WTO Law and Jurisprudence on Invasive Alien Species in the Global South

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Abstract

International trade is a significant factor in the introduction of invasive alien species around the world. The preparedness of countries through their domestic regulations to combat invasive alien species differs from country to country. This article discusses the potential of WTO law in combating the spread of invasive alien species in countries with weak environmental regulation regimes such as Botswana. It recognises the possibility of invoking provisions of WTO agreements by member states to combat the introduction and spread of invasive alien species. It concludes that the use of WTO agreements by developing countries may be an immediate solution to address and combat biodiversity losses in the global south. The article recommends the building of technical and scientific capacity by developing countries to effectively use international trade law for environmental protection.
Keywords

international environmental law – invasive alien species – SPS Agreement – TBT Agreement – Article X – GATT – WTO law – WTO jurisprudence

1 Introduction

Invasive alien species (IAS) have a significant negative influence on natural ecosystems, cultivated ecosystems and managed landscapes.1 The classification of organisms as alien and invasive distinguishes them from native species that are useful to certain ecosystems.2 IAS are introduced outside their natural range by human actions resulting in significant negative impacts on the recipient environment.3

Although IAS often find the climatic conditions of the new host environment unsuitable for their survival, in certain instances they flourish and end up dominating the new host environment.4 IAS are not only a threat to the biodiversity or the environment, but also pose an economic risk to the invaded territories. The dangers posed by IAS have long been recognised by governments. In the context of Botswana, which serves as the case study in this article, Great Britain, being the then colonial government, passed a legislative instrument aimed at controlling the spread of IAS over a century ago in the form of the Noxious Weed Proclamation.5 This Proclamation was replaced by an Act of Parliament passed by the Privy Council in 1948, the Noxious Weeds Act, which was subsequently amended post-independence in 1966.6 Moreover, in 1971 the legislature of Botswana passed the Aquatic Weeds (Control) Act intended to prevent the spread of water-based weeds.

This article is intended to contribute to the fight against IAS in the environment in developing countries with weak domestic regulation such as Botswana. An alternative regulatory mechanism for addressing the problem of

1 Vânia REGINA PIVELLO and others, ‘Thinking about Super-Dominant Populations of Native Species – Examples from Brazil’ (2018) 16(2) Perspectives in Ecology and Conservation 74.
2 Manuel-Angel DUENAS and others, ‘The Role Played by Invasive Species in Interaction with Endangered and Threatened Species in the United States: A Systematic Review’ (2018) 27(12) Biodiversity and Conservation 3171.
3 James C RUSSELL et al, ‘Invasive Alien Species on Islands: Impacts, Distribution, Interactions and Management’ (2017) 44(4) Environmental Conservation 359.
4 ibid.
5 No. 3 of 1916.
6 ibid.
invasive species is proposed. The central thesis is that in the absence of coherent and comprehensive domestic environmental laws, international trade law should be used to protect developing countries against IAS. Consequently, it is argued that it is the right of Botswana as a World Trade Organisation (WTO) member to put in place measures to protect against the importation of IAS into its jurisdiction. Under appropriate circumstances, the country must carry out *in situ* inspections to ensure against the importation of goods with pests and diseases. Other international agreements and treaties beyond the WTO framework which might be used in preventing and controlling the spread of IAS species are beyond the scope of this article.

A pragmatic approach is adopted in this article, which argues that apart from the criticisms levelled against the WTO, it is only practical that the developing countries (many of which are members of the WTO), should invoke the environmental measures remedies under the WTO law to protect their ecosystems. The article further argues that apart from the existence of the statutory enactments, there is a lacuna in IAS regulation in Botswana. The existing regulatory frameworks have not been amended in over fifty years. Consequently, in Botswana the potential threats of IAS have not recently been subjected to a detailed investigation. Notwithstanding the absence of accurate detailed lists and distribution data on the impacts of IAS in Botswana and the broader sub-Saharan Africa, it is indisputable that it is important to deal with IAS.

This article is divided into five sections, the first being this introduction. The second section briefly discusses international trade and associated economic activities as a causes for the spread of IAS. Section three gives an overview of the relationship between international trade (WTO) law and international environmental law. Section four traces environmental protection rules in WTO agreements capable of combating the spread of IAS and discusses the WTO jurisprudence on environmental measures. The fifth section sets out concluding remarks.

2 Overview of International Trade and the Spread of Invasive Alien Species

International trade is one of the many factors in the spread of IAS around the world. The distribution of IAS occurs through trade, transport, travel, and tourism which are known as the ‘four T’s’. In that context, Botswana is one of the key destinations in Africa, with leisure travel accounting for 77.9% of direct

7 ibid.
travel against 22.1% of business travel. Similarly Botswana imports agricultural produce and manufactured products from all over the world. On average, approximately 50% of total imports reach Botswana by road, while air and rail transport account for 40% and 10%. Therefore, the risk of the introduction of harmful exotic organisms in Botswana is real, due to the arrival of people, vessels, and goods.

The increase in global trade in goods has added to the explosion of IAS from various parts of the world to other parts. However, the absence of a specific WTO agreement providing for environmental protection does not mean that trade law cannot be used to promote environmental goals.

IAS are also a major cause of crop loss and affects food security. Invasion by IAS of natural and plantation forests can negatively affect timber production, biodiversity, recreation values, and aesthetic values. The control and prevention of IAS require concerted policy efforts. Border quarantine requirements are often put in place to safeguard countries against the introduction of IAS brought by consignment of products. In instances where such species have already been introduced, there is a need to put regulatory mechanisms in place for their control and destruction.

To ensure that States deal with IAS, there must be stringent environmental laws which prohibit introduction of alien organisms to the country. These laws should consistently be enforced by border and customs officials at all ports of entry. Due to the legislative gaps and real risk of biological invasions, it is essential to invoke alternative regulatory measures. The main weakness of the existing laws is the limitation to invasive or noxious weeds. This creates a legislative or regulatory gap with respect to other organisms capable of being imported, such as animals and insects which are often used as pets and for agricultural purposes. Due to the link between international trade and the spread of IAS, it is argued here that the most practical alternative regulatory regime against combating IAS is the use of WTO law.

Further, there are instances where states have been given the green light to use WTO law to address environmental, public health and biodiversity conservation issues. For example, the Norwegian government invoked the WTO law in 2007 to ban the import of tilapia from China due to concerns over the spread of aquatic diseases. This case demonstrates how the WTO can be an effective tool for environmental protection.

8 Andrew RYLANCE and Anna SPENCELY, ‘Reducing Economic Leakages from Tourism Industry in Botswana’ (2017) 34 (3) Journal of Contemporary African Studies 295.
9 Statistics Botswana, International Merchandise Trade Statistics (Gaborone: Botswana, 2019); Statistics Botswana, International Merchandise Trade Statistics (Gaborone: Botswana, 2018).
10 Philip E HUME, ‘Trade, Transport and Trouble: Managing Invasive Species Pathways in an Era of Globalization’ (2009) 46 Journal of Applied Ecology 10.
11 Rebecca S EPANCHIN-NEIL, ‘Economics of Invasive Species Policy and Management’ (2017) 19(11) Biological Invasions 3333.
conservation issues, as discussed further below. Having identified that both trade in goods and trade in services are sources of IAS, this article moves to how international trade law can be used to mitigate against trade-in-goods as a source of invasive species, and the potential of the General Agreement on Trade and Tariffs (GATT), the Sanitary and Phytosanitary Agreement (SPS) and the Agreement on the Technical Barriers to Trade Agreement (TBT) to address invasive species where environmental regulations are weak.

3 The Interface between WTO Law and International Environmental Law

The introduction of IAS into foreign jurisdictions is partly because of international trade, and it is therefore argued that international trade law should be used to provide solutions in addressing IAS. Although the WTO and its legal system are mainly aimed at facilitating free trade, the parties to this agreement establishing the WTO recognise that their relations in the field of trade and economic endeavour should be conducted with a view to raising standards of living, ensuring full employment and a large and steadily growing volume of real income and effective demand, and expanding the production of and trade in goods and services, while allowing for the optimal use of the world's resources in accordance with the objective of sustainable development.12 This shows that WTO law has a role to play in environmental protection and in mitigating environmental degradation. Increased global trade and economic growth are not incompatible with a cleaner and healthier environment.13

An example of the interface between international trade law and international environmental law can be found in the duty of states to cooperate over the protection of marine living resources and to do no harm in other states' territories and the high seas. Such a duty is captured by the maxim *sic utere tuo, ut alienum non laedas* which is a principle of customary international law.14 This maxim means that states have a duty to preserve good neighbourliness with other states, and not cause damage in other states' territories.15

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12 Paragraph 1 of the Preamble to the Marrakesh Agreement Establishing the World Trade Organization.
13 Reuben P KELLER and Charles PERRINGS, ‘International Policy Options for Reducing the Environmental Impacts of Invasive Species’ (2011) 6(12) Bioscience 1005.
14 Elmer E SMEAD, ‘Sic Uttere Tuo Ut Alienum Non Laedas a Basis of the State Police Power’ (1936) 21 (2) Cornell Law Review 276.
15 Piotr SZWEDO, ‘Limiting Sovereignty Through Global Governance?’ (2014) 43 (1) Polish Review of International and European Law 9.
The protection of the environment and free trade can be complementary in some cases. However, in other instances they can be non-complementary, when there is an imposition of environmental taxes or prohibitions against certain types of transport that can reduce the flow of goods. It is important to achieve a balance between these often-conflicting interests to promote sustainable development.

Generally, WTO law does not seek to address environmental concerns of member states or to even limit the rights of states to make laws aimed at achieving particular environmental goals. WTO member states have an inherent right to put in place strict environmental protection and conservation measures as long as they do not violate WTO rules. The absence of a specific WTO agreement concerning environmental protection does not mean that trade law cannot be used to promote environmental goals. Where a decision has been made to impose environmental measures, such should not be trade-restrictive or be disguised discrimination for restricting free trade.

This article proposes the use of WTO law provisions in Botswana and other similar jurisdictions to restrict the importation of products as sanitary or phytosanitary measures aimed at reducing the potential introduction of IASs. However, it is important to note that in terms of WTO law, restricting the importation of foreign-produced goods produced under lower environmental standards may prima facie be an infringement of Article III of General Agreement on Trade and Tariffs (GATT). For example, quantitative restrictions imposed because of environmental concerns may be a violation of WTO law, as prohibited in Article XI of GATT 1994. However, national measures which violate the GATT may be allowed if they are intended to serve a legitimate

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16 Clement KYEI and Rashid HASSAN, ‘Managing the Trade-off Between Economic Growth and Protection of Environmental Quality: The Case of Taxing Water Pollution in the Olifants River Basin of South Africa’ (2019) 21 (2) Water Policy 277.
17 Natalie L DOBSON, ‘Exploring the Crystallization of “Climate Change Jurisdiction”: A Role for Precaution?’ (2018) 8 (3–4) Climate Law 208.
18 Karen JALTERS, ‘Resolving or Exacerbating Disputes? The WTO’s New Dispute Resolution System’ (2003) 79(4) International Affairs 783.
19 Ulrike WILL, ‘The Extra-Jurisdictional Effects of Environmental Measures in the WTO Law Balancing Process’ (2016) 50 (4) Journal of World Trade 611.
20 Gerd WINTER, ‘The GATT and Environmental Protection: Problems of Construction’ (2003) 15(2) Journal of Environmental Law 113.
21 Douglas JAKE CALDWELL, ‘International Environmental Agreements and the GATT: An Analysis of the Potential Conflict and the Role of a GATT “Waiver” Resolution’ (1994) 18(2) Maryland Journal of International Law 173.
goal to advance environmental protection. Historically, the environmental concerns and protection under the GATT were introduced into the dispute settlement body to resolve environmental protection disputes between the GATT Contracting Parties.

The establishment of the WTO is one of the most important developments in the sphere of international law. In terms of Article 3(2) of the Dispute Settlement Understanding (DSU), the WTO agreements are to be interpreted in accordance with the customary rules of interpretation of public international law. The WTO law with respect to environmental issues has not changed since 1995 and have undergone little change since the pre-WTO days of the GATT. However, the WTO dispute settlement and jurisprudence evolved to recognise the environmental concerns of member states, thus growing to reflect realities on the ground. Consequently, the WTO tribunals have pronounced on various environmental issues ranging from shrimp/turtles, hormones, agricultural products, genetically modified organisms among others; the respective cases are discussed in the subsequent sections. It is essential to find a proper balance between international environmental and economic institutions.

Having briefly discussed the contribution of international trade in the spread of IAS, the next section discusses how specific WTO agreements can be used to protect the environment.

4 Survey of WTO Environmental Rules and Jurisprudence

This section discusses particular sources of WTO law and jurisprudential development under the WTO Dispute Settlement Body (DSB) that have varying potential to be used for environmental management issues. Over the past seven decades, GATT/WTO DSB developed the jurisprudence to inform state conduct on the use of trade law to safeguard environmental integrity. Although no specific cases are dealing with measures aimed at the prevention or control of IAS, the case law is nevertheless useful in illustrating how WTO members can invoke provisions of various agreements to address biological invasion.

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22 Steve CHARNOVITZ, ‘The Law of Environmental “PPMs” in the WTO: Debunking the Myth of Illegality’ (2002) 27 (1) Yale Journal of International Law 174.
23 Man Jiao CHI, “Exhaustible Natural Resource” in WTO Law: GATT Article XX (g) Disputes and their Implications’, (2014) 48 (5) Journal of World Trade 939.
24 Pascal LAMY, ‘The Place of the WTO and its Law in the International Legal Order’ (2005) 17(5) European Journal of International Law 969.
25 Isabelle VAN DAMME, ‘Treaty Interpretation by the WTO Appellate Body’ (2010) 21 (3) European Journal of International Law 605.
concerns. A brief discussion of a specific WTO agreement is followed immediately by the relevant case law.

4.1 General Agreement on Tariffs and Trade

Although the world has dramatically changed, the fundamental principles on trade in goods in the GATT 1994 have not substantially changed from the GATT 1947. WTO law prohibits placing a different burden on imported goods compared to domestic products. In international trade law parlance, these principles are known as the ‘national treatment’ and ‘most favoured nation’. These principles seek to ensure that domestic producers are not treated more favourably than external producers and to prohibit against placing more burdens on some countries than on others. These principles do not have an absolute binding effect. The protection of human life and the environment rank equally alongside key WTO rules, subject to stipulated exceptions. Article XX(a)–(j) of the GATT set out exceptions for discriminating against imported goods for the protection of animal and public health, patents, trademarks, conservation of exhaustible natural resources, etc. Subsequently, the WTO Appellate Body has interpreted Article XX to include the reasonable regulation of species that have been classified as endangered. Article XX provides that WTO members may be exempted from GATT rules on environmental grounds.

The necessity for Botswana and other developing countries to protect themselves from IAS falls within environmental exceptions in terms of Article XX. This argument is supported by the Panel Report on United States – Section 337 of the Tariff Act of 1930 where it was found that ‘... it is up to the contracting party seeking to justify measures under Article XX(d) to demonstrate that...’

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26 Curtis REITZ, ‘Enforcement of the General Agreement on Tariffs and Trade’ (1996) 17 (2) University of Pennsylvania Journal of International Economic Law 555.
27 Axel BREE, ‘Article XX GATT – QUO VADIS? The Environmental Exception After the Shrimp/Turtle Appellate Body Report’ (1998) 17(3) Penn State International Law Review 99.
28 Article 111 of the GATT 1994.
29 Winter (n 20) 116.
30 ibid.
31 Padideh ALA’I, ‘Free Trade or Sustainable Development? An Analysis of the WTO Appellate Body’s Shift to a More Balanced Approach to Trade Liberalization’ (1999) 14(4) American University International Law Review 1129.
32 See the WTO Appellate Body Report on United States Import Prohibitions of Certain Shrimp and Shrimp Products WT/DS58/AB/RW. Hereinafter the Shrimp Turtle AB Report.
those measures are “necessary” within the meaning of that provision’.\textsuperscript{33} These measures are deemed lawful even though they are inconsistent with national treatment clauses as long as they relate to the protection of human, animal or plant life or health, or the conservation of natural resources.\textsuperscript{34} The implementation of Article XX exceptions must be consistent with the ‘chapeau’. The chapeau provides that measures taken by WTO members in terms of Article XX exceptions should not be arbitrary or discriminatory ‘between countries where the same conditions prevail’.

Botswana, as a member of the WTO, is engaged in various forms of international trade such as tourism, the export of high-quality beef, and gem diamonds. The net importer profile of Botswana exposes the country to the real risk of introducing unwanted invasive pests, plants and associated diseases. Imported fresh agricultural products and other goods manufactured abroad are the main possible vectors of IAS to Botswana. Acting in terms of the Article XX exception, Botswana is entitled to impose some import limitations and vessel arrival standards to protect animal and plant life.\textsuperscript{35} This avenue goes a long way in ameliorating weak environmental regulations in Botswana which do not effectively protect the country against bio-invasion.

WTO members with inadequate IAS regulatory frameworks may use the exceptions of Article XX. International trade is not more important than other public policy imperatives, such as the conservation of the environment.\textsuperscript{36} Thus Article XX may be invoked to bar the IAS associated with the import of particular goods. The Article XX exceptions are available to Botswana and developing countries as a \textit{de facto} framework for imposing border quarantine measures which do not violate the underlying principles of free trade. Some of the quarantine measures might include mandatory vessel fumigation upon arrival at ports of entry and fumigation of goods of plant and animal origin to kill pests, and seeds, and to deal with diseases. Such measures could bar the introduction of IAS into Botswana and other developing countries with weak domestic

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\item[\textsuperscript{33}] \textit{United States – Section 337 of the Tariff Act of 1930} L/6439, adopted on 7 November 1989, S/345, para. 5.27.
\item[\textsuperscript{34}] Christopher DOYLE, ‘Gimme Shelter: The “Necessary” Element of GATT Article XX in the Context of the China-Audiovisual Products Case’ (2011) 1 Boston University International Law Journal 143.
\item[\textsuperscript{35}] See generally the Panel Report on \textit{United States} (n 33).
\item[\textsuperscript{36}] ibid.
\end{itemize}
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regulations. Import quarantine obligations are legal to the extent that they do not impose unfavourable treatment to imports relative to domestic products.37

Clearly, Article xx exceptions are a viable supplement to weak environmental law regimes that fail to regulate against the import of IAS. There have been cases considered in the WTO Dispute Settlement Body regarding the balance between trade rules and states’ unilateral approaches under Article xx of the GATT.38

4.2 Agreement on the Application of Sanitary and Phytosanitary Measures

The Agreement on the Application of Sanitary and Phytosanitary Measures, which is commonly referred to as the 'SPS Agreement', may be used to combat IAS. The SPS Agreement and other agreements of the Uruguay Round of negotiations transformed the relevant international trade law from narrowly governing trade in goods by introducing a sea of other ancillary matters and trade in services.39

The SPS Agreement creates a balance between trade liberalisation and the sovereign rights of states to invoke measures for protecting human, animal, plant life and public health where appropriate.40 When the SPS Agreement was negotiated, there was limited understanding of the usefulness of entomology in international trade.41 Its importance became much clearer in the 1990s, for example with the detection of the non-native pinewood nematode and the Asian long‐horned beetle in the North American forests.42 These pests were introduced through shipments of wood chips imported from Finland.43 These

37 Aynsley KELLOW, Marcus HAWARD and Kristy WELCH, 'Salmon and Fruit Salad: Australia's Response to World Trade Organisation Quarantine Disputes' (2005) 40(1) Australian Journal of Political Science 17.
38 Sanford GAINES, 'The WTO's Reading of The GATT Article XX Chapeau: A Disguised Restriction on Environmental Measures' (2001) 22(4) University of Pennsylvania Journal of International Economic Law 739.
39 Steve CHARNOVITZ, 'Triangulating the World Trade Organization' (2002) 96(1) American Journal of International Law 28.
40 Boris RIGOD, 'The Purpose of the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS)' (2013) 24(4) European Journal of International Law 503.
41 Andrew M LILIEHOLD and Robert L GRIFFIN, 'The Legacy of Charles Marlatt and Efforts to Limit Plant Pest Invasions' (2016) 62(4) American Entomologist 218.
42 David J HORNBY, 'WTO Effectiveness in Resolving Transatlantic Trade-Environment Conflict' (2013) 9(3) Journal of International Trade Law and Policy 297.
43 Celia K BOONE and others, 'Monochamus Species from Different Continents can be Effectively Detected with the Same Trapping Protocol' (2019) 92(1) Journal of Pest Science 3.
pests destroyed the economic and aesthetic value of a number of important forest regions in the United States and Canada.44

Botswana has pristine forests used for safari tourism, an important source of foreign currency and second-highest gross domestic product contributor.45 These forests need to be protected from IAS to maintain their healthy pristine nature. In instances where there are threats of importation of wood diseases, pests and even the introduction of exotic tree species in Botswana, the government may invoke the SPS Agreement.46 The SPS Agreement grants state the right to adopt SPS measures necessary for the protection of human, animal, or plant life.47 To ensure that the use of SPS measures is exercised objectively, their adoption should be based on scientific findings.48 The country clearly needs to develop technical and regulatory capacity to monitor its forests and to carry out inspections at borders and airports to safeguard its environmental integrity.

The SPS Agreement provides states with the latitude to impose measures which may result in a higher level of SPS protection than would be achieved by customary international law measures.49 The scientific risk assessment must be specific to the facts of the case being made by a member state.50 Further, there should be a direct relationship between SPS measures and an imminent threat.51 The sovereign right of states to implement their acceptable level of risk or the appropriate level of SPS protection may be exercised as long as scientific justification has been provided.52

Generally, the international standard setters in the context of human, animal, and plant health issues are Codex Alimentarius, World Organisation for

44 L David DWINNEL, ‘The Pinewood Nematode: Regulation and Mitigation’ (1997) 35 Annual Review of Phytopathology 153.
45 Lesego S STONE, Moren T STONE and Joseph E MBAIWA, ‘Tourism in Botswana in the Last 50 years: A Review’ (2017) 49 Botswana Notes and Records 57.
46 See the Appellate Body Report on Australia – Measures Affecting the Importation of Salmon WT/DS18/AB/R, para. 146.
47 The Agreement on the Application of Sanitary and Phytosanitary Measures, art 2.
48 Iain SANDFORD, ‘Hormonal Imbalance? Balancing Free Trade and the need for SPS Measures after the Decision in Hormones’ (1999) 29(2) Victoria University of Wellington Law Review 389.
49 The Agreement on the Application of Sanitary and Phytosanitary Measures, art 3.3.
50 Christopher BONNEUIL and Les LEVIDOW, ‘How Does the World Trade Organization Know? The Mobilization and Staging of Scientific Expertise in the GMO Trade Dispute’ (2012) 42(1) Social Studies of Science 45.
51 BS CHIMNI, ‘WTO and Environment: Shrimp-Turtle and EC-Hormones Cases’ (2000) 35(20) Economics and Political Weekly 1752.
52 Ming DU, ‘Autonomy in Setting Appropriate Level of Protection under the WTO Law: Rhetoric or Reality?’ (2010) 13(4) Journal of International Economic Law 1077.
Animal Health (OIE) and the International Plant Protection Convention (IPPC) Secretariat. These organisations under normal circumstances are authoritative on the SPS measures that might be adopted. Therefore, Article 3.3 of the SPS Agreement is the exception to the general rule that the standards set out by either of these organisations ought to underlie the sanitary or phytosanitary measures.

The use of the SPS Agreement requires technical experts to conduct scientific research and make appropriate recommendations. Further, technical competency must be built by ensuring that there are biodiversity security and compliance personnel in ports of entry. Currently, there are no stringent quarantine checks at ports of entry across Botswana and there is no presence of personnel from the Ministry of Agriculture and Food Security to ensure that imported goods do not pose any risk to Botswana’s agricultural industry or the environment. Without effective legal measures to regulate the entry of material which may constitute a biosecurity risk to Botswana, scientific risk analysis will only have a limited impact.

The negotiators of the SPS Agreement did not include any of the fundamental exceptions found in Articles XX and XXI of the GATT. These exceptions permit trade restrictions to protect national security and the environment, among other policy issues. An omission of the GATT exceptions or similar provisions reflects that drafters of the SPS Agreement intended for it not to apply to animal or food health laws. That position is given credence by the fact that at the time of the drafting of the SPS Agreement, the drafters knew of the GATT Article X X and Article XXI exceptions.
There is a consensus that the liberal interpretation of the SPS Agreement empowers WTO member states to declare SPS measures.\textsuperscript{60} These measures can be for the control of parasites, bacteria, viruses, prions, heavy metals, and IAS, among others.\textsuperscript{61} Although WTO agreements do not specifically mention IAS, the scope of the SPS Agreement gives countries the right to demand evidence from the exporter that the goods are pest or disease-free.\textsuperscript{62} As a corollary, the importing state may demand reasonable access to carry out procedures to confirm the absence of pests and diseases in the territory of the exporting country.\textsuperscript{63}

The SPS measures can be used to combat the importation of IAS without being limited by the absence of environmental laws to that effect.\textsuperscript{64} SPS measures have the potential to be an effective transboundary framework in the fight against IAS.\textsuperscript{65} On that note, it is submitted that these measures are more relevant in jurisdictions with underdeveloped environmental law. It is argued here that the failure of Botswana’s lawmakers to legislate adequately against IAS could be offset by invoking the SPS measures. This ought to be preceded by a scientific risk assessment for the proposed SPS measures to comply with WTO laws. The relevant minister, in appropriate circumstances, may issue a statutory notice to establish SPS measures without having to approach the legislature for endorsement. The SPS measures should, on the face of it, be aimed at minimising or eliminating the threat posed by pests or diseases.\textsuperscript{66} The SPS Agreement recognises that developing countries often struggle in the formulation of measures to prevent the importation of IAS, and therefore provides a framework for assisting them.\textsuperscript{67}

The above discussion highlights the extent to which the SPS Agreement may be a useful instrument for jurisdictions such as Botswana and other countries that have an underdeveloped regulative framework to minimise the spread of IAS and to protect the environment from externalities of trade. The role of

\textsuperscript{60} Tracey EPPS, ‘Reconciling Public Opinion and WTO Rules under the SPS Agreement’ (2008) 7(2) World Trade Review 359.

\textsuperscript{61} Lakshman D GURUSWAMY, ‘Sustainable Agriculture: Do GMOS Imperil Biosafety?’ (2002) 9(2) Indiana Journal of Global Legal Studies 461.

\textsuperscript{62} The Agreement on the Application of Sanitary and Phytosanitary Measures, art 6(3).

\textsuperscript{63} ibid.

\textsuperscript{64} The Agreement on the Application of Sanitary and Phytosanitary Measures, art 5(3).

\textsuperscript{65} Maria PETTERSSON, Caroline STROMBERG, and E Carina H KESKITALO, ‘Possibility to Implement Invasive Species Control in Swedish Forests’ (2016) 45 Ambio 214.

\textsuperscript{66} Jacqueline PEEL, ‘A GMO by Any Other Name ... Might Be an SPS Risk!: Implications of Expanding the Scope of the WTO Sanitary and Phytosanitary Measures Agreement’ (2006) 17 (5) European Journal of International Law 1009.

\textsuperscript{67} Michael ORMSBY and Evan BRENTON-RULE, ‘A Review of Global Instruments to Combat Invasive Alien Species in Forestry’ (2017) 19 Biological Invasion 3355.
scientific evidence as a prerequisite to impose SPS measures to eliminate risks set out in Annex A of the SPS Agreements such as pests and diseases has been noted.\textsuperscript{68} The EC Biotech case\textsuperscript{6} which provides judicial pronouncement of definition of ‘risk’ in terms of Annex A of the SPS Agreement that is liberal enough to include IAS’ is discussed in the jurisprudence section below. The necessity of Botswana to build scientific and technical expertise required to successfully invoke SPS measures is apparent. This is an area in which the country is currently lacking. How these issues can be resolved in the short to medium term is discussed in the following sections.

4.2.1 EC Measures Concerning Meat and Meat Products

In this sub-section section, WTO jurisprudence relating to potential use of the SPS Agreement in the environmental management and the fight against IAS is discussed, beginning with the EC-Hormones (Canada) dispute.\textsuperscript{69} This dispute began in June 1996 when Canada submitted a request for consultations with the European Communities (EC) concerning the ban imposed by the EC against the importation of livestock and meat from livestock that had been treated with certain growth hormones.\textsuperscript{70} Canada argued that the ban violated Articles 2, 3 and 5 of the SPS Agreement; and Article III or XI of the GATT 1994.\textsuperscript{71} Further, Canada argued that the measures imposed by the EC contravened Article 2 of the TBT Agreement and Article 4 of the Agreement on Agriculture.\textsuperscript{72}

The Panel found that the EC adopted the sanitary measures that (i) were not based on a risk assessment, in violation of Article 5.1 of SPS Agreement; (ii) discriminatory measures or a disguised restriction on trade inconsistent with Article 5.5 of the SPS Agreement, and (iii) the sanitary measures were not based on existing international standards, without justification in terms of Articles 3.1. and 3.3 of the SPS Agreement.\textsuperscript{73} On appeal, the Panel’s general interpretative ruling that the SPS Agreement allocates the evidentiary burden to the member imposing an SPS measure was reversed.\textsuperscript{74} In that regard,

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\item \textsuperscript{68} Ming DU (n 52).
\item \textsuperscript{69} WTO, EC: Measures Concerning Meat and Meat Products (Hormones) – Report of the Appellate Body (16 January 1998) WT/DS26/AB/R.
\item \textsuperscript{70} ibid, para 2.
\item \textsuperscript{71} ibid.
\item \textsuperscript{72} ibid.
\item \textsuperscript{73} ibid, para 6.
\item \textsuperscript{74} ibid, para 253(a).
\end{itemize}
it was held that the burden is on that member to show that its SPS measure is consistent with Article 3.3 of the SPS Agreement.\footnote{ibid.}

Further, the Panel’s interpretation of ‘risk assessment’ was modified by holding that neither Articles 5.1 and 5.2 nor Annex A.4 of the SPS Agreement require an assessment to establish a minimum quantifiable magnitude of risk, nor do these provisions exclude \textit{a priori} factors which are not susceptible to quantitative analysis by empirical or experimental laboratory methods.\footnote{ibid, para 253(j).} In overall, the finding that the EC measures at issue were inconsistent with the requirements of Article 5.1 of the SPS Agreement was upheld. However, the interpretation was modified by holding that Article 5.1, read with Article 2.2, require that the results of the risk assessment must sufficiently warrant the SPS measure at issue.\footnote{ibid, para 253(k).} Even though the SPS measures were found to be illegal, the interpretation of the SPS Agreement went a long way in contributing to the trade and environment jurisprudence.\footnote{BS CHIMNI, ‘WTO and Environment’ (n 51).} The critical jurisprudential issue highlighted is that the results of the risk assessment must sufficiently warrant the SPS measures.

The risk assessment supporting the measure may be performed by the WTO member, or by a relevant international body.\footnote{The Appellate Body Report (n 72) para 253(k).} The Appellate Body in the EC \textit{Hormones} case clarified that the risk assessment must be specific in terms of the harm concerned and the precise agent that may cause the harm.\footnote{ibid.} The overarching finding is that WTO members have the right to introduce or maintain an SPS measure which results in a higher level of protection than would be achieved by international standards.\footnote{ibid.} This means that where customary international law provides for lower environmental standards, Botswana and other member states are entitled to introduce higher SPS measures. However, the SPS measures should be scientifically justifiable. The proposing state should bring forth scientific evidence that such measures will prevent the importation of IAS. This is useful in addressing the deficient environmental regulatory framework as it obtains in Botswana. The imposition of sanitary measures supported by scientific assessment stipulating the IAS risk that Botswana, or any other developing country, faces may be lawfully and successfully done in terms of the SPS Agreement. The African Centres for Disease Control and Prevention (African CDC), which will be discussed later, can come to the aid of African

\begin{footnotesize}
\footnote{ibid.}
\footnote{ibid, para 253(j).}
\footnote{ibid, para 253(k).}
\footnote{BS CHIMNI, ‘WTO and Environment’ (n 51).}
\footnote{The Appellate Body Report (n 72) para 253(k).}
\footnote{ibid.}
\footnote{ibid.}
\end{footnotesize}
countries without adequate national scientific capacity in providing technical and scientific investigations to support the SPS measures to be adopted.

4.2.2 EC Biotech Case

The following case discusses other aspects of the jurisprudence on the SPS Agreement which supplement the case law in the EC Hormones case rulings.

The dispute between the European Community (EC) and the United States of America (European Communities – Measures Affecting the Approval and Marketing of Biotech Products) over import restrictions of biotechnology products which were introduced in October 1998 culminated into what is known as the EC Biotech case.82 The trade measures imposed by the EC required that prior approval be obtained for the marketing and selling of certain biotech products. This restricted the importation of some agricultural and food products.83

In brief, the Panel found that the decision of the European Communities to impose a general moratorium on the importation of agricultural biotech produce was a decision concerning the application/operation of approval procedures, ie, a procedural decision to delay final substantive approval decisions. Therefore, it was held that it was not intended to meet the EC level of sanitary or phytosanitary protection, thus was not an SPS measure subject to Article 5.1 or 2.2 of the SPS Agreement. The Panel also found that there was nothing placed before it to demonstrate that there was insufficient evidence to conduct a risk assessment in terms of Article 5.1 and Annex A(4) of the SPS Agreement for the biotech products that were subject to safeguard measures. In that regard, Articles 5.1 and 2.2 were applicable, which led to the Panel to hold that none of the safeguard measures at issue were based on a risk assessment and that by maintaining measures contrary to Article 5.1 of the SPS Agreement, the European Communities contravened Article 2.2 of the SPS Agreement.84

The EC Biotech case demonstrates that for an SPS measure to be legal, it must be intended to bring about sanitary or phytosanitary protection with a backing of scientific evidence in compliance with the SPS Agreement. On that note, such measures affecting agricultural produce intended to be mitigative against the introduction of IAS should satisfy the requirements set out at Article 5.1, 2.2 and Annex A(4) of the SPS Agreement. It is important to reiterate that the legality of SPS measures is premised on them being a reasonable

82 WTO, EC: Measured affecting the approval and marketing of the Biotech Products – Reports of the Panel (29 September 2006) (WT/DS29/R, WT/DS292/R and WT/DS293/R).
83 ibid.
84 ibid.
deviation from the general international standards, on the basis of scientific justification.85

4.2.3 The Use of SPS Agreement in Protecting the Environment
The scientific justification requirements for the implementation of SPS measures must be a transparent and objective exercise to avoid their abuse for protectionist reasons. To make use of trade remedies, the Botswana Trade Commission was established as an investigatory and scientific authority in 2013. One of the duties of this body is to regulate the import of goods into Botswana,86 and has the power to search and examine goods being imported into the country.87

The rigorous scientific standards required to discharge the burden of proof bring about a semblance of objectivity and consistency in trade-environment jurisprudence or state practice. African countries should not view this an impediment, but rather as an opportunity to strengthen the African CDC and establish similar sub-regional bodies to give technical or scientific support to countries seeking to invoke WTO law to control IAS in Africa. The African CDC is a public health institute of the African Union aimed at reducing sickness and death in the continent by improving prevention, detection, and response to public health threats.88 Its objectives are to support African countries in their efforts to monitor the public's health, respond to emergencies, address complex health challenges, and build needed capacity.89

Botswana has a track record in the control of animal diseases such as foot and mouth disease (FMD) and Contagious Bovine Pleuropneumonia (CBPP).90 Over the years, the country has built technical expertise and amassed experience on animal diseases control and best practices for quarantine.91 This may

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85 Markus WAGNER, ‘Law Talk v. Science Talk: The Languages of Law and Science in WTO Proceedings’ (2016) 35 (1) Fordham International Law Journal 151.
86 The Botswana Trade Commission Act, section 31.
87 The Botswana Trade Commission Act, section 34.
88 John N NKENGASONG, Olawale MAIYEGUN and Matshidiso MOETI, ‘Establishing the Africa Centres for Disease Control and Prevention: Responding to Africa's Health Threats’ (2017) 5(3) The Lancet Glob health 246.
89 Timothy AMUKELE, ‘Africa CDC: Establishing Integrated Surveillance and Laboratory Networks for Rapid Disease Detection and Response, Control, Prevention, and Clinical Care in Africa’ (2017) 6(1) African Journal of Laboratory Medicine 638.
90 Daniel J MCGAHEY, ‘Livestock Mobility and Animal Health Policy in Southern Africa: The Impact of Veterinary Cordon Fences on Pastoralists’ (2011) 1 Pastoralism; available online <https://pastoralismjournal.springeropen.com/articles/10.1186/2341-7136-1-14#citeas>.
91 Kabo MOGOTSII, Olaotswe Ernest KGOSIKOMA and Keotshepile Fredric LUBINDA, ‘Wildlife-Livestock Interface, Veterinary Cordon Fence Damage, Lack of Protection
provide useful lessons in building an effective IAS compliance and quarantine regime. This article recommends that the Botswana Bureau of Standards, Botswana National Veterinary Laboratory and Botswana National Health Laboratory should enter into collaborative agreements with similar institutions across the globe to build national IAS technical capacity. Such a move would be important in ensuring WTO compliant imposition of sanitary and phytosanitary measures for combating trade-introduced IAS.

In drawing up the regulatory framework for preventing the introduction of IAS in Botswana, policymakers should pay regard to the EC Biotech reports on both substantive and procedural issues on the convergence of international trade law and international environmental law. The case confirms the inherent right of WTO members to impose environmental conditions under the purview of WTO agreements. The SPS Agreement that was judicially scrutinised in the EC Biotech case provides governments with an established environmental framework to adopt, while internal legislative inefficiencies are yet to be addressed. It is submitted that in the context of Botswana, such environmental regulations, being secondary legislation issued by the minister, do not require parliamentary ratification before coming in force.

4.3 Agreement on Technical Barriers to Trade

One of the WTO texts that has an environmental aspect is the Agreement on Technical Barriers to Trade or the ‘TBT Agreement’. The preamble of the TBT Agreement entitles states to implement measures for the protection of human, animal and plant life and the environment. Although a preamble is not part of the substantive provisions of legal texts, international law provides that a preamble and annexes should be considered in treaty interpretation. Therefore, the preamble of the TBT Agreement is instructive as to the intention of its drafters. It does not prohibit the exercise of sovereign decisions in regulating environmental protection.

The preamble to the TBT Agreement is similar in effect to the GATT Article xx exceptions, as they both justify the discriminatory treatment that
is essential for the attainment of legitimate policy objectives. The level of environmental protection to be put in place is left to the discretion of each member county. The interpretation of the TBT Agreement should not be done in a manner that unnecessarily classifies genuine environmental concerns as a technical barrier to trade. However, the environmental measures should not be applied in an arbitrary or unjustifiable discrimination between countries.

The TBT Agreement provides a framework to establish regulations, standards, testing and certification procedures of imported goods in a manner that does not hamper trade. The TBT and SPS Agreements are mutually exclusive and there is no overlap between them. The SPS Agreement deals with additives, contaminants, toxins and disease-carrying organisms, among others, while the TBT Agreement covers all other product standards. The measures not covered by the SPS Agreement such as procedures related to identification, labelling and traceability systems of goods may fall under the scope of the TBT Agreement.

Regardless of the differences between them, the TBT and SPS Agreements play a complementary role to Article XX of GATT. They provide a framework for carrying out risk assessment without having to resort in anti-trade tactics. TBT and SPS Agreements create domestic flexibility of rules concerned with the protection of animal health, human health and environmental

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94 Ming DU, ‘Taking Stock: What Do We Know, and Do not Know, about the National Treatment Obligation in the GATT/WTO Legal System’ (2015) 1(1) The Chinese Journal of Global Governance 67.
95 Hajin KIM, ‘An Argument for WTO Oversight of Ecolabels’ (2014) 33(3) Stanford Environmental Law Journal 421.
96 WTO, US: Measures Affecting the Production and Sale of Clove Cigarettes – Report of the Appellate Body (4 April 2012) WT/DS406/AB/R.
97 Jurgen KURTZ, ‘A Look Behind the Mirror: Standardisation, Institutions and the WTO SPS and TBT Agreements’ (2007) 30 (2) University of New South Wales Law Journal 504.
98 Thomas J. SCHOENBAUM, ‘International Trade and Protection of the Environment: The Continuing Search for Reconciliation’ (1997) 91(2) American Journal of International Law 231.
99 ibid.
100 The Agreement on Technical Barriers to Trade, Annex 1A, art 1.5.
101 Halina WARD, ‘Common but Differentiated Debates: Environment, Labour and the World Trade Organization’ (1996) 45(3) International & Comparative Law Quarterly 592.
102 Elizabeth TRUJILLO, ‘A Dialogical Approach to Trade and Environment’ (2013) 16 (3) Journal of International Economic Law 535.
conservation.103 The commonality of the GATT, the SPS and TBT Agreements is the rule that every state is entitled to adopt regulations aimed at protecting life and health, and conserve exhaustible natural resources.104 The TBT Agreement is meant to ensure that non-tariff barriers (NTBs) will not be used when they do not serve a legitimate policy objective.105 All national measures adopted by any member states should be based on risk analysis and fully comply with WTO principles.106

4.3.1 Tuna-Dolphin II Case
In the environmental-related dispute considered by the DSB on the ‘United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products’ case known as the US-Tuna II case,107 Mexico was complaining about the measures imposed by the United States of America which required that tuna harvested Eastern Tropical Pacific Ocean and sold in the United States should be harvested using dolphin-safe methods to qualify for it to be labelled as such. The key findings of the Panel vis-à-vis the Appellate Body are discussed briefly below.

The Appellate Body found that the measures established a legally mandated set of requirements in the broad subject of ‘dolphin safety’ of tuna products.108 Accordingly, it upheld the Panel’s ruling that they were ‘technical regulations’ within the meaning of TBT Annex 1. According to the Appellate Body, the measure at issue modified the competitive conditions in the US market to the detriment of Mexican tuna products and the United States did not demonstrate that this stemmed solely from ‘legitimate regulatory distinctions’. The Appellate Body thus found that the US ‘dolphin-safe’ labelling measure was inconsistent with Article 2.1 and reversed the Panel’s contrary finding.

The Appellate Body overturned the finding on the basis that the measure was more trade-restrictive than necessary to fulfil US domestic legitimate objectives. The Appellate Body reversed the ruling that the measure was

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103 Erik P. BARTENHAGEN, ‘The Intersection of Trade and the Environment: An Examination of the Impact of the TBT Agreement on Ecolabeling Programs’ (1997) 17(1) Virginia Environmental Law Journal 51.
104 ibid.
105 Petros C. MAVROIDIS, ‘Last Mile for Tuna (to a Safe Harbour): What Is the TBT Agreement All About?’ (2019) 30(1) European Journal of International Law 279.
106 Joanne SCOTT, ‘International Trade and Environmental Governance: Relating Rules (and Standards) in the EU and WTO’ (2004) 15(2) European Journal of International Law 327.
107 WTO, US: Measures concerning the Importation, Marketing and sale of Tuna and Tuna Products – Report of the Appellate Body (16 May 2012) WT/DS381/AB/R.
108 ibid, para 199.
inconsistent with Article 2.2 of the TBT Agreement. Further, the Appellate Body held that the ‘dolphin-safe’ definition and certification did not constitute a relevant international standard within the meaning of Article 2.4 of the TBT Agreement. It nonetheless upheld the Panel’s ultimate finding that the measure did not violate Article 2.4. The Appellate Body found that the Panel’s assumption that the obligations under Article 2.1 of the TBT Agreement and GATT Articles I:1 and III:4 were substantially the same was incorrect. Therefore, the Appellate Body concluded that the Panel engaged in ‘false judicial economy’ and acted inconsistently with DSU Article 11 in declining to address Mexico’s claims under GATT Article I:1 and III:4.

The Appellate Body clarified that in terms of Article 2.1 of TBT Agreement, a complainant must show that, under the technical regulation at issue, the treatment accorded to imported products is less favourable than that accorded to like domestic products or like products originating in any other country. It stated that evidence should be adduced proving that the measure is not even-handed and thus inconsistent with Article 2.1 of the TBT Agreement. Should the respondent show that the detrimental impact on imported products stems exclusively from a legitimate regulatory distinction, it follows that the challenged measure is not inconsistent with Article 2.1 of the TBT Agreement.

The US-Tuna II case is the first WTO panel decision considering the application of the TBT Agreement to domestic environmental regulations. In that regard, it has been observed that the US-Tuna II has contributed to giving a new lease of life to the TBT Agreement, which had for a long time remained in the shadow of the ‘hot topics’ in the trade-environment debate. Further, US-Tuna II re-opened the debate on how to classify a measure as technical regulation or standards, and when measures can be considered mandatory or voluntary.109

4.3.2 The Use of the TBT Agreement in Protecting the Environment

Taking into account the cases discussed above, if Botswana intends to draft environmental measures to combat IAS, the responsible public officers are under a duty to ensure that the said measures do not contravene the WTO law. Such measures as may be considered by Botswana and other jurisdictions should not be non-tariff barriers to trade disguised as environmental policy concerns. The TBT Agreement provides an ancillary framework in combating the introduction or spread of IAS such as the identification, documentation,
labelling and traceability systems of imports\textsuperscript{110} Botswana and similarly situated jurisdictions may use the TBT Agreement for collating the IAS risks profile of each importing country. Acting on the IAS risk profile, the government should devise technical regulations that are not more trade-restrictive than necessary, taking into consideration the possible impact on the economy and the environment.

The TBT Agreement is meant to ensure that the GATT exceptions and the SPS Agreement are not abused in order to pursue trade protectionism disguised as environmental protection concerns, such as controlling the spread of IAS. Overall, the SPS and TBT Agreements provide successful safeguards to combat non-tariff barriers to trade while at the same time giving countries freedom to set environmental standards.\textsuperscript{111}

From the jurisprudential perspective, the \textit{US-Tuna II} case clarified that an ecologically friendly labelling requirement should not be trade-restrictive for it to be legal under the TBT Agreement.\textsuperscript{112} Further, the jurisprudential importance of the \textit{US-Tuna II} is that it provided the interpretation on the provisions defining ‘less favourable treatment’ under Article 2.1 and the trade-restrictive impact of technical regulations in terms of Article 2.2 of the TBT Agreement.\textsuperscript{113} On that note, Botswana, acting in terms of the TBT Agreement, may impose technical regulations on IAS-free manufacturing or harvesting standards both on domestic and international business. That would entail the imposition of similar requirements across all manufacturers in eliminating the introduction and spread of IAS in Botswana and labelling the extent of compliance. The said environmental or eco-friendly technical measures should not be trade-restrictive more than necessary. They should comply with Articles 2.1 and 2.2 of the TBT Agreement.

The strict compliance to the TBT Agreement would be required even when the parliament of Botswana decides to amend the Aquatic Weeds (Control) Act. There is a thin line between the sovereign right of states in imposing technical standards and restricting trade more than necessary. Therefore, in drafting the

\begin{itemize}
\item \textsuperscript{110} David MORGAN and Gavin GOH, ‘Genetically Modified Food Labelling and the WTO Agreements’ (2004) 13 (3) Review of European Community & International Environmental Law 306.
\item \textsuperscript{111} Ronald LABONTE and Matthew SANGER, ‘Glossary on the World Trade Organisation and Public health: Part 2’ (2006) 60 Journal of Epidemiology and Community Health 738.
\item \textsuperscript{112} Laurens ANKERSMIT and Jessica LAWRENCE, ‘The Future of Environmental Labelling: \textit{US – Tuna II} and the Scope of the TBT’ (2012) 39 (1) Legal Issues of Economic Integration 127.
\item \textsuperscript{113} Enrico PARITITI, ‘The Appellate Body Report in \textit{US – Tuna II} and Its Impact on Eco-Labelling and Standardization’ (2013) 40 (1) Legal Issues of Economic Integration 73.
\end{itemize}
amendment statute or passing administrative regulation, the lawmakers should draw lessons from the findings of the US-Tuna II case. Interestingly, others have viewed the decision of the Appellate Body US-Tuna II case to be largely insensitive to national autonomy in environmental and consumer protection policy. The more recent Article 21.5 decision in the same case reaffirmed the right of the states to impose labelling regimes for the environment.

Botswana, as a land-locked country that imports goods mostly through the road network (with the rest by rail and air) is at risk of importing IAS. This is compounded by the absence of an appropriate legislative and regulatory framework. Consequently, it has been observed that there several kinds of IAS that are slowly displacing and replacing indigenous flora, mostly around urban areas in Botswana. These foreign flora were introduced or imported for aesthetic purposes. On the face of it, the banning or restricting of the import of some goods from other countries are trade restrictive and in violation of WTO law. However, the country may invoke some provisions of specified WTO agreements, as confirmed by the Appellate Body, to be available to member states to address biodiversity and environmental concerns.

5 Conclusion

This article has provided a discussion on how WTO law and jurisprudence may be used by countries to restrict imports as a measure to combat invasion by alien species. It argued that the trade restrictions adopted for environmental aims should not discriminate in a way that bears no rational connection to environmental protection objectives. Further, this article has highlighted that the availability of environmental exceptions under international trade law is the recognition of the reality that to a large extent, environmental degradation is attributable to trade. Therefore, IAS should increasingly become subject to international trade law and states’ concerns, even where domestic regulation is inadequate, as it is in Botswana. Certainly, by joining the WTO, Botswana ceded some of her sovereignty for the common good. It is the conclusion of

114 Joel P TRANCHTMAN, ‘WTO Trade and Environment Jurisprudence: Avoiding Environmental Catastrophe’ (2017) 58(2) Harvard International Law Journal 273.
115 United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products – Recourse to Article 21.5 of the DSU by Mexico – Report of the Appellate Body, 3 December 2015, WT/DS381/AB/RW; Andrew LANG, ‘The Judicial Sensibility of the WTO Appellate Body’ (2016) 27(4) European Journal of International Law 1095.
116 Sunday Standard, ‘Aliens in Botswana’ <https://www.sundaystandard.info/aliens-in-botswana/>. 
this article that notwithstanding that, the right to protect Botswana’s environment, including the conservation of wild flora and fauna from IAS, remains.

Through the *EC Biotech* case, this article highlighted the importance of scientific evidence in supporting the imposition SPS measures and clarified further the role of public international law in the interpretation of WTO rules. It provides useful jurisprudence for informing the conduct of a state when using trade law to combat IAS and other pests. The panel confirmed that the legitimate risks that SPS measures may be imposed against as stipulated in Annex A of the SPS Agreement include pests, disease-carrying organisms, and foodstuffs, among others. It is recommended that countries such as Botswana should be encouraged to make use of environmental exceptions in the GATT, SPS and TBT Agreements. These WTO instruments provide developing countries with an alternative framework to address the spread of IAS as an externality of trade. In the short and medium-term, it is recommended that to leverage and make optimal use of their limited technical and financial resources, developing countries should consider negotiating sanitary or phytosanitary measures of common interests multilaterally, taking a leaf from the Caribbean countries in the *Shrimp/Turtle case*. In the context of Botswana, it is recommended that this be done under the auspices of the Southern African Customs Union (SACU) as a starting point. If successful, such might be extended to the larger regional grouping in the form of the Southern African Development Community.

It is further recommended that African countries should use the African CDC as an important institutional measure to address scientific and technical capacity in respect of SPS measures. With respect to technical capacity in international trade law, there are commendable capacity-building efforts in Africa of providing fully funded masters’ degree programme in this field.117 Further, Botswana and other African countries should facilitate technical capacity building through programmes such as the Mo Ibrahim Leadership Fellowship tenable at the African Development Bank (AfDB), International Trade Centre (ITC) United Nations Economic Commission for Africa (UNECA) and the Trade Law Centre (Tralac).

117 LLM in International Trade & Investment Law in Africa (TILA) https://www.chr.up.ac.za/tila.