



**U.S. Senate Committee on Finance**  
**Hearing: “Cattle Supply Chains and Deforestation of the Amazon”**  
**215 Dirksen Senate Office Building**  
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**Written Testimony of Rick Jacobsen**  
**Manager, Commodities Policy**  
**Environmental Investigation Agency US**

**Introduction**

Mr. Chairman, Ranking Member, and members of the Finance Committee, thank you for inviting me to appear before the Committee today for this hearing on “*Cattle Supply Chains and Deforestation of the Amazon*”.

For the past 15 years, I have investigated natural resource-related crime and developed and advocated for policy solutions in producing and consuming countries around the world, first with the London-based non-profit Global Witness, and since 2018 with the Environmental Investigation Agency here in Washington. At EIA, my work has focused on understanding the role commodity production and associated international trade plays in driving environmental crime and deforestation, and developing practical and effective policies to decouple the production of agricultural commodities from negative impacts on the environment and human rights. As part of this work, I have lead in depth investigations into illegal cattle ranching in Brazil, the largest driver of deforestation of the Amazon rainforest, and its links to international beef and leather supply chains. Before joining EIA, I worked for a number of years as a researcher in biological sciences at Sandia National Laboratory. I have a Masters in Neuroscience from Stanford University and a BSc in Biology from the University of Utah.

The Environmental Investigation Agency, Inc. (EIA), a non-profit 501(c)(3) organization, has worked for over 35 years to investigate and expose environmental crimes, and advocate for tangible and effective solutions. EIA’s analyses of the trade in illegal timber, wildlife, and ozone-depleting substances have been globally recognized. Our investigations played a leading role in instigating the international ban on ivory trade, and more recently, the timber annex to the U.S.-Peru Trade Promotion Agreement and the 2008 amendments of the U.S. Lacey Act prohibiting the trade in illegally produced timber. More recently, EIA’s investigations have expanded to look at environmental crime related to the production of agricultural goods such as beef, leather and palm oil.

Working with local civil society partners around the globe, we document the environmental, economic and social impacts of environmental crime. Our experience has shown us unequivocally that the most destructive and challenging crimes to fight are those that are inextricably linked to international trade, whether it is trade in endangered species, timber, agricultural commodities, or fish products – and that any

solution therefore requires action and cooperation from both producer and consumer nations involved in that trade. Crimes driven by local demand can, when there is political will, be solved locally, while crime driven by international trade can overwhelm the best local efforts to do so alone.

Today I will focus my remarks on the role of cattle ranching in driving illegal deforestation in the Brazilian Amazon, how the sector's lack of traceability and transparency allows products linked to deforestation and crime to enter international markets, including our own here in the U.S. where they undermine American producers who follow the law, and actions the U.S. can take to help address the problem.

### **The critical importance of forests**

Over the past decade, the world has lost an area of forest the size of Virginia every year.<sup>1</sup> The global deforestation crisis is closely connected to some of the most pressing problems we face. Forest loss and degradation are among the biggest contributors to climate change and biodiversity loss and are a root cause of zoonotic disease spillover events such as those related to Ebola and coronaviruses.<sup>2</sup> Forests contribute to the livelihoods and food security of well over a billion people around the world,<sup>3</sup> and their loss is linked to land invasions and violence against Indigenous peoples, local communities, and environmental defenders<sup>4</sup> while feeding corruption and organized crime and undermining rule of law.<sup>5</sup>

In the tropics, the expansion of commercial agriculture, led by cattle and soy in South America and palm oil and pulp in Southeast Asia, drives 60% of deforestation.<sup>6</sup> A recent comprehensive review estimated that roughly two-thirds of this conversion for agriculture occurs illegally.<sup>7</sup> Yet commodities produced on illegally converted lands continue to find unwitting consumers, buyers and investors in the U.S. and other major markets, in part because complex and opaque global supply chains hide the links to crime and deforestation.

### **The Amazon: world's largest rainforest under threat**

The Amazon basin is home to the world's largest tropical rainforest, of global significance for the biodiversity it harbors, its importance for the global climate as a sink and store of carbon dioxide, and its modulation of water cycles and weather patterns across the continent and beyond. Scientists have for years been raising the alarm that deforestation is pushing the entire Amazon rainforest towards a tipping

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<sup>1</sup> Roughly 42,000 square miles per year, based on annual deforestation estimates published by the UN Food and Agriculture Organization for 2010 – 2020. This does not include vast areas of clear-cut logging in boreal and temperate forests or selective logging in tropical rainforests.

<sup>2</sup> For recent analysis of the climate mitigation potential of tropical forests, see: Griscom et al. [National mitigation potential from natural climate solutions in the tropics](#). Phil. Trans. Of the Royal Society B: Biological Sciences (2020); for recent analysis on the role of forest and wildlife protection in preventing pandemics of zoonotic origin, see: Dobson et al. [Ecology and economics for pandemic prevention](#). Science (July 24, 2020); and Tollefson, Jeff. [Why deforestation and extinctions make pandemics more likely](#). Nature (August 7, 2020).

<sup>3</sup> Independent Evaluation Group of the World Bank Group, 2013. [Managing Forest Resources for Sustainable Development: An Evaluation of World Bank Group Experience](#).

<sup>4</sup> See [Human Rights Watch letter to the OECD](#), January 27, 2021, for an overview of the situation in Brazil.

<sup>5</sup> See, for example: Emanuele Ottolenghi, The Dispatch, March 19, 2021. [Good Climate Policy Should Fight Corruption and Organized Crime: They are key drivers of deforestation and environmental degradation](#).

<sup>6</sup> Forest Trends, May 18, 2021. [Illicit Harvest, Complicit Goods: The State of Illegal Deforestation for Agriculture](#).

<sup>7</sup> Forest Trends, op. cit.

point that could lead to irreversible ecological collapse and the release of tens of billions of tons of carbon dioxide. This could put global targets for avoiding the worst impacts of climate change out of reach. The Amazon is also on the frontline of the struggle of Indigenous peoples to protect land they have occupied and stewarded for centuries from invasions by illegal loggers, miners and ranchers. Indigenous peoples have the most to lose from the destruction of forests that are integral to their livelihoods and cultures, and have shown themselves to be the most effective protectors of these forests, often at great personal risk to individual leaders and community members.

Deforestation rates in the Brazilian Amazon reached their highest level in 15 years under the Bolsonaro presidency.<sup>8</sup> Roughly 80% of all deforested land in the Brazilian Amazon has been converted to cattle pasture, making cattle ranching the largest driver of deforestation in the tropics.<sup>9</sup> Much of this forest conversion – around 95% by one recent estimate – occurs in violation of Brazil’s own laws and regulations.<sup>10</sup> Many of these violations rise to the level of crime under Brazilian law. For example, invasions of protected areas and legally recognized Indigenous territories are widespread and have been on the rise in recent years.

Actions by the Bolsonaro administration that significantly weakened environmental law enforcement played a role in recent increases in illegal deforestation.<sup>11</sup> A 2022 analysis found that only 2% of illegal deforestation events across Brazil since 2019 were subject to any penalty by federal law enforcement agencies.<sup>12</sup> But this does not need to be the case. Between 2003 and 2012, the policies of the first Lula administration resulted in a reduction in Amazon deforestation by more than 80%, a decrease widely attributed by experts to more effective law enforcement. The current Lula government recently announced that improved enforcement of environmental laws will be a core part of a strategy to halt deforestation in the Amazon by 2030.<sup>13</sup> The U.S. should support and backstop these efforts by providing technical and financial assistance, increasing law enforcement cooperation and using the power of the U.S. market to incentivize the needed reforms.

### **Exposure of U.S. cattle product imports from Brazil to illegal deforestation**

Since a ban on imports of fresh beef from Brazil was lifted in 2020, the U.S. has become the second largest destination for Brazil’s beef exports, representing a key growth market. In 2022, U.S. imports of fresh and frozen beef from Brazil more than doubled over the previous year, bringing the total import of beef products to over \$1 billion, the highest level ever.<sup>14</sup> An increasing amount of this beef comes from slaughterhouses in the Amazon region at high risk of sourcing cattle raised on illegally deforested land.<sup>15</sup>

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<sup>8</sup> See for example: [www.reuters.com/world/americas/brazil-deforestation-data-shows-22-annual-jump-clearing-amazon-2021-11-18/](https://www.reuters.com/world/americas/brazil-deforestation-data-shows-22-annual-jump-clearing-amazon-2021-11-18/)

<sup>9</sup> See for example: <https://www.sciencedirect.com/science/article/pii/S0959378021000595>

<sup>10</sup> [https://s3.amazonaws.com/alerta.mapbiomas.org/rad2021/RAD2021\\_Completo\\_FINAL\\_Rev1.pdf](https://s3.amazonaws.com/alerta.mapbiomas.org/rad2021/RAD2021_Completo_FINAL_Rev1.pdf)

<sup>11</sup> See for example: <https://iopscience.iop.org/article/10.1088/1748-9326/ac5193>

<sup>12</sup> See analysis by the Mapbiomas Enforcement Monitor: <https://mapbiomas.org/en/data-on-enforcement-show-that-impunity-still-prevails-in-the-fight-against-deforestation>

<sup>13</sup> See for example: [https://www.reuters.com/world/americas/brazils-lula-launches-plan-stop-deforestation-amazon-by-2030-2023-06-05/#:~:text=BRASILIA%2C%20June%205%20\(Reuters\),the%20world's%20largest%20tropical%20rainforest](https://www.reuters.com/world/americas/brazils-lula-launches-plan-stop-deforestation-amazon-by-2030-2023-06-05/#:~:text=BRASILIA%2C%20June%205%20(Reuters),the%20world's%20largest%20tropical%20rainforest)

<sup>14</sup> EIA analysis using U.S. import data accessed through UN Comtrade: <https://comtradeplus.un.org/>

<sup>15</sup> See for example: <https://www.earthsight.org.uk/news/american-pie-keeps-growing>; <https://reporterbrasil.org.br/2022/11/jbs-admite-ter-comprado-quase-9-mil-bois-ilegais-do-maior-desmatador-do-pais/>

The U.S. is also a major destination for leather processed in Brazil, much of it for use in car seats. EIA recently published the findings of a multi-year investigation showing how U.S. and global car manufacturers sourcing from Brazil are at high risk of using leather from cattle raised on illegally deforested lands in the Amazon.<sup>16</sup> Our findings also led to an in depth investigation by the New York Times into this issue in 2021.<sup>17</sup>

Our investigation detailed how hides from cattle raised on illegally deforested land in the Brazilian Amazon enter the supply chains of three of the country's largest leather companies, JBS, Vancouros and Viposa, which supply global manufacturers of leather products ranging from car seats to sofas to handbags. The investigation used cattle transport permits to trace thousands of cattle raised illegally inside one of the most heavily deforested protected areas in the Brazilian Amazon, the Jaci-Paraná Extractive Reserve, and on a number of farms outside the protected area where ranching is occurring in areas embargoed for illegal deforestation, into the supply chains of major slaughterhouses in the Amazon state of Rondônia operated by major meat companies JBS, Marfrig, Minerva, among others. Some of these slaughterhouses export beef to the U.S., according to shipping data reviewed by EIA.<sup>18</sup>

Our findings, and those of numerous other civil society groups and media outlets, connect the dots between the systemic illegal deforestation occurring in Rondônia and across the Amazon region and international supply chains, and illustrate the high level of risk associated with beef and leather sourced from Brazil.<sup>19</sup> I want to emphasize that small NGOs like mine with much more limited budgets and access to information than the world's largest meat companies are showing it is possible to trace these supply chains.

The U.S. market should not be a destination for illegally produced beef or leather from Brazil that undercuts the livelihoods of law-abiding ranchers in the U.S. and Brazil alike. I'm going to talk about one of the most important things the U.S. can do to ensure this isn't the case: establishing requirements for traceable and transparent supply chains for high-risk products entering our market.

### **The critical importance of traceable and transparent supply chains**

The investigations I've been involved in over the course of my career have shown time and again how complex and opaque global supply chains allow goods linked to some of the worst crimes and abuses, such as armed conflict, corruption, forced labor, violence against people defending their land and environment, and illegal logging and deforestation, to enter international markets, including our own.

Traceable and transparent supply chains for agricultural commodities linked to deforestation are critical to ensuring a resilient and sustainable supply of goods, while providing assurances to American businesses,

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<sup>16</sup> EIA US, Deforestation in the Driver's Seat, December 2022. Available at: <https://us.eia.org/report/deforestation-drivers-seat/>

<sup>17</sup> <https://www.nytimes.com/2021/11/17/climate/leather-seats-cars-rainforest.html>

<sup>18</sup> Shipping data obtained by EIA from Panjiva. See also: <https://www.earthshight.org.uk/news/american-pie-keeps-growing>

<sup>19</sup> See for example: <https://reporterbrasil.org.br/2022/11/jbs-admite-ter-comprado-quase-9-mil-bois-ilegais-do-maior-desmatador-do-pais/>; <https://www.bloomberg.com/graphics/2022-beef-industry-fueling-amazon-rainforest-destruction-deforestation/#xj4y7vzkg>

investors and consumers that goods entering the U.S. market are produced legally and in ways that align with our values and national security interests and do not undermine producers at home and abroad who follow the rules.

Nowhere is the importance of traceable and transparent supply chains more apparent than in Brazil's cattle sector, where a decade of voluntary corporate commitments by the country's largest meat companies have failed to reduce Amazon deforestation. Numerous investigations, including our own, have shown how the failure to enforce environmental laws and weak government oversight allow cattle raised on illegally deforested land to be laundered into supply chains through intermediaries, easily evading corporate supply chain monitoring systems limited to the direct suppliers to slaughterhouses. This often involves the abuse of cattle transport permits (GTAs) and rural property registrations (CARs). These systems are intended to strengthen transparency, traceability and legal compliance, but lax government oversight of the self-declared information provided by ranchers and cattle traders leaves them open to fraud and manipulation.

EIA's investigation detailed how ranchers and intermediaries can use GTAs and CARs to quickly adjust the paper trail of their cattle once a laundering scheme is exposed and continue to elude efforts by meat companies to exclude cattle raised on farms with illegal deforestation from their supply chains. The findings led us to conclude that the current monitoring systems of Brazil's meat and leather companies are inadequate to exclude cattle raised on illegally deforested land from their supply chains, and recently proposed improvements are likely to be inadequate to address the problems uncovered by our investigation.

Taken together, the findings of EIA's investigation show why full birth to slaughter traceability of individual animals must be a mandatory component of supply chain due diligence regulations in Brazil, and in international markets sourcing beef and leather from Brazil, to ensure cattle from high-risk regions like the Brazilian Amazon are free of deforestation and crime.

### **Demand-side Actions Urgently Needed**

While some of the dynamics that drive forest loss must be resolved at a national level, deforestation worldwide is increasingly driven by the demand for commodities in international markets. Voluntary initiatives and corporate commitments have not done enough to curb deforestation and forest degradation.<sup>20</sup> Government leadership and regulatory frameworks are urgently needed to address the climate and biodiversity crises, drive systemic change in global commodity supply chains and level the playing field for businesses at home and abroad trying to operate responsibly.<sup>21</sup>

### **The FOREST Act**

As one of the world's largest producers and consumers of agricultural commodities, the U.S. must play a key role in setting standards for trade and finance that promote good governance and protect people and

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<sup>20</sup> For an analysis of voluntary commitments by major companies, see: [Forest 500 annual assessment](#).

<sup>21</sup> For recent commentary, see: Justin Adams, Financial Times Opinion, August 7, 2019. [Companies alone cannot tackle deforestation](#).

the ecological integrity of the world's remaining forests. The European Union recently passed a new regulation requiring traceable, legal and deforestation-free supply chains for agricultural commodities linked to deforestation<sup>22</sup> and the United Kingdom is in the process of developing regulatory measures to reduce the role of its imports of agricultural commodities in driving illegal deforestation.<sup>23</sup> The U.S. must also show leadership in advancing global standards that decouple deforestation from international trade while ensuring our market does not become a dumping ground for products linked to deforestation and crime that Europe is closing its doors to.

This is why EIA and more than 40 other environmental, human rights, faith-based and anti-corruption NGOs welcomed the introduction of the Fostering Overseas Rule of Law and Environmentally Sound Trade (FOREST) Act (H.R. 5508 / S. 2950) in the last Congress.<sup>24</sup> The pragmatic and effective measures proposed in the bill would represent a critical step forward in fighting corruption and environmental crime abroad while reducing our footprint on the world's forests. We understand the sponsors are preparing to reintroduce the bill this year and urge members of Congress to support its swift passage.

The FOREST Act would:

- Prohibit products containing certain agricultural commodities produced on illegally deforested land, including cattle products, from entering the U.S. market;
- Require companies to carry out and report on risk-based due diligence, including supply chain traceability, on imports of key agricultural commodities linked to deforestation;
- Increase U.S. engagement with and support for countries taking meaningful steps to improve governance and reduce deforestation;
- Strengthen tools to tackle deforestation-related corruption and financial crime; and
- Establish a federal government procurement preference for zero-deforestation products.

At the core of the FOREST Act are requirements to increase supply chain traceability and transparency, allowing companies and consumers to make well-informed purchasing decisions, and incentivize reforms in producer countries such as Brazil to strengthen rule of law. Technologies already exist and are rapidly advancing to meet supply chain traceability needs across various sectors and applications, from timber to fisheries to food safety. The U.S. should provide technical and financial support to scale up this transition, in particular to assist small farmers in meeting emerging market requirements for traceable, legal and deforestation-free products, and to producer country governments committed to adopting the necessary transparent traceability and forest monitoring systems.

### **Industry Support for Regulation of Commodities**

There is significant and growing industry support for supply chain due diligence requirements. The US Cattlemen's Association has endorsed the FOREST Act.<sup>25</sup> A group of five of the world's largest chocolate companies recently issued a letter to EU lawmakers supporting the farm-level traceability requirement in the recently adopted EU Deforestation Regulation, showing that this level of traceability is

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<sup>22</sup> Available at: [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L\\_.2023.150.01.0206.01.ENG&toc=OJ%3AL%3A2023%3A150%3ATOC](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2023.150.01.0206.01.ENG&toc=OJ%3AL%3A2023%3A150%3ATOC)

<sup>23</sup> Schedule 17 of the UK Environment Act 2021: <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>

<sup>24</sup> <https://us.eia.org/report/20211001-sign-on-letter-forest-act/>

<sup>25</sup> <https://twitter.com/uscattlemen/status/1501997951421501441>

being embraced by leading businesses and can be achieved for even the most complex supply chains.<sup>26</sup> The Sustainable Food Policy Alliance (comprised of Danone North America, Mars, Incorporated, Nestlé USA, and Unilever United States) and the National Confectioners Association, among others, have also added their voices to calls for a regulatory approach to tackle global deforestation.<sup>27</sup>

## **Conclusion**

As the example of illegal deforestation driven by cattle ranching in Brazil and its links to international markets – including our own – clearly demonstrates, opaque and unregulated global commodity supply chains risk making American consumers, businesses and investors unwittingly complicit in environmental crimes that drive deforestation and undermine legitimate agricultural producers at home and abroad. But the U.S. market can also be leveraged to incentivize the needed governance reforms in producer countries.

U.S. leadership and legislative action can and must focus on bringing greater traceability, transparency and accountability to global supply chains, supporting and building partnerships with countries taking meaningful steps to address deforestation and strengthen rule of law, and laying the foundation for cooperation and engagement with other major economies to encourage similar steps.

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<sup>26</sup> See for example: <https://www.politico.eu/sponsored-content/polygon-mapping-is-critical-to-a-deforestation-free-cocoa-supply-chain/>

<sup>27</sup> SFPA statement available at: <https://foodpolicyalliance.org/news/sfpa-commends-efforts-to-address-deforestation-in-ag-supply-chains/>; NCA statement available at: <https://candyusa.com/policy-advocacy/deforestation/>