most likely theory is trade from a wildlife farm to a wild animal section of a commercial wet market. The team determined the least likely theory was that the virus sprang from a laboratory. Whether the source turns out to be a wildlife-breeding farm, a wet market selling wild animals, or a lab that tests on wild animals, the consensus remains that the origin of the virus was a wild animal. Therefore COVID-19 is—like so many previous outbreaks before it—another zoonotic disease, now spreading from person to person.

We do not need to wait for more lengthy findings to act. The evidence of viral zoonotic risk is extensive and predates our current crisis. Imagine a group of inspectors going into a fuel depot that exploded, looking for clues, discovering a cigarette pack on the ground. They could take years to determine which cigarette – or other factor – caused the explosion. But you can be sure that as the depot was rebuilt and reopened, the no-smoking regulation would be strictly enforced. We need to rebuild our world with similar precautions. COVID-19 was a viral bomb. And we already know the triggers.

Specifically, the two major triggers of zoonotic outbreaks have been (1) destruction of wild habitats, largely for intensive agriculture, livestock ranching, and natural resource extraction; and (2) commercial trade in wild animals. The former *pushes* wild animals out of their natural homes, into close contact with humans and domesticated animals. The latter *pulls* wild animals from their natural homes and into close contact with people and other animals.

In both cases, a distressed animal can shed a virus that makes its way to a person who lacks

an immune response. When this happens, a zoonotic outbreak or a full-blown pandemic may be born. Those same factors triggered HIV, Ebola, SARS, MERS, H5N1, and before that, the Plague, among others.

“
The Pandemics Era is a crisis that was caused by, and can be solved by, humans.
”

Novel infectious diseases regularly come from nature. However, so do many cures and products that make our lives easier. Hence, nature itself is not the problem. The Pandemics Era is a crisis that was caused by, and can be solved by, humans (see Box 1). These diseases rarely become epidemic or pandemic where nature’s balance is undisturbed.

To soften the impact of human interference with nature, we must address the root causes—also known as “triggers”—of pandemics.

PANDEMIC TRIGGER 1: WILD HABITAT DESTRUCTION

Unsustainable farming practices that clear wild habitat, or artificially and intensively breed wild animals, lead to ecosystem disturbance and dysfunction. Zoonotic disease risk increases when natural ecosystems are disturbed. In nature, species that thrive and proliferate in disturbed habitats—such as bats, rodents and primates—often carry a high viral load. Harming or removing these species from their natural habitats pushes these animals into nearby communities or farms, where they may introduce viruses to domesticated animals or to people.

PANDEMIC TRIGGER 2: COMMERCIAL TRADE IN WILD ANIMALS

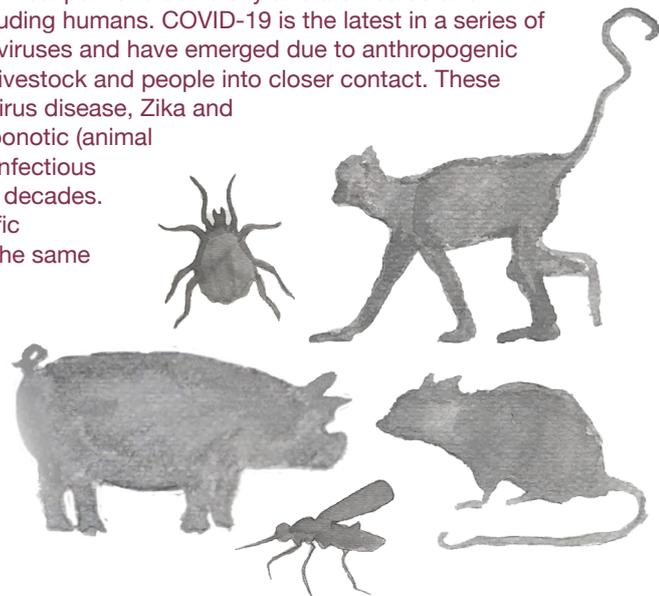
Taking wild animals from their natural homes – alive or dead – and bringing them to markets for sale is another efficient way to transmit

zoonotic viruses to human populations. Rising demand for wild animals in some countries has given rise to “wildlife farms”, which breed exotic species for sale to the same urban, border and online markets, adding to the risk of virus transmission. Transport, confinement, lack of animal welfare standards, and other known stressors associated with wildlife trade make the animals vulnerable to disease and more likely to shed and transmit viruses.

Wild animals play critically important roles in our ecosystems. If we can learn to understand and respect the benefits to people by protecting wild animals and wild lands, we will all be safer. Trade them or destroy their homes, and these animals become potential sticks of dynamite.¹

Box 1: ROOT CAUSES OF PANDEMICS

The emergence of COVID-19 in late 2019 as a major global pandemic is part of a pattern of disease emergence that highlights linkages between biodiversity, global environmental changes, and human health. COVID-19 and other pandemics are rooted in biodiversity. They are caused by microorganisms that are themselves a critical part of biodiversity and are hosted and transmitted by diverse animal species, including humans. COVID-19 is the latest in a series of diseases that are caused by wildlife-origin viruses and have emerged due to anthropogenic environmental changes that bring wildlife, livestock and people into closer contact. These diseases include SARS, Ebola and Nipah virus disease, Zika and influenza, and reflect a predominance of zoonotic (animal origin) viral diseases among the emerging infectious diseases affecting people over the last few decades. Over the past few years, a series of scientific papers have been published that suggest the same environmental changes that threaten biodiversity loss on a global scale (e.g., land use change, such as deforestation, degradation, or encroachment into wildlife habitat; climate change; unsustainable trade and consumption of wildlife; agricultural intensification; globalized trade and travel) are driving the increasing spillover, amplification and spread of these novel viral diseases.



Source: IPBES, 2020.²

1 Some experts will claim that not all commercially traded wild animals pose a risk of dangerous virus transmission to people. *EndPandemics* takes a “precautionary approach”, recognizing that there are 1.7 million viruses in nature, at least half of which can cause serious threats to human health if we disturb the balance of nature. Scientists are still learning about these viruses. Our definition of “wild animals” does not include fish or such marine fauna as corals because the risk of dangerous, pandemic-level virus transmission associated with them is negligible. But it should be noted that many fish species are threatened with extinction by over-exploitation. And that is a reminder of the importance of the threat that commercial wildlife trade poses to earth and its people.

2 <https://www.ipbes.net/pandemics>.

IV. CURES

How Do We Stop Pandemics from Recurring?

To prevent future pandemics, we must address their root causes. We must follow the precautionary principle to disrupt viral emergence as early as possible (see Box 2). There will be an initial financial cost to changing our relationship with nature. But the economic argument favors transformational change. The global bill thus far for COVID-19 makes clear that pandemic prevention is an insurance policy for the planet that costs a tiny fraction of inaction.

The estimated cost of COVID-19 related economic damage and recovery efforts is US\$11.5 trillion as of this writing. US\$5 trillion has been wiped off the global economy in 2020 alone. The estimated global cost to significantly reduce the chance of another pandemic is US\$26.6 billion per year for the next 10 years.³ That is just 2% of the estimated total cost of COVID-19, or 0.2% per year. Most of this cost would be offset by the ancillary benefits of investing in nature,

Box 2: PREVENTING AN EMERGING DISEASE

There is nothing new about the wisdom of prevention being the mother of cure. Brushing your teeth beats a visit to a dentist. Wearing your seatbelt beats a bloody road accident. Fireproofing your home beats the devastating loss of lives and property to a fire.

It is always cheaper to invest in preventing predictable damage than to pay for post-damage response and recovery. Incentives are clear, and the world's vast and successful insurance industry is built upon this basic premise.

The same logic applies to emerging diseases (see Figure 1). Anticipation and primary prevention of new disease spillovers at their source (land degradation and destruction, intensive agriculture, wildlife trade) has proven to be more cost effective than after-the-fact detection and containment of even localized disease transmissions. Furthermore, this approach is several orders of magnitude less costly than disease outbreak control, mitigation and recovery measures in the event of epidemics or pandemics.

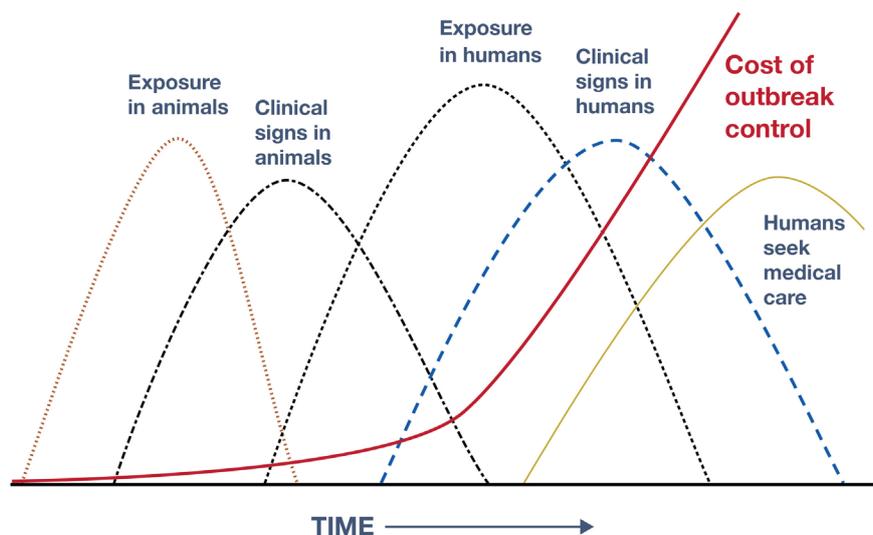


Figure 1. Economic rationale for primary prevention of pathogen spillovers at their source (deforestation, agriculture, wildlife trade). Adapted from IOM, 2009.

including carbon sequestration, natural disaster mitigation, community food security, local jobs and livelihoods, and more.

While the current spending surges tend to target pandemic recovery and preparedness measures, they can easily fund pandemic prevention programs. Investing in prevention is the

economically responsible policy approach (see Box 3).

To sustain full-scale prevention long-term will require incentives. The good news is that expertise and incentives are available.

Box 3: THE COSTS OF PREVENTION VERSUS INACTION

An early COVID-era assessment of the economics of pandemic prevention quoted above (see Figure 2) has penciled total projected damages⁴ from COVID-19 at up to US\$15.8 trillion. This same study calculated ten years' worth of proposed prevention measures – including an extremely ambitious and costly item of “ending wild meat trade in China” – to be about 2% of current total COVID-19 related costs.

Although these early projected pandemic damages and prevention costs are likely underestimated, and will continue to be revised, they give a good indication of the steps that lie ahead. These economic analyses underscore the need to act; there is no excuse to delay obvious prevention actions for endless efficiency studies.

By building resilience to a variety of shocks – economic, social, climate, or health-related – countries, organizations, and firms can avoid diverting scarce resources to repeated cycles of shock, restructuring, recovery, and rebuilding (World Bank, 2021).

The economic rationale for strong and steady spending on pandemic prevention is now clearer than ever before in our history.

Our investments in pandemic prevention will also carry important direct benefits towards our key goals in biodiversity conservation and climate change mitigation.

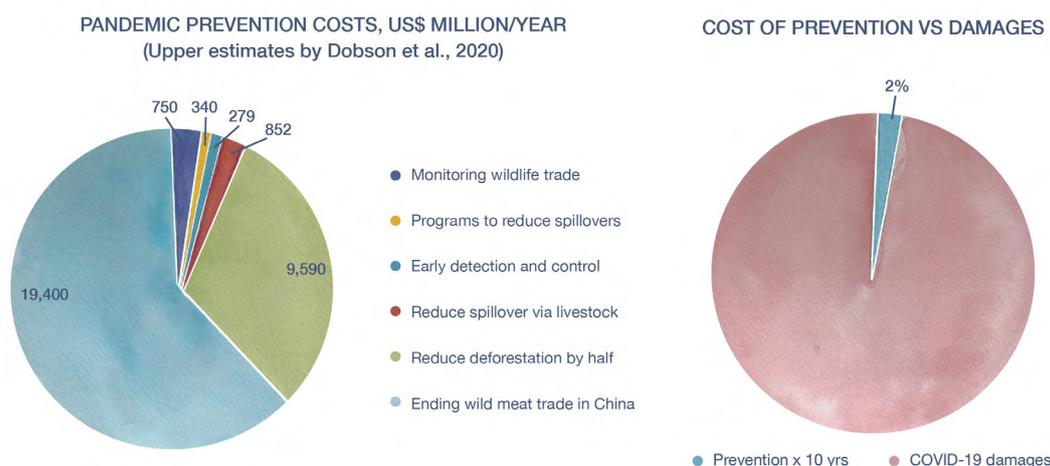


Figure 2: Estimated COVID-19 damages versus prevention costs. Data from Dobson et al., July 2020.

3 Dobson et al. (2020). <https://science.sciencemag.org/content/369/6502/379>

4 Including global mortality and GDP losses, but excluding the rising tally of morbidity, deaths from other causes due to disrupted medical systems, and the loss to society of foregone activities due to social distancing.

V. HOW TO FIX



Components and Costs of a Pandemic Prevention Plan

EndPandemics refers to the 4 components of an effective pandemics prevention plan as “Action Pillars”, which include:

- **Action Pillar 1:** Reduce Demand for Wild Animals
- **Action Pillar 2:** Phase Out Commercial Trade in Wild Animals
- **Action Pillar 3:** Protect and Restore Natural Habitats
- **Action Pillar 4:** Make Our Farms and Food Systems Safer and Healthier

The following sections describe these 4 Action Pillars, followed by costs or steps to implement them.



REDUCE DEMAND

ACTION PILLAR 1: REDUCING DEMAND FOR WILD ANIMALS

Launch Government-Private Sector Behavior Change/Awareness Campaigns

These campaigns explain the rationale and urgency for the ban to gain public support for its implementation. They can include television, social media, school and community outreach.

Examples of good practices:

- Public-private sector behavior change campaigns aiming to reduce consumption of wild animals have been launched in China, Vietnam, Thailand, USA, UK, and some other

countries. They use Key Opinion Leaders (including celebrities, government leaders, health experts, and others) to message target audiences via multiple platforms. Positive impact has been recorded.⁵

- Amend compulsory national curricula for primary and secondary schools to include lessons covering the importance of protecting wildlife and wild habitats for people. Link the risk of exploiting animals and the environment to the risks to public health.

Consumer behavioral change/awareness campaigns are vital, but they can take decades to achieve deep impact, especially if they are not coupled with clear laws and simple-to-implement enforcement.



STOP TRAFFICKING

ACTION PILLAR 2: PHASING OUT COMMERCIAL TRADE IN WILD ANIMALS

Ban commercial trade and consumption of wild animals

All commercial trade in wild animals—legal and illegal—carries the risk of virus transmission. Viruses do not discriminate between animals that are cleared for legal commerce versus those that are smuggled. SARS was linked to legal wildlife trade. African Horse Sickness (AHS), another zoonotic outbreak occurring around the same time as COVID-19, swept into Southeast Asia via legally traded zebras and killed over 90% of the horses it infected.

⁵ The USAID ARREST Program (2011–2015), USAID Wildlife Asia Program (2016–2020), and ongoing IFAW, WildAid, Wildlife Alliance, TRAFFIC, ENV-Vietnam, and Freeland Social Behavior Consumer Change activities in China, Vietnam, Thailand, while Wildlife Alliance and Freeland have been measured for impact. This data is publicly available on their websites, together with some reports and lessons learned about strategies.

Effectively phasing out commercial trade in wild animals will entail several steps:

- Create a timeline for the phase-out;
- Give legal wildlife dealers a deadline to accept a one-off financial compensation for transitioning out of the commercial wildlife trade;
- Partner with government and private sector wildlife care and rescue centers to ensure they are properly outfitted to accept and care for new animals that are forfeited by traders, while mandating the animals be neutered and the centers prohibited from breeding.

Examples of good practices:

- China banned consumption of terrestrial wild animals in response to COVID-19, to prevent its spread or the recurrence of another outbreak.⁶
- Italy recently announced new trade restrictions and a ban on the import and trade of wild and exotic animals to reduce the risk of zoonotic outbreaks.⁷
- Vietnam's Prime Minister issued a Directive in July 2020 to ban imports and exports of wild animals until further notice, in response to COVID-19.

Opponents argue that such bans will force the trade underground and increase illegal trade in wildlife. Some also argue that such bans negatively impact poor or indigenous communities that may rely on hunting. These arguments do not hold up to wider analysis.

Some trade will likely go underground, but provided the ban is enforced, the number of dealers willing to risk doing business in a criminal market will be reduced. Similarly, the number of buyers daring to buy in the criminal space will also go down. An enforced ban would reduce overall volume of wild animals in trade, thereby reducing pressure on species popula-

tions, preserving biodiversity, and reducing the risk of zoonotic transmission. A clear ban also narrows the scope of enforcement for officers who target criminal dealers.

A ban on commercial trade in wild animals does not ban indigenous hunting/gathering by subsistence communities. These are completely different things.



PROTECT NATURE

ACTION PILLAR 3: PROTECTING AND RESTORING NATURAL HABITATS

Over the last 60 years, the majority of new zoonotic pathogens have emerged, largely as a result of human activity including changes to land-use (e.g., deforestation) and the way we manage agricultural and food production systems (CBD, 2020).⁸

Land-use change is one of the leading factors contributing to zoonotic disease outbreaks. One of the major drivers of land use change is food production. Globally, approximately 40% of land use change is due to large-scale food production, and 33% is due to subsistence farming.⁹

As agriculture is expanding and human activity encroaches into wild habitat, wild species are in greater contact with humans and farmed animals, resulting in higher risk of disease spillover.

A well-connected and effectively managed system of inviolate Protected Areas is essential to protecting and conserving the integrity and intactness of natural ecosystems. Protected

6 China's revised wildlife law still allows for some wild animals to be bought and sold for medicines, and non-food purposes. Global experts in health and conservation are concerned that such allowance will create loopholes for dealers to exploit, leading back to resumption of trade. <https://EndPandemics.earth/action-china-wildlife-protection-law.html>

7 <https://www.lav.it/en/news/ban-trade-import-wild-animals>

8 Statement by CBD Acting Executive Secretary. <https://www.cbd.int/doc/speech/2020/sp-2020-04-07-health-en.pdf>

9 Food and Agriculture Organization of the United Nations. 2017. The State of Food and Agriculture. Leveraging Food Systems for Inclusive Rural Transformation. Rome. www.fao.org/3/a-i7658e.pdf.

Areas often span across international boundaries to provide connectivity of wild habitats. A new global consensus under the Convention on Biological Diversity (CBD) is emerging around the so-called 30x30 target to ensure that, by 2030, at least 30% of all land and marine areas are covered by effective protection.¹⁰



REFORM FARMING

ACTION PILLAR 4: MAKING OUR FARMS AND FOOD SYSTEMS SAFER AND HEALTHIER

The majority of current land use and agricultural practices are designed for mass food production to meet market demand and achieve food security. But these conventional practices have given rise to ecosystem degradation, global warming, unhealthy food supply chains, and virus transmission.

Governments and the private sector must collaborate to promote agro-ecological practices (see Box 4), which sustain soil health and profitable agricultural harvests, mitigate climate change, restore wild habitats, and reduce the risk of zoonotic outbreaks. Agro-ecology promotes functional biodiversity and nutrient cycling and is based

on circular systems that mimic natural ecosystems. Agroecology can improve the livelihoods

and autonomy of food producers even on a small scale. It draws on indigenous as well as farmers' knowledge and has the potential to transform social and political structures that are often times the root causes of the crises in the current food system.¹¹

PAY NOW OR PAY MUCH MORE LATER

The convenient truth about the cost of a comprehensive 10-year pandemic prevention package is that it costs a tiny fraction of what governments and international aid agencies are spending to fix the damage from COVID-19, and to improve preparedness for the next outbreak. We can seriously reduce the risk of another outbreak by investing in prevention.

A prevention plan costs less than 2% of the total COVID-19 damages to the global economy (in other words, less than 0.2% per year). A fraction of current and planned recovery and stimulus packages can finance pandemics prevention. All that is needed is political commitment to prioritize prevention.

Costs and Steps of Action Pillar 1: Reducing Demand for Wildlife

Changing or creating laws and policies does not cost a lot of money. It takes political will. Financial resources and incentives, as well as effective communications, are needed to get society on board with legal and policy changes – then to be followed by effective implementation.

Consumer behavior change campaigns do cost money, but they are not expensive if conducted properly. The use of internet and social media to reach and impact consumers with effective market-tested messaging can result in positive impact. Campaigns are now being conducted in China, USA, Vietnam, the Philippines, and Thailand, where costs and impact data are available for sharing. Most campaigns are new, short lived or interrupted because the changes they are not yet institutionalized by governments. Private sector partnerships and donors have helped, but the impact and sustainability

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”

10 See Target 2 in CBD/SBSTTA/24/3: “By 2030, protect and conserve through well connected and effective system of protected areas and other effective area-based conservation measures at least 30% of the planet with the focus on areas particularly important for biodiversity.”

11 IRAM 2020. Agroecology and safe food system transitions. Feasibility study, p. 8.

Box 4: AGROECOLOGICAL PRACTICES

Agroecological practices are based on the ecological functionalities of agroecosystems, the optimization of natural processes, and the sober management of resources. The aim is to make maximum use of nature as a production factor while maintaining and supporting its regenerative capabilities. Agroecology thus encompasses a variety of practices from the plot to the landscape: water management, soil fertility management (composting, soil cover, crop rotations and crop succession, etc.), crop protection (integrated pest management, natural pesticides, etc.), and landscape management (terrace cultivation, crop rotation, crop-livestock integration, agroforestry, etc.).

However, agroecology cannot be reduced to technical management practices. It represents a redesign of current production and processing systems, and a rethinking of all food systems.

Agroforestry, as one practice that falls under the umbrella term of agroecology, is a mixed cropping system in which woody perennials are deliberately integrated with crops and/or animals on the same land management unit to initiate the creation of an agroecological succession.¹² In this way, new and old land use plans can be modified to re-boot subsistence agriculture in the tropics and subtropics.¹³ By rehabilitating degraded farmland and restoring dysfunctional agroecosystems, it rebuilds wildlife habitat and natural capital in ways that are also farmer-friendly - by expanding and diversifying income streams - and climate-friendly - by restoring habitats and sequestering carbon. These processes are fundamental to reforming tropical and sub-tropical subsistence agriculture and industrial farming and minimizing the risks of new zoonotic spillovers. Agroforestry is widely practiced in Asia, Africa and Latin America, but to be scaled up to a level that will have global impact on the drivers of deforestation (hunger, poverty and social injustice) requires donors and international development agencies to make a shift in mindset away from land clearance for monocultural crops and livestock.

Certain issues are specific to Southeast Asia:

- The replacement of natural vegetation by the main six agricultural crops of rice, cassava, maize, sugarcane, rubber and oil palm covers 80% of all agricultural land in the Mekong region.
- The agriculture sector contributes significantly to national GDP (38% in Myanmar, 23.4% in Cambodia, 25% in Laos, 15% in Vietnam) and employment (60% in Myanmar, 75% in Laos, 40% in Cambodia) as well as to a large rural population.¹⁴
- Increased pressure on agricultural landscapes and livelihoods already affected by climate change and natural disasters.
- The rapid ageing of the population, particularly in the agricultural sector, on top of accelerating migration into cities.

The accession of Cambodia and Vietnam to the “4 per 1000” initiative (www.4p1000.org) in 2019 is an example of the growing political interest in the sustainability of agricultural and food systems. The vast majority of countries in the region have action plans aimed at increasing adaptation to and mitigation of the impact of climate change and seek to reverse the cycle of land degradation of cultivated agroecosystems.



12 Leakey, 2014. The role of trees in agroecology and sustainable agriculture in the tropics. Annual Review of Phytopathology 52: 113-133.

13 Leakey, 2020. A re-boot of tropical agriculture benefits food production, rural economies, health, social justice and the environment. Nature Food 1: 260-265.

14 Ingalls et al., 2018. State of Land in the Mekong Region.

of such campaigns need official institutionalization (via government policy) in order to scale. Such a policy should include change within the national education curricula, and this should be inclusive for every child. Teachers must be trained to deliver new curricula with key messages on protecting wildlife and avoiding pandemics. The youth are our future.

Costs and Steps of Action Pillar 2: Phasing Out Commercial Wildlife Trade

This measure can be implemented with a stroke of a pen. To ensure effective implementation, financial costs should be focused on (a) enforcement of a ban; and (b) one-off compensation to legal wildlife dealers so that they can transition to a new line of work.

Wildlife enforcement budgets are inadequate in almost every country in the world. Efficiency and resourcing of wildlife enforcement can be improved in these four ways:

- (1) Simplifying national wildlife laws to make enforcement easier. Fuzzy or complicated laws result in more effort by enforcement and opportunistic corruption;
- (2) Creating multi-agency, cross-border wildlife enforcement networks spreads the burden of work across agencies and countries to tackle transnational organized crime;
- (3) Supporting a new protocol on wildlife crime under the UNTOC (United Nations Convention Against Transnational Organized Crime);
- (4) Allocating more money to counter-wildlife trafficking.

Enforcement against illegal wildlife trade is often complicated by laws and regulations that allow trade in certain species under certain circumstances, dictated by a mix of national laws and adherence to international CITES regulations. Many officers do not know how to identify the thousands of species in trade, nor can they recall which species are allowed to be traded or not. A ban on all commercial trade in wild animals simplifies enforcement and saves resources.¹⁵

“
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 ”

Interagency and cross-border wildlife enforcement networks (WENs) allow agencies and countries straddling the illicit wildlife trafficking supply chains to collaborate to dismantle syndicates (which are destroying and stealing over US\$20 billion worth of biodiversity of CITES-listed species¹⁶ every year), thereby saving time, money and lives.

One-off compensations to legal wildlife dealers must be conducted carefully, fairly and swiftly. There

will be resistance, while some illegal dealers will get in line to receive their compensation, with intentions to continue an illegal business. Each government must decide what is a fair payment. A very small percentage of government and donor allocations for pandemic recovery can include this line item. *EndPandemics* partners are available to provide advice on the mechanics and costs of this challenging and sensitive, but important step.

Costs and Steps for Action Pillar 3: Protecting and Restoring Natural Habitats

A variety of biodiversity conservation investments will have a direct positive impact on reducing the risks of zoonotic spillovers, as well

¹⁵ EndPandemics definition of wild animals does not cover fish. In fact, many fish species are threatened by over-exploitation and should be protected, but they do not pose a pandemic risk. And to repeat: the EndPandemics call to ban commercial trade in wild animals does not mean a ban on indigenous subsistence hunting.

¹⁶ It is actually about US\$200 billion worth for all species in trade that are not listed under CITES. See UNODC World Wildlife Crime Report 2020 and World Bank Report 2019.

as multiple other benefits related to climate change, security, jobs, and more. These targeted investments have been explicitly defined by the recent report of the Intergovernmental Platform on Biodiversity and Ecosystem Services.¹⁷ They include:

- Frontline ranger & community patrols: training, equipment, life insurance;
- Poverty reduction programs: youth education & alternative livelihood support;
- Empowering rural communities to defend their land & human rights as protectors of nature;
- Restoring nature: growing protected areas, buffer zones, corridors & rewilding;
- Re-designing infrastructure & development projects, following the impact mitigation hierarchy, to avoid core wilderness areas wherever possible;
- Reducing pressures on natural forests and woodlands by initiating more sustainable farming practices that recreate functioning agroecosystems based on the production of domestically useful indigenous food and non-food products that also have potential to create new local markets and industries.¹⁸

Costs and Steps for Action Pillar 4: Making Our Farms and Food Systems Safer and Healthier

Investing in a transformation from current industrial agriculture (including factory farming) to a holistic agroecological approach that regenerates ecosystem health will require significant political will, effort and resources. But the return on such investment will be significant. The regenerative approach leads to:

- Cleaner food and healthier consumers;
- Healthier soil that can be used for generations, ensuring more stable, sustainable incomes;

- More resilient and prosperous local communities that benefit from sustainable livelihoods;
- Reduction in wildlife poaching and illegal habitat destruction because local communities are less dependent on these activities;
- Reduced risk of zoonotic transmissions due to minimal disruption of wild habitats.



¹⁷ IPBES (2020) Workshop Report on Biodiversity and Pandemics of the Intergovernmental Platform on Biodiversity and Ecosystem Services. https://ipbes.net/sites/default/files/2020-12/IPBES%20Workshop%20on%20Biodiversity%20and%20Pandemics%20Report_0.pdf

¹⁸ Leakey, 2019. From ethnobotany to mainstream agriculture – socially-modified Cinderella species capturing ‘Trade-ons’ for ‘Land Maxing’. *Planta* 250: 949–970.

IV. GOOD PRACTICES

Policies That the Public and Private Sectors and Individuals Can Adopt

The following are policy guidelines that the public and private sectors and individuals can follow to do their part in preventing pandemics.

MODEL GOVERNMENT POLICIES/LAWS

One Health

The most efficient and impactful policy that a government can adopt to mitigate the risk of pandemic recurrence, while repairing earth's ecosystems, is **One Health**. It is a global approach that merges expertise, goals and resources in human health, animal health, and ecosystem health in order to detect and prevent emergence and spread of disease (see Box 5).

“ Companies and organizations, large and small, can adopt their own pandemic prevention policies and practices that will contribute to a local and global effort. ”

No one agency or sector of society alone can prevent the emergence or resurgence of diseases in today's globalized world. No one nation alone can reverse the patterns of habitat loss and extinction that threaten people and animals. Only by convening various agencies and civil society groups involved in human

health and the environment in a comprehensive manner can we realistically detect, solve, and mitigate the spread of zoonotic disease.

While the idea behind this approach is not new, its implementation is new. The World Health Organization (WHO), the Food and Agriculture

Organization of the United Nations (FAO), the World Organization for Animal Health (OIE) and the United National Environment Programme (UN-Environment) are coordinating the development of One Health at the intergovernmental level. The parties to the Convention on Biological Diversity (CBD) are developing a Global Action Plan for Biodiversity and Health that would make One Health more biodiversity inclusive.¹⁹

To be effective, One Health needs to be properly institutionalized and supported both nationally and internationally, with adequate enabling conditions for its implementation at the ground level.

MODEL CORPORATE AND ORGANIZATIONAL POLICIES/PRACTICES

The global economy has been dominated by extractive commercial practices that remove or damage natural resources. A regenerative approach ensures that natural resources will not be harmed, and if they are disturbed or removed, they will be replaced, increased, and protected. Companies and organizations, large and small, can adopt their own pandemic prevention policies and practices that will contribute to a local and global effort. These policies can include:

- Regenerative investments, production and sales;
- Deforestation-free supply chains;
- Wildlife-free supply chains;
- Loyalty programs (tokens, points, etc.) rewarding customers for protecting and restoring nature;
- Sponsorship of pandemic prevention activities and media campaigns; etc.

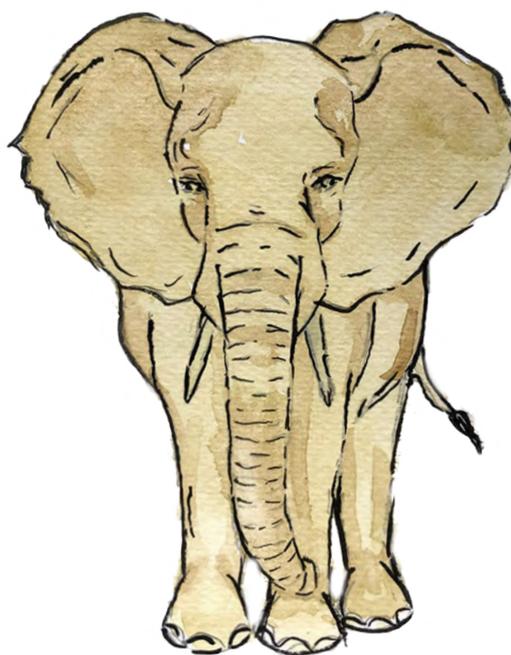
¹⁹ The CBD COP 15 in Kunming, China in October 2021 will consider the new Global Biodiversity Framework that would pledge, inter alia, to ensure that, by 2030, “the harvesting, trade and use of wild species of fauna and flora is legal, at sustainable levels and safe.” It is important that the definition of “safe” in the Convention’s new targets is aligned with the One Health approach, i.e., that it means “posing no risk of pathogen spillover to humans, wildlife, or domesticated species and posing no risk of becoming an alien invasive species.”

MODEL INDIVIDUAL POLICIES/ BEHAVIORS

Many individuals feel helpless when fighting such a huge problem like a pandemic. But, in fact, there are specific actions that individuals can take that will have a positive impact, which can become exponential as we convince others to follow suit.

Here are 11 habits that individuals, families, or social groups can adopt to help prevent pandemics and make our world a better, safer, happier place:

1. **Eat less meat.** Some of the world's deadliest disease outbreaks have been tied to industrial animal agriculture.
2. **Don't buy fur or exotic animal skins.** Captive breeding farms are inhumane and are breeding grounds for disease transmission and laundering of illegally caught wildlife.
3. **Choose your wildlife tourism options carefully.** Tourist attractions that feature captive wild animals often remove these animals from their natural habitats and make them accessible to tourists, increasing the risk of zoonosis.
4. **Don't purchase wildlife products, souvenirs, or bushmeat when traveling.** Just because they may be for sale, does not mean their legal, safe, or ethical.
5. **Check the ingredients – Don't buy products created from deforestation.** The conversion of rainforest to pastureland and plantations increases risks for zoonotic spillover from wild animals to domesticated animals and humans.
6. **Don't keep exotic pets.** Contact with exotic pets puts owners at risk for exposure to zoonotic diseases, while harming wild populations.
7. **Be responsible on social media.** Social media activity is noticed by wildlife traders, so comments like "I want one" encourage them to remove wildlife from natural habitats to sell them.
8. **Minimize your carbon and waste footprint.** Support policies and businesses that embrace a "circular economy" approach – reducing the extraction of natural resources and minimizing environmental impact.
9. **Support rewilding and agroecological restoration of degraded land.** Rewilding is the large-scale restoration of natural ecosystems and productive agroecosystems in ways that allow nature to take care of itself.
10. **Invest in sustainable finance.** Use your savings and investments wisely to ensure that your financial choices are fully divested from fossil fuels and industries linked to deforestation.
11. **Vote for the planet. Make sure your elected officials are representing you and the planet!**



VII. THE URGENCY



The Time to Act is Now

No-one is safe against future pandemics until all are safe. A virus outbreak in one country, state, or city can spread to another, even in the face of costly lockdowns. Global cooperation is critical.

COVID-19 disrupted entire societies, regardless of beliefs or income levels. We **can and must** motivate everyone to join this global movement to prevent a new pandemic. **The window of opportunity is now.**

Such a diverse and motivated alliance can create unprecedented power to force the necessary transformation

from pandemic reaction to pandemic prevention in two ways:

- Fueling political will for the necessary wide sweeping reforms;
- Driving exponential growth of prevention solutions on the ground.

To convert this global crisis to a global opportunity that can fix and improve our world, mass social participation and collaboration is needed.

Such collaboration is at the center of the alliance's impact delivery model (see Box 5).

“
No-one is safe
against future
pandemics until all
are safe...
The window of
opportunity is now.
”



Box 5. ONE HEALTH AND THE POWER OF INCLUSIVE RECOVERY

Before COVID-19, we already knew the mantra that viruses do not need a passport to travel. We learned how fast and how far pathogens can spread in our interconnected world, not just from scary movies, but also from real-life health scares like SARS or Ebola. Still, the world largely viewed these frightening realities as medical emergencies, to be dealt with by capable health professionals.



In the wake of SARS and Ebola, the One Health²⁰ approach eventually added veterinary and ecosystem health experts to the joint effort of disease prevention and control.

A clear-eyed economist predicted²¹ in 2013 that “pandemics are not mainly a health problem because they can disrupt the functioning of economies and societies.” Now we all know how true this is!

The direct toll from COVID-19 on the millions who got hit by the disease, including their families and frontline health workers, is devastating. In fact, the entire world has been impacted.

Whether you are a stockbroker in New York, a truck driver in Brazil, a schoolteacher in Finland, a hotel owner in Egypt, a chicken farmer in Bangladesh, a restaurant cook in Australia, a park ranger in Zimbabwe, or a retiree in Spain, you will have already felt the pain of severe disruptions in your daily life, the loss of income and basic economic security caused by non-medical consequences of the pandemics.

“Rising inequality and the exclusion of different social groups from services, markets and opportunities impedes development and foments discord. Ensuring that the recovery does not leave anyone behind can reduce disparities in opportunities and outcomes and help excluded groups to realize a fair share of benefits. Including diverse perspectives and involving communities in the design of policies and investment projects by private and public sector entities can ease implementation challenges.” (World Bank, 2021)

Hard-hitting policies and clever technologies will be essential, but not enough. Top-down change is linear, bottom-up change can be exponential.



²⁰ <https://www.who.int/news-room/q-a-detail/one-health>

²¹ <https://blogs.worldbank.org/developmenttalk/danger-pandemic>

VIII. HELP AVAILABLE



How *EndPandemics* Can Help You

Developing and implementing your locally relevant pandemic prevention plan is no easy task. The *EndPandemics* alliance can help you, and you can help us.

The main approaches to pandemic prevention are:

- Reduce demand for wildlife;
- Phase out wildlife trade;
- Protect and restore natural ecosystems; and
- Make our farms and food systems safer and healthier.

None of these solutions are new. They have been applied, on and off, piece-meal, in different places and at different times. So, the know-how is there. *EndPandemics* is convening the expert practitioners and projects behind these 4 solution approaches to create a comprehensive “Solutions Map”. We are continuously importing and exporting best practices to hone projects for maximum, positive impact.

To end the Pandemics Era, we need to switch the throttle of these prevention solutions from sporadic and isolated to nonstop, wall-to-wall coverage.

Scaling up delivery of solutions is commonly constrained, not by the lack of resources, but by the lack of bankable project ideas. This is in large part due to what businesses call the **Last Mile Problem**.²² Ambitious government policies, programs and projects perennially struggle, and too often fail, in delivering the intended impacts. They are not duly tasked, resourced or equipped to listen to their end beneficiaries, nor track in real time the impact of their interventions.

To tackle this challenge, we must reverse top-down solutioning that often cosmetically involves or co-opts local communities²³ and

EndPandemics
(<https://EndPandemics.earth>),
an open collaborative alliance of practitioners working for the common good, is generating a continuous flow of locally owned pandemic prevention solutions – community actions, changes in public policies, business practices and consumer behaviors – that are being openly reviewed, rated, exchanged and promoted for replication and scaling up by public and private investments.

instead employ mass co-creation of solutions that ensures ownership and sustained implementation.

The *EndPandemics* alliance is engaging all interested individuals and organizations, big and small, from all sectors and geographies, to jointly grow the *EndPandemics* Solutions Map (see Figure 3). This Map is a tool to refine, match and market pandemic prevention solutions (see Appendix 1 for examples).

Solutions that are received and vetted, or created, replicated, and refined by the *EndPandemics* community then become building blocks of a global recovery and regeneration effort. These solutions are catalogued, with details of their innovator, costs and impacts, like an

²² It means that product delivery at the final stage of a B2C (business-to-customer) value chain tends to be most expensive, most time consuming and least reliable. Apart from delivery infrastructure improvements, the main two ways to tackle this problem in a business are communicating with customers and real-time delivery tracking to customers. Source: <https://onfleet.com/blog/last-mile-problem>.

²³ This term fully refers to Indigenous Peoples and Local Communities (IPLCs).

investment platform. Shared lessons learned ensure that interested stakeholders can hit the ground running.

As the community grows, the value of each mapped solution also increases due to its higher visibility, public transparency, stronger impact verification protocols and social validation, as

it is backed by the social capital invested by solution co-owners.

EndPandemics has established a Monitoring, Evaluation and Reward (MER) system that utilizes its own blockchain-based digital token (EPX) to track and reward effort and impact of the solutions.

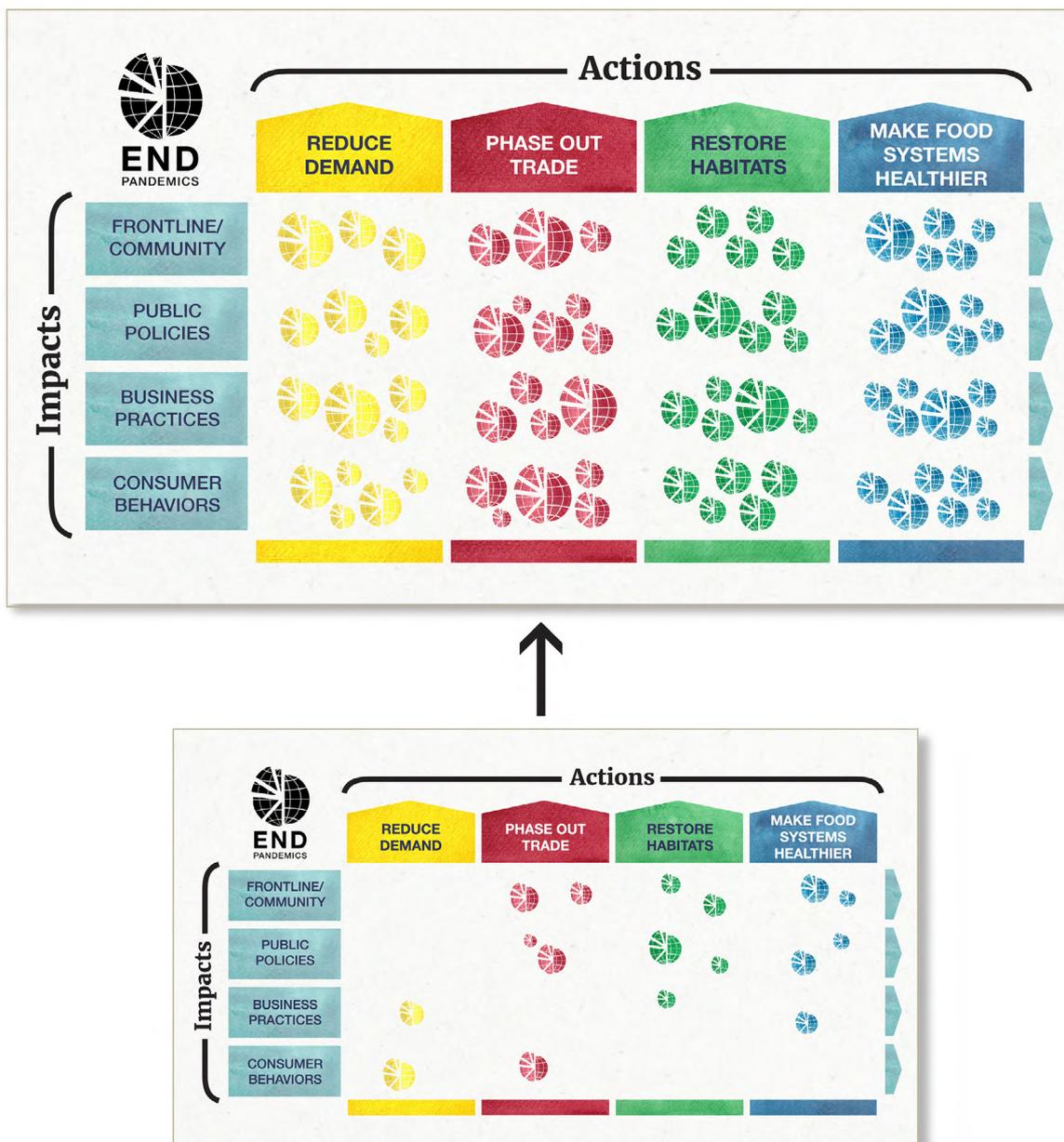
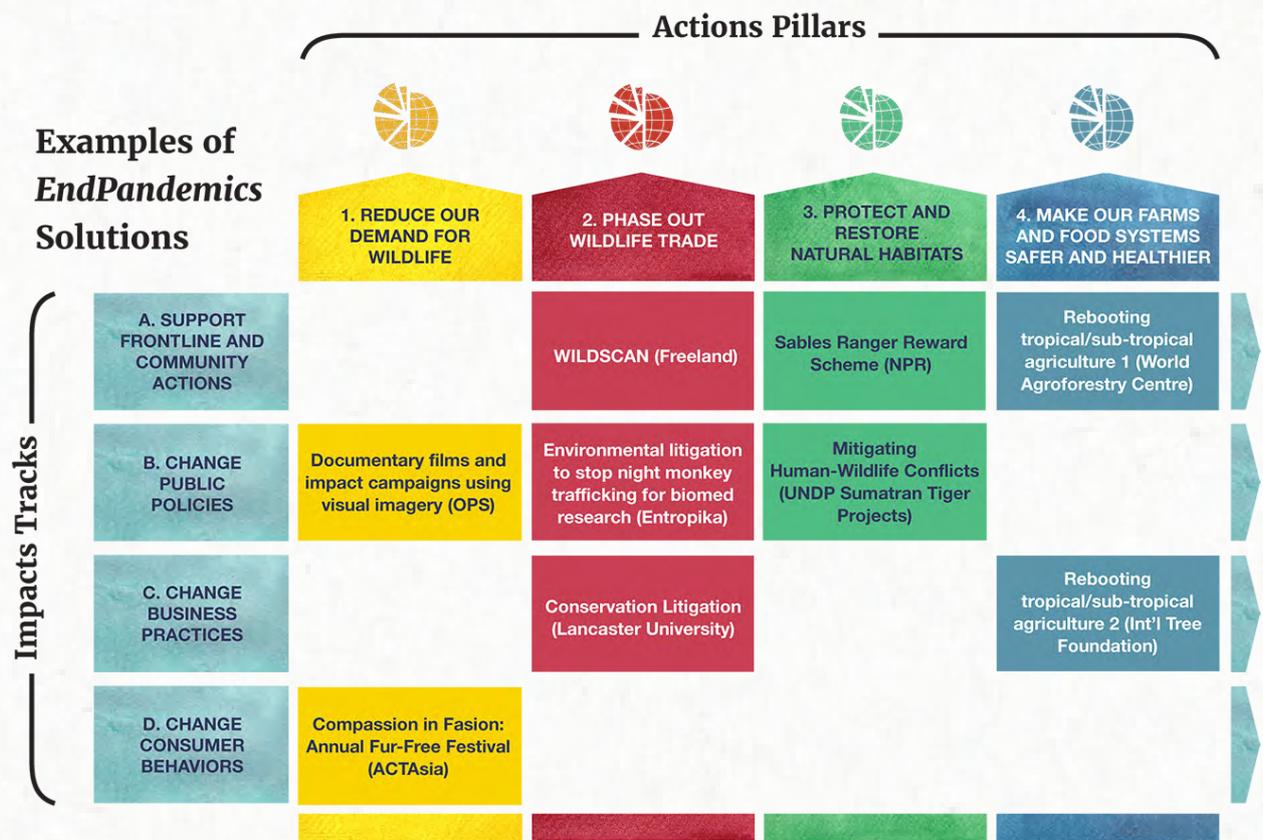


Figure 3. Growing the Solutions Map – from random interventions to lasting, wholesale changes.

APPENDIX



A Sampling of the *EndPandemics* Solutions Map



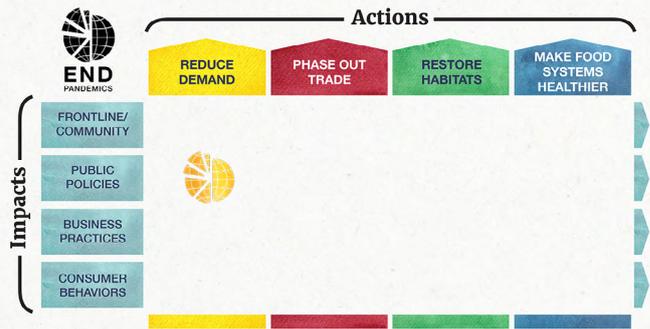
EndPandemics
Investing in Planetary Health



● **DOCUMENTARY FILMS AND
IMPACT CAMPAIGNS USING
VISUAL IMAGERY**

● Location: Global

● Solution Proponent: Oceanic Preservation Society

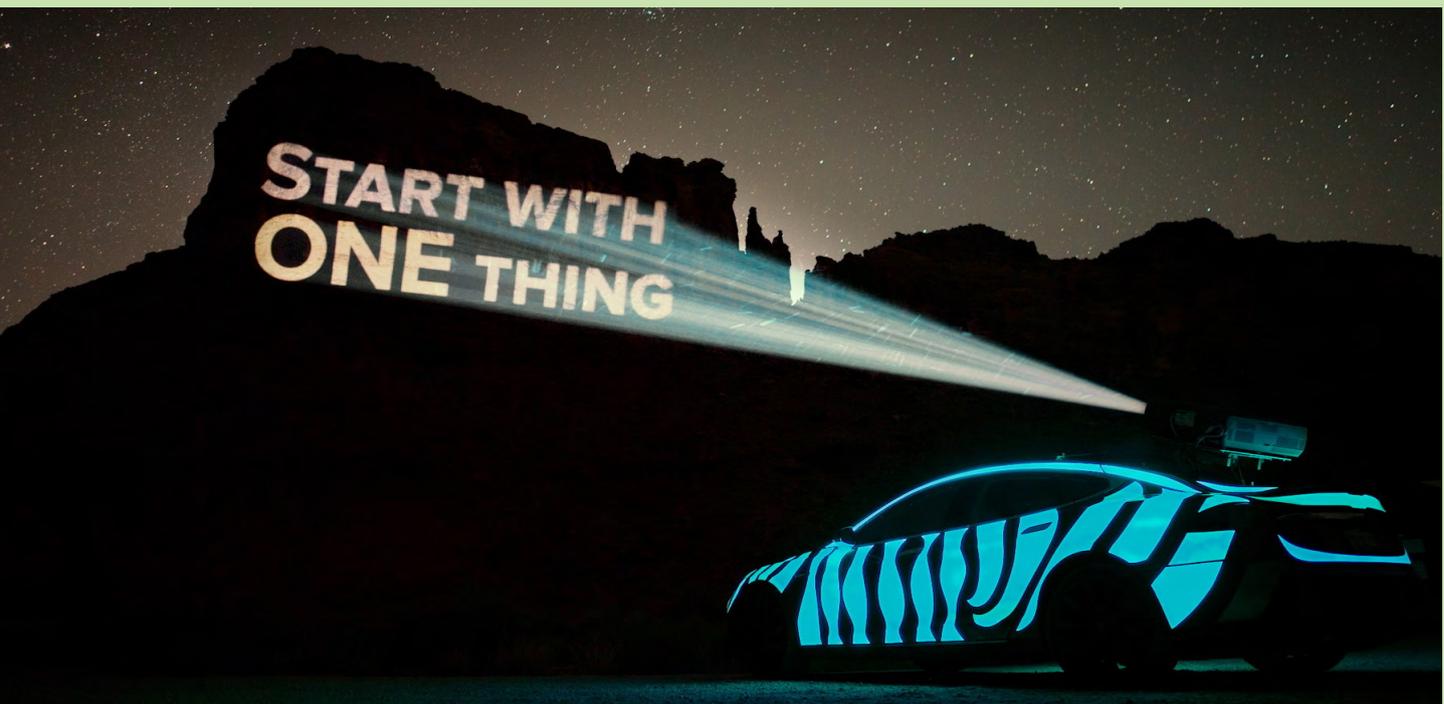


PROBLEM

OPS [documentary films](#) and projection events expose critical issues facing our planet, and the front-line defenders who are risking their lives to defend it, through compelling imagery and storytelling. *Racing Extinction* (2015) revealed the role that wildlife trafficking plays in contributing to the current mass extinction event, climate change, and humankind’s important connection to, and reliance upon, nature. *The Game Changers* (2019) focused on the benefits of a plant-based diet for human health and reducing the environmental impacts of intensive animal agriculture which contributes to species extinction, deforestation, zoonotic disease transmission, and climate chaos. Our next film currently in production will expose the destruction of tropical ecosystems by the palm oil industry that is hastening wildlife trafficking, exacerbating climate change, and increasing the potential for future zoonotic disease outbreaks.

SOLUTION

Documentary film and impact campaigns using visual imagery (e.g. projections events).
Some of our films require covert operations and investigations, including infiltration of wildlife [markets in Asia](#); others have required film crews to be embedded within field operations where our interventions have led to the confiscation of endangered wildlife or enforcement actions against illegal wildlife traders; interviews with government officials, scientists, and activists requires the establishment of trust; and partnerships with innovative technology companies have enabled some of our incredible [projection events](#) where we have illuminated iconic buildings, such as the [Empire State Building](#) and St. Peter’s Basilica at [The Vatican](#). These images of endangered species and other thematic content have reached millions of people globally and helped to raise awareness.



RESULTS

Our films have been met with varying success, including an Academy Award for the best documentary (2009 for *The Cove*). For other films (*Racing Extinction*), we partnered with high-profile multimedia companies (Discovery, Vulcan Productions, Obscura and others) to create an action website and impact campaign to channel interest after the film's release. Our projection events were strategically held in tandem with key meetings and partners (UN Climate Summit in September 2014 New York; and at the [Vatican in early December](#) before the Paris Climate Accord (Climate COP21) in 2015. With the intention of scaling social change and sparking an international dialogue, success is measured by the campaigns and partnerships spawned by these films and visual displays, the numbers of viewers reached, and who ultimately participates in some form of action (which is ultimately more difficult to track). Collectively, our global projection events have achieved over [5.3 billion impressions](#).

Beyond raising awareness, our documentary films have catalyzed action, including the abandonment of whale and dolphin meat in school lunch programs in Japan achieved a reduction in numbers of dolphins killed in the drive hunts each year; supported increased protection for shark and ray species at wildlife trade fora (e.g., CITES); and led to the confiscation of wildlife and arrest of traffickers (e.g., the closure of a high-end restaurant in Southern California serving endangered whale meat, and the rescue and release

of an endangered orangutan discovered during covert filming operations). After the release of *The Game Changers*, the interest in plant-based diets escalated, with 'plant-based recipes' one of the biggest Google searches of 2019. While isolating the true impact of the film is difficult, a growing awareness around plant-based diets and their importance to the environment has exploded since the film's release.

LESSONS

A post-film impact campaign is essential to reaching, and activating, the largest audience over time. We did not have an action site with our first film (*The Cove*, 2009), but quickly learned that the impact campaign that follows a film or projection event is as important as the documentary itself. It is imperative to have a clear and tangible way to channel interest and inform action by the viewing public. Capitalizing on the inspiration of a film requires a long-term commitment to identifying opportunities to channel strategic action in the policy arena, field, or through recruitment of corporate partners and commitments.



OPS inspires, empowers, and connects a global community using high-impact films and visual storytelling to expose the most critical issues facing our planet.

LEARN MORE

Website

www.opsociety.org

Vimeo Page

<https://vimeo.com/opsociety>

Youtube page

<https://www.youtube.com/channel/UCbbST1c7UWQBG-5GkgIOrt7A>

Wildlife markets clip

<https://www.youtube.com/watch?v=jx9VmRKB6wM>

Educational outreach videos

<https://www.opsociety.org/outreachvideos/>

Our films

<https://www.opsociety.org/our-work/>

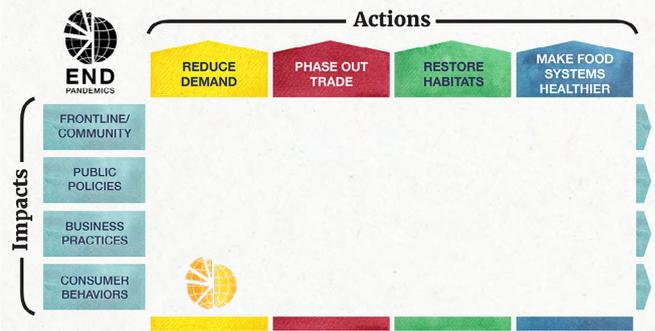
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● **COMPASSION IN FASHION:
ANNUAL FUR-FREE FESTIVAL**

● Location: China

● Solution Proponent: ACTAsia



PROBLEM

Indiscriminate consumption globally and in China is fueling unsustainable industries such as fur farming. In fur farming, disregard is shown for human welfare in terms of employment and safety, exploitation of animals and damage to the environment. The risks of pandemics are becoming clearer but as consumers, people continue to overlook the disconnect between individual actions and impacts to other people, animals and the environment.

The legal trade in fur is a starting point to tackle the trade in wildlife and prevent future pandemics. At the same time as ACTAsia works for a reduction in demand for wildlife as a whole, we aim to build a consumer mindset that understands compassionate choices and the destructive effects that excessive and indiscriminate consumption has on the world, from all of the One Health perspectives.

These choices such as fur in fashion fuel unsustainable industries and put human health at risk from toxic chemicals and the potential for pandemics.

The legal trade in fur is a starting point to tackle the commercial trade in wildlife and prevent future pandemics.

SOLUTION

Annual Fur-Free Festivals in Shanghai China have been held since 2014 usually during or close to Shanghai Fashion week Autumn/Winter. The Fashion Festival is made up of several components all aimed to keep the fur-free message in the mainstream media:

- Fur-Free Fashion Show (2020 Stella McCartney).
- Fur-Free Day for all visitors and exhibitors (3rd September at Fashion Zoo Expo in 2020).
- Sustainable and Fur-Free Forum to promote fur-free and alternative materials - with international experts and leading speakers in

sustainability and the fashion industry.

- Opportunity to present Fur-Free Retailers (FFR) who commit to not use fur in their designs.
- Partnerships: in 2020 - Fashion Zoo, Stella McCartney, London College of Fashion, British Consulate, British Council, China Biodiversity Conservation Green Development Fund.

The Fur-Free Fashion Festival in 2020 reached close to 40 million people on social media with 500 attendees in person at the forum and 20,000 online streaming the event. The Fashion show pulled an online crowd of half a million people.

RESULTS

ACTAsia has been delivering the Fashion Festival in China for six years and has built up to 2020 where we have made the event offline and online, had international speakers join from around the world online and in person, and been able to pull in brands for sustainable fashion and in 2020 started to broaden the reach to consumers of plant-based diet including OATLY.

Held in China to include: Fashion Show, Forum and Fur-Free day.

Media pick up from 20 media agencies in China

Total reach for the event this year (2020) was close to 40 million people.

In ACTAsia consumer report 2020 we have found that a higher percentage of fur consumers will stop buying fur once they know about the practices in fur farms and more about the industry. This has increased from 65% in 2019 to 84% in 2020.

We measure success by the partnerships and strong political support that the Fur-Free message is within the larger sustainability discussion and has become mainstream – this has been a crucial goal that ACTAsia has been keen to work towards. ACTAsia has steadily built a robust and credible reputation in China and internationally through diligent research work and reporting on evidence and maintaining context and integrity within our

work. We have honoured partners and given credit where it is due, delivering what we set out to achieve.

Over the six years of Fashion Festivals, we have hand-picked key speakers who we respect and know they have something key and individual to bring to the forums, we have showcased fur free brands and maintained a positive message on consumer choices. ACTAsia avoids the radical or bandwagon approach and does not use aggression or finger-pointing tactics. Instead, we are non-confrontational, offering positive consumer choices and back up with the reasoning to explain and inform with benefits to people, animals and the environment.



Through the media we have become a called upon source for accurate up to date information, this is due to the approach we have taken to ensure we research and fact-check before sharing information with others. ACTAsia keeps the fur issue

within mainstream media and have avoided being side-lined or tarnished as a 'radical' group that is then dismissed.

Promoting open and honest discussion and not condemning but celebrating small changes, not driving for perfection in consumer choices but showing that small changes can add up makes people feel they are willing to join us.

LESSONS

Partnerships work! ACTAsia have been able to partner in 2020 with Fashion Zoo, this has in part been due to the reputation build up in the previous five years, and also driven by ACTAsia's endeavour to reach a higher number of engagements. The partnership was marked by Stella McCartney giving her blessing in the form of the Opening Show and a quote in support of the work that ACTAsia does. This links back to the credible partners that are essential within the industries that we want to change.

Get data and use the statistics. ACTAsia have been carrying out an annual public survey for both consumers of fur and consumers who do not buy fur, gathering their opinions helps us to shape our education campaign and topics within the forum at the festival. It also serves to update brands and companies, ensuring we are providing accurate and up to date information.

Reputation needs to be built in every decision and strategy the organisation has, not reactionary or radical/extreme, messaging is clear and backed up with up to date evidence which is accurately portrayed. Partnerships are carefully chosen.

Target the millennial and generation Z, middle classes who are the consumer spenders and also the group likely to change the future!



Through education, we promote compassion for animals, kindness towards people and respect for the environment in China and throughout Asia.

LEARN MORE

<https://www.actasia.org/news/the-future-of-fashion-can-be-beautiful-sustainable-and-fur-free/>

<https://www.actasia.org/news/fashion-professionals-speak-out-for-fur-free/>

<https://www.youtube.com/>

[watch?v=1KnzzoT_x7I](https://www.youtube.com/watch?v=1KnzzoT_x7I) 2020 recap video

https://www.youtube.com/watch?v=_gSZyEyNRJg&t=138s 2019 recap video

<https://www.actasia.org/wp-content/uploads/2019/10/China-Fur-Report-7.5.pdf>

<https://www.actasia.org/>

wp-content/uploads/2018/11/Toxic-Fur_6.1.pdf

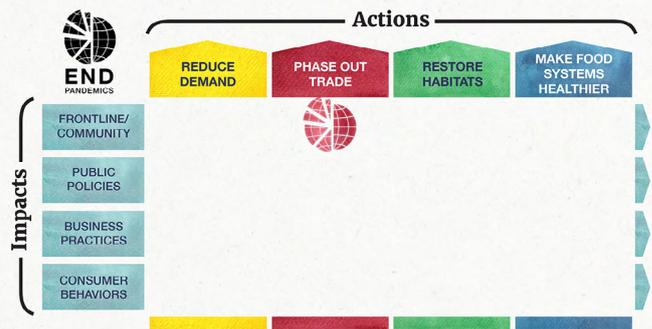
CONTACT

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● WILDSCAN

● Location: Southeast Asia, West Africa

● Solution Proponent: Freeland



PROBLEM

A majority of officers and the public are unable to identify most wildlife species that are in trade. They do not know which ones are legal or illegal, or which ones are high risk for transmitting viruses.

SOLUTION

WildScan smartphone app enables everyone to identify commonly trafficked wildlife and wildlife parts. Originally designed for frontline law enforcement officers and transport sector workers to correctly identify, report and handle commonly trafficked species, the app also encourages civil society to report wildlife in local markets. WildScan is currently available for free download for Apple and Android devices in multiple languages.

RESULTS

WildScan contains information on 600+ species and contacts from 25+ countries on two continents. It is available in English, French, Portuguese, Thai, Vietnamese and Lao. It can be used by frontline enforcement officers, transportation and shipping officers (aviation, courier, postal), and by members of civil society, including children. Since its relaunch in late 2020, it has been growing a steady user base, and there has been growing interest in expanding it to other parts of the world.

LESSONS

1. You do not just launch an app and then let it go viral. It requires marketing and maintenance.
2. We learned to develop the structure of the app (with help of Vimi, the company that co-designed it with us) so that it can be adapted for any region of the world. So, any time a new country wants it, it's just a matter of adding the library of species that is traded there, applicable laws and translating it.



Protect vulnerable wild animals, communities and ecosystems from trafficking and over-exploitation. Our Vision is a world of pristine ecosystems that is free of wildlife trafficking and human slavery.

LEARN MORE

<http://wildlifeProtectiontools.net/>
(select tool "Species ID")
<https://youtu.be/whpVmVcFdyg>

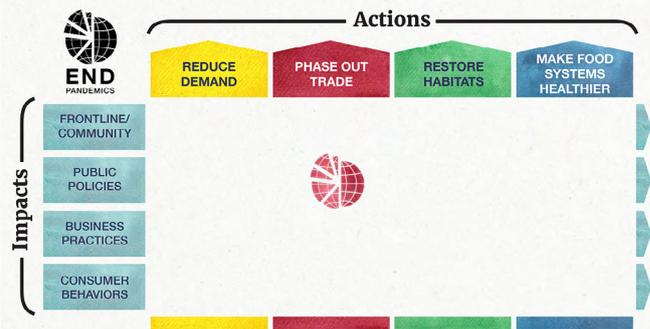
CONTACT

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- ENVIRONMENTAL LITIGATION
- TO STOP NIGHT MONKEY
- TRAFFICKING FOR
- BIOMEDICAL RESEARCH

Location: Amazonian triple border region of Peru, Brazil, and Colombia

Solution Proponent: Fundación Entropika



PROBLEM

At the Colombian-Peruvian border of the Amazon, wild night monkeys are harvested for malaria research by a single Colombian biomedical laboratory that illegally sources 70% of their test subjects from Peruvian communities. The continuous extraction of night monkeys decimates local primate populations and contributes to the deforestation of the Amazon since wide expanses of trees are felled during the capture process.

After experimentation, trafficked night monkeys are released back into the wild without screening for diseases or assessment on how resident populations are affected by the influx of released animals.

Night monkeys are susceptible to human pathogens such as TB and herpes simplex virus,

and releasing them after prolonged captivity, especially immunocompromised, could introduce harmful diseases into wild populations or establish sylvatic cycles of disease with the potential for spillback from animals to humans.

Entropika takes legal action to stop the trade of night monkeys and the exploitation of indigenous trappers.

SOLUTION

In 2011, Entropika’s director filed a “popular benefit” lawsuit, setting off a series of ongoing legal battles to protect night monkey populations from wildlife trafficking for vaccine research.

Entropika uses the court system to hold Colombian national and regional environmental authorities and the biomedical facility accountable for corruption, negligence in issuing permits, unregulated post-experimental releases, and exceeding legal trapping quotas by procuring trafficked monkeys from Peru.

RESULTS

In 2014, Entropika’s director won the lawsuit, and trapping permits for night monkeys were revoked until 2016. This ruling stopped the capture of approximately 4,000 monkeys per year and reduced the risk of endemic disease transmission from primates to indigenous trappers.

National and international media coverage of the landmark case exposed corruption, unethical research, and environmental damages costing the laboratory financial backing and prestige.

In 2017, Nancy Ma’s night monkey was upgraded from Least Concern to Vulnerable on IUCN’s Red List.

In 2019, at Entropika’s request, the Comptroller General ordered disciplinary and penal investigations against Corpoamazonia, the regional environmental authority, and the Ministry of Environment, marking the first time that criminal investigations



will be carried out regarding the illegal trade in night monkeys.

Entropika is currently contesting the lab's latest permits to extract 400 monkeys a year from indigenous territories for the period 2020-2022 in court.

LESSONS

Perseverance, adaptability, and continuous follow-up are the key lessons when entering into litigation. Despite several setbacks with the judicial system, public servants will finally be investigated for corruption, making it more difficult for the biomedical facility to obtain trapping permits in the future.

Main obstacles faced are the sluggishness of the court system. Powerful environmental offenders can bribe court officers who will seek any oversight to throw out a case, such as not responding in time

to a hearing appointment. Legal teams will utilize obstruction and delay tactics to waste time and resources. In Entropika's case, the defense has repeatedly rescheduled court hearings, causing money to be lost in lawyer fees, flight tickets, and lodging. In addition, Entropika's director became the target of a strategic lawsuit against public participation (SLAPP) by the lab's director to silence claims of wrongdoing by draining financial resources, time, and emotional energy.

In retrospect, paying for representation from a strong law firm from the start would aid in advancing legal processes and save time and energy. However, the resources available only allow for the services of a low-cost lawyer with limited experience, leaving Entropika to shoulder most of the legal work.

Advice to other organizations is to be prepared to face intimidation tactics such as SLAPPs and secure sufficient funds for unexpected expenses and a drawn-out legal process.



Entropika

A grassroots NGO dedicated to conserving biodiversity and improving local livelihoods in the Amazonian border area between Colombia, Brazil, and Peru.

LEARN MORE

News articles

https://e360.yale.edu/features/primate_rights_vs_research_battle_in_colombian_rainforest

<https://latinamericanpost.com/34713-angela-maldonado-the-tireless-defender-of-the-amazon>

<https://www.ippl.org/gibbon/blog/a-legal-victory-for-night-monkeys/>

<https://whitleyaward.org/winners/night-monkey-colombia/>

<https://www.caracoltv.com/regias/regias-inspiradoras/angela-maldonado-la-cientifica-que-dedica-su-vida-a-la-conservacion-de-la-amazonia>

<https://www.eltiempo.com/vida/medio-ambiente/la-cientifica-colombiana-que-sera-premiada-por-national-geographic>

<https://www.spreaker.com/user/naturalpress/03-angela-maldonado>

<https://sostenibilidad.semana.com/actualidad/articulo/angela-maldonado-gano-premio-buffet-award-de-national-geographic/56346>

Videos

<https://m.youtube.com/watch?v=HhipnIIYiDo>

<https://www.facebook.com/watch/?v=1030083960792357>

<https://www.facebook.com/fentropika/videos/127142007438605/>

Publications

<http://www.scielo.org.co/pdf/racefn/v35n135/v35n135a09.pdf>

Research and in situ conservation of owl monkeys enhances environmental law enforcement

at the Colombian-Peruvian border

Biomedical_Research_vs_Biodiversity_Conservation_in_the_Colombian-Peruvian_Amazon_Searching_for_Law_Enforcement_Where_There_is_Lack_of_Accountability

https://www.researchgate.net/publication/317538960_Primate_Trade_Neotropics

Disappearing_in_the_Night_An_Overview_on_Trade_and_Legislation_of_Night_Monkeys_in_South_and_Central_America

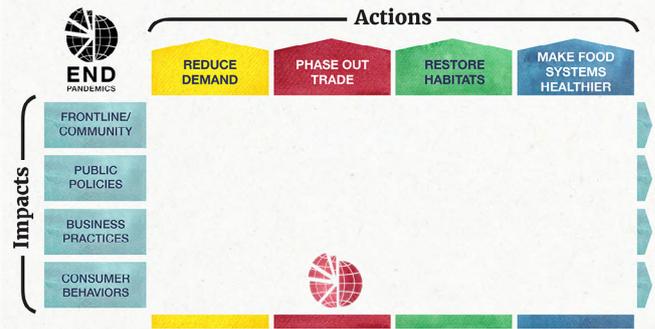
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- **CONSERVATION**
- **LITIGATION**

- Location: Mexico, Indonesia, China, DRC, other countries

- Solution Proponent: Lancaster University



PROBLEM

Illegal wildlife trade (IWT) is typically enforced through criminal and administrative sanctions that result in limited fines and/or imprisonment. This often limits deterrence effects that allow ongoing illegal trade and associated pandemic risks. Moreover, traditional enforcement strategies do not provide meaningful remedies for the harm caused by IWT. This means that the harms—such as injuries to individual animals, impacts on people’s livelihoods, harm to species survival, and

even disease—are regularly left unresolved, and responsible parties are not held liable.

Conservation litigation focuses on creating accountability and remedies via liability lawsuits. Such lawsuits can both help remedy the harm caused by specific IWT cases, and help to reduce large-scale, commercial IWT by holding perpetrators responsible for their actions. These lawsuits can help deter future IWT and thus pandemic risks. In the future, similar litigation could potentially also be used to specifically hold responsible parties legally liable for the harms caused by disease risk, although this is not yet tested.



SOLUTION

Conservation-litigation.org has proposed how liability lawsuits can be used to address IWT. This includes development of a framework for how to facilitate these types of lawsuits in countries around the world. This includes development of a guide and training resources for practitioners (e.g., judges, prosecutors, conservation NGOs).

In March 2021, the Indonesian NGO, WALHI North Sumatra, used this framework to develop a civil lawsuit in Indonesia. To our knowledge, this is the first such citizen lawsuit in an illegal wildlife trade case. The case is against a zoo that was illegally keeping protected, endangered species, including Sumatran Orangutan. It seeks to make the zoo responsible for providing remedies that would address the harm the zoo caused to individual animals, species survival and human wellbeing.

These resources and the Indonesian lawsuit present the approach and precedent for future lawsuits, likely undertaken by NGOs and government agencies in a number of high-biodiversity countries. This could be funded by core NGO and government budgets, as well as philanthropic efforts to support strategic litigation.

RESULTS

The key outputs were the development of the framework and guide, as well as its dissemination via engagement with target NGOs.

Proof of intermediate outcomes and changes are the emergency of lawsuits that adopt this approach to addressing IWT. This is indicated by the presence of the 1 lawsuit in Indonesia, and expressions of interest from >4 NGOs in Indonesia and internationally, and of Indonesian government agencies. These suggest that further such lawsuits may be forthcoming.

LESSONS

These lawsuits require a strong understanding of domestic legislation, including a number of procedural requirements, to ensure that any court submissions meet any legal restrictions and are correctly presented. This requires identifying domestic legal counsel that is familiar with and/or will meaningfully analyse domestic legislation and is properly capacitated and supported to undertake new types of litigation that likely differ from what they traditionally practice.

These lawsuits are not everyday interventions, but rather strategic interventions. As such, it is important that groups undertaking these lawsuits consider not only the many details of case development, but also how the case is going to be strategically presented and levered to create broader change.



Conservation Litigation, a collaborative project hosted by Lancaster University, works to facilitate the use of liability litigation to remedy the harm caused to biodiversity, including by illegal wildlife trade.

LEARN MORE

www.conservation-litigation.org

Guideline

www.conservation-litigation/resources

Details about WALHI's lawsuit

<http://walhisumut.org/2021/04/13/walhi-north-sumatra-files-lawsuit-against-pt-nuansa-alam-nusantara-for-illegally-keeping-animals>

[in-a-zoo-without-permits/https://twitter.com/walhisumut/status/1382263998905606144](https://twitter.com/walhisumut/status/1382263998905606144)

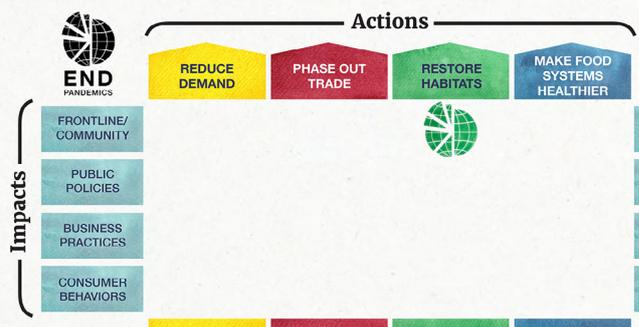
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● **SABLES RANGER REWARD SCHEME**

● Location: Chizarira National Park, Zimbabwe

● Solution Proponent: National Park Rescue



PROBLEM

The destruction of nature through poaching and habitat degradation is one of the leading causes of biodiversity loss and is a significant driver of zoonotic diseases.

Morale and job satisfaction are important factors in the performance of rangers who defend National Parks and other protected areas.

The Sables Ranger Reward Scheme enables high performing rangers to boost their earnings and provides extra incentives for them to invest in their family’s education and healthcare, using a tokenized virtual currency.

By boosting ranger morale and incentivizing high performance, the Sables Ranger Reward Scheme aims to reduce the risk of zoonotic disease by reducing poaching and trafficking of wildlife in and around Zimbabwe’s Chizarira National Park.

SOLUTION

National Park Rescue’s Sables Ranger Reward Scheme is part of an ongoing 10-year project (from 2018-2028) that aims to improve the motivation and performance of park rangers in Chizarira National Park, Zimbabwe (N -17.6775160, E 27.8782881), by rewarding high performance in their duties.

The total budget for the Sables Ranger Reward scheme is US\$130,000 over 10 years and is financed out of National Park Rescue’s core operational budget.

Sables are a virtual currency that are earned through high performance, they can be exchanged for goods and services at a set value (e.g., 1 Sable = 1 Dollar), or for education and medical bills at double the value (i.e., 1 Sable = 2 Dollars).

This novel scheme encourages high performing rangers to invest in education and medical care for themselves and their families, increasing workplace motivation, alleviating poverty and reducing the incentive for corruption and negligence.

RESULTS

In three years, this program has benefited over 30 rangers and their families in Chizarira National Park, Zimbabwe, and has paid out over US\$30,000 in school fees and medical bills.

Rangers have reported that this scheme is a strong motivating factor in their performance.

Since implementing Sables, we have seen a 98% reduction in indicators of bushmeat poaching, a 90% reduction in elephant poaching, a 550% increase in arrests and a 250% increase in the number of snares removed from the park.

By reducing poaching and wildlife trafficking this project is mitigating the risk of future zoonotic disease outbreaks.

This scheme also provides job security and promotes the welfare, education and capacity building of the rangers and their families.

LESSONS

The job of a frontline park ranger is dangerous, stressful, and often poorly paid. Providing rangers with the opportunity to boost their income through rewarding high performance is an effective way of improving ranger morale and wellbeing, which ultimately improves protected area security.

Rewarding rangers with cash can lead to problematic behaviors such as drunkenness. To address this, NPR created the tokenized virtual currency, whereby we pay for services rather than paying the rangers directly in cash.

It is important to identify what factors are important to rangers. In this instance, rangers reported that education and medical care were particularly important, so we prioritized these using our tokenized reward scheme.

If we were to plan this intervention again, we would focus on educating the rangers about how to use a tokenized reward system to maximize the value of their rewards.

Any organization wishing to replicate this solution should ensure that the value of the rewards is appropriate for the behaviors being rewarded (e.g., arrests, collecting snares, etc.), so as to effectively motivate performance without encouraging/enabling corruption. It is also vital to stipulate the

level of reporting/evidence required for rewards to be awarded, e.g., full GPS tracks of patrols, photographs of crime scene, etc., to reduce opportunities for corruption.



National Park Rescue advances environmental protection and animal welfare by preventing poaching and promoting law enforcement in national parks in Africa.

LEARN MORE

http://www.nationalparkrescue.org/docs/YR2_Update_Operation_CK.pdf

<https://www.nationalparkrescue.org/>

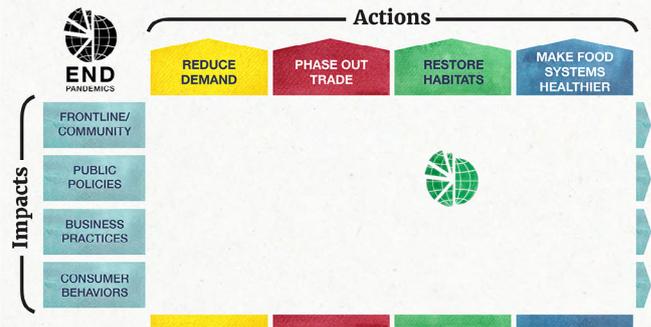
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● **MITIGATING HUMAN-
WILDLIFE CONFLICTS**

● Location: Sumatra, Indonesia

● Solution Proponent: UNDP – Sumatran Tiger Project



PROBLEM

In Sumatra, approximately 650 tigers (Goodrich et al. 2015) are found in highly fragmented and declining rainforest habitat and often disperse into village and farmland areas in search of territory and prey. Annually, on average, 15 people were injured or killed in interactions with tigers and 83 families lost their livestock to tiger predation between the years 2001 to 2016 (UNDP 2020). Such conflicts have historically seen the Balinese and Javan tigers being hunted to extinction.



The extirpation of apex predators such as tigers from a wildlife community can lead to population explosions of reservoir species more likely to come in contact with humans and livestock.

Recognising that the safety of communities and their assets is critical for saving the

tiger, the Sumatran Tiger Project partners with local communities to prevent and manage Human-Wildlife Conflict (HWC).

Project analyzed spatiotemporal patterns of human- tiger conflict to identify the most conflict prone districts within five tiger landscapes. In this project area, around 80 tiger encounters were documented on an annual basis. To address these conflicts, HWC coordination teams prepared training plans and Standard Operating Procedures to ensure safe human-tiger conflict management for both people and wildlife and created communication networks and tiger proof enclosures to increase responses and effectiveness in HWC handling.

The initiatives will prevent future human and wildlife conflicts that could trigger future zoonotic outbreaks. The transmission of pathogens from animals to humans has brought into sharp focus zoonotic diseases that are spread by animals

forced to move out of their natural habitats that are increasingly being destroyed.

SOLUTION

The UNDP Sumatran Tiger Project has introduced five systematic and integrated interventions dealing with human and tiger conflicts working with project partners, national parks and local governments:

1. Forming village, district, and provincial human and wildlife conflict mitigation teams in all landscapes: Gunung Leuser National Park, Kerinci Seblat National Park, Berbak Sembilang National Park and Bukit Barisan Selatan National Park. The initiative has been completed with budgets coming from the project and partners.
2. Conducting advocacy training for relevant stakeholders on increasing communications and reporting skills when responding to human and wildlife conflicts. The initiative has been conducted in all landscapes. Communication networks (in forms of WA Groups) were formed in all landscapes. Members of these networks consist of national parks staff, BKSDA, journalists, and wildlife experts who actively coordinated and discussed solutions to human and wildlife conflicts at fields.
3. Developing curriculum on HWC mitigation and hosting a series of human-tiger conflict mitigation training - using the syllabus - for different targeted groups, e.g., national park/ local government staff, veterinarians, and the local community.
4. Building tiger-proof enclosures in targeted landscapes. The Sumatran Tiger Project built 11 tiger proof enclosures between 2017-2019 - three in Gunung Leuser National Park and eight in Bukit Barisan Selatan National Park. The initiative is ongoing based on the needs at project sites. The initiative was also adopted by members of communities with their own budget or co-funding budget with partners.

5. Strengthening village capacity to handle conflict. From 2016 to June 2019, the project developed two independent village communities (Masyarakat Desa Mandiri) in North Sumatra Province and five independent village communities in Bukit Barisan Selatan Province. The two villages have become part of larger independent village community networks handling human and wildlife conflicts in Sumatra.

Specific to livestock predations, the project has managed to reduce livestock predation cases to zero in the villages where tiger proof enclosures have been developed. And based on project partners' reports for PIR (project implementation report) there are no human casualties in the project's landscapes as human and wildlife conflicts in the area have been handled using standardized conflict mitigation protocols.

RESULTS

1. Teams that are responsible for the monitoring and management of human and tiger conflict, as well as other wildlife conflicts in their respective landscapes, have increased capacity to resolve the problems.
2. The outcome of this training has resulted in positive local media coverage and articles that support tiger conservation and project activities. Project has also successfully formed four communication networks in the project's landscapes (in forms of WA groups) that increase communication and coordination between relevant stakeholders in handling human and wildlife conflicts at fields.
3. The curriculum is used as guidelines to systematically prevent human and wildlife conflicts.
4. A recent analysis showed members of communities are still actively using these tiger proof enclosures to protect their livestock. These enclosures have effectively reduced risks of HWCs and increased people's quality of life in targeted landscapes.
5. These interventions empower communities to independently handle HWCs based on evidence-based mitigation protocols developed by the project.

LESSONS

At the heart of this project's HWC solutions is the development and capacity building of HWC management teams at the village level to empower communities to independently handle tiger encounters. Legal frameworks support the trained teams of volunteers, who are empowered by a governor's decree to monitor and manage encounters with tigers by following an evidence-based protocol. Once the presence of a tiger close to a village is confirmed by the village HWC team, a specialized task force will be called to either install camera traps, closely monitor the tiger's movement or ensure measures to scare tigers away from villages are taken. Close, coordinated communication is critical for ensuring responses are timely and adequate when addressing community concerns.

In addition to these HWC teams, installing tiger proof livestock enclosures have provided increased security for communities and their livestock, as tigers tend not to return if they have not been able to penetrate the enclosures. The integration of community-based prevention and response interventions, informed by research and monitoring and backed by local policies has reduced livestock predation and attacks on people to zero since the start of the programme and provided security for the communities and their livelihoods.



Transforming Effectiveness of Biodiversity Conservation in Priority Sumatran Landscapes

LEARN MORE

<https://undp-biodiversity.exposure.co/from-conflict-to-co-existence>
<https://undp-biodiversity.exposure.co/partners-against-crime>
<https://sumatrantiger.id/en/2021/02/01/terus-bersinergi-tangani-konflik-satwa-liar/>

<https://sumatrantiger.id/en/2019/11/27/mencegah-konflik-satwa-menjaga-hak-kehidupan/>
<https://sumatrantiger.id/en/2018/10/22/upaya-mengajak-masyarakat-untuk-mandiri-menangkal->
<https://sumatrantiger.id/en/2018/03/20/pelatihan-penanggulangan-konflik-manu->

[sia-dan-harimau/](https://sumatrantiger.id/sia-dan-harimau/)
<https://youtu.be/Uh2igC-GdxE>

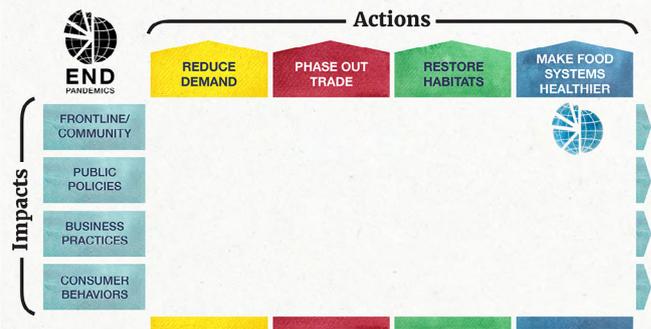
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● **REBOOTING TROPICAL/
SUBTROPICAL AGRICULTURE 1:
RESEARCH OUTPUTS AND
PILOT PROJECT**

Location: Cameroon (replicable across Africa, Southeast Asia, Latin America and Oceania)

Solution Proponent: Prof Roger Leakey, Fellow of World Agroforestry Centre



PROBLEM

1. Many of the problems arising from subsistence agriculture are the consequence of inappropriate international agricultural policies to address hunger and malnutrition in the tropics and subtropics. Typically, these policies have promoted land clearance and the intensification of farming systems using monocultures and the application of high inputs of manufactured inorganic fertilizers, pesticides etc. These costly practices are not appropriate for subsistence farmers with only about 2 ha of land and an income of only US\$2 per day.
2. Typically, the result of this conventional approach to agriculture is the clearance of new areas of forest or woodland, deforestation and land degradation, characterized by the breakdown of ecological functions and the breakdown of society norms including the trafficking of wildlife, etc.
3. The resulting agroecosystem dysfunction increases the risk of new zoonotic diseases due to the increased interface between people and wildlife.

SOLUTION

An adoptable and successful 3-step approach to reverse the negative impacts of subsistence farming and to meet the needs of the farmers has been developed, tried and tested in Cameroon. It uses:

(i) leguminous shrub species like *Sesbania sesban* and *Calliandra calothyrsus* at about 20,000 plants per ha. This restores soil nitrogen, organic matter and initiates a functioning and much more productive agroecosystem (e.g., 3-fold higher cereal crop yields); (ii) culturally important, indigenous food and medicinal trees like *Dacryodes edulis* (Safou), and *Irvingia gabonensis* (Bush mango) to diversify the farming system. These are selected for their high quality and marketable fruits/nuts and simply propagated by cuttings to create elite cultivars. This diversification of the agroecosystem increases

its sustainability; (iii) simple post-harvest processing of the tree products for wider and year-round marketing. The income generated from this can then be used to purchase inputs to further increase food crop yields.

The elements of the solution are to: (a) restore soil fertility and ecological health at virtually zero cost, e.g., without use of inorganic fertilizers and pesticides; (b) generate new sources of income for subsistence households; (c) community-based farmer training and capacity building in agroforestry and simple horticulture techniques.

RESULTS

Typically, 10-30 people are trained per village. Subsequently, the skills are disseminated by word of mouth to neighbouring villages as they set up satellite village nurseries for trees and crops.

Outcomes and impact have been recorded by farmer interviews and surveys. They include: improved soil fertility and health; reduced hunger and malnutrition; increased income and improved livelihoods; and increased biodiversity and carbon sequestration – as published in the science literature. This has transformed the lives of the participating communities, improved agroecosystem functions and restored local level biodiversity in farming systems. In addition, rural communities have developed new local businesses creating employment and improved local infrastructure.

LESSONS

The most important lesson has been the huge importance of a grassroots, participatory process in order to achieve ‘buy-in’ and success. The self-help philosophy is dependent on the farmers having a highly personal incentive to engage with the programme.

Advice is “keep it simple, appropriate to the needs of the community, based on local knowledge – and encourage the villagers to do what is good for their own situation”.



Generating science-based knowledge about the diverse benefits – both direct and indirect – of agroforestry, or trees in farming systems and landscapes, and disseminating this knowledge to develop policy options and promote policies and practices that improve livelihoods and benefit the environment.

LEARN MORE

Books

Leakey R.R.B. 2012. Living with the Trees of Life – Towards the Transformation of Tropical Agriculture, CABI, Wallingford, UK. 200pp.

Leakey, R.R.B. 2017. Multifunctional Agriculture: Achieving Sustainable Development in Africa. Academic Press, San Diego, California, USA, 480pp.

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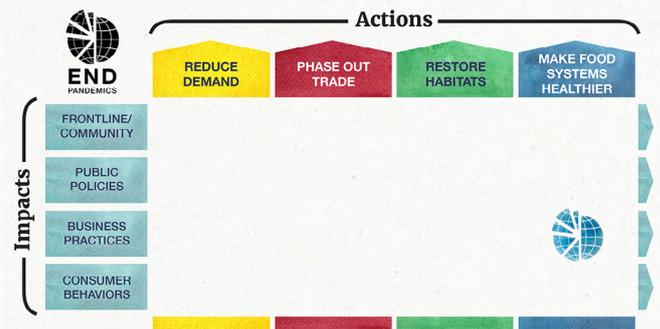
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● **REBOOTING TROPICAL/
SUBTROPICAL AGRICULTURE 2:
IMPLEMENTATION AND SCALING
OF COMMUNITY RESTORATION
OF DEGRADED LANDS**

Location: 35 projects in 9 African countries (replicable across tropics and subtropics)

Solution Proponent: International Tree Foundation



PROBLEM

1. Tropical deforestation, desertification and land degradation due to inappropriate agricultural policies and technologies, especially in subsistence households in tropical and subtropical areas.
2. These problems result in hunger, malnutrition, poverty and social injustice, as well as loss of wildlife habitat and climate change. These are intertwined with the breakdown of ecological functions at the plot and landscape level, urban/illegal migration, social injustice and conflict.
3. Social, economic and ecosystem dysfunction, loss of wildlife habitat and their associated social problems alter predator-prey dynamics and hinder the ability of ecosystems to self-regulate, promoting zoonotic spillover.

SOLUTION

ITF’s Centenary Programme in the Kenyan Highlands celebrates its foundation in 1922 by promoting community-led action to protect, restore and care for the environment and sustain livelihoods, to reverse deforestation, land degradation and build resilience to climate shocks. It aims to plant 20 million trees by 2024 and improve the livelihoods of 50,000 people. It engages with local communities in the Five Water Towers of Kenya and helps them to plant trees in degraded forest areas and in farmland. Projects involve community training in practical skills and technologies through the establishment of tree nurseries and small-scale agroforestry. Farmer training and capacity building in agroforestry and simple horticulture are the key elements of the solution. Through its schools programme it inspires children, their teachers and parents to understand and protect the natural world, and to learn about how natural resources support life.

To date this programme has planted 1.27 million trees, restored 9000 ha of degraded forest and farmland; involving 17000 people in local commu-

nities. The focus is on environmental and social rehabilitation, including the promotion of biodiversity and soil/water management; as well as poverty alleviation and the mitigation of climate change.

RESULTS

Outcomes and impact are recorded by farmer interviews and surveys. These are summarized annually in Annual Report and ITF Impact Statements, as well as on ITF website (www.internationaltreefoundation.org).

LESSONS

The most important lesson has been the huge importance of a grassroots, participatory process in order to achieve ‘buy-in’ and success. The self-help philosophy is dependent on the farmers having a highly personal incentive to engage with the programme. ITF has been implementing similar programmes for 99 years and aims to continue into the foreseeable future by funding new projects annually. Advice is “keep it simple, appropriate to the needs of the community, based on local knowledge – and encourage the villagers to do what is good for their own situation”.



Working with communities in Africa and the UK to carry out sustainable community forestry projects which protect, regenerate and cultivate trees and forests to conserve habitats rich in biodiversity and to enhance human and environmental well-being.

LEARN MORE

Impact Reports (2012-2020), 'Trees' Journal (2010-2020), at: Trees Journal and Impact Report - International Tree Foundation.

Blogs archives at Blog Archives - International Tree Foundation.

The Great Reset Project - International Tree Foundation

Website: www.internationaltree-foundation.org

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Leakey R.R.B. 2012. Living with the Trees of Life – Towards the Transformation of Tropical Agriculture, CABI, Wallingford, UK. 200pp.

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Food Security 10: 505-524. DOI 10.1007/s12571-018-0796-1

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EndPandemics
Investing in Planetary Health

Roadmap To End Pandemic: Building It Together
June 2021



<https://endpandemics.earth/join.html>

SECTION 5

About EndPandemics and Our Partners



EndPandemics
Investing in Planetary Health



WHAT

A Global Frontline Movement to Prevent Pandemics by Protecting and Regenerating Nature.

VISION

A compassionate world where people coexist with nature and our economy promotes life.

WHY

COVID-19 has wreaked havoc on our world, causing countless illnesses and deaths, disruption of daily life, and the collapse of global economies.

Fortunately, we know what causes zoonotic disease outbreaks like COVID-19, as well as HIV, Ebola, SARS and others before it, so we can mitigate the risks of new outbreaks.

To protect and regenerate nature is a far less expensive and long-lasting solution to the pandemics problem. Only through investing in nature can we achieve planetary health!

WE HAVE HOPE

#EndPandemics has assembled a diverse spectrum of organizations who identify, promote, and replicate frontline, policy, business, and behavioral change solutions to prevent future pandemics by addressing their root causes. We espouse the “One Health” approach that simultaneously protects people, animals, and ecosystems through cross-sector collaboration.

“

We are united to end pandemics by changing our global relationship with nature.

”

WHO WE ARE

#EndPandemics is a global alliance of frontline organizations tackling unsustainable wildlife trade, habitat destruction, and related consumer-driven behaviors.

HOW WE WORK

#EndPandemics roadmap is based on the “One Health” approach and operates by promoting impactful solutions through four main action pillars:



**Protecting and Restoring
Natural Habitats**



**Phasing Out Commercial
Trade in Wild Animals**



**Reducing Demand for Wild
Animals**



**Making Our Farms and Food
Systems Safer and Healthier**

“

**Never in our history
has there been a
more urgent need for
collaborative action.**

”

PLEASE JOIN US!

We are looking for like-minded organizations and individuals who want to play a role in protecting the future of our planetary health through replicable and impactful solutions to end pandemics and the root causes fueling new zoonotic diseases.

For more information:

www.endpandemics.earth/join-us.html

www.endpandemics.earth/roadmap.html

Watch our CNN ad:

<https://youtu.be/cpRT32lcHRM>

#EndPandemics



CAMPAIGN PARTICIPANTS TO DATE

Academia Sinica	Global Ocean Trust	Project Coyote
ACTAsia	Global Regeneration CoLab	Rede Latino-Americana de Ministerio Publico Ambiental
ADM Capital Foundation	Global Tiger Forum	Regen Network
ALERT	Green Consumers' Foundation	Save Wild Tigers
Animal Defenders International	GreenRope	SEEDS
Ark Ventures	GTI Council	Sekem
AsiaWorks	Hemp for the Future	SmartAgro
Asociación de Becarios de Casanare	Humane Society International	Solidaridad Network Central America
B.Grimm	Hyphae	Sumatran Tiger Project
Big.tc	International Fund for Animal Welfare	Task.io
Blood Lions	International Tree Foundation	The Corbett Foundation
Blue Sphere Media	Lancaster University	The Land App
Born Free Foundation	Land of the Leopard National Park	Third Avenue Business Improvement District
Born Free USA	Leadership Knowledge Learning	Threefold.io
Catalyze	Liberia Chimpanzee Rescue & Protection	Transparent World
China Biodiversity Conservation and Green Development Foundation	Mememeshop	United for Regeneration
David Shepherd Wildlife Foundation	Michigan State University	Victoria Falls Wildlife Trust
EarthPulse	Muktir Bondhon Foundation	Voices 4 Biodiversity
Education for Nature Vietnam	National Park Rescue	WildAid
Endangered Species Coalition	Norwegian Yacht Voyages	WILD Foundation
Endangered Species Protection Agency	NOW Partners	Wilderness Foundation Global
EndTheTrade	Ocean Conservation Trust	Wildlife Alliance
Environmental Investigation Agency	Oceanic Preservation Society	World Agroforestry
For the Animals	Open Hearts Foundation	World Animal Protection
Freeland	PawPAC	Worldview International Foundation
Fundación Entropika	Peace Journey	World Youth Wildlife Summit
Generation Blue	Planetary Health Alliance	
Global Environmental Institute	PRC Global Pte Ltd	

SECTION 6

Lets Fix Our World: Things You Can Do to Help End Pandemics

1. **Eat less meat.** Animal agriculture utilizes precious water resources, releases greenhouse gases into the atmosphere, and reduces the planet's ability to sequester carbon by destroying diverse ecosystems. Adopting a responsibly-sourced plant-rich diet will reduce your carbon footprint and animal suffering; some of the world's deadliest disease outbreaks have been tied to industrial animal agriculture.¹
2. **Don't buy fur or exotic animal skins.** Captive breeding farms are also breeding grounds for disease transmission. Large numbers of animals are bred, confined and slaughtered there for fur and skin products. Mink farms have been implicated in the transmission of SARS-CoV-2.² Slaughter methods are inhumane. Captive breeding also serves as a cover for the illegal trade in wildlife, as consumers may not be able to confirm the origin of the skins utilized, including fur that is acquired from wild animals.
3. **Choose your wildlife tourism options carefully, not all are nice to wildlife.** Tourist attractions that feature captive wild animals have often removed these animals from their natural habitat and keep them in unnatural surroundings to be accessible to tourists. Handling and feeding wildlife not only impacts their diet, ranging patterns, feeding activities, and behavior, but also increases the risk of zoonosis.³ Avoid facilities that allow visitors to handle big cats and other animals, even if those animals have been bred in captivity. These facilities serve no conservation purposes and are purely about profit. In some countries, these facilities sell body parts and derivatives of big cats and other animals into wildlife trade, fueling demand and threatening wild populations.⁴
4. **Don't purchase wildlife products, souvenirs, or bushmeat when traveling.** Just because it is for sale, does not mean it is legal, safe, or ethical.⁵ Live and deceased animals are traded for their products and derivatives for the tourism sector, and pass through various hands as they make their way through the supply chain. During the transportation process, wild animals are packed in small crates in unsanitary conditions that create a breeding ground for infectious zoonotic diseases to spread to nearby humans. Wildlife trade for bushmeat takes animals from natural reservoir populations and brings them into markets creating a risk for cross-species transmission/exposure of humans to potentially zoonotic microbes.⁶

1 <https://www.theguardian.com/environment/ng-interactive/2020/sep/15/covid-farm-animals-and-pandemics-diseases-that-changed-the-world>

2 Oreshkova, et al. (2020). SARS-CoV-2 infection in farmed minks, the Netherlands, April and May 2020. *Euro Surveill*, (23), 2001005. <https://doi.org/10.2807/1560-7917.ES.2020.25.23.2001005>

3 More than 550,000 wild animals currently in captivity are being abused for the sake of so-called tourism entertainment, affecting not only individual animals, but wild populations of vulnerable species. These animals end up malnourished, live in cramped conditions, and have frequent physical contact with humans which results in stress, injury, and even death. When animals die, they are replaced with more taken from the wild, over time putting pressure on wild population numbers. This is especially detrimental for threatened and endangered species. Furthermore, animals who have lived in captivity rarely can be released back into the wild, creating a genetic bottleneck in local populations. From World Animal Protection. (2017). *A Close Up on Cruelty: The harmful impact of wildlife selfies in the Amazon*. 40 pp.

4 Education for Nature Vietnam, Environmental Investigation Agency, Wildlife Friends Foundation Thailand, 2020 *On The Butcher's Block: The Mekong Tiger Trade Trail*

5 <https://www.worldwildlife.org/pages/suitcase-for-survival>

6 Huong, et al. (2020). Coronavirus testing indicates transmission risk increases along wildlife supply chains for human consumption in Viet Nam, 2013-2014. *BioRxiv*, DOI: 10.1101/2020.06.05.098590

5. **Check the ingredients** – Don’t buy products created from deforestation. 50,000 acres of forests are cleared every day worldwide to grow commodity crops such as palm oil, sugar cane, and soy that are found in many consumer goods. The conversion of rainforest to pastureland increases risks for zoonotic spillover from wild animals to domesticated animals and humans. Newly cleared areas become pathways for pathogen transmission as farmers and workers come into contact with wild animals.
6. **Don’t keep exotic pets.** The exotic pet trade has been linked to multiple infectious disease outbreaks in humans. Contact with exotic pets puts owners at risk for exposure to zoonotic diseases, while harming wild populations. Thousands of reptile, bird, amphibian and other species are under threat because of the global pet trade.⁷
7. **Be responsible on social media.** Think twice before clicking ‘like’ or sharing videos, photos, and other content that contains wild animals interacting with humans, wearing clothes, and/or in inappropriate surroundings. Social media activity is noticed by wildlife traders, so comments like “I want one” encourage them to remove more from the wild to sell them.⁸
8. **Minimize your carbon and waste footprint.** Reduce, reuse, recycle – the less we waste the better. Support policies and businesses that embrace a “circular economy” approach – reducing the extraction of natural resources and minimizing environmental impact.⁹
9. **Support rewilding.** Rewilding is the large-scale restoration of natural ecosystems where nature can take care of itself.¹⁰ Support initiatives to protect terrestrial and marine ecosystems to maintain biodiversity and ecosystem services. Elect representatives who support rebuilding a greener world in the wake of the pandemic.
10. **Invest in sustainable finance.** Use your savings and investments wisely, ensuring that your financial choices are fully divested from fossil fuels and industries linked to deforestation. Almost every bank offers a sustainable investment portfolio, and these can offer rates of return at least as good as non-sustainable investments while reducing your impact on the environment!
11. **Vote for the planet.** Engage with your elected representatives. It is their job to represent their constituents, so make sure that they are representing you and our planet!

7 Marshall, B. M., Strine, C., and Hughes, A. C. (2020). Thousands of reptile species threatened by underregulated global trade. *Nature Communications*, 11, 4738. <https://www.nature.com/articles/s41467-02018523-4>

8 <https://www.ecowatch.com/social-media-animal-cruelty-trafficking-2638942517.html?rebellitem=3#rebellitem3>

9 <https://www.ellenmacarthurfoundation.org/circular-economy/what-is-the-circular-economy>

10 <https://www.rewildingbritain.org.uk/rewilding/>



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