

Status of pest Survey and Surveillance Program in Nepal and its Support need

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The Country

- Land locked country
- Birth place of **Lord Buddha**
- Bordering countries:
 - China (Tibet): North
 - India: East, south and west
- Geographical region: (3)
- Altitude ranges from few meters to 8,848m
- (Mt Everest; the highest peak of the world)

Major crops :

Rice, Wheat, Maize, vegetables, potatoes and fruits.

Cash crop- Tea, Coffee, Sugarcane, Jute and cardamom

NEPAL



Geographical and Political division of Nepal

Geographical division: 3 Eco-zones

Mountain (16 districts)

- 35% of total area. (4800 masl and above)
- Yak/Nak, sheep, alpine goats (*Chyangra*) and mule rearing forms the way of life of people in this region.

Hills (39 districts)

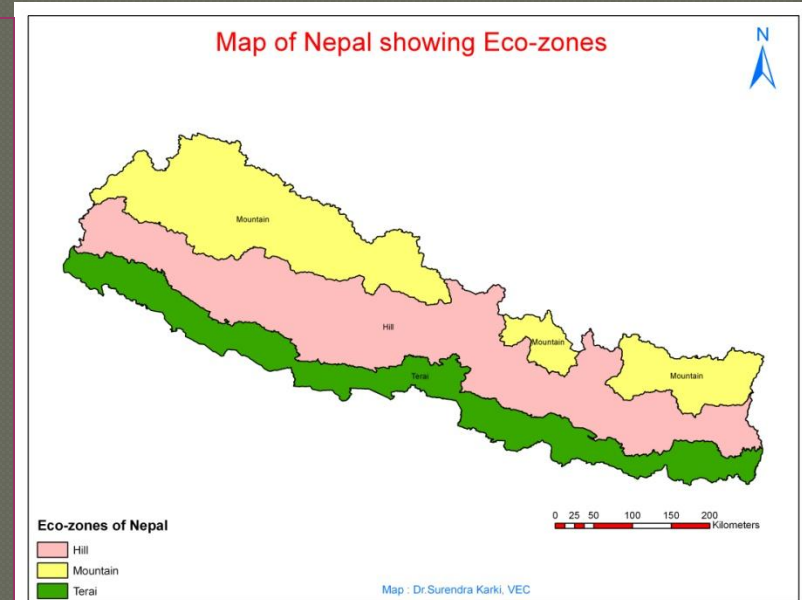
- Covers about 42% area.(300 to 4800 masl.)
- Agro-based livestock industries and horticultural production in the region are the main source of income of the people.

Terai (20 districts)

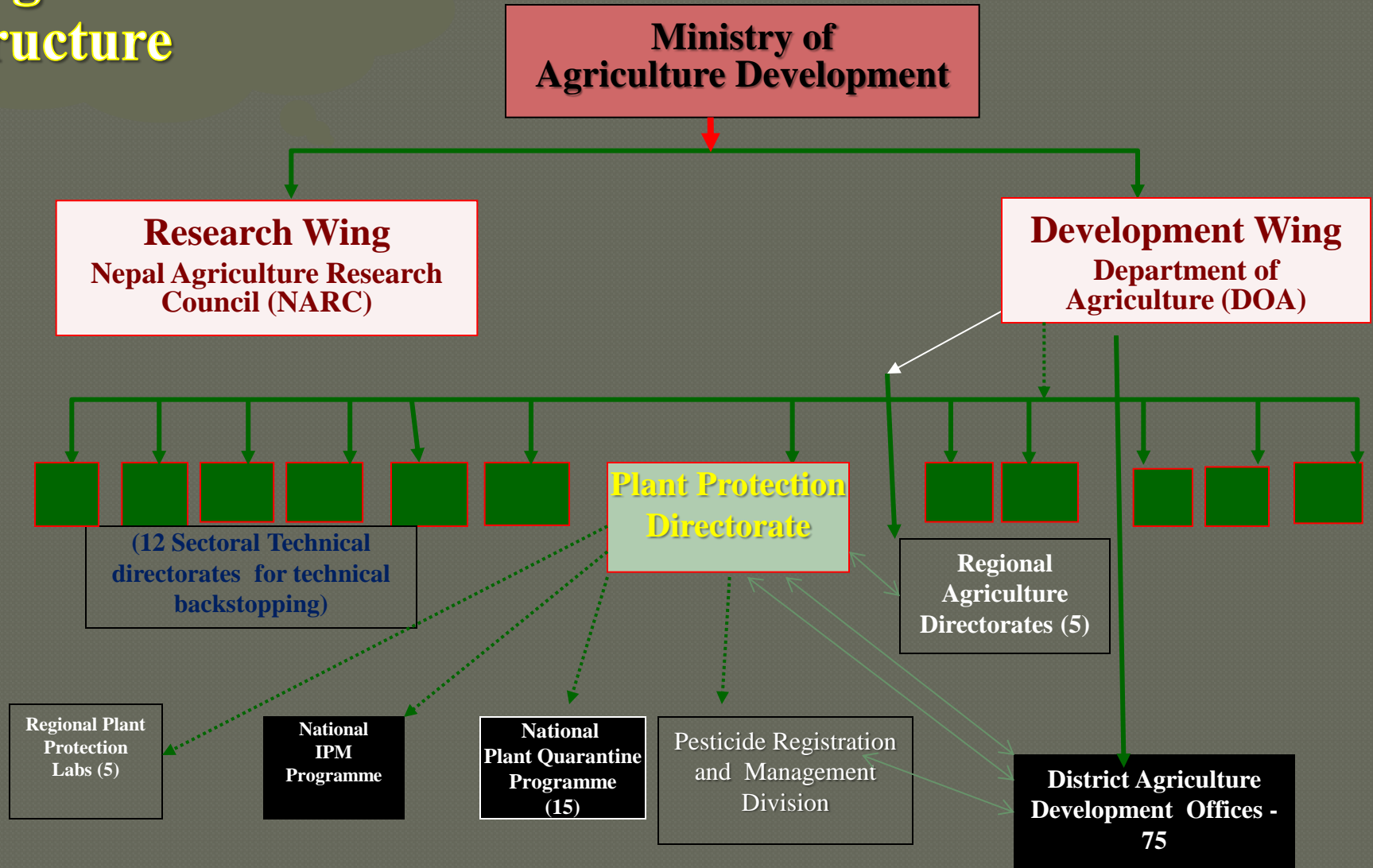
- Covers about 23% of the total area.(<300 masl.)
- This region serves as a main source of food supply to other region of the country.

Administrative division

- 5 Development regions
- 75 Districts
- 3995 Village Development Committees



Organizational structure



Vegetation and Biodiversity

- 118 ecosystems
- 75 vegetation types and 35-forest types
- Shares nearly 0.03 percent of the total landmass of the world.
- Existence of 7000 flowering plants. Out of which 245 species are endemic
- Over 500 plant species are edible, out of which 200 species are cultivated.



Development of Institutional and legal Framework in Agriculture

- ◉ Agriculture is the major sector for National economy in Nepal
- ◉ National priority on commercialization, diversification and specialization of agriculture
- ◉ NPPO is established : Plant Protection Directorate (PPD) is recognized as National Focal Point

Development in Plant Protection sector....

- Legal framework is revised : Plant Protection Act, and Plant Protection Regulation.
- Amendment of Pesticide act is in process
- National IPM policy is in process of approval
- Various working procedures including pest survey surveillance are being developed.
- Pest survey/surveillance is recognized as one of the core activity under plant protection.

Pest survey/Surveillance Program of NPPO

- Pest survey/surveillance program is performed at three level in Nepal.
- At the local level it is performed by District Agriculture Development Office (DADO)
- At the Regional level Regional Plant Protection Laboratories (RPPL) - conduct the survey. surveillance and prepares regional pest map
- At the centre level PPD as its capacity to NPPO - coordinate, support and perform the activities
- In cases of need and availability support from research institutes and universities are obtained.

Pest survey.....

- ⦿ Conversely, whatever the pest data are generated, mostly based on general survey/surveillance practiced
- ⦿ Regular reporting, notification to the RPPO is not practiced regularly.
- ⦿ Pest information to the trading partners are sent only on demand

Basis for setting Survey/ surveillance in regular program

- Importance of crop –
 - major crop,
 - coverage of crop,
 - commercial crops
- Availability of resources - financial and technical
- Incidence of pest - frequently occurring pest and its devastating nature
- In special cases - in accordance with agreement to export in aboard.
- To adopt the pest management strategy

Pest surveys that Nepalese NPPPO is performing

- General survey is practicing in a regular fashion by the existing structure.
- Monitoring surveys : this survey is performed regularly by DADO and RPPL
- Delimiting surveys : This survey is not practicing
- Detection surveys : Practicing in a general survey.
- By the working experience of the PPD it has been necessitated the capacity development in survey/surveillance

Agriculture trade and pest survey

- Over 80% of the agriculture trade of Nepal take place with India
- However, it has export/ import relation with over 40 nations of the world for different purposes and in various quantity
- But pest survey is limited to cultivated crops

Agriculture.....

- ◉ With the support of FAO national pest data base on 25 important commodities has been carried out.
- ◉ However, mostly it has to be relied on secondary sources and old data of the crop pest
- ◉ Pest survey surveillance of 15 highly important crops are under priority
- ◉ The task for declaring PFA, ALPP is yet to be performed

Major exported commodities

- ◉ Lentil,
- ◉ Large cardamom,
- ◉ Ginger,
- ◉ Tea,
- ◉ Coffee,
- ◉ Different vegetables,
- ◉ Orange,
- ◉ Mango
- ◉ Various herbs as well as
- ◉ Forest products

Areas to be strengthened for pest Diagnostic services

- ◉ expertise in disciplines relevant to pest and host identification
- ◉ management for adequate facilities and equipment
- ◉ access to specialists for verification where necessary
- ◉ facilities for record keeping
- ◉ facilities for processing and storing of voucher specimens
- ◉ Use of standard operating procedures - where available

Support need

- To enhance the technical capacity of Nepalese NPPO
- To perform the comprehensive PRA
- To declare PFA, ALPP, Buffer zone
- Development of national standards and harmonization with international standard
- To increase the competency in the concerned sector
- To facilitate agriculture trade.
- To adopt appropriate pest management tactics.
- In streamlining these activities as guided by ISPM, practical training for the concerned officers is felt very important
- To conduct the official pest survey and its update as guided by ISPM capacity development of the NPPO is our felt need

Our vision in development of pest survey/surveillance in plant Protection

- ◉ Development of pest identification capabilities to the ISPM standards
- ◉ Technical manual preparation
- ◉ Operational plan to perform survey/surveillance
- ◉ Data base to develop pest management strategy

Need of training in the areas of Survey methodology and quality management

- ◉ Sampling procedures (attractant trapping, whole plant sampling, visual inspection, sample collection and lab analysis)
- ◉ Diagnostic procedures
- ◉ Expert consultation and information trapping
- ◉ Reporting procedures
- ◉ Some case studies related to S/surveillance

Training need in the areas

- ◉ repository for plant pest records
- ◉ a record keeping and retrieval system
- ◉ data verification procedures
- ◉ Communication channels
- ◉ Identification of target pests
- ◉ Identification of scope (Geographical area, Production system, Season)
- ◉ Identification of timing (dates, frequency, duration)
- ◉ Target pests in commodity pest list
- ◉ Indication of the statistical basis



Thanks for Patience