

ENVIRONMENT &
NATURAL RESOURCE
MANAGEMENT
Training Programme

We enhance our worth, by conserving our Natural Resource...



ENVIRONMENT & NATURAL RESOURCE MANAGEMENT Training Programme



Pakistan is a resource rich country. It has lofty mountain ranges, vast plains, deserts, fertile soils, perennial rivers and Sea. Proper management and effective utilization of these natural resources becomes all more imperative for the development and prosperity of a country, if it has an agrarian based economy. An important characteristic of the economy of Pakistan is that its natural resources either remain un-utilized or under-utilized due to lack of natural resource management skills, capital, limited size of the market and laid back attitude of the people.

Significance

Environment & Natural Resource Management Training Programme of N-IRM provides skill and knowledge on agriculture and horticulture through innovative training courses and helps promote and build up the capacity of communities by obtaining appropriate methods of Natural Resource Management, Livestock Management practices, Agricultural Farm Management practices and provide preventive and curative services in the Poultry and Fisheries sector. This ultimately results in acquiring our objective of Poverty Alleviation through



harnessing people's potential.

Intended Beneficiaries

The target group for the training in E&NRM is scattered and diverse which mainly includes the rural farmers and growers (men and women). This programme is also involved in conducting training events for community activists and professional staff of RSPs and other organizations.

Training Methodology

This training programme is specifically designed to strengthen local capacities of rural farmers by utilizing natural resources. This is done by using direct learning methodologies which are helpful to clear the vision of the participants such as interactive classroom lectures, experimental games and seminars. The teaching methodology encompasses the "practical hands on experience", field trips and brain storming sessions which makes our training programme distinctive.

Collaborations

To improve the quality of life of the rural communities, N-IRM has built strong linkages between communities and various public sector organizations. Through E&NRM training programme, our team of experts works in collaboration with National Agricultural Research Center (NARC) which is the largest research institute of Pakistan Agricultural Research Council (PARC). The Training events are held at NARC, ARID University, Barani Livestock Production Research Institute Khairi Murat and N-IRM.



PORTFOLIO OF TRAINING MODULES

Following is a list of the current portfolio of training modules being offered by NRSP - Institute of Rural Management, under its Environment and Natural Resource Management Training Programme.

AGRICULTURE

SLOPING AGRICULTURE LAND TECHNOLOGIES (SALT)

6 Days

Soil and water conservation for sustainable land use
SALT, its importance in hill farming
Land use to conserve fragile mountain resources
Establishment and management of hedgerows
Establishment and management of low cost nurseries
Introduction and establishment of potential fodder crops
Dry afforestation
Integration of fruits and vegetables in SALT
Visit to agro-forestry nursery and project sites

CROP PRODUCTION AND PROTECTION TECHNIQUES

6 Days

Introduction to the major crops of the area
Insight into agronomic practices
Identification and control of insect bites and diseases
Introduction of important weeding methods
Briefing on pesticides and sprays

LAND USE PLANNING FOR IRRIGATION SCHEME

2 Days

Soil sampling and guidance for input arrangements
Proper farm layout, mapping, precision and levelling
Improved crop rotation by introduction of new improved varieties and high value cash crops
Introduction of improved cultivation, irrigation methods and scheduling
Kitchen gardening and off-season vegetable cultivation
Fruit plantation, grafting, budding, and layering of indigenous fruit plants
Forest and fruit nurseries

INTEGRATED PEST MANAGEMENT (IPM)

2 Days

Introduction to integrated pest management
Identification of useful and harmful insects for effective IPM
Effective use of chemical insecticides in IPM
Importance of persistent organic pollutants (POPs)
Use of organic manure in IPM (Farm yard manure, Compost and Green manure)
Insect/pest control (Biological, Chemical, Cultural, and Mechanical)

AGRICULTURAL MACHINERY

OPERATION AND MAINTENANCE OF WATER LIFTING PUMPS AND PETER ENGINES

2 Days

Introduction of pump and peter engine
Points to be considered during installation
Measures required for efficient working

OPERATION AND MAINTENANCE OF DRILLS, HARVESTERS AND THRESHERS

2 Days

Introduction to instruments
Precautionary measures during operation of instruments
Routine maintenance procedures

WATER RESOURCE DEVELOPMENT AND MANAGEMENT

ON-FARM WATER MANAGEMENT

4 Days

Introduction of laser equipment for land levelling
Precision land levelling
Water course improvement
Measurement of flowing water
Machinery required for water conservation
Methods of land preparation and sowing techniques for water conservation

WATER & SOIL CONSERVATION

4 Days

Introduction to check dams and delay action dams
Introduction to mini dams and ponds
Agricultural machinery required for soil and water conservation
Soil conservation techniques
Irrigation systems and techniques
Types of water and soil erosion

IRRIGATION TECHNIQUES

2 Days

Sprinkler irrigation
Trickle and drip irrigation
Cultivation of crops on grades

AQUACULTURE

FISH FARMING

6 Days

Introduction to site selection
Familiarization with fish farming prospects and problems
Orientation to steps in fish farm construction
Briefing on types of fish
Details on feed requirement of fish
Types of diseases
Reproduction of fish
Catch nets for fish
Grading, packing, and marketing of fish

RENEWABLE ENERGY TECHNOLOGIES

Solar light emitting diodes (LED)	Fuel efficient stove
Solar pump with sun tracking system	Wind mill
Solar concentrator	Micro hydal power plant
Solar geyser	Solar box
Solar dryer (fruits and vegetables)	Solar still
Bio gas plant	Bio sand filter plant

2 Days

LIVESTOCK

ADVANCED COURSE ON LIVESTOCK NUTRITION AND PREGNANCY DIAGNOSIS

30 Days

Anatomy of reproductive organs
Diagnosing techniques of gestation period
Familiarization to reproductive disorders
Introduction to locally available nutrients
Diagnosing techniques of pregnancy period
Imparting knowledge on feeding formulations

LIVESTOCK MANAGEMENT

2 Days

Introduction to animal management
Importance of proper livestock management
Basic principles of animal management
The importance of fodder in animal management
Familiarization with various breeds

BACKYARD POULTRY MANAGEMENT

6 Days

Introduction to poultry production
Introduction of feeding, vaccination and medication schedule
Poultry breeds
A method for selection of eggs
Management of hatchery
Management of one day old chicks
Familiarization with vaccination exercises
Field visit to a poultry farm

APICULTURE

BEE KEEPING

6 Days

Introduction and importance of bee keeping
Comparison of tools used in traditional and modern bee keeping
Establishing of apiaries and site selection
Familiarization with remedial measures of bee stinging
Orientation of types of bees
Bee cycle and behaviour
Survey of flora and fauna for bee keeping
Role of queen, drone and workers in honey production
Development of colony and feeding
Orientation of the control measures of swarming
Detail on honey extraction
Briefing on honey packing, storing, and marketing

ADVANCE BEE KEEPING

3 Days

Introduction to queen rearing
Importance of queen rearing
Explanation on queen cup formation
Grafting
An explanation of the breeder colony selection
Details on advanced level bee keeping

HORTICULTURE

ORCHARD DEVELOPMENT, MANAGEMENT AND PROTECTION

6 Days

Introduction to fruit industry's prospects and problems
Explanation of site identification for orchards
Briefing on plant selection and transportation
Identification and application of the right fertilizers

Precautionary methods and pesticide applications
Irrigation
Pit formation
Types of orchard establishment
Demonstration of the spray celebration
Study cum field visit to the orchards and nurseries

NURSERY RAISING AND PLANTATION TECHNOLOGY FOR FRUIT AND FOREST PLANTS

4 Days

Introduction to forestry
Role of forestry in improvement of environment
Land amelioration through forestry
Nursery raising techniques with practice sessions
Plantation techniques
Explanation on budding, grafting and layering techniques
Familiarization with preventive measures
Orientation to work plan preparation

SUBJECT SPECIFIC WORKSHOPS

Duration: 1 Day

Introduction to livestock management
Livestock breed improvement
Wild boar management
Introduction to poultry management
Introduction to apiculture
Introduction to sericulture
Introduction to aquaculture
Water course improvement
On farm water management
Operation and maintenance of seed grader
Soil sampling methods
Basics for crop improvement
Rabi and kharif crop cultivation
Cotton cultivation
Wheat cultivation
Rice cultivation
Grain storage
Basics for vegetable cultivation
Mushroom growth, their types and uses
Post harvest technology for fruits and vegetables
Packing of fruits and vegetables
Grading and marketing of fruits and vegetables
Orchard training, thinning and pruning
Orchard pest management
Rodent control (porcupine and rat)
Insect control measures of post harvest period

N-IRM PROFILE

NRSP-Institute of Rural Management (N-IRM) is the foremost training facility in the not-for-profit sector, conducting up to 600 different types of training with a turnout of over 50,000 trainees. Over the last 18 years, N-IRM has been directly responsible for building the capacity of development professionals and communities across Pakistan, as well as developing a pool of lead trainers to meet the specific needs of NRSP, other partners, projects and communities. N-IRM is an ISO 9002-2008 certified entity. N-IRM has highly organized internal controls and systems in place which include financial procedures, staff service rules, gender policy, as well as administrative processes.

TRAINING PROGRAMMES OFFERED

- The **Community Training Programme** works to enhance the capacity of community organization members in managerial, technical and vocational skills. The main components of CTP are the Community Management Training Programme, Social Sector Services Training Programme, Environment and Natural Resource Management Training Programme, Vocational Training Programme, and Enterprise Development Programme.
- The **Staff Training Programme** aims to enhance the knowledge, skills and attitudes of the staff of other RSPs, government departments, national and international organizations. The main components of STP are the Internship Training Programme, Management Development Programme and Micro Finance Training Programme.
- The **Management Development Programme** implemented in partnership with the Rural Support Programmes Network, aims to enhance the professional competencies of senior and mid-level managers by developing a needs-based curriculum for training courses that upgrade academic, technical and managerial skills.
- The **Women's Leadership Programme** enables women professionals to improve and develop their leadership and management skills. This unique programme consists of five 2-week sessions over one year. The sessions are complemented with 'distance learning' and mentoring.
- The **Academics Programme** offers Post Graduate Diplomas in Human Resource Management and NGO Leadership and Management. It also offers Executive Diploma in English Language Proficiency. These diplomas are designed for professionals from government, corporate sector and civil society organizations.
- **Vocational, Technical and Educational Centers** have been established in Rawalpindi, Rawalakot and Muzaffarabad with the aim of providing vocational, technical and educational skills to the young men and women of rural areas, and to the vulnerable and marginalized, especially women and persons with disabilities.



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