Training Needs Assessment in Agriculture Sector in Nepal

Ram Bhakta Shrestha, NASC
Shyam Prasad Paudyal, MoAC
Overview of TNA process

• TNA is considered as important step of the training cycle management
• TNA skills are imparted through ToT courses at different level
• Expertise is available within the organization for conducting TNA
• Setting up of a TNA team
  – Training directorates/ regional training centers coordinate the overall process
  – Team comprises of; Training expert, subject matter specialist and support staff
TNA process...

• Functional job analysis
  – review of the job description (promulgation of new policies, acts and regulations by the government, structural reforms, emerging issues and problems etc.)
  – Feedback from the supervisors on their performance
  – Feedback of the clients

• Actual performance analysis of the employee
  – Focused Group Discussion
  – Semi-structured Questionnaire/ Checklist/ Interview

TNA Process...

• TNA workshop for validation and consolidation
  – Review of the curricula (Trade schools/ College/ Universities)
  – Expert consultation
  – Ex-participant's feedback

• Training evaluation feedback
• Feedback of the regional level and national level program review workshops (Trimester, Annual)
Training design

- Curriculum drafting committee comprising of content expert and training expert
- Curriculum review committee;
  - Curriculum expert
  - Subject matter specialist
  - Training specialist
- Development/ revision and updating of training curricula
Imja Glacier Lake, Solukhumbu.

Average mean temperature have been increasing in Nepal by 0.06 degree C between 1977 to 2000 and these increases are more pronounced at higher altitude and in winter. As a consequence, Nepal’s high altitude Glacier are retreating at an alarming rate, faster than the world average, resulting in the creation of glacial lakes and the threat of catastrophic Glacial Lake Outburst Floods (GLOFs).

Imja Glacier Lake (5010m) is a remarkable example of a glacier that was nonexistent in 1960 and now covers nearly one square Km. The Imja glacier that feeds the lake has retreated 75 m between 2001 and 2006.

EVEN THE HIMALAYS HAVE STOPPED SMILING

Risks of Glacier Lake Outburst
Eroded bank of the Tamor river after the Nagma GLOF of 23 June 1980
Team Composition

- Mr. Ram Bhakta Shrestha - Team Leader (Training expert), NASC
- Mr. Shyam Prasad Paudyal - Agriculture expert representing MoAC
- Mr. Trilochan Pokhrel, Pedagogic expert
- TBA, Research Assistant

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<th>Assistants (Non-gazetted)</th>
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<td>1292 (12.8%)</td>
<td>5278 (52.4%)</td>
<td>3505 (34.8%)</td>
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Form I: Structure of Decision Making

- National level - Director General
- Regional level - Regional Directors (five)
- District level - Chief, DADO/DLSO (75)
- Sub-district level (Village Development Committee) - In-charge, Service Centers/Service Sub-centers (999 livestock, 500 agriculture)

Details of Form I

Form II: Job Description

- Program Director: Plant Protection
- Program Director: Livestock Training
- Chief: District Livestock Services Office
- Chief: District Agriculture Office
- Service Center In-charge: Agriculture
- Service Center In-charge: Livestock

Details of Form II
Form III: Training Facilities

• HRD working policy of the MoAC exists
• Guided by periodic plan and National Agriculture Policy
• Fund allocation; inadequately funded
• Types of training implemented:
  – Basic induction (officer level)
  – Basic in-service (officer, non officer)
  – Subject specific technical training
  – Social mobilization, training of trainers, marketing training

Form III: Training facilities...

• Induction training mainly knowledge areas included
• On the job training is both skill intensive as well as knowledge included
• Induction training is sporadic as per the recruitment process of Public Service Commission
• On the job (in-service) training is regular
• The training duration ranges from one week to 5 weeks. Mostly one-two weeks
Form III: Training facilities...

• Who implements training?
  – mostly departmental training centers (center and 5 regions)
  – some of the in-service training are implemented by dedicated training institution (NASC)
  – Universities sometimes implement contracted out training packages but the frequency of such training is quite low

• Training facilities at departmental training center ranges from average to good categories

Form III: Training facilities..

• Specific training facilities for climate change training;
  – demonstration unit
  – computer laboratories with software for modeling
  – Training manuals, teaching aids on various climate change related topics
  – No training facilities in high mountains or Himalayan regions where climate change impacts are serious
Form IV: Training needs

Knowledge areas;

• Planning climate change adaptation strategies and programs
• Climate change adaptation technologies on; rangeland management, resource conservation
• Adaptation to climate change situations by different livestock species especially in high mountain regions (rising temperature, narrowing eco-zone area, drying of water sources)

Form IV: Training needs...

• Water harvesting technologies suitable for hills and high mountains (for farm, animals, households)
• Drought resistant crop varieties including forage crops for different eco-zones
• Diseases and pest threats in animals, plants (crops) in adopting climate change including tran-boundary disease and pest threats
• Soil fertility maintenance, conservation agriculture, reclamation of flood affected areas, organic farming
Form IV: Training needs...

• Overcoming food safety and food security threats through climate change adaptations, livelihood diversification
• Issues of food security and livelihood impacts for livestock herders in high hills and mountains
• Design appropriate communication message, awareness campaign, extension and training materials
• Trainers capability building on climate change adoption training program planning and implementation

Form IV: Training needs...

• Documentation of indigenous knowledge, skills, practices and their scientific validation
• Enhancing adaptive capacity of the of local institutions and target communities
• Community based climate change adaptation measures/ practices
• Capability building of national as well as local institutions on climate change adaptation
Training needs...

Skills area;
- Modeling techniques
- Design and operationalise Early warning system/ forecasting
- Application of GIS in planning and management of adaptation measures
- Vulnerability assessment by sub-sector and by regions
- Adaptation capability analysis (developing various indices for decision making)
- Tools and techniques on community based adaptation planning and management

Program Director, Plant protection/ DoA

Knowledge areas;
- The effects of climate change on crop pests adaptation
- The effects of climate change on the insect pests of crops, disease occurrence, incidence and outbreaks
- The natural calamities and its relation in insect havoc situation
- Agro-climatic parameters and their relation in insect pests abundance and crop losses
Plant protection...

- data handling on agro-climatic parameters and their relationship with pest abundance
- skills on analyzing climate change and pest havoc

Self evaluation of knowledge and skill areas:
- Knowledge: good
- Skills: average
- Working environment: retention of trained and qualified professional on right job

District Agriculture Officer

- Knowledge areas;
  - various terminologies and concepts related to climate change adaptation, disaster risk reduction
  - water saving technologies suitable for cereal crops, vegetables and fruits plantation
  - conservation of agro-biodiversity in the context of climate change adaptation
  - overcoming challenges faced by cold water fisheries in hills and mountains
  - emerging threats of crop pests from climate change
District agriculture officer....

Skills areas;
- water conservation technologies and its applications
- pest risk assessment techniques
- planning and implementation of community based participatory adaptation techniques
- Preparing monitoring and evaluation plan for climate change adaptation measures

Results of the desk review
- Sensitization at policy or national level is fairly high as NAPA process is completed.
- The government has promulgated separate 'Climate Change Adaptation Policy' in 2010.
- The government has put forwarding the concept of 'Mountain Alliance' among mountain countries for effective negotiation at international forum.
- The needs for regional/ global collaboration has been emphasized looking into the complexity of climate change issues and intervention needs. There is strong need for sharing of experiences, knowledge and resources for improvements in the situations
### Results of the desk review...

- Capability building of the employees working at national, regional, district and village level is urgently emphasized but the efforts are sporadic
- The existing training curriculum of employees both officers and non-officers; induction as well as in-service training have very little content to none on climate change adaptation.
- Similar is the situation with training curriculum of the farmers and entrepreneurs
- The capabilities of the existing training centers both in terms of human resources and facilities is reasonably weak and needs strengthening

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<thead>
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<th>Results of the desk review...</th>
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<tr>
<td>• There are few awareness raising/ orientation training on climate change adaptation and disaster risk management</td>
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<tr>
<td>• Specific training materials/ modules are almost none</td>
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<tr>
<td>• There are international organizations (FAO, UNDP, ICIMOD), INGOs (WWF), government and NGOs doing some awareness raising training and workshops</td>
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<td>• Scientific research findings/ recommendations on specific country contexts are very few</td>
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Suggestions for further exercise

• Most of the respondents were unaware about the knowledge and skills areas on climate change adaptation. Therefore, before going for filling form IV a checklist for the reference should be developed.

• Most of the present job description does not include climate change related assignments therefore revision of job description is equally important.

• There is a need for strong collaboration between the respective national partner and the agricultural training institutes in mainstreaming climate change adaptation related training modules.

Suggestions for further exercise

• There should be provisions for piloting of the training in respective countries and development of group of core trainers.

• Flexibility for hiring research assistants from within or outside the partner institution would ease the process. It will also help to develop staff capability of the partner institution or the agriculture training institute.
Thank You
For
Your Kind Attention