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COMMITTEE UNDER THE AUSPICES OF THE GOVERNMENT OF  
THE REPUBLIC OF TAJIKISTAN, AT SESSION IV OF THE  
SECOND PREPARATORY CONFERENCE TO THE  
17th OSCE ECONOMIC AND ENVIRONMENTAL FORUM**

(Slide 1)

**Limiting environmental migration in the mountainous regions of Tajikistan**

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[Pinpoints Tajikistan's location on a map of the world]

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**Map of Tajikistan**

Figure 1.2: Map of Tajikistan

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**Factors involved in environmental migration**

**Natural:**

- Floods;
- Earthquakes;
- Landslides.

**Man-made:**

- Erosion;
- Salinization;
- Swamp formation;
- Soil and water pollution.

(Slide 5) **Table 3: Major floods of the last ten years**

<b>Year</b>	<b>Location</b>	<b>Victims/Damage (US dollars)</b>	<b>Comments</b>
1998	Garm, Vose (Republic of Tajikistan)	134/60 million direct damage	Heavy rain
1998	Dushanbe, Kulyab (Republic of Tajikistan)	1,346/300 million (approximate figure)	

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### **Man-made causes of flooding**

The increase in the frequency of flooding is primarily due to deforestation. Thanks to the high infiltration level of forest soil and forest leaf litter as well as canopy interception, forests are able to regulate large volumes of water. Furthermore, forests prevent erosion and help to preserve small rivers and streams. Surface run-off in forests is on average 15 times lower than in fields. Once the trees have been felled, there is a 3.5-fold reduction in the soil's infiltration properties and the intensity of its erosion increases 15-fold.

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### **The phenomenon of mudslides on the territory of Tajikistan (given as a percentage)**

- Never occur — 10 percent;
- Low occurrence — 27 percent;
- Average occurrence — 9 per cent;
- High occurrence — 22 per cent;
- Extreme occurrence — 32 percent;

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### **High-priority reforestation work in environmentally disadvantaged regions from 2005 to 2009**

In total — 22,000 hectares:

- 2005 — 400 hectares;
- 2006 — 400 hectares;
- 2007 — 400 hectares;
- 2008 — 500 hectares;
- 2009 — 500 hectares;

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### **Main legislative acts concerned with solving the problems of environmental migration**

- Law of the Republic of Tajikistan on Migration;
- Decree No. 344 of the Government of the Republic of Tajikistan of 4 September 1999 on the provision of credit to households at risk because of exogenous processes and their relocation out of these hazardous zones during the period from 2000 to 2004;

- Decree No. 467 of the Government of the Republic of Tajikistan of 9 November 2000 on the approval of the Regulations regarding the procedure for the relocation of households out of environmentally hazardous territories of the Republic of Tajikistan;
- A number of directives of the Ministry of Labour and Employment.

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### **Relocation of households in the Republic of Tajikistan over the last five years in figures**

- Scheduled for relocation — 7,664 households;
- Actually relocated — 2,420 households.

Around 1,200,000 US dollars were projected in the budget for this purpose; however, only around 803,333 US dollars in total were actually allocated, amounting to 68.8 per cent of the total budget.

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### **Problems affecting the situation as regards environmental migration**

- Integration of environmental policy into economic and social plans and programs;
- Insufficient information available on issues concerned with environmental migration and the existence of likely environmental threats;
- Increase in the potential of environmental management and the analytical skills of the staff of different institutions and departments in this area in attracting investment in environmental management issues;
- Introduction of environmental assessment mechanisms and their mandatory use when planning any business activity affecting the environment;
- Conduct of public awareness campaigns, involvement of the population in community-based environmental management methods, ensuring access to information connected with different aspects of the environment.

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### **New approaches in the struggle with the elements**

In view of the fact that the reliability of protective structures is constantly increasing, the main criterion when selecting a type of engineering defence must be maximum effectiveness with minimum damage to the environment. The ideal solution is a combination of engineering and non-engineering methods which take into account the natural and business features of the territory and are implemented not in individual segments of the drainage basin but rather cover all of it. The so-called conceptual framework for the regulation of the business development of floodlands is based on the rational use of flood-risk territories, aimed at organizing enterprises that would cause minimum damage in the event of flooding.

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### **Non-engineering (or administrative) defence measures**

Aimed at the restriction or complete prohibition of those forms of business activity which may increase the risk of flooding, and aimed at the expansion of measures to reduce or prohibit deforestation. Reforestation measures are being implemented. In areas suffering from erosion, contour ploughing is used, along with the creation of terraces on slopes and subsurface tillage of the soil. Various anti-erosion measures are being employed. Those forms of business activity which would cause the most damage in the event of flooding are also subject to restrictions.

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### **Some ways of solving the problems associated with environmental migration**

- Conduct of campaigns and educational programmes to increase the population's environmental awareness;
- Promotion and employment of other (alternative) forms of environmentally friendly business activities;
- Teaching farmers effective and accessible agricultural methods to help prevent soil erosion and the pollution of water resources;
- Strengthening of slopes by planting trees and other soil-binding plants, etc;
- Increasing the role of warning and alarm systems and the forecast of flooding and floods caused by melting snow by further developing the methods used and improving information collection.

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### **Some ways of solving the problems associated with environmental migration**

- Analysis and assessment of gaps in the legal framework and improvement of legislation;
- Analysis and assessment of gaps in the institutional framework and adoption of measures to strengthen it with a view to carrying out reconstruction operations and being ready for disasters;
- Development of measures to reduce the impact of flooding;
- Development of co-ordinated response systems, proactive planning, alleviation of effects, strengthening of functional capabilities;
- Development of long-term forecasts and strategies to help solve problems connected with climate change.

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### **Some ways of solving the problems associated with environmental migration**

- Creation and strengthening of a hydro-meteorological monitoring and forecast system;
- Assessment of the role of the private sector, local communities and non-governmental organizations in flood situations. Appropriate sector and inter-State co-ordination. Creation of environmental security co-ordination committees;
- Development of systematic plans to deal with national disasters, monitoring the results obtained and inclusion of adapted and streamlined programmes in State expenditure programmes;
- Development of a programme to restore ecosystems in river deltas (planning, assessment of risk and effects).

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### **Some ways of solving the problems associated with environmental migration**

- Development of measures for economic rehabilitation, proper consideration in assistance and restoration operations. Reduction of socio-economic vulnerability to flooding;
- Development of measures to improve the management of dykes, reservoirs and dams;
- Assessment of the effectiveness of measures after flooding and incorporation of appropriate improvements;
- Creation of financial systems to ensure financial mechanisms for risk reduction;
- Inclusion of flood management in leading water quality and climate change projects;
- Interactive flood management and measures to alleviate flooding as part of special-purpose assistance for social programmes in areas subject to flooding;
- Reform of the communication and organizational aspects of the flood management structure.