

Promotion of Energy Efficient Cooking, Heating and Housing Technologies (PEECH)

UNDP Project ID: 3110

GEFSEC Project ID: 2526

Project Executing Agencies: Aga Khan Foundation, Aga Khan Planning & Building Services - Pakistan

Project Partners: Economic Affairs Division, Climate Change Division, GoG-B, GoKPK, WWF-P, Local Communities of the Northern Areas

Final External Evaluation

August – September 2013

Report prepared by: Karen Janjua, Independent Consultant
karenjanjua@hotmail.com

Acknowledgements

Sincere gratitude for support with the Final Evaluation of the project, *Promotion of Energy Efficient Cooking, Heating and Housing Technologies (PEECH)*, is extended to the people of Astore, Chitral, Gilgit, Hunza-Nagar and Skardu and to the governments of Gilgit-Baltistan and Chitral, Khyber Pakhtunkhwa. Without their kind contributions of cooperation and generosity of ideas, the evaluation mission would not have been possible.

In addition, the significant contributions of the following persons are gratefully acknowledged:

Mr. Marc-Andre Franche, Country Director, UNDP Pakistan
Mr. Gul Najam Jamy, Assistant Country Director and Chief, Environment & Climate Change Unit, UNDP
Ms. Naveeda Nazir, Program Associate, Environment & Climate Change Unit, UNDP

Mr. Hadi Husani, CEO, Aga Khan Planning and Building Service, Pakistan
Mr. Nawab Ali Khan, General Manager, Gilgit-Baltistan & Chitral, AKPBS
Mr. Fida Hussain, Project Manager, PEECH, AKPBS
Mr. Alizay Jaffer, Asst. Manager, Knowledge Management, AKPBS
Ms. Shabana Abbas, Asst. Manager, Knowledge Management, AKPBS

Mr. Ahsan Imtiaz Paracha, Sr. Program Officer/Built Environment, Aga Khan Foundation

Mr. Mr. Khaled Siddiq, Joint Secretary/Development, Climate Change Division and GEF Focal Point
Mr. Irfan Tariq, Director General/Environment, Climate Change Division
Mr. Jawed Ali Khan, DG/Environment, Climate Change Division (Ret'd)
Mr. Muhammad Fawad Hayat, Program Coordinator, GEF Cell, Climate Change Division
Ms. Ghazala Raza, Sr. Program Officer, GEF Cell, Climate Change Division

Dr. Muktar Ahmad, Senior Joint Secretary, EAD
Syed Iftikhar Hussain Naqvi, IHN Deputy Secretary, EAD
Syed Qalb-e-Abbass, Desk Officer, EAD

Executive Summary

An External Final Evaluation of the UNDP GEF-funded project, *Promotion of Energy Efficient Cooking, Heating and Housing Technologies* (PEECH) was carried out during the period of August – September 2013. Evaluation methodology and reporting recommended by UNDP for project-level evaluations of UNDP-supported, GEF-financed projects were utilized.

Project Description

The project employed a holistic approach to energy efficiency (EE) applications in 40 villages in Pakistan's Northern Areas through the promotion and product installation of EE home improvement and building products. An awareness-raising campaign in the programming area was linked with support to a micro finance institution to offer financing services for procurement of EE products. Local and regional manufacturing and entrepreneur/craftsman capacities were strengthened using a variety of practical training and internship/apprenticeship models as well as arrangements with training institution. Economic incentives were provided to bring entrepreneurs and craftsmen closer to local communities needing to be served. A complementary component enhanced the institutional capacity for needed policy development, implementation and awareness of the socioeconomic importance and benefits of EE and seismic resistance technologies among key local, provincial and national policy makers, provincial-level planners, managers, Vocational/Technical educators and the private sector.

The PEECH project document was developed in 2005; approved and signed in early 2009. Start up of the 4-year project began subsequent to a multi-stakeholder Inception Workshop held in May 2009. The project was completed in June 2013, after having received one, 6-month, no-cost extension.

Project Goal, Objective and Outcomes

The project's Goal and Objective are:

GOAL: Reduction of the GHG emissions from unsustainable uses of wood for building and energy purposes in the Northern Areas and Chitral.

OBJECTIVE: Improved household economies and improved health in the Northern Areas and Chitral through efficient use of wood fuel and EE housing construction technologies.

The Project had 3 components corresponding to the following Outcomes:

1. Improved local awareness and capacity for installing EE cooking, heating and housing products and technologies.
2. Enhanced institutional capacity and support to mainstream EE products and technologies into local and national-level building codes and standards, together with relevant support measures, as well as rural and regional development plans, strategies and programs.
3. Significant growth of rural enterprise and income generation from community service providers enhanced through the replication of integrated EE products and techniques packages.

While the focus of the project was on creating real and sustainable changes in communities that would lead to reductions in GHGs through more sustainable uses of forest resources, it was understood that the incentives for the local stakeholders to invest in the EE and other building products would come from highlighting the multiple indirect, yet tangible benefits which could accrue to them. For example, local households, which use energy efficient (EE) stoves that include integrated exhaust expulsion and simple water warming systems, reduce the production of GHGs as a consequence of also reducing their biomass consumption. The latter implies real savings for households in terms of cash spent on purchased fuel and time spent on gathering firewood from the forest.

Used properly, the same products also result in warmer rooms, yet much less smoke and burnt soot in homes; better hygiene, and, better health of family members.

Management and Partnership Arrangements

UNDP provided ongoing administrative support and project implementation oversight from Islamabad. Aga Khan Foundation (AKF) provided secretariat support for the duties assigned to the Executing Agency and AKPBS undertook project implementation and management. The Project Management Unit was located in Gilgit, with hubs in Skardu, Baltistan and Chitral, KPK. The Project Advisory Committee (PAC), i.e., the steering committee, provided technical guidance and strategic monitoring of the project.

Major institutional partners included the Climate Change Division and Economic Affairs Division at the Federal Government Level, and the Governments of Gilgit-Baltistan, and Chitral (KPK) at the Provincial Government level. Organizational partners included the Karakorum International University, the Karakorum Polytechnic Institute, the Gilgit-Baltistan Polytechnic Institute, the First Micro Finance Bank (FMFB), and, the Worldwide Fund for Nature (WWF).

Project Finances

Actual contributions banked included the GEF grant of \$975,000; a UNDP grant of \$150,000 as well as \$500,000 in leveraged funding earmarked for temporary shelters for IDPs. In-kind contributions by AKF and AKPBS are valued at \$516,000. FMFB provided staff time and subsidized some transaction costs for the activities in their MF sub-project but cash values are not available. The total, final project expenditures are calculated at approximately \$2,027,362.

Project Results

Outcomes & Outputs

Using UNDP rating scales, the project was evaluated at the highest level for the criteria: Relevance, Ownership, Mainstreaming and Impact. Ratings for Effectiveness & Efficiency and Sustainability are provided in the table at the end of this Summary. Each Project Component/Outcome received an Overall Score and sub-scores were provided for each Indicative Output/Objectively Verifiable Indicator (OVI). The final Cost per Outcome is also provided. The final results demonstrate value for money. In most cases, actual expenditures were well below the original project document's budget and the targets were met.

Conclusions & Recommendations

The project has been able to pilot an implementation phase of activities, bringing R&D outputs into development and decision-making processes in four districts of Gilgit-Baltistan and Chitral, KPK. Most Outputs and Outcomes enjoyed high levels of success, even under circumstances that were particularly challenging for implementation. All project Outcomes were produced and demonstrate relevance, effectiveness, efficiency and catalytic effects. Outcomes One and Two also demonstrate high likelihood of sustainability and future impacts. Outputs produced under Outcome Three could generally be described as 'satisfactory' but some sustainability issues were identified. Learning under the project has provided valuable contributions to the growing knowledge pool on community participation for environmental sustainability, as well as development through appropriate technology in mountainous regions. A follow-on project to add sustainability to gains made under project Component 3 is strongly recommended. Development of a Phase 3 Project, to fine tune some of the work begun under PEECH and to bring all Components to scale is also highly recommended.

Summary of Ratings and Costs by Project Outcome

OUTCOME 1: <i>Improved local awareness and capacity for installing EE cooking, heating and housing products & technologies.</i>			OUTCOME 1
OVI-1: Awareness-raising increased at least 50% in 10 target valleys; Communication Strategy developed and implemented starting year 2. Effectiveness & Efficiency Sub-score: S Sustainability Sub-score: L	OVI-2: Training program for local technical personnel, end users and other stakeholders developed; and, training program institutionalized in at least 2-3 teaching institutions; and, a pilot training program with a minimum of 20 people trained starting year 2. Effectiveness & Efficiency Sub-score: HS Sustainability Sub-score: L	OVI-3: Capacity development leads to at least 5 local craftsmen/artisans being part of local EE business by year 2. Effectiveness & Efficiency Sub-score: HS Sustainability Sub-score: L	E & E Score: HS Sustainability Score: L COST: \$212,069
OUTCOME 2: <i>Enhanced institutional capacity and support to mainstream EE products and technologies into local and national-level building codes and standards, together with relevant support measures as well as rural and regional development plans, strategies and programs.</i>			OUTCOME 2
OVI-1: Proposal for new building codes and standards adapted specific to rural conditions in G-B and adoption is facilitated by year 3. Effectiveness & Efficiency Sub-score: HS Sustainability Sub-score: L	OVI-2: At least 20 new buildings/houses built or retro-fitted by AKPBS based on the new building codes and standards, by the end of the project. Effectiveness & Efficiency Sub-score: HS Sustainability Sub-score: L	OVI-3: Strategy for mainstreaming of building codes and standards in rural development plans is completed by year 2. Effectiveness & Efficiency Sub-score: HS Sustainability Sub-score: L	E & E Score: HS Sustainability Score: L COST: \$121,938
OUTCOME 3: <i>Significant growth of rural enterprise and income generation from community service providers is enhanced through the replication of integrated EE products and technique packages.</i>			OUTCOME 3
OVI-1: At least 15 local enterprises engaged in EE activities by the end of the project. Effectiveness & Efficiency Sub-score: S Sustainability Sub-score: ML	OVI-2: At least 1 micro finance institution offering sustained micro-credit facilities for EE housing improvement products by the end of the project. Effectiveness & Efficiency Sub-score: HS Sustainability Sub-score: L	OVI-3: At least 32,000 households including 2,100 directly and 30,000 indirectly showcasing EE cooking, heating and housing improvement technologies and products by the end of the project. Effectiveness & Efficiency Sub-score: S Sustainability Sub-score: L	E & E Score: S Sustainability Score: L COST: \$612,407
M&E: <i>A Project Monitoring and Evaluation System is based on the project Logical framework and supports tracking and reporting on progress against Outputs and Outcomes, as well as adaptive management.</i>			OUTPUTS M&E
Output-1: An information repository with web access stores and organizes information on EE products, manuals, studies and other materials created under the project for future reference. Effectiveness & Efficiency Sub-score: HS Sustainability Sub-score: L	Output-2: The Project Monitoring Plan reports project progress transparently to all major stakeholders and promotes accountability. Effectiveness & Efficiency Sub-score: S		E & E Score: S Sustainability Score: L COST: \$76,513
TOTAL PROJECT BUDGET – All expenditures			\$2,027,362

CONTENTS

- i. Acknowledgements
- ii. Executive Summary
- iii. Acronyms & Abbreviations

- I. INTRODUCTION
 - a. Purpose of the Evaluation
 - b. Scope & Methodology
 - c. Structure of the Evaluation Report

- II. PROJECT DESCRIPTION & DEVELOPMENT CONTEXT
 - a. Project Summary, Start and Duration
 - b. Problems that the Project sought to Address
 - c. Goal and Objectives of the Project
 - d. Baseline Indicators established
 - e. Primary Stakeholders
 - f. Expected Results

- III. FINDINGS
 - III.1. Project Design & Formulation
 - a. Analysis of the Results Framework
 - b. Assumptions and Risks
 - c. Lessons from other Relevant Projects
 - d. Planned Stakeholder Participation
 - e. Replication Approach
 - f. UNDP Comparative Advantage
 - g. Linkages within the Sector
 - h. Management Arrangements

 - III.2. Project Implementation
 - a. Adaptive Management
 - b. Partnership Arrangements
 - c. Feed-back from M&E Activities
 - d. Project Finance
 - e. Monitoring & Evaluation: Design at Entry and Implementation
 - f. UNDP and Implementation Management

 - III.3. Project Results
 - a. Overall Results/Attainment of Objectives
 - b. Relevance
 - c. Country Ownership
 - d. Mainstreaming
 - e. Effectiveness & Efficiency
 - f. Sustainability
 - g. Impact & Catalytic Role

IV. CONCLUSIONS, RECOMMENDATIONS & LESSONS

IV.1. Actions to Follow Up or Reinforce Initial Benefits from the Project

IV.2. Proposals for Future Directions supporting Main Objectives

IV.3. Best and Worst Practices in addressing Relevance, Performance & Success

V. ANNEXES

1. ToR for the Evaluation

2. Work Plan & Itinerary

3. List of Resources Consulted & Persons Interviewed

4. Interview Protocol

5. Stakeholder Roles & Responsibilities

6. Achievement of Outcomes Matrix

7. Indicative Monitoring Plan Matrix & Checklist

8. M&E Data: Energy and GHGs Savings per Project Year

Abbreviations and Acronyms

ADPC	Asian Disaster Preparedness Centre
AKDN	Aga Khan Development Network
AKF	Aga Khan Foundation
AKPBS-P	Aga Khan Planning and Building Service, Pakistan
AKRSP	Aga Khan Rural Support Program
APR	Annual Project Report
BACIP	Building and Construction Improvement Program
CBO	Community Based Organization
CC	Conveying Committee
CDM	Clean Development Mechanism
CFM	Collaborative Forest Management
CO2	Carbon Dioxide
DRR	Disaster Risk Reduction
EAD	Economic Affairs Division (of the Ministry of Finance, Pakistan)
EE	Energy Efficient/Efficiency
EQ	Earth quake
FMFB	First Micro Finance Bank
GEF	Global Environment Facility
GHG	Greenhouse Gases
GoGB	Government of Gilgit-Baltistan
GoKPK	Government of Khyber Pakhtunkhwa
GoP	Government of Pakistan
HDIP	Hydro Carbon Development Institute of Pakistan
HH	Households
LogFrame	Logical Framework
IW	Inception Workshop
LSO	Local Social Organization
MACP	Mountain Areas Conservancy Project
MDGs	Millennium Development Goals
M&E	Monitoring and Evaluation
MF	Micro Finance
MOV	Means of Verification
MTR	Mid-Term Review
NA	Northern Areas
NEAP	National Environmental Action Plan
NGO	Non-Governmental Organization
OPII	One (United Nations) Programme II (Pakistan)
OVI	Objectively Verifiable Indicator
PAC	Project Advisory Committee
P&DD	Planning and Development Department
PEECH	Promotion of Energy Efficient Cooking Heating and Housing Technologies
PIR	Project Implementation Review
ProDoc	Project Document
PURE	Productive Use of Renewable Energy Project
SME	Small/Medium Enterprise
TPR	Tripartite Review
TR	Terminal Report
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
WWF	World Wide Fund for Nature

I. INTRODUCTION

a. Purpose of the Evaluation

An External Final Evaluation of the UNDP GEF-funded project, *Promotion of Energy Efficient Cooking, Heating and Housing Technologies* (PEECH) was carried out during the period of August – September 2013. The evaluation was undertaken for the following purposes:

- To assess and disclose the extent of project accomplishments, thereby promoting transparency and accountability, in the context of M & E activities, both planned and not undertaken during the project's implementation.
- To synthesize lessons and examples of good practice that can support improved selection, design and implementation of future Climate Mitigation projects promoting reductions of GHGs through improved Energy Efficiency in remote, high altitude regions.

b. Scope & Methodology

The Evaluation mission's investigatory activities were guided by key questions and checklists were developed based on a review of current best practices in evaluation methodology. These tools are appended as ANNEXES 4-7. The evaluation activities also included the following evaluation techniques:

- (1) *Documentation survey and review* – A broad understanding of the project's achievements and lessons learned was gained through examination of project reporting documentation produced during the programming period. This information supported refinement of questions put forward during the interviews and focus group meetings.
- (2) *Review of the quantitative data* – Review of the data produced under the project, in particular, that related to achievement of quantitatively verifiable indicators took place concurrent to the documentation review and during field visits to each programming area.
- (3) *Assessments of tools and products developed under the project* – A clearer understanding of the quality of programming, as well as training, technical assessments, monitoring tools, and data capture was gained through examination and assessment of the tools, products, ToRs and manuals (e.g., for trainings and technical consultancies) produced under the project.
- (4) *Structured interviews with program management, donors, Government stakeholders* – Interviews served to support validation of project gains reported in project documentation and provide data for assessment of client satisfaction, significance of learning and value for money. The final list of persons interviewed was determined in consultation with UNDP and GEF program personnel and leadership.
- (5) *Focus Group Meetings (FGMs) with representatives of project stakeholder groups* - FGMs were undertaken in each of the programming areas and included groups of beneficiaries, key executing agency, implementing agency field personnel, and, provincial government partners. The meetings enabled assessment of the benefits, sustainability and lessons learned from the direct and indirect beneficiaries' as well as the other local stakeholders' points of view. Participants in field-based FGMs were determined in consultation with the executing and implementing agencies.

- (6) *Field Visits to programming areas* – Field visits were undertaken in the programming areas in Chitral, KPK as well as Gilgit and Skardu, Baltistan for the purposes of collecting information and documentation, conducting interviews and convening FGMs.

c. Structure of the Evaluation Report

i. Overall Assessment of the Project

Subsequent to a description of the project’s design in the post-implementation context, a general description of key aspects of the project’s implementation will be presented as per the UNDP Guidelines.¹ The project’s Goal, Objective and three programmatic Outcomes are evaluated as per the degree of achievement, utilizing the project logical framework, outcome indicators and the Rating Scales required by GEF for Project Evaluations². In addition to ‘whether’ an intended outcome has been achieved, evidence that demonstrates ‘why and how’ the outcome was achieved is provided. The latter will also consider the degree of contribution to global environmental goals, including limiting deforestation and reducing GHGs.

The project’s results are, furthermore, evaluated as per UNDP’s global criteria:

i.a. Relevance The broad relevance of the project to national environmental priorities, One UN II Strategic Priority Areas (SPAs) and programming priorities, as well as global environmental concerns will be mentioned. The relevance of the project’s actual results to program strategies, stakeholders’ priorities and aims; government agencies’ goals for environmental conservation as well as the quality of life for project beneficiaries at the local level, will be discussed.

i.b. Effectiveness Affects of project outcomes on local populations, institutions, public policy, markets and natural environment will be discussed in terms of the project objective and outcomes.

i.c. Efficiency Project investments incurred in terms of time and finances will be mentioned in relationship to gains and achievements, the degree to which quantitative targets were met for each Outcome and how consistent delivery was within planned costs per Outcome.

i.d. Sustainability of Project Outcomes This section will permit assessment of gains versus risks emanating from Financial, Social, Institutional, Environmental factors. Assessment of the durability of networks and linkages established or reinforced under the project will also be considered for some outputs.

i.e. Impact & Catalytic Role Key spaces where a multiplier effect is taking place will be identified, including positive synergies with other stakeholders’ programming and interests at a variety of levels, as relevant. Any unintended results or ancillary effects and their causal relationships will also be discussed throughout the report.

ii. Assessment of Project Performance and Processes:

¹ *Project Level Evaluation: Guidance for Conducting Terminal Evaluations of UNDP-supported, GEF-financed Projects*. 2012. NY: UNDP Evaluation Office.

² *Ibid.*, Page 25

ii.a. Performance: A description of Indicators and their targets includes the processes impacting project performance, as per each Outcome. This also includes observations on stakeholders' interactions during the project. For example, how did implementation arrangements and capacity to collaborate cooperatively across public and civil society organizations affect delivery of outputs? Examples of good practice and learning will be highlighted.

ii.b. Key political-economic processes: Key political-economic processes operating in the programming environment are identified, as relevant. Any events or circumstances during the project cycle which impacted project implementation or delivery will be mentioned in the same context as the Outcomes being supported.

ii.c. Implementation management: Implementation processes are discussed in terms of: preparation and readiness; country ownership and 'drivenness,' as demonstrated through substantive cooperation by government counterparts and partners; stakeholder involvement and inclusiveness, in addition to experiences which responded to needs of gender and poverty.

iii. Assessment of Project Monitoring and Evaluation System

The project's Monitoring and Evaluation system is analyzed under the following framework, seeking, at a minimum, to answer the questions under each heading.

iii.a. Robustness of the M&E System Design: Were indicators and targets sufficient to capture the key results intended and actually produced? Were the documents anticipated in the logical framework corresponding to 'Means of Verification' actually produced or available?

iii.b. System Implementation and Management: Was the project data-base adequately maintained to enable tracking of results and obligatory project reporting? Was information made available to all stakeholders on a regular basis? Were all of the financial, technical and progress reports anticipated in the Project Document produced and distributed in a timely and consistent manner? Did the system promote learning that could – and did - feed-back into subsequent program activity?

iii.c. Resource Allocation and Delivery: Were financial allocations for M&E adequate at all levels? Did timely release of funds as per work plan, managerial, systemic or institutional issues impact quality or delivery of the project's M&E activities?

iv. Lessons and Recommendations

Recapitulation of factors that contributed to or supported attainment of project outcomes or hindered progress, with special attention to analyses of conditions and processes are presented in this section. Examples of good or best practices under each of the project's three component areas – as well as M&E - are highlighted with a view to demonstrating those which are replicable and relevant to other projects. Sufficient information to ensure understanding of the relevance as well as replicability of the best practices indicated is provided.

II. PROJECT DESCRIPTION & DEVELOPMENT CONTEXT

a. Project Summary, Start and Duration

The project, *Promoting Energy Efficient Cooking, Heating and Housing Technologies (PEECH)*, employed a holistic approach to energy efficiency (EE) applications in 40 villages in Pakistan's Northern Areas³ through the promotion and product installation of EE home improvement and building products. Awareness-raising in the programming area was linked with support to a micro finance institution to offer financing services for procurement of EE products. Local and regional manufacturing and entrepreneur/craftsman capacities were strengthened using a variety of practical training and internship/apprenticeship models as well as training institution arrangements. Economic incentives were provided to bring entrepreneurs and craftsmen closer to local communities needing to be served. A complementary component enhanced the institutional capacity for needed policy development, implementation and awareness of the socioeconomic importance and benefits of EE and seismic resistance technologies among key local, provincial and national policy makers, provincial-level planners, managers, Vocational/Technical educators and the private sector.

The PEECH project document was developed in 2005, approved and signed in early 2009. Start up of the 4-year project began subsequent to a multi-stakeholder Inception Workshop held in May 2009. The project was completed in June 2013, after having received one, 6-month, no-cost extension.

b. Problems that the Project sought to Address

At the time of its development, PEECH was the logical culmination of the research and development work achieved through the AKPBS' Building and Construction Improvement Programme (BACIP), in addition to increased attention to the environment, arising from the experiences of local communities and aid agencies in the wake of the devastating 2005 earthquake centered in neighboring Kashmir.

The early BACIP program sought to develop energy efficient technologies that were affordable, replicable and which improved incrementally upon what was traditionally used to survive the cold, high altitude winters in Pakistan's Northern Areas. Studies had demonstrated that using a combination of EE products could result in homes that produced as much as 50% fewer GHG emissions but were more comfortable. An additional line of building products was also developed to help limit GHGs emitted via deforestation in a more indirect way. Providing a low-cost alternative to the lumber that would normally be used to build earthquake resistance into traditional construction could save approximately 6-8 trees per family home. In sum, BACIP's EE products were designed to improve lives through a combination of information and low-tech, incremental changes that did not distort traditional lifestyles.

In continuation of these aims, the PEECH project translated the 5-year R&D program into a market development and capacity support phase, piloting a number of new initiatives that would create product awareness and demand, while ensuring that the technical, manufacturing, social support, financial resources and government advocacy were not only available locally, but also integrated into communities and economies in the local pilot areas.

³ The project was implemented in 9 valleys across 4 districts in the province of Gilgit-Baltistan and 1 district (Chitral) in the province of Khyber Pakhtunkwa.

This was to be done through directly addressing the key remaining barriers with regards to: low levels of awareness among local stakeholders, limited local entrepreneurial capacities to manufacture and sell products, lack of access to micro-finance in the region for home improvements, the absence of an enabling environment conducive to investments in energy efficient cooking, heating and housing construction and technology, the lack of a comprehensive supply-demand structure linked to the supply chains essential to the provision of EE products, and finally, the lack of an easily accessible information on EE products in the local context and a technical repository for reference materials created under the project.

c. Goal and Objectives of the Project

While the focus of the project was on creating real and sustainable changes in communities that would lead to reductions in GHGs through more sustainable uses of forest resources, it was understood that the incentives for the local stakeholders to invest in the EE and other building products would come from highlighting the multiple indirect, yet tangible benefits which could accrue to them. For example, local households, which use energy efficient (EE) stoves that include integrated exhaust expulsion and simple water warming systems, reduce the production of GHGs as a consequence of also reducing their biomass consumption. The latter implies real savings for households in terms of cash spent on purchased fuel and time spent on gathering firewood from the forest. Used properly, the same products also result in warmer rooms, yet much less smoke and burnt soot in homes; better hygiene, and, better health of family members.

The project's Goal and Objective were stated as below:

GOAL: Reduction of the GHG emissions from unsustainable uses of wood for building and energy purposes in the Northern Areas and Chitral.

OBJECTIVE: Improved household economies and improved health in the Northern Areas and Chitral through efficient use of wood fuel and EE housing construction technologies.

d. Baseline Indicators established

Baseline indicators established before or during the development of the project document in 2005 were thought to be in need of validation or updating at project startup in 2009. Indicators were reviewed, and where necessary, were re-evaluated during multi-stakeholder consultations at the Inception Workshop (May 2009). More current baseline information and supporting information specific to the geographical target areas were subsequently obtained through the undertaking of a Baseline Survey⁴. A comparison of the refined project indicators and Baseline information may be made by consulting the "Achievement of Outcomes Matrix" appended at ANNEX 6.

⁴ See the *Baseline Survey Report*, August 2010

e. Primary Stakeholders

Key Stakeholders and Partners

The project directly involved a variety of local and provincial stakeholders in development of the programmatic outcomes. At the community level, 16,941 households which installed EE and EQ resistant products in their homes were involved, through awareness building and community activities. Subsets of these beneficiaries were trained and involved in additional activities such as social mobilization, facilitation of group access to micro-finance, awareness building, and, measuring/reporting fuel consumption as one of 33 demo household participants in a longitudinal study.

Others included the national government participants from the Climate Change Division and the Economic Affairs Division who supported the project through advocacy and advisory services, as well as provincial government counterparts who were actively involved in policy development, support and implementation initiatives.

Greater access to EE products in one pilot area of Gilgit was provided through a partnership between the project and the First Micro Finance bank. Partnerships with training institutes ensured integration of EE and earthquake resistant technologies into the training curricula and programs of future engineers, architects, local craftsmen and builders.

The Aga Khan Foundation was an ideal project Executing Agency, providing a coordination hub for partnership relations, troubleshooting, and support to the field offices and programs as needed. The Aga Khan Planning & Building Service (AKPBS), as the Implementing Agency, provided technical expertise, as well as many years of relevant experience working directly with the intended beneficiary populations and their unique economic and environmental issues.

UNDP Pakistan's Environment Unit and the GEF Cell provided ongoing advice as well as administrative and technical monitoring and documentation. The Ministry of Environment and its Climate Change Division provided technical support and advocacy on an ongoing basis. ANNEX 5 provides a summary list of all major stakeholders and project partners, in addition to their roles and responsibilities.

Project Resources

Under the arrangements outlined within the original, signed, project document, UNDP and GEF were to provide the major cash-based resources while several, additional partners were to have contributed both cash and in-kind to a total project budget amounting to USD 2,463,500. UNDP's original pledge was USD 150,000 and the GEF Grant was USD 975,000. All, in-kind contributions from participating partner NGOs were pledged as USD 1,338,500. In-kind contributions from the participation of the GoP, GoG-B and GoKPK K partners, as well as from local communities were expected but not directly budgeted.

f. Expected Results

In addition to improvements in the environment resulting from reductions in deforestation and GHG emissions, the project sought to help build more sustainable mountain communities through the following Outcomes:

1. Improved local awareness and capacity for installing EE cooking, heating and housing products and

technologies.

2. Enhanced institutional capacity and support to mainstream EE products and technologies into local and national-level building codes and standards, together with relevant support measures, as well as rural and regional development plans, strategies and programs.
3. Significant growth of rural enterprise and income generation from community service providers enhanced through the replication of integrated EE products and techniques packages.

III. FINDINGS

III.1. Project Design & Formulation in the Post-Implementation Context

a. Analysis of the Results Framework

The project's results framework consists of the project Goal, one Objective and three Outcomes; all of which were stated in terms that are clear and feasible. The Logical Framework (LogFrame), in itself, allows for the elaboration of an integrated program of mutually reinforcing activities that approach the problem of carbon emissions produced at the community and household levels through building local capacities to work against the social, economic, environmental and policy/governance disincentives that have supported unsustainable practices. The LogFrame provides sufficient infrastructure to describe an effective and relevant project, but demonstrates a couple of shortcomings with regard to formulation of its Objectively Verifiable Indicators (OVIs). These are described below:

OVIs for the Project GOAL

Three quantitative indicators and targets were defined for the Goal statement's aim of reducing GHG emissions through increasing energy efficiency. However, no indicators were stated for reductions in GHGs that would occur through limiting the uses of wood for building purposes. The OVIs for the Goal refer to: (1) reduced emissions due to installation of EE product packages in demonstration households (HH); (2) reduced emission due to replications of EE installations in other HHs on an annual basis; and, (3) reduced emissions from replications in 30,000 HH by the end of the 4-year project.

While 'unsustainable uses of wood for building construction' is mentioned in the Goal statement, no specific target indicator was set for estimating the amounts of GHG avoided through promotion of building and construction practices that utilize fewer trees. One cubic meter of wood stores nearly 1 ton of CO₂⁵ and GHGs are released back into the atmosphere when trees are cut. Thus, if approximately 98% of all building construction uses timber⁶ and an average of 6-8 trees are cut to build one house in the Northern Areas⁷, substitution of BACIP building products for some of the wood typically used in beams, as well as EQ resistant construction should have quantifiable CO₂ avoidance values, per cubic meter of construction. MoVs could have been set, such as 'numbers of new constructions in a pilot target area' against 'numbers and sizes of new constructions employing the BACIP building and EQ resistance technologies' in the target area.

In addition to not calculating all emissions savings which could have occurred under the project, the implications for this omission include the difficulties in providing justification under the Project Framework for the seismic resistance building, training and policy development activities which were later added into the project work plans. Monitoring and reporting on the EQ-related activities that were coupled with EE in training, training manual development, technical studies and Guidelines development is possible as the indicators corresponding to Outcomes 1 – 3, are for the most part, broadly stated.

PROJECT GOAL:

Reduction of GHG emissions from the unsustainable uses of wood for building and energy purposes in the Northern Areas and Chitral.

⁵ Source: <http://www.treehugger.com/green-architecture/does-cutting-a-tree-create-greenhouse-gas.html>

⁶ Source: Interview with Mr. Ismail Zafar, Conservator of Forests, Forestry Dept., GoG-B. 21 August 2013

⁷ Source: PEECH Project Document narrative, Section 3, Page 14

However, there are no other indicators that can logically provide accountability for the building materials and technologies which are not directly related to EE. Lumping EQ products in with those contributing EE will only distort the reporting on reductions in GHGs which are due to reductions in fuel consumption. (Please refer to ANNEX 8 for values of GHG savings calculated by year).

Other OVIs

Several of the OVIs under Project Components 1-3 are quantifiably verifiable, listing numerical targets for numbers of beneficiaries trained, numbers of entrepreneurs installing EE systems, numbers of enterprises engaged in EE activities, numbers of HHs showcasing replications, etc. As there are no qualitative perimeters of any sort, issues of effectiveness as well as those factors that might support sustainability, cannot be adequately captured within a monitoring and reporting system that is tightly associated with the results Framework.

Other than what is stated above in relation to the OVIs, there are no glaring issues with the project framework. The project's objectives and components are clear, practicable and achievable under "business as usual" circumstances.

b. Assumptions and Risks

Based on their extensive experience in the geographic programming area, their thorough understanding of the problems that the project sought to address, as well as the social, economic and other concerns of the target beneficiaries, the Executing and Implementing Agencies were able to confidently anticipate the types of risks that were likely to arise during project implementation and were in a position to competently mitigate or avoid some of the more important ones through good project management. Responses to the project document's stated risks included:⁸

- Mobilizing Community participation, interest and willingness to take risks through information, visits, demonstrations, economic incentives, and building local ownership collectively at the community level.
- Avoiding production of sub-standard products/cutting corners by craftsmen, through clear, detailed specifications, quality check-lists, illustrated manuals, training and ongoing spot checks on suppliers and manufacturers. Customer complaints were dealt with in cooperation with the supplier.
- Mobilizing and maintaining Public sector interest through ongoing consultations, lobbying efforts, and technical assistance.
- Co-opting local women as Village Resource Persons, to be trained and work within their own communities, or, through their own, local women's organizations.
- Avoiding no-go areas created by sectarian violence through using media to build awareness during tension-ridden periods; training entrepreneurs and craftsmen in each valley to ensure that skills and products were close to beneficiary communities; and, collaboration with local CBOs.

In addition to the above "risks," which were somewhat predictable, the Implementing Agency commendably responded to another risk, which is becoming increasingly relevant to project implementation in the Northern Areas; that being, the threat of natural disasters. They addressed

⁸ Sources for section III.1.b: PEECH Project Document, page 22; Project Terminal Report, Section 5, page 12; Interviews with BACIP and PEECH officers; field visits to project beneficiaries.

the challenges of project implementation in the aftermath of the 2010 floods and Attabad disaster by:

- Recognizing that natural disasters in the project implementation areas – in addition to providing a cause of implementation delays, or in the worst cases, reassessment of programming areas – could also provide more opportunities for demonstration of EE products through design and provision of thermally efficient IDP housing.

c. Lessons from other Relevant Projects

Lessons from other relevant projects not only contributed to the development of PEECH, but provided the bedrock upon which the project was formulated. Over the 5 years preceding the development of the PEECH Project, the AKPBS, through its BACIP Program⁹ researched, developed and tested over 60 EE housing technologies and products and technologies to improve thermal efficiency while reducing biomass consumption. Most of these products were validated for their impacts. PEECH represented a move away from an R&D stage, to a phase of integrated awareness, capacity development and market chain development, bringing earlier learning to scale. A subset of 8-9, key, EE and earthquake resistant building products were selected for promotion and market chain development under the PEECH project, while continuing to monitor and improve product performance based on consumer preferences and affordability.

In addition to benefitting to a large degree from the BACIP program, the PEECH project design also benefitted indirectly from mechanisms developed for other projects by partners; in particular, the AKRSP and WWF. The Mountain Areas Conservancy Project (MACP), another multi-year, multi-stakeholder project under the auspices of the Ministry of the Environment and funded through GEF, involved communities through Village and valley-level community structures and awareness raising activities. PEECH was implemented in some of the same valleys as MACP, namely: Astore, Hunza, Skardu, Chitral and Booni.¹⁰

Lastly, the project was conceptualized taking in to consideration the experiences of other UNDP-GEF SGP-funded projects, as well as EE projects funded by USAID.¹¹

d. Planned Stakeholder Participation

Partnership roles and arrangements were identified and well negotiated during the project design phase. The design originally foresaw a wider range of stakeholders participating in implementation than were available in 2009 at project start up. Due to the 4-year interval between project development and final approval, some of the NGO partners who were to have had smaller implementation roles and to have provided cost-sharing did not participate. Those included: AKCSP, CBRM and ADPC. AKRSP regularly participated in the PAC Meetings, although they did not implement project activities. Roles for the remaining implementing partners were reaffirmed prior to project implementation.

⁹ Building and Construction Improvement Programme, Start-up date: 1997

¹⁰ Source of MACP information:

http://iucn.org/about/union/secretariat/offices/asia/asia_where_work/pakistan/projects/archived_projects/proj_arc_macp.cfm

¹¹ PEECH Project Document Page 37

The project Inception Workshop (IW) was used to clarify the membership and roles of the final list of stakeholders who would be participating in implementation. The IW also clarified the membership and roles of the Project Advisory Committee (PAC).

Stakeholder participation at the level of the pre-selection of participating Villages and Valleys was reassessed and announced at the Inception Workshop. These were also periodically reassessed at the PAC meetings. The importance of ongoing reassessment of valleys and villages was in part due to the need for direct and very active involvement of village-level stakeholders in project implementation, the fluctuating security and stability issues in the Northern Areas, in addition to the need to avoid undue overlap with implementation of similar activities by other projects in some of the same target areas.

e. Replication Approach

The project design advocated an integrated approach to producing both project outcomes and outputs. A strengthened multiplier effect was planned for within the project design by combining community-level stakeholder investments with installations of demonstration products in 2,100 model homes and awareness building. These actions worked in combination to spread and increase demand for the EE products across target populations.

Demand for products was joined with capacities to produce products by trained craftsmen and entrepreneurs incentivized to build and sell EE products closer to customers. Enabling actions at the institutional level supported access to finance by communities as well as businesses and craftsmen. Finally, know-how and advocacy for the technologies was institutionalized in training centers, and government departments.

The project modeled an approach to policy development and advocacy that was highly successful and appears to have had no drawbacks. Aspects of the market development are also exemplary; in particular, with regard to the Micro Finance. The weakest link in the market chain was the production and distribution sub-component, which will require additional support to build independence from the project, and therefore, genuine sustainability.

f. UNDP Comparative Advantage

UNDP has a history of close partnership with developing country governments and the GEF, working with both to implement innovative projects which mitigate the effects of climate change and the resulting impacts on rural, traditional lifestyles. Ongoing and pipeline UNDP environment-sector projects in the Northern Areas seek to showcase UNDP's expertise in sustainable development, as well as gender equity, democratic governance, capacity development, crisis mitigation and results-based management.

g. Linkages within the Sector

The project's Goal and Objective fit into the partner government's National and Provincial strategies and programming priorities, including the Clean Development Mechanism Pakistan¹² aimed at cutting the costs of curbing GHG emissions.

¹² <http://www.cdmpakistan.gov.pk/>

The project contributes to meeting the objectives of the GEF Operational Program No. OP-5: “Removal of Barriers to Energy Efficiency and Energy Conservation,” and, Strategic Priority No. CC-1: “Transformation of Markets for High Volume Products and Processes.”

The project falls in line with UNDP programming priorities for supporting holistic initiatives that strategically impact several, interdependent sectors for sustainable development. Further to that aim, PEECH Project Outcomes contributing towards reductions in deforestation and GHGs, as well as improved livelihoods, are likely to synergize with the intended results of other UNDP Environment projects such as Productive Use of Renewable Energy¹³ (PURE) and more indirectly, Glacial Lake Outburst Floods¹⁴ (GLOF).

h. Management Arrangements

UNDP provided ongoing administrative support and project implementation oversight from Islamabad. AKF provided secretariat support for the duties assigned to the Executing Agency and AKPBS provided the Project Management Unit in Gilgit, with hubs in Skardu, Baltistan and Chitral, KPK.

The project’s steering committee, Project Advisory Committee (PAC), was created to provide technical guidance and strategic monitoring of the project. It appears in both the original project document and Inception Workshop Report as a 14-member group with organizational representation from the GoP (2 members), Provincial Governments (3 members), Local CS Organizations (2 members) UNDP Pakistan (1), AKF/AKPBS (5 members), INGO Partners (1 member: WWF). Within this advisory mechanism, other, select stakeholders could be invited or co-opted to attend.¹⁵

¹³ The PURE project aims at removing barriers to the adoption of renewable energy technologies (RETs) by promoting productive uses of energy in one of Pakistan’s remotest areas: Gilgit-Baltistan and the KPK District of Chitral.

¹⁴ The GLOF project seeks to develop the human and technical capacity of public institutions and local communities to understand and address immediate glacial lake outburst flood risks in Gilgit and Chitral.

¹⁵ PEECH Project Document, Page 37; Inception Report, Annex 2

III.2. Project Implementation

a. Adaptive Management

Each UNDP project's Logical Framework is intended to provide the basis of project management as well as monitoring and evaluation. Some of the difficulties with the OVIs described in Section III.1 above led to inherent challenges for the Executing and Implementing Agencies in monitoring and reporting on project achievements, as all reductions of GHG emissions achieved were probably not entirely covered. Likewise, failure to state the expected outputs clearly under the project framework from the outset may have created the situation where some Outputs were shifted from one component to another as the project progressed. These issues aside, the project implementation demonstrated flexibility as well as ability to adapt to on-the-ground changes in the programming area and the regulatory environment, over time.

Originally, the project was expected to be implemented in 10 project valleys in the provinces of Gilgit-Baltistan and Chitral in the province of Khyber Pakhtunkhwa. The Northern Areas are vulnerable to various types of natural and socio-political crises. During year two of project implementation, the program area suffered from major floods (2010), landslides and displacement of affected communities, as well damage to livelihoods, property and public infrastructure. Infiltration of insurgents into the region and sectarian tensions also led to social instability during the programming period. These difficulties not only preoccupied project stakeholders and partners, compelling them to divert their attention temporarily away from project implementation, but also limited accessibility of roads and travel, prohibited shipment of goods and materials, and otherwise led to occasional, unavoidable delays. During such times, project management worked within the target areas where it was possible, with the support of program partners available. By mid-2013, the project had been successfully implemented in nine valleys across five districts, namely: Gilgit, Astore, Skardu and Hunza-Nagar in Gilgit-Baltistan and Chitral District in Khyber Pakhtunkhwa.¹⁶

Subsequent to a directive issued by the EAD, project funds could no longer be utilized for technology exposure visits abroad. The study visit which was an activity on the signed Project Document, and planned for 2012 was, therefore, cancelled. The project was instructed during a PAC Meeting to re-allocate the resources in favor of subsidizing the participation of ultra-poor families in the project, as direct beneficiaries.¹⁷ The Implementing agency acted on the instructions as a decision taken by the PAC and prepared a revised budget.

Tools for Feed-back & Adaptive Management:

2009	Inception Workshop & Report
2010	Baseline Survey
2011	Internal Evaluation/HH Survey
2011	Lessons Learnt Study
2012	Technical Review
2013	Terminal Report
Ongoing:	Longitudinal Study Monitoring GHG emissions

¹⁶ PEECH Terminal Report, June 2013

¹⁷ As a project that was intended to operationalize and pilot technologies developed during the earlier, research-oriented BACIP project, the PEECH Project Design and Budget had not originally planned for the inclusion of the most vulnerable. The ratio of contribution for installation of products in homes was developed as 70% by the beneficiary householders and 30% by the project.

b. Partnership Arrangements

b.i. Key Partners in Project Implementation

Much of the project's successful implementation owed to the high quality of the Partnership arrangements which built upon previously existing high levels of trust and willingness to cooperate in new ventures. Key partners and partnership arrangements are described below. Annex 5 provides a summary of the project partners' roles.

Aga Khan Planning & Building Services-Pakistan (AKPBS-P)

As the primary implementing partner, AKPBS was responsible for supporting, advising and managing all other partners across the 5-district programming area. Wherever possible, AKPBSBS sought to integrate activities at the level of project implementation, so that the integration and synergies anticipated within the project's design were manifested among both institutional and local stakeholders on the ground. The project team was highly experienced, technically competent and ethically responsible, with a strong reputation in the programming area for producing good results.

Interviews with project stakeholders during field visits conveyed a long-standing sense of ownership and appreciation for the project work undertaken by the Implementing Agency. They conveyed enthusiastically as well, a belief that the project had brought tangible benefits to their homes, schools, businesses or government programs.

Ministry of Environment – Climate Change Division

The role of Climate Change Division was to provide technical oversight and advice, in particular during review of Annual Work Plans. The stakeholders interviewed were clearly knowledgeable and engaged; and, they stated more than once that "PEECH was a flagship project."

Government of Gilgit-Baltistan (GoG-B)

The GoG-B actively facilitated and supported project activities in Gilgit-Baltistan, most actively, through the Planning and Development (P&DD) and Forestry Departments. Engagement was most pronounced in regard to provision of necessary policy level support to the project, as well as advocacy and funding support for policy development in the sphere of Guidelines for EE and EQ resistant construction practices.

The First Micro Finance Bank (FMFB)

One of the most successful, if not impressive partnership arrangements under the project was undertaken with the First Micro Finance Bank. The role of the FMFB in providing financing for households to purchase the EE products was considered one of the most important aspects of ensuring the sustainability of the Market chain to be developed under Outcome 3.

In spite of the pre-existing relationship between the AKPBS and the FMFB, as members of the AKDN, the FMFB was reluctant to participate in the project when the time came for their entry in 2010. Largely due to the massive defaults on loans that were occurring in the wake of the floods and large scale displacement of beneficiaries at the time, FMFB was adverse to taking on any risky new interventions. Microfinance had not previously been offered for non-performing, home improvement assets. They realized, however, that the EE products could be considered "indirectly productive," as they saved the beneficiaries valuable cash, and that this freed up more of a beneficiary HH's cash to make the repayments.

Through assuming or supporting many of the initial transaction costs, such as awareness raising/product demand creation in pilot villages, training and supporting Village Resources Persons (who managed much of the group social collateral activity), managing the suppliers and craftsmen, as well as delivery of products, AKPBS became the ideal partner for FMFB, mitigating much of the risk during the demonstration and pilot phases.

Training Institutes

Three of the programming area's most well-established training institutions became project partners, mainstreaming the project training manuals, materials and programs into their existing curricula, offering short-term training courses at the behest of the project, Training of Trainers for faculty members and providing students as interns on project building sites. MOUs were signed between the project and the following institutions in order to build long-term capacities in GB and Chitral for teaching skills for EE and earthquake resistant construction:

- i. Karakorum International University (KIU),¹⁸ Institute of Professional Development - The Institute is located at the university's main campus in Gilgit City and covers the Vocational-Technical courses affiliated with the university. Under the project they trained 108 craftsmen and 5 master trainers.*
- ii. Karakorum Polytechnic Institute (KPI) – Located in Chinar Bagh, this private Polytechnic offered technical training to 120 students using manuals developed under the project and placed 20 engineering students as interns at project construction sites. They also partnered to train KPI's teachers in EE and EQ resistant construction.*
- iii. Gilgit Baltistan Polytechnic Institute (GBPI) - This Institute sent teachers to participate in the ToT.*

SKAT (Swiss Resource Centre and Consultancies for Development)¹⁹

The Swiss consulting firm conducted a study on building typologies. They also developed and facilitated a 'Master Training' for architects, engineers and master trainers to test retrofitting techniques on selected demonstration houses and buildings.

Pakistan Engineering Council (PEC)²⁰

The PEC is Pakistan's regulatory agency for the engineering profession. It provides advisory services and notifies regulations for engineering education in the country. It also maintains a number of committees and special interest sub-committees. The PEC assisted the project in the development, adaptation and notification of Building Guidelines for EE and earthquake resistant construction, especially suited to Pakistan's mountainous areas.

INGO Partners

The project partnerships and in-kind contributions envisioned in 2004/2005 when the project was developed had changed by the time implementation had begun in 2009. Specifically, the AK Cultural Service and AK Rural Support Programme had already implemented some of the activities they had hoped to collaborate on in PEECH. AKRSP, however, did participate in an advisory capacity, regularly contributing to the Project Advisory Committee.²¹

¹⁸ <http://www.kiu.edu.pk/>

¹⁹ <http://www.skat.ch/>

²⁰ <http://www.pec.org.pk/>

²¹ Refer. PAC Meeting Minutes, December 2009.

The Worldwide Fund for Nature-Pakistan (WWF)

WWF supported development of policy and advocacy through creating planning tools that helped decision-makers to understand the importance of comprehensive, multi-sector approaches to planning and building which consider the implications of deforestation, climate change and disaster mitigation. Specifically, studies were undertaken and digitalized hazard maps were created that could be used for awareness building in communities as well as decision-making by provincial government line departments, planners and builders.

Project Advisory Committee (PAC)

The 14-member PAC included members of Government Agencies at the Federal and provincial levels, implementing and executing agencies, donor organizations, implementing partners and local stakeholder groups.

b.ii. Stakeholder Interaction

Cooperation between the project and the GoG-B was exemplary for development cooperation, permitting the stakeholders to undertake policy development and begin institutionalization of new policy that surpassed original programmatic targets. Successes during the project in regard to Outcome Two, in addition to the reductions in use of wood fuel and carbon emissions associated with deforestation under the project Goal, have led to strong and durable partnerships between the Implementing Agent and GoG-B counterparts.

PEECH helped develop strategic cooperation between the Government and other stakeholders to increase the impacts of each others' work.

- *Mr. Jamshed,
Forestry Dept.,
GoG-B*

Interactions between project and community stakeholders, likewise have built skills and social capital at the village level that may be drawn upon in future programming; whether under UNDP-GEF cooperation, or any other.

FMFB representatives have stated that the positive experiences with the project MF pilot has led them to plan to scale up coverage and develop additional loan products. The Bank is now willing to expand their presence in the programming area in order to be able to offer the new products to more families.

A review of the Meeting Minutes of the 6 PAC meetings held during the project implementation phase demonstrate that, although the committee met regularly enough and performed all of its duties, it was very difficult to arrange for all stakeholder groups to be adequately represented at each meeting. Despite the good intentions of the members, inconsistencies in representation can lead to some stakeholders losing their voice and their institutional memories not becoming part of decision-making processes. That being said, these are problems common to many projects across the globe. Obligations of senior officials (or their frequent turn-over) prohibited some institutional representatives from attending more than one or two meetings during the course of the entire project. Stakeholders from the programming area found it difficult to travel to Islamabad for meetings. Ongoing problems of travel emanating from unpredictable weather and the unreliability of flight schedules to remote, difficult to reach locations, road security and length of time required for road travel were also factors. Any inconsistency in PAC Meeting attendance appears to bear no negative relationship to issues of ownership.

c. Feed-back from M&E Activities & PAC Comments

Feed-back that drove “adaptive management” during project implementation emanated from three major sources: Technical feedback from studies and assessments; feed-back on progress or beneficiary preferences from M&E activities, and, verbal feedback from members of the PAC provided during each of six meetings. It may be mentioned that there was no MTR undertaken and that it is not a requirement of GEF Medium-sized projects. Helpfully, the Project Technical Assessment undertaken in 2012 included an Evaluation section.

Technical Feed-back

Formal technical feedback in the form of verification and documentation was provided through external sources such as the Project Technical Review produced by an independent, external consultant in 2012.²² The Technical Review examined in detail the installation of EE products as well as progress on reduction of CO2 emissions. In 2013, the Pakistan Engineering Council reviewed, provided feed-back and endorsed the Building Guidelines for EE and earthquake resistant construction which were developed under the project towards realization of Outcome 2. The NED University of Engineering and Technology in Karachi, in addition to UET Lahore and Peshawar also provided a technical review of the building Guidelines.

Feed-back from M&E Activities

Monitoring of project implementation by several offices of the Implementing Agency was ongoing throughout the life of the project. The latter included technical monitoring for quality control and progress by project engineers, area managers and senior management; monitoring of social processes, cultural needs and beneficiary perceptions by social mobilizers; and, general monitoring of progress against project outputs and activities undertaken by several M&E associates and specialists from the AKPBS. The latter undertook an internal project evaluation in 2011²³ as well as prepared a report on a Lessons Learned stock-taking study in 2011.²⁴

Reporting to stakeholders, through quarterly and annual progress reports, was generally regular. The quality and completeness of reporting was, however, of varying consistency throughout the life of the project.

PAC Advice & Feed-back

It may be noted that project activities, indicators and targets were monitored and periodically evaluated for relevance in the context of learning from ongoing project implementation during the Project Advisory Committee (PAC) Meetings which were held 1 -2 times per year of the project. An important change to target indicators occurred as a result of the PAC Meeting held in October 2011. Programme Officers from AKRSP, UNDP and AKF recommended revision of the target for replication of products which had been revised up during the Inception Workshop in 2009 to 30,000 replications. The suggestion was, “to rationalize the final target for replications of EE products (down from 30,000 over 4 years) and to base it on the existing trend (in 2011).” While the trend at that time may have been artificially low, due to problems that the region and program had suffered in the aftermath of the 2010 floods, the project replications were subsequently scaled down based on the instructions. The project-end, actual figures for replications were 21,496 products installed in 14,331 replication households.

²² Ali, Sadat. November 2012. *PEECH Technical Review*.

²³ Didar, Nasreen & Nazakat Ali. August 2011. An Evaluation Study of GEF-PEECH. Gilgit: M&E and Research Section, AKPBS Regional Office

²⁴ M&E and Research Section, AKPBS. 2011. *Lessons Learnt Study on PEECH*.

The Implementing Agency was compliant with the PAC's directions. However, there is no evidence available that any formal, official process was undertaken to reset the target to a specific number and notify all stakeholders concerned, as per GEF and UNDP Guidelines.²⁵

d. Project Finance

The project Terminal Report (June 2013) states the Total Project Budget as: USD 1.125 Million – in contrast to the budget on the signed Project Document which is USD 2,463,500. UNDP's contribution of USD 150,000 and the GEF grant of USD 975,000 are equal to the "final budget," but there is no detail for the in-kind contributions of the Executing and Implementing agencies. AKPBS was to have contributed USD 488,500 and AKF's contribution was to have been USD 100,000 - both cash and in-kind. WWF originally pledged USD 350,000. AKCSP, AKRSP and CBRM planned to participate, contributing around USD 400,000, but declined to participate at the time of project start up in 2009.

In-kind contributions from the participation of the GoP, GoG-B and GoKPK partners, as well as from local communities were expected, but not directly budgeted. Local communities' contribution of costs was 70% in contrast to 30% from the project. Government counterparts contributed in-kind, providing officers' time and expertise to the project.

Actual contributions banked included the GEF grant of \$975,000; a UNDP grant of \$150,000 as well as \$500,000 in leveraged funding for component 6; and, in-kind contribution by AKF and AKPBS valued at \$516,000. FMFB provided staff time and subsidized some transaction costs for the activities in their MF sub-project but cash values are not available. The total, final project expenditures are calculated at approximately \$2,027,362.

Actual versus planned expenditures, per each of the 3 programming Outcomes, the M&E component, the PMU/project administration component; in addition to one new component (Transitional Shelters for flood-affected IDPs and for which UNDP leveraged an earmarked \$500,000), are detailed below:

Project Component/ Outcomes	GEF & UNDP Contributions planned	Co- financing pledged ²⁶	Total Planned Budget ²⁷	Actual Expenditures ²⁸ Paid by UNDP- GEF	Values of Co-financing In-kind by AKF & AKPBSBS	End-Project Cost/ Outcome
1 Technical capacity building on EE cooking, heating and housing products technologies	\$320,300	\$150,000	\$461,300	\$140,469	\$71,600	\$212,069
2 Policy support & institutional capacity building	\$218,200	\$172,500	\$390,700	\$86,138	\$35,800	\$121,938
3 EE service market development & financing	\$376,000	\$738,100	\$1,094,100	\$505,007	\$107,400	\$612,407
4 Monitoring, learning & Evaluation	\$123,000	\$92,000	\$215,000	\$76,513	All built in	\$76,513
5 Project management	\$87,500	\$185,900	\$302,400	\$201,952	\$229,600	\$431,552
6 Transitional Shelters	0	0		²⁹ \$501,283	\$71,600	\$572,883
TOTAL PROJECT COSTS	\$1,626,283	\$1,338,500		\$1,511,362	\$516,000	

²⁵ GEF Terminal Evaluation Guidance, in: *Project-Level Evaluation: Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects*. UNDP Evaluation Office. 2012

²⁶ From all sources originally planned in 2005, as per ProDoc.

²⁷ As per signed ProDoc, page 30

²⁸ Source: UNDP Country Office; ATLAS, accessed September 2013. NB: Several project expenditures to be paid by UNDP-GEF have not yet been processed in ATLAS. Final figures are expected in October 2013.

²⁹ These were earmarked funds leveraged during project implementation for flood response.

TOTAL ACTUAL BUDGET			\$2,463,500		\$2,027,362
---------------------	--	--	-------------	--	-------------

The expenditures demonstrate that value-for-cost was achieved. In most cases, project targets were achieved at much less cost per outcome than originally planned. The differences in planned versus actual budgets reflect the absence of cost-sharing that had been planned in the original project design but was no longer available 4 years later when the project was signed. Project delivery was about 100%.

e. Monitoring & Evaluation: Design at Entry and Implementation

Indicative Monitoring Plan

The Project Document’s *Indicative Monitoring Plan*³⁰ comprised a standard collection of the reporting documentation usually required for UNDP projects. The plan was closely complied with by the Executing and Implementing Agencies as all reporting and other documentation required by GEF-funded projects was produced. The monitoring plan has been converted to a checklist and appended as Annex 7. Each document was examined and it has been confirmed that documents generally complied with expectations of content and quality.

Logical Framework: Targets and Means of Verification

The project’s Logical Framework listed Indicators and quantitative targets, some of which were modified at project start up and others, during implementation. Change of some appears to have been a necessity, as the targets originally set (e.g., for demonstrations houses in 2005, and later for replications of EE products in 2009) were set unrealistically high. Natural disasters in the programming area slowed implementation during 2010-11, while insurgencies slowed project work during 2012.³¹ Other targets, e.g., those set for savings on health expenditures and fuel wood consumption corresponding to the project Objective, were based on evidence from studies.³²

“Means of Verification” (MOVs) were also listed in the Project Document’s Logical Framework to support monitoring through verification that indicators and their targets were being met.

The MOVs for EE and reduction of GHG emissions appear robust. The longitudinal study carried out to monitor fuel wood consumption over time, both prior to and after installing EE products, was monitored by project staff and diligently reported on. This study was of prime importance as it became the basis for calculating the reductions in GHGs and making inferences on how well project targets were being met through annual increases in installation of products in additional homes. Within the study, 33 model households were provided with spring scales for measuring the weight of fuel wood and books with forms for recording their daily fuel consumption. One form had sufficient space to record the HH’s daily consumption for one month, as well as the demographic characteristics of HH members. Each household in the study was trained in a 4-step process, and each house posted a sign with a unique ID number on its front gate to mark it as a monitoring home. These houses were visited on a monthly basis to collect the forms and examine the data. Monthly information was processed and collated by the BACIP program staff in Karachi. Calculations of GHG emissions were figured by hand. This process appears to have been rigorously followed: see Annex 8 for details of project records.

³⁰ ProDoc Pages 28-29

³¹ Source: APR 2012

³² Refer. Sedky, Noha & Abid Hussain. *The Impact of BACIP Interventions on Health and Housing in the Northern Areas of Pakistan*. July 2001. Karachi: AK Health Services & AKPBS-P

The HH Baseline Survey undertaken in 2010 provided updated baseline figures on demographic information, prevalence of wood fuel usage and other information specific to the project intervention communities. Although no end-of-project survey was undertaken to verify how well some of the targets had been met, other useful information was produced. As an example, evidence to demonstrate that the target for “reductions in household Healthcare expenditures” had been met was provided through ongoing monitoring, a mid-implementation technical study on health impacts,³³ and an Internal Evaluation undertaken in August 2011.³⁴ The 2013 APR claims that the health expenditures were in fact reduced from around USD 300 to USD 165 per household, per winter season, which suggests that the targets were met.³⁵

Similarly, Outcome 1’s first OVI states a target of “increased awareness of at least 50% in 10 target valleys.” No pre-and post-intervention surveys to gauge levels of awareness were undertaken. It should not be assumed that pre-intervention levels of awareness were 0%, as AKPBS had been working in the region on the BACIP technologies for about a decade and elsewhere it is stated that “about 5% of HH had EE products.” Although a direct comparison of 50% cannot be established, other documentation bears proof that the project developed and published a communication strategy based on best practices in the programming area and did mount an extensive, multilingual campaign across the programming area.

Qualitative information regarding the effectiveness of the various elements in the campaign can be inferred through the findings of the HH Survey undertaken in 2011 within the context of an Internal Evaluation by the AKPBS M&E Section. The survey demonstrated that the “people to people” approach, i.e., meetings and demonstrations with program staff, neighbors or Village Resource Persons tended to be remembered and reported most often by respondents as, ‘how they learned about the EE products.’

f. UNDP and Implementation Management

Partnership support and backstopping provided by UNDP and GEF was largely focused on assistance with administrative requirements, associated advisory services, and, monitoring. In this regard, UNDP appears to have generally met its fiduciary responsibilities. The only questions that may be raised would be regarding the timeliness of completing documentation such as PIRs and the GEF Tracking Tool. Ensuring that evaluative narratives refer directly and specifically to indicators, progress towards targets and the quality of progress towards outcomes could profit from a bit more attention. When updating records, checking every relevant box and providing justifications of ratings which include facts and figures serves all partners; as well as provides opportunities for future learning.

Both the Executing and Implementing partners have expressed appreciation to UNDP for administration and support that were consistently timely and forthcoming, as well as for the accessibility of senior managers and experts. GEF was appreciated for its direct involvement through ensuring representation at all PAC meetings in addition to the project’s monitoring activities, workshops, etc.

III.3. Project Results

³³ 2010. *Indoor Air Pollution – Health Impact Study of BACIP Fuel Efficient Stoves*. Dr. Amna Rahanna Siddiqui. Aga Khan University Hospital.

³⁴ 2011. *An Evaluation Study on GEF-PEECH*. Nasreen Didar and Nazakat Ali.

³⁵ APR August 2013, Page 5

a. Overall Results/Attainment of Objective and Outcomes

According to UNDP parlance, a 'result' is defined as "a describable or measurable development change resulting from a cause and effect relationship." In GEF terms, results include direct project 'Outputs,' such as the 'Guidelines for Energy Efficient Construction'³⁶ developed under the project. Another type of result is the short-to-medium term 'Outcomes,' which are the *effects* of the project's Outputs. Examples of Outcomes from PEECH would include Outcome 2³⁷ from the project's LogFrame under Component 2: Policy support and Institutional capacity building." Very importantly, however, Outcomes also include those effects which did occur but were not spelled out in the ProDoc, such as the adoption of the Guidelines for all, new provincial constructions by the Government of Gilgit-Baltistan, and, the allocation of funds by the GoG-B to implement the new directive. Longer-term 'Impacts,' include global environmental effects, replication effects, and other local effects, such as decelerating deforestation in the province due to "across-the-board" implementation of the directives, and, the resulting reductions in GHG emissions.³⁸

Overall, the project has been able to deliver and to do so in ways that have implications for replication in other parts of Pakistan or South Asia as 'best practices.' It may be kept in mind that, the project largely constituted a set of 'pilots,' that sought at the activity/output levels, to bring a number of initiatives (such as EE and MF products) out of the R&D stage and to integrate them into the fabric of local life by:

- Building awareness and advocacy at various levels of society and various levels of local decision-making authority; (Outcome 1)
- Creating market demand in target valleys while building local capacities to reproduce and/or retail in the EE and building products; (Outcome 1 and Outcome 3)
- Developing new financial products that responded to the needs and purchasing power of the local populace as well as the realities of the local economy; (Outcome 3)
- Ensuring sustainability through integrating know-how into local institutions for education, provincial administration and governance; (Outcome 1 and Outcome 2)
- Mainstreaming appropriate technologies into policies and governance practices with a view to future impacts on deforestation, climate change and disaster preparedness. (Outcome 2)

As an integrated set of pilots, 'learning' was also one of the most important Outcomes of the project and will be treated in this report as Outcome 4. The results desired at the Macro level were intended to contribute to the project's Goal: reductions in GHG emissions; while, results at the micro level would contribute to meeting the project's objective: improving the health and economic well-being of the individual, participating households. Meso-level results occurred largely at the level of the project's Outcomes, in terms of broadened awareness across 5 districts, enhanced capacities of institutions, and development of the components of a new EE service market.

³⁶ Title of document: *Energy Efficient Building Guidelines for Non-Engineered Buildings in Gilgit-Baltistan and Chitral Region of Pakistan*. May 2013

³⁷ Outcome 2: Enhanced institutional capacity and support to mainstream EE products and technologies into local and national-level building codes and standards, together with relevant support measures, as well as rural and regional development plans, strategies and programs.

³⁸ Based on: *Project-Level Evaluation: Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects*. 2012. UNDP Evaluation Office. Page 19

The project Goal, objective and all project Outcomes under the PEECH Logical Framework were achieved, albeit, with varying degrees of success. A number of very positive ancillary Outcomes were also achieved which were not pre-defined in the project document.

In the remainder of this section, each project Outcome and any of their ancillary outcomes will be discussed within the context of how each has contributed to or detracted from the project's overall performance as per the global evaluation criterion in items b-g, below. The project will be rated using the UNDP Rating Scales for project evaluations.³⁹ Please refer as well to the 'Achievement of Outcomes Matrix,' appended as Annex 6 and the Rating Scales on the annex' final page.

b. Relevance

SCORE: R (Relevant)

The project concept as a whole and each of its constituent components were highly relevant to multiple levels of society and within multiple spheres: social, economic and even political. To some degree, this explains the enthusiasm with which stakeholders readily participated; the ownership expressed by representatives of institutional stakeholders; and, finally, the willingness of stakeholders to take professional or financial risks, even during difficult times in the region.

Consistency with Beneficiaries' Requirements

Traditional Mountain Communities and High Altitude Subsistence Farmers

Most mountain village communities live in small homes which are built by non-professional masons in traditional architectural styles. According to the Baseline Survey (2010), 97% of households in the program target areas used fuel wood for heating and cooking. BACIP EE products offered ways for these communities to adapt their homes, making them warmer, drier, cleaner and lighter while using less fuel wood. By insulating their common room and using a fuel efficient stove with attached water warmer and ventilation, traditional communities could make a significant, incremental step away from using large amounts of wood for cooking and heating, while not being expected to drastically change their lifestyles. As the combined effects of using 3 or more products together could save as much as 60-67% of firewood over pre-product installation usage, households had more cash income available for family needs. This is particularly important to local people who sell crops from small holdings for cash and are, most of the year, 'cash poor.' When village stakeholders were queried as to what they spent the extra cash on, they invariably said their "children's education."

Provincial Government of G-B

The project's start up coincided with a new era in the region and therefore, new freedom to explore development based on local priorities that were truly local. Since gaining *de facto*, province-like status in 2009, the Provincial Administration and new Legislative Assembly have had a greater stake in building their region's future. Against this context, the needs of decision-makers to respond to the threats of GHGs, climate change and deforestation in ways that do not undermine social sustainability have become increasingly apparent in the face of natural disasters. As only about 14% of the provincial

Baseline fuel wood consumption was equal to 27 kg per household per day; or, 4.8 tons/year per household.

PK 350

is the cost of 1 maun (40 kg.) of Oak fire wood in Chitral district.

Transport charges are more than the cost of the wood.

- A Resident of Booni Valley, Chitral, KP

³⁹ To review the UNDP Rating Scales, please refer to the table at the end of Annex 6.

population is urban⁴⁰ the challenges cover a wide geographic area. The solutions offered through PEECH were developed in partnership with Government counterparts and communities' stakeholders. Policy development undertaken promised reasonably high chances of success and compliance because there were built-in incentives for energy efficiency and protection from earthquakes for families, contractors and building owners. Additionally, the policy directions pursued did not clash in any way with traditional practices or systems of authority and patronage.

Consistency with Global priorities & Pakistan's Needs

The project helped to develop techniques and good practices that with some further development can feed into future and scaled up projects under the Clean Development Mechanism – Pakistan. Good practices can also contribute to mitigation measures relevant to the National GHGs Inventory.

Further, the project addressed several of the recommended actions for mitigating climate change endorsed by the GoP's *National Task Force on Climate Change Report* (2010); in particular, through limiting deforestation, through promoting livelihoods development and use of fuel efficient stoves.⁴¹

c. Country Ownership

SCORE: HS (Highly Satisfactory)

At the last PAC meeting of the project implementation period, the Chair⁴² made a recommendation which was repeated by a number of other stakeholders throughout the project evaluation: as the project that was coming to a close was exemplary, "it should be scaled up and extended to new areas of Pakistan." PEECH has been described as a Flagship Project for the Ministry of Environment and the Climate Change Division, which was an active member of the PAC. The project concept was regarded as very much in line with National priorities in curbing deforestation, mitigating the adverse effects of climate change, and promoting Clean Development. Even so, it was also generally regarded as a particularly elegant concept as its integrated, inter-dependent components promised – in addition to better environmental statistics - better day-to-day living for poor people subsisting in the harsh high altitude environment of the Northern Areas.

Provincial Government decision-makers have unreservedly based decisions, planning policy and budget allocations on project outputs; e.g., building guidelines and hazard maps. While attendance by Provincial stakeholders, including those from the Provincial Government at the PAC meetings and other events held in Islamabad was low, this was due to the time-consuming difficulty in travel to and from the National Capitol. Provincial Government stakeholders did regularly participate in project meetings, workshops and other activities in the Northern Areas. Senior officials also generously supported the project evaluation and have spoken enthusiastically of the work achieved "together" through project implementation.

d. Mainstreaming

SCORE: HS

The project corresponds to the OPII (One UN Program for 2013 – 2017) Strategic Priority Areas (SPAs) 2 and 3, "Inclusive economic growth through sustainable livelihoods;" and, "Increased national resilience to disaster, crises and shocks," respectively.

⁴⁰ Source: <http://en.wikipedia.org/wiki/Gilgit%E2%80%93Baltistan>

⁴¹ See: Sections 6.2.4.1.-2. Available at: <http://pc.gov.pk/usefull%20links/Taskforces/TFCC%20Final%20Report.pdf>

⁴² Mr. Jawed Ali Khan, DG/Environment, Climate Change Division, Ministry of Environment, 12 December 2012.

In regard to SPA 3, “Increased resilience to disaster and crises,” the project Goal’s emphasis on reductions of GHGs, in the context of the project’s outputs, implies contributions to efforts to limit disasters owing to climate change and deforestation. The project’s promotion of earthquake resistant building technologies which save trees also helps to build resilience to disaster. Hazard assessments and mapping undertaken as activities under Outcome 2 to develop policies and guidelines for EE and earthquake resilient construction also correspond to this SPA.

SPA 2, “Sustainable livelihoods,” is promoted through the Project’s Objective, for helping cash poor households save money on fuel wood and health care, as well as Outcome 3: development of a Market Chain. In the case of the latter, craftsmen and entrepreneurs were trained to enable them to enter and build up the EE market. Eight were provided with soft micro loans by the project to expand their businesses.

Women and children also benefitted directly, as they are responsible for collecting fuel wood; often forgoing other productive work and education. As a result of a focus on women as the catalysts for change in their communities they have become strong advocates and have been leading the push for the expansion of services. Currently 90% of Village Resource Persons (VRPs) are women. VRPs are trained and facilitated to act as commission-based sales agents and generate demand within communities by raising awareness with regards to energy efficient cooking, heating and housing technologies. The intervention has provided them with skills and confidence, reduced their workload, helped them acquire a cleaner indoor environment and lowered the incidence of disease related to indoor air pollution. The commission based sales mechanism has provided incentives to women who have been able to earn money and improve their livelihood status.⁴³

e. Effectiveness & Efficiency

OVERALL SCORE: S (Satisfactory)

‘Effectiveness’ concerns foremost the extent to which a development intervention’s objectives were achieved, whereas ‘efficiency’ is a measure of how well Inputs (resources) were converted into results. In the section below, the project Objective, the three programmatic Outcomes, and the project’s M&E component are discussed as per their effectiveness and efficiency, and each of their corresponding OVI’s are provided with a rating corresponding to a sub-score.⁴⁴

i. Project Objective

E & E Score: S

The PEECH Project Objective and its two Objectively Verifiable Indicators (OVIs) are as follows:

OBJECTIVE: <i>Improved household economies and improved health in Gilgit-Baltistan and Chitral through efficient use of wood fuel and EE housing construction technologies.</i>	
OVI-1: Household expenditures on fuel wood in pilot villages of Gilgit-Baltistan & Chitral reduced by 53% or \$160 per (winter) season.	OVI-2: Reduced average household health expenditures due to reduced incidence of ARI, pneumonia and other respiratory illness in the pilot villages by 20-24%; i.e., by PKR 3,500 to PKR 10,500 per annum.
Effectiveness & Efficiency Sub-score: HS	Effectiveness & Efficiency Sub-score: S

⁴³ Based on: PIR 2013, “Progress in addressing Gender Equity,” Page 35

⁴⁴ It should be noted that “the overall rating should not be higher than the lowest rated dimension.” Source: *Project-Level Evaluation: Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects*. 2012. UNDP Evaluation Office. Ch. 3 Page 22,

Ninety-seven per cent (97%) of households in the programming area use wood as their priority fuel⁴⁵ and 53% purchase firewood as they are unable to gather enough for their daily uses.⁴⁶

The first OVI, ‘Reduced Expenditures on firewood,’ had a targeted savings of USD 160 per family, per winter for households that were participating as ‘model’ or demonstration households. By the end of the project, 2,610 model households which had installed a package of 3 products had reduced their

	Savings from EE Products	Fuel Wood Saved (% per year)
A.	Saving from single product	
	Fuel Efficient Stove (FES)	25-30
	Water Warming Facility (WWF)	20-25
	House Insulation Techniques (HIT)	10-15
B.	Saving from combinations of 02-products	
	Rooftop Hatch Window (RHW)	20-25
	FES + WWF	35-40
C.	Saving from combinations of 03-products	
	FES + RHW	40-45
	RHW + HIT	40-45
D.	Saving from combinations of 04-products	
	FES + WWF + HIT	50-55
	RHW + WWF + FES	55-60
	WWF + FES + RHW + HIT	
		55-60

Source: BACIP Firewood Monitoring Yasin Valley (BACIP/CCTL), from the paper which is in process for publication by GEF.

winter expenditures on wood fuel by an average of USD 165. The savings to each family were significant, but at the level of village communities profiting from improved purchasing power, there would have been an economic multiplier effect.

Results for OVI-1, “reduced household expenditure on fuel wood,” indicate that the target was met and surpassed. Results were verified through project monitoring of demonstration households and verified against the ongoing monitoring of a sample of 33 households through the longitudinal study which closely monitored and documented firewood consumption over time. An internal

evaluation study undertaken by the AKPBS M&E Section in 2011 with a sampling 298 households in Chitral and Gilgit confirmed significant savings of wood fuel for each EE product.⁴⁷ This indicator received a sub-score rating of ‘HS’: Highly Satisfactory.

OVI-2: “Reduced household expenditures on healthcare as a result of improved health,” used a 2001 comprehensive study to set the baseline of PKR 14,000 as the cumulative, average winter health expenditure for Northern Areas families who used traditional methods of cooking and heating.⁴⁸ The report of the Baseline Survey⁴⁹ undertaken in the programming area in 2010 found that respondents reported a number of health issues arising from spending long hours daily in cold, smoky, unhygienic houses. A separate study in 2010 by the Aga Khan University Hospital⁵⁰ reported that, “women’s health was improved by 50% by using the EE products, as they reduced indoor air pollution in closed spaces.”

2010 Health Baseline:

Coughs & colds: 71%
Pneumonia: 15%
Skin diseases: 39%

It may also be mentioned that the 2011 household survey⁵¹ queried 298 families as to the primary benefits of using EE products. Of the 14 responses received, “improved health and hygiene” was the

⁴⁵ This figure is from the *Baseline Survey Report August 2010* which surveyed HH in the intended project area. Thus, the figure is higher than the average figure for the NA region which appears in the Project Document.

⁴⁶ August 2011. *An Evaluation Study on GEF-PEECH*. Nasreen Didar & Nazakat Ali. AKPBS-P, M&E Section

⁴⁷ Ibid.

⁴⁸ July 2001. *The Impact of BACIP Interventions on Health & Housing in the Northern Areas Pakistan*. AK Health Services Pakistan & AKPBS

⁴⁹ August 2010. *Baseline Survey Report: PEECH*. AKPBS Monitoring & Evaluation Section

⁵⁰ January 2010. *Indoor Air Pollution- Health Impact Study of BACIP Fuel Efficient Stoves*. Dr. Amna Rehanna Siddiqi, Aga Khan University Hospital.

⁵¹ August 2011, *An Evaluation Study of GEF-PEECH* Pages 11

third most popular response, just under “keeping the house light” and “keeping it warm.” Direct beneficiaries randomly queried during field visits, FGMs and for case studies reported knowledge of the potential health benefits of using EE products, as well as general improvements in their own families’ health and well-being.

The 2011 household survey⁵² delivered inconclusive results on this indicator. The 162 families queried in Gilgit, reported spending an average of PKR 3,323 on health per winter season, while the 136 families in Chitral reported an average expenditure of PKR 15,924. This was due in part to differences in disease burden reported but there are no details as to what other variables could have been operating in the environments.

Diseases	GILGIT	CHITRAL
	# cases	# cases
Cough	30	26
Colds	14	31
Pneumonia	7	17
ARI	0	18
Avg. Health Expenses	PKR 3,323	PKR 15,824

As no post-implementation survey or study was undertaken to confirm the results, as per the Means of Verification (MoVs) indicated in the project monitoring plan, we can only infer that it was likely that the financial targets for OVI-2 were met because there is evidence that the health-oriented portion of the Objective was likely to have been achieved. For this reason, the OVI received a sub-score rating of ‘S’ Satisfactory.

ii. Outcome One

E & E Score: HS

Outcome 1 and its 3 OVIs are as follows:

<i>OUTCOME 1: Improved local awareness and capacity for installing EE cooking, heating and housing products & technologies.</i>		
OVI-1: Awareness-raising increased at least 50% in 10 target valleys; Communication Strategy developed and implemented starting year 2.	OVI-2: Training program for local technical personnel, end users and other stakeholders developed; and, training program institutionalized in at least 2-3 teaching institutions; and, a pilot training program with a minimum of 20 people trained starting year 2.	OVI-3: Capacity development leads to at least 5 local craftsmen/artisans being part of local EE business by year 2.
Effectiveness & Efficiency Sub-score: S	Effectiveness & Efficiency Sub-score: HS	Effectiveness & Efficiency Sub-score: HS

The Outputs under Outcomes 1 (raised awareness across valleys & capacities for training, manufacturing and servicing EE products) reinforce and further promote those under Outcome 3 (growth in enterprises and entrepreneurs entering the EE market; access to credit for household purchases of EE products; and, widespread installations of products across the programming area induces increasing numbers of household replications).

For Outputs under OVI-1, a communication strategy was developed by media consultants to enable the Implementing Partner to advantageously employ a variety of methodologies and media that were known to be effective in the area.⁵³ The strategy combined print, electronic and personal marketing approaches which included demonstrations and opportunities to interact with others who were already using the products. Messages targeted the public, Government, CSOs, manufacturers and entrepreneurs. The Table below lists the types and numbers of activities undertaken during implementation of the awareness-raising campaign.

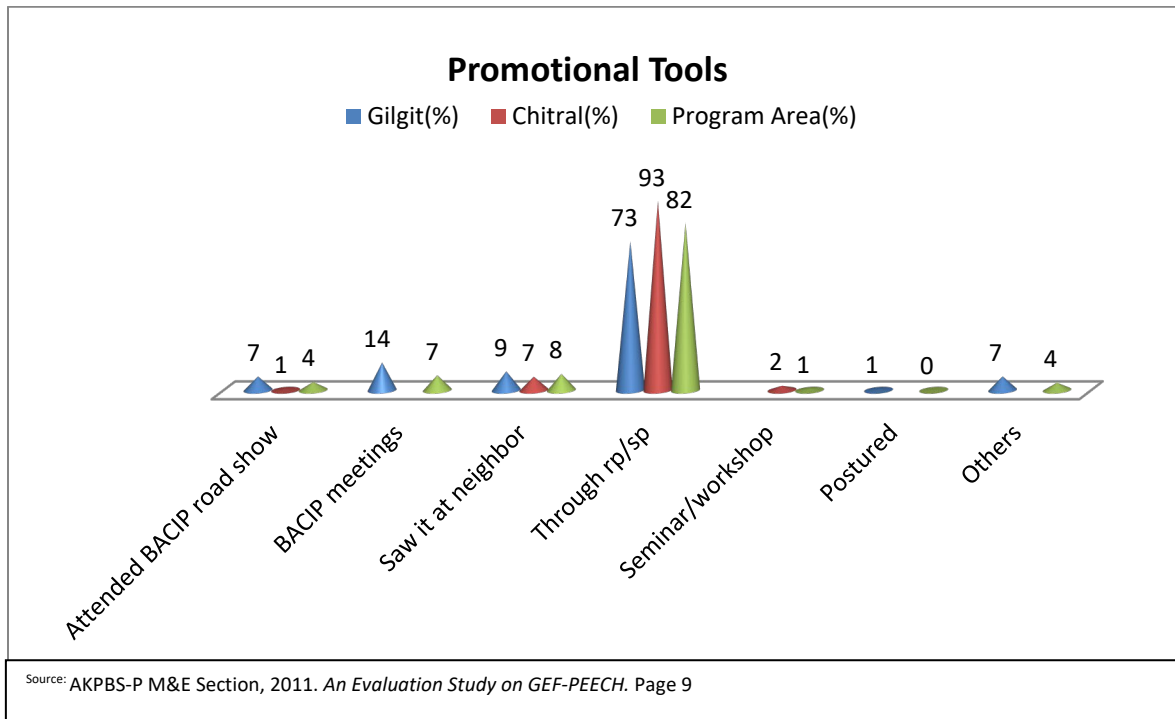
⁵² Ibid. Page 14

⁵³ June 2010. *PEECH Communication Strategy*. Syed Anwar-ul-Hasan & Shakeel Awan.

#	Awareness Raising Activity Type	# & Unit	Details
1	Community Meetings	228	28 villages@2 meetings/year/village
2	Road Shows	32 events	
3	Training of Village Resource Persons	30 VRPs	2 visits/model house (2,610 model households)
4	Bussing (Exposure) Visits	1 event	
5	Radio Talk Programs on EE Products (Urdu)	270 days	
6	Radio Talk Programs on EE Products (Shina)	90 days	
7	Radio Talk Programs on EE Products(Balti)	90 days	
8	TV tickers through local cable networks	90 days	
9	EE home improvement Infomercial on cable TV	270 days	
10	Radio Talk Program on Construction (Urdu)	270 days	
11	Radio Talk Program on EE Products (Shina)	270 days	
12	Radio Talk Program on EE Products (Balti)	270 days	
13	Post card with messages	600 cards	
14	Posters	45	
15	Stickers for school children	800	
16	Brochures on 4 products	4,000	
17	Banners	18	
18	Billboards	4	Installed in major town hubs in project area
19	Regional Awareness Workshops	7	1 in Chitral; 4 in Gilgit; 2 in Skardu
20	National Workshops/Seminars	3	1 in Islamabad; 2 in Gilgit
21	Round table Meeting with GOs & NGOs	12	
22	2012 PEECH Calendar		Targeted professionals, contractors, building owners

Source: AKPBSBS- Gilgit

Members of beneficiary households across three valleys who were queried during the evaluation field visits demonstrated awareness of the campaign’s messages and reported hearing the radio messages. The 2011 household survey indicated, however, that the campaign’s ‘people to people’ activities were probably the most effective with the village-level beneficiaries of the programming area. Please refer to the table from the 2011 Survey, below.



The awareness campaign had several objectives and one of the outcomes sought was increased demand generated for the products in the programming area. The end-of-project status for product installations indicates that, in addition to the 5,956 products installed in 2,610 demonstration houses, 21,496 products were installed in 14,331 replication households. In the context of the target beneficiaries, this level of demand suggests that the awareness campaign was effective.

Nevertheless, without carrying out pre- and post- intervention surveys, it is difficult to make any claim as to the *exact* levels that awareness has been raised. The target of 50% increase in awareness across 10 target valleys is not verified, although awareness has very clearly been raised across many remote mountain villages, the major towns of the region and social groups: from subsistence farmers to tradesmen to professionals. For this latter reason, OVI-1 received a sub-score of ‘S.’

OVI-2 with a focus on building local capacities for training identifies three Outputs: (1) development of a training program for technical personnel, end users and stakeholders; (2) institutionalization of training in 2-3 teaching institutions; and (3) another training program with 20 persons trained starting year 2 of the project. All three output areas were achieved with a total of 291 persons trained under the project. Details are as follows:

- 1) A technical training program was developed and implemented which included Curriculum development, training materials and 20 technical manuals produced in English and Urdu. Technical topics included manufacturing of EE products, EE and earthquake resistant design and construction techniques, as well as training. (See the end of Annex 7 for a complete list of publications). Under the project, 59 engineers from public sector departments were trained. In addition, 15 engineers, architects and master trainers were trained to test retrofitting techniques on buildings.
- 2) Three well-established training Institutions were supported to promote technologies and teach skills. Those included: Karakorum International University, Karakorum Polytechnic Institute and Gilgit-Baltistan Polytechnic Institute. MOUs were signed with each for cooperation which included technical support, a ToT and provision of training manuals. The Training of Trainers was undertaken for 15 faculty members. Subsequently, 123 students were trained and 20 engineering students became interns in PEECH demonstration construction projects. Trainees received certification which enhanced their employability.
- 3) A hands-on training was also undertaken benefitting 86 skilled craftsmen and artisans across the programming area. This type of training ensured that technical awareness and capacities for manufacturing, installation and construction were available.

Outcome:

Energy efficiency technologies are now mainstream for technical institutions in the region.

- Joint Stakeholder
Meeting Participant,
Gilgit, 19 August 2013

The targets for each output were met and surpassed where quantities were specified. Stakeholder perspectives were positive. This OVI’s outputs received a rating of ‘HS.’

OVI 3’s Outputs were focused on developing and providing the technical and entrepreneurial training, in addition to other support, to enable more entrepreneurs to enter and function sustainably within the emerging EE market. The target was for at least 5 local craftsmen to establish new businesses. Under this project component, 17 entrepreneurs and suppliers were trained. Soft loans of approximately \$1,000 for EE business start-up or expansion were subsequently provided to 8 of the more promising trainees. The pay-back rate was 100% and several entrepreneurs were granted second loans to continue building up their businesses.

During the evaluation, around 18 crafts persons and entrepreneurs were met under the format of 3 focus group meetings (FGMs). They valued the training and would welcome opportunities to be trained further. Most have been involved in training other crafts persons and their own employees in the techniques and business skills they learned. Some of the best were further trained as master trainers. The target has been met and a multiplier effect is both evident and working. The rating for the outputs under this OVI is: ‘HS’ or Highly Satisfactory.

iv. Outcome Two

E & E Score: HS

Outcome 2 and its 3 OVIs are as follows:

<i>OUTCOME 2: Enhanced institutional capacity and support to mainstream EE products and technologies into local and national-level building codes and standards, together with relevant support measures as well as rural and regional development plans, strategies and programs.</i>		
OVI-1: Proposal for new building codes and standards adapted specific to rural conditions in G-B and adoption is facilitated by year 3.	OVI-2: At least 20 new buildings/houses built or retro-fitted by AKPBS based on the new building codes and standards, by the end of the project.	OVI-3: Strategy for mainstreaming of building codes and standards in rural development plans is completed by year 2.
Effectiveness & Efficiency Sub-score: HS	Effectiveness & Efficiency Sub-score: HS	Effectiveness & Efficiency Sub-score: HS

Consistent with the Project Goal to decrease CO2 emissions, Outcome 2 was designed to further the aim of curbing the degradation of forests from excessive use of timber for house construction and wood fuel for household energy use. It was recognized that sustainability of short-to-medium term gains in the other project components (i.e., broad-based awareness, technical capacity, market access for EE and seismic resistant technologies) would be strengthened for the longer-term through advocacy of key provincial decision-makers and policy coverage under local public institutions. The Outputs under each OVI in Outcome 2 directly support these aims.

The activities in support of realizing Outcome 2 were undertaken against the backdrop of an absence of government regulatory mechanisms, building codes and standards designed to specifically address the Northern Areas’ needs for EE and seismic resistant construction. The majority of village housing is constructed by non-professional masons with local materials and traditional techniques for seismic resistance. The latter employ a great deal of timber to add flexibility to stone and plaster constructions and do not meet any safety standards. Furthermore, traditional building practices do not effectively employ insulation to limit the need for burning large amounts of wood. Provincial and National Government stakeholders recognize the need for adaptation in traditional building practices, as well as policies that will support good practices in both public and private building construction as means to improve living and working conditions while curbing deforestation.

Under OVI-1, two sets of building construction Guidelines and Codes were produced through a combination of technical and stakeholder consultative processes. To ensure the greatest practicality

Climate change is costing Pakistan dearly; Adaptation and DRR have to be priorities and learning has to be translated into policies, practices, laws and needs-based interventions.
 - Mr. Jawed Ali Khan,
 Former DG/Environment,
 Climate Change Division

and usefulness, the texts were produced in plain language with graphics. The development process was supported through workshops in Gilgit and Islamabad, in addition to reviews and recommendations by engineering universities: NED – Karachi, UET Lahore and UET Peshawar. The final sets of Guidelines were examined and endorsed by the Pakistan Engineering Council (PEC).

Concurrently, Hazard Risk Assessment Maps and Tools were developed to support Building Codes and capacity development, in partnership with WWF. These are to be used to demonstrate appropriate consideration of the stability of construction sites, as well as other decisions to be made in implementation of the new guidelines. The tools benefited both decision-makers and local communities in districts of G-B and Chitral. The Outputs in OV-1 have been rated ‘HS.’

OVI-2 involved promoting the new Guidelines through selection of at least 20 construction and retrofitting projects that could be used as high-profile demonstration models for the EE and seismic resistant technologies and products. By the end of the project, a total of 29 construction projects had implemented the new Codes and Standards. These included 4 public buildings, 5 communal buildings and 20 private buildings. Additionally, the selected construction sites provided training opportunities for engineering student interns who participated in implementation of the new codes and standards, first-hand. Finally, demonstration buildings served to create additional advocates in local communities and provincial governments. In some cases, the new buildings being constructed by opinion leaders provided a relatively inexpensive way for the project to increase local advocacy and create more demand, as well as familiarize more local skilled labor with the new codes. The target was surpassed by 30% and this OVI receives a rating of ‘HS.’

Each new house constructed uses at least 8 trees and now only 4% of what we call forest land is actually covered by forest.
- *Mr. Ismail Zafar,
Conservator of Forests,
Forestry Dept., Gov. of
Gilgit-Baltistan*

technologies and products. By the end of the project, a total of 29 construction projects had implemented the new Codes and Standards. These included 4 public buildings, 5 communal buildings and 20 private buildings. Additionally, the selected construction sites provided training opportunities for engineering student interns who participated in implementation of the new codes and standards, first-hand. Finally, demonstration buildings served to create additional advocates in local communities and provincial governments. In some cases, the new buildings being constructed by opinion leaders provided a relatively inexpensive way for the project to increase local advocacy and create more demand, as well as familiarize more local skilled labor with the new codes. The target was surpassed by 30% and this OVI receives a rating of ‘HS.’

Hazard assessments in four programming sub-areas⁵⁴ helped the Forestry Department build awareness among communities about DRR and unsafe building practices. Corresponding maps also helped to convince and involve communities in planting as opposed to cutting more trees in unstable areas.

An important Outcome has been the paradigm shift from the Government: Learning needs to also come from the communities in order to create greater benefits.
- *Mr. Nawab Ali Khan,
General Manager Gilgit- Baltistan
& Chitral, AKPBS-P*

OVI-3’s primary Output was a ‘strategy for mainstreaming building Guidelines in rural development plans.’ Policy development activities undertaken through the project have included distribution of well-illustrated manuals and other materials written in local languages. Seven regional seminars in the programming areas and 1 national seminar were organized to promote and disseminate the Guidelines. Advocacy for adoption and implementation was promoted by the project through targeted visits to members of the G-B Assembly, public departmental heads (Planning and Development Department, Forestry Department, Education Department), and other public representatives. Through the Planning and Development Department, the GoG-B was facilitated by the project to formulate their Annual Development Plan (ADP) which mainstreams the new Building codes and Guidelines, in consultation with local and provincial stakeholders. The Planning and Development

through targeted visits to members of the G-B Assembly, public departmental heads (Planning and Development Department, Forestry Department, Education Department), and other public representatives. Through the Planning and Development Department, the GoG-B was facilitated by the project to formulate their Annual Development Plan (ADP) which mainstreams the new Building codes and Guidelines, in consultation with local and provincial stakeholders. The Planning and Development

⁵⁴ Hazard assessments were undertaken in Chitral, Gilgit, Astore and Skardu. Mapping tools with detailed, colored indicators of types of hazards and where they could occur were created.

Department has furthermore made a budget provision in their ADP for development of the Gilgit Development Authority and Skardu Development Authority which will eventually take responsibility for implementation of the building codes in all new construction projects undertaken by the GoG-B.

The above actions have resulted in concrete measures to institutionalize the new codes and standards in development and construction projects in the province. Rating for OVI-3: 'HS'

v. Outcome Three

E & E Score: S

Outcome 3 and its 3 OVIs are as follows:

<i>OUTCOME 3: Significant growth of rural enterprise and income generation from community service providers is enhanced through the replication of integrated EE products and technique packages.</i>		
OVI-1: At least 15 local enterprises engaged in EE activities by the end of the project.	OVI-2: At least 1 micro finance institution offering sustained micro-credit facilities for EE housing improvement products by the end of the project.	OVI-3: At least 32,000 households including 2,100 directly and 30,000 indirectly showcasing EE cooking, heating and housing improvement technologies and products by the end of the project.
Effectiveness & Efficiency Sub-score: S	Effectiveness & Efficiency Sub-score: HS	Effectiveness & Efficiency Sub-score: S

Outcome 3 aimed to develop an EE service market in the programming area through Outputs that developed livelihoods, established access to credit for EE home improvement products, and, through demonstrations that promoted replications of products in more homes throughout the region.

Under OVI-1, at least 15 local enterprises (distributed throughout the programming area) were to become engaged in EE activities by the end of the project. An initial activity, a comprehensive study with a market strategy was completed in 2012. An incremental approach to institutionalizing the marketing strategy was necessary in order to build up capacities of the market while increasing customer demand. Twenty-three local entrepreneurs and suppliers were trained, after which they received bulk orders for products from Village Resource Persons and Local Social Organizations' (LSOs) social mobilizers who were facilitated by the project. Products were supplied to Demonstration House customers at subsidized rates. Entrepreneurs were also subsidized as the project absorbed all transportation, storage and marketing costs.⁵⁵ As a result, entrepreneurs and craftsmen sold a total of 18,332 products to consumers.

As the project has ended, these subsidies and guaranteed bulk orders can no longer be offered. At present, entrepreneurs are highly dependent on the program and feel it is too expensive for them to take over the linkages to markets or transportation and delivery. None of the entrepreneurs queried during the evaluation could provide a clear answer as to how they could work together to maintain demand, elicit customer orders or manage relationships with Village Resource Persons and LSOs, themselves in the post-project context. This implies serious sustainability issues at the current point in time, even though the activities produced effective results during the life of the project and targets have been met. Rating for Outputs under OVI-1: 'S'

S'OVI-2 specified that at least one micro finance institution would be offering sustained micro credit facilities for household purchases of EE products. Three district-level workshops were held for

⁵⁵ Subsidies were a part of the original project design and incentivized the demonstration effect.

representatives of financial institutions and local entrepreneurs to discuss opportunities for future business cooperation. An MOU was signed between the AKPBS and the First Micro Finance Bank (FMFB) to begin the first-ever program to provide micro credit to poor families for home improvement products consisting of 'indirectly-performing assets.' The loans were for the amount of PKR 9,500 for a 3-product package and an insurance policy. Interest rates were low compared to market rates for micro credit, at 14.3/8% with a usual repayment period of 3 years. A 'social collateral' mechanism utilizing Village Resource Persons as group leaders was employed to grant loans to 717 households.⁵⁶

Although initially risk averse, the FMFB has been very pleased with the pilot project's popularity and success. The Regional Manager has called it their "most successful loan product." The project was able to ensure that much of the ordinary risk was mitigated through supporting management of demand, overseeing orders of products with entrepreneurs, and ensuring delivery and installation. There is increasing demand for the loan product on both supply and demand sides. The bank reports that the use of 'social collateral' has ensured that there have been no defaults and not even one late payment. The Outputs under OVI-2 have received a rating of 'HS.'

Exceptional Outcome:

Communities that previously could not qualify for credit of any kind now have credit histories and are deemed credit worthy. These communities will be eligible to avail of additional credit opportunities or products for SMEs, agro-industry, etc.

- *Mr. Hadi Husani,
CEO, AKPBS-P*

Under OVI-3, a 'critical mass of households' show-casing EE cooking, heating and house improvement technologies and products were to be produced by the end of the project. This Output is useful as it is an indirect indicator of increased well-being of local peoples who are enjoying the products. It also provides the source of data demonstrating that GHG emissions are being reduced to a significant degree. Furthermore, increasing the numbers of replications across the programming area, over and above the numbers of demonstration households, should free up more households' finances in the area; eventually contributing to strengthened local economies.

The end-of-project results comprise a grand total of 27,452 products installed in a total of 16,941 households over 4 years of project implementation. Of this total, 2,610⁵⁷ households are directly and 14,331 are indirectly showcasing products. Therefore, the target for direct showcasing was exceeded by 510 HHs.

The demonstration households, whose awareness had been built regarding the cumulative effects of 3 EE products installed together, were encouraged to purchase a package where they would pay for two

Exceptional Outcome:

In the aftermath of the 2010 floods, the project developed and show-cased a newly designed, culturally appropriate and thermally efficient, transitional shelter for NA IDPs. The model was used to house more than 1,000 displaced families.

⁵⁶ The MoU allowed for many more loans to have been made but initial delays and the seasonal nature of customer demand meant only 2, 2-month loan cycles could be implemented.

⁵⁷ Direct or Demo houses include: 267 shelters for IDPs and 484 ultra poor homes, as well as 13,034 replication homes serviced through entrepreneurs.

products and receive the third one free of charge. In other cases, consumers could opt for a cash subsidy rebate instead of the third product. This still translated into a 70% (householder) - 30% (project) contribution ratio.

While it appears that there was a short-fall in meeting the target for replications of more than 50%, (i.e., by 15,669 households) this is not entirely the case.⁵⁸ In 2011, the PAC recommended revising the target for 30,000 replications which had been raised at the Inception Workshop, but no specific new target number was established officially, or otherwise. Rating for Outputs under OVI-3: 'S'

vi. Monitoring & Evaluation Component

E & E Score: S

<i>M&E: A Project Monitoring and Evaluation System is based on the project Logical framework and supports tracking and reporting on progress against Outputs and Outcomes, as well as adaptive management.</i>	
Output-1: An information repository with web access stores and organizes information on EE products, manuals, studies and other materials created under the project for future reference.	Output-2: The Project Monitoring Plan reports project progress transparently to all major stakeholders and promotes accountability.
Effectiveness & Efficiency Sub-score: HS	Effectiveness & Efficiency Sub-score: S

Output 1

The repository stores the sizable amount of documentation⁵⁹ created under the project in an attractive and easy to use online format. It is not yet available for use to anyone outside of the AKDN.

The data-base for tracking the results of monitoring and measuring the use of wood fuel in the longitudinal study; in addition to GHG emissions avoided on monthly and annual basis were not made part of the repository. This data is restricted to the MIS maintained in Karachi. However, this data is the project's means of demonstrating impact; i.e., verifiable improvements in behavior, corresponding reductions in GHGs, and, reductions in stress on ecological systems. Information from this separate system should be incorporated into the repository developed under the PEECH project in order to promote learning and transparency. Rating: 'HS'

Output 2

All types of documentation in the Project Document's Monitoring Plan which were **also required** by GEF were produced. (See Annex 7 for the matrix of the Indicative Monitoring Plan and comments on each item.)

Progress and Terminal reporting were of varying clarity, detail and completeness. There appears to have been some confusion regarding the level of detail required in reporting to demonstrate that outputs have been produced with effectiveness and efficiency; i.e., an emphasis on progress towards outcomes in current approaches to results based management still requires detailed reporting on

⁵⁸ PAC members at a meeting in October 2011 recommended "revising the target down to coincide with the existing trend." No new numerical target was set either at the meeting or later. The original targets in the ProDoc were for 22,000 demonstration houses and 10,000 replications. These were changed to 2,100 demonstration houses and 30,000 replications at the Inception Workshop.

⁵⁹ See ANNEX 3 for a list of the PEECH documents, materials and manuals produced.

production of outputs. Additionally, some outputs appear to have been misplaced under the headings of the wrong Outcome in APRs, the terminal report and AWP.

The quality of output monitoring and reporting appears to have been somewhat inhibited by pitfalls in the design of the Logical Framework, later problems with re-setting indicators' targets during inception and implementation, and, with failure to carry out some of the needed pre- and post-implementation surveys to verify results quantitatively. Rating: 'S'

It is believed that the Implementing Agency made efforts to carry out the necessary monitoring and reporting and would welcome, as well as profit from additional process consultation concerning UNDP's style of RBM and reporting under any future cooperation.

f. Sustainability

OVERALL SCORE: L

UNDP and GEF both assign high importance to assessment of each project Outcome's sustainability. While sustainability is generally defined in simplest terms to mean, "the likelihood of continued benefits after the project ends," there are four dimensions along which this 'likelihood' is to be analyzed: environmental, social, financial and institutional. A consideration of risks that could emanate from within any of the four dimensions is also a part of the analysis.⁶⁰ Each of the 3 programming components is discussed below in terms of aspects relevant to each dimension of sustainability.

i. Outcome One

Sustainability Score: L

OUTCOME 1: Improved local awareness and capacity for installing EE cooking, heating and housing products & technologies.		
OVI-1: Awareness-raising increased at least 50% in 10 target valleys; Communication Strategy developed and implemented starting year 2.	OVI-2: Training program for local technical personnel, end users and other stakeholders developed; and, training program institutionalized in at least 2-3 teaching institutions; and, a pilot training program with a minimum of 20 people trained starting year 2.	OVI-3: Capacity development leads to at least 5 local craftsmen/artisans being part of local EE business by year 2.
Sustainability Sub-score: L	Sustainability Sub-score: L	Sustainability Sub-score: L

Social

OVI-1: The electronic and print media portions of most awareness-raising and public service campaigns are of limited duration. In isolation from other actions, their benefits have a limited shelf-life. In the case of the campaign to raise awareness of the benefits of EE products, media tools operated concurrently to a number of social, demonstration and workshop activities. Of particular importance in the rural areas was the training of 30 residents of various villages across the programming area in personal marketing approaches and their subsequent assignments as Village Resource Persons. In some areas, the local LSO became the resource liaison and several of its members took the RP role. This approach automatically integrated a long-term source of information and access to products – and in some areas micro-credit – into communities. The village resource persons and LSOs were incentivized to maintain a high level of involvement through a small commission on each new household's purchases. These human resources remain in and with their communities, in some cases continuing to work, even after the end of the project. Sustainability sub-score rating: L (Likely)

⁶⁰ Based on pages 21-22 of: *Project-level Evaluation: Guidance for Conducting Terminal Evaluations of UNDP-supported, GEF-financed Projects*. 2012. UNDP Evaluation Office.

Institutional

OVI-2: Administrators and instructors of the University and Polytechnic training institutes expressed enthusiasm over the results of the capacity development activities; They also stated their willingness to ensure the sustainability of the programming via their own resources and personnel. In separate interviews they conveyed a belief that they had been enabled by the project to deliver higher quality training than they could have otherwise provided, and which was suited to local conditions; in particular, the needs of the professionals and technicians of the Northern Areas region. They mentioned the quality of the staff development, technical manuals and studies which they were still using in their courses, as well as the competitive edge that the certification and internships gave to their students. The sustainability rating for this OVI is L

Financial

In addition to EE and seismic resistance technologies having gained real traction in the region’s top technical centers, there is an aspect of financial sustainability as well. Brief interviews of 2 student interns and several trained Master trainers also provided positive feed-back on the value of the training to them and their careers. It is expected that the Institutes and the university also understand the advantages of the training to acquiring future student applications.

OVI-3: Capacity development of local craftsmen was undertaken to assist them to become manufacturers and suppliers of EE products. This included training in high demand items, such as the roof hatch windows and doubled glazed windows (for carpenters) as well as high quality fuel efficient stoves and their components (for tin and metal workers). An aim of the training was to ensure the sustainability of quality in the market. Some tradesmen were also trained and encouraged to stock the materials needed to construct or retro-fit walls, floors and ceilings with insulation. Larger numbers of trainees than the target required were trained as a sustainability measure, though not so many as to adversely affect livelihoods. The likelihood for sustainability of the livelihood enhancing skills is high. During the course of the project, entrepreneurs were able to earn more and often opted to train their employees and family business members in what they had learned through the project. An incentive is that the “BACIP” EE products have formed a market niche as the higher quality products. A respondent at women’s FGM stated that, “the BACIP products were better than the imitations that were in the market.” Several entrepreneurs participating in Focus Group Meetings offered opinions that they would attend more training if possible. Sustainability rating for capacity building under OVI-3: L

ii. Outcome Two Sustainability Score: L

<i>OUTCOME 2: Enhanced institutional capacity and support to mainstream EE products and technologies into local and national-level building codes and standards, together with relevant support measures as well as rural and regional development plans, strategies and programs.</i>		
OVI-1: Proposal for new building codes and standards adapted specific to rural conditions in G-B and adoption is facilitated by year 3.	OVI-2: At least 20 new buildings/houses built or retro-fitted by AKPBSBS based on the new building codes and standards, by the end of the project.	OVI-3: Strategy for mainstreaming of business codes and standards in rural development plans is completed by year 2.
Sustainability Sub-score: L	Sustainability Sub-score: L	Sustainability Sub-score: L

Environmental

OVI-1 Forestry Department cooperation and advocacy is strong as they view the building guidelines as supporting their objectives and interests in limiting deforestation – particularly in areas where there is strong dependency of local populations on wood for construction, as well as scarcity of remaining timber. Forestry Department officials claim that they are no longer interested in working in isolation from other stakeholders.⁶¹ Sustainability rating: L

Social

OVI-1 The building Guidelines support project objectives and environmental priorities through provision of codes and standards of construction that ensure greater safety and comfort for people.

OVI-2 Demonstration construction and retro-fitting sites provide citizens, craftsmen, laborers, engineers and architects with examples of what the building guidelines mean in practice, thereby incentivizing compliance with codes on future projects. Good-will and positive interest are created among building owners and custodians (public and private) through provision of technical assistance for their properties. Sustainability rating: L

Institutional (includes Governance)

OVI-1 Stakeholders, including NED and PEC who supported development and endorsement of the Guidelines are likely to remain advocates and may provide advocacy for institutionalization at the National level.

OVI-3 Development of institutional capacity in the Provincial Government’s Planning and Development Department has culminated in commitments. By issuing instructions to other provincial line departments to use the Guidelines and by including a directive in the Annual Development Plans to implement the Guidelines in all new construction projects, the Provincial government is ensuring that the Guidelines produce future benefits. Steps towards development of provincial legislation taken during project implementation are continuing and are likely to result in future legal coverage for the Guidelines. Sustainability rating: L

Financial

OVI-3 Provincial government investments have been committed through budget allocations for the building guidelines directive in the Annual Development Plan.

iii. Outcome Three Sustainability Score: L

<i>OUTCOME 3: Significant growth of rural enterprise and income generation from community service providers is enhanced through the replication of integrated EE products and technique packages.</i>		
OVI-1: At least 15 local enterprises engaged in EE activities by the end of the project.	OVI-2: At least 1 micro finance institution offering sustained micro-credit facilities for EE housing improvement products by the end of the project.	OVI-3: At least 32,000 households including 2,100 directly and 30,000 indirectly showcasing EE cooking, heating and housing improvement technologies and products by the end of the project.
Sustainability Sub-score: ML	Sustainability Sub-score: L	Sustainability Sub-score: L

⁶¹ Mr. Ismail Zafar, Conservator of Forests. Group interview at the Forestry Dept., Gilgit, 21 August, 2013.

Financial

OVI-1 During a FGM (Gilgit, 20 August 2013), six entrepreneurs and craftsmen were requested to share their thoughts on their post-project business prospects. Each had been receiving subsidized block orders for the products through the project. A tin smith stated that, “during the last 3 years, more than 90% of their business had been the BACIP products. Another stove maker stated that 1/3 of his total business in the preceding year had been direct orders from the project. He expected the demand to go down with the completion of the project, but said he would not “go back to making cheap stoves.” Carpenters claimed that direct demand from AKPBS was more than 50% of their business. They were less optimistic about acquiring enough new orders on their own than the tin smiths were, but said that there was a lot of demand for the insulation.

Another tinsmith claimed that he was still dependent on BACIP because customer demand was not rooted well in all communities. BACIP was needed to influence demand. “If BACIP isn’t getting the orders through their VRPs, what will we do to have enough demand for our products?” he asked. Another stated that, “Before, when there were financial problems, we could take loans to keep businesses going. It wasn’t difficult to repay because we could count on the bulk orders coming in.” Yet another claimed that they couldn’t go to the ladies in the valleys themselves to get orders – the cost of travel and delivery was too much and they would be at a loss.” A manager explained, that “the entrepreneurs had not been trained to do planning of inventory and marketing on their own; that was another level of training.” The entrepreneurs’ mindset of continued dependency on AKPBS implies serious sustainability issues at the current point in time - even though the activities produced effective results during the life of the project and targets have been met.

Realistically speaking, two + years is an insufficient time for any project to create a sustainable new market. A follow-on phase to build more customer demand while, reinforcing entrepreneurs’ skills, networks and other capacities to function more independently is needed to ensure long-term sustainability of gains and true integration into local economies. To their credit, the Implementing Agency does have some ideas on how this could work which involve establishment of group franchises and cooperatives, starting with the same groups of entrepreneurs. Sustainability sub-score for OVI-1: ML (Moderately Likely)

Institutional

OVI-2: Both financial and institutional sustainability were aims under the pilot sub-project to provide access to microfinance for purchases of EE products. In 2010, an MoU was signed between FMFB and AKPBS. The project implementing partner worked closely with FMFB to select villages and jointly market the loan products. AKPBS also had a strong role in managing the VRPs who would form and oversee loan groups of 8 – 15 family representatives (usually women). The transaction costs for loans disbursed under a group ‘social collateral’ mechanism are high (though they vary from bank to bank) and have to be subsidized. The bank charged interest rates of 14.3/8%⁶² on loans of PKR 9,500 per family⁶³ with 3 years to repay. Branches were authorized to bridge excessive transaction costs with profits from other products.

If the products are alleviating poor living standards and freeing up cash in cash-poor homes, why wouldn't other microfinance banks want to take them up? The model should be replicated.

- Mr. Mohammad Nayab,
Branch Manager, Gakooch
FMFB

⁶² Interest of 14.3/8% was the amount of interest charged, although the signed MOU had mentioned 18%. FMFB normally charges 24% interest on a declining rate over time.

⁶³ The loan was made for a 3-product EE package and an insurance policy valued at PKR 10,000.

As the participation of the PEECH project assumed the costs of training VRPs, as well as some costs of marketing and monitoring the loans, this also represented a form of subsidization; in addition to any subsidization of actual products. PEECH staff also placed the orders with the entrepreneurs, took delivery of products and delivered them to villages. No money was disbursed to the village customer, but went directly to the vendors. VRPs collected monthly payments from group members and paid the bank. As AKPBS was monitoring this whole process during the pilot, risk was greatly reduced and the bank was able to cover costs.

FMFB is very happy with the initial experience. Now that the PEECH project is completed, FMFB hopes to continue by offering a similar MF product but dealing with cooperatives that would work directly with the bank to take out loans. Sustainability sub-score: L

Social

OVI-2: Micro finance and the associated social mobilization activities are continuing to build capacities for greater social sustainability among village women. Most of the microfinance products were awarded to poor women with families who needed warmer, healthier places to live. Low monthly payments of PKRs 600 per month helped ensure that repayments were affordable and that the social collateral mechanism could work. One ancillary Outcome of the sub-project was that groups of village women who wanted to avail of the micro-finance scheme were incentivized to acquire their first CNIC cards. Another Outcome has been that village women in Danyore have been able to convert their group of 17 micro-credit beneficiaries and their neighbors into a Women's Association and work together on other issues of concern to their community. They have been contributing some of their savings from fuel wood expenditures to a joint savings account to use as small, short-term loans to their members, as well as for small community projects.

OVI- 3: 16,941 homes showcasing EE products can inspire additional households to purchase products. A critical mass of healthier households with improved home finances can improve local economies and lead to increased social sustainability. Communities may also gain a little more resilience to catastrophic shocks – including natural disasters.

Environmental

OVI 3: Over the 4-year term of the project, CO2 savings were reported as 34,841.95 tons from 2,610 demonstration/model homes; and, 124,673 tons of CO2 avoided from 14,331 replication households, for a total of 159,515 tons avoided from BOTH replications AND Model/pilot households.⁶⁴ Savings in carbon emissions are sustainable and will continue to accumulate for the life of the EE products (approximately 8 years), so long as they are utilized properly. Sustainability sub-score: L

iv. Impact & Catalytic Role

OVERALL SCORE: S (Significant)

Outcome 1: Awareness & Capacities

Impact Score: S

The potential impacts of the project objective and first outcome are increased social sustainability and improved local economies through broad, cumulative effects on livelihoods and local markets.

⁶⁴ Project Terminal Report, 2013

Development of awareness, better health and household finances in the programming areas can lead to increases in literacy rates and decreases in child mortality.

Outcome 2: Policy Development

Impact Score: S

Impacts on Climate change and Deforestation

The complementarity of goals between the project and the provincial government are at the root of the willingness of officials to provide advocacy as well as request new forms of partnership. As many as 80% of NA residents are rural, low income and dependent on forests to satisfy many of their basic living requirements. The pressure on forests is always there. Deforestation and GHG emissions are important contributors to the receding glaciers and flash floods which plague the NAs, leaving many homeless and displaced. Partnerships that provide tools and approaches that help people meet their needs through using the forest resources better and reducing wood use, also relieve stress on eco-systems. This aspect of the project has been highly appealing to public sector decision-makers. The cooperation undertaken during the project has led to the recent signing of a new MoU between the Forestry Department of Gilgit-Baltistan and the AKPBS. Areas of attention include coordination and sharing of experiences, avoidance of duplication, technology transfer and development of joint ventures.

Building Construction Codes and Guidelines

As mentioned previously, the building guidelines and policies developed through the project have been taken up at a provincial and regional scale and are likely to result in new legal requirements for construction in Gilgit-Baltistan. This will produce steadily growing, catalytic effects on the natural and built environments.

Outcome 3: Market Chain Development

Impact Score: S

Access to Micro-finance

The experience gained under the project has motivated FMFB's plan to continue to offer group micro-loans for housing improvement. The bank plans to develop a product for purchase of EE products in the post-project context and to also develop additional home improvement loan products: one for purchases of solar lighting and another aimed at the middle class for PKR 100,000 to insulate entire houses. These moves should support additional improvements in living conditions in the region while ultimately contributing to future reductions in GHGs.

Replications of EE and EQ resistance Home Improvement Products

The approach to developing demonstration households encouraged additional customer demand, resulting in replications of product installations in more than seven times as many households, even in geographic areas outside of the programming area. The model was highly effective and took into consideration learning gained through project implementation.

One drawback of the implementation phase was a difficulty in meeting indicator targets for replications. Original targets for replications in the Project Document were reset at a number three times higher during the Inception Workshop, while targets for demonstration and product model homes were reduced 10 times. Why the revised replication targets were deemed unworkable by 2011 is likely attributable to a number of factors. First and foremost, the PEECH project scaled up and implemented activities which were designed during a research stage under considerably more favorable environmental and security conditions. The replication targets were probably set unrealistically high when they were adjusted in 2009. At that time, stakeholders could not anticipate the natural disasters in 2010, 2011 and the seriousness of the insurgency problems throughout the region in 2012. In 2011, a

PAC meeting endorsed revising the replication targets down again. By the end of the project, replications corresponded to 21,496 products installed in 14,331 households. These numbers should continue to rise (albeit at a slower rate than during project implementation) largely because awareness and demand for the products, as well as capacities to produce them locally, have been built.

vii. CONCLUSIONS, RECOMMENDATIONS & LESSONS

The project has been able to pilot an implementation phase of activities, bringing R&D outputs into development and decision-making processes in four districts of Gilgit-Baltistan and in Chitral, KPK. Most Outputs and Outcomes enjoyed high levels of success, even under circumstances that were particularly challenging for implementation. All project Outcomes were produced and demonstrate relevance, effectiveness, efficiency and catalytic effects. Outcomes One and Two also demonstrate high likelihood of sustainability and future impacts. Outputs produced under Outcome Three could generally be described as 'satisfactory' but some sustainability issues were identified. Learning under the project has provided valuable contributions to the growing knowledge pool on community contributions to environmental sustainability, as well as development through appropriate technology in mountainous regions. A follow-on project to add sustainability to gains made under PEECH Component 3 is strongly recommended. Development of a separate, Phase 3 Project, to fine tune some of the work begun under PEECH and to bring all Components to scale is also highly recommended.

IV.1. Actions to Follow Up or Reinforce Initial Benefits from the Project

The evaluation has identified several issues that are pending and would profit from attention as well as small amounts of funding in the immediate post-project time period. Ideally, all five items should be addressed; item three is the most urgent, however.

1. Under Component One, Awareness and Capacity Development, a number of excellent studies, reports, training materials and technical manuals were developed, translated and published. Although hundreds of manual copies were distributed to key institutions, technical teaching institutes, libraries and partners in the region, they are worthy of even wider dissemination. Most have been organized and uploaded to the Repository data base created under the PEECH Project. It is recommended that the data-base be made available on line; preferably, to all interested parties.

It may be noted as well that the data-base for tracking the results of monitoring and measuring the use of wood fuel in the longitudinal study; in addition to GHG emissions avoided on monthly and annual basis were not made part of the repository but will be, once data collection is complete and the report is published. This data may be of interest to a wide range of climate change and development professionals in Pakistan as it comprises the project's means of demonstrating an important environmental impact; i.e., verifiable improvements in behavior, corresponding reductions in GHGs, and, reductions in stress on ecological systems. Once online, the repository developed under the PEECH project would continue to promote learning and transparency.

2. Component Two, Policy Development was both directly and indirectly interlinked with many of the PEECH project's successes. UNDP, GEF and AKPBS should continue to build on the good will, high levels of trust and cooperation established with provincial government partners during the project. This could be done to several ends:
 - To keep alive the interest and support from the provincial government that will contribute to sustainability of outcomes and induce longer-term impacts.

- To reinforce confidence and strengthen capacities of line department partners in the face of their increased autonomy and authority for solving the unique problems of their area.
 - To explore their priorities for climate change mitigation and ways that they can enter new partnerships; not only with regard to the above, but also under International Mechanisms for Green Economies and Clean Development.
3. Component Three, Market Chain Development, should not be abandoned at this point in time. It needs to be further developed until sufficient market forces are present to enable it to stand alone sustainably. Two sub-project areas require immediate attention; a third is recommended:
- (1) The entrepreneurs and product manufacturers need a viable solution to their problems with planning for profitability, marketing and customer relations, as well as cost-effective transport for delivery of sold goods. Two suggestions made by separate AKPBS managers were for development of cooperatives and for development of area-based franchises to sell certified BACIP quality products. Either approach or a hybrid of the two could work. Concurrently, Village Resource Persons should receive more training and mentoring for the post-project phase. This could include support to enhance one of their two previous roles: either as a commissioned sales person for the products, or as a social mobilizer for community development.
 - (2) Ideally, the viability of the partnership between FMFB and AKPBS should be maintained, with a view to developing and promoting a model that mentors trained, competent community entities until they are able to take over many of the roles previously handled by the PEECH project. As suggested by the bank, additional and new loan products could be added to the EE home improvement loan portfolio.
 - (3) Based on the ground-breaking achievements of the micro finance sub-project, a multi-stakeholder workshop is recommended to identify the most important lessons learned from the relevant technical viewpoints, as well as bring together and further develop the various ideas for additional loan products which would help to strengthen the entire market chain. Subsequent to this workshop, a national seminar could be held to share the project experiences, present the newest developments and access feed-back.
4. The Project Goal and its indicators supported a means of measuring and reporting on reductions of GHG emissions saved through usage of EE products. No indicator was developed for monitoring and calculating savings of GHGs through reductions of timber in construction. A multi-stakeholder Lessons Learned workshop or Round table event which examines the robustness and reliability of the monitoring, reporting and calculations for savings on carbon emissions is recommended. It may be convened with a view to:
- a. Improving and standardizing project monitoring and implementation practices that would lead to reliable, verifiable data that feeds into carbon emissions inventories at the National and International levels (e.g., National GHG Inventory);
 - b. Developing practices and formulas to be used by future projects that would be registered under the CDM-Pakistan;⁶⁵
 - c. Increasing stakeholder interest and involvement in reducing carbon emissions in the NAs.

⁶⁵ For relevant information See: <http://cdm.unfccc.int/about/index.html>; <http://cdmrulebook.org/304> for international guidelines; and, for information on Pakistan's participation, see: <http://www.cdmpakistan.gov.pk/>

5. The project should be redeveloped and scaled up making as much use as possible of the considerable learning that took place during the preceding four years. The new project should be a 'Phase 3,' following on the progression of BACIP's 'R & D Phase,' and PEECH's experimentation and piloting approaches. That is, the new project should not seek to replicate what has already been accomplished as much as to develop improved models based on best practices and what are now known pitfalls. The new project might also strategically plan what would constitute a critical mass of beneficiary types in each of several social and professional or livelihoods groups that have been recommended by PEECH stakeholder groups for inclusion. (E.g., The G-B Forestry Dept. wants to target EE products for high altitude dwellers where trees are scarce and communities can no longer be supported by traditional lifestyles; LSO Chairs want access to microfinance in Baltistan; EAD has mentioned the ultra-poor. A portion of funds could be ear-marked to include 20% of the ultra-poor and most vulnerable in each programming sub-area).

IV.2. Proposals for Future Directions supporting Main Objectives

Stakeholders' Proposals:

The recommendations below have been offered by stakeholders interviewed during the course of the evaluation:

- Policy Directions for Mountainous Areas should be developed for the Ministry of Climate Change based on PEECH and other GEF projects' experiences and stakeholder recommendations.
- Provincial Government should have a stronger role in the design and development of any new, scaled up or follow-on project; Modalities should also be developed for joint project implementation involving provincial line departments, provincial EPA and members of AKDN on relevant activities to ensure maximum technology transfer. Project responsibilities and assets could be handed over to the Government counterparts, as per a step-by-step process, during the final year of the project.
- The PEECH Market Chain Development component should be further developed, and when more sustainable, replicated in other areas e.g., Sindh and AJK. The PEECH EE components should be adapted for the needs of other areas of KPK, as well as mountainous areas of Punjab and Baluchistan.
- Land use, deforestation and DRR need to be taken to the next level in policy development. Lessons learned should provide the major thrust.
- Manufacturers need larger loans for purchases of equipment and stock-piling raw materials that are unavailable during the months when roads are impassable in the NA. FMFB's micro business loans targeting individual SMEs are insufficient. Development of larger group loan products for cooperatives of manufacturers should be explored.

IV.3. Best and Worst Practices in addressing Relevance, Performance & Success

The following observations, comments and ‘practices’ are based on actual experiences and learning arising from project implementation. Most have been justified by explanations in previous sections of this report.

BEST PRACTICES:

Outcome Two

Policy development processes have a variety of stakeholders. It is essential that public sector and local communities are both involved in developing policies that protect public goods or “commons.” Furthermore, National and Provincial Governments contribute resources on a variety of levels, but these can be made more effective and sustainable when matched by contributions from community stakeholders.

A Planning workshop was organized for the G-B province and stakeholders where project learning over the course of several years was made part of the G-B province’s Annual Development Plan. Successes became part of policy with endorsement at the highest level of government. Funds were allocated on the spot. The Chief Secretary wants to see more project partnerships like PEECH which have real and long-lasting impacts on the lives of people.

Outcome Three

Providing affordable loan products for communities to access “indirectly productive home improvement assets,” builds stronger, healthier, more credit worthy communities, with capacities to take more control of bettering their own futures.

Adapting project activities to the cultural and practical needs of the direct beneficiaries can involve recognizing and planning for the seasonal nature of most potential MF clients’ purchasing power (i.e., post-harvest). There is essentially a two month period of time when people want to purchase EE products, and therefore loan products for such purchases. Mobilizing organizational resources and preparing for peoples’ needs that are concurrent to the approach of winter helps to provide more and better services for loan candidates.

Working with manufacturers and entrepreneurs to ensure product availability corresponds with the seasonal nature of customers’ needs and affordability helps to develop a customer-friendly market and better livelihoods for craftsmen and suppliers.

Likewise, adapting products to the needs and cultural preferences of the people (e.g., for size and shape of stoves or windows) helps sell products and supports livelihoods.

Further, the best products for people – the ones which they will want to adopt and buy – are not necessarily those that save the most money. Local people’s conceptions of ‘quality of life’ and ‘aesthetic quality’ should be a part of the assistance package.

BIGGEST PITFALLS:

Outcome One

Training for manufacturers and suppliers was valuable but short and focused mostly on acquisition of technical skills. Additional training modules (and refresher workshops) in marketing, managing finances and how to access credit from the market are needed to build on the previous training covering enterprise development.

Outcome Three

Subsidizing EE products for villagers and transaction costs for manufacturers and FMFB helped to promote the products and enable more households to acquire them, but have also kept prices artificially low. People will not want to pay much more for the products than their neighbors did. Villagers are complaining across Chitral that now when they are ready to buy “the products are unavailable.” (In fact, products are available in the market; it is the subsidy that is no longer available).

Now that the project has ended, prices will have to rise significantly. Craftsmen also do not want to work on their own anymore – they only want the bulk orders which do not come with transportation and delivery responsibilities.

A project component that is planned to require 24 months, in reality requires longer than two calendar years. Many people cannot work all year because of practical reasons such as impassable roads and inaccessibility to areas where raw materials can be accessed cheaply. If customers only have cash after harvests have been sold, sales opportunities need to be planned and vendors have to be ready to participate in brief, peak season markets.

Products that are very unfamiliar will be discarded by village customers. For example, villagers disliked the solar cookers because food prepared in them takes longer to cook, tastes different and the cookers do not permit cooks to constantly stir their curry.

Monitoring & Evaluation

Regarding numbers of replications, there may have been a number of contributing circumstances⁶⁶ as to why the numerical targets were problematic – both before and during implementation. Socio-political events, ongoing law and order issues and natural disasters resulted in delays in supplies of materials reaching the Northern Areas. Even so, ongoing scrutiny of monitoring and convening a forward looking ‘lessons learned’ study or Round Table in 2011 may have been useful to ascertain and document how targets for replications could have been reset using an evidence-based approach.

The Indicative monitoring plan’s outputs as well as production of all necessary MOVs should be planned well in advance and included in all Annual Work Plans.

The Logical Framework is the most important monitoring and management tool. Any problems need to be identified and rectified early. All partners need to be clearly informed of what the UNDP and GEF procedures are for changing elements of the LogFrame. Where they apply, procedures must be followed.

⁶⁶ APR 2012, page 6

Project Design

Each project component or sub-project needs to have a clear exit strategy and efforts to set it in place should begin no less than six months prior to the end of the project. Wherever possible, funds for the post-project period should be leveraged well in advance of when they are to be needed. Stakeholders have complained that just when PEECH was building up some serious momentum the project was completed.

ANNEXES