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State of Knowledge on Impacts of Illegal Wildlife Trade on National Economies in Southern Africa

Namibia Nature Foundation
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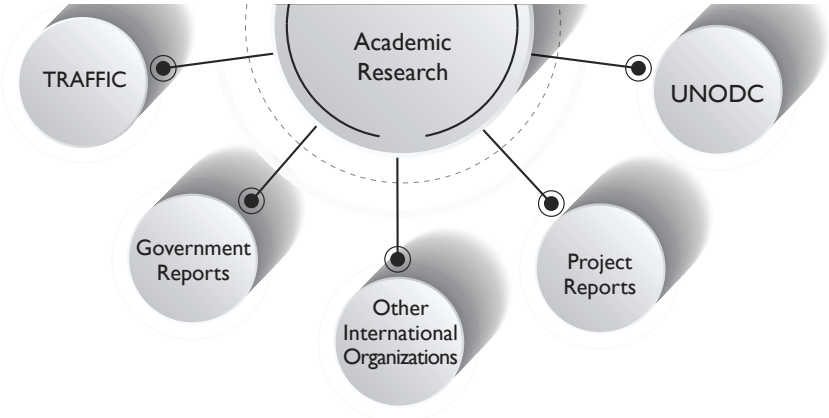
Numerous actors contribute to the research necessary to build a comprehensive database.

> "... effort is needed in generating further quantitative knowledge necessary to carry out economic assessments of IWT."

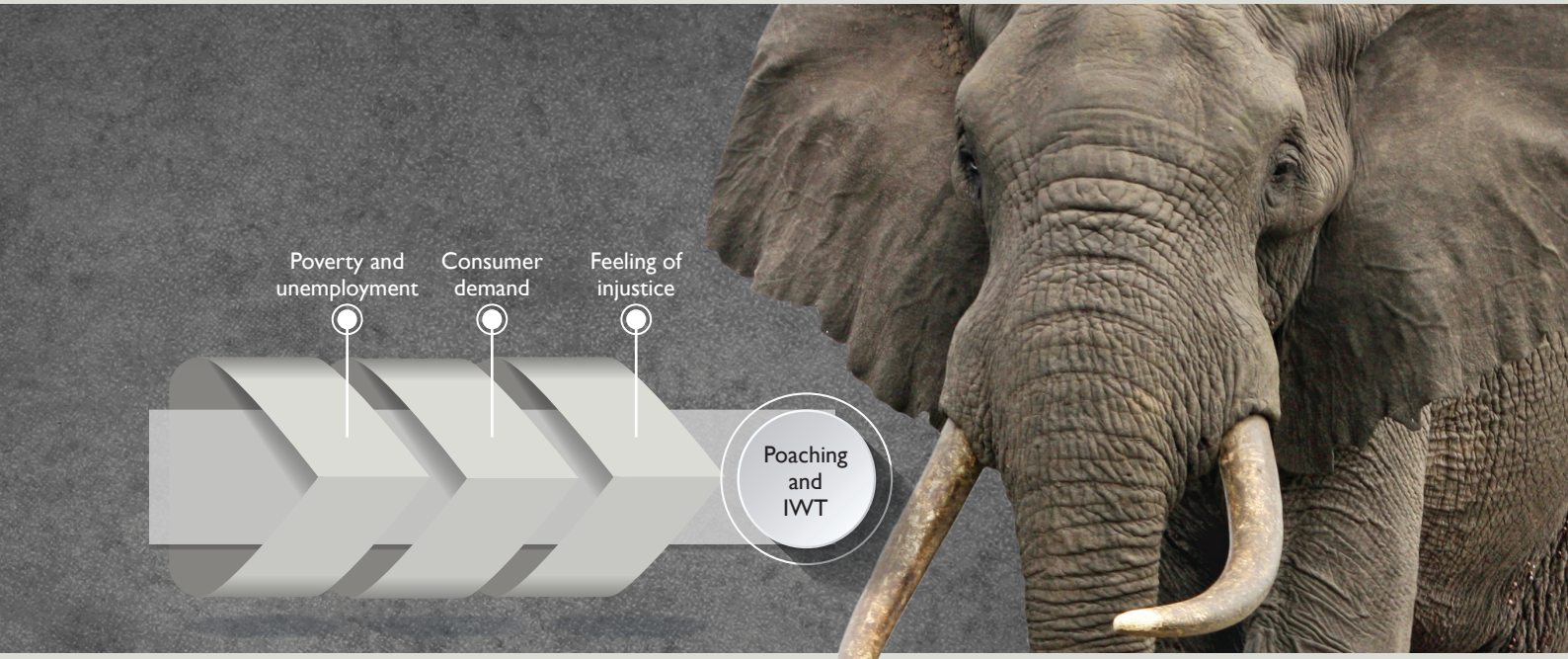
Where is the accessible knowledge?



A large-scale state of knowledge review was carried out to understand what data and information is available on Illegal Wildlife Trade (IWT) in southern Africa, its causes and impacts on societies and national economies. The literature review showed that, although a lot of knowledge has been accumulated on IWT in southern Africa, much effort is needed in generating further quantitative knowledge necessary to carry out economic assessments of IWT in different countries in the region. Yet, some countries and institutions collect valuable information and data which would need to be compiled and integrated at national and regional level.

What do we know about drivers and causes of IWT in southern Africa?

There is a consensus in the literature that IWT is largely driven by consumer demand in Asia (Lawson & Vines 2014; Miliken 2014; Moneron et al. 2017; Nellemann et al. 2013; Outhwaite & Brown 2018; UNODC 2020; UNODC 2013a; Price 2017; WWF 2012).



It is critical to understand and address the socio-economic factors underlying IWT.

Poverty and lack of employment are also assessed as major drivers of IWT, with strong correlation between poverty levels and poaching found by Hauenstein (2019), and a poacher's profile usually being from the lower-income bracket with no or unstable employment (Moneron et al. 2020).

However, literature also warns against overlooking the components of identity and protests against what is considered unjust regulations as another driver of poaching in certain areas (Duffy et al. 2015, Harrison et al. 2015). The intricacies of corruption, weak governance and armed conflict are also well understood although further studies and investigations would be required to understand these dynamics better at national and local levels.

> "Qualitative evidence shows a negative impact of IWT on wildlife tourism and legal hunting activities."

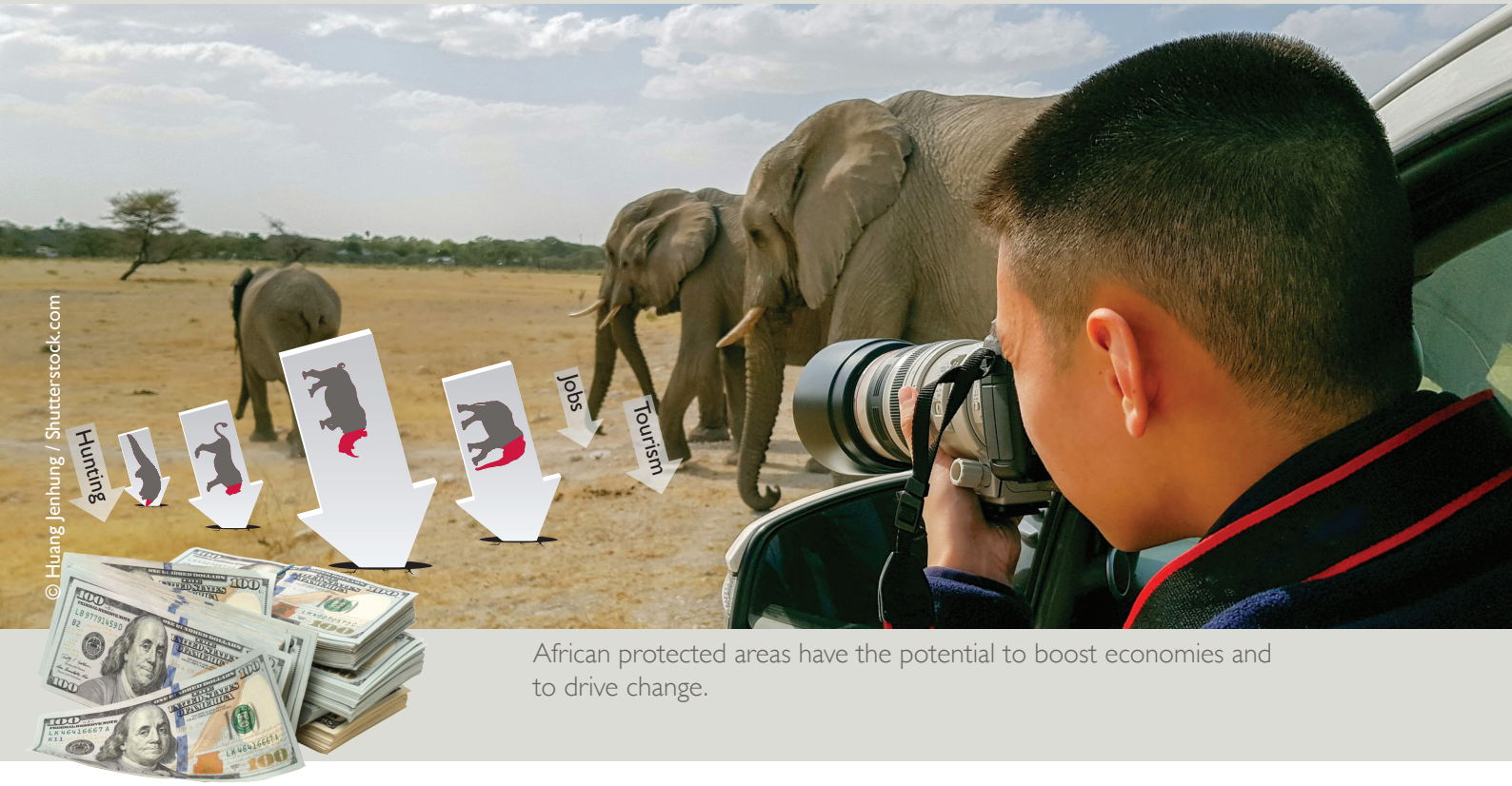
What do we know about the impacts of IWT in SADC?

IWT has direct and indirect impacts that degrade economic, natural and social capital, which compromises the development of economies in southern Africa.

Little has been done to quantify these impacts in monetary terms. Comprehensive assessments of the full economic costs of IWT are not available for southern African countries but some studies do provide qualitative and some quantitative evidence on the source and scale of economic losses due to IWT.

Economic Impacts: Degrading Wildlife Economy

Qualitative evidence shows a negative impact of IWT on wildlife tourism and legal hunting activities (WildAid, 2015; Fin24, 2013; Namibian, 2017) but there are few studies quantifying these costs associated in southern Africa.



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African protected areas have the potential to boost economies and to drive change.

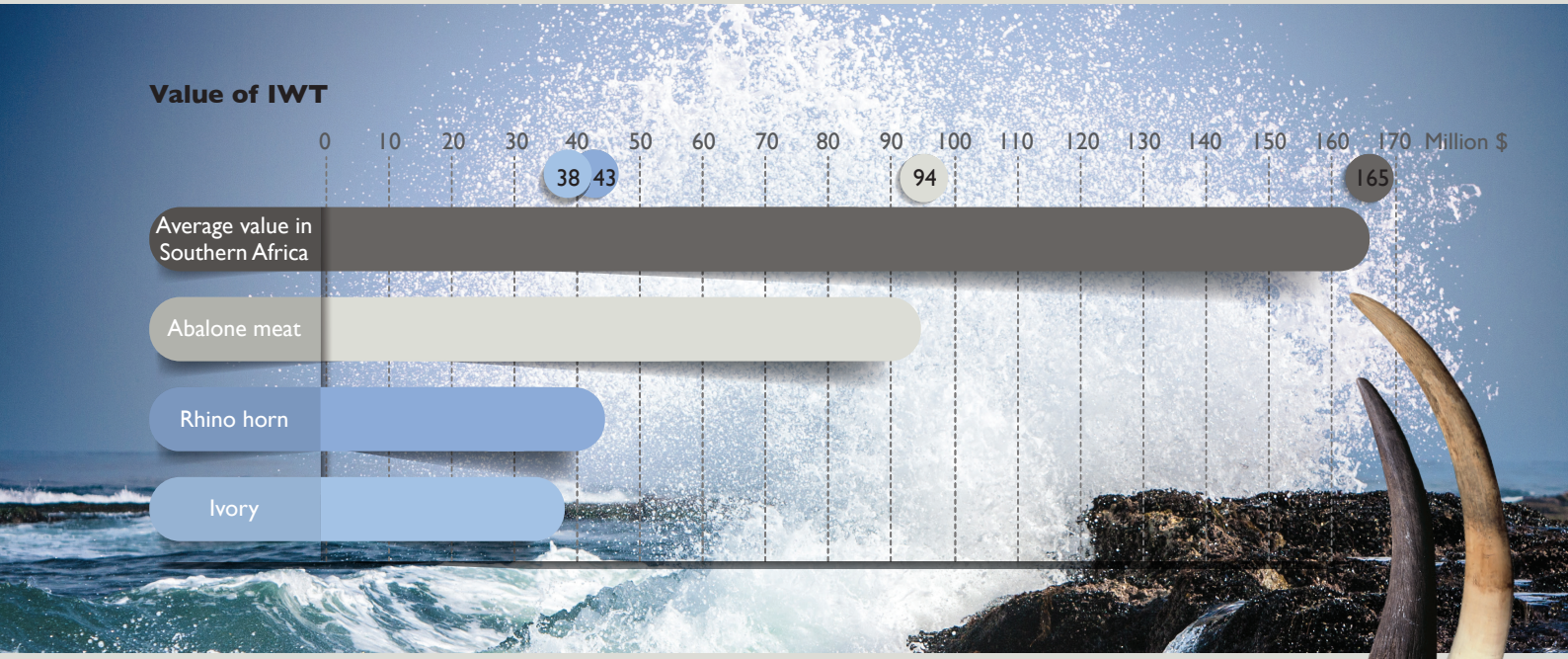
> “It is estimated that southern African protected areas lose on average US$13 million per year due to elephant poaching.”

Two major studies provide quantified impacts:

1. **Porsch and Smith (2015):** calculated that a 1% reduction in rhino population would incur a loss of up to €1 billion per year in South Africa, up to €56 million in Namibia, and up to €68 million in Zimbabwe.

Rhino	South Africa	Namibia	Zimbabwe
Billion	€79 - €118 billion	€3.7 - €5.6 billion	€4.5 - 6.8 billion
Loss in tourism income from decrease in 1% of rhino population	€0.79 - €1.18 billion	€0.037 - €0.056 billion	€0.045 - €0.068 billion
Loss in legal hunting income from average poaching rates in first decade of 2000s	€133 million	€0.26 million	€16.9 million
Elephant	**African range states**		
Loss in tourism income from extinction of all elephants	€237 - €356 billion		
Loss in tourism income from 1% reduction in elephant population	€2.4 – 3.6 billion		
Loss of potential legal hunting income per elephant	€22,331 - € 31,264		
Loss in legal hunting income from decrease in 1% of elephant population	€2.4 billion – €3.6 billion		

2. **Naidoo et al. (2016):** estimated that southern African Protected Areas lose on average US$13 million per year due to elephant poaching. In Tanzania, the average total tourism benefits lost due to elephant poaching are estimated between 4% and 11% of the total revenue from all visitors to Protected Areas.



Abalone meat was the highest-valued commodity with an illegal trade value of US$94 million. The illegal trade in rhino horn was estimated at US$43 million, and illegal ivory trade at US$38 million. (Based on data from Martin and Stiles 2017).

Economic Impact: Generating illegal financial flows

Value of IWT**:** the average value of illicit financial flows from IWT in southern Africa is about US$165 million per year (Martin and Stiles, 2017).
Abalone meat was the highest-valued commodity with an illegal trade value of US$94 million. The illegal trade in rhino horn was estimated at US$43 million, and illegal ivory trade at US$38 million.

Prices: The prices of different products vary widely between countries and stages within the supply chains; usually the income received by foot soldiers and poachers is a small fraction of the end market price but still significant relatively to rural income levels (US$150 to US$200 per kilogram of ivory in Zimbabwe, US$100 per hunt in Zambia) (Brown 2007 in Lindsey et al. 2015, FCN 2020).

Income to poachers: Illegal trade in wildlife products generates income to various actors along the value chains. Although most of the value is reaped by actors at the end of the value chains, IWT activities can represent a substantial source of short-term cash income or in-kind benefits for local poachers and traffickers (UNODC, 2020). Local-level economic impacts of IWT are not well understood and would require further research.

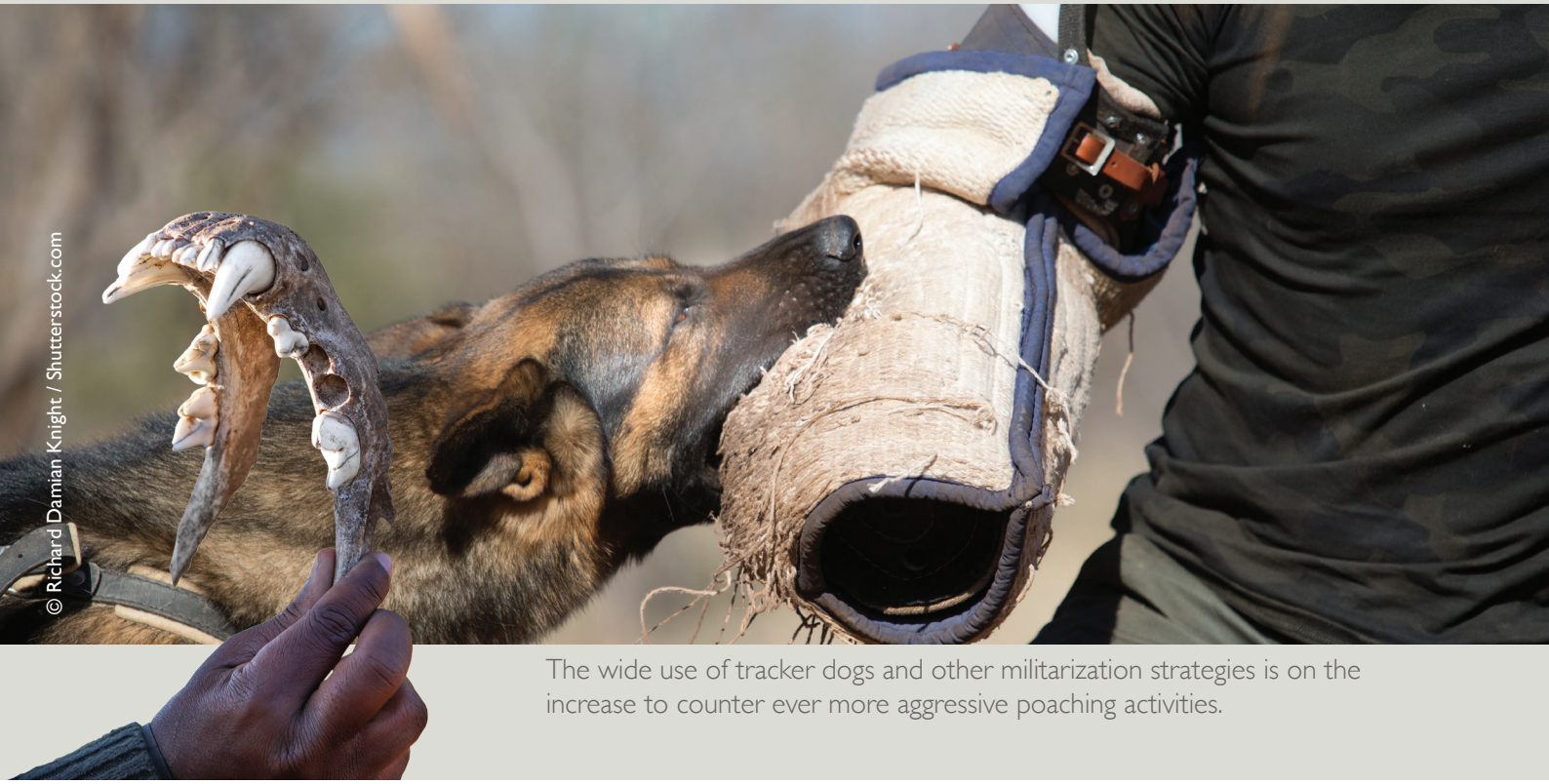
> "...the average value of illicit financial flows from IWT in southern Africa is about US$165 million per year."

Environmental Impact:

Decrease in wildlife population: The main environmental impact of IWT studied is the decrease in wildlife populations related to increased poaching of certain species.

Data available for iconic species: CITES' MIKE database for elephants, the African Elephant Database, and data collected by IUCN's African Rhino Specialist Group (AfRSG) and Pangolin Specialist Group - up-to-date and easily accessible information on population trends and poaching events in southern Africa.

Little or no data for other species: more difficult to find information on non-iconic species, including pangolins, birds etc. Especially on long-term impact on population dynamics.



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The wide use of tracker dogs and other militarization strategies is on the increase to counter ever more aggressive poaching activities.

"Nature reserves in southern Africa are being militarized at a rapid rate due to increasing rhino poaching."

Loss of ecosystem services: The loss of certain species to IWT also triggers losses in the ecosystem services these species provide, potentially leading to a degradation of some ecosystem functioning in southern Africa. Although it is well known that wildlife provides key ecosystem services such as biological control of pests and disease, food web functions, and landscape management, there is little research available that highlights the potential threats to ecosystems functioning and degradation of ecosystem services related to increased poaching in specific landscapes of southern Africa.

Social Impacts: Violence and Casualties

The social impacts of IWT appear to have received only limited attention in the accessible literature. There is only limited understanding of the impact on individuals, communities and societies as a whole.

IWT causes significant human and social capital losses at local level for both poachers and law enforcement officers. Nature reserves in southern Africa are being militarized at a fast rate due to increasing rhino poaching, and occurrence of heavily armed poachers supported by organized crime syndicates is increasing. These impacts are disproportionally affecting the poorest and most marginalized groups in society, who are at the frontline of poaching on both sides (OECD, 2012). Interviews and national newspapers report casualties in many countries among both rangers and poachers.

De-horning of rhino does reduce the risk-benefit of poaching and so reduces, but does not eliminate, the threat to rhino.

Where is data available?

Data needs	Availability in SADC countries
Seizures	Records available in Botswana, Malawi, Namibia, South Africa, Tanzania, Zambia.
Prosecution cases	Records available in Botswana, Malawi, Namibia, South Africa, Tanzania, Zambia, Zimbabwe.
Value of products illegally traded	Some records but not integrated or hardly accessible.
Expenditures on anti-poaching and anti-trafficking	Some records but not integrated or hardly accessible.
Recordings of known poaching events locations	Good records in Namibia, South Africa and Zambia but confidential.
Impact of IWT on wildlife population	Some good population statistics in National Parks but little impact assessment.
Impact of poaching on tourism/trophy hunting	No quantification except Naidoo et al. (2016).

Where are the knowledge gaps?

Expenditures and cost-effectiveness of measures to curb IWT

Transparent and integrated records of expenditures of all actors involved in the fight against IWT overtime would be invaluable to better understand the costs associated to IWT at national and regional levels.

This data was partly collected in Namibia for the Cost-Benefit Analysis of curbing IWT study (see CBA policy brief).

> "Very limited academic research is available on the social and cultural impacts of IWT on local and national communities in southern Africa."

Synthetic substitutes for leopard skins have been widely adopted by some cultural groups for whom leopards have significance.

> "The value of different illegal wildlife products along the supply chain in southern Africa is particularly hard to access."

Identification and quantification of ecosystem services impacted by IWT
The identification of ecosystem services affected by IWT and its impact on the environment is usually limited to wildlife tourism and legal hunting, with little assessment of the impact of IWT on other key ecosystem services.

Local economic impact of IWT
Further economic research should be conducted to assess and compile knowledge on the income generated from IWT by local poachers across southern Africa. It would also be key to quantify the long-term local economic impacts that IWT can have for the communities living in areas with high levels of poaching.

Social and cultural impact of IWT
Very limited academic research is available on the social and cultural impacts of IWT on local and national communities in southern Africa, although many records show highly detrimental effects among rangers and poachers groups, as well as among local communities living in high risk areas.

Records of trade values in southern Africa
The value of different illegal wildlife products along the supply chain in southern Africa is particularly hard to access, with limited information on prices and volumes traded.

Impacts of IWT on population for non-iconic species.

This policy brief was prepared by Tania Briceno (Conservation Strategy Fund) and Juliette Perche (Namibia Nature Foundation), authors of the corresponding report "Namibia Case Study: Cost-Benefit Analysis of Curbing Illegal Wildlife Trade" published in May 2021 for the USAID VukaNow Activity project "Assessing the economic impact of Illegal Wildlife Trade in the SADC region". The views represented in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States government.

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