GENERAL AND SPECIFIC MEASURES FOR DROUGHT ADAPTATION

OPPORTUNITIES FOR COMMUNITY INVOLVEMENT IN FIGHTING DROUGHT

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PhD in Biological sciences,
Ms in Agribusiness and rural development
Introduction of plants’ species, varieties and hybrids with increased tolerance and higher level of adaptation to droughts and extreme temperatures

Capitalising and respecting the crop rotation system
GENERAL AND SPECIFIC MEASURES FOR DROUGHT ADAPTATION

A rational and minimal tilling and application of methods to increase soil fertility

Setting up and rational exploitation of plant irrigation systems on fields suitable for irrigation
GENERAL AND SPECIFIC MEASURES FOR DROUGHT ADAPTATION

- Construction of lakes, basins and water units with the view of providing water for domestic and irrigation needs
- Construction and reasonable management of drinking water sources: wells, artesian wells, water towers, etc.
GENERAL AND SPECIFIC MEASURES FOR DROUGHT ADAPTATION

Setting up protective forest belts and forestry improving arrangements

Monitoring, prognosis and early warning on the jeopardy of drought
COMMUNITY INVOLVEMENT IN FIGHTING DROUGHT

The losses within the national economy of the Republic of Moldova caused by the extreme droughts in 2000 have risen to 169 million USD, and in 2007 to 987 million USD.

The annual economic impact caused by drought is 21.12 million USD.
THE FARMERS REPRESENT THE CATEGORY MOST PREDISPOSED TO BE VULNERABLE TO DROUGHT, WITH HIGH POVERTY RISKS.

Disastrous effects of drought:

- Lack of drinking water and water for irrigation (with a mineralization of 500 mg/l);
- Depreciation of agricultural crops’ harvests;
- The lack of fodder increases the vulnerability of the zootehnic sector;
- Lack of water for watering the livestock;
- Suffocation of plankton and fish in the water basins;
- Risk of emergence and spreading of infectious and parasitic diseases;
- On persons suffering from heart and respiratory diseases.
TRAINING THE POPULATION FOR THE POSSIBLE IMPACT OF DROUGHT

- being aware of the rules of conduct in a situation of drought or sunstroke;
- providing family first aid kits;
- providing water and food provision stocks;
- restricting the time of being on a field and with a long exposure to sun;
- fitting out shelters with thermic isolation;
- providing simple or special means of individual protection;
- ensuring the proper functioning of the home equipment.

Recomendations for the protection of domestic livestock and poultry:

- providing with drinking water, fodder and veterinary products;
- ensuring a balanced food ration;
- preparing the shelters, including their thermal isolation;
- providing a microclimate for the animals kept in shelters;
- preparing and installing of sheds for protection against sunstroke.
POTENTIAL MECHANISMS AND MEASURES OF TRAINING, PREVENTING AND DIMINISHING THE DROUGHT AT THE RURAL COMMUNITY LEVEL

Development of prevention, action and contingency plans

- Identifying the risks and estimating the exposure of the community;
- Evaluation of all available resources;
- Actions and their time estimation;
- Distribution and awareness of the obligations;
- Assessing community’s training and preparation degree;
- Implementation of specific activities.

Community

- Risk identification
- Assessing resources

Human
- Means and equipment

Financial
- External sources

Developing the action plan

Awareness of each’s duties

Implementation

Evaluation and Improvement
The law on civil protection nr. 271-XIII, of 09.11.94, and Government’s Decision nr. 367 of 13.04.2000, regulate the National Action Plan on fighting desertification, according to which the economical agents have the duty to ensure:

- An improved system of plant cultivation and its methods;
- An integrated management of disease and pest protection of plants;
- Harvesting and capitalising of the production harvested;
- A sustainable management of the drinking water and irrigation water sources;
- Afforestation and plant and forest amelioration arrangements.

**Economic agents and farmers shall be aware of the fact that the sustainability of their own business, in the case of a possible drought, will be guaranteed primarily by the availability of their own provision stocks, personal perseverance and the level of preparation of the agricultural plantations and livestock.**
SOCIAL AND ECONOMIC MEASURES APPLICABLE TOWARDS PREVENTING AND FIGHTING DROUGHT

Insurance of agricultural crops and livestock, compensation and calamity funds

*The law on subsidized insurance of production risks in agriculture nr. 243-XV of 05.07.2004.*

p.1 – the percentage of state compensation of the insurance premiums for the agricultural sector (80%);

p.3. – the list of the agricultural crops and animal species proposed for subsidized insurance, approved by the Government of the Republic of Moldova;

p.5. – agricultural producers shall benefit from subsidies to the insurance premiums only when:
  - they have contracts for subsidized insurance;
  - they have paid 20% (for 2009) of the insurance premium;
  - they have registered the crops and animals to be insured with the agricultural registry of the townhall.

Diversifying the lifestyle and promoting non-agricultural activities

- Creating and developing small and medium enterprises in the service area;
- Diversifying the non-agricultural economic activities within the agricultural husbandries;
STRUCTURAL MEASURES FOR PREVENTING AND FIGHTING DROUGHT

Creating and setting up of the infrastructure for providing drinking water and irrigation water

Potential financers: The Republican Environmental Fund, State Agency „Apele Moldovei”, Moldova’s Social Investment Fund, international projects.

Offering facilities for seed storage and livestock sheltering

- setting up and developing networks of storehouses and depots;
- setting up stationary and temporary shelters for livestock and poultry;

Access to financial sources, risk funds and micro credits

- Funds for subsidies in the agricultural sector;
- Financial means for subsidized insurance of risks in agriculture;
- Preferential credits, through RISP, IFAD and PASET, etc.;
- Credits for agriculture and small enterprises: FNAEIC, ProCredit, Microinvest, CFR, state projects;
- Assistance programs: World Bank, CPP-IREX, USAID, GTZ, etc.;
- Favourable bank credits from commercial banks within the country;
- Equipments procurement by leasing.
EDUCATION AND TRAINING WITH THE VIEW OF ENSURING THAT AGRICULTURAL INSTALLATIONS ARE WELL PREPARED TO DROUGHT CONSEQUENCES

Training and informative programs should include the following target groups and application methods:

- members of the community – persons of all ages;
- instruction workshops for the Local Public Administration, organisational measures, management and public awareness;
- workshops on specific topics for agricultural producers;
- activities to spread environmentally friendly agricultural practices;
- workshops for the disadvantaged segments of the community or farmers;
- competitions among the workers from different rural economic areas;
- activating and widely using the local mass media.
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<thead>
<tr>
<th>ACTIVITIES FOR FUTURE DROUGHT PREVENTION</th>
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<td><strong>At national level - Civil Protection Service within the Ministry of Internal Affairs, State Hidrometeorology Service within the Ministry of Environment and the network of SRE within the Ministry of Agriculture and Food Processing.</strong></td>
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<td>- monitoring and development of specialised prognoses;</td>
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<td>- early warning and informational availability;</td>
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<td>- analysis and evaluation of risk factors;</td>
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<td><strong>At community level - LPA and local communities.</strong></td>
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<td>- development and access to early warning systems;</td>
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<td>- establishing material, financial and human resource reserves;</td>
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<td>- development and application of management plans;</td>
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<td>- mobilizing the members of the community;</td>
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<td>- setting up forest belts, lakes and basins as sources of drinking water;</td>
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<td>- organising of assistance and training services;</td>
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<td><strong>At the level of the agricultural enterprise the following activities shall be undertaken:</strong></td>
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<td>- management and administration of the agricultural business,</td>
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<td>- diversification of the spectre of crops, livestock and poultry, as well as activities and services offered;</td>
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<td>- providing alternative income sources;</td>
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<td>- securing seed, fodder and provisions reserves.</td>
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