



Democratic Socialist Republic of Sri Lanka

**The National Policy on Invasive
Alien Species (IAS) in Sri Lanka,
Strategies and Action Plan**

Ministry of Mahaweli Development & Environment

June - 2016

**The National Policy on Invasive
Alien Species (IAS) and
the Strategies & Action Plan
for it's Implementation in Sri Lanka**

**Biodiversity Secretariat
Ministry of Mahaweli Development & Environment
Sampathpaya, Battharamulla
June - 2016**

**The National Policy on Invasive Alien Species (IAS)
and the Strategies & Action Plan for it's
Implementation in Sri Lanka**

Publish by : Biodiversity Secretariat
Ministry of Mahaweli Development & Environment
Sampathpaya, Battharamulla

ISBN 978-955-8395-03-5

Printed by : Deepani Printers/Publisher
464, Highlevel Road, Gangodawila, Nugegoda.
Tel: 011 - 2852530

**The National Policy on Invasive Alien Species in Sri Lanka and
the Strategies & Action Plan for it's Implementation has been
approved by the cabinet of Ministers on 30th March 2016.
(Cabinet decision No. අමෙ/16/0426/704/013-07th April 2016)**

The National Invasive Alien Species (IAS) Policy of Sri Lanka

1). Introduction and Background

The importance of Invasive Alien Species (IAS) is recognized as a major threat to the natural (terrestrial, aquatic and marine) and agro-ecosystems of Sri Lanka affecting its biological diversity and food security. Open economic policies that have facilitated international trade and travel and the free movement of international aid followed by major disasters has seen the incidences of IAS becoming more frequent, accidentally or deliberately over the past decades.

The threats of IAS cannot be treated in isolation, but are part of a complex set of pressures and drivers of biodiversity loss and environmental impact. Since, the social, political and economic drivers are growing in both scale and scope, the responses to IAS need to go beyond short-term crisis-focused approaches but be at multiple levels through an integrated approach.

While being a signatory to international conventions such as Convention on Biological Diversity (CBD), International Plant Protection Convention (IPPC), and Convention for the Prevention of Pollution from Ships (MARPOL 73/78), Sri Lanka have enacted number of ordinances/acts to impose laws governing import of fauna and flora to the country. The direct legal instruments available in Sri Lanka to tackle the issues related to IAS are the Water Hyacinth Ordinance No. 4 of 1909, Fauna and Flora Protection Ordinance No. 2 of 1937 (as amended), Fisheries and Aquatic Resources Act, No. 02 of 1996 (as amended), Plant Protection Act No. 35 of 1999, Prevention of Mosquito Breeding Act No. 11 of 2007 and Marine Pollution Prevention Act No. 35 of 2008.

However, considering the importance of the development and implementation of an effective legal instrument to support the country's efforts to manage IAS, the Cabinet of Ministers, on 15th January 2009 granted approval to develop a new act to prevent entry of and control of IAS.

Keeping in line with the article 27 subsection 14 of Sri Lanka's constitution "The State shall protect, preserve and improve the environment for the benefit of the community", relevant international conventions and as highlighted "need to address IAS issues as priority interventions" in the National Action Plan for the Haritha Lanka Program, the "National Invasive Alien Species (IAS) Policy" is prepared aiming at preventing the introduction and spread of IAS and their control. This policy is intended to provide a base for IAS Act and consistent guidance to the Government, in particular to the Ministry responsible for the subject of Environment, and all other stakeholders.

2). The need for a National Invasive Alien Species Policy (NIASP)

Despite the fact that IAS issues are being accepted as a concern to be dealt with a sense of urgency, the sectoral policy and regulatory framework for minimizing the risks posed by IAS in Sri Lanka still remain under-developed and not well coordinated. Although many institutions hold a stake in IAS related activities namely, Ministries of Environment, Agriculture, Irrigation, etc., these institutions to-date have not harmonized their policies to account for the effects of IAS.

Therefore, a national policy is required as the guiding light that shows the path to achieve the vision and the long-term goals envisaged by state and other stakeholder organizations in minimizing the risks of IAS across sectors in Sri Lanka.

3). Scope of the National Invasive Species Policy

- All actions taken or authorized by the Government of Sri Lanka should consider and minimize, to the extent possible, the detrimental effects caused by the introduction of non-native invasive species.
- This policy does not imply that the government of Sri Lanka will not permit introduction of all exotic species to the country. However, the government of Sri Lanka recognizes that all alien species are potentially invasive, caution is required until a formal risk assessment is performed.
- The introduction of biological measures to control Invasive Alien Species or scientific studies on Invasive Alien Species approved by the Government of Sri Lanka is not covered by this policy.
- This policy supplements any other policy and program guidelines that may exist.

The National Invasive Alien Species (IAS) Policy

Vision

Sri Lanka is free from risks posed by Invasive Alien Species

Mission Statement

A comprehensive, coordinated, and efficient system is established with necessary legal environment to protect aquatic, marine and terrestrial ecosystems including agricultural and other man made landscapes and native biodiversity of Sri Lanka from risks associated with IAS.

Objectives

The main objective is to establish a national policy, which leads to formulate an appropriate legal framework and implemented through an effective and efficient institutional coordination mechanism that prevents, detects, responds to, and manage the risks of IAS to the economy, environment, and society. The policy will address the following specific objectives;

1. To minimize the risks of IAS on the biodiversity, ecosystems, economy and society thus promoting the sustainable economic development
2. To update all the stake holders on the national position and priorities and promote their participation in dealing with IAS related issues
3. To contribute to global efforts to control IAS through nationwide operations

As the base for the formulation of policy statements, main trust areas have been identified considering the following facts;

- IAS as a factor affecting sustainable development and poverty eradication.
- The potential impact of IAS on the biodiversity is irreversible and urgent policy intervention is vital.
- The need for cooperation at all levels of government, private sector and non-governmental organizations within Sri Lanka, regional and international arena is essential to manage the risks posed by IAS.
- Scientifically valid, best available knowledge and public-private partnership is a primary need for effective management of IAS using an ecosystem approach.

Thrust Areas

The policy is organized under four equally essential thrust areas that forms the foundation for the management of IAS:

1. Prevention of intentional and unintentional introductions of IAS
2. Early Detection and Rapid response to the new invaders (pre-entry/post-entry)
3. Containment, Control and Eradication of established and spreading invaders
4. Restoring of Ecosystems degraded due to impacts of IAS

The Policy Statement

The policy statements mainly focuses on five different sections.

1. General and Cross-cutting Policies

The statements that are overlapping or cross-cutting depending on the national needs and the nature and relative importance of the invasion is presented under general section.

Key Policy Statements

- 1.1. All citizens who concern are made aware of IAS and their adverse effects.
- 1.2. Recognize the need for a multi-stakeholder driven process for effective management of IAS through prevention, early detection and rapid response and ecosystem restoration
- 1.3. Recognize the need for establishing a knowledge base and data sharing mechanism to support IAS management.
- 1.4. Recognize the need for capacity development with international cooperation and resource mobilization.
- 1.5. Recognize the need to promote research to support effective IAS management.
- 1.6. Recognize the need to be consistent with national, regional and international initiatives.

2. Policy on Prevention

Prevention of introduction is generally the far more environmentally desirable and most cost effective approach to avoid significant environmental, economic and social costs.

Key Policy Statement

- 2.1 An effective risk assessment protocol is in place for prevention of entry of IAS

3. Policy on Early Detection and Rapid Response

Once an IAS has entered the country, early detection and rapid eradication is the most cost effective and environmentally favourable way of preventing its establishment and wider spread. It is essential to have integrated rapid response networks and contingency plans for eradication of such species immediately upon detection.

Key Policy Statement

- 3.1. Recognize the need to establish a mechanism for surveillance, early detection and rapid response

4. Policy on Containment, Control and Eradication

If the IAS becomes established, appropriate management responses (containment, control and eradication) are needed based on the species priority at the relevant geographical scale. Risk analysis, economic analysis, and other tools should be used to select the most appropriate and cost-effective mitigation measures. An integrated approach is the most effective way to manage IAS within Sri Lanka.

Key Policy Statements

- 4.1 Recognize the need to establish a sustained mechanism to identify and prioritize IAS
- 4.2 Recognize the need to take an integrated approach for containment and management of IAS
- 4.3 Recognize the need to develop and implement management plans for eradication of priority IAS

5. Policy on Restoration of Biodiversity, Habitats and Ecosystems

Each invasion is unique, therefore specific restoration programs are required to be designed at the appropriate level. Restoring degraded areas to their proper ecological function would prevent infestations from IAS or to prevent re-occurrence after their removal. Therefore, adoption of restoration concepts to manage the impacts of IAS on an ecosystem is a critical component of a fully functional invasive species control program.

Key Policy Statements

- 5.1 Recognize the need to take the ecosystem and participatory approach in managing IAS
- 5.2 Recognize development projects that increase vulnerability of natural ecosystems to IAS undertake restoration as a mandatory requirement

**Strategies for Implementation of
National Invasive Alien Species (IAS)
Policy in Sri Lanka**

Strategies for Implementation of National Invasive Alien Species (IAS) Policy in Sri Lanka

Introduction

The increasing economic and environmental losses caused by non-native invasive species amplify the value of identifying and implementing optimal management options to prevent, detect, and control invasive alien species (IAS).

Strategies that are suitable for the implementation of National Invasive Alien Species Policy in Sri Lanka have been developed through a dynamic consultative process with wider participation of stakeholders. These strategies are intended to provide consistent guidance to the Ministry responsible for the subject of Environment (ME), which is the focal point for implementation of the CBD in Sri Lanka, and the stakeholder institutions in line Ministries, non-governmental and private sector organizations, and the citizens of Sri Lanka to develop their own action plans for any activities that could introduce or cause the spread of invasive alien species in the country.

Strategies to be followed to fulfill each of the policy statements are appended below.

1. General and Cross- cutting policies

1.1. All citizens who concern are made aware of Invasive Alien Species (IAS) and their adverse effects	
Strategies	1.1.1 Public Awareness and sensitization programmes on entry pathways, invasiveness, and environmental impacts on IAS are promoted to produce a responsible and vigilant citizen.
	1.1.2 Specific awareness programs on IAS for key stakeholders will be conducted island wide.
1.2 Recognize the need for a multi-stakeholder driven process for effective management of IAS through prevention, early detection and rapid response and ecosystem based restoration	
Strategies	1.2.1 Establishment of the National Focal Point on IAS at the Biodiversity Secretariat of the Ministry responsible for subject of Environment that facilitates a process of monitoring IAS entry and control at national level.

Strategies	1.2.2 An organized risk assessment process and an effective regulatory mechanism will be established preventing entry and spread of IAS
	1.2.3 Promote a national level campaign for IAS control
	1.2.4 Set up an effective, properly coordinated, institutional mechanism to prevent entry, early detection, rapid response and ecosystem based management of IAS.

1.3 Need to Establish a knowledge base and data sharing mechanism to support IAS management

Strategies	1.2.1 Support development and maintenance of National IAS database containing information on Identification, Risk assessment, Invasiveness, Importance and Cost effective Management practices
	1.2.2 Establish a national data base incorporating information available in regional and global level and make accessible to the general public through relevant authorities and share the available information/ data

1.4 Recognize the need for capacity development with international cooperation and resource mobilization

Strategies	1.2.1 Human resources of stakeholder organizations are developed with required training/ capacity building
	1.2.2 Advocate stakeholder institutions to obtain necessary financial and other resources for IAS control from international and local donor agencies and national budget.
	1.2.3 Mobilize financial and other resources for human and infrastructure development of stakeholder institutions
	1.2.4 Cooperate with external organizations/ governments in training and capacity building on IAS

1.5 Need for Research on IAS to support effective management is recognized

Strategies	1.2.1 Strengthen the financial and logistical support for research and development of techniques for IAS control and management
------------	---

	1.2.2 Establish a mechanism including national scientific forum for regular dissemination of research findings to encourage better management practices.
	1.2.3 Promote research on IAS based on identified information gaps.

1.6 Recognizes the need to be in consistent with national, regional and global initiatives

Strategies	1.2.1 Cooperate with other regional and global organizations with their initiatives for management of IAS.
	1.2.2 Support national institutions that dealt with IAS entry, detection and Control.

2. Policy on Prevention

2.1. An effective risk Assessment protocol is in place for prevention of entry of IAS

Strategies	2.1.1 Establishment of updated risk assessment protocol at all entry pathways
	2.1.2 Support capacity building and acquisition of physical resources required for stakeholder institutions for IAS identification and risk assessment
	2.1.3 Ensure pathway analysis is conducted and risk assessment are performed for all the pathways of introduction of IAS
	2.1.4 improve the capacity of relevant stakeholder institutions for enforcement of IAS regulations and policies at entry points
	2.1.5 Support development plans and their implementation for managing high-risk entry pathways by giving due consideration to risk imposed by IAS.

3. Policy on Early Detection and Rapid Response

3.1. Recognize the need to establish a mechanism for surveillance, early detection and rapid response

Strategies	3.1.1 Ensure development of education and outreach action plan targeting general public and key stakeholders supporting identification ,early detection and rapidly response on IAS
------------	---

	3.1.2 Facilitate the establishment of a national level ‘core team of experts’ supported by research, and appropriate diagnostic tools and international cooperation for taxonomic identification of IAS
	3.1.3 Ensure that the core team of experts continue to develop diagnostic tools and protocols to identify IAS aiming sustenance of the system.
	3.1.4 Strengthen the surveillance activities among stakeholders through a coordinated monitoring in geographic areas at high risk of invasions.
	3.1.5 Promote the development of networks for rapid decision making, communication and implementation of emergency response plans.
	3.1.6 Use of mass media on IAS early warning and awareness

4. Policy on Containment, Control and Eradication

4.1. Recognize the need to establish sustained mechanism to identify and prioritize IAS.	
Strategies	4.1.1 Facilitate to mobilize the members of core team of experts for correct identification of IAS, based on the rapid response.
	4.1.2 Set standards for species identification include into the protocol.
	4.1.3 Support the team of experts by sharing research findings and providing them with appropriate diagnostic tools.
	4.1.4 Periodic update of the protocols and assessments undertaken to prioritize IAS

4.2. Recognize the need to take an integrated approach for containment and management of IAS	
Strategies	4.2.1 Ensure identification of integrated management options for IAS based on risk assessment and stakeholder consultations
	4.2.2 Facilitate adoptive management of IAS through objective scientific methodology and /tools

	4.2.3 Promote the management of IAS in priority sites considering the environmental, economic, social and cultural impacts.
	4.2.4 Update the management of IAS into common data base.

4.3 Recognize the need to develop and implement management plans for eradication of priority IAS

Strategies	4.3.1 Prepare and implement integrated management plans based on ecosystem approach for IAS control
	4.3.2 Strengthen public-private-community partnerships for IAS management and eradication
	4.3.4 Develop a mechanism to integrate research findings in to management plans
	4.3.5 Incorporate IAS management into relevant stakeholder’s management plan.

5. Policy on Restoration of Biodiversity, Habitats and Ecosystems

5.1. Recognize the need to take the ecosystem approach in managing IAS

Strategies	5.1.1 Ecosystem based, appropriate restoration plans are developed and implemented for the affected areas
	5.1.2 Ensure relevant authorities include restoration plan and monitoring mechanisms to their management plans.
	5.1.3 Participation of the stakeholders as well as the affected communities are obtained for the implementation of the plans

5.2. Recognize development project that increases vulnerability of natural ecosystems to IAS undertake restoration as a mandatory requirement

Strategies	5.2.1 Restoration of natural ecosystem of the areas taken up for development projects will be consider as mandatory practice on project approval
	5.2.2 Ensure IAS management included into EIA process.

**The Strategies and Action Plan to
Implement the National Policy on
Invasive Alien Species**

The Strategies and Action Plan to Implement the National Policy on Invasive Alien Species

1. General and Cross cutting policies;

1.1. All citizens are made aware of Invasive Alien Species (IAS) and their adverse effects	
Strategy 1.1.1	<p>Public Awareness and sensitization programmes on entry pathways, invasiveness and environmental impacts on IAS are promoted to produce a responsible and vigilant citizen.</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Conduct awareness needs assessment on IAS for general public II. Select appropriate modes of conducting awareness campaigns on IAS according to different public groups III. Design and prepare awareness and promotional materials on IAS based on the needs assessment IV. Identification of organizations capable of conducting awareness building programmes on IAS V. Conduct regular media briefings, publish newspaper articles and newsletters to create awareness among general public on IAS VI. Conducting awareness campaigns using mass-media
Strategy 1.1.2	<p>Specific awareness programs on IAS for key stakeholders will be conducted island wide</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Conduct a “capacity and awareness needs assessment” of relevant stakeholder organizations on detection, identification and control of IAS II. Design and prepare training manuals and materials and other documents based on the needs assessment on identification and detection of IAS III. Conduct training programs to build technical and physical capacity of border control officers on identification and detection of IAS

	IV. Conduct training programs to build technical and physical capacity of stakeholder organizations on detection, identification and control of IAS
--	---

1.2. Recognize the need for a multi-stakeholder driven process for effective management of IAS through prevention, early detection and rapid response and ecosystem based restoration	
--	--

Strategy 1.2.1	<p>Establishment of the National Focal Point on IAS at the Biodiversity Secretariat of the Ministry of Mahaweli Development and Environment that facilitates a process of monitoring IAS entry and control at national level</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Establish the national focal point for coordinating detection, identification and control of IAS II. Enforce the provisions of IAS control Act and its regulations through appropriate stakeholders. III. Develop a monitoring framework to measure the effectiveness of the awareness, entry and control programmes on IAS at national level IV. Conduct regular monitoring programs on the effectiveness of the awareness campaign, prevention of entry and control of IAS
-------------------	---

Strategy 1.2.2	<p>An organized risk assessment process and an effective regulatory mechanism will be established preventing entry and spread of IAS</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Formulate and enact the IAS control Act and regulations. II. Establish mechanisms/regulations especially focusing on the main pathways of entry identified through pathways-analysis to prevent entry of IAS to Sri Lanka III. Develop, implement and regularly update pre- and post-entry risk assessment protocols for IAS IV. Develop a monitoring framework to measure the effectiveness of the risk assessment protocols on IAS V. Conduct regular monitoring programs on the effectiveness of the risk assessment protocols on IAS
-------------------	--

Strategy 1.2.3	<p>Promote a national level campaign for IAS control</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Identify resource groups and target groups and conduct national campaigns on IAS control
Strategy 1.2.4	<p>Set up an effective, properly coordinated, institutional mechanism to prevent entry, early detection, rapid response and ecosystem based management of IAS.</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Develop an effective and integrated institutional coordinating mechanism link through national focal point for detection, identification and control of IAS at national level II. Develop guidelines specifically to prevent introduction of IAS, for importers of commodities to Sri Lanka III. Develop an activity plan on regional trade preventing entry of IAS to Sri Lanka keeping in line with the clauses identified in the CBD IV. Establish an interlinked e-system to share information on import licensing, notification of entry etc., among border control agencies

1.3. Need to Establish a knowledge base and data sharing mechanism to support IAS management

Strategy 1.3.1	<p>Support establishment and maintenance of the National IAS database containing information on Identification, Risk assessment, Invasiveness, Importance and cost effective management practices</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Formulate and mandate a National IAS information management Committee II. Identify hosting and maintenance arrangement for the National IAS Database III. Develop an interactive National IAS database through broad-based stakeholder consultation. IV. Establish an IAS data entry web portal with an appropriate data entry verification procedure and broad-based stakeholder consultation V. Periodically review and update of the National IAS Database
-------------------	--

	VI. Conduct a campaign to create awareness among general public on the availability and utility of the National IAS Database
Strategy 1.3.2	<p>Incorporate information on IAS available in regional and global databases in to the national data base.</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Identify, list and publish in the public domain, the IAS of global, regional and national significance, potential IAS and black lists of IAS II. Establish a mechanism to periodically update the lists of IAS of global and regional significance, potential IAS and black lists of IAS III. Identify the possible countries of origin of IAS based on the pathways-analysis
1.4. Recognize the need for capacity development with international cooperation and resource mobilization	
Strategy 1.4.1	<p>Human resources of stakeholder organizations are developed with required training/ capacity building.</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Conduct capacity need assessment of relevant stakeholder organization on detection, identification and control of IAS. II. Design and prepare training manuals and materials and other documents based on the need assessment on detection, identification and control of IAS. III. Conduct training programmes to build technical and physical capacity of stakeholder organization on detection, identification and control of IAS.
Strategy 1.4.2	<p>Advocate stakeholder institutions to obtain necessary financial and other resources for IAS control from govt. budget</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Identify regular funding for IAS detection and rapid response in the national and provincial budget II. Establish a fund disbursement mechanism for rapid response to identified IAS

Strategy 1.4.3	<p>Mobilize financial and other resources for human and infrastructure development of stakeholder institutions.</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Allocate adequate financial resources to stakeholders for training on IAS management. II. Provide sufficient staff and other physical resources for IAS control in stakeholder institutions.
Strategy 1.4.4	<p>Cooperate with external organizations/ governments in training and capacity building on IAS</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Maintain contacts with other countries/ external organizations and seek their support for training. II. Facilitate training expert visits by other countries/organizations to Sri Lanka on IAS.

1.5. Need for Research on IAS to support effective management is recognized

Strategy 1.5.1	<p>Strengthen the financial and logistical support for research and development of techniques for IAS control and management</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Prepare a national research agenda for IAS control through a research gap identification process. II. Develop a mechanism for continuous financial and logistical support for identified research
Strategy 1.5.2	<p>Establish a mechanism including national scientific forum for regular dissemination of research findings to encourage better management practices.</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Mainstream recommendations of the outcome and outputs of the contracted research on IAS control. II. Device a mechanism to integrate the outcome of research into IAS management plans.
Strategy 1.5.3	<p>Promote research on IAS, based on identified information gaps</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Identify priority research projects and co-funding opportunities based on the national research agenda

	II. Award contracted research to stakeholder organizations/ personnel for IAS control
--	---

1.6 Recognizes the need to be in consistent with national, regional and international initiatives	
--	--

Strategy 1.6.1	<p>Cooperate with other regional and global organizations with their initiatives for management of IAS</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Update the knowledge of staff attached to the IAS cell at focal point and staff at entry points on global and regional initiatives of IAS. II. Take appropriate actions by focal point and border control staff as directed by global and regional initiatives.
-------------------	--

Strategy 1.6.2	<p>Support national institutions that dealt with IAS entry, detection and control</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Review the sectoral policies and update to include IAS inspection, detection, identification and control. II. Update the knowledge of relevant national institutions on international initiatives for control of IAS.
-------------------	---

2. Policy on Prevention

2.1. An effective risk Assessment protocol is in place for prevention of entry of IAS	
--	--

Strategy 2.1.1	<p>Establishment of updated risk assessment protocol at all entry pathways.</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Develop, implement and regularly update pre-entry and post risk assessment protocols for IAS II. Develop an effective mechanism for detection and prevention of entry of IAS at entry points III. Identify, assess, list and publish in the public domain, the IAS of national significance and potential IAS. IV. Develop a mechanism to periodically update the national and potential list of IAS.
-------------------	---

<p>Strategy 2.1.2</p>	<p>Support capacity building and acquisition of physical resources required for stakeholder institutions for IAS identification and risk assessment</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Conduct a “capacity needs assessment” of border control officers on identification and detection of IAS II. Provide appropriate materials to identify IAS and direct access to the IAS data base. III. Assist acquisition of required physical resources to the standard institutions. IV. Provide suitable training for key officers involved in detection of IAS.
<p>Strategy 2.1.3</p>	<p>Ensure pathway analysis is conducted and risk assessment are performed for all the pathways of introduction of IAS</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Establish mechanisms/regulations especially focusing on the main pathways of entry identified through pathways-analysis to prevent entry of IAS to Sri Lanka II. Develop an activity plan on international trade preventing entry of IAS to Sri Lanka keeping in line with the clauses identified in the CBD and other relevant international treaties and agreements III. Develop guidelines specifically to prevent introduction of IAS, for importers of commodities to Sri Lanka
<p>Strategy 2.1.4</p>	<p>Improve the capacity of relevant stakeholder institutions for enforcement of IAS regulations and policies at entry points</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Prepare regulations for effective implementation of the IAS Control Act II. Train relevant stakeholder institutions for enforcement of IAS regulations and other related regulations.
<p>Strategy 2.1.5</p>	<p>Support institutional development plans and their implementation for managing high-risk entry pathways by giving due consideration to risk imposed by IAS.</p>

	<p>Actions:</p> <ol style="list-style-type: none"> I. Establish mechanisms/regulations especially focusing on the main pathways of entry identified through pathways-analysis to prevent entry of IAS to Sri Lanka II. Identify the possible countries of origin of IAS based on the pathways-analysis
--	---

3. Policy on Early Detection and Rapid Response

3.1. Recognize the need to establish a mechanism for surveillance, early detection and rapid response	
<p>Strategy 3.1.1</p>	<p>Ensure development of education and outreach action plan targeting general public and key stakeholders supporting identification, early detection and rapid response on IAS</p> <p>Actions :</p> <ol style="list-style-type: none"> I. Identify, list and publish in the public domain, the IAS of national significance, potential IAS and black lists of IAS II. Conduct a “capacity needs assessment” of relevant stakeholder organizations on detection and identification of IAS III. Conduct training programs to build technical and physical capacity of stakeholder organizations on detection and identification of IAS IV. Establish a communication link to the grass-root level organizations to implement the emergency response plan for identified IAS V. Design and prepare training manuals and awareness materials for public/stakeholders and publish newspaper articles and newsletters on IAS.
<p>Strategy 3.1.2</p>	<p>Facilitate the establishment of a national level ‘core team of experts’ supported by research, and appropriate diagnostic tools and international cooperation for taxonomic identification of IAS</p> <p>Actions :</p> <ol style="list-style-type: none"> I. Establish and mandate a National Invasive Species Specialist Group (NISSG) for advising on all of aspects of IAS II. Establish a national “core team of experts” on taxonomic identification of IAS III. Mainstream recommendations of the outcome/outputs of the contracted research on IAS control

Strategy 3.1.3	<p>Ensure that the core team of experts continue to develop diagnostic tools and protocols to identify IAS aiming sustenance of the system.</p> <p>Actions :</p> <ol style="list-style-type: none"> I. Develop suitable system and monitor framework to measure the effectiveness of the risk assessment protocols on IAS II. Establish a communication channel to link the focal point with the “core team of experts
Strategy 3.1.4	<p>Strengthen the surveillance activities among stakeholders through a coordinated monitoring in geographic areas at high risk of invasions</p> <p>Actions :</p> <ol style="list-style-type: none"> I. Establish IAS cell in main stakeholder institutions and in each province. II. Establish a coordinated monitoring network for continued surveillance of high risk areas for IAS III. Establish a reporting channel between the focal point and the surveillance network.
Strategy 3.1.5	<p>Promote the development of networks for rapid decision making, communication and implementation of emergency response plans</p> <p>Actions :</p> <ol style="list-style-type: none"> I. Establish networks representing relevant stakeholder groups at provincial levels for formulating emergency response plans, in consultation with the focal point on identified IAS II. Design and prepare a reporting mechanism for early response to IAS III. Establish a communication link to the grass-root level organizations to implement the emergency response plan for identified IAS
Strategy 3.1.6	<p>Use of mass media on IAS early warning and awareness</p> <p>Actions :</p> <ol style="list-style-type: none"> I. Conduct regular media briefings, publish newspaper articles and newsletters to create awareness among stakeholders on IAS II. Prepare promotional materials on identification and control of IAS at national level. III. Conduct national campaigns on IAS control.

4. Policy on Containment, Control and Eradication

4.1. Recognize the need to establish sustained mechanism to identify and prioritize IAS.	
Strategy 4.1.1	<p>Facilitate to mobilize the members of core team of experts for correct identification of IAS, based on the rapid response.</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Provide logistical support to the “core team of experts” for taxonomic identification of IAS. II. Provide the members of “Core Team” with necessary tools and field equipment to identify IAS.
Strategy 4.1.2	<p>Support the team of experts by sharing research findings and providing them with appropriate diagnostic tools.</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Share the national research agenda for IAS control prepared based on the research gap identification process. II. Mainstream recommendations of the research carried out on IAS control. III. Device a mechanism to integrate the outcome of research into IAS management plans.
Strategy 4.1.3	<p>Periodic update of the protocols and assessments undertaken to prioritize IAS.</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Undertake regular update of pre- and post – entry risk assessment protocol for IAS. II. Periodically update (once in 3-4 years) the list of IAS of national significance and potential IAS. III. Conduct regular monitoring programmes on the effectiveness of the risk assessment protocol on IAS.
Strategy 4.1.4	<p>Set standards for species identification include into the protocol</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Initial identification of spp. Using standard/ recognized taxonomic literature. II. Confirmation of species in consultation with National Herbarium of Sri Lanka or Natural History Museum (Local/ Foreign)

4.2 Recognize the need to take an integrated approach for containment and management of IAS	
Strategy 4.2.1	<p>Ensure identification of integrated management options for IAS based on risk assessment and stakeholder consultations</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Select vulnerable localities through properly designed assessment procedure. II. Map the priority IAS of national importance and vulnerable localities. III. Evaluate integrated management options for priority sites. IV. Design and prepare adaptive management plans for priority IAS and vulnerable localities with stakeholder participation.
Strategy 4.2.2	<p>Facilitate adoptive management of IAS through objective scientific methodology and /tools</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Develop tools to measure environmental impact assessment, socio- economic impact resource need and extended cost benefit analysis for management of IAS. II. Develop a decision making matrix for containment, control and eradication of prioritized IAS. III. Conduct pilot scale testing for the integrated management options selected for IAS control IV. Monitor the effectiveness of the management initiatives taken V. Document and demonstrate site specific, cost effective and best practices for management of prioritized IAS.
Strategy 4.2.3	<p>Promote the management of IAS in priority sites considering the environmental, economic, social and cultural impacts</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Develop guidelines to select priority sites for IAS management II. Devise and implement long term integrated management programmes for priority IAS in priority IAS sites based on pilot scale testing, through private public community partnership. III. Develop monitoring framework for assessing the success of IAS management plans.

Strategy 4.2.4	<p>Update the management of IAS into common data base.</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Upload the National list of invasive alien species to the data base. II. Publish the guidelines to select priority sites for IAS management. III. Upload the case studies on eco system based best practiced integrated IAS management.
-------------------	---

4.3 Recognize the need to develop and implement management plans for eradication of priority IAS

Strategy 4.3.1	<p>Prepare and implement integrated management plans based on ecosystem approach for IAS control</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Apply ecosystem approach while preparing the integrated IAS management plan. II. Prepare guidelines on Eco-system approach in IAS management. III. Assess the environmental, social and economic impacts of IAS in priority sites.
-------------------	--

Strategy 4.3.2	<p>Strengthen public-private-community partnerships for IAS management and eradication</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Identify potential partners for IAS control activities. II. Communicate with and educate relevant partners on species and site specific containment and eradication plan for IAS. III. Enter into agreement / MOU with private/ community organization in implementation of IAS management plan.
-------------------	--

Strategy 4.3.3	<p>Develop a mechanism to integrate research findings in to management plans</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Disseminate the research findings through the IAS cells established in the stakeholder institutions and in the provinces. II. Upload the research activities and recommendations into the IAS data base.
-------------------	---

	III. Publish summarized research findings in the newsletters and distribute to the ground level through stakeholder agencies.
Strategy 4.3.4	<p>Incorporate IAS management into relevant stakeholder’s management plan.</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Incorporate IAS management in National Development Plan. II. Institutionalize training on IAS through the in-service training modules of stakeholder institutions. III. Make management of IAS mandatory in preparation of site specific management plan

5. Policy on Restoration of Biodiversity, Habitats and Ecosystems

5.1. Recognize the need to take the ecosystem approach in managing IAS	
Strategy 5.1.1	<p>Ecosystem based, appropriate restoration plans are developed and implemented for the affected areas</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Review the best practices on eco- systems based restoration activities practiced regionally and globally. II. Develop best practice guidelines for restoration of eco-systems affected by IAS to create conditions conducive to native biota. III. Develop ecosystem restoration plan based on the guidelines developed using suitable native species
Strategy 5.1.2	<p>Ensure relevant authorities include restoration plan and monitoring mechanisms to their management plans.</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Include provisions in the IAS Act to incorporate the restoration of ecosystem is mandatory in development projects/plans. II. Monitor the restoration of the ecosystem back to the original position, as a part of the monitoring plan of the EIA.

Strategy 5.1.3	<p>Participation of the stakeholders as well as the affected communities are obtained for the implementation of the plans</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Obtain the direct involvement of stakeholders and participation of affected community from planning stage. II. Assign responsibilities of stakeholders and community in implementation of restoration plans.
-------------------	--

5.2. Recognize development project that increases vulnerability of natural ecosystems to IAS undertake restoration as a mandatory requirement	
Strategy 5.2.1	<p>Restoration of natural ecosystem of the areas taken up for development projects will be consider as mandatory practice on project approval</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Include the provisions of the IAS Act on “restoration of ecosystems” as part of EIA process.
Strategy 5.2.2	<p>Restoration of natural ecosystem of the areas taken up for development projects will be consider as mandatory practice on project approval</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Implement long term restoration plans for ecosystem affected by development projects.
Strategy 5.2.2	<p>Restoration of natural ecosystem of the areas taken up for development projects will be consider as mandatory practice on project approval</p> <p>Actions:</p> <ol style="list-style-type: none"> I. Implement long term restoration plans for ecosystem affected by development projects.