



Country Presentation

Federal Democratic Republic of Nepal

3rd Regional Forum on Sustainable Agricultural Mechanization in Asia and the Pacific
3rd ASEAN Conference on Agricultural and Biosystems Engineering
Co-located with the 12th Engineering Research and Development for Technology in Agriculture
9-11 December 2015, Manila, the Philippines

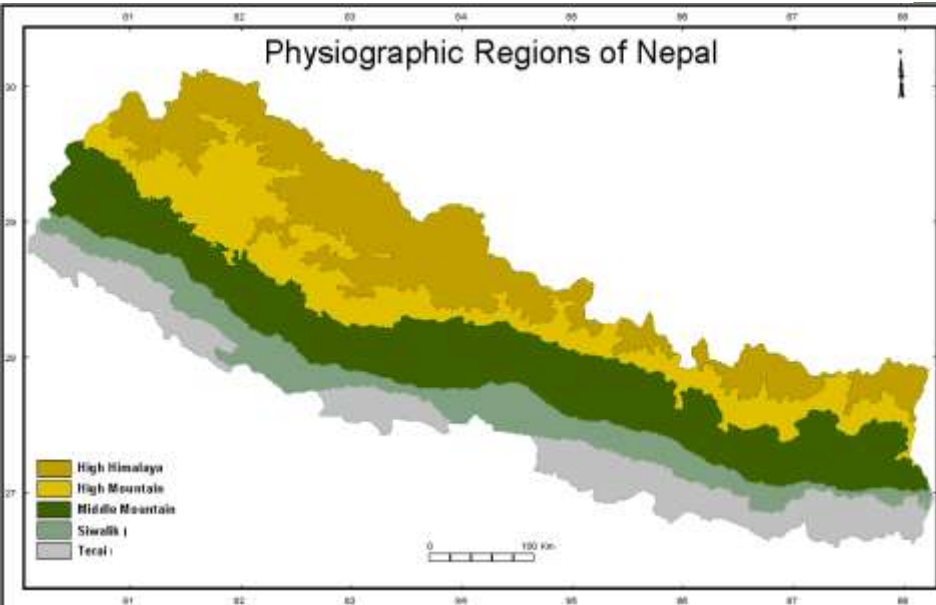


Role of Government Institutions in Human Resource Development for Sustainable Agricultural Mechanization (AgrilMech) in Nepal

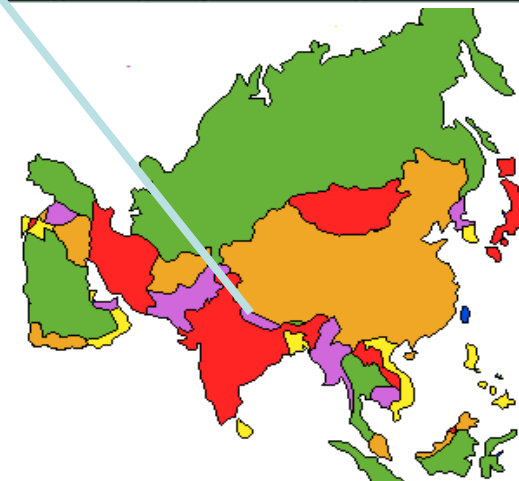
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Federal Democratic Republic of Nepal



- Land area 147,181 sq km (EW-885 km, NS-193 km)
- Population 26.50 M (CBS 2011)
- Three geographical region Terai, Hill & Mountain
- Elevation ranges from 60 m to 8848 m
- Climate temperate to sub tropical
- Rugged terrain and diversity (in all sense) the typical feature



Agro Eco zone



Mountain (35%)



Mountain

Hill (42%)



Hill

Terai (23%)



Terai (Plain)

Agricultural Scenario



- Agriculture contributed **34 % AGDP** and employment to about **66 %** of population,
- Dominated by subsistence & small holder,
- Average land holding : < 0.65 ha,
- Labor **migration** from agril sector to non-agricultural sector
- Young people unwilling to work in agriculture,
- Dependent on old-age and feminization in agriculture
- Emerging commercialization
- **Low investment capacity** and **lack of infrastructure** and **market opportunities** forced to use traditional technology

Hence, urgent need of appropriate AgrilMech in the country

Trend of AgrilMech 20 years



Types of equipments	1991/92		2001/02		2011/12	
	Holdings using equipments ('000)	No. of items ('000)	Holdings using equipments ('000)	No. of items ('000)	Holdings using equipments ('000)	No. of items ('000)
Iron ploughs	315.1	354.5	870.3	890.2	1073.4	856.3
Power tillers	5.6	1.6	15.6	11.8	75.7	10.4
Shallow tube wells	50.9	48.2	119.7	109.5	367.7	262.0
Deep tube wells	20.1	15.7	58.6	51.5	159.7	82.0
Rower pumps	3.5	3.8	22.7	21.8	79.1	36.2
Tractors	35.2	5.5	272.9	150.6	844.7	37.4
Threshers	85.6	19.9	249.5	129.1	803.1	51.9
Pumping sets	81.1	41.3	210.4	146.1	548.2	150.3
Animal drawn cart	204.6	198.1	226.4	199.1	335.0	159.9
Sprayers	50.2	23.4	203.0	145.9	574.0	282.3
Others	296.5	878.4	449.0	1072.7	290.1	83.5

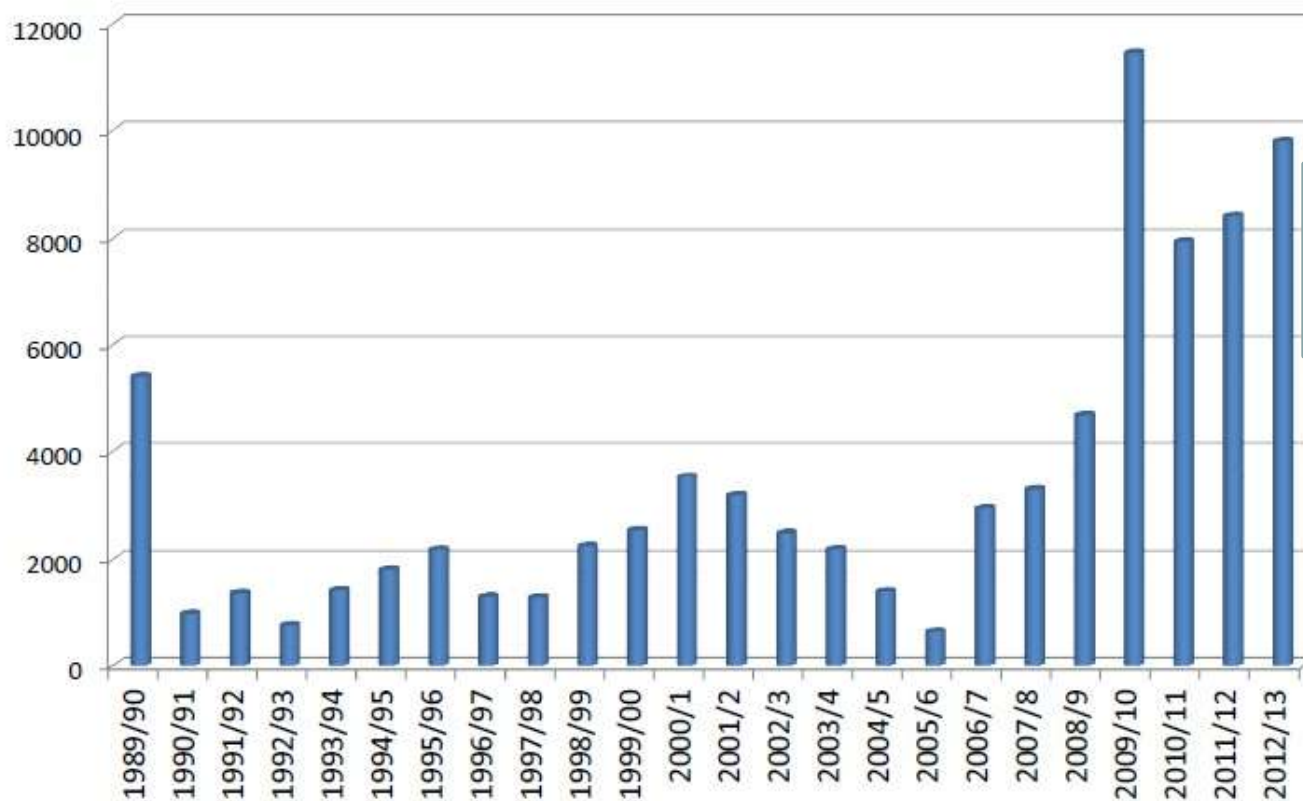
Agricultural Machinery Import , 2014/15



Item	Unit	Quantity	Values (NRs 000)	Source
Ploughs	Pcs.	41,610	8,884	China, India
Disc harrows	„	3,952	36,773	India
Cultivators/harrows	„	1,89,974	6,90,670	„
Seeder/planter/transplanters	„	6,408	14,872	India, China
Threshers	„	21,358	4,80,053	India, China, USA, Japan
Tractors	„	16,693	58,38,984	China, India
Reaper/harvesters	„	3,557	44,327	„
Fertilizer distributors	„	25,827	2,281	„
Combine harvesters	„	78	66,521	„
Cultivation machineries	„	8,063	2,212	„
Mowers	„	51	609	China, India, Taiwan
Hay making machines	„	57	750	India
Fodder balers	„	27	1,415	India, China, Japan, Korea
Cleaning, sorting and grading	„	511	4,520	China, India
Animal feed making	„	1,76,232	3,23,756	Germany, Netherlands
Grain cleaner/grader	„	24,903	3,78,556	--
Milking machines	„	207	6,629	China, India
Milling machineries	„	4,541	5,29,125	Germ, Indonesia, Turkey



Trend of Tractor Registered in Nepal



**2014/15:
16693 Nos.**

Overview of Human Resource Development (HRD) in AgrilMech



- Promotion in government service, one month in-service training will be added advantage gaining extra point
- All most all disciplinary department have training center
- Government organization having Training Center
 - Nepal Administrative Staff College (NASC)
 - Nepal Army Staff College
 - Nepal Electricity Authority Training Center
 - Water Supply Training Center
 - Directorate of Agricultural Training Center (DoATC) under Department of Agriculture (DoA), So on.

No seperate training center for AgrilMech

Overview of HRD in AgriMech



Agricultural Engineering Work Force

- 32 under DoA
- 40 under NARC

Registered Number (Agril. Engineers)		Graduation Countries	Employment
Institution	Number		
Nepal Engineering Council (NEC)	225	Nepal India Bangladesh	Government, Private, NGO/ INGO, Education
Purwanchal Campus, Dharan	264	Pakistan Germany Japan	Institute,etc
Total	489		

Overview HRD in AgriMech



Credentialing, Licensing, and regulations

Particulars	Credentialing	Licensing	Regulations
Agricultural Engineers	Academic institutions	Nepal Engineering Council	Government of Nepal
Machinery operators	Training Centers	Transport Management Department	Government of Nepal
Technicians	Academic institutions/ Training centers	Transport Management Department	Government of Nepal

Agencies/Institutions involved in AgriMech HRD and programs/projects



Agricultural Engineering Division (AED) under NARC

Main mandate : Research, Testing, Developing and Recommend

- Agricultural Mechanization Research: crop, horticulture, livestock , and fisheries sectors,
- Development of **appropriate technologies** (open drum thresher, improved plough, plastic ponds etc) for hill agri. mechanization,
- **Validation and up scaling** of AED technologies,
- **Conservation tillage** up scaling in Terai and vallies,
- **Soil and water** resource engg (drip, micro irrigation cum fertigation)
- **Post harvest** engg Research
- **Survey** on terai and hill mechanization

Agencies/Institutions involved in AgriMech HRD and programs/projects



Agricultural Engineering Division (AED) under NARC

■ Recommending Technologies like:

- ❖ Zero tillage improved iron plough
- ❖ Rice weeder
- ❖ Pedal paddy thresher
- ❖ Coffee pulper
- ❖ Jabs planter
- ❖ low cost solar dryer
- ❖ Direct seeded rice
- ❖ Pedal rice-wheat thresher
- ❖ Corn sheller
- ❖ seed drill
- ❖ fertigation system
- ❖ low cost drip irrigations

- Human resource development/capacity building: training to
 - Black smiths on improved plough
 - Operators on operation of RCTs machineries, laser land leveling, rice transplanters, DSR technologies (drum seeder and aerobic rice).

Agencies/Institutions involved in AgriMech



HRD and programs/projects

Directorate of Agricultural Engineering (DoAEngg) under DoA of MoAD : Establish in 2004

Main mandate : Extension of agricultural engineering technology, short term training, demonstration of agril.machineries, resource center development, develop custom hiring centers, post harvest centers and so on

1. Human Resource Development (HRD) for agricultural engineer/technician –Short term

- *Refresher Training on Agricultural Engineering*
- *Training on Gravity Goods Rope Way*
- *Training on Procurement Including e-Bidding*
- *Training on Passive & Mechanical Cold Storage*
- *Training on Power Tiller Operation and General Maintenance for JT/ JTA*



Agencies/Institutions involved in AgriMech

HRD and programs/projects

DoAEngg



2. Training Seed Producer Entrepreneur:

Training on Community Post Harvest Storage Processing Technology for 45 seed producer from farmers groups, cooperatives and private entrepreneur

➤ Till date 12 such center has been established



Agencies/Institutions involved in AgriMech

HRD and programs/projects

DoAEngg



3. Agricultural Mechanization Program for Rural Livelihood

i. Basic Training for Black Smiths:

- Short term training of 7-8 days
- Till date **250** had been trained
- In association with AED and private manufacture Trishul Agri Tools and Engineering



Agencies/Institutions involved in AgriMech

HRD and programs/projects

DoAEngg



3. Agricultural Mechanization Program for Rural Livelihood

ii. Special Training for Black Smiths:

- Short term training of 7-8 days
- Till date **60** had been trained
- Fabricate hand corn sheller, mould board plough, harvesting screeted sickle, pedel paddy thresher, water can, biomass stove, jab seeder etc
- In association with AED and private manufacture Trishul Agri Tools and Engineering



Agencies/Institutions involved in AgriMech

HRD and programs/projects

DoAEngg



3. Agricultural Mechanization Program for Rural Livelihood

iii. Basic Training for Power Tiller Operator:

- Short term training of 7-8 days
- Operation, Repair and Maintenance of power tiller/mini tiller for Farmers
- Till date **260** had been trained.
- In association with AED and private entrepreneur BTL Trade Pvt. Ltd, SKT Nepal



Agencies/Institutions involved in AgriMech

HRD and programs/projects

DoAEngg



3. Agricultural Mechanization Program for Rural Livelihood

iv. Special Training for Power Tiller Repair and Maintenance:

- Short term training of 7-8 days
- overhaul the engine, transmission system, fuel system etc.
- Till date **60** had been trained.
- In association with AED and private entrepreneur BTL Trade Pvt. Ltd, SKT Nepal



Agencies/Institutions involved in AgriMech

HRD and programs/projects

DoAEngg



3. Agricultural Mechanization Program for Rural Livelihood

v. Resource Center for Power Tiller Repair and Maintenance:

- Supported financing tools and machines like
 - welding m/c, grinder, drill m/c, hand tools etc
 - cost sharing of around NRs 90thousand from DoAEngg and around NRs.10 thousand from the legally registered trained power tiller operator
- Till date **20** had been established

vi. Resource Center for Black Smiths:

- Supported financing tools and machines like
 - welding m/c, grinder, drill m/c, hand tools etc
 - cost sharing of around NRs.80 thousand from DoAEngg and around NRs.8 for legally registered trained black smith
- Till date **29** had been established



Agencies/Institutions involved in AgriMech

HRD and programs/projects

DoAEngg



4. Demonstration :

- i. *Minimum Tillage Technology:*
- ii. *Harvesting Technology:*
- iii. *Mini Tiller Technology:*
- iv. *Mobile Demonstration:*



Agencies/Institutions involved in AgriMech

HRD and programs/projects

DoAEngg

5. AgriMech Exhibition :

First National Agricultural Mechanization Exhibition-2014 at Chitwan

- February 21-24, 2014
- 35 thousand visitor from 52 districts farmers, group, cooperative, policy maker, educationist, researchers, students, NGO/INGO entrepreneurs etc
- 72 exhibitors, exhibiting more than 500 agri. machineries, tools, equipments etc from 16 countries
- Total translation was NRs. 50 millions
- Ad hoc committee of **Nepal Agricultural Machinery Entrepreneurs Association (NAMEA)** had formed now its registered



Agencies/Institutions involved in AgriMech

HRD and programs/projects

DoAEngg



6. Custom Hiring Center: Community Agril. Machinery and Implement Service Center for Custom Hiring, Bara & Morang

1 new center in mid west or far west region in FY 2015/16

7. Interest Subsidy:

- ✓ Infrastructure Development for Community Post Harvest Center: Chitwan & Rautahat.
- ✓ Agril. Machinery for Community Post Harvest Center: Chitwan & Rupandehi.
- ✓ Small Agril. Machinery like PT, MT financed by Co-operatives, Lalitpur, Bhaktapur, Kathmandu

Agencies/Institutions involved in AgrilMech

HRD and programs/projects

DoAEngg



8.Focus Program to Subsidies AgrilMech:

- FY 2013/14- 29 districts out of 75
 - 50 % -75% subsidy
 - 448 PT, 236 MT and 344 attachments

- FY 2013/14- 35 districts out of 75
 - 25 %-Terai, 30% -Hill & 35 % Mountain subsidy
 - 1299 PT, 1008 MT and 1288 attachments

- FY 2015/16- 50 % subsidy in specialized machine for 13 Rice mission, 20 Fish mission districts and 24 Earth Quake highly affected districts
 - ✓ **General operataton traning is compalsury as per aggrement**

Agencies/Institutions involved in AgrilMech HRD and programs/projects



Development Organization in AgrilMech

1. Samarth - Nepal Market Development Programme (NMDP)

- Managed by Adam Smith International (ASI), is a UK aid
 - Increasing incomes of smallholder farmers and small-scale entrepreneurs
 - One of the component is **AgrilMech** in mid-hills
 - Working to stimulate private sector investment
 - Associated with **F-skill training consultant** with private entrepreneurs, BTL Trade Pvt. Ltd
 - Conducted number of **training** in different mid-hill districts in **operation and maintenance of mini tiller** and small business management
 - Inviting **EoI** from **importers and suppliers to identify availability of repair and maintenance services and establish better maintenance services** through a **mechanics training**

Agencies/Institutions involved in AgrilMech HRD and programs/projects



Development Organization in AgrilMech

2. Feed the Future(FtF)

- Implemented by International Maize and Wheat Improvement Centre (CIMMYT Intl) under Cereal System Initiative for South Asia in Nepal (CSISA-NP) of USAID
- Working in Mid and Far West region of Nepal
- For small holder farmer for **income generation** through **agriculture, conservation agriculture and AgrilMech**
- Mandated to **demonstrate and training** in AgrilMech users.
- Plannig to establish **Training and Testing Center** for DoAEngg and AED supported by USAID- INDIA through CSISA-3
- Medium-term **Earth Quake Recovery work** to eight affected districts

Agencies/Institutions involved in AgrilMech HRD and programs/projects

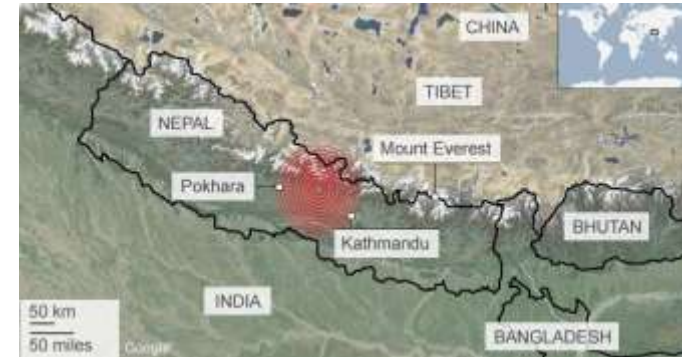


Development Organization in AgrilMech

CIMMYT Intl/CSISA-NP/USAID-Nepal

Medium-term Earth Quake Recovery work

- 25 April, 2015, EG of 7.8 magitude
- 12 May, 2015, aftershock of 7.3 mag
- 8,857 dead and 21,952 injured



- Distributing **grain storage materials** and **Agri Machine** eight affected districts 400 mini tillers and attachments in **90% subsidy for individual farmers** and **95% subsidy for farmer group /cooperatives**



- Training package for basic operations.
- Training mechanics in local level for repair and maintenance
- Brief operation manual of mini tiller developed with DoAEngg & AED



Agencies/Institutions involved in AgrilMech

HRD and programs/projects



Development Organization in AgrilMech

3. Policy Reform Initiative Project (PRIP)

International Food Policy Research Institute (IFPRI) funded of USAID

Support for DoAEngg, AED and private sector NAMEA in AgrilMech

Capacity Building

a) Training cum study visit to India for custom hiring practices

- At Zamindara Farm Solutions Pvt. Ltd.(ZFS), Fazilka district, Punjab
- 9 participant: 9th-19th August, 2015
- Training partner selected after 2nd Regional Forum "Enabling Environment for Custom Hiring of Agricultural Machinery"



Agencies/Institutions involved in AgrilMech HRD and programs/projects



Development Organization in AgrilMech

3. Policy Reform Initiative Project (PRIP)

Capacity Building

b) Training for Trainers (ToT)

India. Central Farm Machinery Training & Testing Institute (CFMT&TI) Budni (M.P)

- Tractor and attached equipment for four wheel tractors
- 6 participant: DoAEngg, AED and private sector, 6-12 Dec, 2015

China. Proposed and negotiation with **Nanjing Research Institute for Agricultural Mechanization, Ministry of Agriculture (NRIAM)**

- Tractor and attached equipment for two wheel tractors

Nepal Proposed at AED/NARC

- safety and ergonomic in Agril Machines

C) Exhibition Participation : Partial support for organizing national Agril Mechanization fair and sponsor participation in international Agril-Mechanization fairs

Strategies, Policies for AgriMech



Constitution of Nepal 2072(2015):

- Sept 20, 2015 by the house representatives of the people
- Its fundamental law of Federal Democratic Republic of Nepal
- 37 divisions, 304 articles and 7 annexes
- **7 federal provinces**, Kathmandu as capital
- Disagreement to the federal structure, agitation going on in terai.



Strategies, Policies for AgriMech



Constitution of Nepal 2072:

- PART 4 . Directive Principles, Policies and Responsibilities of the State
 - Article 51. State policies: section **(e) Policies regarding agriculture and land reform:**
 - Point (5) Making arrangements for agricultural tools and an access to market with appropriate price for the produce.*
- **SCHEDULE 6 (RELATED WITH ARTICLE 57 (2), 162 (4), 197, 231 (3), 232 (7), 274 (4) AND 296 (4) List of Provincial Powers/Jurisdiction**
S.No. 20 *Agriculture and livestock development*, factories, industrialization, business, transportation
- **SCHEDULE 7 (RELATED TO ARTICLE 57(3), 109, 162 (4), AND 197) List of Concurrent (federal and provincial) Powers/Jurisdiction S. No. 22 *Scientific research, science and technology and human resource development***
- **SCHEDULE 8 (RELATED TO 57 (4), 214 (2), 221 (2) AND 226 (1)) List of Powers/Jurisdiction for Local Level S. No. 15 *Farming and livestock, agriculture production management*, livestock health, cooperative;
S. No. 18 *Management, operation and control of agriculture extension***

Strategies, Policies for AgrilMech



HRD & AgrilMech in Agricultural Development Strategy (ADS)

- ▶ **20 years strategic planning 2015-2035**
- ▶ ADS approved by the Government of Nepal (GoN) on Sunday, 26 July, 2015
- ▶ Officially launched by the Minister of Agricultural Development on Friday, 20 November, 2015

Vision of ADS

"A self-reliant, sustainable, competitive, and inclusive agricultural sector that drives economic growth, and contributes to improved livelihoods and food and nutrition security leading to food sovereignty."

Strategies, Policies for AgriMech



HRD & AgriMech in Agricultural Development Strategy (ADS)

Capacity and Human Resources Development in ADS

- Article 5.3.3 Activities related to Output 2.3 (Education) on a Strengthened Agricultural Education System
 - Improve facilities and capacity of Agricultural University
 - Establish new departments in the Agriculture and Forestry University
 - Support for joint educational, research and extension programs
 - Establish Agricultural University partner operations with private sector
 - Establish new agricultural/veterinary science colleges in other regions of Nepal
 - Strengthen capacity of Centers for Technical Education and Vocation Training (CTEVT)
 - Strengthen capacity of professional staff from government, educational system, and private sector through overseas degrees and training
 - Mainstream food and nutrition security into existing agricultural education system

Strategies, Policies for AgriMech



HRD & AgriMech in Agricultural Development Strategy (ADS)

Agricultural Mechanization

➤ Article 5.3.10 Activities related to Output 2.10 (Mechanization) on a Range of Mechanization Options accessible to Farmers through the Private Sector

Six components to this strategy:

- ❖ Information dissemination
- ❖ Improve customer access to finance
- ❖ Capacity building of service and maintenance providers
- ❖ Enable the business environment for leasing agricultural equip
- ❖ Revise regulation and taxes to support mechanization
- ❖ Pilot a voucher scheme

Strategies, Policies for AgriMech



HRD & AgriMech in Agricultural Development Strategy (ADS)

Agricultural Mechanization

➤ Article 7.17 Decentralized Science, Technology, and Education Program (DSTEP)

➤ decentralizing the extension and research system while fostering coordination of research, extension, and education

➤ Article 7.17.2 Decentralized Research System

➤ establishment of Agriculture Mechanization Centers in the terai (2), mid hills (1), and high hills (1) within existing research centers

➤ Article 7.17.3 Integration with the Agricultural Education System

➤ agricultural education system in Agriculture and Forestry University, TU

➤ capacity building of vocational schools and establishment of regional agricultural colleges

Strategies, Policies for AgrilMech



Agricultural Mechanization Promotion Policy, 2071

❖ Approved by the GoN on 29th. August 2014

Vision

"To contribute national development through agriculture mechanization in present agriculture system to transform to modernization and commercialization."

Clause 9. Objective: 4 main point to achieving AgrilMech

1. To increase productivity through appropriate agricultural mechanization as per the economic and geographical need of the country in order to develop the sustainable, competitive and commercial agriculture sector

Strategies, Policies for AgriMech



Agricultural Mechanization Promotion Policy, 2071

Objective:

2. To develop the services and business of agriculture machineries through the coordination among the Government, private sectors and cooperatives in order to increase the access of the farmers and the business people
3. Identification and promotion of women and environment friendly agriculture machineries
4. To establish and strengthen the organizational structural development to develop, quality standardization, regulation, monitoring and promotion of agriculture machineries for agricultural mechanization

Strategies, Policies for AgriMech



Agricultural Mechanization Promotion Policy, 2071

- ❖ Clause 10. Policy and Strategy has describe how to fulfill the set objective. Inline to HRD
 - ❖ Sub clause 10.1.2 The outcome of the research and developed agriculture machine and equipments will be **promoted** through **training, demonstration, exhibition and media**
 - ❖ Sub clause 10.2.9 With the coordination between government, private, cooperative or community Modern Agricultural Machinery Workshop and Resource Center will be established and developed for **custom hiring, repair and maintenance, and training in all development region.**

Strategies, Policies for AgrilMech



Agricultural Mechanization Promotion Policy, 2071

- ❖ To fulfill 4th objective of AMPP following strategies and policies have been developed
 - ❖ *Adequate human resource development for identification, research, development, and promotion of appropriate machineries for agriculture business*
 - ❖ *Capacity development of agricultural engineering academic/educational institutions for to educate sufficient skilled manpower, in addition to encouragement training centers and Council for Technical Education and Vocational Training (CTEVT) to educate mid-level skilled agricultural engineering technician for promotion of AgrilMech.*

Strategies, Policies for AgriMech



Agricultural Mechanization Promotion Policy, 2071

- ❖ *Organize different level of training for farmers and entrepreneurs to develop adequate mid-level skilled human resources in repair and maintenance of agricultural machineries,*
- ❖ *Encourage inclusion of agricultural engineering curriculum in secondary and higher secondary vocational education.*
- ❖ *Manufacturers and suppliers should compulsorily organize trainings to farmers on operation and maintenance of agriculture machineries.*

Need Assessment of HRD for AgrilMech



- DoAEngg only 1 organization in the nation working for AgrilMech extension, 75 district office do not have AgrilEngg manpower in DoA
- Establish well equipped training and testing center
- Establish more academic and vocational institute
- Updating and refresher training for AgrilEngineers
- ToT in country and aboard
- Create sufficient job for effective AgrilMech
- Educate sufficient mid-level technician for substainable AgrilMech
- Appropriate training to local manufactures for quality and standard agricultural machinerries production
- HRD for entrepreneurs and cooperatives for custom hiring service

Need Assessment of HRD for AgrilMech



- Appropriate **training for mechanic** from the **principle company** of machineries in **diagnostic fault and problem** for quality repair and maintenance
- **Train cycle and motorcycle mechanics** to repair and maintenance of small machine to serve in local level and establish resource center in village level
- **Train black smith to handle workshop tools** and establish resource center in village level
- **Train farmers in AgrilMech to commercialized production** by lowering the production cost
- **Train rural women with appropriate drudgery less women friendly agriculture machines**

Challenges and Constraints faced for HRD of AgrilMech



- HRD is highest priority for effective implementation AMPP but required strategy, directive, guidelines etc. are not formed yet.
- AMPP was approved as per **old constitution and revision of AMPP needed** as per new federal government system.
- **Weak organization setup** in the government system. Only 15 AgrilEngineer in DoA and 25 in NARC
- **Inadquate qualified human resources** for quality training and research
- **No specific training or testing center**
- Establishing training and testing center **requires huge expensive**
- **Inadequate infrastructure facility** to conduct effective training for staff, farmers or mechanics

Challenges and Constraints faced for HRD of AgrilMech



- **No mid-level AgrilMech manpower production** in the country like in other faculty civil, electrical, mechanical
- **Hard to retain mid-level technician** of other faculty working under MoAD as they do not find career development opportunity
- **Annual budget is less** to organize more number of skill training and establish resource center
- Establishing training institute/vocational colleague by **private sector not encouraging** as **AgrilMech growth is not significant** as other profession
- **Inadequate and expensive energy.**
- **Youth migration** leaving old age and women for agriculture.
- **Credit facility and high interest rates** can't attract youth.

Challenges and Constraints faced for HRD of AgrilMech



- Easy availability of spare parts, **lack of training on operation and maintenance**
- **Inadequate facility for servicing and repair**
- The **blacksmiths indigenous skill and technology** is at the verge of extinction from the community, due to **lack of training and modernization of their skills**
- **Lack of appropriate training in custom hiring it is informal business**
- **Lack of R & D, human resources in AED and Agricultural Implement Research Center for effective research of appropriate AgrilMachines**
- **IOE, Purwanchal campus, Dharan is the only institute producing AgrilEngineers**

Solutions and suggestions for HRD of AgriMech



- National perspectives:
 - Due realization of planners and policy makers on HRD
 - Establish Training and Testing Center in all region
 - Development of more academic and vocational institutions for HRD and upgrading their capacity (both by numbers & levels) through more investments
 - Encourage private academic/vocational institution development with govt. control on fee structures
 - Assurance of employment opportunities to trained human resources by govt/private sectors
 - Addition of AgrilEngineer/sub-engineers posts in all extension offices and District Development Committees (DDCs)
 - Encourage local manufacturing of Agril Machineries

Solutions and suggestions for HRD of AgrilMech



- Regional perspectives:
 - Developed countries support undeveloped/developing countries through scholarship provisions
 - Capacity enhancement to existing human resources (Agril Engineers /sub-engineers) through trainings/visits/traveling seminars
 - Exchange of new innovations on AgrilMech among the member countries of CSAM through strengthen linkages
 - Coordination among the organization/institute involve in AgrilMech in the SAARC regions
 - Establish HRD centre for AgrilMech in SAARC regions
 - Professional organization of the region meet frequently for cooperation.

Solutions and suggestions for HRD of AgrilMech



- Regional perspectives:
 - Development partners support establishing AgrilMech Training and Testing Center
 - Capacity building for training and testing at established and well equipped international institutes
 - Strengthen and expand ANTAM activates throughout the region
 - CSAM continue organizing regional meeting and seminar for coordination and cooperation



Thank You
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