



United Nations Development Programme

Country: FYR Macedonia

Project Document

UNDAF Outcome(s): Effective and equitable management of natural resource and environment protection based on the principles of sustainable development ensured

Expected CP Outcome(s): The country obligations related to the ratified environmental conventions met

Expected Output(s): Capacities to implement the ratified Multilateral Environmental Agreements/Protocols improved

Implementing Partner/Executing Entity: Ministry of Environment and Physical Planning

Responsible Parties/Implementing Agencies: UNDP

The project is one of three components of Energy Efficiency programme, financed by the Austrian Development Cooperation, and aims in enabling the environment for mitigating climate change in the country through improved energy efficiency in the building sector and enhanced awareness and capacities of stakeholders involved in energy efficiency issues. The programme aims to strengthen the capacities of the Macedonian Energy Agency, to develop energy efficiency (EE) regulations in the building sector, to develop applicable EE tools, to ensure long-term sustainability by supporting the curricula changes in the appropriate faculties, to improve interactive cooperation between the Government and the appropriate business community and to raise awareness among the stakeholders on EE issues. In long term, the activities will contribute to reduce the energy consumption in residential and public buildings, thus reducing not only energy demands, energy losses and greenhouse gas emissions, but also increasing energy independence of the country.

Specific goal of this project that will be implemented by UNDP is to contribute to the above mentioned objectives. The main outputs of the project will be a national database on climate parameters per regions, an inventory of public buildings nationwide, and most effective investment-oriented energy efficient building programme.

Programme Period: 2005 – 2009 / 2010 - 2015

CPAP Programme Component: Energy and Environment for Sustainable Development

Project Title: Mitigating climate change through improving energy efficiency in building sector

Atlas Award ID: 00049238

Start date: June 2009

End Date: May 2011

PAC Meeting Date: _____

Estimated annualized budget:

Total resources required 350,000 Euro equivalent to 510,204.08 \$USD

Total allocated resources: _____

• Regular _____
• Other: _____

Austrian Development Cooperation 350,000 Euro

Government _____
Unfunded budget: _____

In-kind Contributions 10,000 \$USD

Agreed by (Government): Ministry of Environment and Physical Planning, Mr. Nexhati Jakupi

Agreed by (UNDP): Ann Marie Ali, UNDP Resident Representative a.i.

I. SITUATION ANALYSIS

The full-fledged membership of the country in the EU is a clear and well-defined strategic interest and a priority goal of the policy of the Government. The country is presently undertaking the harmonization of EU legislation in all relevant sectors. In this context, the primary legislation is well under way, although in some areas, there are still some gaps that will need to be filled in the near future.

Climate change and sustainable energy are considered as a crucial issue in regard to the country's dependency on the imported fuels and foreseen depletion of the domestic reserve of coal within the next decade. One of the areas that need to be considered is the building sector in which the energy consumption represents 39% of the overall energy demand (2001); the residential sector uses nearly 80% of the energy consumed in all buildings. In addition, buildings consume 69% of electricity and 40% of district heat, the combined production of which is responsible for some 71 % of the annual CO₂ emissions in the country.

In addition, the main characteristics of the building sector can be summarized as follows: a large stock of existing buildings with an estimated annual energy consumption of 100kWh/m²; a large number of 'illegal' constructions; outdated and un-enforced laws on thermal insulation in buildings; a high percentage of small-volume buildings (i.e. single family homes); private ownership and occupancy of almost all dwellings, with little presence of home owner associations; no households presently using gas, but plans to extend gas network to households exist.

Several laws have been adopted in the past three-four years (Energy Law, Construction Law, Law on Building Materials, Law on Environment, Law on Accreditation), as well as strategies (Strategy on Energy Efficiency, National Environmental Action Plan) providing an enabling environment for implementation of energy efficient measures in the building sector. However, secondary legislation, including new regulations and standards need to be drafted and adopted and a strong technical assistance will be necessary to support the relevant authorities and institutions in charge.

A great number of standards necessary for the calculation of energy performance in buildings have already been adopted concerning: insulation materials; performance and value calculation methodologies for the building envelope, windows and hydrothermal performance, as well as thermal bridges; thermal insulation and performance of building elements. However, another set of standards need to be adopted in the short term in order to comply with the implementation of the Directive on Energy Performance in Buildings.

The Ministry of Environment and Physical Planning is a focal point for the UN Convention on Climate Change and the Kyoto Protocol, and the Ministry of Economy is responsible for development and implementation of energy policies and laws. On the other hand, the Ministry of Transport and Communication is responsible for the construction and urban planning. The Law on Self Government which was adopted in 2002 transfers responsibilities from the central government to municipalities in key aspects of infrastructure and management such as local development, education, health, environment protection, urban planning, etc. Municipalities are in charge of all aspects related to monitoring, inspection and enforcement regarding their areas of competences.

The main problems and barriers in this area could be summarized as follows:

Institutional/Legal Barriers: Outdated bylaws, overlapping competences of Governmental institutions hamper efforts to introduce and enforce energy performance legislation. However, these barriers should be systematically addressed within the broader programme for energy efficiency, including strengthening capacities of national institutions.

Information and Knowledge Barriers: Apart from technical problems, such as lack of appropriate data, nonexistent central database of public buildings and their energy efficiency, limited specific knowledge on building standards and calculation methods, inadequate capacities of government officials to enforce the building energy performance standards and certify imported building are also evident.

Awareness Barriers: There is a lack of general awareness and knowledge about energy efficiency buildings, particularly among high-level decision-makers, line ministries and private sector. Especially the link between improved energy efficiency and climate change mitigation is not recognized, beside numerous previous efforts for mainstreaming climate change.

An effective instrument to reach significant energy savings would be the adoption of energy performance standards and building labelling for new buildings and buildings under renovation. A recommendation in this sense has been made in Macedonia's First and Second National Communications to the United Nations Framework Conventions on Climate Change (UNFCCC), prepared by the Ministry of Environment and Physical Planning. The energy costs are taking up large stake in the state and municipal budgets. Partial of total reconstruction and implementation of energy efficiency measures will certainly lower the energy consumption/expences and improve the indoor ambiental conditions in the public buildings. Just as illustration, there is a potential to decrease the energy consumption of buildings down to 90kWh/m² without increasing the cost of construction. In order to develop successful measures for energy efficiency in buildings adequate and reliable data are needed on the building sector that will be further linked with the specific climate conditions in the country. In addition there is a need of a comprehensive public awareness programme that will increase the knowledge of the key decision makers on national and local level.

II. STRATEGY

Since 2000, UNDP is assisting the Government in preparation of the national reports to the UN Framework Convention on Climate Change. This is a strategic document that includes an inventory of greenhouse gas (GHG) emissions, assessment of the most vulnerable sectors to climate change in the country and measures for adaptation, and an analysis and policy advice on measures to reduce the GHG emission. The Initial Communication was adopted in March 2003, and the Second National Communication (SNC) is adopted by the Government in November 2008.

The project will particularly benefit from the activities under the project for preparation of the Second National Communication to UNFCCC by utilizing results from the analyses performed within the greenhouse gas abatement and climate variability, including the downscaled climate change scenarios for Macedonia. Number of thematic studies has been prepared within the Climate Change National Communications' processes, which results, findings and recommendations will create basis for development of follow up projects. Climate change analyses within the past century and climate scenarios for Macedonia, based on various emissions projections (IPCC, IEA), developed at national and regional country level by the end of 2100 will provide input for database regarding specific climatological parameters needed for development of methodology for energy efficient buildings. Greenhouse gas abatement strategy, developed within the SNC, identifies building sector as one of the area for mitigating climate change, recommending improvement of energy efficiency in this sector, which is faced by significant energy consumption and outdated and un-enforced laws on thermal insulation in buildings.

The project will take stock of the results and lessons learnt from several projects implemented in the past period such as: the Energy Efficiency Program for the Municipality of Gevgelija (MMEP) that was funded by the Norwegian Government and UNDP. This project was aiming at reducing the energy consumption

in the building under the municipal authority and the street lighting in the municipality thus contributing to improvement of the municipal economy. As a result of the project Municipalities of Saraj, Djorce Petrov, Kisela Voda, Centar, Gazi Baba, Valandovo, Cair, Kocani, Resen, Berovo, Aerodrom, Gevgelija and Kicevo became members of the Macedonian Municipal Network for Energy Efficiency; USAID supported project in the framework of the decentralization process, including audits in buildings and financing demonstration projects in municipalities; GTZ, within its project on EE in the building sector for the Ministry of Transport and communications, has developed a pilot project in the residential sector, published a handbook for architects and planners, and has prepared the implementation of a training course at the Faculty of Architecture; MACEF, the Centre for Energy Efficiency, is involved in the creation of a network of local authorities within Energie-Cités, a European network very active in promoting energy efficiency and renewable energy at local level.

In the same context, this projects will be closely linked with a wider UNDP/UNEP programme - "towards carbon neutral and climate change resilient territories" aimed at developing the capacities of public authorities at all levels to design and implement an Integrated Territorial Climate Change Strategy and Action Plan (Mitigation and Adaptation). The project objective is to support low carbon and climate change-resilient local development in the country by helping design climate friendly policies and direct investments towards low carbon and climate change-resilient local development in Vardar and the Southeast regions, and potential other planning regions. Following outputs will be delivered towards this end of the project: i) established partnership, coordination and participation platform for climate change planning and programming; ii) developed capacity to integrate climate change issues into development strategies and plans; iii) formulated integrated Regional Climate Change Action Plan; and iv) developed climate change investment package. The project is expected to start in the second half of the year.

Given that this project is part of a wider framework, similar to SWAp¹ Programme financed by the Austrian Development Cooperation very close coordination will be established with the project teams within the energy efficiency programme, as well as with the partnering ministries and national institutions. The activities implemented within this project will be complementary and will contribute to the achievement of overall aim of the projects which is improvement of energy efficiency and supporting the country to meet its requirements of the EU.

The proposed project is continuation of the successful collaboration between the Ministry of Environment and Physical Planning and builds upon UNDP's previous and on-going support and technical assistance provided to the Government for formulation and implementation of wide arrange projects and programmes in the area of energy and environment, decentralization and economic development/social inclusion.

It will directly contribute to the achievement of one of the key objectives of the UNDAF (UN Development Assistance Framework) and the Country Programme Document 2005 – 2009 and 2010 - 2015 that are focused on providing assistance to the country to meet its commitments and reporting requirements under the multilateral environmental conventions with particular attention to the UNFCCC and the Kyoto Protocol

Project Objective

The main objective of the project is to contribute to an enabling environment for improving energy efficiency in building sector and at that end contributing to climate change mitigation at national level.

Project Objectives and Proposed Activities

Output 1: National database, including required climate parameters per regions in the country developed.

¹ SWAp – Sector Wide Approach

The First National Communication on Climate Change identifies seven climate regions in the country. Although the country is small, the heterogeneity of climate conditions on this area is very high. This is also evident from the observations of air temperature and precipitation on selected fifteen meteorological stations analyzed within the First National Communication on Climate Change (2003) and the Second National Communication. The locations represent different climatic types and subtypes in the regions of the country, which are a combination of three major climate drivers: Mediterranean, Continental and Alpine climate impacts.

The project will develop a database which among other will include, to extend possible, the following information:

- Temperature: dry and wet bulb temperature, daily norms, hourly, monthly; January Average, July Average, Yearly Average; Frost days (i.e. Min. $<0^{\circ}\text{C}$) to selected bases; Ice days (i.e. Max. $<0^{\circ}\text{C}$) to selected bases; Summer days (i.e. Max. $>25^{\circ}\text{C}$) to selected bases; Tropical days (i.e. Max. $\geq 30^{\circ}\text{C}$) to selected bases; Annual summary of monthly temperatures to selected bases; Monthly and seasonal temperatures to selected bases
- Solar radiation: sunshine duration (daily); hourly solar radiation; relative or absolute sunshine duration January, July
- Cloudiness: Average cloud coverage Daily, Monthly, January, July, Annual
- Average heating degree days: Annual summary of monthly hdd to selected bases; Daily and monthly norms
- Cooling degree days: Annual summary of monthly cdd to selected bases; daily and monthly norms
- Precipitation: Daily, (hourly), Monthly; Winter total; Summer total; Year total; Days with precipitation in a year; Annual summary of monthly precipitation; Daily and monthly norms; Monthly and seasonal precipitation to selected bases
- Snow: daily summary to selected bases; Annual summary to selected bases; Average heights of new snow to selected bases; Average snow height maximums to selected bases
- Humidity: Daily, Hourly; Average relative humidity, January, July, Year; Average vapour pressure, January, July, Year; Number of muggy days; Annual summary of monthly humidity to selected bases
- Air pressure: average air density (year); average monthly air density
- Wind: Wind direction and speed summaries; Annual summary of monthly or daily direction and speed

This database would provide the main input parameters necessary for the component 2 of the ADA project on development of legislation and creation of enabling environment i.e. preparation of the Book of Rules, development of methodology for calculation the energy performance of buildings, development of the software and other tools necessary for proper implementation of the Book of Rules and its methodology, and setting the minimum energy performance requirements for buildings.

Prior the development of the database for the climate map begins, the institutions sharing responsibilities and providing certain input will sign a Memorandum of Agreement or similar document with regards to their responsibilities on providing the necessary data for the data base and the climate map, as well as regards the maintenance of the data base and the climate map itself, and obligations to make the information available to the broader public.

1. Activity Result: Climate database developed

- 1.1. Draft TORS and identify consultants/consulting company
- 1.2. Development of methodology to determine the required climate parameters
- 1.3. Collect the required data and fill the data gaps
- 1.4. Develop specific software for the database
- 1.5. Discuss the database design with the relevant stakeholders
- 1.6. Develop the final database

Output 2: Inventory of Public Buildings and dynamic database developed, the most effective investment-oriented energy efficient building programme identified, and energy efficiency programmes for public buildings in selected municipalities developed.

Complementary to the climatological data, the project will collect information on public buildings in each municipality i.e. actual data on electrical and heating energy consumption, water consumption, building area, number of people that use the building, regime of building usage, type of construction and year of building construction, and other relevant information which are also needed for the component 2 of the above mentioned project financed by the ADA. It will also contribute for the component C3T1.2 of the AEA implemented project – Energy statistic of public buildings (ADA ref. number 8129-00/2008)² i.e. screening of the energy efficiency in the public building and pilot demonstration project as well as to the third Project³ part of programme focused on the facade technology which also includes a pilot project a component.

The information for the inventory will be collected through a questionnaire that will be sent to all local self-governments, which will be supported by information collected by UNDP monitoring officers, and by utilizing other existing databases available in relevant national and local institutions. Possibilities to link the existing database and/or to upgrade them will be also considered. This activity will be very close coordinated with the Macedonian Energy Agency.

The inventory and the database will be used to calculate the GHG emissions from public buildings, and assessment of the GHG reduction potential by implementation of energy efficiency measures. For this purpose GACMO or other specialized software will be applied. The assessment will provide input for the future greenhouse gas abatement strategy of the energy sector at the energy demand side. The information will also be utilized for development of investment oriented energy efficient building programme.

In order to increase the interest of the local self governments for development and implementation of energy efficient measures in public buildings, the project will support development of energy efficiency programme for public buildings in selected municipalities. This programme will utilize the experience and lessons learned in the similar projects financed by the Norwegian government. The selection of the municipality will be done in close collaboration with the Association of Local Self Governments (ZELS). This programme should help the municipalities to comply with the relevant laws and regulations, and on medium to long term, this will create opportunities to save money from the municipal budgets that can be reinvested in continuation and extension of similar environmental friendly programmes on local level. There are many easy low and no-cost options to help save money and improve the energy performance. This might include: 1) better understanding of energy use i.e. identification of the major areas of energy consumption); 2) Identification of the opportunities; 3) prioritization of actions i.e. drawing up an action plan detailing a schedule of improvements that need to be made and implementation of the energy savings actions and measuring against original consumption figures.

In addition, calculation of the GHG emissions from public buildings and the assessment of the GHG reduction potential will serve as a basis for development of a PIN for potential CDM project(s). This activity will be closely coordinated with the Designated National Authority (DNA)

2.1 Activity Result: Inventory of public buildings developed

- 2.1.1 Draft TORs and select consultant
- 2.1.2 Establish criteria for selection of public buildings
- 2.1.3 Develop Template for inventory of public buildings
- 2.1.4 Collect required data
- 2.1.5 Discuss the draft design of the inventory
- 2.1.6 Finalize the inventory

² Enabling the environment for introduction of the energy efficiency in buildings in the Republic of Macedonia

³ Energy efficient construction with an emphasize on facade technology

- 2.1.7 Assess the greenhouse gas emissions from the public building and identify the reduction of GHG emissions by implementation of the EE measures in public buildings (applying GACMO software, e).
- 2.1.8 Development of centralized dynamic database that will be used by all relevant ministries, ZELS, and other interested parties.
- 2.2. *Activity Result: Investment-oriented energy efficient building programme identified*
 - 2.2.1 Analyse the public building sector in terms of EE and recommend least cost measures for improvement as a basis for development of an effective investment-oriented energy efficient building programme
 - 2.2.2 Discuss the draft programme
 - 2.2.3 Finalize the programme
- 2.3 *Energy efficiency programmes for public buildings in selected municipalities developed*
 - 2.3.1 Develop the selection criteria
 - 2.3.2 Select the municipalities
 - 2.3.3 Develop TORs and select the consultants/consulting company
 - 2.3.4 Develop the programme
 - 2.3.5. Organize joint workshop for the selected municipalities to present the draft programmes for each of them
 - 2.3.6. Finalize the programmes and organize promotional events
- 2.4 *PIN for potential CDM project (s) develop*
 - 2.4.1 Develop TORs and select the consultants/consulting company
 - 2.4.2 Present the PIN to the DNA and facilitate identification of interested party(ies) that will provide the underlying finance

Output 3: Public awareness and knowledge about energy efficiency and energy saving measures in building sector increased.

The project team will support technical schools, universities and professional associations to update and deliver modules about energy efficiency in design, construction and materials, for architects, engineers, construction managers, and skilled labour. This will be complemented with the development and dissemination of information and materials through sector associations and unions to construction professionals and firms to promote the use of energy efficient materials, products and techniques. Further, these activities will be linked to climate change mitigation, through organizing round tables, workshops and disseminating leaflets and brochures on energy saving tips. In addition, close cooperation with all Programme partners will be established and activities will be in line with the approved PR programme and communication strategy of the entire Programme.

- 3. Activity result: Public awareness and knowledge on Energy Efficiency in buildings increased
 - 3.1 Organize workshops to raise knowledge on energy efficiency in the building sector for the local self-governments
 - 3.2 Organize round tables for discussion of the benefits from improving energy efficiency in the building sector on local level
 - 3.4 Establish Web based information clearing house as a channel for information dissemination and as a link between customers and providers
 - 3.5 Conduct training for targeted group of stakeholders on local level to adopt EE aspect into the building design and construction.
 - 3.5 Develop simple promotional materials

III. RESULTS AND RESOURCES FRAMEWORK

Intended Outcome as stated in the Country Programme Results and Resource Framework: The country obligations related to the ratified environmental conventions met				
Outcome indicators as stated in the Country Programme Results and Resources Framework, including baseline and targets: <u>Indicator:</u> Annual reporting on environmental data and MDGs. <u>Baseline:</u> Multilateral Environmental Agreements ratified, but not fully implemented. <u>Target:</u> The country meets obligations under UNFCCC, UNCBD, and UNCCD.				
Applicable MYFF Service Line: 3.3 Access to sustainable energy services (Energy and Environment for Sustainable Development)				
Partnership Strategy: The project is considered as one of the components of a bigger programme aimed at contributing to the improvement of energy efficiency in the country, and at the same time marking an important step towards meeting the requirement of the EU. It will utilize the lessons learnt in similar projects and will be complementary to the other ongoing initiatives. The project will bring together important ministries such as the Ministry of Environment and Physical Planning, Ministry of Economy, Ministry of Transport and Communications, ZELS (Association of Local Self Governments) and other relevant stakeholders.				
Project title and ID (ATLAS Award ID): Mitigating climate change through improving energy efficiency in building sector - 00049238				
INTENDED OUTPUTS	OUTPUT TARGETS FOR (YEARS)	INDICATIVE ACTIVITIES	BASELINE/INDICATORS	MEANS OF VERIFICATION
Output 1: National database, including required climate parameters per regions in the country developed.	Targets (year 1) Required climate parameters per regional collected National climate database completed and regularly updated	1.1 Activity Result: Climate database developed 1.1.1 Draft TORS and identify consultants 1.1.2 Development of methodology to determine the required climate parameters 1.1.3 Collect the required data and fill the data gaps 1.1.4 Develop specific software for the database 1.1.5 Discuss the database design with the relevant stakeholders 1.1.6 Develop the final database	Baseline: Second National Communication on Climate Change; National Energy Efficiency Strategy; Incomplete list of required climate parameters No database exists Indicators: Number of climate parameters per region identified and obtained One unique database developed	Climatological data for the Book of Rules developed Operational climate database

Output 2: Inventory of Public Buildings developed, most effective investment-oriented energy efficient building programme identified, and energy efficiency programmes for public buildings for selected municipalities developed.	Targets (year 1) Inventory of public buildings developed Assessment of greenhouse gas emissions reductions from implementation of EE measures done Targets (year 2) Most effective investment-oriented energy efficient building programme identified Energy efficiency programmes for public buildings in selected municipalities developed PIN for CDM project(s) developed	<i>2.1 Activity Result: Inventory of public buildings developed</i> 2.1.1 Draft TORs and select consultant 2.1.2. Establish criteria for selection of public buildings 2.1.3. Develop Template for inventory of public buildings 2.1.4. Collect required data 2.1.5. Discuss the draft design of the inventory 2.1.6 Finalize the inventory 2.1.7 Assess the greenhouse gas emissions from the public building and identify the reduction of GHG emissions by implementation of the EE measures in public buildings (applying GACMO software, etc) 2.1.8 Develop dynamic database <i>2.2 Activity Result: Investment-oriented energy efficient building programme identified</i> 2.2.1 Analyse the public building sector in terms of EE and recommend least cost measures for improvement as a basis for development of an effective investment-oriented energy efficient building programme 2.2.2 Discuss the draft programme 2.2.3 Finalize the programme	Baseline: No inventory of public buildings on national level and no strategy/programme for energy efficient building sector Very limited number of energy efficiency programmes on local level Greenhouse gas abatement strategy developed within the SNC Indicators: Number of relevant information gathered Number of public buildings inventoried Kilotones of GHG emission reduction calculated Strategic documents developed	Acceptance of the energy efficient building programme by the Municipal Councils PIN supported by the DNA
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		<i>2.3 Energy efficiency programmes for public buildings in selected municipalities developed</i> 2.3.1 Develop the selection criteria 2.3.2 Select the municipalities 2.3.3 Develop TORs and select the consultants/consulting company 2.3.4 Develop the programme 2.3.5 Organize joint workshop for the selected municipalities to present the draft programmes for each of them 2.3.6. Finalize the programmes and organize promotional events. <i>2.4 PIN for potential CDM project (s) develop</i> 2.4.1 Develop TORs and select the consultants/consulting company 2.4.2 Present the PIN to the DNA and facilitate identification of interested party(ies) that will provide the underlying finance		
Output 3: Public awareness and knowledge about energy efficiency and energy saving measures in building sector increased.	Targets (year 1): At least two workshops organized Targets (year 2): Web based information clearing house developed Training package developed At least two trainings on local level organized	3. Activity result: Public awareness and knowledge increased and EE measures implemented in a public building 3.1 Organize workshops to raise knowledge on energy efficiency in the building sector 3.2 Organize round tables for discussion of the benefits from improving energy efficiency in the building sector 3.3 Establish Web based information clearing house as a channel for information dissemination and as a link	Baseline: Low level of knowledge on energy efficiency benefits in building sector Low awareness / interest among the owners of private service sector buildings to invest in energy efficiency Low level of implementation of energy efficient standards in existing	Surveys of the public opinion Focus groups

	Promotional materials developed	between customers and providers 3.4 Conduct training for targeted group of stakeholders on local level to adopt EE aspect into the building design and construction. 3.5 Develop simple promotional materials	public buildings Limited number of trained CSOs in this area Indicators: Number of public awareness activities conducted Number of trainings conducted Number of experts trained One public building reconstructed by implementation of EE measures	
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IV. ANNUAL WORK PLAN BUDGET SHEET



Annual Work Plan

Award Id: 00049238

Award Title: Mitigating CC through improving EE in building sector

Year: 2009

Project ID	Expected Outputs	Key Activities	Timeframe		Responsible Party			Planned Budget	
			Start	End		Fund	Donor	Budget Descr	Amount US\$
00059896	Energy Efficiency	Dev national Capacities			MCD-National Execution	23400	AUS - TTF	71200 International Consultants	20,000.00
					MCD-National Execution	23400	AUS - TTF	71300 Local Consultants	12,000.00
					MCD-National Execution	23400	AUS - TTF	71400 Contractual Services - Individ	19,200.00
					MCD-National Execution	23400	AUS - TTF	71600 Travel	3,000.00
					MCD-National Execution	23400	AUS - TTF	72100 Contractual Services-Companies	102,600.00
					MCD-National Execution	23400	AUS - TTF	72400 Communic & Audio Visual Equip	2,000.00
					MCD-National Execution	23400	AUS - TTF	72500 Supplies	1,200.00
					MCD-National Execution	23400	AUS - TTF	72800 Information Technology Equipmt	2,000.00
					MCD-National Execution	23400	AUS - TTF	74500 Miscellaneous Expenses	2,000.00
					MCD-National Execution	23400	AUS - TTF	75100 Facilities & administration	36,000.00

200,000.00



Annual Work Plan

Macedonia

Award Id:	00049238
Award Title:	Mitigating CC through improving EE in building sector
Year:	2010

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Project ID	Expected Outputs	Key Activities	Timeframe		Responsible Party	Planned Budget				
			Start	End		Fund	Donor	Budget Descr	Amount US\$	
00059896	Energy Efficiency	Dev national Capacities			MCD-National Execution	23400	AUS - TTF	74100	Professional Services – Audit Fee	4,000.00
					MCD-National Execution	23400	AUS - TTF	71300	Local Consultants	10,000.00
					MCD-National Execution	23400	AUS - TTF	71400	Contractual Services - Individ	38,400.00
					MCD-National Execution	23400	AUS - TFF	71600	Travel	3,000.00
					MCD-National Execution	23400	AUS - TTF	72100	Contractual Services-Companies	133,304.00
					MCD-National Execution	23400	AUS - TTF	72400	Communic & Audio Visual Equip	2,100.00
					MCD-National Execution	23400	AUS - TTF	72500	Supplies	2,400.00
					MCD-National Execution	23400	AUS - TTF	74200	Audio Visual&Print Prod Costs	15,000.00
					MCD-National Execution	23400	AUS - TTF	74500	Miscellaneous Expenses	2,000.00

	210,204.00



Annual Work Plan

Macedonia

Award Id: 00049238

Award Title: Mitigating CC through improving EE in building sector

Year: 2011

Project ID	Expected Outputs	Key Activities	Timeframe		Responsible Party			Planned Budget	
			Start	End		Fund	Donor	Budget Descr	Amount US\$
00059896	Energy Efficiency	Dev national Capacities			MCD-National Execution	23400	AUS - TTF	74100 Professional Services – Audit Fee	4,000.00
					MCD-National Execution	23400	AUS - TTF	71300 Local Consultants	4,000.00
					MCD-National Execution	23400	AUS - TTF	71400 Contractual Services - Individ	16,000.00
					MCD-National Execution	23400	AUS - TTF	71600 Travel	2,000.00
					MCD-National Execution	23400	AUS - TTF	72100 Contractual Services-Companies	64,200.00
					MCD-National Execution	23400	AUS - TTF	72500 Supplies	800.00
					MCD-National Execution	23400	AUS - TTF	74200 Audio Visual&Print Prod Costs	8,000.00
					MCD-National Execution	23400	AUS - TTF	74500 Miscellaneous Expenses	1,000.00

100,000.00

TOTAL Award:

510,204.00

V. MANAGEMENT ARRANGEMENTS

The Project will be executed using the national implementation (NIM) modality, and the Ministry of Environment and Physical Planning (MEPP) will serve as implementing partner. The Ministry is accountable for the government's participation in the project. The Ministry's staff and/or experts will be utilized when needed in accordance with UNDP guidelines, and will facilitate interaction among relevant public organizations, research institutions and private organizations. The Ministry will be responsible for project implementation and the timely and verifiable attainment of project objectives. The Ministry of Economy is an Executing Agency for the overall Energy Efficiency Programme financed by the Austria Development Cooperation.

Funding from the Austrian Government will be channelled through the Energy and Environment Thematic Trust Fund (EE TTF). The donor will receive a Certified Financial Report (CFR) from the BOM showing their contribution to the TTF.

Working closely with the EA, the UNDP Country Office (CO) will be responsible for: recruitment of the project staff and consultants, and procurement of goods and services in consultation with the MoEPP; overseeing project budgets and expenditures; project evaluation and reporting; result-based project monitoring; and organizing independent audits to ensure the proper use of funds. Procurement, Recruitment, Financial transactions, Auditing and Reporting will be carried out in compliance UNDP procedures for national execution, based on the Agreement for provision of Support Services signed between UNDP and the Ministry of Environment and Physical Planning.

Day-to-day Project Management and Implementation: The Project Manager will assume the day-to-day management responsibility for the project implementation, and coordination among partner organizations. The Project Manager will report to the Project Board. He/She will be assisted by a Project Assistant. The PMU (Project Management Unit) will ensure timely disbursement of funds and provide financial reporting. It will prepare regular financial summary narratives and consolidated accounts for circulation / presentation, and present substantive progress reports to the Project Board.

The Project Management Unit will closely lease with the project teams that will implement other components of the Programme, the Ministry of Economy, the Macedonian Energy Agency and other key stakeholders. The Ministry of Environment and Physical Planning will provide the premises and maintaining costs (rent and electricity cost) for the project office.

Decision-making: A Project Board will be established as a main decision making body for the project. The Project Board will consist of representatives of the major stakeholders:

- 1) **Executive:** Ministry of Environment and Physical Planning, representing the project ownership to chair the group;
- 2) **Senior Supplier:** UNDP and ADC (Austrian Development Cooperation) representing the interests of the parties, which provide funds and/or technical expertise to the project (designing, developing, facilitating, procuring, implementing); and
- 3) **Senior Beneficiary:** Ministry of Economy and ZELS (Association of Local Self Government). The Senior Beneficiary's primary function within the Board is to ensure the realization of project results from the perspective of project beneficiaries.

The Project Board is responsible for making by consensus management decisions for the project when guidance is required by the Project Manager, including approval of project work plans and revisions. In order to ensure accountability, the Project Board decisions should be made in accordance with standards that shall ensure the project's integrity and transparency.

Specific responsibilities:

Initiating a project

- Delegate any Project Assurance function as appropriate;
- Review and appraise detailed Project Plan and AWP, quality criteria, issue log, updated risk log and the monitoring and communication plan.

Running a project

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Address project issues as raised by the project manager;
- Provide guidance and agree on possible countermeasures/management actions to address specific risks;
- Agree on project manager's tolerances in the Annual Work Plan and quarterly plans when required;
- Conduct regular meetings to review the Project Quarterly Progress Report and provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans.
- Review Combined Delivery Reports (CDR) prior to certification by the Implementing Partner;
- Appraise the Project Annual Review Report, make recommendations for the next AWP if required, and inform the Outcome Board about the results of the review.
- Review and approve end project report, make recommendations for follow-on actions;
- Provide ad-hoc direction and advice for exception situations when project manager's tolerances are exceeded;
- Assess and decide on project changes through revisions;

Closing a project

- Assure that all Project deliverables have been produced satisfactorily;
- Review and approve the Final Project Review Report, including Lessons-learned;
- Make recommendations for follow-on actions to be submitted to the Outcome Board;
- Commission project evaluation (only when required by partnership agreement)
- Notify operational completion of the project to the Outcome Board.

Executive

The Executive is ultimately responsible for the project, supported by the Senior Beneficiary and Senior Supplier. The Executive's role is to ensure that the project is focused throughout its life cycle on achieving its objectives and delivering outputs that will contribute to higher level outcomes. The Executive has to ensure that the project gives value for money, ensuring a cost-conscious approach to the project, balancing the demands of beneficiary and supplier.

Specific Responsibilities (as part of the above responsibilities for the Project Board)

- Ensure that there is a coherent project organization structure and logical set of plans
- Set tolerances in the AWP and other plans as required for the project manager
- Monitor and control the progress of the project at a strategic level
- Ensure that risks are being tracked and mitigated as effectively as possible
- Brief Outcome Board and relevant stakeholders about project progress
- Organize and chair Project Board meetings

The Executive is responsible for overall assurance of the project. If the project warrants it, the Executive may delegate some responsibility for the project assurance functions.

Senior Beneficiary

The Senior Beneficiary is responsible for validating the needs and for monitoring that the solution will meet those needs within the constraints of the project. The role represents the interests of all those who will benefit from the project, or those for whom the deliverables resulting from activities will achieve specific output targets. The Senior Beneficiary role monitors progress against targets and quality criteria.

Specific Responsibilities (as part of the above responsibilities for the Project Board)

- Ensure the expected output(s) and related activities of the project are well defined
- Make sure that progress towards the outputs required by the beneficiaries remains consistent from the beneficiary perspective
- Promote and maintain focus on the expected project output(s)
- Prioritize and contribute beneficiaries' opinions on Project Board decisions on whether to implement recommendations on proposed changes
- Resolve priority conflicts

The assurance responsibilities of the Senior Beneficiary are to check that:

- Specification of the Beneficiary's needs is accurate, complete and unambiguous
- Implementation of activities at all stages is monitored to ensure that they will meet the beneficiary's needs and are progressing towards that target
- Impact of potential changes is evaluated from the beneficiary point of view
- Risks to the beneficiaries are frequently monitored

Where the project's size, complexity or importance warrants it, the Senior Beneficiary may delegate the responsibility and authority for some of the assurance responsibilities.

Senior Supplier:

The Senior Supplier represents the interests of the parties which provide funding and/or technical expertise to the project (designing, developing, facilitating, procuring, implementing). The Senior Supplier's primary function within the Board is to provide guidance regarding the technical feasibility of the project. The Senior Supplier role must have the authority to commit or acquire supplier resources required.

Specific Responsibilities (as part of the above responsibilities for the Project Board)

- Make sure that progress towards the outputs remains consistent from the supplier perspective
- Promote and maintain focus on the expected project output(s) from the point of view of supplier management
- Ensure that the supplier resources required for the project are made available
- Contribute supplier opinions on Project Board decisions on whether to implement recommendations on proposed changes
- Arbitrate on, and ensure resolution of, any supplier priority or resource conflicts

The supplier assurance role responsibilities are to:

- Advise on the selection of strategy, design and methods to carry out project activities
- Ensure that any standards defined for the project are met and used to good effect
- Monitor potential changes and their impact on the quality of deliverables from a supplier perspective
- Monitor any risks in the implementation aspects of the project

If warranted, some of this assurance responsibility may be delegated.

Project Assurance

Overall responsibility: Project Assurance is the responsibility of each Project Board member however the role can be delegated. The Project Assurance role supports the Project Board by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed.

Project Assurance has to be independent of the Project Manager; therefore the Project Board cannot delegate any of its assurance responsibilities to the Project Manager. A UNDP Programme Officer typically holds the Project Assurance role.

The following list includes the key suggested aspects that need to be checked by the Project Assurance throughout the project as part of ensuring that it remains relevant, follows the approved plans and continues to meet the planned targets with quality.

- Maintenance of thorough liaison throughout the project between the members of the Project Board.
- Beneficiary needs and expectations are being met or managed
- Risks are being controlled
- Adherence to the Project Justification (Business Case)
- Projects fit with the overall Country Programme
- The right people are being involved
- An acceptable solution is being developed
- The project remains viable
- The scope of the project is not “creeping upwards” unnoticed
- Internal and external communications are working
- Applicable UNDP rules and regulations are being observed
- Any legislative constraints are being observed
- Adherence to RMG (Results Management Guide) monitoring and reporting requirements and standards
- Quality management procedures are properly followed
- Project Board’s decisions are followed and revisions are managed in line with the required procedures

Specific responsibilities would include:

Initiating a project

- Ensure that project outputs definitions and activity definition including description and quality criteria have been properly recorded in the Atlas Project Management module to facilitate monitoring and reporting;
- Ensure that people concerned are fully informed about the project
- Ensure that all preparatory activities, including training for project staff, logistic supports are timely carried out

Running a project

- Ensure that funds are made available to the project;
- Ensure that risks and issues are properly managed, and that the logs in Atlas are regularly updated;
- Ensure that critical project information is monitored and updated in Atlas, using the Activity Quality log in particular;
- Ensure that Project Quarterly Progress Reports are prepared and submitted on time, and according to standards in terms of format and content quality;
- Ensure that CDRs are prepared and submitted to the Project Board and Outcome Board;
- Perform oversight activities, such as periodic monitoring visits and “spot checks”.
- Ensure that the Project Data Quality Dashboard remains “green”

Closing a project

- Ensure that the project is operationally closed in Atlas;
- Ensure that all financial transactions are in Atlas based on final accounting of expenditures;
- Ensure that project accounts are closed and status set in Atlas accordingly.

Project Manager

Overall responsibilities: The Project Manager has the authority to run the project on a day-to-day basis on behalf of the Project Board within the constraints laid down by the Board. The Project Manager is responsible for day-to-day management and decision-making for the project. The Project Manager’s prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost.

Specific responsibilities would include:

Overall project management:

- Manage the realization of project outputs through activities;
- Provide direction and guidance to project team(s)/ responsible party (ies);
- Liaise with the Project Board or its appointed Project Assurance roles to assure the overall direction and integrity of the project;
- Identify and obtain any support and advice required for the management, planning and control of the project;
- Responsible for project administration;
- Liaise with any suppliers;
- May also perform Team Manager and Project Support roles;

Running a project

- Plan the activities of the project and monitor progress against the initial quality criteria.
- Mobilize goods and services to initiative activities, including drafting TORs and work specifications;
- Monitor events as determined in the Monitoring & Communication Plan, and update the plan as required;
- Monitor financial resources and accounting to ensure accuracy and reliability of financial reports;
- Manage and monitor the project risks as initially identified in the Project Brief appraised by the Local Project Appraisal Committee (LPAC), submit new risks to the Project Board for consideration and decision on possible actions if required; update the status of these risks by maintaining the Project Risks Log;
- Be responsible for managing issues and requests for change by maintaining an Issues Log.
- Prepare the Project Quarterly Progress Report (progress against planned activities, update on Risks and Issues, expenditures) and submit the report to the Project Board and Project Assurance;
- Prepare the Annual review Report, and submit the report to the Project Board and the Outcome Board;
- Based on the review, prepare the AWP for the following year, as well as Quarterly Plans if required.

Closing a Project

- Prepare Final Project Review Reports to be submitted to the Project Board and the Outcome Board;
- Identify follow-on actions and submit them for consideration to the Project Board;
- Manage the transfer of project deliverables, documents, files, equipment and materials to national beneficiaries;
- Prepare final CDRs for signature by UNDP and the Implementing Partner.

Project Support

Overall responsibilities: The Project Support role provides project administration, management and technical support to the Project Manager as required by the needs of the individual project or Project Manager. The provision of any Project Support on a formal basis is optional. It is necessary to keep Project Support and Project Assurance roles separate in order to maintain the independence of Project Assurance.

Specific responsibilities: Some specific tasks of the Project Support would include:

Provision of administrative services:

- Set up and maintain project files
- Collect project related information data
- Update plans
- Administer the quality review process
- Administer Project Board meetings

Project documentation management:

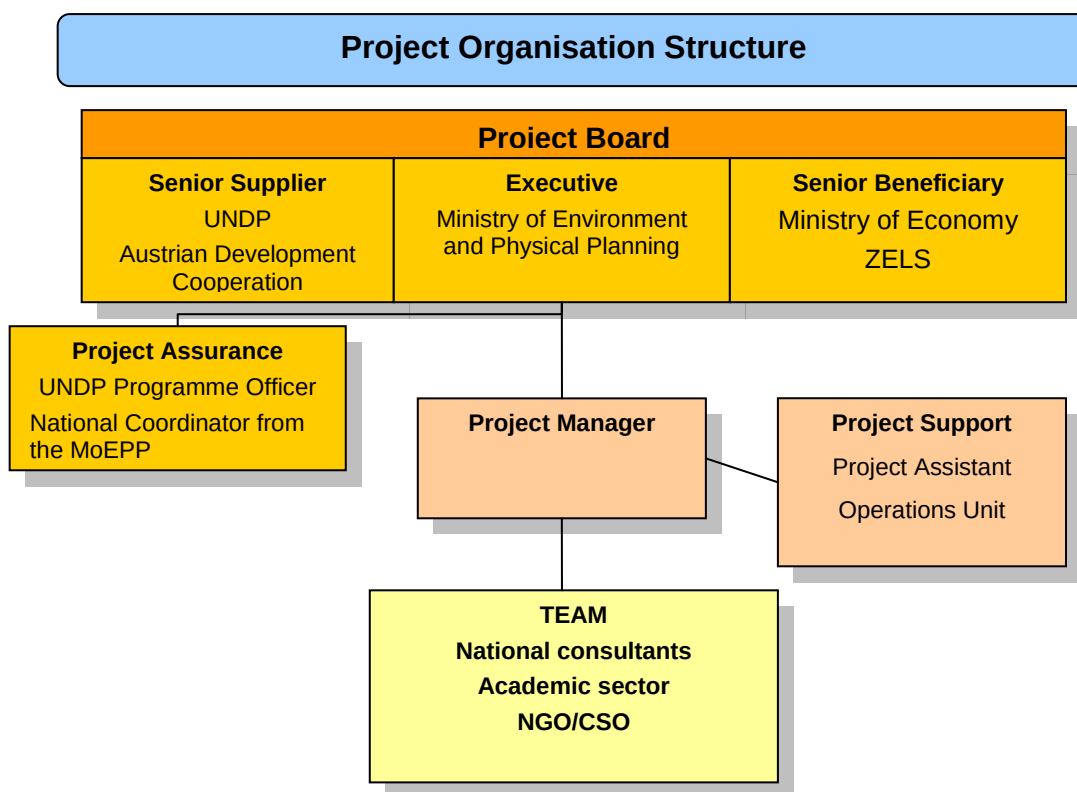
- Administer project revision control
- Establish document control procedures
- Compile, copy and distribute all project reports

Financial Management, Monitoring and reporting

- Assist in the financial management tasks under the responsibility of the Project Manager
- Provide support in the use of Atlas for monitoring and reporting

Provision of technical support services

- Provide technical advices
- Review technical reports
- Monitor technical activities carried out by responsible parties



Note: The organizational scheme reflects only UNDP implemented project. For the implementation of the full Energy Efficiency Programme please see the document developed by the Austrian Energy Agency

VI. Monitoring and Evaluation

In accordance with the programming policies and procedures outlined in the UNDP procedures the project will be monitored through the following:

Within the annual cycle

- On a quarterly basis, a quality assessment shall record progress towards the completion of key results, based on quality criteria and methods captured in the Quality Management table below.
- An Issue Log shall be activated in Atlas and updated by the Project Manager to facilitate tracking and resolution of potential problems or requests for change.

- Based on the initial risk analysis submitted (see annex 1), a risk log shall be activated in Atlas and regularly updated by reviewing the external environment that may affect the project implementation.
- Based on the above information recorded in Atlas, a Quarterly Progress Reports (QPR) shall be submitted by the Project Manager to the Project Board through Project Assurance, using the standard report format available in the Executive Snapshot.
- A project Lesson-learned log shall be activated and regularly updated to ensure on-going learning and adaptation within the organization, and to facilitate the preparation of the Lessons-learned Report at the end of the project
- A Monitoring Schedule Plan shall be activated in Atlas and updated to track key management actions/events

Annually

- **Annual Review Report.** An Annual Review Report shall be prepared by the Project Manager and shared with the Project Board and the Outcome Board. As minimum requirement, the Annual Review Report shall consist of the Atlas standard format for the QPR covering the whole year with updated information for each above element of the QPR as well as a summary of results achieved against pre-defined annual targets at the output level.
- **Annual Project Review.** Based on the above report, an annual project review shall be conducted during the fourth quarter of the year or soon after, to assess the performance of the project and appraise the Annual Work Plan (AWP) for the following year. In the last year, this review will be a final assessment. This review is driven by the Project Board and may involve other stakeholders as required. It shall focus on the extent to which progress is being made towards outputs, and that these remain aligned to appropriate outcomes.

Audit Clause

UNDP will engage legally recognized auditor to conduct regular audit of the project according to UNDP Rules and Procedures and provide a copy of the Audit Report to the Implementing Agency i.e. the Ministry of Environment and Physical Planning and the donor through the Austrian Development Cooperation.

VII. Legal Context

This Project Document shall be the instrument referred to as such in Article I of the Standard Basic Assistance Agreement between the Government of FYR Macedonia and the United Nations Development Programme, signed by the parties on 30 October 1995. The host country implementing agency shall, for the purpose of the Standard Basic Assistance Agreement, refer to the government co-operating agency described in that Agreement.

Consistent with the Article III of the Standard Basic Assistance Agreement, the responsibility for the safety and security of the executing agency and its personnel and property, and of UNDP's property in the executing agency's custody, rests with the implementing partner.

The executing agency shall:

- a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
- b) assume all risks and liabilities related to the executing agency's security, and the full implementation of the security plan.

UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

The executing agency agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities

associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via <http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm>. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

ANNEX: RISK LOG

#	Description	Category	Impact & Probability	Countermeasures / Management response	Owner	Author	Date Identified	Last Update	Status
1	Deficiency of appropriate and reliable data and/or unwillingness of institutions to provide data/information in their possession	Political	Medium	The project team will take stock of all relevant resources of data/information and will invite related institutions to participate in the project implementation. The Law on Free Access to Information also provides legal framework for getting the required data	MoEPP	UNDP	February 2009		
2	Insufficient interest and knowledge on energy efficiency issues especially on local level	Strategic	Medium	The project will utilize the lessons learnt from similar projects that involved stakeholders on local level and develop specific activities that will increase the awareness and knowledge of targeted groups of stakeholders	Project team	UNDP	February 2009		
3	Insufficient coordination among the Projects within the Energy Efficiency Programme	Operational	Low	The main project partners (MoEPP, MoE, ADC and UNDP) will be represented in the Project Board which among the other will serve as a forum for exchange of information on the progress of various project components. In addition the project staff will ensure continuous collaboration with all stakeholders.	MoEPP/ ADC/UNDP/ Project team	UNDP	February 2009		