



United Nations Development Programme

Country: RUSSIA

PROJECT DOCUMENT¹

Project Title:

Greening 2014 Sochi Olympics: A Strategy and Action Plan for the Greening Legacy

UNDAF Outcome(s): N/A

UNDP Strategic Plan Environment and Sustainable Development Primary Outcome:

UNDP Strategic Plan Secondary Outcome:

Expected CP Outcome(s): *(Those linked to the project and extracted from the country programme document)*

Outcome 3. Energy and environment: Improved environmental sustainability of development processes

Expected CPAP Output(s): *(Those that will result from the project and extracted from the CPAP)*

Improved environmental sustainability of development processes and increased energy efficiency/
Environment indicators included into development policies at the sub-national and regional levels

Executing Entity/Implementing Partner: Ministry of Natural Resources and Environment of the RF

Implementing Entity/Responsible Partners: ICF ECO

Brief Description

The project will produce a Greening Strategy and Action Plan for the 2014 Winter Olympics in Sochi. The project will develop greening recommendations and action plans in six specific sectors. By introducing an early CC planning the project will help to ensure the games are a "carbon neutral" event and unleash the potential for GHG emissions reduction during preparation to, convening and following the Sochi Olympics. In doing so the MSP project will come up with an integrated programmatic approach (a set of project proposals) for the Greening of Sochi Olympics

Programme Period:	<u>2007-2010</u>
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Project ID:	<u>00074313</u>
PIMS #	<u>4320</u>
Start date:	<u>January 2011</u>
End Date	<u>December 2012</u>
Management Arrangements	<u>NIM</u>
PAC Meeting Date	_____

Total resources required	<u>US\$ 14,417,000</u>
Total allocated resources:	<u>US\$ 14,417,000</u>
• Regular	
• Other:	
○ GEF	<u>US\$ 900,000</u>
○ Government	<u>US\$ 5,497,000</u>
○ Private Sector	<u>US\$ 7,445,000</u>
○ NGO	<u>US\$ 575,000</u>
In-kind contributions	

Agreed by (Executing Entity/Implementing Partner):

Date/Month/Year

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Date/Month/Year

¹ For UNDP supported GEF funded projects as this includes GEF-specific requirements

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ACRONYMS

APR	Annual Project Report
AWP	Annual Work Programme
CDM	Clean Development Mechanism
CEO	Chief Executive Officer
CHP	Combine Heat and Power plant
CO ₂ e	Carbon Dioxide equivalent
DD	Design Documentation
ERC	UNDP Evaluation Office Evaluation Resource Center
EE	Energy Efficient / Energy Efficiency
EEG	UNDP Energy and Environment Group
EIA	Environmental Impact Assessment
EMAS	European Eco Management and Audit Scheme
EMS	Environmental Management System
FSP	Full Sized Project
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GHG	Greenhouse Gas
HPP	Hydro Power Plant
IA	Implementing Agency
IOC	International Olympic Committee
IPCC	Intergovernmental Panel on Climate Change
IPR	Intellectual Property Rights
ISO	International Standardization Organization
JI	Joint Implementation
kWh/m ² .a	Kilowatt-hour per square meter and year (building energy demand)
LEED	US Green Buildings Council Leadership in Energy Efficient Design
M&E	Monitoring and Evaluation
MoU	Memorandum of <u>U</u> nderstanding
MNRE	Ministry of natural resources and environment of the RF
MSP	Medium Sized Project
NGO	Non-Governmental Organization
OVOS	Assessment of Environmental Impacts (Russ.)
PAC	Program Advisory Committee
PIR	Project Inception Report
PMU	Project Management Unit
PPP	Public Private Partnership
PSC	Project Steering Committee
QPR	Quarterly Progress Report
RCU	Regional Co-ordination Unit
RF	Russian Federation
RE	Renewable Energy
ROC	Russian Olympic Committee
RPC	Russian Paralympic Committee

RTA	Regional Technical Advisor
SBAA	Standard Basic Assistance Agreement
SOOC	Sochi 2014 Organizing Committee for the Olympic Games
tCO ₂ e	Tonnes of CO ₂ equivalent
TPP	Thermal Power Plant
UNDP	United Nations Development Program
UNDP CO	United Nations Development Program Country Office
UNEP	United Nations Environmental Program
UNFCCC	United Nations Framework Convention on Climate Change
USD/US\$	United States Dollars
USRR	Urban speed railroad
VANOC	Vancouver 2010 Organizing Committee for the Olympic Games
VCS	Voluntary Carbon Standard
VER	Verified Emission Reductions

1. SITUATION ANALYSIS

Background

1. In 2014 Sochi will host the XXII International Winter Olympic Games. A massive investment into sport infrastructure, visitor and accommodation facilities, power supply and transport infrastructure and environment protection is planned. The Russian Government is committed to demonstrate adherence to international environmental standards and state-of-the-art energy efficiency technologies in the course of the event. However, over the first years of the preparations to the event a number of barriers have become evident that may hamper effectiveness of the national effort. These barriers mainly involve (i) lack of experience, know-how and capacities at the local and national level and (ii) lack of a coordinated interagency strategy and planning focusing on environmental and particularly climate change agenda. As such without this GEF project it is unlikely that climate change considerations will be fully integrated in the event planning from early stages in a coordinated manner and as a result many opportunities to reduce GHG emissions will be lost.
2. Minimizing the environmental footprint and ensuring a carbon-neutral event in particular are key components for the concept of a Green Olympics. The proposed project will use the Sochi Olympic Games as an opportunity to showcase the GEF's contribution to addressing global environmental challenges and the Russian efforts to leave a green legacy after the Sochi Olympics. The MSP project will develop and implement strategies and action plans for integrating a climate change agenda through six key sectors: green building standards; power planning and energy efficiency; renewable energy; low-emitting transport; carbon offset programme; and public awareness and advocacy. The project will develop greening recommendations and action plans in these six specific sectors and come up with an integrated programmatic approach (a set of coordinated project proposals) for the Green Sochi Olympics that will involve technical assistance and investment projects.
3. The expected global environmental benefits from the project include both the direct avoidance of greenhouse gas emissions during preparations to and convening the Games and additional GHG emission reductions that will be achieved through implementation of the action plans and follow up projects in improved energy efficiency of infrastructure, increased use of renewable energy for power supply, reduced emissions from transport and a voluntary carbon offset programmes. The project outputs would include specific low-carbon solutions linked to the Sochi investments/infrastructure development plans (buildings, transport, power and waste processing infrastructure, etc.). The successful implementation of the GEF-supported strategy and plans and subsequent direct avoidance of GHG emissions will be achieved through (i) embedding these action plans into the national Sochi Olympics preparatory process, the public and corporate investments plans and construction norms in partnership with the key national agencies responsible for the event - the Ministry of Natural Resources and Environment of the RF, Olympstroy and the Olympic Organizational Committee (see Section E.); and (ii) the timely and effective design and implementation of the GEF MSP to ensure that the greening action plans are developed early enough for their implementation prior to 2014. The indirect global environmental benefits of the project will be achieved through the outreach program by raising the awareness of the athletes, the media, the private sector, and other participants to the Olympics and the general public about climate change and other global environmental issues as well as options to reduce the human impact on the environment. A detailed plan for the implementation of the greening strategy and action plans will be developed in the MSP project document.

Olympics and the environment

- Over the past two decades, issues of environment and sustainability have taken on a leading role in the realization of large international sporting events. More recently 'green' and 'carbon neutral' branding of these events has grown in popularity to become an expected standard of 'fair play' for their planning and realization. The cities and nations hosting these events are increasingly competitive in defining the scope and sophistication of their environmental impact mitigation schemes and are continually raising the bar for the hosting of subsequent events. The Olympic Games in particular play a leading role in setting the mark for sustainable planning and staging practices for large international sports events.
- The 1994 Winter Olympics in Lillehammer, Norway, is considered by many as the groundbreaking international 'green' sporting event where sustainability issues and environmental planning were clearly integrated in the event's planning and staging. The same year, the International Olympic Committee (IOC) defined 'environment' as the third pillar of the Games – along with 'sport' and 'culture' – and signed a cooperation agreement with UNEP to undertake joint international actions to promote sustainable development. This flagship cooperation has since become a key component of Olympic Game planning, staging and impact evaluation.
- The 2002 Winter Olympics in Salt Lake City set another precedent by demonstrating that 'zero net emissions' is a viable target for staging an Olympics. The challenge was taken up in the 2006 Winter Olympics in Turin where for the first time an environmental management system was applied to various environmental programs including the carbon neutral games targets.
- Showcasing of innovative green technologies has also become a major theme in the realization of the Olympic Games. State of the art energy efficiency and renewable energy technologies are promoted in the venue buildings and the transport sectors. Venues for the 2008 Beijing Olympics for example demonstrated conformity to new stricter national building energy codes and the Beijing Olympic Village was the first international project to achieve the Green Building Council's LEED certification for Neighbourhood Development. Sustainability programs involving environmental management systems, broad-based sustainability targets, and monitoring and reporting mechanisms have been adopted by the Organizing Committees of Vancouver 2010 Winter Olympics and the London 2012 Summer Olympics. As international expectations concerning climate change expand from year to year, the expectations on Sochi's sustainability programme are high. In particular, the Sochi Olympics provide an excellent opportunity for the government of the Russian Federation to showcase their green credentials and commitment to sustainability.

National context

chart by amCharts.com

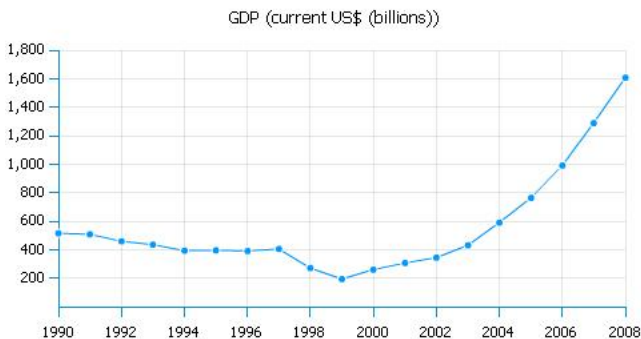
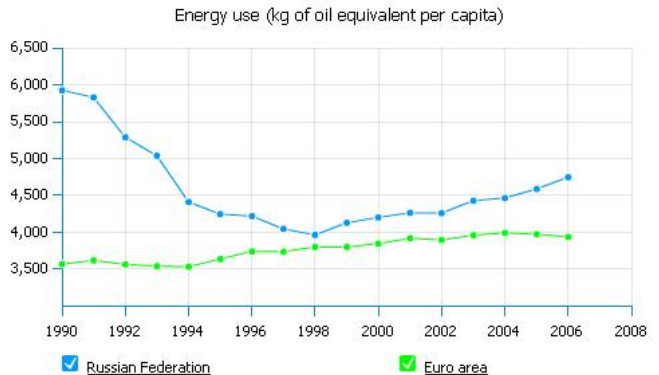


chart by amCharts.com



8. As a result of increasing economic and political stability over the past years, the economy of Russia is experiencing a steady economic growth, which has come along with a growing demand for energy and natural resources. The Russian economy remains among the most energy intensive in the world. For example, the energy intensity of the Russian Federation (based on purchase power parity) is twice that of the USA and three times that of the EU and Japan. The structure of electricity consumption has shifted towards higher shares of the residential and municipal sector (27%) and transport (11%). Industrial electricity consumption is still 49%, agriculture 9% and construction 4%. The reasons are structural changes in the country's economy, in particular: (i) growth of housing construction, (ii) development of the services sector – like shopping and entertainment malls and sport complexes, (iii) an expansion of office and hotel construction, (iv) diversification of industry. Russia's Adjusted Net Savings index falls far below the world and European average. Forecasts of emissions and discharges of major pollutants show that urban air pollution will remain a serious problem, while water pollution and drinking water quality will increasingly become a problem in the long run. The rate of land degradation and ecosystem fragmentation threatens security and wealth of future generations. In addition, Climate Change will pose new emerging threats to the population and economy in particular in the Russian Arctic and in the Southern regions.
9. Russia's Ecological Doctrine and the Law on Environmental Protection were adopted in January 2002 and represent the governmental commitment to environmental protection. Energy security and food security are broadly recognized as national priorities. In addition, Russia is a Party to both the United Nations Framework Convention on Climate Change (UNFCCC) and to the Kyoto Protocol. In order for Russia to fully realize its vast potential for improvements in energy efficiency and reduction in pollution, it will be necessary to eliminate the economic, structural and institutional barriers that currently discourage investors in these areas. With the recognition of development challenges faced by the Russian economy, there is an urgent need to mainstream the concept of environmental sustainability into political, economic and social agendas of contemporary Russia. Greening the Sochi Olympics helps to build a strong platform for environmental sustainability which can be replicated to other parts of the Russian Federation.
10. The Russian Federation is one of the leading emerging economies and has been undergoing a complex transition since 1991. In 2004—2006, the country continued to recover from the economic and social distress of the early transition years. Record-high world energy prices helped sustain steady growth and reduce public debt ahead of schedule. However, growth has been uneven and Russia was hit harder than most western economies by the financial crisis of 2008 and 2009 and underinvestment in capital assets, technology, and infrastructure continue to pose challenges to the sustainability of long-term economic development. Diversification, a greater knowledge-based economy and increased investment, particularly in infrastructure, are vital.
11. Under the Kyoto Protocol, which the Government ratified in November 2004, Russia is committed to curbing its greenhouse gas emissions at 1990 levels over the period 2008-12. Russia remains world's third largest GHG emission producer mainly from burning of fossil fuels but as a result of the dramatic loss of industrial production after 1990, it will likely remain within its Kyoto targets to up to 2012 because as of 2010 Russian GHG emissions are still 40% below 1990 levels. However, over the longer term as the Russian economy continues to grow it is likely that Russian greenhouse gas emissions will continue to increase and therefore it is necessary to examine in detail and implement mitigation options. The potential for GHG mitigation in the Russian economy through energy efficiency and renewable energy in all sectors is substantial.

Global significance

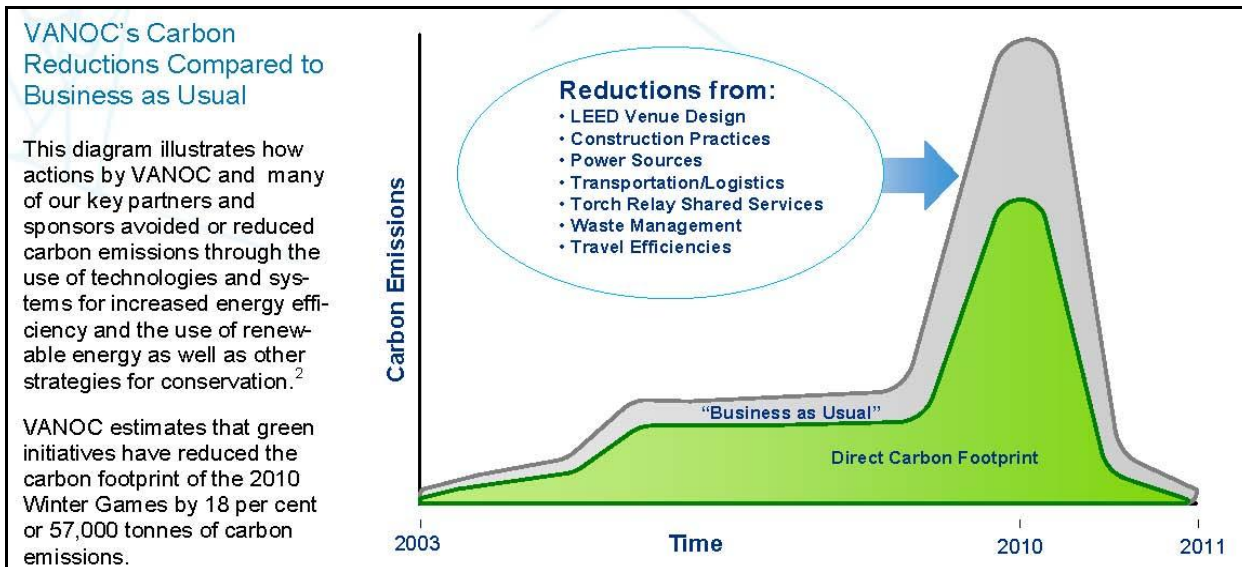
Carbon neutral Games

12. The Olympic Cleaner and Greener programme initiated by the Salt Lake 2002 Winter Olympics organizing committee included a carbon neutral goal. Organizers monitored energy use and transportation during the Games and solicited companies to donate VERs to the event. DuPont donated 120,000 tons of CO₂-equivalent emissions credits to the Salt Lake City Organizing Committee. This allowed the Winter Olympics to offset their emissions and be declared "climate neutral" setting a strong precedent for future Games. Future winter games decided that this was a good model to follow.
13. The Sustainability Report² prepared after the 2006 Turin Winter Olympics found direct and indirect GHG emissions of the Games amounted to 118,500 tCO₂e (without considering emissions from air travel). At the time the Games closed, some 67% of these emissions had been 'offset', largely through planned regional investments in power and heat utilities which would result in improved energy efficiency. Organizers created the HECTOR (HERitage Climate TORino) programme with the target of making the Turin Winter Games climate neutral through carbon offsets and raising awareness of climate change issues. HECTOR was funded largely by the Piedmont regional authorities and involved carbon credits which were to be generated from three new low-energy district heating and two co-generation projects. The town council in Pinerolo, site of the curling venue, also undertook energy-saving programs that were to generate carbon credits for the programme. In the period following the Games, the projects were expected to generate carbon credits in the range of 250-300 thousand tCO₂e and thereby compensate the GHG emissions from the Turin Games before the start of the next games in Vancouver. While it is still not clear whether organizers achieved their carbon neutral targets, they did set strong precedents for monitoring (use of an Environmental Monitoring System certified under ISO 14001), reporting and offsetting GHG emissions related to the event.
14. Preliminary GHG estimates for the Vancouver 2010 Winter Olympics prepared in 2007³ foresaw some 330,000 tCO₂e resulting from organizing and staging the event. This estimate included some 32,300 tCO₂e (9.8%) from local transportation, 29,900 tCO₂e (9.1%) from energy use and 226,500 tCO₂e (68.9%) from air travel. The remaining 40,000 tCO₂e (12.2%) included emissions generated from accommodation, construction, cargo transport, administration, waste and the torch relay. The estimated impact has recently been adjusted to 268,000tCO₂e based on updated data and emission mitigation measures implemented⁴. The Vancouver 2010 Organizing Committee has been committed to offsetting the direct carbon footprint of the Games (estimated at 118 000 tCO₂e) and has set up an 'offset portfolio' funded by sponsors (including Coca Cola, McDonalds and Visa) and comprised of regional clean energy technology projects to be implemented in the 2 years following the Games and a selection of international Gold Standard projects which also will be implemented after the Games. The organizers are urging additional sponsors and individuals to donate to the portfolio to cover the remaining estimated 150 000 tCO₂e indirect emissions (flights for delegations, media and spectators) but are currently not claiming responsibility for these within their carbon neutral targets.

2 Sustainability Report 2006, Benedetta Ciampi, Giuseppe Feola, Paolo Revellino, Environmental Department of the Organizing Committee for the XX Olympic Winter Games Torino 2006, Turin, November 2006

3 Meeting the Challenge, A Carbon Neutral 2010 Winter Games Discussion Paper, David Suzuki Foundation, 2007 ISBN 1-897375-09-3

4 http://www.vancouver2010.com/olympic-news/n/news/partners-of-2010-winter-games-join-forces-to-help-make-canada-s-games-carbon-neutral-vanoc-offsetters-to-offset-air-travel-of-2010-olympians-and-paralympians-_184348Yk.html. The estimate consists of 118000t from direct emissions and 150 000t from indirect emissions. The large drop in expected indirect emissions is based on an updated spectator profile from June 2009 whereby spectator origins were more centralized to BC, Canada and North America than originally expected. The specific estimates on savings from venues and transportation are: Venues - 62% savings (includes savings from energy reductions and efficiencies, reduction in generator usage and use of green power, supplied by VANOC's sponsor BC Hydro), Transportation - 31% savings (results from use of motorcoaches for transport of spectators/workforce, 25% hybrid vehicles in fleet, hydrogen buses and fuel cell demo vehicles). The estimates are based on the expected emissions at Games-time and a "business-as-usual" model built to quantify what the carbon footprint of the Games could have been if environmental impact had not played a key role in decision making.



15. Summer Olympic Games;

- Beijing 2008 – 1.8 million tCO₂e resulted from the Games. 22300 tCO₂e were avoided through energy efficient and renewable energy measures in transport and buildings. The Organizers claimed that the event GHG impact was 'offset' by traffic control during the Games (800 000 tCO₂e), pollution control in industry (166 000 tCO₂e), boiler conversions (116 000 tCO₂e) and a number of smaller measures including 'greening' the venues and city. The Games were deemed by the organizers to be carbon neutral although environmental NGOs complained about a lack of transparency.
- London 2012 – 3.4 million tCO₂e (estimated baseline). The London 2012 Organizing Committee aims to have a low-carbon - as opposed to carbon neutral - event. The organizers claim to have the most comprehensive GHG inventory and mitigation scheme, accounting not only for the GHG impact of the Games and preparations but also for the 'embedded' carbon in construction materials and processes. Measures to reduce GHG impact include use of low-carbon concrete (with recycled aggregate), use of water and rail transport for construction materials, and 20% of Games time electricity to be provided from new renewable sources. Organizers claim a total of 1.5million tCO₂e has already been avoided from the reference footprint (based on 2006 practice).

16. These inventories and estimates are based on the preparation and staging of the Games only without considering post-Games lifecycle GHG emission reduction benefits generated by the energy efficiency and renewable energy measures implemented in the local and regional transport, utility and building sectors. Nor do they consider the positive GHG emission mitigation benefits generated through capacity building, legislation development and replication at the local and national levels.

GHG emissions in Russia

17. Russia is the world's number three emitter of greenhouse gases, mainly from burning fossil fuels, behind China and the United States. Russia emitted 2.192 billion tCO₂e in 2007, according to official Russian figures submitted to the UNCC Secretariat.
18. The Russian energy mix is dominated by natural gas, oil and coal. One third of carbon emissions results from power and heat generation whereby district heating accounts for half of these emissions. Russia currently uses very little of its huge renewable energy potential. In 2001, only 3.5% of its

total primary energy supply (TPES) was based on renewable energy, of which two-thirds was hydro and one-third all other forms.

19. The energy demand in buildings accounts for some 36% of national energy use and 30% of GHG emissions⁵. The combination of energy inefficient construction and subsidized heat and power tariffs contribute to the fact that the energy consumption for heating in existing buildings is double that for comparable buildings in Scandinavia. Significant energy and GHG mitigation potential also exists in the rapidly growing construction industry.
20. The Russian vehicle market is one of the fastest growing in the world. In 2005, the road transport sector was responsible for some 10% of energy consumption and 7% of GHG emissions. Dominated by domestic brand vehicles, fuel efficiencies are some 15-20% lower than European benchmarks.⁶

Institutional and Policy Framework

National Policy

21. Energy efficiency has been named, by the President and the Government, as one of the eight priorities for the future development in Russia. Russia's Energy Strategy for the period until 2020 views raising energy efficiency as one of the main strategic objectives. Key federal legislation includes;
 - Requirements of the rational use of natural resources, application of the best technologies and reduction of environmental impacts are covered in the Federal Law “On Protection of the Environment.”
 - The Federal Law “On Energy Saving” dated April 03, 1996 with alterations of 2008.
 - The President of the Russian Federation adopted on June 04, 2008 the resolution “On certain measures for improvement of energy and environmental efficiency of the Russian economy”.
 - In January 2009, the Government issued an Order (Resolution) on the accelerated development of renewable energy sources for the period until 2020; the order sets specific policy targets for impressive increase in electricity generation from renewable sources (up-to 4.5% by 2020). The legislative provisions for the promotion of renewable energy in Russia have been set up through the federal law on electric energy (amended in November 2007); further regulatory work to ensure implementation of these policy provisions has been carried out.
 - In the November of 2009 the state Duma of the Russian Federation adopted the Federal Law “On energy saving, improvement of energy efficiency and alterations introduction to certain legal acts of the Russian Federation”. Energy saving and efficiency issues are regulated by the legislation, which imposes a tight schedule of new restraints on the use of incandescent light bulbs, makes it compulsory that electrical products be labelled according to their energy efficiency and requires new energy efficiency standards for new buildings and installations. The new protocol also encompasses a transition to a long-term tariff regulation to offset costs of energy efficient improvements to power generation.

IOC Policy

22. Following the Centennial Olympic Congress in 1994 in Paris, the IOC recognised the importance of the environment and sustainable development, and, in 1996, added a paragraph on environmental protection to the Olympic Charter. “[The IOC’s role with respect to the environment is:] to

5 Pathways to an energy and carbon efficient Russia: Opportunities to increase energy efficiency and reduce greenhouse gas emissions, McKinsey & Company, 2009

6 Pathways to an energy and carbon efficient Russia: Opportunities to increase energy efficiency and reduce greenhouse gas emissions, McKinsey & Company, 2009

encourage and support a responsible concern for environmental issues, to promote sustainable development in sport and to require that the Olympic Games are held accordingly.”⁷

23. The IOC works to ensure that the Olympic Games are held in conditions that demonstrate responsible concern for the environment. Within the Applicant and Candidate City procedure and selection process, environmental and sustainable development guiding principles and requirements are included. Statements provided by Candidate Cities are verified by an Evaluation Commission, which includes an environmental advisor appointed by the International Olympic Committee. Once elected, the Host City is provided with assistance and guidance in its preparations by the IOC Coordination Commission, which also includes an environmental advisor.

Threats, root causes

Policy gaps

24. The Kyoto target of the Russian Federation is to stabilize its emissions at 1990 levels, which means annual average emissions of more than 3.3 billion tCO₂e. Due to the loss in industrial production after the collapse of the Soviet Union, current carbon emissions are more than 20% lower than this target
 - Global climate change is currently not a force driving decision making at the national level
 - The provisions to participate in the Kyoto-based carbon mitigation projects have not been fully implemented in Russia so far. Even though the approval procedures have been agreed in 2009, not a single Joint Implementation project has been approved as of January 2010
 - Lack of experience in carbon management and mitigation programs
25. State standards contain provisions for a number of energy efficiency measures (efficiencies of boilers, use of excess gas pressure, heat insulation of exterior walls, energy saving glazing, lighting, ventilation, heat recovery, heat supply). Few standards are provided with sufficient instruction and the standards are not adequately enforced partly because of application restrictions – the standards remain to be voluntary. The 2009 Law on Energy Saving and Energy Efficiency establishes that buildings should meet energy efficiency requirements during commissioning and operation but does not fully define what these standards are. The requirements (minimum energy performance, technologies and materials) and persons responsible for compliance have still to be developed and prescribed in bylaws. Responsibilities for developing various by laws, regulations and technical standards on energy efficiency are spread among multiple federal ministries and agencies, many of those agencies are lacking necessary knowledge, experience and capacities in energy efficiency. At the same time, national coordination mechanisms among those agencies are still to be fully created or enforced.
26. The existing situation is characterized by the following example; the current urban-planning code within the resolution of the government of the RF (RG of the RF dated February 16, 2008, № 87), defining requirements for construction design development, contain no criteria of energy efficiency evaluation. The lack of national regulation on the environmental performance of buildings is further illustrated by the small number of technical and economical indicators for the evaluation of those projects actually subject to state review. The following green building measures are not covered in project evaluations:
 - measure to increase energy efficiency in the design process (massing and orientation);
 - Use of renewable energy;
 - Use of energy efficient products;

⁷ Chapter 1, Rule 2, Paragraph 13 of the Olympic Charter, in force from 7 July 2007

- Measures to reduce GHG emissions;
- Sustainability of resources;
- Building energy management
- Indoor climate;
- Restrictions of traffic and transport;
- Use of natural lighting;
- Shading and solar protection
- Water conservation

Capacity gaps

27. Energy efficiency measures are not adequately promoted in current building policy, enforcement and practice. There is an urgent need to translate federal-level energy efficiency legislation and regulations into the sub-federal legislative and regulatory framework, which includes the regional (okrug), provincial (oblast), and municipal levels. In addition, it is necessary to develop energy efficiency enforcement models and tools at all of these levels to ensure that stricter requirements are implemented. Safety requirements and economics play the dominant roles in design. Other motivational tools for applying conservation measures (public campaigns, labelling and certification of products, property insurance) are not sufficiently developed.
- Implementation tools for optimizing energy efficiency are unavailable or ineffective. Evaluation criteria consists largely of requirements towards minimum safety levels.
 - An additional problem of the national regulations compliance is their excess number. The list of acts and documents, defining requirements to design, construct and operate buildings includes more than 250 items, 18 federal laws among them. Under these circumstance, adoption of additional requirements, including those related to promotion of the green standards, are seen as an additional burden to building professionals.
28. Local authorities are responsible for regional construction and energy infrastructure, including building permits and energy supply and demand management. They are responsible for the construction and maintenance of municipal infrastructure (local power plants, municipal buildings, roads and other infrastructure). Inadequate national policy combined with insufficient capacity and enforcement at the regional level results in a lack of innovative energy saving solutions for buildings, infrastructure and traffic.

Market gaps

29. The Russian market currently consists of equipment with low energy performance. Local production of equipment delivers low efficiency products. The demand for quality EE and RE products is currently insufficient to support market transformation. The 2009 Law on Energy Saving and Energy Efficiency provides the policy background for such transformation. It includes a tight implementation schedule for energy efficient class labelling of appliances as well as requirements for water, electricity, gas and heat meters at the building and apartment levels (by 2012.) It also restricts the sale of incandescent bulbs, progressively removing them from the market by the year 2014. GEF is supporting these national efforts through a series of national market transformation projects in Russia. Except for the public sector, energy audits and passports for buildings are still voluntary but the law proposes a number of mechanisms (tax incentives and public awareness programmes) to encourage the uptake of energy efficiency measures.

Compliance gaps

30. State expert review of the designs and structure in accordance with the Urban-planning code of RF is the primary means of environmental compliance enforcement. Assessment requirements are ambiguous and applicants may not even be required to present documentation or certification of the scale and impact.
31. One important tool in the institutional system of the Russian Federation for the environmental standards and promotion of innovative solutions and application of the best available technologies is the national evaluation tool OVOS. OVOS is the Russian abbreviation for Environmental Impact Assessment, and is a pre-requisite for implementation of any project involving new construction, expansion or reconstruction of facilities. Comparisons of this system and international standards of environmental assessment, including the Green standards requirements, reveals the following:
 - Similarity of goals and principles of the project impacts and consequences, in terms of environmental protection, health and well being;
 - Similarities in organization, environmental assessment procedures and structure;
 - Correlation of the principles and requirements for cooperation with stakeholders.
32. Nonetheless, there is a discrepancy between the Russian requirements, procedures, regulative practice and the acknowledged international requirements of environmental assessment (Environmental Impact Assessment (EIA)), which may inflict a negative impact to the promotion of the Green standards during the Olympics objects' construction. Some features of EIA tools which are insufficiently developed in OVOS are operation procedures, implementation of improved analysis techniques for the baseline conditions and alternative scenarios, best practices, obligatory development of "action plans" and (or) "compliance monitoring" and application of non-government effective control tools (certification institutions.)
33. The principal difference of OVOS system is the restricted and often formal attention to singular projects and project components, reducing the quality of overall assessment methods of optimizing overall energy and material use (production process). Another weak element of the OVOS system is the necessity for complete design documentation for its application. It lacks flexibility for application to environmental optimization during the design stage. The preceding gaps in the OVOS procedure require the development of special procedures for the preparation and construction of the Olympics objects.

Baseline Analysis

34. The Winter Olympics and Paralympics will take place in Sochi and the surrounding Krasnodar Region in February—March 2014 offering an environmentally spectacular and diverse site for the Winter Olympics. Olympic sports and infrastructure facilities (structures) are planned in the territory of two clusters
 - Mountain Cluster — in the Mzymta River valley and the surrounding mountains;
 - Coastal Cluster — in the Imereti valley south-east of the cities of Sochi and Adler, within the territory of the Big Sochi municipal district.
35. The Mountain Cluster in the Caucasus Mountain Natural Park and the Coastal Cluster located some 40km away in the Black Sea resort city of Sochi (population 400,000) are currently connected by a two-lane automobile road. According to the program of preparation for the 2014 Sochi Olympics, the 'coastal cluster', a compact arrangement of 6 new stadia, a media centre and the Athletes' Village, will be connected to the airport and to the 'mountain cluster' by an additional combined highway and a new light rail line. now under construction, the present automobile road being under reconstruction.
36. Before December 2012, over 200 facilities are to be built in Sochi, including 14 sport facilities, with the total capacity of 190 000 spectator seats. Many of these new facilities have already been

approved for construction with limited attention paid to energy-efficiency in their design and construction. It is not too late for this project to aim to introduce into the design of some of these sport facilities new and additional energy-efficiency considerations. In the Mountain Cluster there are biathlon and ski complexes, mountain ski centres, bobsleigh track and ski jumps; in the Coastal Cluster the Olympic palace and park, the Olympic village, as well as skating, hockey, curling, and figure skating facilities. Hotel and office buildings are located among the Olympic complexes in both Mountain and Coastal Clusters.



Sochi 2014 Olympic bid commitments

37. In 2007, the IOC awarded Sochi the 2014 Winter Games based on its spectacular location, its compact site and a bid which included clear commitments to infrastructure construction, environmental protection and public engagement. These commitments are incorporated in the contract between the IOC, the Russian Federation and the City of Sochi.

Carbon Neutral Games

38. The staging of a Climate Neutral Games is one important component of the Sochi 2014 bid document which stated:

Sochi 2014 will reach its carbon neutral goal

- by adopting energy conservation measures in all new construction,
- by retrofitting existing energy production facilities to operate using renewable fuels, and
- by offsetting remaining greenhouse gas emissions with emission reduction credits.

Additionally, the bid document states, "The Sochi 2014 carbon footprint will be calculated based on power use from the time the Games are won through the post-Games shut-down phase. Quantification will be based on current July 2007 usage levels and projections for new facilities built for Games time. Quantification will encompass all utilised power, including use of electricity, and all

air and ground transport. Emission reduction credits will be used to offset the remaining carbon footprint to reach a carbon-neutral status.'

39. The bid to stage the Olympics in Sochi is founded on the 12 billion USD 'Federal Target Programme for the Development of Sochi.' The bid includes the following environmental commitments;

- The development of cutting-edge, environmentally friendly facilities which will set new standards throughout Russia;
- A programme of environmental compensation to mitigate the overall impact of Sochi's infrastructure development;
- An Environmental Discovery Centre in the Sochi National Park, as well as educational programs for schools and libraries, to promote environmental stewardship among children, adults and visitors.

To ensure sustainable development in the city and region throughout its transformation into an Olympic Host City and a modern resort centre, Sochi will:

- Mandate sustainable design procedures for all Olympic-related construction;
- Incorporate principles of sustainability into operations planning phases;
- Incorporate principles of sustainability into the development of transport systems;

40. In February 2007 the Sochi 2014 Ecological Council was established to prepare green development guidelines for Sochi and the surrounding region. The council is composed of Russia's leading ecological experts from both the government and private sectors including experts from numerous environmental NGOs, including Greenpeace-Russia and WWF-Russia, representatives of the Ministry of Natural Resources and Ministry for Economic Development and Trade, as well as the Directorate for the Development of Sochi. Under the prepared guidelines, an environmental impact assessment is mandatory before the start of any construction work on a Sochi 2014 Olympic venue.

41. In June 2009 Sochi 2014 signed an MoU with UNEP. As part of the Memorandum, UNEP will advise the organizers on greening the 2014 Olympics. Environmental education schemes will also be organized, and a series of conferences will allow international experts to monitor and analyze key environmental indicators before and after the Games. In order to ensure full coordination with the activities to be undertaken by UNEP, it has been agreed to include UNEP on the Project Board (Steering Committee) for this project in order to incorporate their experiences and to coordinate with their activities.

42. The experiences with carbon management of large international events has shown a steady development of improved concepts and approaches, advancing expectations in terms of quality and transparency as well as widening the scope of emissions considered as within the project boundary of the event. Today the following issues should be seen as state of the art for green events:

- Site specific reductions first, offsetting second
- Project boundary includes all emissions directly related to the event, thus also including the largest share of spectators international air travel.
- Stringent monitoring of emissions starts already in the preparation phase
- Offsets from projects certified under internationally acknowledged standards, such as CERs from CDM projects, ERUs from JI projects, and in the voluntary market VCU from VCS projects and Gold Standard VERs from Gold Standard projects,

43. However, even the most recent events have shown that not all of these issues are necessarily followed and that there is no obligation towards meeting any minimum quality standard or definition of a carbon neutral event.

- The FIFA 2006 organizers defined the national borders of Germany as the project boundary. The total emissions of 100 000t CO₂e were offset by the funding of international Gold Standard

projects which generally only began providing GHG reduction some 1-2 years after the event. The event was celebrated as carbon neutral. The cost of offsetting the event, 1.2 million Euro, was financed solely by 4 private sponsors.

- The UEFA EURO 2008 started early with greening the event, but national organizers in Austria were rather late in targeting a carbon neutral event. Sponsors financed national carbon reduction projects (without strict verification criteria) to offset the emissions within Austria. Similar to the FIFA 2006 international air travel was not accounted for.
 - Vancouver 2010 has a comprehensive concept for tracking and offsetting its emissions. An additional 268.000 tCO₂e is estimated to be generated by the event, including direct and indirect emissions. Offsets are financed by private sponsors but the organizing committee has announced it would not take responsibility for the indirect emissions (some 150 000 tCO₂e) and that they expect spectators to voluntarily offset their own air and travel emissions.
 - The London 2012 Organizing Committee has initiated a comprehensive GHG monitoring and mitigation scheme which also addresses embedded carbon in construction processes and materials. However organizers have announced that they do not intend to host a carbon neutral event. Rather efforts, investments and public awareness campaigns are being focused on GHG mitigation at the source. The goal is to produce a low-carbon event.
 - Organizers of the 2010 FIFA World Cup in South Africa have also decided to pursue a low carbon event rather than a carbon neutral event. Initial estimates foresaw some 896 000 tCO₂e direct and 1 856 000 tCO₂e indirect emissions. Costs to offset the domestic emissions are estimated in the range of 7 to 12 million USD. Rather than funding offsets, financing from sponsors earmarked for mitigating the carbon emissions resulting from hosting the event have been directed to projects in the venues themselves or social projects (i.e. solar hot water systems for low-income households) in the host cities expected to be implemented by the end of 2010.
44. The above examples show a number of trends in carbon management of international sports events. On the one hand there is the tendency to acknowledge, monitor and address GHG emissions beyond the confines of the event staging period. On the other hand, financing of offsets and increasingly of GHG mitigation projects in the host city, is largely dependant on the engagement of sponsors.

Sochi 2014 Environmental Strategy

45. In 2009, SOOC Environmental Department issued the Sochi 2014 Environmental Strategy which outlined a 4-pillar concept for sustainable environmental protection each of which will address the pre-Games preparations, the staging and the post-Games legacy;
- Games in Harmony with Nature
 - Climate Neutral Games
 - Zero Waste Games and
 - Enlightenment Games
- SOOC plans to elaborate this strategy with detailed Action Plans in the form of addenda. This project will assist in and complement the development of the Climate Neutral Games Action Plan by incorporating elements which would not happen or be undertaken in the business as usual scenario.
46. The Climate Neutral Games component underlines bid commitments to provide full GHG mitigation through energy efficiency and renewable energy measures for venues, power infrastructure and transport followed by offsetting of the remaining emissions. Reference is made to HECTOR, the offset programme developed and applied in the 2006 Winter Olympics in Turin

Strategic Initiatives

47. The following initiatives are recommended by the monitoring council of the “Sochi 2014” Organizing committee (concerning measures of climate impact reduction):

- Creation of environmentally sound traffic net.
- Introduction of modern control and management methods to the traffic net of Sochi, based on informational technologies providing online traffic control with prevention of traffic jam formation.
- Traffic management improvement and limitation in the borders of Olympic park and Sochi national park, occupied with Olympics objects of a mountain cluster.
- Equipment of municipal transport vehicles and special vehicles, used for the Games preparation, with devices providing pollutants volume reduction in exhaust gases, according to the established fuel quality standards.
- Transforming part of the public transport of the city of Sochi for natural gas fueling, replacement of obsolete transport vehicles with modern and environmental-friendly ones, as well as adoption of stricter requirements to the motor fuels market of the Big Sochi.
- Adoption of environmentally stricter requirements, compared to the national ones, to energy efficiency of the buildings.
- The Olympics objects infrastructure projects should be implemented in a singular manner using the most effective funding and methods for limitation of negative impacts to the environment.
- Application of resource saving technologies and methods.
- Re-equipment of the city boiler units from fuel oil and coal to gas fueling and improvement of their technical conditions in order to reduce polluting emissions to the atmosphere.
- Maximal use of the alternative (renewable) energy sources, which cause no pollution to the environment.
- Introduction of new energy generating facilities, using exceptionally gas fuel.
- Preservation of water basins.
- Implementation of programs for preservation of the Sochi national park’s environmental functions.
- Greening of the Olympic park and the city objects.

Venues

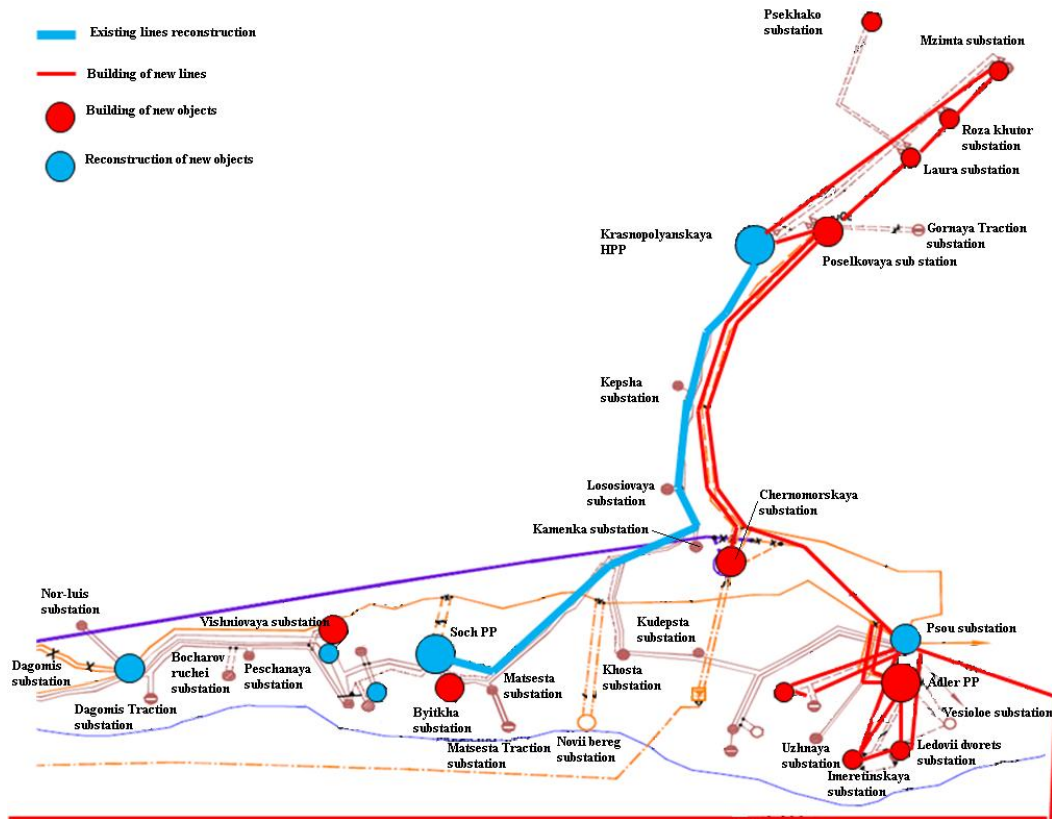
48. Planning of venues are already well underway with construction of the major venues planned for 2010—2012. Environmental assessments have been completed on a large portion of the projects. Contractors are required to meet ISO 14001 standards (or equivalent) for Environmental Management Systems on building sites. The Olympics objects construction programs [6; 7] are implemented according to the schemes of private-state partnership projects. Preparation of the territory development plans, engineering support diagrams and transport services were financed from the budget funds by SC Olympstroy order. Development of the main infrastructure objects and their construction are managed by private sector companies. The system of the Olympics additional environmental requirements to the construction projects developed and established by the Olympics organizers, follow stricter requirements for energy efficiency compared to the national ones, and provoke involvement of private investors to fulfill the corresponding Olympic bid obligations of the Russian Federation. The implementation control is provided by corporative and governmental expert reviews of the projects.

49. Olympstroy has been developing green requirements and recommendations⁸ for the design and construction of the Olympic facilities. This project will examine and make further recommendations on how the greening can be strengthened even further. A number of non-obligatory recommendations for energy efficiency and renewable energy measures for Olympic buildings (sports venues, tourist facilities and medical facilities) are listed including:
- Use of solar thermal, photovoltaic and heat pumps
 - Heat recovery in ventilation and waste water systems
 - South oriented windows
 - Shading devices
 - Optimize building form and compactness
 - Use of natural day-lighting
 - Use of passive house technologies
50. These recommendations are not accompanied by fixed targets or incentives for project developers to reduce energy consumption and as such have found very little or no application in the designs for the venue buildings. Few energy saving measures are listed as requirements for the Olympic buildings in the document:
- Use of thermal insulation and vapour barriers to reduce heat transfer of external envelope (without specified qualities or performance targets beyond code)
 - Use of energy saving lighting (avoiding the use of incandescent bulbs) - this is also required by the 2009 Law on Energy Saving and Energy Efficiency which sees the ban on incandescent bulbs by 2014.
 - Controlled ventilation (without requirements for efficiencies or heat recovery)
 - In addition, the priority use of local construction materials is required in order to reduce CO₂ emissions related to transportation (generally without requirements for verification)

Power infrastructure

51. The 2007 bid documents included an investment target of US\$1.75 billion for energy infrastructure projects and upgrades. Specific objectives to realize energy conservation include:
- Introduction of gas to rural communities to replace fuels with higher carbon output.
 - Construction of the Adler thermal power station in the Imeretinskaya Valley;
 - Conversion of four heating boiler units into mini-thermal power stations;
 - Upgrade and redesign of several power substations and power lines to increase transmission and generation efficiency;
52. At the present time (November, 2009) the power demand of Greater Sochi is about 400 MW. The domestic power plants (Sochi TP and Krasnopolyanskaya HPP) provide less than 25% of the electricity demand. The main electricity supply of the region is provided by Stavropol State district power station (SDPS) by means of transformer plant «Tsentralnaya» with capacity of 500/220kw. Electric demand within the city of Sochi is estimated at 1040 MWh by 2014, and by 2032 (second development extension of the health resort city of Sochi) it would make 1160 MWh. The additional electric demand for the construction of the Olympics program infrastructure objects is assumed at about 640 MWh.

⁸ Appendix No.21 to the Contract for execution of construction-and-assembly works (with development of the detailed documentation)



53. To cover the additional electric load and capacity demands, the following local generating facilities are planned:

- Construction of second extension of Sochi TPP with increase of electric capacity from 78 to 158 MW;
- Construction of Adler CHP plant with capacity of 360 MW (under construction);
- Construction of hydro power plants using potential of mountain rivers in the area of Krasnaya polyana village;
- Transition of boiler rooms to co-generation plant regime with complete transition to gas use;
- Introduction of unconventional energy sources (wind and solar plants).

54. The infrastructural development scheme can be divided into responsibility zones:

- Imeretinskaya lowland and mountain cluster (taking into account adjoining existing buildings and the developed infrastructure), as the centre of the basic loadings;
- Sochi in the existing developed infrastructure.

Renewable Energy Sources

55. Because of time restrictions in the planning and development of infrastructure for the Games, additional application of renewable energy (beyond hydro power mentioned above) for utility scale power or heat production is unlikely. Implementation of renewable energy technologies (solar thermal, photovoltaic) at the building level are foreseen. Following is a short evaluation of renewable energy potential in the region:

Energy source	Use capability
Solar	Annual value of total radiation in Sochi - 1 400 kW•h on 1 m ² of horizontal surface. Thus the minimum value of solar radiation in December – 36 кВт•ч on 1 m ² .
Wind	No data at the moment.
Geothermal of direct use	No data at the moment.
Geothermal for heat pumps	Seismic activity of the area possibility risk
Ground water for conditioning systems	On Imeretinskaya lowland the level of ground waters is 50 sm.
Wave	No data at the moment.
Water salinity	The top layer of water lying to depth of 150 m, more cool, less dense and less salty, sated with oxygen, separates from the bottom, warmer, salty and dense layer sated with hydrogen sulphide. Salinity of the top layers nearby 18 ppm. The temperature of blankets of water, seasonally, fluctuates from 8 to 30 °C. Salinity increases in the bottom layer to 22-22,5 ppm, the average temperature ~8,5 °C.
Mountain rivers	Mzimta river: Length – 89 km, area of pool – 885 km ² . The height of a source – 2980 m. The River almost on all extent has rough mountain character; during a season of snow thawing in gorges the water horizon rises to 5 metres. The average expense of water — nearby 50 m ³ /with (the greatest — 764 m ³ /c). The river bias – 33,5 m./km Psoy river: Length — 57 km, the pool area — about 420 km ² . Height of a source of 3256 m.
Rise and fall of the tide	Practically there are no inflow and outflow.
Wood, scrap wood for production of biofuel	Deforestation volume under building of objects in mountain cluster

Transportation

56. The compactness of the venues was a key argument supporting the IOC choice of Sochi as host city for the 2014 Winter Olympics. The proposed 'coastal cluster' with key stadiums and arenas is located close to the international airport and within walking distance of the Olympic village. The 2007 bid documents included investment targets of 4.4 billion for improvements to transport systems. Significant improvements to the public transport systems will target availability, convenience, speed and comfort (railway and public bus service). The main railway link between coastal and mountain clusters is 48km; trains will reach speeds up to 160 km/h permitting travel times between clusters under 30 minutes.
57. Currently most elements of the traffic network in the city of Sochi and surrounding region neither meet the established requirements of the Russian Federation and IOC, nor correspond to the world standards. The expected load at the traffic network of the city of Sochi is expected to increase by 30 % during the Olympics delivery. Targets to attract tourism and other visitors to the city of Sochi as a mountain resort of world class and a positive outcome of the 2014 Winter Olympics highly depends on the successful solution of the traffic problems of the city of Sochi by means of traffic network development and implementation of traffic flow management systems. According to the expert evaluation, the traffic improvements make up about 50-60% of the whole scope of the scope of preparation and delivery of the 2014 Sochi Olympics. The target for the traffic problem is defined by delivery of acceptable level of traffic services for health resort visitors, participants of the Olympics and local residents of the city of Sochi, including realization of acceptable travel times from points of arrival to points of accommodation, as well as from points of accommodation to the points of the Olympics delivery and back.

58. Implementation of the general urban plan of the city of Sochi and the program of the Olympics objects construction include the following activities and measures:

a) Development of railway transport

- Reconstruction and modernization of railway link Tuapse-Adler-Vesyoloe, in order to double the passenger volume (up to 12 million people a year) and to increase cargo volumes (8-10 million tons per year);
- Realizing of high speed rail link Moscow-Adler as a part of FSP “Development of the transport system in Russia”;
- Realizing a direct link Sochi-Adler-airport, also by means of a new railroad line Adler-airport construction as a part of the future system of urban speed railroad of the city of Sochi (USRR-Sochi);
- Realizing a system of USRR-Sochi railroad on the basis of the existing railroad Sochi-Adler-Vesyoloe and construction of a suburb passenger railroad Adler-mountain health resort “Alpika-Service”;
- Construction of a new railroad station in the central part of Sochi and reconstruction of the existing passenger railroad terminals and platforms;

b) Development of sea transport

- Restoration of regional and local tourist cruiser routes and reconstruction of 15 port units of a Sochi sea port, to serve modern high-speed passenger vessels;
- Construction of a modern cargo sea port unit in Emeretinskaya lowlands and at the mouth of the Mzymta river (with maximum capacity of more than 3 million tones);

c) Concerning transport logistics

- Creation of transport logistics centre TLC-Sochi to manage cargo and passenger transport, with special attention to the period of the Winter Olympics. TLC-Sochi would allow to increase efficiency of the transport operation from 5-10% to 30- 40%;

d) Concerning cargo transport

- The expected swift increase of cargo transfer rates at the territory of the Big Sochi is explained first of all by the construction of health resort and sport objects, as well as hotels and motels of all kinds and objects of transport engineering infrastructure. The volume of the imported construction materials for the development of the city of Sochi in the period of 2007—2013 is evaluated as more than 100 million tons or 10-14 million tons per year during this period.
- In order to service this cargo volume, it was decided to reconstruct railroad stations of Sochi and Adler (cargo units and access lines), to construct two cargo sea port units and a railroad station with two cargo units in the Vesyoloe village, as well as a warehouse for temporary storage of powder materials, which would allow to provide annual unload of construction materials at the station in the Vesyoloe village at the amount of 6,5 million tones (the total maximum unload volume at the railroad makes about 10 million tones).

e) Concerning optimization of the traffic network (detour roads of the Greater Sochi region):

- Construction of an outer detour mountain road (starting to the North-West of Nadjigo village and up to the crossroad with auto road A-148 and Mzymta river near the Galitsyno village) as a part of the Russian area of the Black Sea auto road circle;
- Construction of an internal detour mountain road (starting to the North-West of Nadjigo village and going up to Kudepsta, beyond which the road splits: to the South direction it goes up to adjoining to the auto road A-148, and to the East direction it goes up to cross with the Mzymta river where it adjoins to the Black Sea auto road circle) as an intermodal transport line, including a main two-way railroad besides the auto road;
- Reconstruction and modernization of the federal highway M-27 “Djubga-Sochi” as a detour road inside the agglomeration (including its extension to the border with Abkhazia) and its

functional transformation after commissioning of the outer (mountain) and inner (plateau) detour auto roads into the main road of the city-wide level.

f) Improvements to the main roads of the Olympics system Sochi-Adler-Krasnaya polyana:

- Reconstruction of an auto road A-148 “Adler-Krasnaya polyana”;
- Construction of a backup auto road “Adler-Esto-Sadok” and a mountain backup auto road A-148 “Adler-Krasnaya polyana”;
- Creation of the auto roads system leading to the sport objects of the Krasnaya polyana and to the Olympic park at the Imeretinskaya lowlands.

59. Stakeholders activities related to road transport are primarily focused on measures to increase road quality and capacities and to reduce blockages and travel times through traffic control systems. While this contributes to mitigating negative environmental impact, there is little attention given to improving vehicle and fuel quality standards.

Sochi 2014 carbon management and offset strategy

60. Holding a Climate Neutral Games is one of 4 key targets of the Sochi 2014 Environmental Strategy and a commitment outlined in the 2007 bid document. While the strategy includes a discussion of measures to reduce emissions in building and transport, these lack clear targets. The strategy suggests that national projects will be implemented to offset the balance of GHG emissions associated with the Games. It states the calculation of GHG emissions will be implemented on the basis of the additional environmental requirements (AER) and global reporting initiatives (GRI) for each construction project. This monitoring program is intended to form the basis for quantifying compensation requirements for the Sochi 2014 Olympics, including offsetting of the GHG emissions during the Olympics 2014 delivery. National GHG emission reduction and compensation projects intended to offset the carbon footprint of the event listed in the strategy include:

- Rehabilitation of forests lands
- Application of renewable energy sources and
- Rational use of energy

The area of the Olympics venue construction is governed by the environmental monitoring system “Sochi-2014” which allows monitoring of the environment during the construction of the Olympics objects. All contractors are required to conform to ISO 14001 standards for environmental monitoring and reporting.

61. All carbon emissions that cannot be reduced directly are expected to be offset by financing of national GHG reduction and sequestration projects.. The Sochi 2014 Environmental Strategy already gives first conceptual ideas about the possible offsetting scheme but it is important to ensure that high quality offsets are procured. The previous Summer Games in Beijing for example showed large deficits in transparency, addressed in the UNEP assessment⁹ of the event. The strategy for the upcoming Winter Games in Vancouver and the 2012 Summer Games in London will set high standards for Green Events, but even these schemes bias temporary GHG mitigation measures for venues and staging. The incentive to implement energy efficiency and renewable energy measures in venue buildings can be undermined, for example, in the use of Renewable Energy Certificates (REC) for electricity (or heat) supplied to the event. It is possible that the Sochi 2014 Games apply an offsetting scheme which does not meet the international expectations but this can be overcome by insisting that any carbon offsets procured meet the internationally accepted criteria..

Public awareness

⁹ Independent Environmental Assessment: Beijing 2008 Olympic Games. UNEP, February 2009

62. The tasks of environmental knowledge dissemination and educating for responsible behaviour towards the environment are based on the following planned activities:
- Environmental Information Centre has been set up in the Sochi National Park for the purposes of environmental awareness and education of the local population and visitors.
 - Students and teachers of the higher educational institutions of the region will execute academic and practical work on environmental issues, dissemination of environmental knowledge among the young, as well as in primary schools, kindergartens, and summer recreational camps.
 - Libraries will receive support to implement environmental awareness raising and promote rational use of resources.
 - From 2010 curricula of the educational institutions of the city will include such disciplines as ecology, environmental protection, rational use of resources and sustainable development.
 - Krasnodarsky Kray Administration has allocated 1 million USD in the regional budget for regular workshops disseminating environmental knowledge.
63. One of the first steps towards development of good partnership relations with the public environmental organizations and good communication, was taken in 2007 by the establishment of the “Environmental Coordination Council under the jurisdiction of Ministry of Natural Resources and Environment of the Russian Federation for implementational support of the Federal Target Program “The city of Sochi development as a health resort (2006—2014). The board of directors included representatives of WWF, Greenpeace, environmental organizations of Krasnodarsky Kray and the city of Sochi, as well as scientists and specialists of the Federal and local levels.
64. At the same period the Ministry of Natural Resources of the Russian Federation organized the Federal Target Program of the state environmental expert review with participation of environmental and scientific communities.

Barrier Analysis

65. Over the first years of the preparations to the event a number of barriers became evident that may hamper effectiveness of the national effort. These barriers mainly involve (i) lack of experience, know-how and capacities at the local and national level and (ii) lack of a coordinated interagency strategy and planning focusing on environmental and particularly climate change agenda.

Policy barriers

- National policies do not support international best practice related to green building practice.
- Implementation tools and enforcement mechanisms for legal requirements in this field of energy efficiency and renewable energy are ineffective or not available. The projects’ evaluation criteria mostly consist of requirements of the established minimum safety level – permissible quality level of the environment.
- There are few contractual requirements for venue designers and contractors to apply energy saving and carbon mitigation technologies in Olympic venue construction. The implementation of energy efficiency and renewable energy technologies in Olympic facilities is still largely voluntary.¹⁰
- The Sochi 2014 Climate Neutral Games target and related carbon offset program is voluntary and as such, not legally bound to international quality standards such as the gold standard or the voluntary carbon standard. The Russian government has no practical experience with verified emission reductions from carbon mitigation projects as the approval procedures for JI projects in Russia have

10 Appendix No. 21 to the Contract for execution of construction works¹ Additional ecological requirements and recommendations for designing and construction of the Olympic facilities

been very slow in being developed. The absence of JI procedures in Russia means there are limited numbers of offset projects which have been developed. This is especially important due to the fact that the offsetting of carbon emissions from the Sochi 2014 Games are supposed to come to at least a large extent from national offset projects. As most offset projects are realized years after completion of the Games, the quality and sustainability of carbon mitigation measures is not assured.

- The Russian government has no practical experience with the implementation of GHG emission reduction projects. The regulations and procedures for the implementation of JI projects under the Kyoto protocol in Russia have been agreed but as of January 2010 no projects have been approved.

Capacity Barriers

66. The planning and development of Sochi for the 2014 Olympics has already attracted the best national competence. International expertise and experiences with innovative solutions in the areas of building energy efficiency, renewable energy applications, sustainable transport and carbon offsetting is required.
- Lack of national experience with carbon management concepts, tools, international standards and innovative developments.
 - Lack of national experience in Russia with both the Kyoto compliance markets and the voluntary carbon market and with rapid developments in the global carbon market.
 - Lack of coordinated approach among stakeholders means many opportunities to reduce energy consumption and mitigate GHG emissions are lost.
 - Lack of know-how of international state of the art in EE, RE and GHG mitigation solutions for building, power and transportation sectors.
 - Lack of experience among national building professionals in applying integrated design approach to reduce energy consumption in buildings and building complexes.
 - Lack of guidelines, tools and certification mechanisms for applying green building concepts.
 - Lack of data on emissions related to construction, production of materials and transport.
 - Event-related carbon mitigation strategies generally bias short-term and temporary solutions (during development and staging of the event) and provide little incentive for investments in long-term lifecycle legacy benefits.

Financial Barriers

- Low energy tariffs mean most energy efficient and renewable energy investments have long payback periods making it difficult to attract investment into projects.
- Many end-users find it difficult to grasp the concept of higher up-front costs for lower life-cycle costs.

Technology Barriers

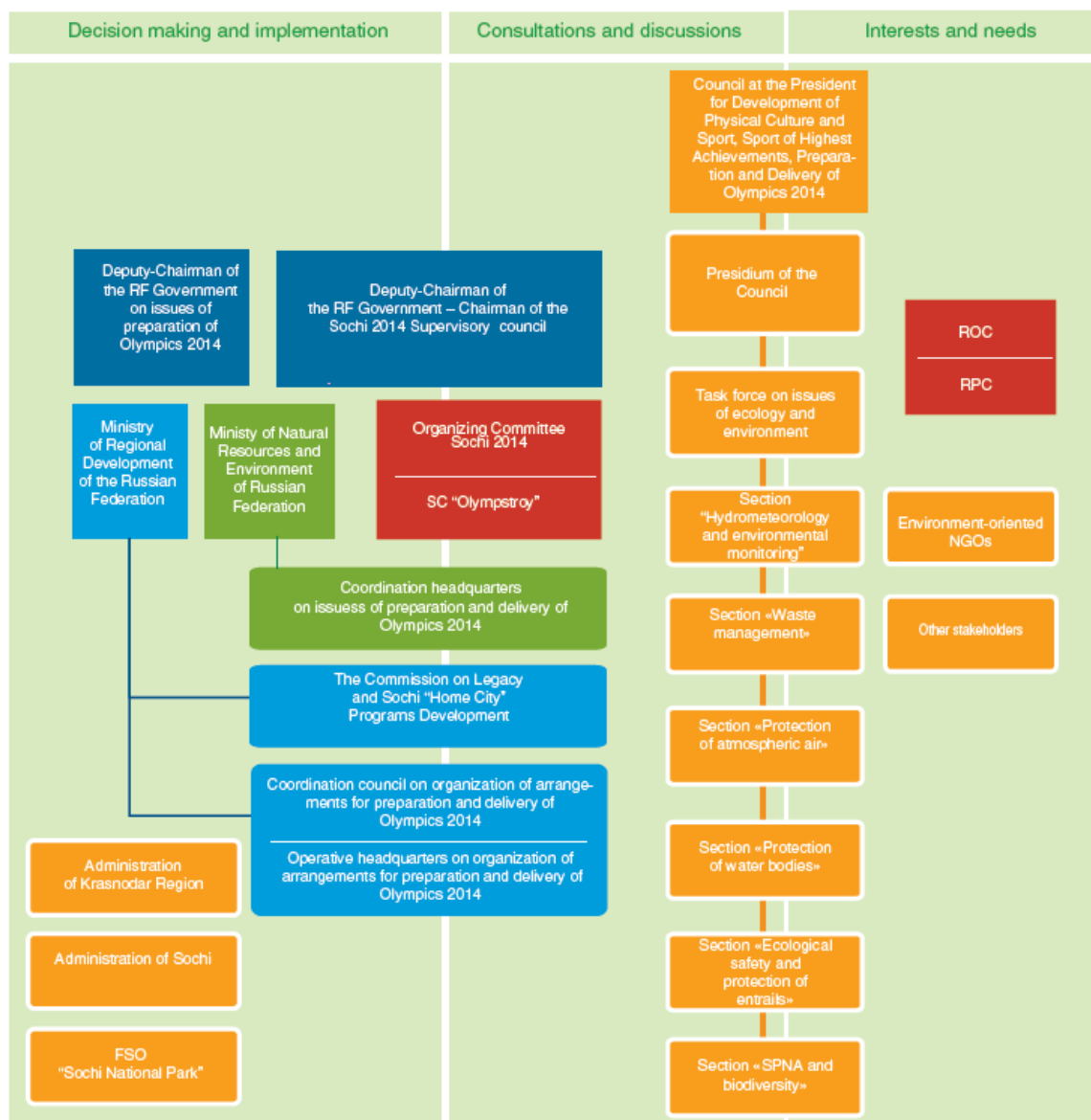
- Energy, building and transport infrastructures are out-dated and inefficient; a high dependence on fossil fuels for the generation of power and heat contribute significantly to the carbon footprint.
- The Russian market currently consists of equipment with low energy performance. Local production of equipment delivers low efficiency products. The demand for quality EE and RE products is insufficient to support market transformation.

Awareness Barriers

- Lack of public awareness, motivation and expectations of environmental responsibility
- Lack of framework and incentives for participation in mitigation programmes

Stakeholder analysis

67. The organization of decision-making stakeholders and beneficiaries with reference to Environmental issues is presented in the following chart from the Sochi 2014 Environmental Strategy.



68. Preparations for the Sochi 2014 Winter Olympic Games and construction of the venues and infrastructure is primarily the responsibility of:

- Sochi 2014 Organizing Committee (SOOC)
- State Corporation Olympstroy
- Administration of the City of Sochi
- Administration of Krasnoyarsk Krai

- International Olympic Committee (IOC)

Additionally, the general coordination of construction operations is overseen by the Deputy Prime Minister of Russia—D.N. Kozak, and the Ministry of Regional Development. Ministry of Natural Resources and Environment of Russia oversees environmental activities and implementation of the Environmental Strategy. Many state agencies, corporations, developers and private sector investors are participating in the preparation for the 2014 Sochi Olympics

Sochi 2014 Organizing Committee (SOOC)

69. SOOC occupies the central position in the process of preparation and delivery of the Olympics. Further, it is a catalyst for solutions aimed at achieving the best results in the area of sustainable development and environmental protection within the framework of Sochi 2014 Projects. SOOC's mandate pools the efforts of ROC, RPC, city of Sochi, Russian and foreign organizers of the Games and other parties, including the public, NGOs and authorities with the purpose to efficiently integrate sustainable development principles into all aspects of preparation and delivery of the Games, to make the best arrangements for environmental component in preparation for the Games and to ensure a positive legacy of the 2014 Winter Games.

State Corporation "Olympstroy"

70. Olympstroy manages and administers the Olympic construction projects including quality evaluation and permissions related to engineering, design, site works, occupation and maintenance of the venue projects. Dedicated to the timely implementation of the national commitments and programs for the construction of Olympic facilities and conformity with IOC requirements. Olympstroy oversees all construction development both those realized directly through state contracts and those developed through private investors. Olympstroy is in process of developing corporate green building standards and procurement models incorporating energy efficiency requirements. SOOC and Olympstroy are cooperating closely to ensure the timely preparation of Sochi for the Games.

City of Sochi

71. City of Sochi is the key national partner in the contract with IOC to realize the 2014 winter Olympics. The city has agreed to comply with bid commitments and to organize and stage the Games implementing such means and methods that support sustainable development, environmental responsibility and preservation of environment. Arrangements required for preparation of the Games in Sochi are overseen by local authorities. In keeping with standard practice, the IOC has identified the following aspects that are to be planned by the city of Sochi: licensing activities and legislative regulation, cleanliness of organizer city and Olympic venues, garbage collection, appearance, permanent and temporary infrastructure, visitor services, security and public safety, workforce management, emergency aid services, parking and transport services.

Stakeholder involvement in environmental issues

72. Involvement in environmental issues and the issue of mitigation of climate effects is reached by the participants with respect to their competencies and functions. Currently, an environmental support program is underway on each component of the Environmental Strategy, including the Climate Neutral Games component, to ensure properly structure the responsibilities and interaction between the participants.

73. The list of the key stakeholders is summarized in the following table, together with a description of their mandate and envisaged role in the project. Many of these organizations have been consulted and have contributed to the project design in different stages of the project preparation.

Stakeholder	Role and mandate	Envisaged Role in the Project
Federal Ministries and Government Agencies		
Ministry of Natural Resources and Environment of RF, (including subordinate entities, such as Rostekhnadzor and Rosprirodnadzor)	Provides functions related to the creation of State policies and regulations concerned with environmental monitoring and control, pollution control, also provides creation and implementation of State policies related to the environmental regulations and legislation.	National Implementing Agency for the project Member of national inter-agency coordination body Development of legal groundwork for environmental requirements on the National level - national green standards (Outcome 1) Guidance to the carbon management and offset programme (Outcome 5) Support to public awareness and capacity building activities (Outcome 6)
Russian Federation Ministry of Energy	Provides functions related to the development and implementation of State policy and regulations in the fuel and power sectors operations, including electrical power generation and rational use of energy resources.	Member of national inter-agency coordination body Support to public awareness and capacity building activities (Outcome 6)
Russian Federation Ministry of Regional Development	Provides functions related to the development and implementation of State policy and regulations concerned with social and economical development of federal entities of the Russian Federation and municipalities	Member of national inter-agency coordination body Responsibility for the general management of the Olympics objects construction process. Legal groundwork for construction norms and regulations on the National level. Support to implementation of Outcome 2 (energy supply planning)
Ministry of Sports, Tourism and Youth Policy	Federal agency under the executive branch responsible for drafting and implementing national policy and legal regulation with regard to physical fitness, sports, tourism and youth policy	Key partner for development of public awareness campaigns
Ministry of Transport	Responsible for the maintenance, modernization and regulation of Russia's rail, air, highway and river transport networks.	Key partner for the development of Action Plan for Transport and implementation of Outcome 4.
Federal Agency of Technical	Executive agency in the field of standards, technical	Possible Member of national inter-agency coordination body.

Stakeholder	Role and mandate	Envisaged Role in the Project
Regulations and Metrology	regulations and metrology. It provides certification and accreditation to the certification centers and laboratories countrywide and controls compliance, via its seven territorial bodies and subordinate organizations.	Coordination management for the proposed technical standards (Outcome 1).
Federal Supervisory Office of Consumer Rights Protection and Human Welfare	Government authority, which provides supervision and control in the field of sanitary and epidemiological safety of the Russian Federation population and in the field of consumer and consumer goods market rights protection	Possible Member of national inter-agency coordination body. Coordination management for the proposed sanitary and epidemiological safety standards of the activities and services.
Federal Supervisory Office for Environmental, Technological and Nuclear Industry Issues (Rostekhnadzor)	Government authority, which issues regulations and provides supervision and control in the field of environmental protection. Review of design compliance with the safety requirements	Possible Member of national inter-agency coordination body (Output) – to participate in specific activities mostly related to development and approval of CO ₂ monitoring plan or other issues related to environmental protection.
Federal Service for Hydrometeorology and Environmental Monitoring Roshydromet	State agency for meteorological monitoring, climate change assessments and research, evaluating the state of environment and pollution, anthropogenic impacts on climate and nature	Data analysis (Outcome 5)
Entities responsible for the preparation and delivery of the Olympics		
Sochi 2014 Organizing Committee (SOOC)	Sochi 2014 Organizing Committee is an autonomous non-commercial organization founded by ROC, Russian federation and the city of Sochi, with the purpose to organize and hold the Games in keeping with the Olympic Charter and with the agreement concluded by the IOC with the ROC and with the city of Sochi for delivering the Games	Project Board Participation in all GEF program activities.
SC Olympstroy	SC «Olimpstroy» exercises administrative functions related to the design, construction, operation and	Participation in all the components of the GEF project. Pilot investment projects performance coordinator.

Stakeholder	Role and mandate	Envisaged Role in the Project
	maintenance of facilities required for delivery of the Games as well as for development of Sochi as an Alpine climatic resort.	
Olympics Transport Directorate	Autonomous non-commercial organization established in 2009 to ensure infrastructure for logistics, transport planning, freight and passenger transportation during preparations to and conducting of the Sochi Olympics.	Member of national inter-agency coordination body Participation in sustainable transport outcome (Outcome 4)
City of Sochi	under the IOC agreement, City of Sochi is responsible for cleanliness of Olympic venues, garbage collection, permanent and temporary infrastructure, visitor services, security, workforce management, emergency aid services, parking and transport services.	Project Board Participation in the GEF project components: <ul style="list-style-type: none"> • the traffic impact mitigation; • energy supply network environmental improvement • environmental awareness.
Regional government of the Krasnodar Krai	Krasnodar is an administrative, industrial and cultural center of Krasnodar krai, one of the most important industrial, agricultural and resort regions of Russia.	Participation in the GEF project components: <ul style="list-style-type: none"> • the traffic impact mitigation • renewable energy and carbon offsets projects; • environmental awareness;
International Olympic Committee (IOC)	As owners of the Olympic and Paralympic Games the IOC has formulated standards and requirements for staging and controlling all aspects and activities involved in organization and delivery of the Games	Technical and data assistance
Russian Olympic Committee (ROC)	ROC is the All-Russian union of physical training and sport associations, citizens of the Russian Federation and Russian companies. It is an independent, voluntary, non-governmental, self-managed, non-commercial association active in the areas of physical culture, health and sport activities recognized by the IOC.	Technical and data assistance

Stakeholder	Role and mandate	Envisaged Role in the Project
Energy supplier(s) of the Sochi region		
Holding Company “MRSK” Kubanenergy	Private companies. Electricity supply for the Sochi Olympics; construction of power supply infrastructure and electric networks.	Energy supply planning and energy efficiency: Outcome 2.
International Organizations; Organisations of civil society, consumers and end users; NGOs		
UNEP	Provides leadership and encourages partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations. Ensures monitoring of environmental principles and environmental assessment of the Sochi Olympics.	Project board Interagency Panel
Russian Green Building Council	The World Green Building Council has recently initiated a Russian branch to promote ecological building strategies in Russia	organization of working groups and seminars devoted to Green construction
International Academy of Sport Science and Technology	The International Academy of Sports Science and Technology is a renowned centre of excellence for education and research in sport located in Switzerland and sponsored by the IOC	development of environmental monitoring criteria for the Olympic event based on experience from previous events
Greenpeace Russia	This office works to drive mass media, government and public attention to the relevant power saving issues	Development and implementation of joint strategy to promote energy efficiency product and equipment to final consumers in pilot regions and at national level (Outcome 4) Participation in discussions of the initial situation issues and the planned measures.
Independent Environmental Rating Agency	This agency develops and provides environmental efficiency ratings for enterprises countrywide	Provide expertise to the development of S&L standards and legislation, lobbying the proposed regulations in the State authorities (output 2.1) Coordination of the pilot projects submission for certification.
WWF	-conserving the world's biological diversity -ensuring that the use of renewable natural resources is sustainable -promoting the reduction of pollution and wasteful consumption.	WWF Russia has been active in promoting environmental protection in the development of the Olympic projects. They are also strong partners for campaigns and publications about climate change issues in Russia. Participation in discussions of the initial situation issues and the planned measures. Participation in development and implementation of complex compensation projects.

Stakeholder	Role and mandate	Envisaged Role in the Project
Supply chain stakeholders		
Glavstroy-management CJSC. Basic Element company LLC	Developer of several Olympic venue objects in at the Coastal Cluster (1) the main Olympic village (with 3000 accommodation places), (2) hotel to accommodate the IOC representatives (500 rooms, 5-star) (3) complex of buildings and constructions for accommodation of the Olympics family and International Paralympics committee (1000 rooms, 4-star) (4) port facilities	Participant of “pilot” projects, including (on arrangement): - private investor adherence to the Green standards promotion policy in the construction activity; - shaping of environmental initiative with participation of the GEF project experts for development of the construction project in accordance with the Green standards; - application of international experience in the Green standards policy during the projects’ development including a flagship building for Olympic Village) (Outcome 1); - preparation of construction activity environmental performance data in accordance with the Green standards, as well as of design documentation for volunteer environmental certification. - Development of carbon mitigation strategies for development and operations of the port facilities. (Outcome 4)
Shaneco Group (CJSC)	Research project company	Forming the adapted requirements of pilot project in the Olympic Village Event feasibility evaluation Ecolaw consulting Compliance and Monitoring Procedure
Technoprom	Engineering company	Energy efficiency consulting, standards development. Forming the adapted requirements of pilot project working-out
ICF Eco	Professional NGO working in the fields of energy efficiency and environmental protections. Developed methodology and guidance on environmental impact assessment for Sochi Olympics projects. Provides consultations to key Olympics stakeholders on green standards and environmental planning.	Responsible Party (project implementing organization)
Scientific and technological research and educational institutes		
Institute of Global Climate and Ecology	state funded institute for research on evaluating the state of environment and pollution, anthropogenic impacts on climate and nature	GHG inventory and estimates (Outcome 5)
Nizhegorodsky State University	R&D of energy efficient technologies	GHG inventory and estimates (Outcome 5)

STRATEGY

74. Using modern energy efficiency technologies and integrating renewable energies into the Olympic Winter Games will help ensure that this type of event is in keeping with the international expectations of environmental protection and resource management. A reduction in the energy used will ensure not only a decrease in emissions, but also the economically viable operation of the Games. Lower energy costs in particular will make the properties and facilities fit for the future, allowing them to continue to provide benefits once the Games have ended. It is important that decisions regarding GHG mitigation put priority on sustainable solutions (energy efficient and renewable energy measures in buildings, energy infrastructures and transport) and apply temporary solutions and offsetting as a last resort. International experience in event greening has demonstrated the long-term benefits of reducing energy requirements to a minimum at the planning stage using a wide range of measures.
75. The topic of energy efficiency and climate change has taken on more significance over the last few years. Major sporting events both past and future, such as the 2006 FIFA World Cup in Germany, the 2010 Winter Olympics in Vancouver or the 2012 Summer Games in London demonstrate that an event can be held in harmony with the environment if a holistic approach is taken. The international regard in which the Olympic Games are held and the climate mitigation requirements set by the Olympic Committee clearly highlight the exemplary role played by the Games. With a systematic and practical approach to the implementation of innovative concepts and measures, the event in Sochi could trigger replication throughout the region and internationally, acting as a standard for future events.
76. If this is to happen, climate mitigation and efficiency measures must be taken into account from the very beginning, i.e. at the planning stage. The plans for Sochi are already well underway, and measures increasing energy efficiency must therefore be identified and integrated without delay. Using a description of the status quo and comparisons with best practice projects as a basis, the MSP will provide recommendations and action plans for concrete measures which could be taken in selected areas to allow a more climate-friendly design of the 2014 Olympic Winter Games.

Project rationale

77. The hosting of a carbon-neutral event in Russia is an exceptional undertaking and one that has not happened before in Russia. Inefficiencies in existing energy, building and transport infrastructures, a high reliance on conventional fossil fuels in the energy and transport sectors and a lack of effective policy supporting energy efficient and renewable energy markets contribute to a significant increase in the carbon footprint compared to events in countries where policies, programmes and infrastructures are in place. In addition, participation of athletes and visitors will rely heavily on international air travel further increasing the carbon footprint of the event.
78. The project proposes the development of an integrated approach to carbon management and GHG mitigation for the Sochi 2014 Winter Olympics involving the following 6 key components;
 - Building and construction
 - Efficient energy supply and consumption
 - Renewable energy applications
 - Sustainable Transport
 - Carbon management and offsetting
 - Engagement of sponsors, partners, suppliers, participants and visitors

Country ownership: eligibility and drivenness

79. The Russian Federation ratified the UN Framework Convention on Climate Change in 1994, and it entered into force in 1995. Russia is eligible to receive funding from UNDP. Russia further ratified the Kyoto Protocol in 2004 and has agreed to limit its GHG emissions to 1990 levels over the period 2008-2012.
80. The proposed project is consistent with government policies and priorities in the area of energy efficiency and climate change. The national Climate Doctrine released in April 2009 outlines national climate policy and prioritizes climate change mitigation. Presidential Decree (June 2008) “On Certain Measures for Increasing Energy and Ecological Efficiency of Russia's Economy” sets out ambitious targets for reducing energy intensity of the national economy; energy efficiency was included in the list of key national priorities. A new energy efficiency legislation and federal target program on energy efficiency are under development. New Federal Law on energy efficiency was adopted in November 2009. In January 2009, the Government issued an Order (a Resolution) on the accelerated development of renewable energy sources for the period until 2020; the order sets specific policy targets for impressive increase in electricity generation from renewable sources (up-to 4.5% by 2020).
81. National commitments to climate management and GHG mitigation during preparations and staging of the Olympic Games is evident in the following documents and activities;
 - Bid document of the Russian Federation for the Olympics delivery which forms part of the contract with the IOC
 - Sochi 2014 Environmental Strategy in which Climate Neutral Games is one of 4 cornerstones
 - RF Decree of October 13, 2008 'Program for Ecological Support of the XXII Olympic Winter Games and the XI Paralympic Winter Games of 2014 in the City of Sochi'
 - Appendix No.21 to the contract for execution of construction works 'Additional ecological requirements and recommendations for designing and construction of the Olympic facilities
 - Application of supplement environmental requirements (SER) in and the global reporting initiatives (GRI) during review and approvals of project as stated in corresponding Olympstroy terms of reference for design and construction works

Sochi 2014 Organizing Committee with the Ministry of Natural Resources and Environment of the RF are responsible for ensuring that best environmental sustainability standards are demonstrated at the Sochi Olympics.

Design principles and strategic considerations

82. Energy and Environment is one of the key target areas of UNDP's Country Program in the Russian Federation. The project builds on and supports UNDP Russia Country Program 2008—2010 , Outcome 3.1 Energy efficiency measures are incorporated into local development strategies. The project will exchange information, lessons and best practices with the GEF/UNDP/EBRD/UNIDO Umbrella Programme “Energy efficiency in the Russian Federation” and with individual projects included in the Umbrella.
83. To ensure the most effective implementation of GEF-interventions and plans, the MSP project is embedded into national Sochi Olympic preparations and policy development. This is achieved through close partnership with the national organizations – the Ministry of Natural Resources and Environment of the RF, Olympstroy and the Sochi 2014 Organizing Committee. UNDP has good working contacts and cooperation experience with all of these organizations; all of them strongly support the GEF project. All MSP activities are linked to the specific management, infrastructure development and investment plans for the Olympics as well as with the key pillars of the Sochi Environmental Strategy. Thus the MSP will bring concrete tangible results through very specific

low-carbon solutions integrated into specific investments and development plans in partnership with key stakeholders including SOOC and Olympstroy.

84. The project design is consistent with GEF Climate Change focal area strategy and strategic mitigation programming for GEF-4 specifically;

- Strategic Program 1: Promoting Energy Efficiency in Residential and Commercial Buildings

This strategic program covers the entire spectrum of the building sector, including the building envelope, the energy-consuming systems and appliances used in buildings for heating, cooling, lighting, including appliances and office equipment, as well as building operation and energy consumption during building operation. Some activities may use solar energy for heating and cooling, some may extend to the replacement of older chillers and air-conditioning systems with newer ones.

- Strategic Program 3: Promoting Market Approaches for Renewable Energy

'During the GEF-4 period, the emphasis will be upon developing policies and regulatory frameworks that provide limited incremental support to strategically important investments.'
'Projects will include a combination of technical assistance for policy reform and regulation and initial investments to jump-start the market for a specific renewable technology.'

- Strategic Program 5: Promoting Sustainable Innovative Systems for Urban Transport

'For the period of GEF-4, emphasis will continue to be placed on “non-technology” options, such as planning, modal shift to low-GHG intensive transport modes, and promotion of better managed public transit systems'

85. The strategy is further based on key recommendations within the Independent Environmental Assessment of the 2008 Beijing Olympics¹¹ and Kick the Habit - A UN Guide to Climate Neutrality.¹² Both documents recommend defining an event carbon management strategy applying the following components in order of priority

- Measure the carbon footprint of the event
- Increase energy efficiency
- Expand the use of renewable energy and
- Compensate or offset unavoidable emissions

In this strategy first priority is given the reduction of greenhouse gas emissions at their source. Offsetting is considered the last alternative.

86. The MSP will develop an Integrated Carbon Management strategy for the Games and Legacy involving considerations of environmental, social and economic impacts and opportunities. Key components shall include

- Integrate best practice examples and lessons learned from previous Games including Turin 2006, Beijing 2008, Vancouver 2010, FIFA World Cup 2010 and London 2012
- Responsiveness to international policy and programs in the carbon sector
- A life-cycle approach to GHG mitigation, including pre-Games operations, Games staging and legacy
- Defining inventory boundaries, quantifying baseline emissions and successful reductions
- Monitoring and reporting emissions, reductions and other environmental, social and economic impacts

11 Independent Environmental Assessment: Beijing 2008 Olympic Games Published by the United Nations Environment Programme (UNEP) in February 2009 ISBN: 978-92-807-2888-0

12 Kick the Habit - A UN Guide to Climate Neutrality Copyright © 2008 UNEMG, UNEP/GRID-Arendal ISBN: 978-92-807-2926-9

- Showcasing innovative solutions in the venues and infrastructure
 - Creation of an innovative offset portfolio which supports a legacy of green infrastructure
 - Engaging sponsors, partners, suppliers, athletes, guests and the general public to participate in reducing the carbon footprint of the Games
87. The MSP will provide public outreach in connection with the greening of the games in two ways. First by directly engaging in public awareness raising programmes, and second by facilitating private outreach activities from sponsors and partners, who contribute to the goal of greening the event. This support from the partners can be in a direct way by supply of environmentally advanced technology or services, or indirectly by supporting the games with additional financing which is needed to achieve the goal of a carbon neutral event by offsetting all carbon emissions. Experience from previous events has shown that time is a crucial factor when a coordinated sponsoring and marketing scheme should be implemented. Sponsors need time to develop their own strategies, so early development of an overriding coordinated strategy gives them a structure and targets to follow.

Project objective, outcomes and outputs/activities

Project objective

- The *objective* is to produce a Greening Strategy and Action Plan for the 2014 Winter Olympics in Sochi. The project will develop greening recommendations and action plans in six specific sectors. By introducing an early CC planning the project will help set up "carbon neutral" event and unleash the potential for GHG emission reduction during preparation to and convening the Sochi Olympics. In doing so the MSP will come up with an integrated programmatic approach (a set of project proposals) for the Greening of the Sochi Olympics.

Outcome 1 ***“Green building standards”: An Action Program for introducing green standards for Sochi Olympics construction and further replication***

Main outputs and activities:

Output 1.1 Training program on green building practices for Olympstroy and other agencies involved in Olympic construction

- Identification of best practice examples (LEED Neighborhood Certification of the Beijing 2008 Olympic Village and the Vancouver 2010 Olympic Village)
- Workshop on green building practices, building EE and carbon mitigation in planning, construction and operations based on latest and most recent Building Code of the Russian Federation

Output 1.2 Public outreach including identification and development of flagship green building projects within the Olympic Venues

- Identification of 2-3 high-profile EE/RE building demonstration projects for the Olympics
- Conceptual design of one passive house demonstration project (a flagship residential building for the Olympic Village)
 - In cooperation with Glavstroy, the private sector investor for the

Olympic Village, one new residential building of approx. 2500m² within the Olympic Village site has been identified as a flagship project using integrated EE/RE building design. With GEF support, international EE experts will work with local architects and engineers to create the conceptual design of a flagship passive house or low-energy building which sets a high performance target for the whole of the Olympic Village (over 300 000m² of new building to be completed by fall 2013 and which will be used as resort accommodations after the Games). 740 tCO₂eq are expected to be mitigated over the lifetime of the flagship building. Applying similar measures to the rest of the Olympic Village buildings would mean savings of over 50 000 tCO₂eq over the lifetime of these buildings.

- Demonstration of energy efficiency design methodologies including energy simulations

Output 1.3 Feasibility study and action plan for further cost-effective GHG mitigation in venue planning, construction and operation phases

- Plans to incorporate energy efficiencies will benefit SOCHI 2014, Olympstroy, City of Sochi, Region of Krasnodar and the Russian Federation. Quantify the value of this investment within the Sochi 2014 carbon management program to demonstrate both the Games benefit and the long-term benefits
- Baseline and cost-effective reduction of games-related building energy requirements and GHG emissions considering
 - Construction phase
 - Operation during staging of Games
 - Legacy and lifecycle savings

Output 1.4 Model TOR for public procurement incorporating green standards

- Review of international best practice
- Review of approaches and lessons learned in event staging including Vancouver 2010, FIFA World Cup 2010 and London 2012
- Supplier and sponsor engagement guidelines for maximum sustainability and minimum GHG emissions associated with production and transportation of construction materials
- Recommendations to up-scale Sochi best practices to national green standards guidelines.

Outcome 2 “Energy efficiency and power planning”: Integrated Strategy and Action Plan for energy efficiency

Main outputs and activities:

Output 2.1 Inventory of planned heat and power supply and demand infrastructure

- Review of previous Games to establish baselines for utility demand
- Overview of existing and planned heat and power supply infrastructure
- Calculation of energy demand (peak) and consumption related to Olympic staging
- Evaluation of baseline GHG emissions for staging of Olympics

Output 2.2 Compendium of EE solutions for heat and power supply and consumption

- Identify opportunities in venue and infrastructure planning and development
 - Apply master plan approach to identify cost-effective energy savings (savings beyond a building by building approach)
 - Evaluate strategies for connections to utilities and recovery
 - Heat recovery
 - Avoidance of temporary generation where possible
 - Identify capacity margins for key areas (i.e. broadcast compounds)
- Identify opportunities in Olympic staging including
 - Zoning and metering
 - Building energy management solutions
 - Concession engagement
 - Consumer engagement
- Identify lifecycle and legacy opportunities
 - Avoiding post games excess capacities
 - Flexible solutions for future use of low carbon and low cost fuels

Output 2.3 Interagency EE committee for preparation to and convening the Olympic Games

- Develop a consistent approach to energy and carbon reporting across the Games development, staging and post Games period

Output 2.4 Design of the Action Plan for CC mitigation through power planning and energy efficiency with specific recommendations for low-carbon solutions for the Olympic investment projects

- Pre-feasibility study for Adler Landfill Gas recovery project
 - Adler power station using landfill gas recycling. The Krasnodar Region Administration is investing 34.8 million USD in the Adler solid domestic waste landfill site by 2013. The administration has expressed interest in incorporating landfill gas extraction and processing equipment and a power station fuelled by landfill gas (estimated costs 0.9 million USD). Within the MSP a pre-feasibility study will be conducted.
- Focus on design/construction related efforts to showcase clean technology that will provide long-term benefits to SOCHI 2014, Olympstroy, City of Sochi, Region of Krasnodar and the Russian Federation. Quantify the value of this investment to demonstrate both the Games benefit and the long-term benefits. Compile reference books for best available technologies.

Outcome 3 "Renewable energy technologies": Reducing GHG emissions through increased application of renewable energy technologies at 2014 Olympics.

Main outputs and activities:

- Output 3.1 Compendium of renewable energy solutions*
- Best practice examples and approaches from previous Games and events including Turin 2006, Beijing 2008, Vancouver 2010, FIFA 2010 and London 2012.
- Output 3.2 Inventory of existing and planned power supply and construction infrastructure which accommodates renewable energy sources*
- Output 3.3 Feasibility study and financing plan with specific recommendations for renewable energy solutions (solar, wind, hydropower) for the Olympic investment projects*
- Develop least cost approach to meet renewable energy targets
 - Identify possible high visibility renewable energy projects as landmarks for Olympic site
 - Preliminary integrated EE/RE building design study for the Ecological Education and Research Centre in Sochi. The Ministry of Natural Resources has committed USD 2.65 million to the renovation and expansion of an existing 2000m² facility applying EE measures and RE technologies and to be completed by 2013. The centre presents the opportunity to showcase and evaluate RE technologies including solar, heat pumps and wind. 600 tCO₂eq are expected to be mitigated over the lifetime of the measures.
 - Engaging renewable energy technology producers and sponsors
- Output 3.4 Guidelines and methodologies for assessing regional potential, feasibility and investment planning and increasing the use of renewable energy sources for the Games*
- Focus on design/construction related efforts to showcase clean technology that will provide long-term benefits to SOCHI 2014, Olympstroy, City of Sochi, Region of Krasnodar and the Russian Federation. Quantify the value of this investment to demonstrate both the Games benefit and the long-term benefits.
- Outcome 4 ”Low carbon transport”: An integrated strategy and action plan for reducing GHG emissions from transport during preparations and convening of the Olympics.**

Main outputs and activities:

- Output 4.1 Travel demand survey*
- Quantitative Baseline scenario for Transport Demand including
 - Existing modes of transport (modal split, transport service

- capacities)
- Targeted modal split (private vehicles/public transport) for Games-related logistics, operations and staging
- Targeted transport service for spectator, workforce etc.
- Targeted transport service for residents during Games Time
- Identifying the challenges for transport planning and traffic management
- Initial analysis of existing infrastructural and technical barriers towards sustainable transport solutions
- Boundary setting for drafting the scope of transport-related GHG-emissions
- Draft transport-related GHG-emissions in baseline-scenario

Output 4.2 Compendium of alternative transport solutions and technologies including zero-emission transport for Olympics

- Technical description of alternative transport scenarios including
 - Technical systems, vehicle fleet, etc.
 - Regional environmental impacts (air quality, noise, demand for land use, impacts on natural resources and landscape)
 - Energy efficiency, use of renewable energy resources
 - Global environmental impacts – transport-related GHG emissions
- Alternative access modes to mountain areas, incl. new vehicle technologies, transport systems, density of systematic transport, etc. considering
 - Natural risk potential (hazards like land slides, avalanche, flooding)
 - Urban / regional development (public service, access, social barriers, ...)
- Assessment of possible impacts on sustainability of the Olympic Games
- Determine Compatibility of Olympic Transport Plan with SOOC objectives to deliver Sustainable Olympic Games

Output 4.3 Integrated planning for reducing GHG emissions from transport with specific recommendations for low-carbon solutions for the Olympic investment projects

- Strategic appraisal of Olympic investment projects towards long-term sustainability of regional transport systems
 - Case study; port facilities; evaluation of energy efficiency measures and power supply planning for the new Sochi Imeretinsky Port infrastructure. The new Imeretinskaya cargo port facility, an Olympic infrastructure project located near the coastal cluster to be completed in 2010, will have a capacity of over 5 million tonnes cargo per year and will primarily be used to supply construction materials to the Olympic sites. After the Games, it will be largely converted to a marina facility with 600-700 berths serving the new resort community. The MSP will assist with a case study for incorporating EE and RE technologies in the port logistics and warehousing operations and the subsequent construction and operation of the marina facilities. Owners of the port have agreed to incorporate measures to reduce carbon emissions during port operations; for example, moored ships will have access to the municipal electricity network to reduce the use of on-board generators (expected

savings 40 tCO₂eq / year) and low-emission vehicles will be used at the facilities

- Low-carbon regional infrastructure development strategy
- Guidelines for Olympic Planning decisions

Output 4.4 Training for municipal authorities and state agencies on integrated transport planning

- Elaboration of procedures to implement integrated transport planning methods within municipal authorities, state agencies and SOOC
 - Prevention of congestions and transport related emissions
 - Improvement of public transport service as a sustainable legacy target of the Sochi 2014 Olympic Games
- Workshop designed for municipal authorities and state agencies on integrated planning and sustainable traffic management approaches

Outcome 5 "Carbon offsets": Sochi Carbon Offsets Programme

The outcome will help develop a Sochi-specific carbon offset program and ensure the required advocacy and implementation. Within this component, dissemination and replication of this program and general approaches will be considered. This component will illustrate best practice for internationally-sound carbon management and offset program for further replication in Russia and future host cities and events.

Main outputs and activities:

Output 5.1 Establishing a GHG inventory and tracking system including a baseline (Sochi regional 2007 emissions and 2014 projections) and a tool to monitor the emissions caused by the event

To set targets and benchmark environmental benefits SOCHI 2014 needs to monitor and evaluate emissions and mitigation. As a component of this monitoring, SOCHI 2014 will use preliminary carbon footprint forecasting as a tool to determine targets and modify plans. Subsequent monitoring and reporting of progress and achievements and will be transparent as a result.

Examine and incorporate international standards for carbon management and the lessons learned from key carbon management programs. Structure the review to examine three key components:

- Carbon Management Lessons and Successes at large sporting events (i.e. Vancouver 2010, FIFA 2010, London 2012, FIFA 2014)
- International Standards for carbon management – incorporate standards for corporate carbon footprint, any developments in event footprint tracking and explore how Sochi 2014 can build on the momentum created by Vancouver 2010 and London 2012 and be a catalyst in creating standards for events
- International Standards for reporting – explore corporate and event reporting

standards (including the Sustainable Sport and Event Toolkit prepared by the International Academy of Sports Science and Technology and the Vancouver 2010 Organizing Committee) and incorporate an emissions tracking system early on for ease of reporting.

Output 5.2 Review of international best practice and feasibility study for Sochi Carbon Offset program

Examine existing national plans for carbon offsets and compensation measures. Examine different carbon offset programme options and make a recommendation on the most appropriate programme and type of project for offsetting GHG emissions from the Sochi Olympics taking into account that it is essential to the overall success of Sochi 2014's greening programme to choose a high quality internationally credible carbon offset programme.. Identify a focus for the program (i.e. Clean technology for Vancouver 2010). Define the structure of a carbon related sponsoring scheme and integrating this into the existing sponsor engagement on other levels. Part of the assessment will involve examining how previous Winter Olympics went about undertaking this activity.

Output 5.3 Outreach program and partnerships for the implementation of the program

An Outreach Program will be developed with national stakeholders which will include the timeframe until after the Sochi 2014 games and include the following tasks:

Establishing an offset project portfolio

This includes:

- the selection of projects,
- decision on share of local/national/international projects
- negotiation of carbon purchase agreements
- management of the portfolio, until the last credits are transferred
- monitoring and quality control

Development of detailed sponsoring packages

Attractive sponsoring packages are key to sufficient sponsor engagement, needed to finance the purchase of credits for offsetting. Such packages can include the development of a logo, organisation of fundraising events, activities for partner companies, such as for example show ski races for teams from the engaging companies together with international sports legends and others. Sponsor packages can be available at different levels for different sizes of companies, but usually it is a few large companies who are willing to engage in facilitating the carbon neutrality of the event, if enough possibilities for communication of these issues are provided.

Outcome 6 "Public awareness and advocacy strategy": A comprehensive public awareness, advocacy and outreach program

Main outputs and activities:

Output 6.1 Stock taking of awareness and outreach tools for large international events greening

Building on established partnerships, examine benefits, opportunities and lessons learned concerning NGO involvement in past events. Structure the review to examine key components:

- Reporting and public awareness tools of large sporting events (i.e. Vancouver 2010, FIFA 2010, London 2012, FIFA 2014) including web sites, media, brochures, demonstration sites, events and exhibitions.
- Impact assessment
- Management and financing

Output 6.2 Building partnerships with key players, private sector, media

- TV interviews
- documentary on Greening Sochi Olympics
- Joint workshops and training for stakeholders on climate change awareness campaigns
- Partnership agreements with stakeholders (private sector, NGOs, media)

Output 6.3 Outline of a coordinated interagency campaign on Climate Change and Greening Legacy.

Experience at previous Games has shown a high degree of enthusiasm on the part of NGOs to support sustainability initiatives. Building on established partnerships, fully engage the capacities and expertise offered by Government partners, NGOs and other partners toward an effective and broad based campaign. The campaign will encourage a heightened public environmental awareness leading up to and following the Games and ensure the legacy of the Games in Sochi is properly documented and shared for future host cities and events.

Output 6.4 Ensure that a whole section of the Sochi Olympics official website is dedicated to the “Greening of the Sochi Olympics”. This will involve outlining on the Sochi Olympic games website all of the activities that are being undertaken as part of this project.

Key indicators

88. Key indicators of success of the project include:

Environmental

- 10% reduction in lifecycle GHG emissions associated with Olympic venue buildings included as a target within the Sochi 2014 Climate Neutral Games Action Plan
- 10% reduction in lifecycle GHG emissions associated with regional transport systems included as a target within the Sochi 2014 Climate Neutral Games Action Plan
- Uptake of 2-3 demonstration projects for EE and RE measures to Olympic venues as a direct result of project activities by the end of the project. (USD 10 million additional financing leveraged.)

- USD 20 million total financing leveraged for GHG mitigation measures and projects as a direct result of project activities by the end of the project.

Energy Demand

- 10% reduction of design energy requirements of venue buildings (kWh/m2.a) beyond 2007 building code by end of project
- Minimum target of 20% energy supplied by new renewable energy sources for planned facilities

Monitoring and Reporting

- Sochi 2014 Climate Neutral Games Action Plan prepared by end of first project year
- Preliminary carbon impact assessment of the Sochi 2014 Games by end of project
- GHG monitoring and reporting mechanism established by end of project
- Traffic management system considering environmental impact by end of first project year

Assumptions

89. Key project assumptions are:

- Under a business as usual scenario the approach to energy-efficiency and reducing GHG emissions at the Sochi Olympics would be ad-hoc and would not result in a comprehensive Greening Strategy and Action Plan for the Games.
- The GEF project supports international and national commitments and efforts to realize an environmentally sustainable Winter Olympics. Considerable national funding has been set aside to realize the Olympic venues and infrastructure and to further develop Sochi as a winter recreation resort. It is assumed that venues, energy and transport infrastructure are completed according to commitments and contracts.
- Development plans for Sochi as a year-round resort involve intensive growth in the period up to the Games but also in the period afterwards. Energy efficiency and renewable energy measures integrated into the regional building, energy and transport infrastructure will continue to provide benefits after the Games and promote a high standard in subsequent development.
- Planning and realization will continue to prioritize long term national and regional benefits to ensure a sustainable legacy of the Games.
- In consideration of the high international profile of the Games, a high degree of engagement with carbon neutral targets is assumed among private sector sponsors and suppliers.
- The involvement of UNDP, GEF and NGOs will provide strong incentive for national stakeholders to effectively implement commitments and strategies outlined in the bid documents and Environmental Strategy.
- “Green standards” policy promotion within the context of the Games will contribute to awareness and policy development within Russia and encourage replication after the Games.

Risk and risk management

Risks	Likelihood	Remedial Action
Preparations for the 2014 Olympics cannot accommodate environmental components because of planning and implementation schedule restrictions	Medium	GEF project has identified key areas of intervention to provide effective results. Project builds on environmental commitments and national policies.

Inadequate financial capacity to realize energy efficiency and renewable energy measures in Olympic investment projects.	Medium	GEF project builds on financial and infrastructure commitments outlined in Olympic bid and national legislation. GEF project supports best practice to engage private sector investment through sponsorship.
Delays at project start mean an increasing number of the major decisions regarding new construction of buildings and traffic will have already been made	Medium	All parties are willing to move fast on this project. UNDP Russia is prepared to begin procurement procedures as soon as the project is approved. Project is aiming at setting up sustainable Olympics Legacy for post 2014 low carbon development therefore its major longer-term recommendations and strategies will remain timely.
Low market availability and high costs of energy efficient and renewable energy technologies may discourage implementation in Olympic investment projects	Low	GEF project supports identification of cost-effective technologies and brings best practice examples from previous events. The project will engage energy efficient and renewable energy firms to support through sponsorship based on best practice examples.
Reluctance of private sector to engage in offset and sponsorship programs	Low	The high value and exposure of private sector participation shall be promoted according to international best practice. Carbon management and offset programs developed early to encourage engagement. High international profile and visibility of the event will provide important opportunities and encourage private sector to engage.
Inadequate transparency and quality of carbon mitigation and offset projects creates poor public image for climate neutral agenda	Low	GEF project builds supports transparent carbon management by identifying boundaries and targets at an early stage.

Cost-effectiveness

90. The project ensures cost-effectiveness by integration of project outcomes and activities with Sochi 2014 environmental initiatives, planning schedules and sponsorship programs. The project is positioned to profit from lessons learned from the staging of the 2010 Winter Olympics in Vancouver and the 2010 FIFA World Cup in South Africa as well as from preparations for the 2012 Summer Olympics in London. From these examples, the project will integrate best practice PPP structures and business models which support private sector engagement and impact. In particular, financing of the direct carbon mitigation measures and the offset portfolio will largely depend on the cooperation of private sector sponsors and suppliers and the general public. In this respect, the project will apply best practice engagement strategies and lessons learned from past Games and events

The MSP assists primarily in the preparation of an Action Plan to mitigate GHG emissions related to the 2014 Sochi Winter Olympics in 6 project areas. In this sense, the project intends to further integrate CC and EE concerns in the Games preparations, to identify best-cost solutions, measures and projects for the organizers to achieve their target of a climate neutral event and to prompt long-term GHG emission mitigation in the post-Games period (indirect savings). In addition, 4 pilot projects have been identified for development during the MSP;

1. Integrated EE/RE building design of the Ecological Education and Research Centre in Sochi. The Ministry of Natural Resources has committed USD 2.65 million to the renovation and expansion of an existing 2000m² facility applying EE measures and RE technologies and to be completed by 2013. The centre presents the opportunity to showcase and evaluate RE technologies including

solar, heat pumps and wind. 600 tCO_{2eq} are expected to be mitigated over the lifetime of the measures.

2. Adler power station using landfill gas recycling. The Krasnodar Region Administration is investing 34.8 million USD in the Adler solid domestic waste landfill site by 2013. The administration has expressed interest in incorporating landfill gas extraction and processing equipment and a power station fuelled by landfill gas (estimated costs 0.9 million USD). Within the MSP a feasibility study will be conducted.

3. One new residential building of approx. 2500m² within the Olympic Village site has been identified as a pilot project using integrated EE/RE building design (Output 1.2). With GEF support, international EE experts will work with local architects and engineers to create a flagship passive house or low-energy building which sets a high performance target for the whole of the Olympic Village (over 300 000m² of new building to be completed by fall 2013 and which will be used as resort accommodations after the Games). 740 tCO_{2eq} are expected to be mitigated over the lifetime of the pilot building. Applying similar measures to the rest of the Olympic Village buildings would mean savings of over 50 000 tCO_{2eq} over the lifetime of these buildings.

4. Case study: energy efficiency measures and power supply planning for the Sochi Imeretinsky Port infrastructure. An Olympic infrastructure project, the new cargo port facility located near the coastal cluster to be completed in 2010, will have a capacity of over 5 million tonnes cargo per year and will primarily be used to supply construction materials to the Olympic sites. After the Games, it will be converted to a marina facility with 600-700 berths serving the new resort community. The MSP will assist with a case study for incorporating EE and RE technologies in the port logistics and warehousing operations and the subsequent construction and operation of the marina facilities. Owners of the port have agreed to incorporate measures to reduce carbon emissions during port operations; for example, moored ships will have access to the municipal electricity network to reduce the use of on-board generators (expected savings 90 tCO_{2eq}/ year) and low-emission vehicles will be used at the facilities.

Incremental Cost Analysis

91. Without the GEF project climate change considerations will not be fully integrated in the event planning from early stages in a coordinated manner and as a result many opportunities for sustainable global environmental benefits will be lost. Thus, the value-added of this proposed GEF project will be the mainstreaming of CC mitigation technologies at the early stages of preparations to the Olympics that will allow maximizing sustainable GHG emission reduction benefits.
92. Current international event carbon management practice does not guarantee implementation of sustainable mitigation measures. On the one hand, event carbon inventories are limited to the event timeframe; this biases temporary solutions which reduce the carbon footprint (traffic restrictions during the Games, re-directing power generated from existing hydro plants towards the event). Implementing Energy Efficiency and Renewable Energy technologies in the venues and transport infrastructure can contribute long-term benefits but only that portion of 'savings' generated during the event period itself contribute to reducing the footprint towards a climate neutral targets. On the other hand, carbon neutral initiatives of these events is voluntary, meaning boundaries, reductions and offsetting are generally not subject to quality or sustainability standards. Integrating the GEF project into the Sochi 2014 commitment to Climate Neutral Games will support the planning and implementation of innovative GHG mitigation mechanisms and technologies which can continue to provide environmental and regional benefits long after the Games. The practices implemented in Sochi can set the minimum standard for future Games and events.
93. With the GEF support, awareness about global environmental issues, best available low-carbon technologies and green standards will be effectively promoted at a high profile event like the

Olympic Games. The Olympic Games presents a unique venue and a rare opportunity for the GEF to showcase its achievements to the world through this project. Therefore, indirect benefits will be achieved through additional publicity that the GEF will bring about clean and low-carbon technology, and about global climate change and local environmental issues through the implementation of the proposed CC advocacy and outreach strategy to be developed in the course of the MSP. Through this focused outreach program, the project will raise the public awareness about the GEF, climate change, and global environmental issues, which would not be achieved without this project.

94. The Institute for Global Climate and Ecology under Roshydromet and the Russian Academy of Science has conducted an inventory of GHG for the Sochi Region using 2007 the base year. This inventory shows over 2million tCO₂e emissions generated from the energy sector.
95. Over 2 million square meters of new buildings are planned for the 2014 Sochi Olympics. These buildings include stadiums, the Olympic Village, administration buildings and hotels. It is estimated that during the 20 day event, electricity supply to the venue buildings will generate 50 000 tCO₂ emissions and heat supply another 50 000 tCO₂ (based on 2007 building standards and the use of natural gas.) Expert assessment of the projects has indicated that some 10-40% of these emissions could be avoided through enforcement of stricter standards and energy management during their operation. Considering progress already achieved in the design and approval of venue buildings, the potential for impacting the energy efficiency of these buildings is limited to about 10%. Additional potential for energy savings is still possible through the use of renewable energy sources and energy management during operations as well through the application of integrated building design to the remaining buildings including the Olympic Villages and hotels.
96. Similarly in the transport sector, some 30% more vehicular traffic is expected during the Games accounting for an estimated additional 20 000 tCO₂ during the 20 day event. Energy efficiency measures in the public transport sector including the use of fuel efficient or hybrid vehicles and the replacement of municipal buses could reduce the emissions in the range of 5000 tCO₂ during the event and by 90 000 tCO₂ annually.
97. The development of the Olympic venues falls within a larger national initiative to develop Sochi as a year-round tourist destination. Improvements to the energy efficiency of buildings and transport for the 2014 Olympics will have sustainable impact for the global environment and the region; energy savings and GHG mitigation from implemented measures will continue after the games and additionally provide the benchmark for further development.
98. Assuming business-as-usual energy demand for the permanent Olympic venue buildings of 100-120 kWh/m².yr and a 20-year building lifecycle, the baseline lifecycle energy consumption of the Olympic venue buildings would be between 4.0 and 4.8 million MWh. This would generate between 1.2 and 1.44 million tonnes CO₂e over building lifetime in the baseline scenario. The project sets targets to reduce the energy demand of the Olympic venue buildings by 10% and to meet the resulting demand with on-site renewable energy in the range of 10-20%. In the project scenario, venue building lifecycle consumption is between 2.9 and 3.9 million MWh with resulting lifecycle GHG generation between 0.86 and 1.17 million tCO₂e. The project sets targets to reduce lifecycle GHG emissions from venue buildings in the range of 230 to 400 thousand tCO₂e. Additional lifecycle GHG emission reduction benefits can be expected from the energy efficiency and renewable energy application in regional transport and energy infrastructure implemented for the Games and continuing to operate after the Games. Finally, project awareness raising and capacity building activities ensure the energy saving measures, tools and know-how developed for the Games are applied further in Sochi and the rest of Russia.

Sustainability

99. The project builds on the OIC commitment to promoting sustainable benefits for Olympic venue cities and regions and Sochi 2014 Games and Legacy targets outlined in the Environmental Strategy. In line with UN guidelines for carbon mitigation, the project gives priority to mitigating carbon emissions at the source (venues, transport and operations) providing long term lifecycle benefits to Sochi and surrounding regions. Specifically, the energy efficient and renewable energy measures applied to buildings, power and heat supply sectors and transport will continue to provide benefits long after the Games. In doing so, the project supports regional and national market change towards energy efficiency and renewable energy technologies.

Replicability

100. The Olympics as a major vehicle for capturing public attention can be used effectively to shape public attitudes and expectations. The innovative legacy and knowledge gained from each staging of the Olympic Games sets the minimum standard for future events, not only the Olympics themselves but also other major sporting and non-sporting events. This in turn encourages progressive technological innovation, greater public awareness and advocacy and policy development.
101. In order to capture the experiences and impacts of the project and the Games, key performance indicators with respect to investment and GHG mitigation will be specified and a comprehensive monitoring and evaluation system will accompany the intervention. These indicators will facilitate monitoring of the progress of national and local authorities in implementing the Sochi 2014 Greening Strategy and Action Plan and will help to identify what works, what doesn't and why. The project will provide a basis for sustainability reporting and GHG emission management leading up to and following the games, providing tangible data for the planning of future events.
102. Finally, by helping Sochi municipality to implement international best practice, the project supports and augments the UNDP Country Program initiatives to encourage the integration of energy efficiency strategies in regional development plans.

2. STRATEGIC RESULTS FRAMEWORK

Logical Framework Analysis

Project Strategy	Indicator	Baseline	Target	Sources of Verification	Assumptions
Goal:					
<p>Objective: to produce a Greening Strategy and Action Plan for the 2014 Winter Olympics in Sochi. The project will develop greening recommendations and action plans in six specific sectors. By introducing an early CC planning the project will help set up "carbon neutral" event and unleash the potential for GHG emission reduction during preparation to convening the Sochi Olympics. In doing so the MSP will come up with an integrated programmatic approach (a set of project proposals) for the Greening of the Sochi Olympics.</p>	<p>Games and legacy GHG mitigation Action Plan</p> <p>GHG mitigation</p>	<p>Lack of coordinated GHG mitigation efforts and targets means transparency and sustainability is not assured</p> <p>The baseline Games GHG emissions and mitigation targets will be established during the baseline survey at project onset.</p>	<p>Integrated Action Plan for GHG mitigation including monitoring and reporting to support the Carbon Neutral Games target of the Sochi 2014 Winter Olympics Environmental Strategy by end of year 1</p> <p>Minimum 10% reduction of direct GHG emissions related to Olympic development, staging and legacy (operations, building and transport) as a clear target of the Sochi 2014 Climate Neutral Games Action Plan</p> <p>High quality, sustainable offset projects with long-term regional and national impact.</p>	<p>Action Plan adopted by Sochi 2014 Organizing Committee</p> <p>Official GHG monitoring body</p> <p>3rd party verification</p> <p>Sustainability Reports</p>	
<p>Outcome 1 "Green building standards": An Action Programme for introducing green standards for Sochi Olympics construction and further replication</p>	<p>Energy performance of venue building designs</p> <p>GHG mitigation for construction and operation of Olympic venue buildings</p>	<p>venue buildings are required to meet energy efficiency requirements of national building standards</p> <p>baseline energy requirements and GHG impact will be established during the baseline survey at project onset</p>	<p>Minimum 10% reduction of baseline lifecycle energy requirements of Olympic venue buildings compared to 2007 building code requirements by 2014</p> <p>Minimum 10% reduction in GHG impact during construction and operations of the Olympic venues.compared to 2007 business as usual scenario by 2014</p>	<p>Olympstroy project evaluation reports</p> <p>monitored heat and power consumptions</p> <p>Official GHG monitoring body</p> <p>3rd party verification</p> <p>Sustainability Reports</p>	

Project Strategy	Indicator	Baseline	Target	Sources of Verification	Assumptions
Output 1.1 Training program on green building practices for Olympstroy and other agencies involved in Olympic construction	workshop number of participants	- -	Workshop on building EE and GHG reduction in planning, construction and operation minimum 40 participants by end of 1st year	workshop report	promotion and enforcement of green building practices
Output 1.2 Public outreach including identification and development of flagship green building projects within the Olympic Venues	design applying integrated building EE design methodology		Identification of 2-3 high-profile EE/RE demonstration projects within the Olympic venues and performance optimization of one project through simulation by end of first year	conceptual design energy simulations report	Realization of demonstration project replication of optimization procedures
Output 1.3 Feasibility study and action plan for further cost-effective GHG mitigation in venue planning, construction and operation phases	identified building EE targets integrated venue-wide strategy follow-up project(s) with leveraged financing	building-by building approach without clear EE targets over baseline Opportunities to develop and demonstrate energy saving design and construction projects in line with the 2009 Law on Energy Saving are not explored	Preliminary estimate of baseline and games-related building energy requirements by end of first year Strategic approach to reduce GHG emissions resulting from Olympic venue construction and operations by 10% developed by end of project	Olympstroy MoU	Enforcement of EE building and building management Conscientious end-use
Output 1.4 Model TOR for public procurement incorporating green standards	number of copies distributed	-	Green procurement guidelines distributed to 50 contractors and building firms by end of project	project reports	use of green procurement recommendations
Outcome 2 “Energy efficiency and power planning”: Integrated Strategy and Action Plan for energy efficiency	power and heat supply capacities and efficiencies GHG mitigated	-existing and planned facilities, baseline energy demand and GHG impact will be established during the baseline survey at project onset	reduction in baseline GHG emission from energy supply of 10% (with option of cost-efficient offset projects) by 2014	GHG monitoring body	commitment of utilities to implement
Output 2.1 Inventory of planned heat and power supply and demand infrastructure	comprehensive overview of energy supply, demand and consumption chain	-	Preliminary GHG inventory for games-related power and heat generation by end of first year	project reports	complete and reliable data is made available

Project Strategy	Indicator	Baseline	Target	Sources of Verification	Assumptions
	and related GHG emissions				
Output 2.2 Compendium of EE solutions for heat and power supply and consumption	comprehensive overview of GHG mitigation solutions for energy supply and consumption	-	Discussion paper for GHG mitigation through supply side EE improvements at the regional level and the option of using remote projects for carbon offsets by end of first year	document	solutions can be implemented within time constraints
Output 2.3 Interagency EE committee for preparation to and convening the Olympic Games	agency and agenda	-	Integrated strategy to reduce GHG footprint of management and operations before and during the games by end of project	meeting reports	
Output 2.4 Design of the Strategy and Action Plan for CC mitigation through power planning and energy efficiency with specific recommendations for low-carbon solutions for the Olympic investment projects	Action Plan	-	Strategic approach and action program to reduce GHG emissions resulting from heat and power generation and distribution during preparation, games and post-game periods by end of 1st yr.	document MoU of stakeholders	solutions can be implemented within time constraints
Outcome 3 "Renewable energy technologies": Reducing GHG emissions through increased application of renewable energy technologies at 2014 Olympics.	Percentage of energy demand covered by renewable energy sources	-existing and planned facilities (baseline will be determined within output 3.2)	20% energy from renewable energy sources for the games (or compatible sustainable renewable energy projects realized as offsets) during staging of the Games	Olympstroy and Utilities	Implementation within games schedule
Output 3.1 Compendium of renewable energy solutions	comprehensive overview of RE solutions at utility and building levels as applies to games and region	-	Working paper on the application of renewable energy technologies (solar, wind, geothermal, biogas, etc) at the utility level and at the building level. by end of 1st yr	report	availability of base data
Output 3.2 Inventory of existing and planned power supply and construction infrastructure which accommodates renewable energy sources	comprehensive overview of RE sources in existing and planned game facilities	project-by-project assessment	Baseline calculation of existing and planned contributions from renewable energy sources by end of 1st yr	report	availability of base data
Output 3.3	feasibility study	-	Feasibility study to identify	feasibility study	cooperation and

Project Strategy	Indicator	Baseline	Target	Sources of Verification	Assumptions
Feasibility study and financing plan with specific recommendations for renewable energy solutions (solar, wind, hydropower) for the Olympic investment projects			most effective RE solutions for games and 3-5 potential flagship demonstration projects for renewable energy within the games and offset program by end of project		commitment of venue developers to develop flagship installations
Output 3.4 <i>Guidelines and methodologies for assessing regional potential, feasibility and investment planning and increasing the use of renewable energy sources for the Games</i>	guidelines	no targets and comprehensive approach	Strategic approach to achieve minimum 20% energy from renewable sources for the games (or to support compatible sustainable renewable energy projects through carbon offsets) by end of first year	Guidelines, methodologies MoU of stakeholders	timely implementation by stakeholders
Outcome 4 "Low carbon transport": An integrated strategy and action plan for reducing GHG emissions from transport during preparations and convening of the Olympics.	percentage reduction of GHG emissions from transport	baseline determined with current Olympic Traffic Master Plan in Output 4.1	minimum 10% reduction of GHG from transport from baseline through integrative planning, procurement and public transport promotion during staging of the Games		
Output 4.1 Travel demand survey	GHG inventory of transport	Olympic Transport Plan traffic simulations	Analysis of modes of transport and size of infrastructure. Transport GHG inventory projection for games period to serve as a baseline by end of first year	report	availability of base data
Output 4.2 Compendium of alternative transport solutions and technologies including zero-emission transport for Olympics	comprehensive overview of green transport solutions and potential for Sochi	-	Working paper of GHG reduction solutions for transport which are being applied in Sochi and best practice strategies which would further support GHG mitigation by end of first year	working paper	
Output 4.3 Integrated planning for reducing GHG emissions from transport with specific recommendations for low-carbon solutions for the Olympic investment projects	Action Plan to reduce GHG from games transport	- -	Strategy, feasibility study and action plan towards sustainable transport systems for Olympic Games operations	action plan MoU	implementation in time for impact on Games

Project Strategy	Indicator	Baseline	Target	Sources of Verification	Assumptions
Output 4.4 Training for municipal authorities and state agencies on integrated transport planning	number of participants at training session	-	To create by the end of the project a framework for a sustainable legacy on low-carbon transport facilities and infrastructure in the Sochi region and mountain area minimum 20 participants	event report	
Outcome 5 "Carbon offsets": Sochi Carbon Offsets Program	Carbon offsetting according to international best practice	No offsetting has taking place	Sound and sustainable carbon offset of GHG directly caused by the Sochi Olympics	Monitoring report	The offsetting program is implemented
Output 5.1 Establishing a GHG inventory and tracking system including a baseline (Sochi regional 2007 emissions and 2014 projections) and a tool to monitor the emissions caused by the event	baseline calculation monitoring system	No regional GHG inventory in place; only aggregated data are available	Baseline data is calculated by end of 1st year and approved Monitoring system is established and operational by end of project	External auditor (to be contracted)	All data for the baseline setting is available from official sources
Output 5.2 Review of international best practice and feasibility study for Sochi Carbon Offset program	feasibility study finalized	An environmental strategy including a rough concept for offsetting emissions has been developed by the Organization Committee	A detailed feasibility study is developed, which includes the following points: <ul style="list-style-type: none"> • project boundary • recommend GHG offsetting programme and projects for offsetting • international experiences • emissions projection • financing requirements by end of project 	Feasibility study	The feasibility study will provide a management plan for the implementation of the offsetting program
Output 5.3 Outreach program and leveraging partnerships for the implementation of the program	marketing concept developed sponsoring packages defined	No information about environmental impacts of the event is publicly available. No private funding will be available for the greening of the event.	The program shall include identification and financing program for the supply of high quality carbon credits for offsetting as well as the development and implementation of comprehensive sponsoring packages in order to attract sponsors to contribute to the climate neutral target of the Sochi 2014 Games.		Program leverages additional financing to realize carbon mitigation projects

Project Strategy	Indicator	Baseline	Target	Sources of Verification	Assumptions
Outcome 6 "Public awareness and advocacy strategy": A comprehensive public awareness, advocacy and outreach program		-	Public Awareness and Engagement in Carbon Neutral Games Program by Games time		
Output 6.1 Stock taking of awareness and outreach tools for large international events greening	Working paper	-	Working paper on public outreach potential and engagement targets for Sochi 2014, within first 6 months	Working paper	
Output 6.2 Building partnerships with key players, private sector, media	Action program for public awareness and engagement	-	Strategic program for optimizing public outreach and engagement in carbon neutral games and legacy by end of first year	Action program MoU	
Output 6.3 Outline of a coordinated interagency campaign on Climate Change and Greening Legacy.	strategic paper	-	Strategy for CC and Green Games Legacy Campaign acknowledging and promoting the roles of UNDP, GEF and UNEP by end of project	strategic paper	
Output 6.4 – Website Integration	development of the Environment pages of the Sochi 2014 website	Sochi 2014 website currently refers to the Environmental strategy for information without in-depth projects or targets	Ensure that a whole section of the Sochi Olympics official website is dedicated to the "Greening of the Sochi Olympics". This will involve outlining on the Sochi Olympic games website all of the activities that are being undertaken as part of this project.	Sochi 2014 website	

Total Budget and Workplan

Award ID:	00059436	GEF ID(s):	Project	4030
Award Title:	Russia: Greening 2014 Sochi Olympics: A Strategy and Action Plan for the Greening Legacy			
Business Unit:	RUS10			
Project Title:	Russia: Greening 2014 Sochi Olympics: A Strategy and Action Plan for the Greening Legacy; Project ID: 00074313			
PIMS no.	4320			
Implementing Partner (Executing Agency)	Ministry of Natural Resources and Environment of the RF – National execution			

Objective: to produce a Greening Strategy and Action Plan for the 2014 Winter Olympics in Sochi. The project will develop greening recommendations and action plans in six specific sectors. By introducing an early CC planning the project will help set up "carbon neutral" event and unleash the potential for GHG emission reduction during preparation to convening the Sochi Olympics. In doing so the MSP will come up with an integrated programmatic approach (a set of project proposals) for the Greening of the Sochi Olympics.

GEF Outcome/Atlas Activity	Responsible Party/Implementing Agent	Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Total (USD)
<u>Outcome 1 “Green building standards”:</u> An Action Programme for introducing green standards for Sochi Olympics construction and further replication	MNRE	62000	GEF	71200	International Consultants	25 000	20 000	45 000
				71300	Local Consultants	20 000	24 000	44 000
				72100	Contractual services	45 000	30 000	75 000
				71600	Travel	4 000	4 000	8 000
				75700	Workshop and learning	6 000	7 000	13 000
				74500	Publications	5 000	5 000	10 000
					Sub-total Outcome 1	105 000	90 000	195 000
<u>Outcome 2 “Energy efficiency and power planning”:</u> Integrated Strategy and Action Plan for energy efficiency	MNRE	62000	GEF	71200	International Consultants	10 000	10 000	20 000
				71300	Local Consultants	30 000	25 000	55 000
				72100	Contractual services			
				71600	Travel	5 000	5 000	10 000
				74500	Miscellaneous Expenses	2 000	3 000	5 000
					Sub-total Outcome 2	47 000	43 000	90 000

<p>Outcome 3 “Renewable energy technologies”: Reducing GHG emissions through increased application of renewable energy technologies at 2014 Olympics.</p>	MNRE	62000	GEF	71200	International Consultants	15 000	-	15 000
				71300	Local Consultants	16 000	20 000	36 000
				72100	Contractual services	40 000	20 000	60 000
				71600	Travel	4 000	5 000	9 000
				74500	Miscellaneous Expenses			
					Sub-total Outcome 3	75 000	45 000	120 000
<p>Outcome 4 “Low carbon transport”: An integrated strategy and action plan for reducing GHG emissions from transport during preparations and convening of the Olympics.</p>	UNDP	62000	GEF	71200	International Consultants	20 000	20 000	40 000
				71300	Local Consultants	10 000	10 000	20 000
				72100	Contractual services	20 000	15 000	35 000
				71600	Travel	5 000	5 000	10 000
				75700	Workshops and learning		5 000	5 000
					Sub-total Outcome 4	55 000	55 000	110 000
<p>Outcome 5 “Carbon offsets”: Sochi Carbon Offsets Programme</p>	UNDP	62000	GEF	71200	International Consultants	15 000	15 000	30 000
				71300	Local Consultants	10 000	10 000	20 000
				72100	Contractual services	15 000	15 000	30 000
				74100	Professional services		30 000	30 000
				75700	Workshops and learning		5 000	5 000
					Sub-total Outcome 5	40 000	75 000	115 000
<p>Outcome 6 “Public awareness and advocacy strategy”: A comprehensive public awareness, advocacy and outreach programme</p>	UNDP	62000	GEF	71200	International Consultants	15 000	15 000	30 000
				71300	Local Consultants	20 000	20 000	40 000
				72100	Contractual services	25 000	25 000	50 000
				71600	Travel	5 000	5 000	10 000
				74200	Audio Visual and Printing	15 000	20 000	35 000
				74500	Miscellaneous Expenses	5 000	10 000	15 000
					Sub-total Outcome 6	85 000	95 000	180 000
<p>Outcome 7 “Project Management”:</p>	UNDP	62000	GEF	71400	Project personnel	30 000	30 000	60 000
				71600	Travel	4 000	4 000	8 000
				72400	Communication	3 000	3 000	6 000
				72500	Supplies	3 000	3 000	6 000
				74100	Audit	5 000	5 000	10 000
					Sub-total Outcome 7	45 000	45 000	90 000
Project TOTAL						452 000	448 000	900 000

Summary of Funds¹³

	Amount Year 1	Amount Year 2	Total
GEF	452 000	448 000	900 000
Project Government Contribution (cash and in-kind)	\$	\$	5 497 000
Private Sector	\$	\$	7 445 000
NGO	\$	\$	575 000
TOTAL	\$	\$	14 417 000

Project Financing

Outcome	Total USD	GEF USD	Cofinancing USD
Outcome 1: "Green building standards": An Action Program for introducing green standards for Sochi Olympics construction and further replication	4,730,667	195,000	4,535,667
Outcome 2: "Energy efficiency and power planning": Integrated Strategy and Action Plan for energy efficiency	900,000	90,000	810,000
Outcome 3: "Renewable energy technologies": An Action Plan for reducing GHG emissions through increased application of renewable energy technologies at 2014 Olympics.	2,540,000	120,000	2,420,000
Outcome 4: "Low carbon transport": An integrated strategy and action plan for reducing GHG emissions from transport during preparations and convening of the Olympics.	2,423,333	110,000	2,313,333
Outcome 5: "Carbon management and carbon offsets": Sochi Carbon Offsets Programme	235,000	115,000	120,000
Outcome 6: "Public awareness and advocacy strategy": A comprehensive public awareness, advocacy and outreach program	2,179,000	180,000	1,999,000
Project management	1,409,000	90,000	1,319,000
Grand Total (with confirmed co-financing)	14,417,000	900,000	13,517,000

¹³ Summary table should include all financing of all kinds: GEF financing, cofinancing, cash, in-kind, etc...

Co-financing by Outcomes and by Source

Name of Co-financier (source)	Classification	Type	Amount USD eq	Description	Status
Outcome 1 Green Standards					
MNRE	Government	Cash	30,000	Design of national green standards for construction sector	Confirmed
GK Olympstroy	State corporation	Cash	2,510,000	Implementation of the green standards and environmental management system in SC Olympstroy; Introducing energy efficiency requirements into the corporate procurement schemes of GK Olympstroy; Development of ecological and energy efficiency criteria for construction projects; Certification of buildings (LEED, BREAM). Planning and development of green measures for Olympic Venue projects	Confirmed
Krasnodar Kray	Government	Cash	4,000	Development of energy efficiency requirements for construction projects, design and introduction of incentives for developers. In the framework of the target programme “Sochi – the hospitable city”	Confirmed
Glavstroy Management	Private Sector	Cash	1,991,667		Confirmed
Subtotal			4,535,667		
Outcome 2 Energy efficiency and power planning					
Krasnodar Kray	Government	Cash	810,000	Design and implementation of the Adler landfill gas reclamation project	Confirmed
Subtotal			810,000		
Outcome 3 Renewable energy					
MNRE	Government	Cash	2,420,000	Ecological Education and Research Centre; rehabilitation and expansion of existing facility incorporating EE and RE measures	Confirmed
Subtotal			2,420,000		
Outcome 4 Low-carbon transport					
SOOC	NGO	Cash	120,000	Monitoring of carbon emissions from road transport, traffic management plans, etc. in the framework of the Programme “Carbon neutral games”	Confirmed

Glavstroy Management	Private Sector	Cash	2,193,333	Imeretinskaya Port Facility; planning and realization of green measures	Confirmed
Subtotal			2,313,333		
Outcome 5 Carbon accounting and carbon Offsets					
SOOC	NGO		120,000	Carbon monitoring, carbon accounting and planning for compensatory activities in the framework of the Programme “Carbon neutral games”	Confirmed
Subtotal			120,000		
Outcome 6 Awareness and advocacy					
MNRE	Government	Cash	1,580,000	Design and construction of information centre for visitors	Confirmed
Krasnodar Kray	Government	Cash	144,000	Public awareness campaigns on zero waste and carbon neutral Games in the framework of the target programme “Sochi – the hospitable city”	Confirmed
SOOC	NGO	Cash	275,000	Environmental education and awareness in the framework of the programme “Enlightenment games”	Confirmed
Subtotal			1,999,000		
Project Management					
MNRE		Cash	403,000		Confirmed
SOOC		Cash	60,000		Confirmed
GK Olympstroy		Cash	285,000		Confirmed
Krasnodar Kray		Cash	106,000		Confirmed
Glavstroy Management		Cash	465,000		Confirmed
Subtotal			1,319,000		
Total Cofinancing			13,517,000		

3. MANAGEMENT ARRANGEMENTS

103. The Ministry of Natural Resources and Environment (MNRE) of Russia will execute the project following UNDP National Implementation (NIM) guidelines. As the National Implementing Agency for this project, the MNRE will appoint a National Project Director (NPD) to be in charge of overall responsibilities, including planning, coordination, administration and financial management of the project with support by UNDP-Russia. The NPD will be responsible for the achievement of the project objectives, for all project reporting, including the submission of Annual Work Plans (AWP) and financial reports. He/she will ensure the delivery of the project outputs and the judicious use of the project resources, ensuring that the expected outputs are delivered using the most efficient and cost-effective implementation strategies and procedures. The NPD will be also a member of the Project Steering Committee (Project Board).
104. **UNDP oversight services:** As the GEF implementing agency for this project, UNDP will monitor all activities and outputs and ensure accurate reporting to the GEF. UNDP-Russia, together with UNDP-GEF, will carry out the GEF oversight. Working in conjunction with the various project partners, UNDP-Russia will be responsible for monitoring and evaluation (M&E), including organizing project reviews, approving annual implementation work plans and budget revisions, monitoring progress, identifying problems, suggesting actions to improve project performance, facilitating timely delivery of project inputs, and provide linkages to the other regional and global initiatives. All M&E functions will be carried out in line with standard UNDP and UNDP-GEF procedures. UNDP Russia will also provide country office support for all the activities of the project as agreed with the implementation partner of Russia.
105. The Project Steering Committee (Project Board) will be established. The Project Steering Committee (Project Board) will ensure close coordination of this GEF project with the implementation of the Sochi 2014 Environmental Strategy. The project Outcomes will be integrated into the implementation of the four main pillars of the Sochi 2014 Environmental Strategy: Games in Harmony with nature; Climate Neutral Games; Zero Waste Games; and Enlightenment Games.
106. Key responsibilities of the Steering Committee (Project Board) are as follows:
- reviewing of annual progress reports for necessary guidance;
 - reviewing and approving the annual work plans and budgets;
 - providing guidance on the effectiveness of the project implementation, and its linkages to corporate UNDP policy decisions, and other UNDP initiatives; and,
 - monitoring and evaluating the implementation of the project towards the intended outputs, after two years of project execution;
 - ensuring coordination and information exchange with partner projects and stakeholders;
 - support resource mobilization and leveraging partnerships for the GEF project.
- As a minimum, the PSC will meet at least once a year, allowing for the stakeholders to review the progress with the project implementation and to agree on a coordinated annual project implementation strategy and plan.
107. The Project Manager (PM) will report to the NPD and UNDP and will be assisted by a Project Assistant based in Moscow. The PM will be in charge of daily implementation of the project and managing project activities. He/she will oversee and co-ordinate the work of the working teams. The PM will also be responsible for the working level co-ordination with other on-going national and international projects.

108. Project Responsible Partner (implementing organization) will provide technical, financial and administrative backstopping for the project, support procurement and contracting by the project. It will also support the PM and NPD in coordination and information exchange among stakeholders.

Collaborative arrangements with related international projects

109. Cooperation with UNEP: In June 2009 a Memorandum of Understanding was signed between the Sochi 2014 Organizing Committee (SOOC) and the United Nations Environmental Programme (UNEP). SOOC and UNEP have agreed to cooperate in the planning and delivery of the Games with reference to environmental issues including zero waste and carbon neutral targets, to promote good working relations with environmental NGOs and to develop programs to raise environmental awareness. Similar to their role in the 2008 Olympics in Beijing, UNEP is planning to report environmental assessment of the event 2-3 years prior to beginning of the Games and again after staging. Interaction with the UNEP enables the organizers of the Games to obtain valuable recommendations, enter into cooperation with, and take part in various environmental UNEP programs (in particular, World Program for planting trees «Billion of trees», World Program for dissemination of knowledge about counteracting man-made climate change, Program for advancing environmental protection technologies in the transport sphere and waste management). As part of this cooperation, UNEP will have a seat on the Project Board (Steering Committee).
110. The IOC and the United Nations Environmental Programme signed a Cooperative Agreement in 1994 to conduct various activities to raise awareness and educate people on environmental matters in sport. Amongst other things, UNEP has participated in the IOC World Conferences on Sport and Environment, IOC regional seminars and in the production of information materials on sport and environment, such as the Agenda 21 for the Olympic Movement. UNEP has also developed working relationships with the Organising Committees for the Olympic Games in Athens (2004), Turin (2006), Beijing (2008) and Vancouver (2010) to promote environmental issues in the Games.
111. The UNEP and UNDP Russian offices have agreed to cooperate in order to ensure the coordinated achievement of results and to avoid duplication of activities. To this end, a representative of UNEP Russia will be on the Project Steering Committee.
112. The project will exchange information, lessons and best practices with the GEF/UNDP/EBRD/UNIDO Umbrella Programme “Energy efficiency in the Russian Federation” and with individual projects included into the Umbrella. In particular, the project will work closely with UNDP/GEF projects “Transforming the market for efficient lighting”, “Standards and labels to promote energy efficiency in Russia” and “Building energy efficiency in the North West Russia”. These projects will inform and advise Outcomes 1,2,5 and 6 of the proposed project in terms of green building standards, energy efficiency solutions in buildings, carbon monitoring and reporting and energy efficiency advocacy campaigns.
113. The project will utilize lessons from the UNDP/GEF projects in South African Republic (Sustainable Public Transport and Sport: 2010 FIFA) and in China (Promoting Clean Electric Buses for the Beijing Olympics) that have produced specific sectoral greening recommendations for the large international sport events.

Audit arrangements

114. The Government will provide the Resident Representative with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of UNDP (including GEF) funds according to the established procedures set out in the User Guide and Finance Manual. The Audit will be conducted by the legally recognized auditor of the Government, or by a commercial auditor engaged by the Government.

Agreement on IPR and the use of UNDP and GEF logos on project-related publications

115. While the project is implemented in close partnership with the national Olympic organizations - Sochi Olympic Organizational Committee and Olympstroy - that will commission/control all public awareness and communication campaigns for the event, the GEF partnership will be adequately promoted through these channels. In the preparatory phase (during preparations to the Olympics) information about the GEF contribution will be disseminated through the government stakeholders and other partners. Two formal Press Releases on the GEF engagement with joint letterheads IPR, GEF and UNDP and quotes by the GEF CEO will be developed at the early stages of the GEF project; one press conferences conducted at the launch of the MSP and two at later stages; information on the GEF contribution including a link to the GEF website will be placed prominently on the homepage of the official websites of the Russian Olympic Games. Key events, including press conferences should be videotaped and photographed, and the multimedia content needs to be sent to the GEF. At the beginning of the Games, mid-term and at the closure, a short news feature in the format of a webstory needs to be provided to the GEF in English and in Russian, including web-optimized photographic material. All cases and specific forms for disseminating information about the UNDP/GEF project and the GEF will be submitted for clearance to the Sochi Olympic Organizational Committee.
116. In order to accord proper acknowledgement of GEF funding, a GEF logo should appear on all relevant GEF project publications, including among others, project hardware and vehicles purchased with GEF funds. Any citation on publications regarding projects funded by GEF should also accord proper acknowledgment to GEF. The logos of the UNDP and GEF should be equal and appear on all communication and other public materials. A copy of each of these publications should be sent to the GEF.

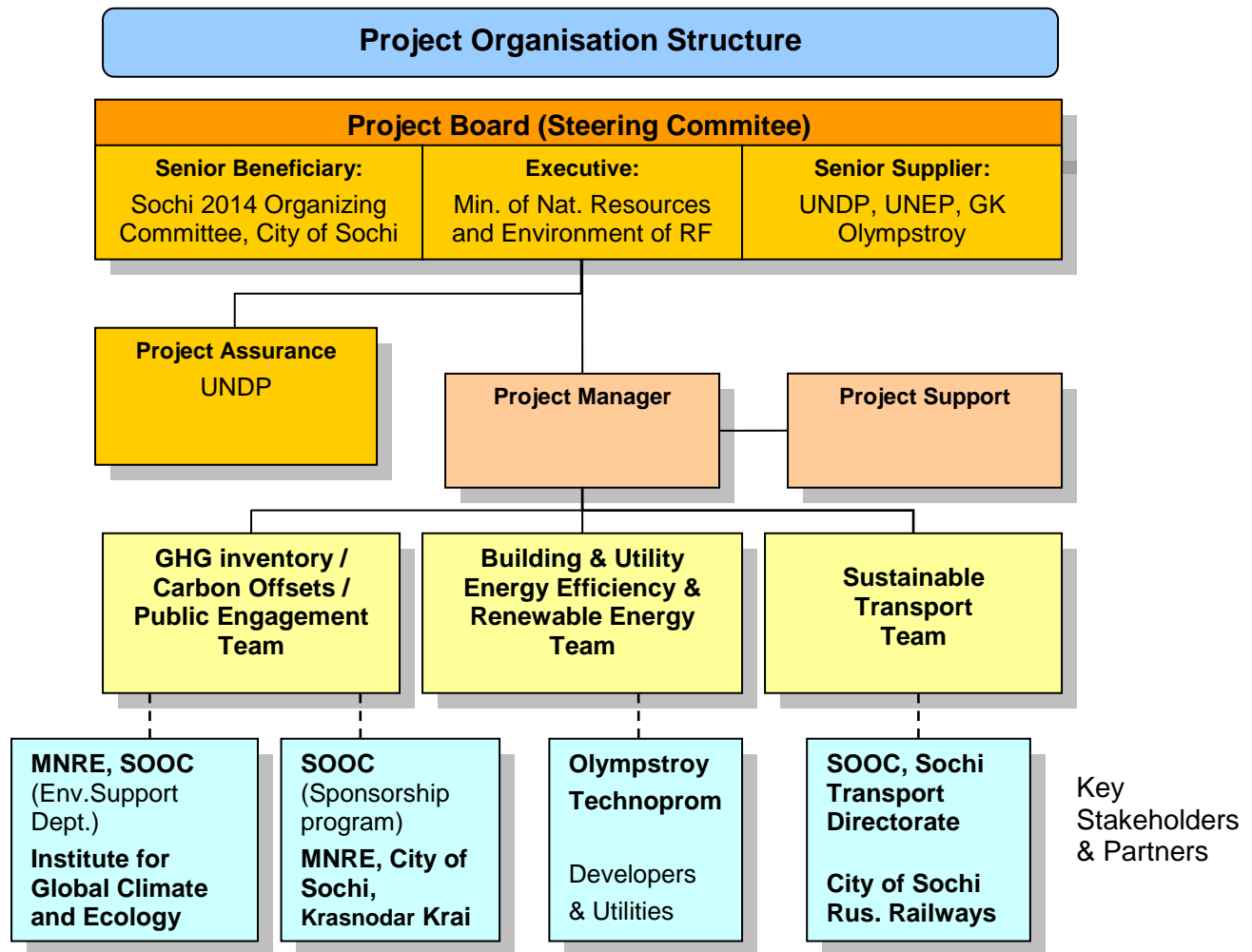
Project Organization Structure

117. Project Board (Steering Committee) is responsible for making management decisions for a project in particular when guidance is required by the Project Manager. It plays a critical role in project monitoring and evaluations by quality assuring these processes and products, and using evaluations for performance improvement, accountability and learning. It ensures that required resources are committed and arbitrates on any conflicts within the project or negotiates a solution to any problems with external bodies.
118. The Project Board (Steering Committee) contains three distinct roles, including:
- 1) **An Executive:** individual representing the project ownership to chair the group.
 - *Ministry of Natural Resources and Environment of RF*
 - 2) **Senior Supplier:** individuals representing the interests of the parties concerned which provide funding for specific cost sharing projects and/or technical expertise to the project. The Senior Supplier's primary function within the Board is to provide guidance regarding the technical feasibility of the project.
 - *UNDP and UNEP*
 - 3) **Senior Beneficiary:** individual or group of individuals representing the interests of those who will ultimately benefit from the project. The Senior Beneficiary's primary function within the Board is to ensure the realization of project results from the perspective of project beneficiaries.
 - *Sochi 2014 Organizing Committee, City of Sochi*

- 4) The **Project Assurance** role supports the Project Board Executive by carrying out objective and independent project oversight and monitoring functions. The Project Manager and Project Assurance roles should never be held by the same individual for the same project.
- *UNDP*

Project Manager: The Project Manager has the authority to run the project on a day-to-day basis on behalf of the Implementing Partner within the constraints laid down by the Board. 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.

Project Support: 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.



4. MONITORING FRAMEWORK AND EVALUATION

The project will be monitored through the following M&E activities. The M&E budget is provided in the table below.

Project start:

A Project Inception Workshop will be held within the first 2 months of project start with those with assigned roles in the project organization structure, UNDP country office and where appropriate/feasible regional technical policy and program advisors as well as other stakeholders. The Inception Workshop is crucial to building the ownership for the project results and to plan the first year annual work plan.

The Inception Workshop should address a number of key issues including:

- Assist all partners to fully understand and take ownership of the project. Detail the roles, support services and complementary responsibilities of UNDP CO and RCU staff vis-à-vis the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed again as needed.
- Based on the project results framework finalize the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.
- Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled.
- Discuss financial reporting procedures and obligations, and arrangements for annual audit.
- Plan and schedule Project Board (Steering Committee) meetings. Roles and responsibilities of all project organisation structures should be clarified and meetings planned. The first Project Board meeting should be held within the first 12 months following the inception workshop.

An Inception Workshop report is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided during the meeting.

Quarterly:

- UNDP/GEF Quarterly Operation Reports will be prepared.
- Progress made shall be monitored in the UNDP Enhanced Results Based Management Platform.
- Based on the initial risk analysis submitted, the risk log shall be regularly updated in ATLAS. Risks become critical when the impact and probability are high. Note that for UNDP GEF projects, all financial risks associated with financial instruments such as revolving funds, microfinance schemes, or capitalization of ESCOs are automatically classified as critical on the basis of their innovative nature (high impact and uncertainty due to no previous experience justifies classification as critical).
- Based on the information recorded in ATLAS, a Project Progress Report (PPR) can be generated in the Executive Snapshot.
- Other ATLAS logs can be used to monitor issues, lessons learned etc.... The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

Annually:

- Annual Project Review/Project Implementation Review (APR/PIR): This key report is prepared to monitor progress made since project start and in particular for the previous reporting period (1 July to 30 June). The APR/PIR combines both UNDP and GEF reporting requirements.

The APR/PIR includes, but is not limited to, reporting on the following:

- Progress made toward project objective and project outcomes – each with indicators, baseline data and end-of-project targets (cumulative)
- Project outputs delivered per project outcome (annual)
- Lesson learned/good practice.
- AWP and other expenditure reports
- Risk and adaptive management
- ATLAS QPR
- Portfolio level indicators (i.e. GEF focal area tracking tools) are used by most focal areas on an annual basis as well.

Periodic Monitoring through site visits:

UNDP CO and the UNDP RCU will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Project Board may also join these visits. A Field Visit Report/BTOR will be prepared by the CO and UNDP RCU and will be circulated no less than one month after the visit to the project team and Project Board members.

End of Project:

An independent Final Evaluation will take place three months prior to the final Project Board meeting and will be undertaken in accordance with UNDP and GEF guidance. The final evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the UNDP-GEF.

The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response which should be uploaded to PIMS and to the [UNDP Evaluation Office Evaluation Resource Center \(ERC\)](#).

During the last three months, the project team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's results.

Learning and knowledge sharing:

Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums.

The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation through lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects.

Finally, there will be a two-way flow of information between this project and other projects of a similar focus.

M&E workplan and budget

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team staff time</i>	Time frame
Inception Workshop and Report	<ul style="list-style-type: none"> ▪ Project Manager ▪ UNDP CO, UNDP GEF 	10,000	Within first two months of project start up
Measurement of Means of Verification of project results	<ul style="list-style-type: none"> ▪ UNDP GEF RTA/Project Manager will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members. 	To be finalized in Inception Phase and Workshop.	Start, mid and end of project (during evaluation cycle) and annually when required.
Measurement of Means of Verification for Project Progress on <i>output and implementation</i>	<ul style="list-style-type: none"> ▪ Oversight by Project Manager ▪ Project team 	To be determined as part of the Annual Work Plan's preparation.	Annually prior to APR/PIR and to the definition of annual work plans
APR/PIR	<ul style="list-style-type: none"> ▪ Project manager and team ▪ UNDP CO ▪ UNDP RTA ▪ UNDP EEG 	None	Annually
Periodic status/ progress reports	<ul style="list-style-type: none"> ▪ Project manager and team 	None	Quarterly
Final Evaluation	<ul style="list-style-type: none"> ▪ Project manager and team ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team) 	30,000	At least three months before the end of project implementation
Project Terminal Report	<ul style="list-style-type: none"> ▪ Project manager and team ▪ UNDP CO ▪ local consultant 	0	At least three months before the end of the project
Audit	<ul style="list-style-type: none"> ▪ UNDP CO ▪ Project manager and team 	5,000	Yearly
Visits to field sites	<ul style="list-style-type: none"> ▪ UNDP CO ▪ UNDP RCU (as appropriate) ▪ Government representatives 	For GEF supported projects, paid from IA fees and operational budget	Yearly
TOTAL indicative COST Excluding project team staff time and UNDP staff and travel expenses		US\$ 45,000	

5. 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 Russian Federation and the United Nations Development Program, signed by the parties on 17 November 1993. 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 implementing agency and its personnel and property, and of UNDP's property in the implementing agency's custody, rests with the implementing agency.

The implementing agency shall:

- 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;
- assume all risks and liabilities related to the implementing 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 implementing 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.

The UNDP Resident Representative in Moscow is authorized to effect in writing the following types of revision to this Project Document, provided that he/she has verified the agreement thereto by the UNDP-GEF Unit and is assured that the other signatories to the Project Document have no objection to the proposed changes:

- Revision of, or addition to, any of the annexes to the Project Document;
- Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation;
- Mandatory annual revisions which re-phase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility; and,
- Inclusion of additional annexes and attachments only as set out here in this Project Document.