«Warm Comfort»
Thermal insulation via Micro-credit in Gorno-Badakhshan

Sustainable Use of Natural Resources in Central Asia

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Content

- Why this product?
- Thermal insulation technology
- Dissemination through loans
- Technical performance
- Lessons learnt and Next Step
Situation

• Energy crisis: After independence of TJK, almost all households in GBAO dependent on scarce natural resources
  
  • high consumption of fuel, like wood for heating private houses
  • degradation of natural resources
  
  • private households will benefit from energy fuel savings & will improve their livelihoods by escaping from the vicious circle of poverty
Thermal Insulation

• Principle: Use of local and available materials

• Insulation ceiling / roof: straw / algae + lime + clay

• Energy efficient windows:
  → Adapted German technology, double-glazing, a simple mechanism for ventilation

• Roof hatch, sealing's
Micro-credit

Approach:

• Thermal insulation forms a major investment for the people of the region

• to provide the financial base for households to invest into thermal insulation activities

• Credit up to 500$ - interest rate 2.5% monthly - duration 6-12month

→ together with MLF - MADINA
Micro-credit

Approach:

• microfinance organization MADINA provides small loans on a personal basis to make the project financially viable

• private households will benefit from energy fuel savings & will improve their livelihoods by escaping from the vicious circle of poverty

• ideal tool distribution: Reducing poverty and mitigating the pressures on natural resources
Technical performance

Technical consultant: his affords a constant contact between technical consultant & micro-finance consultant with the client

Acquisition - Meeting 1
• One micro-credit consultants & one technical consultant work together to evaluate
  – E.g. financial rating of the client

Construction explanation - Meeting 2
• Technical consultant will advise the client on the following issues:
  – Check suitability of the purchased construction material
  – Detailed explanation on technical realization
Technical Performance

Check and Adjust - Meeting 3
• Check progress & quality of the thermal insulation work
• Explain & show where and how to fix construction mistakes in accordance to the quality standards
• Explain the client & local masters the background of occurred mistakes

Acceptance - Meeting 4
• Final inspection of realized thermal insulated measures check
• Final documentation & certification
Better future

Better future energy scenario: less energy use

- more money, less time to spent on collecting wood

- less individual labor spent on collecting fuel & for heating

- more time to earn money, more time to care about the own children, garden or livestock → more nutrients for fields

- warmer & more comfortable house:
  → better health, children get the chance to concentrate on learning for the school
Lessons learnt

• Technical issues resolved

• Technology: Adaption, Test, Standardization

• Create Ownership: no gifts

• 180 credits distributed

• Fuel savings 40-60%

• Education Masters and consultants too slow
Next Steps

- end of 2010: 500 homes in the Pamirs insulated

- Thermal insulation in combination with ee-stove improvements for heating and cooking

- end of 2009: Product "warm comfort" documented and transferred to other MLF

- Handover knowledge on thermal insulation to MLF
Thank You