

**Battling the Illegal Wildlife Trade Through Regulatory Finance:
The Southeast Asian Context****Chad Patrick Osorio**

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The illegal wildlife trade (IWT) is a US\$20 billion global industry, with significant environmental, economic, and sociopolitical harms. Fueled by a complex interplay of drivers and enabling factors, IWT poses concrete stumbling blocks for several UN Sustainable Development Goals. There is an urgent need for comprehensive reforms to address its multifaceted consequences around the world. In Southeast Asia, IWT is rampant as the region serves as a global hub for this black market. However, because of its characterization as an invisible threat, many aspects of IWT in the region remains understudied, particularly its relationship with illicit financial flows. In this paper, I look at the different economic and legal interventions to address IWT, focusing on regulatory finance. Adapting legal mechanisms from comparative jurisdictions, I propose three measures to be spearheaded by the Association of Southeast Asian Nations (ASEAN) Economic Community: first, to strengthen the implementation of existing financial crime instruments through specialized training and the utilization of emerging technology such as AI and blockchain; second, to append wildlife crimes as predicate offences to financial felonies, and; third, to utilize financial regulation instruments to fight poverty and support inclusive community development, encouraging communities to be proactive partners in long-term wildlife conservation.

Keywords:

1. Illegal Wildlife Trade
2. Sustainable Development Goals
3. Southeast Asia
4. Artificial Intelligence
5. Regulatory Finance

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1. Introduction: Invisible IWT

It is relatively easy to assume that the illegal wildlife trade is a matter far removed from daily life. After all, very few of us can afford to keep caged tigers at home, or have exotic plants bedeck our indoor gardens. Yet the cross-border trafficking of plants and animals is a growing problem that persists globally, with wide-ranging impacts that can affect our every day.

Illegal wildlife trade (IWT) refers to all unlawful activities related to the commercial exploitation and trade of wild species ('t Sas-Rolfes et al, 2019). This includes the illegal buying, selling, and trafficking of plants and animals, their body parts, or products derived therefrom. IWT encompasses all flora and fauna, including endangered and protected species (World Bank, 2019). It hides behind legitimate markets and digital platforms, slipping through the cracks of law enforcement efforts (Abano & Chavez, 2021). Figure 1 shows global wildlife trading hotspots based on trade reports from 1975 to 2020 (CITES, 2023).

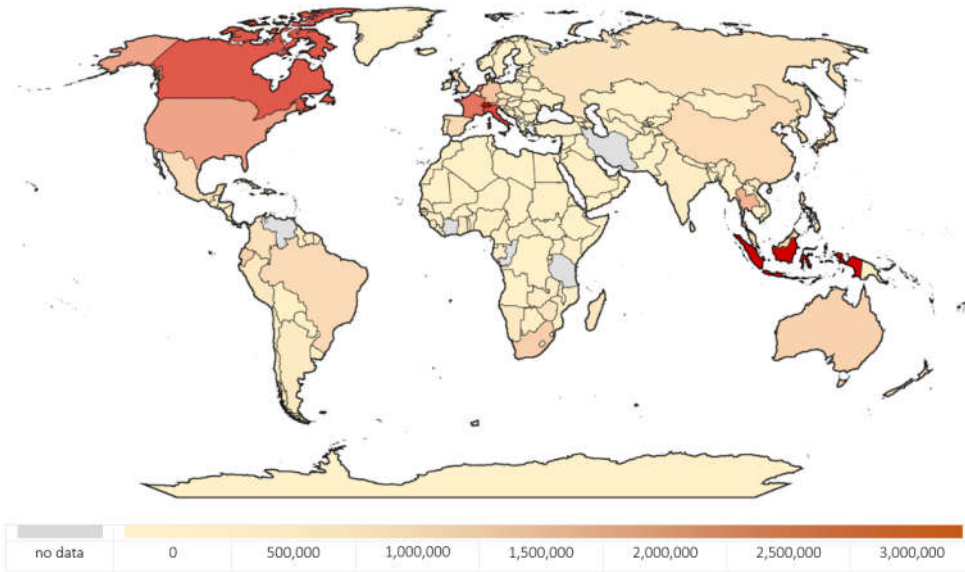


Figure 1. CITES-Reported Wildlife Exports by Country (1975-2020) by Number of Transactions

Operating in the shadows, the illegal wildlife trade (IWT) is a highly lucrative and organized transnational criminal enterprise. With an estimated annual value ranging from US\$19 billion to US\$23 billion in illicit cash flows, IWT surpasses the individual GDPs of almost half the countries worldwide (World Bank, 2019). It is the fourth most profitable criminal activity in the world, following only the trade in illegal drugs, weapons smuggling, and human trafficking (Doody et al, 2021; Kim, 2021). Figure 2 highlights the proportion of annual global revenues lost to the illegal wildlife trade (Yuliantiningsih et al, 2023; Tow, Symes & Carrasco, 2021).

Due to its elusive and clandestine nature, IWT has been characterized as "invisible," which makes it challenging to detect, monitor, and quantify (Phelps & Webb, 2015; Baaniya, 2018). Unlike legal trade, which is subject to regulations and reporting requirements, IWT operates outside formal economic channels. Transactions occur discreetly, often in hidden locations and through secret networks, making it challenging for authorities to track the movement of wildlife and its derivative products. This lack of transparency hampers efforts to obtain accurate and comprehensive data on its scale and impact. Wildlife traffickers also use covert methods and sophisticated tactics to evade law enforcement and conservation authorities, further obscuring the trade's visibility (Keskin et al, 2023). This lucrative underworld remains largely unseen to the rest of the world, camouflaged by corruption, false documentation, and sophisticated smuggling networks.

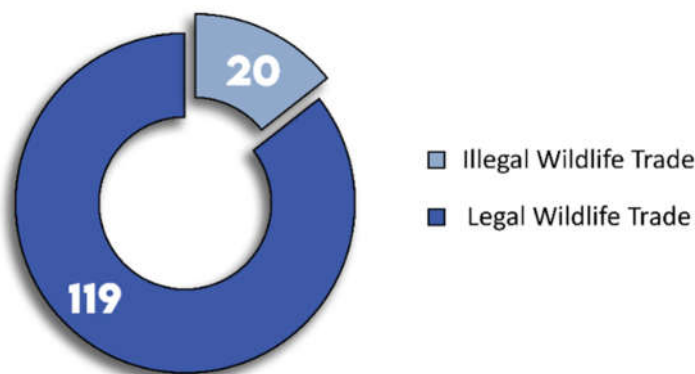


Figure 2. Annual Global Export Values in US\$ Billions

Many IWT transactions involve cross-border and international networks, spanning multiple countries and regions. Traffickers take advantage of weak border control and corruption, allowing wildlife and products to pass through unnoticed. Online platforms have also facilitated the expansion of the illegal trade into the digital realm, where transactions are conducted anonymously, exacerbating the challenge of tracking and regulating the trade (Esmail et al, 2020). The invisibility of IWT is further compounded by limited resources for monitoring and combating wildlife trafficking. Many countries, especially in developing regions, face constraints in funding, technology, and trained personnel, impeding their ability to effectively address the problem.

As a result of this ‘invisibility,’ IWT has not been given significant priority in legislation, implementation, and international cooperation.¹ Many key law enforcement agencies lack awareness of the true extent of the damage caused by IWT and the concrete harms it inflicts. Per the last global survey spearheaded by the World Bank, nearly a hundred countries worldwide did not regard IWT as a serious crime (World Bank, 2019). Despite the urgency and far-reaching implications of IWT, from environmental, socioeconomic and even political harms, it frequently takes a backseat in matters of governance and remains overshadowed by other pressing concerns (ICCWC, 2022). At present, many countries still view IWT as second priority (ICCWC, 2022). This is apparent in the resources being poured into anti-IWT efforts. From the period of 2010 to 2018, an estimated US\$100 billion is spent globally each year to combat the illegal drug trade; in stark contrast, spending on IWT amounts to roughly US\$261 million a year (Open Society Foundations, 2012; World Bank, 2019).

There are several possible perspectives from which to attack this rapidly growing social problem. This includes supply-side, demand-side, and transactional interventions (t Sas-Rolfes et al, 2019). One such transactional intervention focuses on illicit financial flows. It relies on the fact that IWT is an enterprise crime, and its continued existence is fuelled by monetary incentives (Albanese, 2023). By targeting how these incentives are transferred through ancillary enforcement, law authorities can prevent the commission of the primary illegal activities. There are well-documented initiatives led by developed countries in utilizing these financial regulatory measures to stem the tide of IWT, foremost among them cases like *US v. Bengis* and *US v. Rafael* (Sundareshan, 2019; Asner, 2017; Dick, 2019). However, there remains a gap in literature how this type of intervention could be concretely implemented in developing countries.

¹ It is interesting to note that even in the call for submissions of the Sen Prize under the Global Justice Program where it listed nearly 20 different sectors of illicit financial flows, wildlife was not mentioned in particular.

In this paper, we explore the international, domestic, and local policy mechanisms by which regulatory finance can contribute to the global fight against the illicit trade in wildlife, taking the Southeast Asian context into account. Part I of this paper discusses the concrete harms posed by IWT, its impacts on the United Nations Sustainable Development Goals (SDGs), and its incentives and enabling conditions. Part II zooms in on IWT in the context of Southeast Asia, and highlights why the Association of Southeast Asian Nations (ASEAN) is uniquely situated to forward policy reforms towards tackling IWT. To address the existing gap in literature, Part III discusses existing mechanisms and proposed reforms within the ASEAN. It focuses on regulatory finance both at the regional and domestic levels, with emphasis on community-based interventions, while also outlining context-specific limitations of the proposals. Thereafter, Part IV concludes with the recommendation of a paradigm shift and the necessity of adopting a multidisciplinary legal strategy to ensure that the harms of IWT are sufficiently addressed.

1.1.The Harms of IWT

IWT is problematic for several reasons. Its impacts are far-reaching, affecting both the natural environment and human society. It poses concrete adverse effects on multiple levels: from environmental and economic to political and social. It poses direct and indirect threats to various SDGs.

1.1.1. Environmental Harms

One of the primary causes of biodiversity loss and the resulting ecosystem damage is the excessive exploitation of wildlife (Blundell & Mascia, 2005). Indeed, IWT is considered the second biggest threat to global biodiversity after habitat loss (Smith & Pepper, n.d.). By 2050, approximately 30% to 50% of all known species are projected to face extinction (McKie, 2017). Of this, an estimated 950 kinds of flora and fauna are endangered as a result of substantial international demand and ongoing trade activities (Frank & Wilcove, 2019). Species abundance experienced reductions of up to 76.3% and 65.8% due to national and international trade, respectively (Morton et al, 2021). Across the globe, IWT poses a persistent threat to over 30% of all mammalian and avian species, jeopardizing their very existence (Rivalan et al, 2007). Widespread poaching for commercial purposes contributes to the rapid population decline of numerous plant and animal species in their natural habitats. As key species disappear, this can have cascading effects on other plants and animals in the food chain, resulting in long-term ecological imbalances. This is especially true for ecosystem engineers, which provide vital services such as organic waste disposal, soil fertilization, and pollination, among others (US EPA, 2015; Richman, 2011).

An example is the African elephant (*Loxodonta africana*), now critically endangered mainly due to poaching, with one elephant falling victim every 25 minutes (Skinner, 2014). This unprecedented rate of killing not only causes extirpation of individual species but also have extensive consequences on the ecosystem (US EPA, 2015; Richman, 2011). The African elephant plays a crucial role in various ecological functions such as seed dispersal, creating watering holes, carbon sequestration, and enhancing browse heterogeneity (Kohi et al, 2011; Sawyer, 2021). Their rapid disappearance leaves a void of ecological functions on which other species rely.

Another ecosystem engineer at high risk is the hawksbill sea turtle (*Eretmochelys imbricata*). Due to their exquisite shells, these turtles have been subject to intensive transnational trade, leading to their current critically endangered status (Miller et al, 2019; Frazier, 2002; Deines, 2019). Extensive research has shown that turtles and tortoises have a significant impact on their

ecosystems. They primarily feed on marine sponges, which in turn promotes coral growth, creating a conducive environment for other species residing in coral reefs to flourish (National Aquarium, 2022). When they are depleted or eradicated from certain areas, it often results in the drastic reduction of ecosystem quality (Lovich et al, 2018).

In addition to affecting individual species, IWT also drives widespread habitat destruction. Poachers often encroach upon protected areas or destroy natural habitats to access target species. For instance, Teoh (2019) notes that the illegal trade in rare orchids has led to habitat destruction as collectors seek out these valuable plants in their natural environments. This destruction further exacerbates the threats faced by vulnerable species and degrades the overall health of ecosystems.

Moreover, IWT can result in the release of illegally traded species into new environments, leading to invasive species that outcompete and threaten native flora and fauna (Mozer & Prost, 2023). For example, exotic pets that are unwittingly released into non-native habitats can disrupt local ecosystems by engaging in resource competition. They can ultimately suppress and displace the indigenous fauna, pushing native species to the brink of extinction. The same is true for invasive flora, which can negatively impact various ecosystem attributes of the local ecosphere, including soil cover, water retention, nutrient cycling, and fire regimes (Weidlich et al, 2020). Diagne et al (2021) provides a conservative estimate that invasive species incur annual costs of approximately US\$160 billion globally, highlighting its considerable negative impact. Based on these examples, it is clear that the consequences of IWT are far-reaching and have concrete impacts on the delicate balance of nature. Species extirpation, biodiversity loss, habitat destruction, and the introduction of invasive species are all tangible examples of ecosystem disruptions caused by this illicit trade.

1.1.2. Economic Harms

Numerous industries, including agriculture, fisheries, and forestry, rely directly on the ecological functions of biodiversity and ecosystem services (Neill, O'Donoghue & Stout, 2020; Kelleher, Henchion & O'Neill, 2019). Many of these industries provide basic market goods, including food, clothing, medicine, and shelter. Tourism is another industry that heavily depends on ecosystem services. Numerous underserved regions rely on travel and tourism as their main source of income, accounting for nearly 94% of the world's least developed nations (Bolwell & Weinz, 2008). Legal wildlife-based tourism generates substantial income for countries, benefiting local communities and economies (Saarinen & Rogerson, 2021). In 2018, it has contributed US\$120.1 billion to the global GDP (World Travel and Tourism Council, 2019). Wildlife viewing tours and community-led conservation projects can provide essential sources of income for local residents, especially those living in biodiversity-rich yet poverty-stricken regions (Khan, 2001; Monsarrat & Svenning, 2022).

IWT diverts revenues away from legitimate sustainable channels, leading to the stunted development of community livelihood initiatives and economic losses in various local and regional industries. Its detrimental effects are magnified in underserved rural communities in developing countries, which are oftentimes the most biodiverse (Khan, 2001; Monsarrat & Svenning, 2022). Illegal logging and deforestation for the trade of timber and rare plant species, as well as poaching and unsustainable hunting, can lead to the destruction of natural habitats, the decimation of wildlife populations, and the degradation of ecosystem quality. This in turn hinders the growth of green initiatives such sustainable harvesting, eco-tourism, and other environmentally friendly industries, reducing potential community development opportunities. Negative effects of this lost economic potential are exacerbated further for those relying on and

who could otherwise gain from legal, sustainable, wildlife-based activities for their livelihoods. At the benefit of the few who profit from these wildlife crimes, entire communities suffer. On top of this, IWT also diverts financial resources and attention away from genuine conservation efforts addressing other causes of biodiversity decline and habitat loss. Law enforcement agencies and conservationists must allocate resources to tackle illegal trade, limiting their capacity to protect wildlife through sustainable conservation strategies. For instance, conservationists may have to allocate funds and efforts to combat poaching activities rather than invest in habitat restoration and community engagement projects, weakening overall conservation efforts.

Addressing IWT is crucial not only for preserving biodiversity but also for safeguarding economies and livelihoods. By combating illegal trade in wildlife, countries can protect their natural resources, support sustainable industry initiatives, and create opportunities for local communities to thrive while promoting long-term conservation efforts.

1.1.3. Political Harms

Some of IWT's political harms have implications for criminal justice and national security. For one, IWT fosters a culture of corruption within law enforcement and government agencies (Sundström & Wyatt, 2017; UN CAC, 2024). This compromises their ability to enforce conservation laws effectively. Wildlife traffickers bribe officials to turn a blind eye to their illegal activities or tip them off about potential law enforcement actions, undermining conservation efforts. Other crimes similarly overlooked include fraudulent documentation and money laundering (FATF, 2020). Unchecked, these predicate offenses enable illicit trade to persist.

Moreover, the high profitability of this illicit trade attracts transnational organized criminal networks that engage in other illegal activities (Anagnostou, 2021; Anagnostou & Doberstein, 2022). These criminal groups are also often involved in other transnational crimes such as human trafficking, drug smuggling, and the illegal arms trade. They offer both the resources and pathways to facilitate transnational trafficking, generating significant profits from affluent end-consumers (Duffy, 2016). In some regions, the combination of corruption and crime has further led to the formation of "wildlife mafias," where these criminal networks actively collude with authorities to facilitate the illegal movement of wildlife products, making it even more challenging to combat (Asia's Appetite for Endangered Species is Relentless, 2018; Bichell, 2010; UNI, 2023).

IWT can pose a significant threat to national security as well. The United Nations Office of Drugs and Crime (UN ODC, 2019) reports that some syndicates have been linked to armed conflicts and insurgency. These organizations exploit the illicit trade to finance their activities and fuel violence in affected areas. Advocating for peace processes essentially entail cutting off the funding source of organizations seeking to perpetuate conflict.

The convergence of IWT with other criminal enterprises creates complex challenges for law enforcement and international cooperation in addressing these interconnected threats. Left unchecked, IWT could seriously erode the credibility of domestic criminal justice systems and destabilize the integrity of national financial institutions (World Bank, 2019).

1.1.4. Social Harms

Beyond environmental, economic, and political impacts, IWT carries concrete consequences that extend to various social aspects, including global health, culture, and social justice. For one, it poses risks to public health: the handling and consumption of wildlife can transmit zoonotic diseases to humans (Bezerra-Santos et al, 2021). The recent COVID-19 pandemic, suspected to have originated from wildlife consumption, serves as a prime example of this. Repeated close

contact between humans and wild animals in this underground trade creates opportunities for the transmission of diseases that can have severe impacts on global health (Aguirre et al, 2021; Bezerra-Santos et al, 2021).

IWT also disrupts communities that rely on wildlife, both for consumption and as part of their culture. Indigenous communities often possess valuable ecological knowledge about the wildlife in their regions (Fletcher et al, 2021). Many of these cultures have also developed sustainable practices for hunting, fishing, and utilizing wildlife, ensuring that resources are used responsibly and in harmony with nature. When certain species are targeted for illegal trade and harvested beyond sustainable limits, these indigenous knowledge and practices can become less relevant and eventually lost as the ecosystems change. In addition, the loss of iconic or culturally significant species due to illegal trade and other factors can result in a diminished sense of cultural identity and connection to their ancestral lands. Examples of endangered species with high cultural significance include the sawfish (*Pristidae*), the snow leopard (*Panthera uncia*), and the Tibetan antelope (*Pantholops hodgsonii*), among many others (see: Robillard & Séret, 2006; McCarthy & Mallon, 2016; Xin, 2023).

IWT being related to other transnational criminal activities, such as human trafficking, also results to social injustice and abuse of human rights (Osorio & Bernaz, 2024). Communities can be victims of criminal networks involved in wildlife trafficking, in tandem with corrupt government officials. Women, indigenous peoples, and those living in poverty are especially vulnerable to coercion from these unscrupulous actors (Paudel, Potter & Phelps, 2020; Stiles, 2011; Parry-Jones & Léger, 2021). All of these are concrete examples of the negative social consequences of IWT.

1.1.5. IWT and the SDGs

From the point of view of the United Nations, IWT has significant impacts on the Sustainable Development Goals (SDGs), both directly and indirectly, due to its wide-ranging environmental, economic, political, and social consequences.

Directly, IWT undermines SDG 15 - Life on Land, as it threatens the survival of various plant and animal species and harms terrestrial biodiversity. It also hinders progress towards SDG 14 - Life Below Water, as it can affect underwater ecosystems when illegal trade involves fish and other marine species. There are apparent not only in the decimation of individual species (especially ecosystem engineers) but also in the destruction of habitats and the introduction of invasive species, all contributing to gradual ecosystem collapse.

Indirectly, IWT negatively contributes to SDG 1 - No Poverty. It disrupts legal wildlife-based activities that can provide income and livelihood opportunities for local communities. By undermining initiatives on eco-tourism and other sustainable industries, it also impacts SDG 8 - Decent Work and Economic Growth, reducing potential revenue and sustainable economic development for these communities reliant on wildlife resources. It touches upon SDG 10 - Reduced Inequalities, too. IWT and its predicate activities disproportionately impact vulnerable individuals and underserved communities that depend on wildlife resources for their livelihood and basic needs. IWT also relates to SDG 3 - Good Health and Well-being. The consumption and handling of illegally traded animals can lead to zoonotic disease outbreaks, a threat to global public health, not to mention its negative repercussions on the basic human right to a healthy environment.

Lastly, IWT has implications for SDG 16 - Peace, Justice, and Strong Institutions. It can foster corruption and create challenges in enforcing policies and legislation related to wildlife protection, undermining the rule of law. Also because of its clandestine nature, among its many negative effects encompass Target 16.4, coupled with Indicator 16.4.1: the reduction of total

value of inward and outward illicit financial flows. Continued IWT, including money and wildlife laundering, hinder the attainment of these SDG targets.

The significant adverse consequences of IWT are evident, posing direct and indirect obstacles to effectively achieving several SDGs. As a result, IWT becomes a critical barrier to worldwide sustainable and equitable development. Yet in the past few years, this underground economy has only continued to expand. The next section outlines the various drivers and mediating factors contributing to IWT.

1.2. Incentives and Enabling Conditions

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Report on the Sustainable Use of Wild Species presents a comprehensive analysis of the drivers and mediating factors influencing both legal and illegal trade in wildlife (see Figure 3 as adapted) (Balachander et al, 2022). This includes environmental, political, socioeconomic, and cultural drivers, as well as scientific and technological innovations that can facilitate or impede such trade. Examining the interplay of these drivers is crucial to gain a deeper understanding of their real-world implications when it comes to wildlife trade.

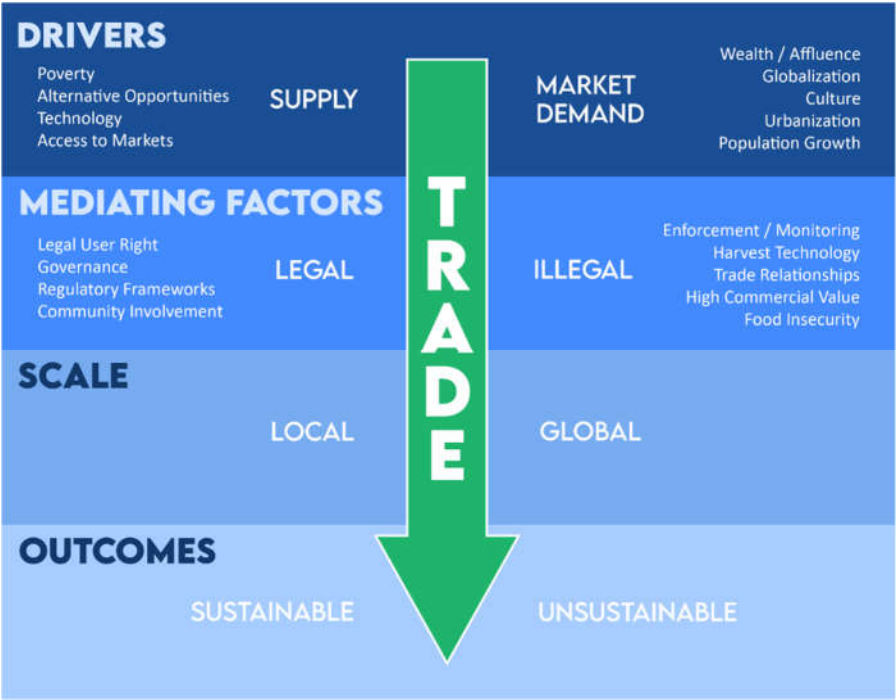


Figure 3. Drivers and Mediating Factors of Trade in Wild Species

IWT thrives due to various incentives that attract individuals and criminal networks to participate in this harmful activity. When it comes to supply, profitability is a significant driving force. Poverty and limited economic opportunities can push individuals in impoverished communities to turn to wildlife trafficking as a means of income generation (Di Minin et al, 2022). Certain wildlife products command high prices on the black market, such as rhino horns and ivory, but trading these items also comes with the possibility of arrest and prosecution.

Despite the high risk, the potential of atypical recompense due to the high incentives still spur people to engage in poaching and illicit trade.

Technology also plays a role in the growth of this underground market (Abano & Chavez, 2021). Due to the low barrier to entry in starting online businesses, emerging platforms like social media and web-based marketplaces even offer more illegal species than their brick-and-mortar counterparts (Sung et al, 2021). In effect, it increases access to international markets, too, which imposes heavier tolls on local wildlife populations.

When it comes to drivers for demand, sociocultural factors play a role in spurring IWT. Traditional medicine beliefs in some cultures contribute to the demand for rare plant and animal parts like the violet monkshood (*Aconitum violaceum*), tiger bones (*Panthera tigris*), and rhino horns (*Rhinocerotidae*) (see Tali et al, 2019; Li et al, 2017; Cheung et al, 2021). Another proposed driver for wildlife consumption is the need to be perceived as affluent (Vu, 2023; Sharif & Eisingerich, 2022). The demand for highly-prized exotic pets and rare ornamental plant fuels illegal trade. Similarly, owning products made from endangered species is seen as a status symbol in certain communities, spurring demand for items such as tiger skins, animal heads, and artisanal products such as ivory carvings. The same is true for wild meat consumption: in some areas, serving it in social gatherings is considered a mark of high socioeconomic status (Ngoc & Wyatt, 2013). These culture-specific aspects of wildlife use and consumption drive the demand for these goods across national borders.

Population growth also serves to compound the effects of IWT because it directly increases the demand for natural resources and consumer goods derived from wildlife, putting additional pressure on vulnerable species and their habitats (Kideghesho, 2016). This is further fueled by both globalization and urbanization. They enable the creation of larger markets catering to wildlife demand, especially in urban centers and across international borders. The increased connectivity and infrastructure associated with these also facilitate the movement of wildlife products, making it easier for illegal traders to smuggle and distribute them globally.

In addition to these drivers, IWT thrives due to a combination of enabling conditions. One of them is weak governance and limited law enforcement in certain regions ('t Sas-Rolfes et al, 2019). It allows criminals to exploit legal loopholes, porous borders, and limited governance resources, making it easier for them to engage in wildlife trafficking. Corruption within law enforcement agencies further undermines efforts to combat the illegal trade, enabling traffickers to operate with impunity.

Modern harvest technology also makes it easier for plant and animal poachers and traffickers to find, capture, kill, and/or transport endangered species.² This includes such as advanced firearms, GPS traps, remote identification systems, efficient storage tech, and other analogous tools. These technologies provide an advantage over traditional foraging, hunting, and trafficking methods and can result in larger quantities of illegally harvested wildlife. Lastly, trade relationship between countries can influence supply, demand, and ease of market access to illegal wildlife products (Busilacchi et al, 2022). Countries with high demand for these goods may drive poaching and trafficking activities in countries with abundant biodiversity and vulnerable species. Strong trade relationships facilitate not only resource access but also the movement of these products across borders. This is especially true for highly profitable wildlife specimens and their derivative products.

² Another good example is when poachers hack conservation systems to use it for their own benefit. See Ismail (2017).

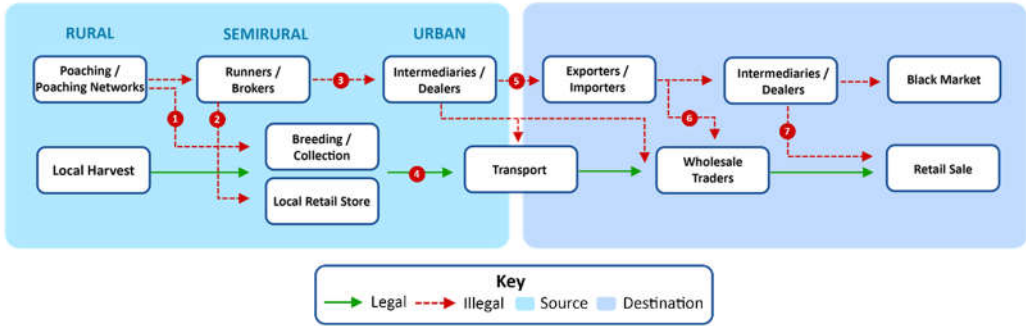


Figure 4. Legal and Illegal Wildlife Trade Flow and Merge Points
(Adapted from Basel Institute of Governance, 2021)

It is important to note that in addition to being a driver for supply, poverty is also a mediating factor for IWT, especially when it translates to food insecurity (Anagnostou et al, 2021). The commission of wildlife crimes do not necessarily arise from malicious motives. Where alternative livelihood opportunities are scarce, individuals may turn to wildlife poaching and trafficking as a means of survival. The promise of quick profits in the illegal trade can be tempting when faced with limited economic prospects. At the same time, many communities rely on wildmeat for food consumption (Booth et al, 2021). Subsequent unavailability of wildmeat supply, either due to policy intervention or environmental resource-provisioning limitations, can lead to shocks to global food systems. Managing both poverty and food insecurity is essential in ensuring that wildmeat is harvested within sustainable limits in the long term.

A critical mediating factor magnifying the harms of IWT is illicit financial flows (In version 5 of the IPBES Report, the matter is covered under the section on globalization and telecouplings.). Illicit financial flows provide essential resources to wildlife traffickers to fund their criminal activities, at the same time keeping their tracks covered (Anagnostou & Doberstein, 2022). By operating outside the formal financial system, wildlife criminals can effectively launder the proceeds from IWT, making it difficult for law enforcement agencies to trace and seize illicit funds. The profits generated from IWT are often funneled through hidden financial channels, further sustaining and expanding criminal networks involved in wildlife trafficking. These funds finance various aspects of the trade, including poaching, smuggling, bribery, and corruption (Wyatt, van Uhm & Nurse, 2020). The availability of substantial financial resources allows criminals to influence and corrupt law enforcement and regulatory institutions, further bolstering the invisibility of their operations.

Illicit financial flows fuel the demand and supply of illegal wildlife products by perpetuating the profitability of IWT. The vast sums of money involved in the trade create financial incentives for traffickers to continue their illegal activities, despite endangering vulnerable wildlife species and undermining global conservation efforts. Addressing this is crucial in dismantling the financial support systems that enable wildlife trafficking. In the succeeding sections, I focus on illicit financial flows as an enabling condition for IWT in the context of Southeast Asia. I will propose plausible ways to curtail the problem through legal mechanisms of regional regulatory finance.

2. Institutional Background: IWT in the Context of ASEAN

The Association of Southeast Asian Nations (ASEAN) is a regional intergovernmental organization that fosters political and economic cooperation among ten countries in Southeast Asia (Narine, 2008). ASEAN was established on August 8, 1967, with the signing of the ASEAN Declaration (Bangkok Declaration) by its founding member states, which included Indonesia, Malaysia, the Philippines, Singapore, and Thailand. Over the years, ASEAN has expanded its membership to include Brunei Darussalam (1984), Vietnam (1995), Laos (1997), Myanmar (Burma) (1997), and Cambodia (1999). The primary objectives of ASEAN are to promote regional peace and stability, enhance economic growth and prosperity, and strengthen cooperation among its member states.

ASEAN functions on the principles of mutual respect, non-interference in internal affairs, consensus-building, and cooperation (Ramcharan, 2000). It operates through regular meetings and consultations among its member countries. It has established various mechanisms and frameworks to facilitate regional cooperation in areas such as trade, investment, security, social and cultural matters, and sustainable development. One of the significant achievements of ASEAN is the establishment of the ASEAN Economic Community (AEC), which aims to create a single market and production base among member states, allowing for the free flow of goods, services, investment, and skilled labor within the region. Collectively, this has resulted in ASEAN being considered the fifth largest economy in the world (Lee & Adam, 2022).

The regional organization also plays a crucial role in regional diplomacy. It acts as a platform for dialogue with other countries and international organizations, forming strategic partnerships with several countries and regions around the world. ASEAN serves as an important forum for promoting cooperation and addressing common challenges faced by its member states. It has contributed to the overall stability and development of Southeast Asia and is considered a significant force in regional diplomatic affairs.

Applying the discussion above in the Southeast Asian context, IWT has profound effects on the goals of ASEAN countries, impacting both individual and regional environment, economy, society, and security.

For one, IWT has far-reaching consequences on ASEAN's rich biodiversity, with country-specific and species-specific examples highlighting its negative impact. Southeast Asia accounts for 25% of global wildlife trafficking, with numerous endangered species being sourced from this region (Duckworth et al, 2012; Krishnasamy & Zavagli, 2020; Lin, 2005; Njman, 2010; OECD, 2019; Rosen and Smith, 2010). One striking example is the pangolin, the most trafficked animal worldwide (Aisher, 2016). Eight species from the *Manidae* family, to which pangolins belong, are listed as threatened by the International Union for Conservation of Nature (IUCN); two of these species call Southeast Asia their home (IUCN, 2023; WWF, 2004). Yet an estimated 900,000 of them have been smuggled across the region in the past two decades (AFP, 2020). The Asian elephant (*Elephas maximus*) also faces significant decline, with its population dropping by 50% over the past century (WWF, 2018). In mainland Southeast Asian countries like Thailand, Myanmar, Laos, Cambodia, and Viet Nam, elephants face dire threats as they are targeted for their ivory tusks, leading to a decline in their populations and disrupting ecological balance (Asian Elephant, 2023). The Javan rhino (*Rhinoceros sondaicus*) and the Sumatran rhino (*Dicerorhinus sumatrensis*) are both critically endangered, with populations of fewer than 70 and 80 individuals in the wild, respectively (OECD, 2019). Birds are also heavily affected, including species like the Javan banded pitta (*Hydrornis guajanus*), Oriental magpie-robin (*Copsychus saularis*), and various hornbill species (*Bucerotidae*) (see Cowan, 2021; Neme, 2016).

The loss of these wildlife affects other species dependent on them, creating imbalances in the biosphere.

In addition to the natural inherent value of environmental protection, other dimensions which are heavily affected involve the economic, political-security, and sociocultural pillars of ASEAN (ASEAN Ministry of Communications and Informatics, 2023). Southeast Asia supplies high-demand countries legal wildlife and derivative products. Approximately 79% of China's legally sourced wildlife imports from the region come from Indonesia, Laos, and Malaysia (Jiao, Yeophantong and Lee, 2021). These three countries contribute to 88% of the total wildlife imports, which consist of only ten species. The list includes the common water monitor (*Varanus salvator*), the Indian rat snake (*Ptyas mucosus*), and the Siamese crocodile (*Crocodylus siamensis*). This legal trade is worth millions of dollars in revenues every year. Unfettered IWT can exhaust these otherwise sustainable resources, making continued legal trade non-feasible.

The ASEAN tourism industry is also affected by IWT. Prior to the pandemic, travel and tourism generated 12% of the collective GDP of the Southeast Asian region (OECD, 2023). With the continued increase in wildlife tourism, this contribution to the regional revenue is only set to grow over time (Rivera, Knight and McCulloch, 2021). IWT can negatively impact this potential source of sustainable income by decimating species for illegal transport and trade, replacing potential long-term, community-based eco-tourism initiatives with short-term private profits. The slaughter of Asian elephants and tigers living in animal reserves and nature sanctuaries in countries like Thailand, Laos, and Viet Nam is a leading example (AP, 2012; Slow, 2019).

When it comes to political harms, IWT can pose national security threats to the Southeast Asian region through organized crime groups and terrorist funding. Criminal networks crucially contribute to IWT by providing both the means and the trade routes for transporting illicit wildlife goods from source to consumer countries (Di Minin, 2022). One example is the Xaysavang Network, leading the illegal ivory trade in Southeast Asia (Bergenas & Knight, 2015). As of 2023, the U.S. Department of State is offering a US\$1.0 million reward for information leading to the dismantling of this organized crime group (US Department of State, n.d.). This gives an indication of the seriousness and extensive reach of wildlife trafficking across continents.

Transnational markets for these illicit goods also tend to be resilient, providing potential sources of long-term funding to insurgent groups (Nellemann et al, 2016; Di Minin et al, 2022). The long-standing conflict in the Philippines with the Moro Islamic Liberation Front (MILF) and the current military junta dictatorship in Myanmar are just two of the many possible situations which can provide an enabling environment for armed separatist groups who are likelier geared towards extracting natural resources for immediate monetary benefits to use for their political causes rather than focusing on long-term environmental stewardship (van der Ploeg, Araño & van Weerd, 2011; McEvoy et al, 2022). Profits from IWT can contribute to prolonging these political conflicts and undermining peace negotiations in the region.

IWT also affects the socio-cultural pillar of ASEAN member-states. One species-specific example is the orangutan. Orangutans (*Pongo spp.*) hold cultural importance in Indonesia, especially on the islands of Borneo and Sumatra, where they are believed to be "people of the forest" and possess mystical powers (Nadler et al, 1995; Aini, 2019). Both habitat destruction and the illegal primate trade have led to a decline in orangutan populations, and in related cases, caused their displacement nearer human settlements (Flores, 2019). This has affected their interaction with local communities, including increases in human-wildlife conflict (Kuswanda et al, 2021). Additionally, the loss of orangutans impacts the ecosystem's health, which is linked to the well-being of indigenous tribes residing in the same forests. Another example is the pangolin (*Manidae spp.*). In 2019, more than 12 tonnes of pangolin scales were seized in Singapore

(Marshall, 2020). Scientists have flagged the pangolin as a potential intermediary host for coronavirus variants (Liu et al, 2020). Continued trade in pangolin parts, especially in small, high population density countries which serve as global transit hubs, can exponentially increase the possibility of another pandemic breaking out and again affecting our way of life. Yet despite the gravity of this issue and the breadth of sociopolitical and economic domains affected in the region, there is a glaring lack of studies, analyses, and projects specifically tackled IWT in Southeast Asia (Fisher, 2021). This is a major limitation in literature which needs to be addressed.

On paper, all ASEAN member countries share a strong commitment to wildlife conservation. Individual countries have extensive laws related to wildlife trafficking (see Table 1).

Table 1. CITES-related Laws in ASEAN Countries

Country	CITES-related Laws	
Philippines	RA 9147 of 2001	Wildlife Resources Conservation and Protection Act
	RA 8550 of 1998	Philippine Fisheries Code
Cambodia	Royal Kram NS/RKM/0802/016 of 2003	Law on Forestry
	Royal Kram NS/RKM/506/011 of 2006	Law on Fisheries
	Royal Kram NS/RKM/0208/007 of 2008	Law on Protected Areas
	Royal Kram NS/RKM/0707/017 of 2007	Law on Customs
	Sub-Decree 53 of 2006	On international trade in endangered species of wild fauna and flora
Vietnam	Law 20/2008/QH12 of 2008	Biodiversity Law
	Law 16/2017/QH14 of 2017	Forestry Law
	Law 55/2014/QH13 of 2014	Law on Environmental Protection
	Law 59/2005/QH11 of 2005	Law on Investment
	Decree 160/2013/ND-CP of 2013	Decree On Criteria to Determine Species and the Regime of Managing Species Under Lists of Endangered, Precious and Rare Species Prioritized Protection
	Decree 06/2019/ND-CP of 2019	Decree On Management of Endangered, Precious and Rare Species of Forest Fauna and Flora and Observation of Convention on International Trade in Endangered Species of Wild Fauna and Flora
Thailand	BE 2535 of 1992	Wildlife Preservation and Protection Act
	BE 2542 of 1999	Plant Varieties Protection
	BE 2557 of 2014	Conservation and Protection of Wild Animals Act
	BE 2562 of 2019	Wild Animal Conservation and Protection
Singapore	Act 5 of 2006	Endangered Species (Import and Export) Act
	Ordinance 5 of 1965	Wildlife Act
Myanmar	Pyidaungsu Hluttaw Law 12 of 2018	The Conservation of Biodiversity and Protected Areas Law
Malaysia	Act 686 of 2008	International Trade in Endangered Species Act
	Act 716 of 2010	Wildlife Conservation Act
Laos	Law 07/NA of 2007	Wildlife and Aquatic Resources Law
	Law 06/NA of 2007	Forestry Law
Indonesia	Act 5 of 1990	Conservation of Living Resources and their Ecosystems
Brunei	Order S 77 /07 of 2007	Wild Fauna and Flora Order
	Act S 130/81 of 1981	Wild Life Protection Act

In addition, all ASEAN member-states are signatories to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).³ This shared commitment between all ASEAN countries lays a solid legal foundation for regional cooperation in tackling IWT and upholding international conservation obligations. At present, the organization has also established specific frameworks and action plans to address wildlife trafficking. This includes the ASEAN Wildlife Enforcement Network (ASEAN-WEN). This network facilitates intelligence sharing, capacity building, and joint operations, promoting a more coordinated and efficient enforcement response to IWT within the region. However, as evidenced by the continuously growing IWT in the region, much more needs to be done.

ASEAN, as a regional intergovernmental organization with significant biodiversity and geographically a wildlife trafficking hotspot, possesses the necessary responsibility, capacity, and motivation to effectively combat IWT. The next section proposes potential reforms which ASEAN can undertake to do so, in particular focusing on transactional interventions and regulatory finance.

3. Exploring Potential ASEAN-Led Reforms

To address the adverse effects of IWT, ASEAN countries must continue to collaborate and strengthen its enforcement efforts. By sharing critical information, harmonizing laws, and raising public awareness, ASEAN countries can collectively combat wildlife trafficking, protect their invaluable natural heritage, and promote sustainable conservation practices. The first part of this section provides general proposals to strengthen supply-side and demand-side interventions, while the second part will expound in greater detail transactional interventions related to financial regulations and illicit financial flows.

3.1. Supply-Side and Demand-Side Interventions

When it comes to supply-side interventions, ASEAN can help curb IWT in the region through strengthening law enforcement efforts focused on limiting supply. Various studies have shown effective mechanisms and management techniques in doing so. This includes increased patrols in wildlife habitats and trafficking hotspots, specialized units dedicated to wildlife crime, and intelligence-led operations to disrupt trafficking networks (Keskin et al, 2023). Enhanced border control and customs cooperation among ASEAN countries are also vital to intercept illicit shipments and prevent cross-border movement of illegal wildlife and derivative products (Jiao, Yeophantong & Lee, 2021). Prosecution and deterrence also play a significant role in disrupting supply chains. This requires ASEAN countries to ensure effective prosecution of wildlife crimes with comprehensive and harmonized wildlife protection laws, coupled with proportionate penalties. Capacity building for law enforcement agencies, customs officials, and judiciary personnel is therefore essential to enhance wildlife crime investigation techniques, evidence collection, wildlife identification, and successful prosecution (Harper, 2023).

In addition to these, addressing the root causes of poaching and wildlife trafficking is also necessary. Sustainable livelihood options for local communities such as eco-tourism and sustainable agriculture should be emphasized (Anagnostou et al, 2021). Involving local communities is also critical in law enforcement, increasing collective vigilance and reporting illegal activities (Acharya et al, 2020; Roe & Booker, 2019). Raising awareness about wildlife conservation within these communities garners support for these initiatives. Collaborating with

³ CITES has been touted as the world's leading international agreement on the protection of wildlife. See Harfoot et al (2018); Shepherd et al (2020); Fukushima et al (2021), and Rivalan et al (2007).

them, as well as with wildlife conservation organizations, offers valuable support through expertise, training, and resources, further bolstering enforcement actions and conservation projects.

On the other hand, interventions targeting demand within the ASEAN include public awareness campaigns focused on consumers. This is essential to reduce the financial incentives driving wildlife trafficking. One key approach involves educating consumers about the consequences of IWT. These campaigns can emphasize IWT's impacts on biodiversity, its threat to endangered species, and the connections to other illicit activities, with the goal of encouraging responsible consumer behavior by discouraging the purchase and use of wildlife products (Boissat, Thomas-Walters & Veríssimo, 2021). Involving celebrities, influencers, and opinion leaders to support conservation messages can amplify the reach and impact of such initiatives (Okuah, Scholtz & Snow, 2019). Education and outreach initiatives in schools and universities can also play a crucial role in instilling a sense of responsibility and respect for wildlife. Integrating wildlife conservation and the harms of IWT into curricula can help shape future generations' attitudes towards wildlife protection (Song et al, 2021).

Regulatory measures are equally crucial in reducing demand for illegal wildlife products. Proponents of strengthening regulations and enforcement against the sale and possession of these items argue that doing so can act as an effective deterrent to potential buyers (Yang et al, 2020). By implementing strict penalties and fines for offenders, ASEAN countries can create an environment where IWT becomes less appealing. An alternative solution, especially when demand is less sensitive to price changes, is to encourage the use of sustainable or synthetic alternatives to wildlife products (Chen & 't Sas-Rolfes, 2021). This can help reduce the pressure on commercial items derived from endangered species.

Curbing both demand and supply as regards IWT is very important. Understanding their underlying economic incentives can hold the key to lowering this illicit trade. Area-specific interventions can simultaneously and separately be implemented on both sides.

An oft-understudied strategy worth exploring is to disrupt the interplay of both demand and supply by focusing on transactional interventions. Below, I illustrate how regulatory finance, as a prime example of transactional interventions, can be used as an effective measure against IWT in the region.

3.2. Transactional Interventions, Focused on Regulatory Finance in the ASEAN

In his legal practice, US Federal Prosecutor Marcus Asner (2016) emphasizes that:

“Any illicit trafficking operation—whether it involves wildlife, narcotics, blood diamonds, guns or even counterfeit goods—involves a supply side, a demand side, and a flow of money.”

This flow of money can be monitored, analyzed and assigned legal responsibility through regulatory finance. Also known as financial regulation, regulatory finance in institutional economics refers to the system of laws, rules, and regulations implemented by government authorities and financial institutions to oversee and control the financial industry. The primary objective of regulatory finance is to maintain the stability and integrity of the financial system, protect consumers and investors, and prevent fraudulent or unethical practices. These financial regulations cover a wide range of areas, including banking, securities, insurance, and other fiscal-related services. Regulatory finance covers many various aspects, such as capital requirements, risk management guidelines, disclosure requirements, consumer protection measures, and anti-money laundering provisions, among others. It plays a crucial role in

safeguarding the financial sector from systemic risks, ensuring fair and transparent financial practices, and promoting confidence in the markets. Various government agencies and regulatory bodies, such as central banks, financial supervisory authorities, and securities commissions, are responsible for enforcing financial regulations within their respective jurisdictions.

Regulatory finance plays a significant role in preventing IWT around the world. It does so by implementing measures to monitor and then disrupt the financial flows that sustain this illicit activity, targeting the financial networks and transactions associated with wildlife trafficking. Because financial institutions are required to adhere to anti-money laundering (AML) and anti-terrorism financing (ATF) regulations, this system can help identify suspicious transactions linked to IWT. It strengthens the monitoring network of IWT beyond conservationists, wildlife enforcement agents, and customs officials by providing forensic finance expertise to these environmental crimes. Following the money trail, from the macro to the micro and vice versa, can help trace actors in the illicit wildlife supply chain and identify those who are most responsible for purposes of criminal prosecution (Haenlein & Keatinge, 2023).

Targeting the connection between illicit financial flows and IWT was the primary strategy used by the prosecution in *US v. Bengis*, which resulted in an award of US\$ 22.5 million in damages to South Africa.⁴ The same technique was used in *US v. Rafael*, where the investigation that resulted in Rafael's indictment was carried out by Internal Revenue Service agents under the Department of Justice's financial crimes division rather than the National Marine Fisheries Service under the DOJ division focused on environmental matters (Sundareshan, 2020). By merging the fields of forensic finance and green criminology, wildlife criminals are arrested, prosecuted and convicted; this can serve as an effective deterrent for others from committing further similar acts.

Another concrete example of the impact of regulatory finance in preventing IWT include the seizure of wildlife assets; doing so disrupts the illicit trade chain. In 2019, Operation Thunderball, a joint initiative involving multiple countries and international agencies like Interpol and the World Customs Organization, resulted in the seizure of millions of dollars in assets linked to wildlife and timber trafficking (Interpol, 2019). By tracking and freezing the assets of traffickers and their associates, as well as seizing the products complicit in IWT, regulatory finance measures hinder their ability to profit from this criminal enterprise. Similarly, these actions can also deter other criminals from engaging in IWT by sending a strong message that the financial community is actively combating this illicit activity, and that once caught, they shall not profit from their crimes.

Anti-IWT initiatives are further boosted by international cooperation and information sharing between financial regulatory authorities. For instance, the Financial Action Task Force (FATF), an intergovernmental organization that sets global AML and ATF standards, issued recommendations in 2020 specifically endorsing collaborative efforts to address the risks posed by transnational wildlife trafficking (Financial Action Task Force, 2020). This includes international co-operation and public-private joint efforts. All actors are encouraged to implement these recommendations, creating a coordinated global approach to tackling the financial aspects of wildlife trafficking.

These salient, non-exhaustive examples show how regulatory finance measures around the world have helped close financial loopholes being exploited by wildlife traffickers and choke off their financial resources. By targeting the financial aspect of the illegal trade, these regulations

⁴ The execution of judgment has been criticized as problematic, but this is another issue altogether separate from the criminal conviction. See Glazewski (2019).

negatively impact the economic incentives of IWT, complementing conservation efforts and reinforcing the global commitment to preserving endangered species and biodiversity. Learning from and utilizing these strategies, ASEAN can play a critical role in curbing IWT by focusing on preventing illicit financial flows associated with this criminal activity. As a regional organization and a global wildlife trafficking hotspot, it is well-placed to disrupt the profitability of this illegal transnational trade and deter criminals from engaging in IWT. What are the concrete ways that it can do so?



Figure 5. Proposed Regulatory Finance Measures in the ASEAN against IWT

First, ASEAN countries should strengthen regional financial regulations by implementing existing anti-money laundering measures more robustly (see Table 2). At the same time, not only should there be additional in-country training for its law enforcement and prosecution agents, institutionalizing international cooperation and information sharing should be spearheaded as well. In line with this, raising awareness among financial professionals about the harms of IWT can play a significant role in preventing money laundering and other financial crimes associated with wildlife trafficking. By providing coordinated training and resources to domestic financial institutions to recognize and report suspicious activities related to IWT, ASEAN can build a more vigilant financial sector in the fight against illicit trade in wildlife.

Collaborating with e-commerce platforms and financial institutions is also a crucial example of joint efforts between the public and the private sectors in battling IWT through AML + ATF regulations. These collaborations with financial intelligence units, public and private banking institutions, and law enforcement agencies in other jurisdictions allow ASEAN countries to more easily trace and freeze IWT-related illicit financial flows. Key in these efforts are asset seizures and other forfeiture measures to confiscate both the assets and the proceeds of wildlife trafficking from these environmental criminals, depriving them of their ill-gotten gains.

Special attention must also be given by law enforcement agencies to target online platforms better, as the internet has increasingly become a major marketplace for IWT (Siriwat and Nijman, 2020). These can be guided by the San Jose FATF Principles, which highlight the use of different technologies in AML and ATF initiatives (Pavlidis, 2021). One of these is Artificial Intelligence, optimizing AML efficiency in the process. Machine learning algorithms can be trained to flag transactions involving entities or regions known to be associated with wildlife trafficking. For instance, if a large sum of money is transferred from an account in a country with a high incidence of wildlife trafficking to an account in another region known for its demand for illegal wildlife products, the AI system could trigger an alert for further investigation.

Table 2. Money Laundering Laws in ASEAN Countries

Country	Laws related to Money Laundering and Terrorism Financing	
Philippines	RA 9160 of 2001	Anti-Money Laundering Act
	RA 10168 of 2012	The Terrorism Financing Prevention and Suppression Act
	RA 10365 of 2013	An Act to Further Strengthen the Anti-Money Laundering Law
	RA 11521 of 2021	An Act Further Strengthening the Anti-Money Laundering Law
Cambodia	Royal Kram NS/RKM/0620/021 of 2020	Law on Anti-Money Laundering and Combating the Financing of Terrorism
	Royal Kram NS/RKM/0620/019	Law on Combating the Financing of Proliferation of Weapons of Mass Destruction
Vietnam	Law 07/2012/QH13 of 2012	Law on Prevention of Money Laundering
	Law 14/2022/QH15 of 2022	Law on Anti-Money Laundering
	Law 28/2013/QH13 of 2013	The Anti-Terrorism Law
Thailand	BE 2542 of 1999	Anti-Money Laundering Act
	BE 2551 of 2008	Anti-Money Laundering Act, No.2
Singapore	Act 29 of 1992 (Original No.)	Corruption, Drug Trafficking and Other Serious Crimes (Confiscation of Benefits) Act
	Act 16 of 2002	Terrorism (Suppression of Financing) Act
	Act 54 of 2018	Developers (Anti-Money Laundering and Terrorism Financing) Act 2018
	Act 7 of 2019	Precious Stones and Precious Metals (Prevention of Money Laundering and Terrorism Financing) Act 2019
Myanmar	The Pyidaungsu Hluttaw Law 11 of 2014	The Anti-Money Laundering Law
	The Pyidaungsu Hluttaw Law 23 of 2014	The Counter Terrorism Law
Malaysia	Act 613 of 2001	Anti-Money Laundering, Anti-Terrorism Financing and Proceeds of Unlawful Activities Act
	Act 769 of 2015	Prevention of Terrorism Act
Laos	Law 50/NA of 2014	Law on Anti-Money Laundering and Counter-Financing of Terrorism
Indonesia	Act 9 of 2013	On the Prevention and Eradication of Terrorism Financing
	Act 8 of 2010	Concerning the Prevention and Eradication of Money Laundering
	Act 15 of 2002	Concerning The Crime of Money Laundering
Brunei	Act S 41/02 of 2002	Anti-Terrorism (Financial and Other Measures) Act
	Act S 57/00 of 2000	Anti Money-Laundering Act
	Order S 47/12 of 2012	Criminal Assets Recovery Order, 2012
	Order S 29/07 of 2007	Drug Trafficking (Recovery of Proceeds) Order
	Order S 52/00 of 2000	Criminal Conduct (Recovery of Proceeds) Order
	Act S 187/81 of 1981	Prevention of Corruption Act
	Act S 9/83 of 1983	Internal Security Act

Another potential technology which can be explored include blockchain technology, which can help ensure that due diligence and anti-money laundering requirements are sufficiently complied with (Woolard, 2016). In particular, through blockchain, the provenance of wildlife products can be verified, making it exceedingly difficult for traffickers to pass off illegally obtained goods as legitimate. These technologies can be instrumental towards confiscating the laundered gains of IWT.

Second, ASEAN countries should amend respective domestic laws so that financial crimes include wildlife trafficking as a predicate offense. This proposal has two supporting arguments:

- Fines as traditionally imposed on IWT violations are not enough. The gains derived from IWT can surpass the cumulative fines by as much as a factor of four (Ngoc & Wyatt, 2013). This leads to the outcome that even when penalties are imposed on those involved in illegal wildlife trading, it can still yield substantial profits. The fines therefore simply serve as a slap on the wrist. Making IWT a predicate offense to AML + ATF crimes necessarily provides for heavier penalties when convicted (Sundareshan, 2020). Fleshing out the correct level of penal proportionality for these environmental crimes can provide a more effective deterrent against them (Ali & Setiawan, 2022; Osorio, Leucci & van Zeven, 2024). Evidence supporting this has been seen at the community level: local IWT logisticians were observed to pause their operations temporarily after news of criminal apprehension circulated, resulting to marked decrease in demand (Archer et al, 2021).
- Member-states have traditionally had varying standards on the ancillary activities related to AML and ATF (UNODC, 2009). Considering IWT as a predicate crime empowers financial institutions to consolidate what these ancillary activities are, and help them track and report suspicious financial transactions related to wildlife trafficking. This creates a uniform standard in the region, making implementation across trading partners more efficient and easier to regulate; later on, this standard can also be used with ASEAN's external trade deals.

Combining both regulatory finance and wildlife crime, focusing on preventing illicit financial flows within the ASEAN and creating a uniform standard in the region, can significantly affect both the profitability and feasibility of IWT, thus reducing its overall negative impact on regional biodiversity, economy, and society.

Lastly, it is good to remember that these financial regulation strategies should also be applied not only at the regional level, but also at the grassroots. After all, international law can be limited in what it can do for conservation efforts (Wiersema, 2017). At the same time, it is essential not only to focus on law enforcement, but also to engage local communities, civil society organizations, and other stakeholders in the fight against IWT.

The World Bank reports that the investment of US\$1.3 billion in countering IWT between 2010 and 2016 saw a distribution of funds with 65% primarily towards law enforcement, and only 15% allocated for projects focused on communities (Wilson-Holt & Roe, 2021). Grassroots efforts are crucial in raising awareness, detecting suspicious activities, and preventing illicit financial flows related to wildlife trafficking. That said, conducting workshops and awareness campaigns, providing educational materials, and partnering with NGOs and local organizations can inform communities about their role in preventing IWT, establishing effective monitoring systems, and reporting suspicious activities to authorities. These are all initiatives that member-countries, with the lead and support of ASEAN, can implement.

More than this, increased effort needs to be devoted to sustainable livelihoods related to wildlife and biodiversity. Once local communities start receiving substantial income from legal socioeconomic practices in relation to wildlife protection and sustainable trade, they can turn from poachers to protectors, as the preservation of the wildlife merges with their own interests

in the long-term (Cooney et al, 2017). This not only enhances enforcement but also fosters a sense of ownership and responsibility among local communities to protect their natural heritage and contribute to the larger conservation goals of the region. Providing legal financial flows to these communities sans the resulting risk of criminal acts creates a bottom-up approach to combating IWT and preventing illicit financial flows. Improving regulatory finance frameworks, with special focus on how it can positively impact underserved communities in the ASEAN, can help forward these goals for inclusive development (Divanbeigi & Chen, 2019).

3.3. Context-Specific Limitations

While regional, national, and community-based financial regulation instruments provide much promise as highly potent tools to aid in investigating, prosecuting, and convicting wildlife crimes in the ASEAN, these are met with certain limitations. ASEAN faces several obstacles when it comes to implementing financial regulations aimed at wildlife protection.

A primary challenge lies in the lack of harmonization among ASEAN member states regarding legal frameworks and financial regulations regarding IWT, precisely because of the organization's emphasis on non-interference and the ASEAN Way (Osorio, 2020). This is an oft-mentioned critique frequently attributed to cultural differences. This resulting lack of consistency creates loopholes that traffickers can exploit, impeding cross-border enforcement and cooperation efforts. A regime of weak governance and limited institutional capacity results in inadequate enforcement and oversight of financial regulations, thereby hampering its effectiveness. A strong political will to encourage ASEAN to collaborate and institutionalize the above-mentioned proposals is necessary in order to address this limitation.

At the same time, resource constraints hinder the implementation and enforcement of financial regulations related to wildlife protection in many ASEAN countries. Insufficient funding, the use of outdated technologies by law enforcement, and the lack of specialized training on both financial crimes and IWT hamper the fight against illicit financial flows linked to the illegal trade in wildlife. The identification, tracking and successful prosecution of such flows require technical expertise in financial investigations and wildlife trafficking, posing a challenge for ASEAN countries in developing a skilled workforce with the necessary knowledge and training.⁵ Awareness campaigns, especially targeting domestic policymakers as well as international representatives to the ASEAN, could help mitigate this challenge with the goal of encouraging them to pour more money and political attention to this important cause.

Lastly, collaboration with the private sector, particularly financial institutions, is crucial for detecting and reporting suspicious transactions related to wildlife trafficking. However, building effective partnerships with these stakeholders may prove challenging due to concerns surrounding data sharing and cooperation, especially for ASEAN countries whose governments enjoy low trust ratings. Directly and indirectly, good governance remains essential in ensuring that biodiversity and environmental conservation targets are met (Heid & Márquez-Ramos, 2023).

Acknowledging these limitations and addressing them sufficiently necessitates both strong political will and a comprehensive, coordinated approach among ASEAN member states and its representatives. Both inclusion and good governance are necessary to make this a success. This way, strengthening financial regulations related to wildlife protection can truly become an effective measure in curbing the flow of illicit funds that fuel the global illicit trade in wildlife.

⁵ This is supported by the fact that as of 2016, nearly a hundred countries around the world do not consider IWT as a serious crime, indicating its low priority in governance. See World Bank (2019).

4. Conclusion

The illegal wildlife trade's estimated US\$20 billion revenues per annum is merely an indication of its wide-ranging scope. It casts a long shadow across various dimensions, simultaneously manifesting as environmental degradation, economic losses, and negative sociopolitical impacts. The substantial harms inflicted by IWT underscore the urgent need for comprehensive reforms to address its multifaceted consequences.

There are a number of strategies which have been forwarded to address this challenge, met with various rates of success. These encompass supply-side, demand-side, and transactional interventions. Among these, regulatory finance emerges as a promising solution, as seen in a number of successful cases brought before Western courts. After all, understanding demand and supply for IWT is essential to curbing it, but so is analyzing incentives for actors within the wildlife trade supply chain and targeting them through regulatory finance. Doing so can modify the risk equation by improving the likelihood for arrest, prosecution, and conviction, as well as increasing associated penalties of wildlife traffickers (Osorio, Leucci & van Zeben, 2024). This can disrupt the financial networks that sustain this illicit trade and provide sufficient deterrents for similar criminal activities in the future.

In the context of the ASEAN, there are three proposed measures to alleviate IWT through regulatory finance. First is to strengthen the implementation of existing financial crime instruments, including money laundering and anti-terrorist financing initiatives. This can make environmental criminals liable for both wildlife trafficking and financial crimes, thus casting a wider fishing net for better chances of arrest for either set of felonies. Second is to append wildlife crimes as predicate offences to financial felonies. This increases penalties and improves rates of prosecution and conviction, both effective deterrents against the commission of further similar crimes. Lastly is to utilize financial regulation instruments to support inclusive community development. Doing so can align potentially competing interests and encourage communities to be partners in long-term wildlife conservation.

It is important to recognize, however, that the implementation of these reforms may encounter context-specific limitations. This includes the ASEAN Way and its focus on non-interference, the perception of IWT as a problem of lesser public priority, and reduced trust in government institutions. Before the proposed solutions for IWT through regulatory finance can be properly implemented, these issues need to be addressed.

In conclusion, combating IWT mandates a paradigm shift that extends beyond traditional conservation efforts and the long arm of environmental criminal justice. It needs a multidisciplinary approach to take into account economic incentives and enabling conditions that allow this illicit trade to continue, and in the process casting a wider net to apprehend environmental criminals. By leveraging regulatory finance and cultivating collaborative networks within the region, ASEAN can pave a transformative path towards stopping IWT in its tracks. Through multifaceted finance reforms tailored to the Southeast Asian context and grounded in community empowerment, ASEAN can recalibrate its trajectory against the global illicit trade in wildlife, fostering a more harmonious future for its environment and its people.

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