

## **THE SPS AGREEMENT: TRADE IN PLANTS AND PLANT PRODUCTS**

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With increasing trade in plant and plant products, the risk of the spread of harmful pests and diseases has also increased. The negative impact on plant health and plant products could be substantial, e.g. an imported harmful pest could destroy entire orange production in a country or a region, or could result into reduced yield, quality deterioration and environmental pollution. All these lead to increased cost of production and reduced market share, and thus undermine competitiveness in both domestic and export markets. In view of the Transboundary nature of these effects and potential trade disruptions, GATT Members negotiated comprehensive phytosanitary rules as part of the Uruguay Round Agreement. The result was the WTO Agreement on the Application of Sanitary and Phytosanitary Measures or the SPS Agreement in short, with additional relevant disciplines in the TBT Agreement. The main objective was to establish and follow a set of standards on phytosanitary measures in the export and import of plant and plant products.

In the case of Nepal, export and import of agricultural and forest-based products through the long and porous borders had been taking place almost without any phytosanitary considerations until recently. To a large extent the practice continues even now. As the potential negative effects are being increasingly recognized and as WTO Members started to implement the SPS Agreement since 1995 the situation is changing. Nepal also had its share of the deleterious effects of the harmful pests that came with imported plants and the difficulties in exporting plants and products, particularly to India in recent years. In view of this, and her commitment to implement provisions of the SPS agreement by 1 January 2007 timely action in this direction has become necessary.

The main purpose of this chapter is to; take a stock of Nepal's situation on phytosanitary measures (PSMs), and to identify key issues and measures that need urgent attention. It builds on the recent works undertaken by the government and on intensive consultation with various stakeholders and knowledgeable persons. The next section of the chapter provides an overview of the PSM-related aspects of the SPS Agreement and Nepal's situation in this area. Then it identifies main issues and gaps in the following section, which also provides an overview of the phytosanitary system of India- a major trading partner. The last section concludes with some suggestions, focussing on four main areas, namely legislation, institutions, physical facilities and human resource.<sup>40</sup>

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<sup>40</sup> Annex 1 provides technical definitions and abbreviations of phytosanitary terms, including those used in this chapter.

## THE SPS AGREEMENT VIS-À-VIS NEPAL

### Overview of the SPS Agreement and Phytosanitary Measures

The SPS Agreement elaborates rules for the application of phytosanitary measures in relation to the trade in plants and plant products. Preceding two chapters in this volume have already summarized the main provisions of the SPS Agreement in the context of trade in food products and in live animals and livestock products. In view of this only the basic principles of the SPS Agreement are summarized here, with some additional comments on the features related to trade in plants and plant products.

As in the case of trade in food products and livestock, the SPS Agreement recognizes the right of WTO Members to maintain PSMs that are essential to protect plant life and health based on scientific principles.<sup>41</sup> It says that the applied measures should be: non-discriminatory, only to the extent necessary to achieve the chosen level of protection, and should not be unnecessary barriers to trade. The Agreement emphasizes harmonization of PSMs based on international standards, guidelines and recommendations. It calls upon members to implement the PSMs on the basis of the assessment of risk to plant life or health, using risk assessment techniques developed by relevant international organizations. The SPS Agreement also allows countries to declare pest or disease free areas within a country, as well as regions of low pest or disease prevalence. Similar to the Codex Alimentarius Commission for food products and Office des Epizootics or OIE for livestock, the International Plant Protection Convention (IPPC) is the relevant international legal instrument for developing international standards for plants and plant products, in addition to other technical functions related to global issues on plant protection and harmonization of PSMs (Box 1).

The difficulties the developing countries face in the phytosanitary area are similar to those they face in the case of trade in food products and live animals and livestock products. Thus, for example, their own ability to upgrade and maintain international standards on export products is weak while they face stringent phytosanitary standards in export markets, notably in developed countries. They face a number of constraints at home in implementing the Agreement, e.g. lack of legislation and rules and guidelines, inadequate and poor physical facilities like laboratories and lack of trained staff. These weaknesses, or areas where attention is required on a priority basis, include the following:

- New legislation consistent with the SPS Agreement, guidelines and protocols, and addressing new and emerging issues.
- Upgrading and strengthening laboratories.
- Capability to undertake Pest Risk Analysis (PRA)
- Capability to identify and declare pest or disease free areas and regions of low pest or disease prevalence.
- Pest reporting and opening new quarantine check posts.

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<sup>41</sup> Besides the legal texts of the SPS and TBT Agreements, an interpretive introduction to these agreements is the FAO publication - *SPS and TBT Agreements, Volume 3 of Multilateral Trade Negotiations on Agriculture: A Resource Manual*, 2000, FAO Rome.

- Improving export certification system.
- Developing code of conduct for the import of exotic biological control agents.

Box 1:

### **The International Plant Protection Convention**

The IPPC is an international treaty related to plant health, to which 127 governments adhere (as of 26 February 2004). It was adopted at the sixth session of the FAO Conference in 1951. The Convention was further amended in 1997. The revised Convention introduces modern plant protection practices, such as PRA to support the PSMs, the designation of PFAs and the phytosanitary security of export consignments after certification. The WTO SPS Agreement refers to the IPPC as the source of the international standards for plants and plant products.

The 1997 amendments to the IPPC include a provision for a Commission on Phytosanitary Measures (CPM) with the objective of promoting the full implementation of the objectives of the Convention. Until 1997, the CPM was preceded by an Interim Commission on Phytosanitary Measures or ICPM.

In 1965, Nepal became a signatory to the Asia Pacific Plant Protection Commission (APPPC), a regional plant protection organization within the framework of the IPPC. Nepal is also a member of the IPPC but has not as yet ratified the IPPC – the process is in parliament. The IPPC members need to undertake a number of legislative and administrative actions as part of the IPPC membership, which include for example legally designating National Plant Protection Office (NPPO) with clear roles and functions, and identification of official contact point to the IPPC Secretariat. Currently, in Nepal, the Plant Protection Directorate is carrying out the function of the NPPO by administrative decision.

The IPPC has so far developed only 19 international standards for PSMs, compared with thousands of standards for food products and livestock. These are the minimum standards all WTO Members agree as sufficient for trade in plants and plant products to take place without harmful effects. The IPPC Secretariat is located at FAO in Rome.

More information on the IPPC is available at the web site: [www.ippc.int/ipp/En](http://www.ippc.int/ipp/En)

### **Phytosanitary Measures – Nepal's Situation**

The outbreak of migratory locusts in 1951 was a milestone in the realization of the need for developing effective plant protection and quarantine system in Nepal. To strengthen technical capacity in preventing the spread and introduction of pests and diseases, Nepal joined the Asia Pacific Plant Protection Commission. Likewise, taking into consideration the domestic needs and international commitments to prevent and control the introduction and spread of pests and diseases through the export and import of plant and plant products, a Plant Protection Act (PPA) was promulgated in 1972. The need for the revision of the Act has been for many years. A number of technical meetings were held and a committee was also established for this task. The urgency of the work has increased in the wake of the WTO Membership, and the Indian Plant Quarantine Order 2003 was issued.

The apex body in charge of implementing PSMs is the central office of Plant Quarantine, under the administrative supervision of the Plant Protection Directorate of the Department of Agriculture. At the field level there are seven Quarantine Check Posts along the Nepal-India border and one check post at Tribhuvan International Airport in Kathmandu. In view of the increasing trade with China, a quarantine check post in the northern border is expected to be operational by 2005.

Nepal's *Plant Protection Act* (PPA) was enacted in 1972. A Plant Protection Regulation was approved in 1974. The objective of the 1972 PPA was to prevent the introduction and control of the spread of destructive pests and diseases through the export or import of plants and plant products. Section 2 of the Act deals with various definitions whereas Section 3 provides authority to the government to notify in the Gazette the imposition of any or all of the following prohibitions/restrictions in the import of plant and plant products:

- Selectively allow the importation of plants or products with conditions;
- Establish quarantine station, check point and laboratory for the inspection and treatment of plant or plant products and to specify working procedures, responsibilities and authority;
- Prohibit the importation of soil attached to plants or plant products or soil only or any other medium on which plants can grow or to treat such medium, as necessary, before importation and to specify such treatment;
- Prohibit the entry of disease, insects, and snails or prohibit planting or keeping of plant or plant products in certain place to check their spread; and
- Issue phytosanitary certification for plant and plant products.

The Act empowers Plant Protection Officers (PPOs) to confiscate infected plants and plant products and to impose fines. Section 9 of the Act confers authority to the government to issue rules in order to execute the provisions of the Act. Plants and plant products imported from any country shall be inspected at the entry point and subjected to treatment as necessary, if risk is perceived. Moreover, any person who wishes to export plant or plant product should submit an application along with prescribed documents in order to obtain phytosanitary certificate as required by the Act.

The government issued a regulation under the Act and imposed import restrictions on 19 plants and plant products from specified countries. The products are: maize, tobacco, sugarcane, citrus fruits, tea, cotton, bread fruits, potato and potato tuber with wart disease, banana and other plants of family *musacea*, paddy, sweet potato, tomato, groundnut, bread fruit, fruits and vegetables, sunflower, lettuce, soil and rooted plants, wheat *Lathyrus sativus* and giant African snail and other snails, DDT and DDT-treated plants and products and beef. The regulations also need updating.

Many deficiencies in the existing facilities have been identified from time to time in various seminars and interaction programmes. Table 1 reports the outcome of one such workshop, an informal brainstorming session where a tool developed by FAO - *Phytosanitary Capacity Evaluation* – was used. The following areas have been identified as requiring urgent improvements by the above-mentioned session.

- Amendment of Acts, Rules and procedures in line with the SPS Agreement and IPPC guidelines;
- Human resource development in several areas, including PRA, taxonomy and overall management;
- Strengthening laboratory and other physical facilities;
- Strengthening data/information system and analytical capability; and

- Facilitating trade, especially export trade.

**Table 1: Conclusions of an informal brainstorming session on Phytosanitary Capacity Evaluation**

	Issue/Aspect	Answers		Broad comments
		Yes	No	
1	Phytosanitary legislation (In line with IPPC)	8 (36%)	14 (64%)	Legislative framework conceptually based on IPPC principles with provision for amendments. Existing pest diagnostic capability not adequate to the extent desired by ISPM. Existing basic taxonomic information of major pests of major commodities lacks bio-ecotoxicological information. Surveillance, pest reporting and inspection system in use need technical guidance to make them inline with WTO/SPS. Pest eradication aspect is weak.
2	Pest diagnostic capabilities	86 (50%)	85 (50%)	
3	Pest risk analysis aspect	12 (27%)	32 (73%)	
4	Surveillance	22 (81%)	5 (19%)	
5	Pest free area	1 (1%)	13 (99%)	
6	Pest reporting	3 (2%)	10 (98%)	
7	Pest eradication	2 (17%)	10 (93%)	
8	Inspection system at point of entry	32 (51%)	31 (49%)	
9	Import certification	17 (50%)	17 (50%)	
10	Institutional aspect	18 (41%)	26 (59%)	

Source: Results of an informal brainstorming session on phytosanitary capacity evaluation, Kathmandu, 2004.

## MAIN ISSUES AND GAPS

This section identifies and discusses main issues and gaps. It also provides an overview of the phytosanitary system of India, Nepal's major trading partner, in view of the importance for Nepal.

Tables 2 and 3 show that Nepal exports and imports a wide variety of plants and plant products. Moreover, this trade has been increasing over time. Phytosanitary issues have impeded trade from time to time, notably between Nepal and India. For a long time, agriculture and forest-based products crossed borders without any quarantine checks and traders were habituated to this tradition. In July 2000, there was wake-up call when India enforced new regulations, tightening controls on the importation of plants and products. India also hiked quarantine inspection fees and made test results from its central laboratory mandatory. Besides the higher fees, the cost of doing business rose as the waiting period for the results increased. As a result, the export of the Nepalese agro-products and medicinal herbs suffered in terms of price competitiveness and quality, and farmers were discouraged from producing or collecting the goods for export. In the mean time, China also notified its quarantine regulation formalities on plant and their products. The notification read as follows: "Livestock, plants and their products of either country shall not be taken out of the country without a quarantine certificate and the quarantine regulations of the host country shall be strictly observed once they are brought into its ter-

ritory." At present Nepal does not even have a plant quarantine check post along the border with China.

**Table 2: Nepal's export of major plants and plant products**  
(In M. Ton unless stated otherwise)

Commodities	2001/002	2002/003	2003/004
Ginger	11947	29945	29151
Pulses	20144	27121	21570
Radish seed	4	8933	-
Cardamom	3405	4813	4273
Cabbage	3023	4192	1247
Broom	33	3259	6525
Medicinal herbs	569	3191	4610
Tea	531	2776	3388
Linseed	-	1342	1060
Buck wheat	-	1186	890
Betel nut	-	85	791
Orange	-	30	66
Coffee bean	7	14	19
Cut flower	31400	21215	22000
Flower bulb	35286	309380	235050

Source: Plant Quarantine Section, Harihar Bhawan.

**Table 3: Nepal's import of major plants and plant products**  
(M. Ton)

Commodities	2001/02	2002/03	2003/04
Vegetable seeds	10, 890	12, 897	66
Other seeds	164	14, 782	320
Potato	43, 893	63, 345	79, 275
Onion	72, 065	43, 543	54, 716
Fruits	21, 168	25, 210	9, 250
Fresh vegetables	3, 614	6, 722	12, 196
Oil crops	15, 420	16, 128	11, 266

Source: Plant Quarantine Section, Harihar Bhawan.

**Regulatory framework:** The regulatory framework applying currently in Nepal - the PPA 1972 - is over 30 years old and needs revision in several areas. In this context, the following five main features of the Act are worth noting. First, the preamble of the PPA gives the impression that the main focus is on "controls" rather than on facilitating trade. The new Act should mention trade facilitation as one key objective. Second, the Act does not define many important concepts and terminologies. For example, the following terms are not defined: germplasm, infectious disease, pest, parasite, predator, parasitism, bio-agents, micro-organisms, quarantine pest and PRA. Third, although it is conceptually based on the IPPC norms, it does not meet the IPPC standards nor is the primary government unit responsible for the administration of the law identified. Fourth, the Act is silent on measures to be taken against imports, exports, transit and re-exports when phytosanitary risks are perceived. It also overlooks Land Border Plant Quarantine (LBPQ) check post issues Fifth, the Act lacks guidelines on the role of the private sector, and on issues such as quarantine fees and the recovery of service charges. All in all, this Act needs an overhaul in the current new environment.

***Inadequate number of plant quarantine check posts along the land border:*** This has been a constraint identified for some time by traders and other stakeholders, including government officials. On the import side, there are only seven quarantine check posts along the long land border with India. There are two implications of not having enough check posts. First, traders incur additional costs in not being able to import goods from the most natural border point. And second, the government cannot monitor imports effectively and thus control the spread of harmful pests and diseases. The implications are equally serious for exports. Along the Indian border, India has established only six check posts with quarantine facility.<sup>42</sup> According to traders, this is inadequate because export products in Nepal originate throughout the country from the eastern to western border. There is also a considerable degree of uncertainty among traders in Nepal as regards the border points eligible for the export of plants and plant products. The 1996 Nepal-India Trade Treaty lists a total of 22 customs posts for exporting goods from Nepal that benefit from preferential market access terms in India. As all primary products receive preferential treatment, this is the maximum number of customs points available for Nepal. For some plant products, namely propagating materials like seeds, the situation was worse in that, under the prevention of destructive insects and pests Act, India had prohibited the entry of vegetable seeds from all Indo-Nepal border points and permitted imports only from five designated points, namely Amritsar, Mumbai, Kolkotta, Chennai and New Delhi, all of them accessible to Nepal by air only. This has changed now as the new Indian Plant Quarantine Order 2003 allows the entry through the six land border check posts listed earlier. Also importantly, India accepts Nepalese quarantine certificate. The Nepalese exporters however complain that Indian quarantine inspection fees are very high.<sup>43</sup>

***Institutional capacity:*** The Nepalese plant quarantine programme is weak in many respects, notably poor institutional capacity, notably lack of human resources to perform such essential functions as PRA and identification of Pest Free Areas (PFAs), laboratory operations, pre- and post-quarantine services and inspection. The system also suffers from weak laboratory back-up services, and poor coordination with customs and local administration. In addition, statistics and information on the occurrence and spread of pests and diseases are poorly documented. Nor being computerized, this information cannot be shared easily and so there are no linkages with international and national pest information systems. There is a widespread feeling that various agricultural development plans during the past three decades did not assign necessary priority to upgrading laboratory and strengthening quarantine capacity.

***Public-private partnership in implementing phytosanitary standards:*** The idea of public-private partnership in the process of policy formulation and implementation is very new to Nepal, not just in agriculture but also in all areas of governance. As it is farmers who produce and traders who trade, they have a vested interest on efficient and effective plant quarantine service. So, as trade expands and diversifies and the cost of a poor quarantine service starts to bite, the private sector should increasingly take interest on how the system is managed and

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<sup>42</sup> Panitanki, Jogbani, Raxual, Sonauli, Rupedia and Banbasa.

<sup>43</sup> See also the chapter on commodity study on seeds by Chitrakar and Singh in this volume.

the services delivered. There are many examples from other countries where the private sector shoulders some of the cost of providing quarantine services. Nepal should also experiment with innovative ways of building private-public partnership in terms of efficient delivery of these service as well as cost sharing. It is the responsibility of the government to make sure that there are both legal and administrative provisions for facilitating this partnership.

## Indian Plant Quarantine Regulations

India is Nepal's main trading partner. Trade statistics show that of the total export of 11 billion rupees of major agricultural products, some 93% is accounted for by exports to India. Obviously, it is important that Nepalese exporters fully understand the quarantine regulation and practices of India, and that the government works over time to harmonize plant quarantine regulations and practices of the two countries. The rest of this sub-section summarizes very briefly plant quarantine regulations of India; where relevant, the corresponding situation in Nepal is indicated in the footnotes.

The basic objectives of the *Indian plant quarantine bill* are as follows:<sup>44</sup>

- To prevent the introduction and spread of quarantine pests by regulating the importation and exportation of plants, plant products and other objects;
- To regulate the introduction of new or beneficial organisms and soil to India;
- To give effect to international agreements to which India is party and in particular to the IPPC, the SPS and TBT Agreements, and Agreement on Agriculture; and
- To provide for the constitution of the Plant Quarantine Authority of India and to ensure efficiency and accountability in the implementation of the above objectives.

The Indian bill defines important terminologies, such as beneficial organism, certificate, containment, controlled area and eradication. As said earlier, in Nepal's case, the 1972 Act does not define many terminologies. Second, these definitions in the Indian bill are compatible with those in the IPPC, especially with its Article IV. Section 4 of the bill establishes a Plant Quarantine Authority as the National Plant Protection Organization (NPPO) of India. The Authority consists of a chairperson appointed by Central Government and eight members. These members include: two representatives of the central government; one each from the following agencies - Department of Agriculture, Ministry of Commerce, Indian Council for Agriculture Research, National Bureau of Plant Genetic Resources, Department of Customs; and one representative of trade and industry dealing with the import and export of plant and plant products.

Section 6 of the Indian bill defines the functions of the Authority. These include the following: preventing the introduction of quarantine pests in India from outside the country; regulating the export of plants, plant products and other ob-

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<sup>44</sup> The text of the bill and other related information is available at: <http://nbpgr.delhi.nic.in>



jects to meet importing country's requirements in accordance with international agreements; designating regions as controlled areas; regulating the spread of quarantine pests and also the introduction of new beneficial organisms; undertaking pest risk analysis; undertaking regular reviews with a view to updating and harmonizing phytosanitary measures; interacting with international, regional or national plant protection organizations and research institutes; framing guidelines for the import and export of plants, plant product and other objects; establishing plant quarantine stations at such places as may be deemed necessary; and undertaking such other activities as may be prescribed.

Section 22 of the Indian bill empowers the Authority to accredit any laboratory, or any quarantine facility. Section 26 makes a provision for the creation of a Plant Quarantine Fund through the collection of fees, costs, charges, interest levied and collected under this Act or/and rules and regulations.<sup>45</sup> Section 34 of the Indian bill confers power to NPPO to declare quarantine pests to inspect, examine and take samples of any plant and plant products.<sup>46</sup> Section 41 prohibits the importation of any plant, plant product or other objects through notification in the Gazette and Section 43 prohibits the export of any plant, plant product or other objects without a phytosanitary certificate. Furthermore, Section 47 of the Indian bill authorizes appropriate designated officer to inspect, examine and take samples of any plant, plant product or other object, and exercise such other powers as may be necessary for carrying out these functions.

Chapter IX of the Indian bill deals with fees, charges and costs of inspection, treatment, testing or analysis, quarantine storage, removal, disposal or return of the consignment. Section 51 provides authority to specify fees, charges, and costs of inspections and services with the prior approval of the central government.<sup>47</sup>

According to the Section 62 of the Indian bill, any importation of plant, plant product or similar other objects in violation of the provisions of the Act and Regulations shall be liable to confiscation. Section 69 of the bill provides right to appeal to the Authority by any person aggrieved by any order or decision of the relevant officer within a period of 45 days from the date of the receipt of such an order or decision. The decision of the authority is final.

Chapter XIII of the Indian bill deals with offences and prosecution of wrongdoers. The offences include submission of false declaration, false document, ob-

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<sup>45</sup> Note that, in contrast, there is no provision in the present Nepalese legislation for the establishment and accreditation of laboratories in Nepal, as well as a mechanism for the collection of funds for the improvement of PSM by the NPPO.

<sup>46</sup> In the case of Nepal, clause (d) section 3 of the proposed bill confers power to the government to declare areas as "pest free area" and "infested area". In addition, the bill empowers the NPPO to declare "quarantine pest" or a "regulated non-quarantine pest" and "controlled area" as necessary based on PRAs.

<sup>47</sup> The proposed Nepalese bill does not have specific and clear provisions for fees and various other charges for quarantine related matters. Rather, section 3(i) empowers the government to fix inspection fees related to importation and exportation of plant and plant products. This provision is limited to fees for the import and export only. As in the Indian provision, there is also the need for specific and clear provisions in the Nepalese bill on fees, charges and costs, including the charges for inspection, treatment, testing or analysis, quarantine storage, removal, disposal or return of plant or plant products during importation, exportation, re-exportation and transit.

struction of proper officer in the exercise of any power under the bill, and any other offences defined as punishable offences.

The *Indian Plant Quarantine Order 2003* contains a number of important provisions on the importation of plants and plant products into India. The Order is issued by the central government under the power conferred by Section 3 of the Destructive Insects and Pests Act 1914. The Order contains seven chapters, 15 clauses, 22 forms and 12 schedules. Its Clause 3 provides details on import permits. Some of the conditions for importation are as follows:

- The import permit issued shall be valid for a period of six months from the date of issue with a provision for the extension of another six months upon payment of revalidation fee.
- The import permit issued shall not be transferable.
- Seeds and grains contaminated with quarantine weeds shall not be permitted to be imported.
- All consignments of plants and plant products and other regulated articles shall be imported into India through ports of entry as specified in Schedule I of the Order.
- If fumigation or other treatment is considered necessary, the importer shall arrange for this at own cost.
- No consignment shall be permitted to be imported unless accompanied by a Phytosanitary Certificate issued by authorized officer of the country of origin.

Clause 4 of the Order generally prohibits the importation of soil, earth, compost, sand, and plant debris along with plants, fruits and seeds. In order to import the consignment, the importer should pay the fees prescribed in Schedule IX for inspection, fumigation and disinfection of the consignment.<sup>49</sup> Chapter IV of the Order has provisions for post-entry quarantine of plants and seeds. If any importer is aggrieved by the decision of the inspection authority regarding the destruction of any plant population, he or she may appeal to the Plant Protection Advisor within seven days from the date of the communication of the decision.

## CONCLUDING REMARKS

As a WTO Member, the SPS Agreement provides for both rights and obligations to Nepal. It is Nepal's right to safeguard its plant life and health based on scientific considerations, and to demand that trading partners also follow scientific and transparent practices so that export trade is predictable and secure. On the other side, Nepal needs to meet its various obligations as per the SPS Agreement. In this context, the IPPC is an important framework. This Convention encourages its members to introduce modern and transparent plant protection practices, such as PRAs. As Nepal's trading partners also increasingly follow and adopt the IPPC

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<sup>48</sup> Schedule I of the Order has specified 13 land frontier stations as points of entry for import of plants/plant material and other articles. Of these 13 entry points, six are located along Indo-Nepal border (Panitanki, Jogbani, Raxual, Sonauli, Rupedia and Banbasa).

<sup>49</sup> Nepalese exporters have been complaining that these fees are high and are hampering the export of agricultural products to India. They also claim that the fees are not in the spirit of the WTO rules, and therefore recommend that Nepal needs to negotiate with India for reasonable fees.

guidelines, technical standards will be increasingly harmonized, thus facilitating trade. For Nepal in particular, it is very important to work towards harmonizing the standards and procedures with its two neighbours – India and China.

Based on the analysis in this chapter, the focus of the improvement measures should be on the following four areas:

- Addressing the inadequacy of facilities at border posts for monitoring and providing reliable inspection services;
- Formulating appropriate institutional and legal frameworks in the light of the IPPC guidelines and the SPS Agreement;
- Addressing the current state of weak technical capability to carry out PRAs and surveillance to back up science-based phytosanitary measures; and
- Correcting overall SPS-related policy inconsistencies.

**Policy reforms:** Although the subject matter addressed here is not entirely new for Nepal, fresh approaches are needed in view of the new developments taking place in Nepal and elsewhere, notably Nepal's WTO Membership and obligations related to the SPS Agreement. Policy reforms or fresh policies are needed in a number of areas, which include the following: institutionalisation of the SPS measures; achieving consistency with other instruments and obligations like the SPS Agreement; effective implementation of various acts and rules related to PSM; assigning appropriate priority (including funding) to capacity building in both human resources and infrastructures; implementing programmes to create awareness on SPS measures; and developing a framework for encouraging private sector participation in the efficient delivery of phytosanitary services. These policies should be developed in line with the overall agricultural development policy.

**Legislative reforms:** These reforms are long overdue as the current plant protection Act and rules were formulated more than 30 years back. Currently, FAO has been assisting Nepal in strengthening plant quarantine programme. One key objective of the project is to review and modernize the legal framework for phytosanitary measures. In the context of the SPS Agreement, the new legal framework should accommodate the following amendments:

- The preamble of the PPA should be reworded to state "Trade facilitation" limiting or controlling exports and imports as the main objective.
- A National Plant Quarantine Committee needs to be established with representations from Ministries responsible for Law and Justice, roads and transport, environment, and Finance (especially customs). Coordination between related agencies at all levels is essential.
- The Act should define concepts and terminologies, e.g. bio-agent, parasitoids, predators, PRA, Pest Free Area and so on.
- New science-based practices such as risk assessment and economic analysis pest risks should be included.
- The entire Act needs to be based on current international practices and the IPPC.
- An organization responsible for the administration of the law should be identified.

- An NPPO should be formed and its authority mandated along the line of the IPPC guidelines. The NPPO should be empowered to declare a pest, a quarantine pest or a regulated non-quarantine pest based on PRA and to declare PFA or an area of low-pest prevalence.
- The legal authority to discharge duties by the PPO should be provisioned.
- Phytosanitary measures for import, export and re-export needs to be distinguished.
- The Act should make provision of a Quarantine Fund from quarantine-related fees, charges, interest, etc.
- The Act should provide authority to the NPPO to accredit laboratories.

**Awareness creation:** There is an urgent need for making all stakeholders and the general public aware of the importance of phytosanitary measures. Also importantly, in order to facilitate trade, both traders and exporters in Nepal and importers in other countries should have easy access to relevant information, notably government's phytosanitary measures and practices, the status of pest and diseases in Nepal, and risk assessment and other analytical information. Many developing countries already provide such information through internet; there is a lot for Nepal to gain from these experiences. Farmers should be aware of phytosanitary requirements of importing countries so that they adopt better practices from the beginning of the production process. The national extension services should include messages to this effect in their programmes.

**Strengthening institutional capacity:** The institutional capacity of the entire plant protection and quarantine service is weak and needs strengthening, both in terms of physical facilities and technical capability. The IPPC provides guidelines in this area. The IPPC in particular lays emphasis on the following technical aspects.

**Pest Risk Analysis (PRA):** PRA is an important technology-driven component of the ISPM. Both PRA and "pest risk management" are required for determining whether or not a pest is a quarantine pest and then to evaluate the potential of being introduced in an area. Documented scientific evidences are essential in order to carry out in-depth PRAs. The following are some of the important technical requirements:

- Identification of pathways and imported commodities that may spread the pest.
- Identification of pest and its biology.
- Identification of pathways other than imported commodities.
- Available treatment options and their costs.
- Possibilities of the outbreak of new pests and their spatial (geographic) spread, as well as their biology and economic consequences.

**Relationship between PRA and Pest Risk Management:** A PRA is a basis for Pest Risk Management, the ultimate goal. The PRA itself is based on several analytical building blocks which include analyses of cultural practices, field treatment, post-harvest disinfestations, inspection and transportation, and the distribution system of the commodity in export and import.

**Export Certification System:** Export certifications are meant to facilitate trade. The basic elements of a phytosanitary certification process include the following:

- Relevant phytosanitary requirements of importing countries.
- Verification of phytosanitary requirements of importing countries at the time of the consignment certification.
- Legal authority to the NPPO for issuing phytosanitary certificates.
- Development of documentation and communication systems.

**Surveillance:** It is essential and urgent that the NPPO should be in position to validate the declaration of the presence or absence or limited distribution of pests using both general as well as specific survey methods. Pest/host surveys should be carried out using Good Surveillance Practices (GSP) and a record keeping system needs to be developed.

**Pest Free Areas (PFAs):** A PFA is a region within a country where specific pest does not occur as determined on the basis of scientific evidence. It is the responsibility of the government to determine and declare such areas, which could be the entire country or some specific areas, e.g. the mountain region of Nepal or Far West region. To be able to declare such areas, capacity needs to be built in a number of aspects including the following:

- A statistical system for collecting and processing data.
- Regular and periodic surveys and monitoring mechanisms.
- Regulatory control measures.
- Documentation, review and evaluation.

**Pest status:** Pest records, including the presence or absence of pests, are essential for establishing the status of a pest or pests in an area. Pest status should be outlined under three categories:

Presence status.  
Absence status.  
Transience status.

Pest status records, verified by authorized collectors based on sound technical identification procedures, are useful inputs to many other activities, including the following:

PRA.  
Pest management.  
Preparation of pest maps.  
Declaration of pest-free areas.

**Pest reporting:** The occurrence, outbreaks or spread of pests that are of potential danger should be reported promptly. Such reports should have information on the identity of the pest, location, pest status and the nature of the immediate and potential dangers.

**Establishment and strengthening of laboratories for effective PSM:** The state of laboratories in Nepal is very poor. One of the many implications of this is

that plant quarantine authorities in importing countries do not have confidence in certification and other technical information provided by Nepal. This is a serious impediment towards establishing equivalency and harmonization of PSM among trading partners. For Nepal, it is very important to achieve equivalency and harmonization of PSM measures with India in particular and other SAARC countries and China in general. Nepalese traders have experienced from time to time phytosanitary related difficulties in exporting plants and plant products to India in particular. As trade facilitation is the main goal, Nepal should upgrade facilities and strengthen technical capability on the basis of scientific evidences and international guidelines.

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## Definitions and Abbreviations of Phytosanitary Terms

<i>Area:</i>	An officially defined country, part of a country, or all or parts of several countries.
<i>Endangered area:</i>	An area where ecological factors favour the establishment of a pest whose presence in the area will result in economically important loss.
<i>Entry (of a pest):</i>	Movement of a pest into an area where it is not yet present, or present but not widely distributed and being officially controlled.
<i>Entry potential:</i>	Likelihood of the entry of pest.
<i>Establishment:</i>	The perpetuation, for the foreseeable future, of a pest within an area after entry.
<i>Establishment potential:</i>	Likelihood of the establishment of a pest.
<i>Introduction:</i>	Entry of a pest resulting in its establishment.
<i>Introduction potential:</i>	Likelihood of the introduction of a pest.
<i>IPPC</i>	International Plant Protection Convention
<i>National Plant Protection Organization (NPPO):</i>	Official service established by a government of discharge the functions specified by the IPPC.
<i>Official:</i>	Established, authorized or performed by a NPPO.
<i>Pest:</i>	Any species, strain or biotype of plant or animal, or any pathogenic agent, injurious to plants or plant products.
<i>Pest free area:</i>	An area in which a specific pest does not occur as demonstrated by scientific evidence and in which, where appropriate, this condition is being officially maintained.
<i>Pest risk analysis (PRA):</i>	Pest risk assessment and pest risk management.
<i>Pest risk assessment:</i>	Determination of whether a pest is a quarantine pest and evaluation of its introduction potential.
<i>Pest risk management:</i>	Decision-making process of reducing the risk of introduction of a quarantine pest.
<i>Phytosanitary measure:</i>	Any legislation, regulation of official procedure having the purpose to prevent the introduction and/or spread of quarantine pests.
<i>Phytosanitary regulation:</i>	Official rule to prevent the introduction and/or spread of quarantine pests, by regulating the production, movement or existence of commodities or other articles, or the normal activity of persons, and by establishing schemes for phytosanitary certification.
<i>PRA area:</i>	Area in relation to which a pest risk analysis is conducted.
<i>Quarantine pest:</i>	A pest of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed and being officially controlled.
<i>Spread:</i>	Expansion of the geographical distribution of a pest within an area.
<i>Spread potential:</i>	Likelihood of the spread of a pest.
Source:	IPPC, FAO.