

### *Impacts*

Currently, most of the vaccine designed refrigerators in the health centres covered with this project are more than 10 years old and 15 refrigerators are 13-14 years old. Refrigerators manufactured since 1995 contain ozone-friendly hydro fluorocarbon (HFC) refrigerants; however, these refrigerants still need to be carefully handled since they are greenhouse gases.

Refrigerators manufactured before 2005 are insulated with foam that contains ozone depleting substances—either chlorofluorocarbons (CFCs) or hydro chlorofluorocarbons (HCFCs). If emitted, CFCs and HCFCs contribute to both ozone depletion and climate change. Only units manufactured since 2005 contain foam blowing agents that are ozone and climate friendly.

Some refrigerators manufactured prior to 2000 have mercury-containing components (i.e., switches and relays).

Through the project proposed, 98 old vaccine-designed refrigerators will be replaced with new. Additionally, 16 transportable refrigerators will be replaced with new units.

According to national legislation<sup>4</sup>, the refrigerators to be replaced, due to their old age and the fact that they do not present household waste need to be disposed of via an official entity that holds a licence for managing such waste. The law prescribes that electric appliance wastes need to be dismantled and recycled and as a last resort landfilled.

### *Mitigation measures*

**Recycling:** Appliance recycling typically entails recovery of refrigerant and removal of hazardous components followed by shredding of evacuated appliances. Metal components are typically separated and recycled, while glass, plastics and polyurethane foam, are typically sent to a landfill. Because there are no legal requirements for foam recovery, the blowing agent contained in the foam insulation is emitted during shredding and landfilling—thus contributing to ozone depletion and to global climate change.

**Landfilling:** Typically, when a waste hauler brings appliances to a landfill, refrigerated appliances are separated until a technician recovers refrigerant and other hazardous components, after which, the appliances are landfilled. Sometimes disposed appliances are reportedly landfilled whole, without shredding or removal of durable components.

Due to the large number of refrigerators to be disposed, it is recommended that old refrigerators are disposed of via a licenced entity (company or person) that will ensure proper recycling and treatment of the electric waste in the most environmentally friendly manner, and provide a report for the action to the Ministry of health and project coordinating unit.

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<sup>4</sup> Law on managing electronic and electrical equipment and their wastes, Ministry of environment and physical planning,  
<http://www.moepp.gov.mk/WBStorage/Files/Zakon%20za%20Elektronska%20i%20Elektricna%20oprema,%20Zakon%20za%20izmena%20i%20dopolna%20na%20Zakon%20za%20otpad%20od%20pakuvanje%20-%20SV%20br.%206-2012.pdf>

## **Environmental impacts from purchase of new vehicles**

### **Description of activity**

The project plans purchase of 83 new vehicles for the purpose of easy access and mobility of medical staff. Specifications of the vehicles according to the project are as follows:

- Capacity for 4 persons
- Mid class type of car; diesel engine
- Ease of operation; everyone with a driver's license should be able to drive the car
- Durability, quality; capacity to withstand the conditions of the countryside in Macedonia in most of the weather and climate conditions; not the extreme situations though.
- Capacity to transport small equipment, medical kits, vaccines and alike
- Safety for driver and passengers in operation
- Good maintenance and repair facilities in the country
- Price
- Cost of operation
- Should be acceptable for companies to take up in fleet management full operational lease facility

### **Vehicles**

#### ***Impacts***

There are several brands of vehicles that fulfil the above mentioned criteria available on the Macedonian market and they have been assessed vis a vis the greenhouse gas emissions. For example, diesel fuelled vehicles available in Macedonia emit an average of 95 kg CO<sub>2</sub> per kilometre<sup>5</sup>, and the gasoline fuelled ones emit an average of 118 kg CO<sub>2</sub> per kilometre<sup>6</sup>. However, other chemicals and elements that also have significant impacts on human health and the environment.

For example, the petro diesel used for combustion in diesel cars contains sulphur. The emission of sulphur on combustion results in various environmental health hazards. The petro diesel if spilled on the road remains there as it does not evaporate quickly and thus forms a greasy slick which is dangerous and can result in accidents. The diesel fuel on combustion releases many atmospheric soot and particles which are major components polluting the atmosphere. These particles are real danger to human beings as they damage heart and lungs. Exposure to diesel exhaust can lead to many cardiovascular diseases. The nano particles present in the diesel exhaust contain mainly unburned lubricating oil and exposure to them causes serious health hazards.

The unleaded fuel on combustion releases many toxic air pollutants, hydrocarbons. They do produce nitrogen oxide and particle matter on combustion but less compared to the diesel engines.

Therefore, it can be concluded that diesel engine cars would have more negative impact on the environment and human health than unleaded petrol cars.

According to the Regulation of the European Parliament and Council from 2009 (443/2009) emissions of CO<sub>2</sub> per kilometre until January 1st 2015 is a maximum of 130 g<sup>7</sup>. Both diesel and unleaded gasoline fuelled vehicles would comply with this standard however, the consultant recommends reconsidering the decision to purchase diesel **vehicles due to their higher environmental and human health impacts described above.**

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<sup>5</sup> According to a desktop analysis of available diesel car models in Macedonia complying with the specifications outlined.

<sup>6</sup> According to a desktop analysis of available unleaded petrol car models in Macedonia complying with the specifications outlined.

<sup>7</sup> From 2015-2020 CO<sub>2</sub> emissions from newly produced cars should reach 120 gr per kilometer.



### *Safety*

Possible accidents when operating the vehicles might result in negative impacts on the people's lives and health. Additionally, the safety of people in the surrounding area (nearby vehicles, pedestrians or cyclists) could be compromised.

### *Mitigation measures*

Vehicles would need to be equipped with the basic safety features (air bags, safety belts) for all passengers (4 people) and safety systems (ESP8 system for example which consists of emergency brake system, electronic brake force distribution etc.) in order to prevent accidents as much as possible.

Only personnel with a valid category B licence should be allowed to operate the vehicles.

Apart from assessment of costs and conditions for purchase and maintenance, the type of vehicle to be procured should be also weighed against the health impacts from emissions of the vehicle.

### **Vehicle maintenance**

#### *Impacts*

Regular maintenance of vehicles is necessary for their proper functioning. Change of lubricants, antifreeze and tyres could potentially cause impacts on human health and the environment, if not handled properly.

#### *Lubricants*

Lubricant oils are used to protect the internal combustion engines in motor vehicles and powered equipment and need to be replaced on a regular basis (usually once per year). Other lubricants in the vehicles are used in the brakes, gearbox and hydraulics. Lubricant oils are 90% oil (petroleum based) and 10% additives. A release of used oil to the environment, whether by accident or otherwise, threatens ground and surface waters by endangering drinking water supply and aquatic organisms. PAHs (Polycyclic aromatic hydrocarbon) substances are released from used lubricating oils during recycling or burning and they cause significant threats to human health if inhaled. Exposure to PAHs (and other contaminants, notably metals) in used engine oils might occur from dermal contact while changing oil as well as from handling recycled oil used as fuel.

According national legislation, used oils need to be properly recycled and/or disposed. Licenced automobile service centres need to comply with the following standards for lubricant oil management, in accordance with the national legislation<sup>9</sup>:

- To ensure safe storage and disposal of waste oils and prevent their leakage in the environment;
- To hand over all collected waste oil further to technological processing or disposal;
- To ensure safe transportation of waste oils, which would guarantee the safety of health and lives of people and the environment through special containers (tanks, reservoirs, etc.);
- Procedures for regeneration and disposal of waste oils should be implemented according to best available practice.

#### *Antifreeze*

Antifreeze is made of either ethylene glycol or propylene glycol. They are similar chemicals, but propylene glycol is significantly less toxic. Both of these chemicals do eventually break down into nontoxic by-products - carbon dioxide and water - if left alone, but in the interim are toxic

<sup>8</sup> Electronic stability control

<sup>9</sup> Rulebook on waste oil management, MOEPP,

<http://www.moep.gov.mk/WBStorage/Files/Pravilnik%20za%20sobiranje,transportiranje,%20prerabotka,%20skladiranje,%20tretman%20i%20otstranuvanje%20na%20otpadnite%20masla.pdf>

substances. Though propylene glycol is less toxic, ingestion of a small amount of antifreeze can damage the central nervous system, even causing death in some cases. Its bright green colour and sweet taste can be deceptively attractive to those who don't know it is poisonous, like animals and small children. Over time, antifreeze will break down and form acids that corrode the inside of the automobile's cooling system. In doing this, the antifreeze becomes contaminated with heavy metals, fuel and other substances from the engine and is therefore considered as a dangerous waste<sup>10</sup>. These include lead, aluminium, copper, zinc, iron and benzene. These substances, carried and deposited by antifreeze, can contaminate soil and water, poisoning organisms and damaging habitats if not disposed of properly.

Antifreeze liquids need to be handled with care and disposal of used antifreeze liquids must not be done in the sewage system, septic systems, or atmospheric drainage systems. When possible, environmentally friendly antifreeze liquid should be used, in order to minimise negative impacts on the environment.

#### *Tyres*

Tires represent a serious environmental concern on several fronts. Part of the risk lies with their chemical makeup (due to the composition which includes oils and heavy metals such as lead). Toxins released from tire decomposition, incineration or accidental fires can pollute the water, air and soil. If disposed improperly, tyres are a source of fires and additional environmental impacts as a result of their burning.

According to national legislation<sup>11</sup> tyres need to be managed by a licenced entity. Recycling of tyres precedes energy recovery methods.

#### *Automotive batteries*

Lead-acid batteries (accumulators) used in vehicles are made up of plates of lead and separate plates of lead dioxide, which are submerged into an electrolyte solution of about 38% sulphuric acid and 62% water. Batteries contain heavy metals such as mercury, lead, cadmium, and nickel, which can contaminate the environment when batteries are improperly disposed of.

Macedonian legislation<sup>12</sup> regarding used accumulators is fully in line with the Batteries Directive (2006/66/EC)<sup>13</sup> of the European Union. As this type of waste is considered as hazardous, landfilling and burning/incinerating accumulators as well as their disposal together with the communal waste is prohibited. Managing the used accumulators must be done only by licenced entities.

#### ***Overall recommendation***

In the selection of a best automobile service centre, possession of necessary licences for waste oil, used batteries and waste tyre management should be a prerequisite for selection.

### **Environmental impacts from healthcare waste**

#### Description of activity

<sup>10</sup> According to the OGRM 100/05 defining a list of waste streams.

<sup>11</sup> Rulebook on waste tyre management, MOEPP, <http://www.moepp.gov.mk/WBStorage/Files/Pravilnik%20za%20nacinot%20na%20postapuvanje%20so%20otpadnite%20gumi.pdf>

<sup>12</sup> Law on waste batteries and accumulators, MOEPP, <http://www.moepp.gov.mk/WBStorage/Files/BATERII%20I%20AKUMULATORI%20I%20OTPADNI%20BATERII%20I%20AKUMULATORI%5B1%5D.pdf>

<sup>13</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:266:0001:0014:EN:PDF>



The National legislation (OGRM No. 100/05 defining the list of waste streams; OGRM No. 146/07 defining the medical waste management) is defining the waste streams arising in the Healthcare sector, and is in accordance with the Basel Convention on the Control of Trans-boundary Movements of Hazardous Waste and their Disposal (December 2002) and aligned with EU legislation (Annex III to Directive 2008/98/EC<sup>14</sup>). The list of waste streams according national legislation is enclosed as Annex 1 to this report.

The project will envision (still subject to decision):

- Investment in 1-2 autoclaves to be installed in regional areas;
- Training and operation of staff to operate the autoclaves;
- Strengthening the inspection system by hiring more staff and training them appropriately.

#### *Impacts from healthcare waste generation*

All individuals exposed to hazardous HCW are potentially at risk of being injured or infected. They include:

- Medical staff: doctors, nurses, sanitary staff and hospital maintenance personnel;
- In- and out-patients receiving treatment in health-care facilities as well as their visitors;
- Workers in support services linked to health-care facilities such as laundries, waste handling and transportation services;
- Workers in waste disposal facilities, including scavengers;
- The general public and more specifically the children playing with the items they can find in the waste outside the health-care facilities, when it is directly accessible to them.

These risks occur constantly during handling of the wastes, for example the medical and non-medical staff as well as the hygiene workers can be injured if the waste has not been packed and transported properly. Sharps are considered as one of the most dangerous categories of waste. Many injuries occur because syringe needles or other sharps have not been collected in special containers, or because they have been improvised and so do not meet the necessary requirements for safety. Sharp wastes do not need to be infected by pathogens to act as direct vector for infection, because potential accidents (needle prick, cut or scratches) are destroying the skin's natural barrier, and enable access for the pathogens to enter the organism. It is imperative to handle (collect, pack, label, treat, transport and dispose) the sharps with great care, also because scavengers are exposed to sharps accidents during their waste separation activities in the landfills.

The public can be infected from HCW either directly or indirectly, through several routes of contamination. Disposal of HCW in open dumpsites can have major adverse effects on the population and the environment. Waste scavengers, animals, rodents, birds and insects may also be considered as potential vectors for transmission of diseases. Usually, it is very difficult for the epidemiologists to find the source of infection transmitted through the waste, especially if the origin of the waste cannot be identified. Improper disposal of cytotoxic and cytostatic materials with confirmed multiple hazards (teratogenic, mutagenic, carcinogenic, toxic...) can be considered as very dangerous for the human health and environment, and may result with great impacts.

The release of materials with heavy metals content (photo chemicals from X-Ray departments) can have huge environmental impact. Release of mercury into the waste water system can result with huge and long lasting impacts on the environment and health. The release of other chemicals used in the PHI for their daily procedures and services may also present huge impact on human health and environment, if the disposal is not performed in accordance with the actual legislation and

<sup>14</sup> Waste Framework Directive, Directive 2008/98/EC <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:312:0003:0030:EN:PDF>



prescribed MSDS (Material Safety Data Sheet) by the manufacturer. Mercury, or its compounds as one of the most toxic substance, if released improperly, especially in the water stream, ultimately accumulates in lake or river bottom sediments. There it is transformed into its more toxic organic form by effect of microorganisms, methyl mercury, which accumulates in fish tissue, and can cause significant impact with long lasting effects on the complete bio system. If mercury spillage is not properly contained, it has severe and very long lasting impact on human health. By reducing or eliminating the improper disposal of chemical waste through sewerage, the impact of the corrosive effect on the sewerage pipes and infrastructure will be significantly reduced.

#### Current practices of HCW Handling

The current practices do not incorporate to a full extent the main principles, and they are not supported with adequate protocols and Standard Operating Procedures (SOP's). The HCWM in all visited hospitals is not based on operative plans, and consequently there isn't any specific responsibility allocated to the staff that gets into contact with the hazardous stream of the healthcare waste. HCW is usually managed by the operative personnel who are primarily engaged in performing healthcare services. All issues that are arising from the poor waste management are resolved with ad hoc solutions, and there are no sustainable solutions either, preventive or proactive measures or practices.

The segregation on a basic level exists; however, all waste streams are mixed during the collection, and disposed of without any treatment at the municipal non-compliant landfills.

Three basic waste streams are segregated: hazardous (mainly infectious) waste sharps and non-hazardous. The law, however, requires waste segregation as per the streams defined in the List of Wastes and their further packing and labelling. During the site visits, it was noticed that during the segregation, non-hazardous streams ended up in the containers intended for the collection of infectious waste, and vice versa.

There are poor practices for spillages management, and no SOP's or spillages kits. Almost all PHIs have problems with disposal of the mercury from broken thermometers. The mercury is improperly collected from the spillage, and then disposed in either the sewerage or communal or healthcare waste stream. Somewhere it is kept in small bottles with water without having solution for collection or disposal. There are no standard operating procedures, no spillages are reported, and spillage kits are not available.

Improvisations are common, especially with regard to the sharps management, which increases the risk of injuries and contamination. The recapping is a standard procedure and there are no proper sharps containers. Sharps accidents are present, but not reported properly. Although all healthcare workers and managers are aware of this problem, there is no standard protocol for reporting of sharps accidents, and there is no programme for replacement of the currently used sharps with safe sharps, designed items or proper sharps containers. According to ROSA6 analysis report 2008 (Healthcare Waste Management Training – REC Project funded by DEFRA) the healthcare workers reported an average of 1,42 accidents per person in four hospitals, in 340 returned questionnaires out of 400 distributed. It is vice to mention that the healthcare workers are basically more exposed to the sharp injuries because of their occupational activities, but significant amount of sharps injuries were reported by Cleaners (11%). This may be prevented only by introduction of safe sharps management system.

Also, internal movement of waste is performed using improvised trolleys, sometimes it is transported in elevators used also for transportation of food; the conditions in internal storage areas are often inappropriate. At the central storage points, there is a clear division on hazardous and non-hazardous; the technical standards are, however, not adequate.



Internal waste collection practices differ throughout the visited HPIs. In some visited HPIs, the HCW is kept at the generation and/or storage points longer than required. All these practices will have to change and harmonize once a common national system is in place.

The external transport for disposal is performed by public companies; however, the vehicles do not fulfil the basic requirements for transport of hazardous materials. In the figure below, some statistics on the external collection frequency are highlighted.

The HCW is usually disposed in regional dumpsites or landfills without proper treatment. It poses potential hazard for the waste scavengers and landfill workers. In Skopje, the HCW is incinerated in an old and improper incinerator. The HCW that is incinerated is from all PHIs in Skopje and some PHIs from Kumanovo.

According to the National legislation, record keeping and reporting procedures on waste management by all is covered by the "Regulation on the format and content of the journal for records keeping on waste handling etc.", No. 07/2006. The authorities receive constant updates and reports from PHIs from Skopje and Kumanovo, due to the reason that only in these two cities the HCWM system is managed, including final treatment and disposal. Other PHIs have not submitted to the authorities reports on waste generation and management. In overall, the HCWM poses significant risk for the healthcare workers, patients and visitors of the PHIs in the first line. There is lack of awareness of the risk of improper HCWM between the healthcare workers, especially in consequences for the environment that may derive from poor disposal practices of hazardous materials.

#### *Mitigation measures*

Through training of staff the project will ensure the implementation of good practices and will increase awareness of proper healthcare waste handling and associated risks and as a result will minimise negative impacts of healthcare waste handling and disposal.

Handling of autoclaves needs to be performed according instructions in order to ensure proper sterilisation of the waste items. Only authorised and trained personnel should operate this equipment.

As a result, it is expected that the project will have a positive impact on the environment.



ДО  
ЗДРУЖЕНИЕ ЗА ЕМАНЦИПАЦИЈА, СОЛИДАРНОСТ И  
ЕДНАКВОСТ НА ЖЕНИТЕ - ЕСЕ  
Ул. Максим Горки бр. 20/1-4  
Скопје

Бр. 11-1487/  
10-03-2017 .2017 година  
Скопје

Министерство за здравство

Врска: Ваш бр. 0801-1511/17-25 од 17.02.2017

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**Предмет:** Одговор на Ваша жалба

Почитувани,

Во врска со Вашата жалба доставена до Комисијата за заштита на правото за слободен пристап до информации од јавен карактер под горниот број во врска со претходно доставено барање со кое ја барате следната информација:

„Испратете ни копија од подготвената „Анализа на влијанието врз животната средина“ наведена во активност 5 од додаток 1. План на влезни материјали и излезни резултати за Развојната фаза, во поглавјето 5: Резултати (излезни резултати), под „Резултат за испорака“, од проектот “Воспоставување на интегриран систем за здравствена заштита за мајките и децата во Република Македонија”, во прилог Ви доставуваме копија од бараниот документ.

Напоменуваме дека документот во прилог е во работна, нефинална верзија во Развојната фаза на проектот и негово финализирање требаше да следи во Имплементационата фаза, која не се случи. За појаснување, развојната фаза отпочна во декември и траеше до јуни 2014 година. Со оглед на фактот што во Октомври 2015 год, Агенцијата одговорна за следење на ОРИО програмата на Кралството Холандија не го одобри продолжувањето на проектот во следната Имплементациона фаза, податоците и документите од проектот, преминаа во сопственост на Министерството за здравство и се користат исклучиво за интерна употреба.

Подготвил:  
В.Салеvsка Трајкова

Копија до:

- Заменик министер
- Државен секретар
- А. Георгиевска

Службено лице за посредување со информации  
- Архива

ЗАМЕНИК МИНИСТЕР  
М-р. Јовида Андоvски







ДО  
ЗДРУЖЕНИЕ ЗА ЕМАНЦИПАЦИЈА, СОЛИДАРНОСТ И  
ЕДНАКВОСТ НА ЖЕНИТЕ - ЕСЕ  
Ул. Максим Горки бр. 20/1-4  
Скопје

Врска: Ваш бр. 0801-1511/17-17 од 17.02.2017

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„Испратете ни копија од „Извештајот“ за активността “3. д)Истражување за актуелниот социо-економски статус на популацијата која ќе има најголема корист од проектот (руралното население, малцинствата), собирање податоци заради анализа на социо-економскиот ефект“ наведена во Додаток 1. План на влезни материјали и излезни резултати за Развојната фаза, во поглавјето 5: Резултати (излезни резултати), под „Резултат за испорака“, од проектот “Воспоставување на интегриран систем за здравствена заштита за мајките и децата во Република Македонија”, во прилог Ви ги доставуваме бараните информации.

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Подготвил:  
В.Салевска Трајкова

Копија до:

- Комисија за заштита на правото за слободен пристап до информациите од јавен карактер
- А. Георгиевска, Службено лице за посредување со информации
- Архива

Бр.

11-1490/1

2017 година

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10-03-2017

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ЗАМЕНИК МИНИСТЕР,  
М-р Јовица Андовски





Прилог:

## 4.5 Socio-economic analysis

### 4.5.1. Socio economic status in Macedonia: social and economic impact analysis

A survey was carried out to assess the socio economic status of geographic areas in particular the population which will benefit from the project (rural population, minorities such as Roma); data collection for social and economic impact analyses. This analysis will serve as a baseline for impact measurement of the ORIO project at a stage of implementation. The research establishes the necessary insight into the present situation in the service area and beyond as far as relevant. It is to establish the "without case" and to collect the data which will be needed to perform the social and economic analysis (direct and indirect economic effects).

#### *Present socio economic situation nation wide*

Macedonia is a middle-income country with a population of just over 2 million inhabitants (2011 data source: State Statistical Office of the Republic of Macedonia, 2012) and a GNP per capita income of 3,600 Euro (2013 data). In 2010 the GDP grew by 1.8 and in 2011 by three per cent.

The present economic slowdown in Europe (2013) triggered a recession in the country in 2012. Also, in 2009 Macedonia faced a short recession, following the financial crisis. Macedonia's National Bank (NBRM) projects slow recovery of the domestic economy (GDP growth of 2.2% in 2013 and 3% in 2014). The recovery is a result of an improved business climate and related foreign direct investments leading to a further diversification of the country's export portfolio.

The probability of an increase in export demand from the Euro zone and the stabilization of international financial markets, raises expectations for a more sustained GDP growth in the years after 2014.

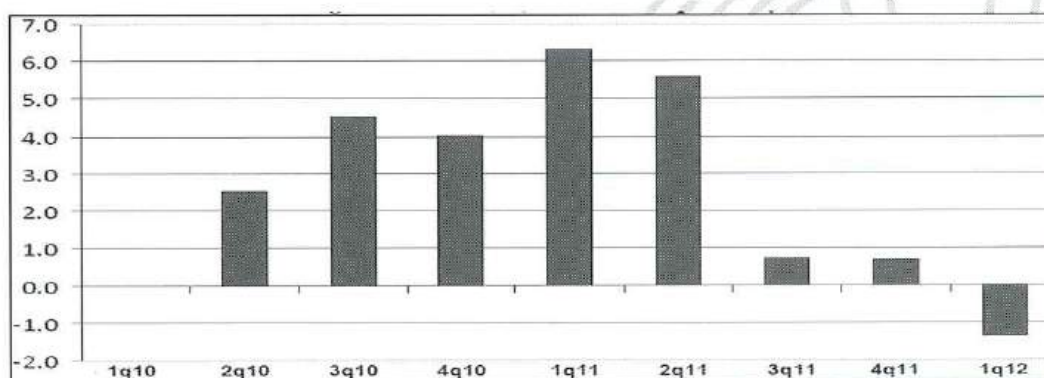


Figure: Growth rates of GDP on quarterly level (%) Source: State Statistical Office of Macedonia

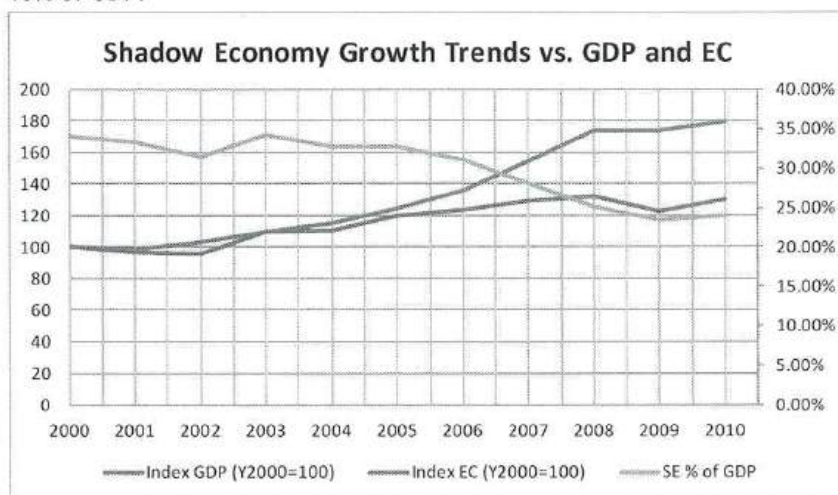
Macedonia has a structurally high unemployment rate (31.4% per 2011, source Labour Force Survey - Statistical Office of the Republic of Macedonia). The number of people living below the poverty line (of 75 US\$ per month) is decreasing: 31.1% in 2010 and 30.9% in 2011. The country has one of the highest shares of people struggling financially. Almost three quarters





of the population states that they can only get by on their household's income 'with difficulty' or 'with great difficulty'. Macedonia still has one of the lowest per capita GDPs in Europe.

The country's "grey" market is estimated at close to 20% of GDP (4,700 US\$ per annum for 2012, source IMF). Macedonia has a large informal sector, which is estimated to be 20 to 40% of GDP.



**Figure: Shadow economy growth trends versus GDP and EC. Source: Center for Economic Analysis (2012)**

The current inflation rate in the country is 2.8 per cent (2013 data, source NBRM). The national currency is the Macedonian Dinar. The Central Bank reference rate is 3.5%. (as per July 2013, source NBRM). The average nominal weighted lending rate 8.6% (as per March 2012).

Macedonia is a candidate to join the European Community. Recently, Macedonia has undergone considerable economic reform. Foreign trade is an important part of the economy and the country has a free trade agreement with Turkey and Ukraine. Macedonia is a member of the UN (1993) WTO (2003), EFTA (2002) and CEFTA (2006). In order to attract more foreign investment, FYROM introduced a flat tax system (12% in 2007 and 10% since 2008).

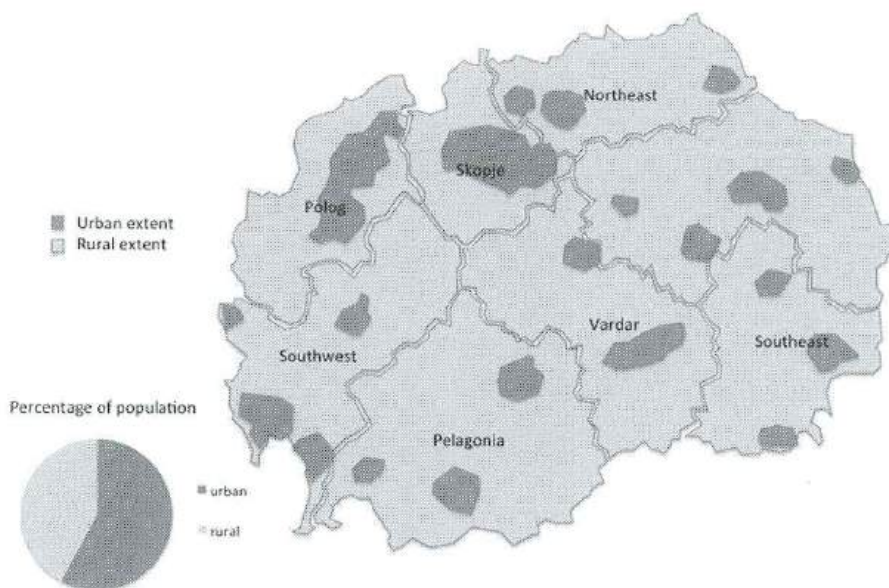


Figure: Urban and rural regions in FYR Macedonia

Macedonia is a largely urbanised country. Almost 60% of the population lives in urban communities. These are spread over the country. The largest urban centres are in the Skopje and in the Polog Region. These are also the most densely populated regions. Low population densities are in the Pelagonia and the Vardar Region.

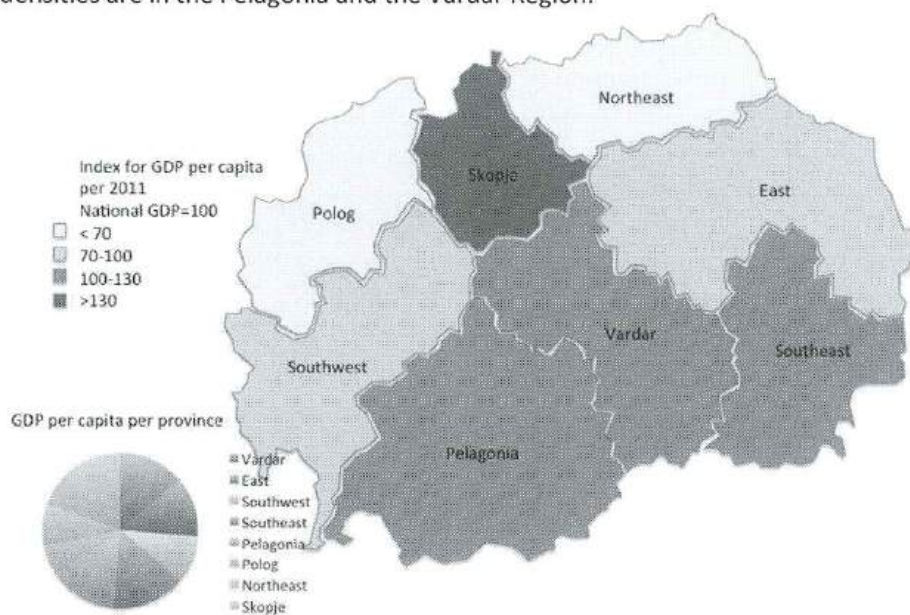


Figure: GDP per capita by region

The formation of GDP is strongly concentrated in the Skopje Region. The share of Skopje Region is three to six times the share of other regions in terms of aggregate GDP. Skopje Region also leads in terms of GDP per capita. But Pelagonia, Vardar and Southeast Regions follow suit. Polog and Northeast Regions have the lowest GDP per capita. The employment rate (2008) is highest in Southeast (62.3%), followed by Pelagonia, with Northeast at the bottom (25%).





### *Poverty*

Poverty and unemployment are still at a high level in Macedonia. According to the latest national poverty measurement, based on the 2010 Survey on Income and Living Conditions (State Statistical Office of the Republic of Macedonia, 2013), 27.3 percent of the population lived in poverty (EU average: 16.4 percent). It is not very likely that this situation has improved over the last two years given a stagnant labour market and the surge in global food prices.

Poverty is linked to the following characteristics: being unemployed, having low education attainment, and having three or more children. Unemployment, one of the highest in Europe, is at 30.6 percent in the third quarter of 2012. Women in particular remain disadvantaged in the labour market, with an activity rate of around 43 percent compared to 70 percent for men.

A substantial reform of the social protection system has not been able to fully absorb the impact of the slow economic growth. It is expected that the labour market will remain weak in 2013. In order to bring the unemployment and poverty rates down it is imperative, once economic growth takes off again, that there will be above average economic growth. (World Bank, 2013).

Macedonia is building an innovative and well-targeted social safety net. The existing system performs reasonably well by regional standards, but is prone to exclusion as only 43 percent of individuals in the poorest category are being reached mainly through lack of proper documentation. This applies in particular to Roma. The system is also one of the least generous in the region; it helps in moderating poverty but not in moving people out of poverty. (World Bank, 2013).

### *Social issues*

The Government launched a broad reform agenda to improve the effectiveness of the system. Through the introduction of a conditional cash transfer (CCT) programme, the government aims to reduce the inter-generational transmission of poverty by linking benefits to the fulfilment of standards for secondary school enrolment and attendance. Authorities are considering extending the CCT benefits to other areas, particularly to improve outcomes in primary school, including through programs designed for mothers and children. (World Bank, 2013).

The International Finance Corporation (IFC) is partnering with the government on strategic sectors crucial for the country's long-term sustainable development, with a focus on, amongst others, health with an emphasis on designing Public-Private Partnership (PPP)-transactions to national and municipal governments to improve infrastructure and access to basic health services through for instance the franchising of dialysis centres. (World Bank, 2013).

The World Bank will continue to support innovative and effective investments in social protection and human capital. The failure of past growth to translate into lower poverty makes it important for the Bank to deepen its support to government efforts to reach the poorest and most vulnerable. At the same time, the importance of human capital to FYR





Macedonia's long-term competitiveness and job creation necessitates sustained assistance in education. (World Bank and IFC (2012))

*MCH Care and poverty*

The focus of the government, as stated in the PRSP 2001, to this day is targeted very much on health care for deprived population groups. An essential component of the provision of health care is MCH as well as immunization and vaccination. The latter is specifically relevant for poor population groups in the light of their significantly lower immunization and vaccination rates. High overall priority is to bring the high rates of perinatal and infant mortality and maternal mortality in line with EU standards.

This project would be an essential part of the concerted efforts to reduce maternal and infant mortality as well as to reduce illness and longer term disabilities of mother and child. The project will thus contribute to national health of the population, which will have a positive effect on the economy. The project will reduce overall cost of the health care system for providing MCH care because the significant increase of MCH care provided at the primary and secondary level will reduce MCH care at the tertiary level and, therefore, trigger considerable savings in overall health expenditure.

Increased immunization especially in rural areas and amongst minorities will help fill the present gaps in countrywide immunization coverage. Ultimately, the outcome will be a healthier and a more productive population.

At the national and intra-regional level major disparities in terms of income, education and well being remain. The poor, Roma and other vulnerable ethnicities and rural populations are generally difficult to reach and hence immunization coverage rates among the children in those population groups are less than 80 percent in contrast with the national coverage rate of 95 percent (EU: 100 percent). Similarly, the rates for deliveries attended by a medical doctor for example in the case of Roma is 70 percent and for women without education 78 percent (nationally: 84 percent). The question is also to what extent the existing system for community nursing for pregnant women and young mothers ('patronage') with 350 nurses based in 34 health centres (one community nurse per 5.000 persons) is effectively covering the vulnerable population groups.

According to Van Ravens (2010) strengthening of the existing patronage system can be of great support to disadvantaged parents by receiving professional support in rearing their children. This can solidify the governmental objective formulated in 2004, when the National Strategy for the Development of Education 2005-2015 and Amendment on the Law on Children's Protection expressed the urgent need for alternative forms of pre-school education, reaching all children in Macedonia regardless of background. It might also lead to expanding enrolment of children into the educational system. It is widely known that lack of education leads often goes together with poverty.

Ultimately, the economic value of this project hinges on the extent to which the socially and economically disadvantaged population groups will indeed effectively benefit from the improvements in the capacity and logistics of the MCH and immunization system as a result of the project. And also on the efficiency from the MCH healthcare system. Where now a large burden is on the healthcare system for the women tend to give birth in facilities which are over qualified for the case.





Regional and intra-regional disparities in the poverty rates can be considerable. High-risk social categories are: households with children, particularly those with five or more members elderly workers; unemployed people who have no education or only incomplete education; households amongst certain ethnic groups whose members are not in paid employment and who are not part of the social protection system as well as households living in urban centres outside of Skopje, and those in rural areas. The highest relative poverty rate is to be found in rural areas.

Women as a vulnerable group, face multiple discrimination and multi-dimensional poverty. Female-headed households are numerous in areas facing continued male labour (e)migration.

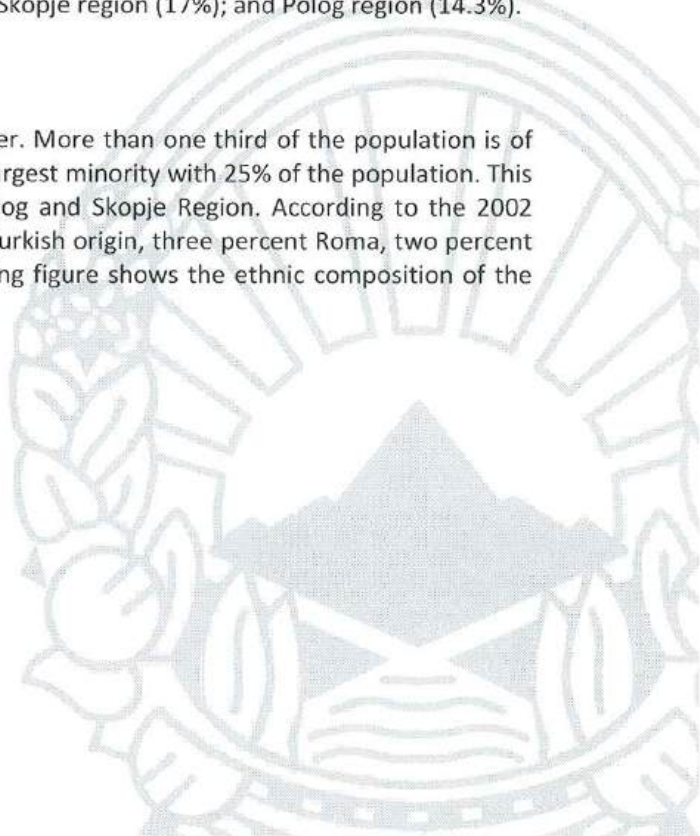
Of those whose incomes declined in recent years, the majority were Roma (28.1%), followed by ethnic Turks (26.1%), ethnic Albanians (23.8%) and Macedonians (22.1%). The regions most affected by the decline were the Southeast and Polog regions. According to family type, income decline was most evident among single-parent families (mother) and unwed couples with children. A significant reduction in income was also reported among households with five or more members and families with four children or more.

In addition, research results (Miheš, Cristina for ILO, 2011) confirm the official figures with regard to the regions most affected by the economic crisis. Thus, the Southeast region, where the textile and metal industries are most present, was found to have suffered the worst effects of the downturn. Other regions, such as Polog, suffered from higher-than-average numbers of individuals losing their jobs (at home or abroad) and/or experiencing a loss or reduction in their regular incomes or remittances.

One can thus conclude that the economic crisis has contributed to an increase in the already high level of unemployment and to a lowering of living standards. The research shows that the majority of job losses (58.2%) were among households living in urban areas, predominantly in the Eastern region (20.9%), Skopje region (17%); and Polog region (14.3%).

#### *Multi minority character of Macedonia*

Macedonia has a strong multi ethnic character. More than one third of the population is of non-Macedonian origin. Albanians form the largest minority with 25% of the population. This group is concentrated in the Southwest, Polog and Skopje Region. According to the 2002 census, four percent of the population is of Turkish origin, three percent Roma, two percent Serbs and one percent Bosniaks. The following figure shows the ethnic composition of the country.



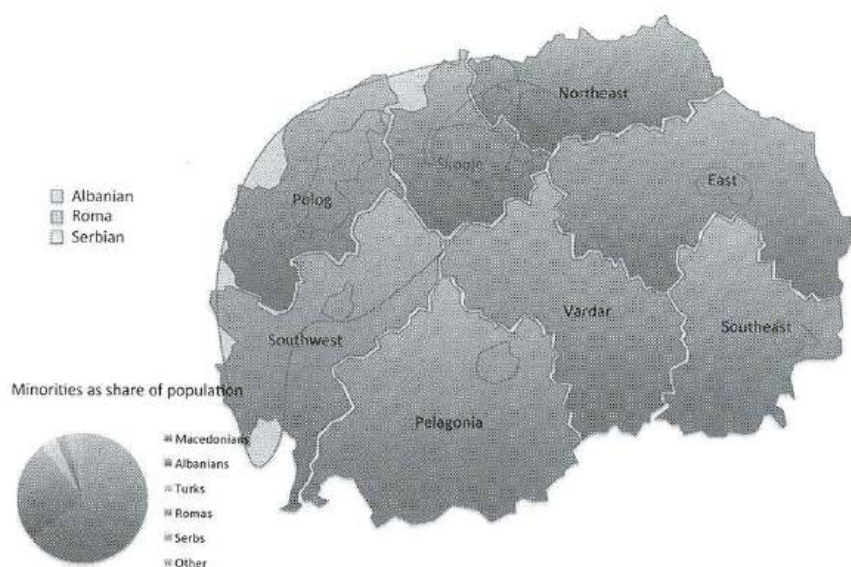
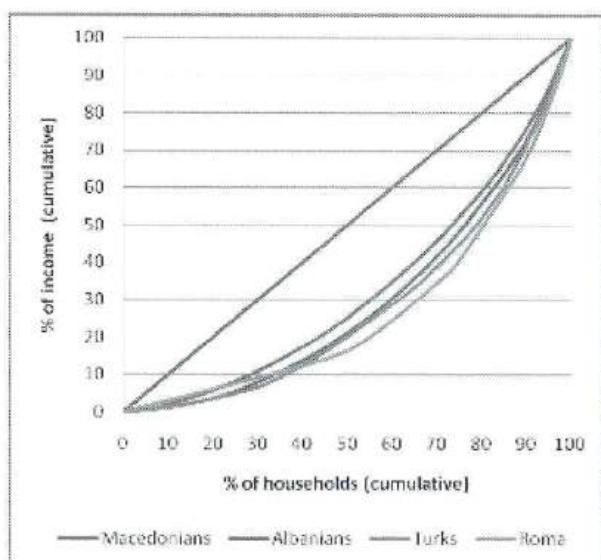


Figure: Minorities, spread over Macedonia and share of population

There is a complex interrelation between ethnicity, poverty and distribution of income. The Lorenz curve and Gini coefficient are indicators of the inequality of income. The income distribution in Macedonia is uneven. When we distinguish ethnic groups, Roma appear to have a more uneven income distribution compared to the other ethnic groups, as the following graph elicits:



Graph: Macedonia Lorenz curve - Income distribution according to ethnicity (source: Mitev, 2012)





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ЗДРУЖЕНИЕ ЗА ЕМАНЦИПАЦИЈА, СОЛИДАРНОСТ И  
ЕДНАКВОСТ НА ЖЕНИТЕ - ЕСЕ  
Ул. Максим Горки бр. 20/1-4  
Скопје

Врска: Ваш бр. 0801-1511/17-19 од 17.02.2017

**Предмет:** Одговор на Ваша жалба

Почитувани,

Во врска со Вашата жалба доставена до Комисијата за заштита на правото за слободен пристап до информации од јавен карактер под горниот број во врска со претходно доставено барање со кое ја барате следната информација:

„Испратете ни копија од подготвениот „Изработената техничка спецификација и соодветните буџетски ставки за болниците и специјализираните клинички објекти, вклучувајќи и потребна опрема“ наведена во активност 4. а) од Додаток 1. План на влезни материјали и излезни резултати за Развојната фаза, во поглавјето 5: Резултати (излезни резултати), под „Резултат за испорака“, од проектот „Воспоставување на интегриран систем за здравствена заштита за мајките и децата во Република Македонија“, во прилог Ви ги доставуваме бараните информации.

Напоменуваме дека документот во прилог е во работна, нефинална верзија во Развојната фаза на проектот и негово финализирање требаше да следи во Имплементационата фаза, која не се случи. За појаснување, развојната фаза отпочна во декември и траеше до јуни 2014 година. Со оглед на фактот што во Октомври 2015 год. Агенцијата одговорна за следење на ОРИО програмата на Кралството Холандија не го одобри продолжувањето на проектот во следната Имплементациона фаза, податоците и документите од проектот, преминаа во сопственост на Министерството за здравство и **се користат исклучиво за интерна употреба.**

Особено е важно да се напомене дека документот во прилог е направен врз основа на истражување на пазарот, при што се вклучени сите ЈЗУ од односната област, со цел да се добие груба проценка на потребните средства, што не значи дека сите наведени ЈЗУ во документот би биле вклучени во финансирањето.

Подготвил:  
В.Салевска Трајкова

Копија до:

- Комисија за заштита на правото за слободен пристап до информациите од јавен карактер
- А. Георгиевска, Службено лице за посредување со информации
- Архива

Бр.

11-1501/1  
2017 година

Скопје

10-03-2017

Министерство за здравство

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Тел. (02) 3112 500  
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ЗАМЕНИК МИНИСТЕР,  
М-р. Јовица Андовски



## **2. Basic technical design and specification**

### **2.1 Upgrading maternities**

For this section, reference is made to the research reports, in which a detailed description is presented of a survey which was held in the first part of 2013 among all maternities in (1) teaching hospitals, (2) general hospitals and (3) maternities in Dom Zdravles. A selection to carry out the ORIO investment was taken by the Macedonian Minister of Health and detailed costing on renovation, needed equipment and staff training needs collected. All this data is presented in the research reports.

The survey generally answered the question how many physical inputs in renovation (e.g. number of square meters to be renovated), equipment (type and quantity of equipment needed) and training needs (number of staff to be trained and staff training needs).

This report aims at collecting prices for the items identified as needed as well as the compilation of a total budget estimate.

For construction cost, a distinction has been made between the cost of renovation per square meter and the cost of building entirely new. Some hospitals will only renovate such as Delcevo whereas others will be built entirely new such as Strumica. The cost estimates per square meter have been collected by contacting several Macedonian building companies based in Skopje. In addition, the cost issue was discussed with several hospitals.

For equipment, three medical device importers were contacted in Skopje. These companies were asked to present a price estimate. Out of the three estimates the most cost efficient was chosen. International suppliers of equipment such as Simed have not been contacted. We do not expect, however major price differentials between local suppliers and international ones. The reason is that most equipment is supplied by international companies such as Siemens and Philips and prices charged are fairly homogenous.



<b>1 MATERNITIES IN HOSPITALS AND HEALTH CENTERS</b>						
<b>A-RENOVATION</b>						
	Maternity Wards	m2	m2 for renovation	Renovation budget	Inventory (calculated)	Total in Euro
1	Chair	5663	150	2256600	0	2256600
2	Delcevo	400	400	6017600	169755	6187355
3	Kocani	1135	1135	17074940	788224	17863164
4	Kumanovo	916	916	13780304	0	13780304
5	Pehcevo	40	40	601760	81381	683141
6	Rostushe	80	80	1203520	81381	1284901
7	Valandovo	260	260	3911440	167662	4079102
8	Strumica	1200	1200	36900000	0	36900000
<b>Total</b>				<b>83.034.567</b>	<b>1.350.156</b>	

\*Method of calculation for the renovations

1	Renovation	Unit m2	Unit Price 15044
2	New hospital ward	m2	30750
* Rate of exchange for 1 euro in dinars		61,5	

<b>B-MEDICAL EQUIPMENT</b>				
	Medical equipment	Unit Price	Number of units	Total in dinars
1	4D Exo	7300000	1	7300000
2	3D Echo + vaginal probe	7700000	2	15400000
3	Exo	4400000	6	26400000
4	Portable echo	184500	1	184500
5	Probes for Portable echo	61500	1	61500
				<b>Total in dinars+vat</b>
				8614000
				18172000
				31152000
				217710
				72570
				<b>Total in Euro</b>
				118699
				250407
				429268
				3000
				1000
				<b>Total in Euro+vat</b>
				140065
				295480
				506537
				3540
				1180

Report prepared by F4HC in collaboration with Macedonian Ministry of Health

6	Trans phontonel	184500	1	184500	217710	3000	3540
7	Ultrasound system	1230000	1	1230000	1451400	20000	23600
8	CTG	180000	26	4680000	5522400	76098	89795
9	Incubator/s	235281	6	1411686	1665789	22954	27086
10	Incubator monitors	380000	3	1140000	1345200	18537	21873
11	Cables		1	0	0	0	0
12	Patients/Vital monitor	246000	16	3936000	4644480	64000	75520
13	Monitors for Int. care	460000	2	920000	1085600	14959	17652
14	Blood pressure monitor	246000	2	492000	580560	8000	9440
15	Cardiorespiratory monitor	246000	2	492000	580560	8000	9440
16	Heart rate meter	246000	2	492000	580560	8000	9440
17	Colposcopy with camera	1300000	2	2600000	3068000	42276	49886
18	Pulse oxymeter	103000	1	103000	121540	1675	1976
19	Pulsoksimetri-portabl	18450	2	36900	43542	600	708
20	Blood analyzers	3900000	1	3900000	4602000	63415	74829
21	Bilirubinometer	123000	2	246000	290280	4000	4720
22	Aspirators (Infant)	55000	4	220000	259600	3577	4221
23	Aspirators	395000	10	3950000	4661000	64228	75789
24	VA aspirator	395000	5	1975000	2330500	32114	37894
25	Electrocauter	710000	2	1420000	1675600	23089	27246
26	Obst. surgery instruments	492000	4	1968000	2322240	32000	37760
27	AS(aminoscopy)aparate	74000	3	222000	261960	3610	4260
28	Laparoscop (pillar)	4000000	2	8000000	9440000	130081	153496
29	Laryngoscope	12000	1	12000	14160	195	230
30	Ligaschure	950000	3	2850000	3363000	46341	54683
31	G&O Equipment	46907	3	140721	166051	2288	2700
32	Chair	423889	12	5086668	6002268	82710	97598
33	Delivery chair	145800	13	1895400	2236572	30820	36367
34	Desks for delivery room	23250	2	46500	54870	756	892



35	Reflectors	61500	15	922500	1088550	15000	17700
36	Mobile reflectors	184500	9	1660500	1959390	27000	31860
37	mobilni reflektori	14072	0	0	0	0	0
38	Lights	369000	6	2214000	2612520	36000	42480
39	Spontaneous delivery set		12	0	0	0	0
40	Oxygen tank with mask	9594	6	57564	67926	936	1104
41	Mobile incubator	799500	3	2398500	2830230	39000	46020
42	Sterilizer (dry)	135000	15	2025000	2389500	32927	38854
43	Infusion pumps	123000	7	861000	1015980	14000	16520
44	Infusiomat	73800	15	1107000	1306260	18000	21240
45	Sets for abdominal hysterectomy	492000	4	1968000	2322240	32000	37760
46	Sets for vaginal hysterectomy	246000	3	738000	870840	12000	14160
47	Sets (Compets) for abortion						
48	Set for Sezarian Cection	123000	5	615000	725700	10000	11800
49	Set for microsurgery		3	0	0	0	0
50	Set for kiretage		2	0	0	0	0
51	Set for HSG		8	0	0	0	0
52	Resuscitation sets	26568	3	79704	94051	1296	1529
53	Resuscitation table		3	0	0	0	0
54	Reanimation balloons	1200000	5	6000000	7080000	97561	115122
55	Resuscitation units	6254	1	6254	7380	102	120
56	Oxygen supply- boca	15682	3	0	0	0	0
57	Oxygen hood	7380	3	47046	55514	765	903
58	Oxygen analyzer		3	22140	26125	360	425
59	Quartz lamp	110000	4	440000	519200	7154	8442
60	Mobile UV lamps	44000	4	0	0	0	0
61	Phototherapy lamp	30750	2	88000	103840	1431	1688
			9	276750	326565	4500	5310

62	Ambu	18450	5	92250	108855	1500	1770
63	Glycometer	33000	3	99000	116820	1610	1900
64	Mobile bed	1200000	5	6000000	7080000	97561	115122
65	Babyterm- mobile panel	880000	4	3520000	4153600	57236	67538
66	Vacuum extractor	60000	4	240000	283200	3902	4605
67	Vaccume pelots		3	0	0	0	0
68	Operating table	1230000	3	3690000	4354200	60000	70800
69	Intubation set	5490	2	10980	12956	179	211
70	Colposcopy	5200000	1	5200000	6136000	84553	99772
71	Drawers	23831	3	71493	84362	1162	1372
72	Antibacterial drawer	73383	1	73383	86592	1193	1408
73	Gynecology mattresses	9594	5	47970	56605	780	920
74	Metal boxes	24600	3	73800	87084	1200	1416
75	Forceps	11000	1	11000	12980	179	211
76	Air-escape valve- airway		1	0	0	0	0
77	4D Ultrasound	14200000	2	28400000	33512000	461789	544911
78	Ultra sound device	3600000	1	3600000	4248000	58537	69073
79	Anaesthesia device	1100000	5	5500000	6490000	89431	105528
80	Defibrilator	370000	1	370000	436600	6016	7099
	All sets and instrument for operational room, laparoscope						
	Equipment- Kumanovo hospital						
81		814831	1	814831	961501	13249	15634
82	Trestle	104237	1	104237	123000	1695	2000
83	Table for Operating room	167772	1	167772	197971	2728	3219
84	Pediatric stethoscope	30750	1	30750	36285	500	590
85	Scale for women	22.000,00	3	66000	77880	1073	1266
86	Scales for babies	18000	3	54000	63720	878	1036
87	Laundry machine	16000	1	16000	18880	260	307



88	Patient transport bed	63868	2	127736	150728	2077	2451
89	Wheel chair	28000	5	140000	165200	2276	2686
90	Obstetric transport bed	35500	1	35500	41890	577	681
91	Working uniforms	900	7	6300	7434	102	121
92	Hospital beds	35000	45	1575000	1858500	25610	30220
93	Baby beds	9781,6	55	537988	634826	8748	10322
94	Bedside cabinetes	4318,8	50	215940	254809	3511	4143
95	Germicide lamp		1	0	0	0	0
96	Computer with printer	33061	5	165305	195060	2688	3172
97	Laptop	27610	1	27610	32580	449	530
98	Printer for eho	61500	1	61500	72570	1000	1180
99	TV with DVD	19407	1	19407	22900	316	372
100	Mattress	1500	14	21000	24780	341	403
101	Clothes drawers	57859	3	173577	204821	2822	3330
102	Working desk	18600	3	55800	65844	907	1071
103	Chairs	6700	16	107200	126496	1743	2057
104	Vehicle for transport		2	0	0	0	0
105	Air conditioner	37280	1	37280	43990	606	715
106	Medical Balls	1729	24	41496	48965	675	796
107	Hanger	1550	2	3100	3658	50	59
108	Autoclave	848700	2	1697400	2002932	27600	32568
109	Mattress	9799	1	9799	11563	159	188
110	Refrigerator for drugs	46000	1	46000	54280	748	883
111	Gtension device		2	0	0	0	0
112	Pelvimeter		2	0	0	0	0
113	Chair for bandaging		1	0	0	0	0
114	Equipment for invitro		1	0	0	0	0
115	Gas Analyzer	556200	1	556200	656316	9044	10672
116	Neuro-Audio-Screen	92250	7	645750	761985	10500	12390

<b>Total</b>		<b>185.083.687</b>	<b>218.398.751</b>	<b>3.009.491</b>	<b>3.551.199</b>
		Calculated			
*Computers vat- 5%		0,05			
*Other units in this table - 18%vat		1,18			
* Rate of exchange for 1 euro in dinars		61,5			
<b>TOTAL 1</b>		<b>Dinars</b>		<b>Euros</b>	
		<b>268.118.254</b>		<b>4.359.646</b>	





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Тел. (02) 3112 500  
Сайт: [www.moh.gov.mk](http://www.moh.gov.mk)

Врска: Ваш бр. 0801-1511/17-21 од 17.02.2017

**Предмет:** Одговор на Ваша жалба

Почитувани,

Во врска со Вашата жалба доставена до Комисијата за заштита на правото за слободен пристап до информации од јавен карактер под горниот број во врска со претходно доставено барање со кое ја барате следната информација:

„Испратете ни копија од подготвениот „Изработената техничка спецификација и соодветните буџетски ставки за системот за здравствена заштита на мајки и деца во општините, вклучувајќи ја и потребната опрема“ наведена во активност 4. б) од Додаток 1. План на влезни материјали и излезни резултати за Развојната фаза, во поглавјето 5: Резултати (излезни резултати), под „Резултат за испорака“, од проектот „Воспоставување на интегриран систем за здравствена заштита за мајките и децата во Република Македонија“, во прилог Ви ги доставуваме бараните информации.

Напоменуваме дека документот во прилог е во работна, нефинална верзија во Развојната фаза на проектот и негово финализирање требаше да следи во Имплементационата фаза, која не се случи. За појаснување, развојната фаза отпочна во декември и траеше до јуни 2014 година. Со оглед на фактот што во Октомври 2015 год. Агенцијата одговорна за следење на ОРИО програмата на Кралството Холандија не го одобри продолжувањето на проектот во следната Имплементациона фаза, податоците и документите од проектот, преминаа во сопственост на Министерството за здравство и **се користат исклучиво за интерна употреба.**

Особено е важно да се напомене дека документот во прилог е направен врз основа на истражување на пазарот, при што се вклучени сите ЈЗУ од односната област, со цел да се добие груба проценка на потребните средства, што не значи дека сите наведени ЈЗУ во документот би биле вклучени во финансирањето.

Подготвил:

В.Салеvsка Трајкова

Копија до:

- Комисија за заштита на правото за слободен пристап до информациите од јавен карактер
- А. Георгиевска, Службено лице за посредување со информации
- Архива

ЗАМЕНИК МИНИСТЕР,  
М-р. Јовица Андовски



## **2. Basic technical design and specification**

### **2.1 Upgrading maternities**

For this section, reference is made to the research reports, in which a detailed description is presented of a survey which was held in the first part of 2013 among all maternities in (1) teaching hospitals, (2) general hospitals and (3) maternities in Dom Zdravles. A selection to carry out the ORIO investment was taken by the Macedonian Minister of Health and detailed costing on renovation, needed equipment and staff training needs collected. All this data is presented in the research reports.

The survey generally answered the question how many physical inputs in renovation (e.g. number of square meters to be renovated), equipment (type and quantity of equipment needed) and training needs (number of staff to be trained and staff training needs).

This report aims at collecting prices for the items identified as needed as well as the compilation of a total budget estimate.

For construction cost, a distinction has been made between the cost of renovation per square meter and the cost of building entirely new. Some hospitals will only renovate such as Delcevo whereas others will be built entirely new such as Strumica. The cost estimates per square meter have been collected by contacting several Macedonian building companies based in Skopje. In addition, the cost issue was discussed with several hospitals.

For equipment, three medical device importers were contacted in Skopje. These companies were asked to present a price estimate. Out of the three estimates the most cost efficient was chosen. International suppliers of equipment such as Simed have not been contacted. We do not expect, however major price differentials between local suppliers and international ones. The reason is that most equipment is supplied by international companies such as Siemens and Philips and prices charged are fairly homogenous.



# 1 MATERNITIES IN HOSPITALS AND HEALTH CENTERS

## A-RENOVATION

	Maternity Wards	m2	m2 for renovation	Renovation budget	Inventory (calculated)	Total	Total in Euro
1	Chair	5663	150	2256600	0	2256600	36693
2	Delcevo	400	400	6017600	169755	6187355	100607
3	Kocani	1135	1135	17074940	788224	17863164	290458
4	Kumanovo	916	916	13780304	0	13780304	224070
5	Pehcevo	40	40	601760	81381	683141	11108
6	Rostushe	80	80	1203520	81381	1284901	20893
7	Valandovo	260	260	3911440	167662	4079102	66327
8	Strumica	1200	1200	36900000	0	36900000	600000
<b>Total</b>							<b>83.034.567 1.350.156</b>

\*Method of calculation for the renovations

1	Renovation	Unit m2	Unit Price 15044
2	New hospital ward	m2	30750
* Rate of exchange for 1 euro in dinars			61,5

## B-MEDICAL EQUIPMENT

	Medical equipment	Unit Price	Number of units	Total in dinars	Total in dinars+vat	Total in Euro	Total in Euro+vat
1	4D Exo	7300000	1	7300000	8614000	118699	140065
2	3D Echo + vaginal probe	7700000	2	15400000	18172000	250407	295480
3	Exo	4400000	6	26400000	31152000	429268	506537
4	Portable echo	184500	1	184500	217710	3000	3540
5	Probes for Portable echo	61500	1	61500	72570	1000	1180

Report prepared by F4HC in collaboration with Macedonian Ministry of Health

6	Trans phontonel	184500	1	184500	217710	3000	3540
7	Ultrasound system	1230000	1	1230000	1451400	20000	23600
8	CTG	180000	26	4680000	5522400	76098	89795
9	Incubator/s	235281	6	1411686	1665789	22954	27086
10	Incubator monitors	380000	3	1140000	1345200	18537	21873
11	Cables		1	0	0	0	0
12	Patients/Vital monitor	246000	16	3936000	4644480	64000	75520
13	Monitors for Int. care	460000	2	920000	1085600	14959	17652
14	Blood pressure monitor	246000	2	492000	580560	8000	9440
15	Cardiorespiratory monitor	246000	2	492000	580560	8000	9440
16	Heart rate meter	246000	2	492000	580560	8000	9440
17	Colposcopy with camera	1300000	2	2600000	3068000	42276	49886
18	Pulse oxymeter	103000	1	103000	121540	1675	1976
19	Pulsoksimetri-portabl	18450	2	36900	43542	600	708
20	Blood analyzers	3900000	1	3900000	4602000	63415	74829
21	Bilirubinometer	123000	2	246000	290280	4000	4720
22	Aspirators (Infant)	55000	4	220000	259600	3577	4221
23	Aspirators	395000	10	3950000	4661000	64228	75789
24	VA aspirator	395000	5	1975000	2330500	32114	37894
25	Electrocauter	710000	2	1420000	1675600	23089	27246
26	Obst. surgery instruments	492000	4	1968000	2322240	32000	37760
27	AS(aminoscopy)aparate	74000	3	222000	261960	3610	4260
28	Laparoscop (pillar)	4000000	2	8000000	9440000	130081	153496
29	Laryngoscope	12000	1	12000	14160	195	230
30	Ligaschure	950000	3	2850000	3363000	46341	54683
31	G&O Equipment	46907	3	140721	166051	2288	2700
32	Chair	423889	12	5086668	6002268	82710	97598
33	Delivery chair	145800	13	1895400	2236572	30820	36367
34	Desks for delivery room	23250	2	46500	54870	756	892



35	Reflectors	61500	15	922500	1088550	15000	17700
36	Mobile reflectors	184500	9	1660500	1959390	27000	31860
37	mobilni reflektori	14072	0	0	0	0	0
38	Lights	369000	6	2214000	2612520	36000	42480
39	Spontaneous delivery set		12	0	0	0	0
40	Oxygen tank with mask	9594	6	57564	67926	936	1104
41	Mobile incubator	799500	3	2398500	2830230	39000	46020
42	Sterilizer (dry)	135000	15	2025000	2389500	32927	38854
43	Infusion pumps	123000	7	861000	1015980	14000	16520
44	Infusiomat	73800	15	1107000	1306260	18000	21240
45	Sets for abdominal hysterectomy	492000	4	1968000	2322240	32000	37760
46	Sets for vaginal hysterectomy	246000	3	738000	870840	12000	14160
47	Sets (Compets) for abortion		5	615000	725700	10000	11800
48	Set for Sezarian Cection	123000	3	0	0	0	0
49	Set for microsurgery		2	0	0	0	0
50	Set for kiretage		8	0	0	0	0
51	Set for HSG	26568	3	79704	94051	1296	1529
52	Resuscitation sets		3	0	0	0	0
53	Resuscitation table	1200000	5	6000000	7080000	97561	115122
54	Reanimation balloons	6254	1	6254	7380	102	120
55	Resuscitation units		3	0	0	0	0
56	Oxygen supply- boca	15682	3	47046	55514	765	903
57	Oxygen hood	7380	3	22140	26125	360	425
58	Oxygen analyzer	110000	4	440000	519200	7154	8442
59	Quartz lamp		4	0	0	0	0
60	Mobile UV lamps	44000	2	88000	103840	1431	1688
61	Phototherapy lamp	30750	9	276750	326565	4500	5310

62	Ambu	18450	5	92250	108855	1500	1770
63	Glycometer	33000	3	99000	116820	1610	1900
64	Mobile bed	1200000	5	6000000	7080000	97561	115122
65	Babyterm- mobile panel	880000	4	3520000	4153600	57236	67538
66	Vacuum extractor	60000	4	240000	283200	3902	4605
67	Vaccine pellets		3	0	0	0	0
68	Operating table	1230000	3	3690000	4354200	60000	70800
69	Intubation set	5490	2	10980	12956	179	211
70	Colposcopy	5200000	1	5200000	6136000	84553	99772
71	Drawers	23831	3	71493	84362	1162	1372
72	Antibacterial drawer	73383	1	73383	86592	1193	1408
73	Gynecology mattresses	9594	5	47970	56605	780	920
74	Metal boxes	24600	3	73800	87084	1200	1416
75	Forceps	11000	1	11000	12980	179	211
76	Air-escape valve- airway		1	0	0	0	0
77	4D Ultrasound	14200000	2	28400000	33512000	461789	544911
78	Ultra sound device	3600000	1	3600000	4248000	58537	69073
79	Anaesthesia device	1100000	5	5500000	6490000	89431	105528
80	Defibrillator	370000	1	370000	436600	6016	7099
	All sets and instrument for operational room, laparoscope Equipment- Kumanovo hospital						
81		814831	1	814831	961501	13249	15634
82	Trestle	104237	1	104237	123000	1695	2000
83	Table for Operating room	167772	1	167772	197971	2728	3219
84	Pediatric stethoscope	30750	1	30750	36285	500	590
85	Scale for women	22.000,00	3	66000	77880	1073	1266
86	Scales for babies	18000	3	54000	63720	878	1036
87	Laundry machine	16000	1	16000	18880	260	307



88	Patient transport bed	63868	2	127736	150728	2077	2451
89	Wheel chair	28000	5	140000	165200	2276	2686
90	Obstetric transport bed	35500	1	35500	41890	577	681
91	Working uniforms	900	7	6300	7434	102	121
92	Hospital beds	35000	45	1575000	1858500	25610	30220
93	Baby beds	9781,6	55	537988	634826	8748	10322
94	Bedside cabinetes	4318,8	50	215940	254809	3511	4143
95	Germicide lamp		1	0	0	0	0
96	Computer with printer	33061	5	165305	195060	2688	3172
97	Laptop	27610	1	27610	32580	449	530
98	Printer for eho	61500	1	61500	72570	1000	1180
99	TV with DVD	19407	1	19407	22900	316	372
100	Mattress	1500	14	21000	24780	341	403
101	Clothes drawers	57859	3	173577	204821	2822	3330
102	Working desk	18600	3	55800	65844	907	1071
103	Chairs	6700	16	107200	126496	1743	2057
104	Vehicle for transport		2	0	0	0	0
105	Air conditioner	37280	1	37280	43990	606	715
106	Medical Balls	1729	24	41496	48965	675	796
107	Hanger	1550	2	3100	3658	50	59
108	Autoclave	848700	2	1697400	2002932	27600	32568
109	Mattress	9799	1	9799	11563	159	188
110	Refrigerator for drugs	46000	1	46000	54280	748	883
111	Gtension device		2	0	0	0	0
112	Pelvimeter		2	0	0	0	0
113	Chair for bandaging		1	0	0	0	0
114	Equipment for invitro		1	0	0	0	0
115	Gas Analyzer	556200	1	556200	656316	9044	10672
116	Neuro-Audio-Screen	92250	7	645750	761985	10500	12390

<b>Total</b>		<b>185.083.687</b>	<b>218.398.751</b>	<b>3.009.491</b>	<b>3.551.199</b>
*Computers vat- 5%		Calculated		0,05	
*Other units in this table - 18%vat				1,18	
* Rate of exchange for 1 euro in dinars				61,5	
<b>TOTAL 1</b>				<b>Dinars</b>	<b>Euros</b>
				<b>268.118.254</b>	<b>4.359.646</b>

2 2.1 il





✓ ДО  
ЗДРУЖЕНИЕ ЗА ЕМАНЦИПАЦИЈА, СОЛИДАРНОСТ И  
ЕДНАКВОСТ НА ЖЕНИТЕ - ЕСЕ  
Ул. Максим Горки бр. 20/1-4  
Скопје

Бр.

11-1502/1

2017 година

Скопје

10-03-2017

Министерство за здравство

50-та Дивизија 14,  
1000 Скопје,  
Република Македонија  
Тел. (02) 3112 500  
Сајт: [www.moh.gov.mk](http://www.moh.gov.mk)

Врска: Ваш бр. 0801-1511/17-23 од 17.02.2017

**Предмет:** Одговор на Ваша жалба

Почитувани,

Во врска со Вашата жалба доставена до Комисијата за заштита на правото за слободен пристап до информации од јавен карактер под горниот број во врска со претходно доставено барање со кое ја барате следната информација:

„Испратете ни копија од „Изработена техничка спецификација и соодветните буџетски ставки за ситем на вакцинација и имунизација, вклучувајќи ја и потребната опрема“ наведена под активност 4. в) од Додаток 1. План на влезни материјали и излезни резултати за Развојната фаза, во поглавјето 5: Резултати (излезни резултати), под „Резултат за испорака“, од проектот „Воспоставување на интегриран ситем за здравствена заштита за мајките и децата во Република Македонија“, во прилог Ви ги доставуваме бараните информации.

Напоменуваме дека документот во прилог е во работна, нефинална верзија во Развојната фаза на проектот и негово финализирање требаше да следи во Имплементационата фаза, која не се случи. За појаснување, развојната фаза отпочна во декември и траеше до јуни 2014 година. Со оглед на фактот што во Октомври 2015 год. Агенцијата одговорна за следење на ОРИО програмата на Кралството Холандија не го одобри продолжувањето на проектот во следната Имплементациона фаза, податоците и документите од проектот, преминаа во сопственост на Министерството за здравство и **се користат исклучиво за интерна употреба.**

Особено е важно да се напомене дека документот во прилог е направен врз основа на истражување на пазарот, при што се вклучени сите ЈЗУ од односната област, со цел да се добие груба проценка на потребните средства, што не значи дека сите наведени ЈЗУ во документот би биле вклучени во финансирањето.

ЗАМЕНИК МИНИСТЕР,  
М-р. Јовица Андовски

Подготвил:  
В.Салевска Трајкова

Копија до:

- Комисија за заштита на правото за слободен пристап до информациите од јавен карактер
- А. Георгиевска, Службено лице за посредување со информации
- Архива

## **2.2 Immunization and vaccination**

For this section, reference is made to the research reports, in which a detailed description is presented of a survey which was held in the first part of 2013 among all more than hundred immunization points in the country. A selection to carry out the ORIO investment in all immunization points was taken by the Macedonian Minister of Health and detailed input data on renovation, needed equipment and staff training needs collected. All this data is presented in the research reports.

The survey generally answered the question how many physical inputs in renovation (e.g. number of square meters to be renovated), equipment (type and quantity of equipment needed) and training needs (number of staff to be trained and staff training needs).

This basic design report aims at collecting prices for the items identified as needed as well as the compilation of a total budget estimate.

For construction cost, a standard cost per square meter was used, which was discussed with several construction companies in Skopje. The total renovation cost was then calculated by multiplying the total number of square meters to be renovated by the standard cost per square meter. Since all of the immunization stations are in need of need new toilet facilities, a standard amount was added for installing toilets in all facilities.

For equipment, three vendors in office equipment were contacted in Skopje. These companies were asked to present a price estimate. Out of the three estimates the most cost efficient was chosen. VAT and other cost was added to the total budget estimate.



**2 IMMUNIZATION SERVICES****A- RENOVATION OF SERVICES**

	Immunization service/Health Center	m2	Number of Facilities included	Price for renovation per m2 (toilets not included)	Toilets renovation, lump sum	Total	Total in Euro
1	Skopje	1.235	14	18.579.340	4577034	23.156.374	376526
2	Tetovo	180	4	2.707.920	1307724	4.015.644	65295
3	Bitola	50	1	752.200	326931	1.079.131	17547
4	Kicevo	36	1	541.584	326931	868.515	14122
5	Kumanovo	500	1	7.522.000	326931	7.848.931	127625
6	Struga	32	1	481.408	326931	808.339	13144
7	Debar	20	1	300.880	326931	627.811	10208
8	Prilep	196	1	2.948.624	326931	3.275.555	53261
9	Krushevo	60	1	902.640	326931	1.229.571	19993
10	Veles	135	1	2.030.940	326931	2.357.871	38339
11	Sv.Nikole	106	1	1.594.664	326931	1.921.595	31245
<b>Total</b>		<b>2.550</b>		<b>38.362.200</b>		<b>47.189.337</b>	<b>767.306</b>

\*Method of calculation for  
the renovations

	Unit	Unit Price
1 Toilet- 25m2	lump sum	326931
2 Renovation per m2	m2	15044
* Rate of exchange for 1 euro in dinars		61,5

**B- TECHNICAL EQUIPMENT**

Package for technical and medical equipment for 37 Immunization units in the 32 Health Centres and separate Skopje with 5 units for the Immunization services placed in 5 district facilities		Unit Price	Number of units	Total in dinars	Total in dinars+vat	Total in Euro	Total in Euro+vat
1	Computer for each HC	28.571	37	1057127	52856,35	17189	859
2	Drawers for files storage	51.431	37	1902947	2245477,46	30942	36512
3	Measuring equipment (scales, height meter)	22.000	37	814000	960520	13236	15618
4	Chairs for each staff	6.700	399	2673300	3154494	43468	51293
5	Benches for the waiting hall	12.800	111	1420800	1676544	23102	27261
6	Air conditioner	37.280	37	1379360	1627644,8	22429	26466
7	Electricity generator	63.975	37	2367075	2793148,5	38489	45417
<b>Total</b>		<b>222.757</b>		<b>11.614.609</b>	<b>12.510.685,1</b>	<b>188.855</b>	<b>203.426</b>
*Computers vat- 5%		Calculated					
*Other units in this table - 18%vat		0,05					
* Rate of exchange for 1 euro in dinars		1,18					
		61,5					

**C-REFRIGERATORS**



Type	Number of needed Vaccine designed- purpose refrigerators	Unit price	Total	Total+vat	Total in Euro	Total in Euro+vat
150l Refrigerators	42	64576	2712175	3200367	44100	52038
200l Refrigerators	59	72914	4301950	5076301	69950	82541
12l Portable Refrigerator	16	30492	487872	575689	7933	9361
<b>Total</b>	<b>117</b>		<b>7501997</b>	<b>8852356</b>	<b>121984</b>	<b>143.941</b>
Calculated						
* Additional costs of 20% (foreigner company, travel)	1,2					
*National vat - 18%	1,18					
* Rate of exchange for 1 euro in denars	61,5					
<b>TOTAL FOR 2</b>				<b>Dinars</b>		<b>Euros</b>
				<b>66.305.943</b>		<b>1.078.145</b>



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ДО  
ЗДРУЖЕНИЕ ЗА ЕМАНЦИПАЦИЈА, СОЛИДАРНОСТ И  
ЕДНАКВОСТ НА ЖЕНИТЕ - ЕСЕ  
Ул. Максим Горки бр. 20/1-4  
Скопје

Врска: Ваш бр. 0801-1511/17-25 од 17.02.2017

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Почитувани,

Во врска со Вашата жалба доставена до Комисијата за заштита на правото за слободен пристап до информации од јавен карактер под горниот број во врска со претходно доставено барање со кое ја барате следната информација:

„Испратете ни копија од подготвената „Анализа на влијанието врз животната средина“ наведена во активноста 5 од додаток 1. План на влезни материјали и излезни резултати за Развојната фаза, во поглавјето 5: Резултати (излезни резултати), под „Резултат за испорака“, од проектот “Воспоставување на интегриран систем за здравствена заштита за мајките и децата во Република Македонија”, во прилог Ви доставуваме копија од бараниот документ.

Напоменуваме дека документот во прилог е во работна, нефинална верзија во Развојната фаза на проектот и негово финализирање требаше да следи во Имплементационата фаза, која не се случи. За појаснување, развојната фаза отпочна во декември и траеше до јуни 2014 година. Со оглед на фактот што во Октомври 2015 год, Агенцијата одговорна за следење на ОРИО програмата на Кралството Холандија не го одобри продолжувањето на проектот во следната Имплементациона фаза, податоците и документите од проектот, преминаа во сопственост на Министерството за здравство и се користат исклучиво за интерна употреба.

Подготвил:  
В.Салевска Трајкова

Копија до:  
- Заменик министер  
- Државен секретар  
- А. Георгиевска  
Службено лице за посредување со информации  
- Архива

ЗАМЕНИК МИНИСТЕР,  
М-р. Јовица Андојски



Бр. 11-1487/  
10-03-2017 2017 година  
Скопје

Министерство за здравство

50-та Дивизија 14,  
1000 Скопје,  
Република Македонија  
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# Environmental Impact Assessment Report

For the Project: “Set up of an integrated  
system for maternal and child  
healthcare to improve health outcomes  
in the Republic of Macedonia”

under the ORIO facility (ORIO10/MK/02)

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The Netherlands, February, 2014

To: the Ministry of Health of the Republic of Macedonia

By: Finance for Health Care VOF

## Foreword

This report is part of the development phase of the project “Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia”, under the ORIO facility (ORIO10/MK/02).

For the development of the Environmental Impact Assessment Report the team of Finance for Projects has been in close contact with MoH. It has been applying the rules and regulations under the ORIO Program and the Macedonian laws as well as best practices and common sense.

This report provides a environmental impact assessment of the Project as defined in the Basic Design Report. Please refer to the Basic Technical Design.

The report is structured as follows:

### Introduction

#### Scope and basic considerations

- Upgrading of maternities at regional hospitals

- Immunisation and vaccination

- Polyvalent patronage nursing service

- Spare Parts, consumables and maintenance

- Vehicles

- Training

- Employers Advisory and Representation

### Environmental Impacts

- Categorisation of Project according national legislation and international standards

- Legal compliance

- Management system

- Impacts of the project on the environment

- Environmental impacts from the reconstruction of maternities, immunisation centres and patronage nursing centres

- Soil



## Introduction

### Scope and Basic Considerations

The project entails the setting up of an integrated system of ante-, peri-, and post-natal maternal and child healthcare to improve health outcomes in the Republic of Macedonia. To achieve that the following will be procured, implemented and operated:

#### 1. Upgrading of maternities at regional hospitals

- Design, engineering, construction and delivery of renovation or new build and construction of facilities including needed equipment and training of staff at maternities at regional hospitals across Macedonia; project management services related to the construction process at the various hospitals, procurement of equipment and training.

#### 2. Immunisation and vaccination

- The detailed design and engineering and renovation of immunisation and vaccination facilities for children, delivery and installation of equipment and training of staff at vaccination and immunisation points across Macedonia; project management services related to the construction process at the various vaccination and immunisation points, procurement of equipment and training.

#### 3. Polyvalent patronage nursing service

- The detailed design and engineering and renovation of community nursing stations facilities for children, delivery and installation of equipment and training of staff at community nursing stations across Macedonia; project management services related to the construction process at the various community nursing stations, procurement of equipment and training.

#### 4. Spare Parts, consumables and maintenance

- Design a spare part and consumable package to be delivered with the equipment;
- Design maintenance, reinvestment and repair program for 10 years operation of the equipment delivered under the Project.

#### 5. Vehicles

- Full operational lease and fleet management for 87 vehicles delivered at the designated healthcare unit.

#### 6. Training

- Detailed design of training curriculum and program to improve the technical skills level as well as the expertise at maternities, immunisation stations and patronage nursing stations;
- Set up a core Centre of Excellence for training in Nursing (community nursing, vaccination, immunization, skills needed at maternities) in Skopje at the School of Nursing and provide for satellite training at Schools of Nursing across Macedonia;

protection of nature. Also, applicable EU Directives, such as the Water Framework Directive, Waste Framework Directive, and Industrial Emissions Directive, Habitats and Birds Directives, Landfill Directive as well as Environmental Impact Assessment Directives have been basis for assessment of the project's impact assessment.

### **Management system**

The Ministry of environment and physical planning is responsible for granting permission for project implementation if the project has been subject to the preparation of an environmental report (elaborate). In the case of tertiary health protection centers, the Ministry would review the elaborate, approve it, and monitor the implementation of the mitigation measures, through its structures, such as the Environmental Inspectorate.

In case of primary and secondary health protection centers, the mayor/the municipality are responsible for approving the elaborate and monitoring the mitigation measures implementation through its environmental inspector.

A grievance mechanism is in place within the Macedonian institutions. The complaints, directed towards the construction inspectorate, environmental inspectorate or municipal inspectorate on the local level in written form will be addressed by the relevant authority.

If resolution of the problem fails, the complaint should be addressed towards the General environmental inspectorate within the Ministry of environment and physical planning. If the problem still persists, lawsuit can be filed in the Administrative Court. If the problem entails property damage a civil litigation process can be exercised.

### **Impacts of the project on the environment**

The project as mentioned above is categorised as a "B" category project, meaning it will have adverse impact on the environment but all impacts could be mitigated with appropriate measures.

Main impacts of the proposed actions can be expected from the reconstruction work of the maternities, immunisation centres and patronage nurses centres due to the generated construction waste, the disposal of old equipment, the operation of new vehicles (and increased emissions) and the generation of medical waste during the operation of the health centres.

The impacts of the project will be analysed according the following components:

1. Reconstruction of maternities, immunisation centres and patronage nurses centres
2. Procurement of new equipment
3. Procurement of new vehicles
4. Medical waste generation

### **Environmental impacts from the reconstruction of maternities, immunisation centers and patronage nursing centres**

#### **Description of activities**

The project envisions renovation and reconstruction of maternities, immunisation centres and patronage nurses centres.



region.

Waste which cannot be recovered through recycling or reuse, should be ultimately landfilled in the nearest possible landfill, according the municipal practice (for landfilling constructions waste).

#### Assessment of the impacts from construction waste on various media

##### **Soil**

###### *Impacts on soil*

It is expected as the construction waste (except for the asphalt, tar and tarred product) is an inert type of waste that it would not cause significant impacts on the soil in the area around the landfill, where the waste will be disposed.

The possible impacts to soil on construction sites during normal operation would be due to improper use and possible leakages of hazardous liquids such as oils and fuels which are used for mechanization and liquid parts of construction materials used in the construction process. These impacts could range from minimal to medium significance. Possible impacts to soil will also be present in cases of minor or major accidents at construction sites. These impacts can range from minimal to severe, depending on the case.

###### *Mitigation measures*

In order to ensure minimal impacts, the following measures need to be followed:

- Temporary disposal of waste at the construction sites during the construction phase prior to landfilling should be done with minimal impact and taking measures of caution for least damage to soil. It is recommended that a detailed plan for disposal of waste on the construction site is made and implemented.
- Landfilling should be done in accordance with best available practice and in the in the case that municipal practice is more beneficial, in line with municipal practice.
- In the case of asphalt, tar and tarred products, although not yet mandatory according EU regulation and not regulated by the national law, it is recommended that best available practice for treatment of asphalt is used prior to landfilling and that products are reused whenever possible.

In case of larger scale construction work done, in order to ensure minimal impacts on soil during normal operations on the construction site, the following measures are recommended:

- Rehabilitation of soil affected by placement of construction waste on the construction sites during the construction phase by measures of re-vegetation (reverting to previous state or improving the state).
- Establishing procedures for maintenance (cleaning) of vehicles leaving the construction sites in order to provide for minimal damage to soil outside of the construction site, including designating a place for such maintenance to ensure minimal impact on site.
- Rehabilitation of soil in cases of leakages by replacing the top layer of soil (reverting to previous state or improving the state). Removed soil in these cases should be treated and managed by best available practices and in the case that municipal practice is more beneficial, in line with municipal practice.

In order to ensure minimal impacts on soil in cases of minor or major accidents on the construction site, the following measures are recommended:

- Preparation and implementation of detailed operation procedures for minor and major accidents which would contain measures for remediation of damage caused and measures of sanction for the causative persons or companies. In order to make sure caution is properly taken, it is recommended that all personnel and associates are thoroughly informed with these procedures (including the possible sanctions) by means of training sessions prior to commencement of all

## Ground and underground water

### *Impacts on water*

It is expected as the construction waste, except for the asphalt, tar and tarred products, is an inert type of waste that it would not cause significant impacts on ground and underground water in the area around the landfill, where the waste will be disposed. According to new research on asphalt, tar and tarred products are considered as hazardous waste due to the presence of coal tar which can pollute groundwater. Although it is not yet mandatory according EU regulation, in accordance with best practice, asphalt, tar and tarred products containing coal tar are not considered as inert waste and should therefore not be directly landfilled.

The possible impacts to ground and underground water on construction sites during normal operation would be due to the discharge of waste water, improper use and possible leakages of hazardous liquids such as oils and fuels which are used for mechanization and liquid parts of construction materials used in the construction process. Particular attention should be paid in the case flammable, corrosive, reactive or toxic materials are used during construction as they create hazardous waste and pose a threat to both ground and underground water. These impacts could range from minimal to medium significance.

Possible impacts to water will also be present in cases of minor or major accidents at construction sites. These impacts can range from minimal to severe, depending on the case.

### *Mitigation measures*

In order to ensure minimal impacts of construction waste to ground and underground water, the following measures need to be followed:

- Disposal of waste at the construction sites during the construction phase prior to landfilling should be done with minimal impact and taking measures of caution for least damage to ground and underground water. It is recommended that a detailed plan for disposal of waste on the construction site is made and implemented.
- Landfilling should be done in accordance with best available practice and in the in the case that municipal practice is more beneficial, in line with municipal practice.
- In the case of asphalt, tar and tarred products, it is recommended that best available practice for treatment of asphalt is used prior to landfilling and that products are reused whenever possible.
- Ensuring proper management of waste water in accordance with national and EU legislation.
- Establishing procedures for maintenance (cleaning) of vehicles leaving the construction sites in order to provide for minimal damage to ground and underground water outside of the construction site, including designating a place for such maintenance to ensure minimal impact on site

In order to ensure minimal impacts damage to ground and underground water in cases of minor or major accidents on the construction site, the following measures are recommended:

- Preparation and implementation of detailed operation procedures for minor and major accidents which would contain measures for remediation of damage caused and measures of sanction for the causative persons or companies. In order to make sure caution is properly taken, it is recommended that all personnel and associates are thoroughly informed with these procedures (including the possible sanctions) by means of training sessions prior to commencement of all works. It is also recommended that implementation of the procedures is controlled by an independent controller/monitor.
- Conducting an inquiry for all accidents and assessing the damages and taking appropriate measures on a case by case basis.



Possible noise would occur in cases of minor or major accidents at construction sites. These impacts can range from minimal to severe, depending on the case.

Impact of noise and vibrations to people is subjective and is related to type of population, age, gender and physiological characteristics. Having in mind that noise and vibrations impacts will be localised, short term and occasional, minimal impacts are expected.

#### *Mitigation measures*

In order to ensure minimal impacts of noise and vibrations to people and the environment, the following measures are recommended:

- Using equipment with low noise levels is recommended. According the Law on environmental noise levels (Official Gazette of Republic of Macedonia No.79/2007) and the Rulebook for limits of environmental noise levels (Official Gazette of Republic of Macedonia No. 147/2008) noise levels in inhabited areas are limited to 50-70 dBA, depending on the type of area.
- In order to protect workers from the noise levels, noise protective headsets need to be used (additionally use of earplugs can be applied).
- Preparing and implementing Plans for management of construction activities in accordance with good practices for noise and vibration control for all construction locations.
- Preparing and implementing a Plan for traffic management in relation to construction activities.

### **Environmental impacts from new equipment**

#### **Installation of new equipment**

##### Description of activities

The project envisions purchase and instalment of new equipment for the health centres covered with this project, namely medical equipment, but also equipment used for the improvement of the functionality of the health centres and their administration such as new computers, desks, air condition units, file cabinets and indoor heaters.

#### **Purchase of heaters**

##### *Impacts*

From the new equipment to be purchased and installed in the health centres, heaters are most likely to have adverse environmental impacts depending on the energy used. Heaters using electricity will have least impacts in terms of direct emissions (their use will be linked to emissions from electricity produced via thermo power plants in Macedonia), but will cause greater costs since electricity prices after 2015 are expected to rise significantly.

Gas heaters emit less carbon dioxide than oil fuelled heaters. Carbon monoxide is a poisonous gas that could reach higher concentration when incomplete burning of fuels and in absence of ventilation. Therefore, the indoors used heater systems need to be accompanied with a ventilation outlet or system.

##### *Mitigation measures*

Depending on the location of the health centre, the most appropriate option of energy will be considered for the indoor heaters. The best available option, having in mind the lowest possible emissions and associated health impacts should be prerequisites for decision during the procurement process.

#### **Disposal of old refrigerators**

## **Environmental impacts from purchase of new vehicles**

### **Description of activity**

The project plans purchase of 83 new vehicles for the purpose of easy access and mobility of medical staff. Specifications of the vehicles according the project are as follows:

- Capacity for 4 persons
- Mid class type of car; diesel engine
- Ease of operation; everyone with a driver's license should be able to drive the car
- Durability, quality; capacity to withstand the conditions of the countryside in Macedonia in most of the weather and climate conditions; not the extreme situations though.
- Capacity to transport small equipment, medical kits, vaccines and alike
- Safety for driver and passengers in operation
- Good maintenance and repair facilities in the country
- Price
- Cost of operation
- Should be acceptable for companies to take up in fleet management full operational lease facility

### **Vehicles**

#### ***Impacts***

There are several brands of vehicles that fulfil the above mentioned criteria available on the Macedonian market and they have been assessed vis a vis the greenhouse gas emissions. For example, diesel fuelled vehicles available in Macedonia emit an average of 95 kg CO<sub>2</sub> per kilometre<sup>5</sup>, and the gasoline fuelled ones emit an average of 118 kg CO<sub>2</sub> per kilometre<sup>6</sup>. However, other chemicals and elements that also have significant impacts on human health and the environment. For example, the petro diesel used for combustion in diesel cars contains sulphur. The emission of sulphur on combustion results in various environmental health hazards. The petro diesel if spilled on the road remains there as it does not evaporate quickly and thus forms a greasy slick which is dangerous and can result in accidents. The diesel fuel on combustion releases many atmospheric soot and particles which are major components polluting the atmosphere. These particles are real danger to human beings as they damage heart and lungs. Exposure to diesel exhaust can lead to many cardiovascular diseases. The nano particles present in the diesel exhaust contain mainly unburned lubricating oil and exposure to them causes serious health hazards.

The unleaded fuel on combustion releases many toxic air pollutants, hydrocarbons. They do produce nitrogen oxide and particle matter on combustion but less compared to the diesel engines. Therefore, it can be concluded that diesel engine cars would have more negative impact on the environment and human health than unleaded petrol cars.

According the Regulation of the European Parliament and Council from 2009 (443/2009) emissions of CO<sub>2</sub> per kilometre until January 1st 2015 is a maximum of 130 g<sup>7</sup>. Both diesel and unleaded gasoline fuelled vehicles would comply with this standard however, the consultant recommends reconsidering the decision to purchase diesel **vehicles due to their higher environmental and human health impacts described above.**

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<sup>5</sup> According to a desktop analysis of available diesel car models in Macedonia complying with the specifications outlined.

<sup>6</sup> According to a desktop analysis of available unleaded petrol car models in Macedonia complying with the specifications outlined.

<sup>7</sup> From 2015-2020 CO<sub>2</sub> emissions from newly produced cars should reach 120 gr per kilometer.



substances. Though propylene glycol is less toxic, ingestion of a small amount of antifreeze can damage the central nervous system, even causing death in some cases. Its bright green colour and sweet taste can be deceptively attractive to those who don't know it is poisonous, like animals and small children. Over time, antifreeze will break down and form acids that corrode the inside of the automobile's cooling system. In doing this, the antifreeze becomes contaminated with heavy metals, fuel and other substances from the engine and is therefore considered as a dangerous waste<sup>10</sup>. These include lead, aluminium, copper, zinc, iron and benzene. These substances, carried and deposited by antifreeze, can contaminate soil and water, poisoning organisms and damaging habitats if not disposed of properly.

Antifreeze liquids need to be handled with care and disposal of used antifreeze liquids must not be done in the sewage system, septic systems, or atmospheric drainage systems. When possible, environmentally friendly antifreeze liquid should be used, in order to minimise negative impacts on the environment.

### *Tyres*

Tires represent a serious environmental concern on several fronts. Part of the risk lies with their chemical makeup (due to the composition which includes oils and heavy metals such as lead). Toxins released from tire decomposition, incineration or accidental fires can pollute the water, air and soil. If disposed improperly, tyres are a source of fires and additional environmental impacts as a result of their burning.

According to national legislation<sup>11</sup> tyres need to be managed by a licenced entity. Recycling of tyres precedes energy recovery methods.

### *Automotive batteries*

Lead-acid batteries (accumulators) used in vehicles are made up of plates of lead and separate plates of lead dioxide, which are submerged into an electrolyte solution of about 38% sulphuric acid and 62% water. Batteries contain heavy metals such as mercury, lead, cadmium, and nickel, which can contaminate the environment when batteries are improperly disposed of.

Macedonian legislation<sup>12</sup> regarding used accumulators is fully in line with the Batteries Directive (2006/66/EC)<sup>13</sup> of the European Union. As this type of waste is considered as hazardous, landfilling and burning/incinerating accumulators as well as their disposal together with the communal waste is prohibited. Managing the used accumulators must be done only by licenced entities.

### **Overall recommendation**

In the selection of a best automobile service centre, possession of necessary licences for waste oil, used batteries and waste tyre management should be a prerequisite for selection.

## **Environmental impacts from healthcare waste**

### Description of activity

<sup>10</sup> According the OGRM 100/05 defining a list of waste streams.

<sup>11</sup> Rulebook on waste tyre management, MOEPP, <http://www.moepp.gov.mk/WBStorage/Files/Pravilnik%20za%20nacinot%20na%20postapuvanje%20so%20otp%20adnite%20gumi.pdf>

<sup>12</sup> Law on waste batteries and accumulators, MOEPP, <http://www.moepp.gov.mk/WBStorage/Files/BATERII%20I%20AKUMULATORI%20I%20OTPADNI%20BATERII%20I%20AKUMULATORI%5B1%5D.pdf>

<sup>13</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:266:0001:0014:EN:PDF>

prescribed MSDS (Material Safety Data Sheet) by the manufacturer. Mercury, or its compounds as one of the most toxic substance, if released improperly, especially in the water stream, ultimately accumulates in lake or river bottom sediments. There it is transformed into its more toxic organic form by effect of microorganisms, methyl mercury, which accumulates in fish tissue, and can cause significant impact with long lasting effects on the complete bio system. If mercury spillage is not properly contained, it has severe and very long lasting impact on human health. By reducing or eliminating the improper disposal of chemical waste through sewerage, the impact of the corrosive effect on the sewerage pipes and infrastructure will be significantly reduced.

#### Current practices of HCW Handling

The current practices do not incorporate to a full extent the main principles, and they are not supported with adequate protocols and Standard Operating Procedures (SOP's). The HCWM in all visited hospitals is not based on operative plans, and consequently there isn't any specific responsibility allocated to the staff that gets into contact with the hazardous stream of the healthcare waste. HCW is usually managed by the operative personnel who are primarily engaged in performing healthcare services. All issues that are arising from the poor waste management are resolved with ad hoc solutions, and there are no sustainable solutions either, preventive or proactive measures or practices.

The segregation on a basic level exists; however, all waste streams are mixed during the collection, and disposed of without any treatment at the municipal non-compliant landfills.

Three basic waste streams are segregated: hazardous (mainly infectious) waste sharps and non-hazardous. The law, however, requires waste segregation as per the streams defined in the List of Wastes and their further packing and labelling. During the site visits, it was noticed that during the segregation, non-hazardous streams ended up in the containers intended for the collection of infectious waste, and vice versa.

There are poor practices for spillages management, and no SOP's or spillages kits. Almost all PHIs have problems with disposal of the mercury from broken thermometers. The mercury is improperly collected from the spillage, and then disposed in either the sewerage or communal or healthcare waste stream. Somewhere it is kept in small bottles with water without having solution for collection or disposal. There are no standard operating procedures, no spillages are reported, and spillage kits are not available.

Improvisations are common, especially with regard to the sharps management, which increases the risk of injuries and contamination. The recapping is a standard procedure and there are no proper sharps containers. Sharps accidents are present, but not reported properly. Although all healthcare workers and managers are aware of this problem, there is no standard protocol for reporting of sharps accidents, and there is no programme for replacement of the currently used sharps with safe sharps, designed items or proper sharps containers. According to ROSA6 analysis report 2008 (Healthcare Waste Management Training – REC Project funded by DEFRA) the healthcare workers reported an average of 1,42 accidents per person in four hospitals, in 340 returned questionnaires out of 400 distributed. It is vice to mention that the healthcare workers are basically more exposed to the sharp injuries because of their occupational activities, but significant amount of sharps injuries were reported by Cleaners (11%). This may be prevented only by introduction of safe sharps management system.

Also, internal movement of waste is performed using improvised trolleys, sometimes it is transported in elevators used also for transportation of food; the conditions in internal storage areas are often inappropriate. At the central storage points, there is a clear division on hazardous and non-hazardous; the technical standards are, however, not adequate.





✓  
ДО  
ЗДРУЖЕНИЕ ЗА ЕМАНЦИПАЦИЈА, СОЛИДАРНОСТ И  
ЕДНАКВОСТ НА ЖЕНИТЕ - ЕСЕ  
Ул. Максим Горки бр. 20/1-4  
Скопје

Бр. 11-1489 /  
10-03-2017

.2017 година

Скопје

Министерство за здравство

Врска: Ваш бр. 0801-1511/17-27 од 17.02.2017

**Предмет:** Одговор на Ваша жалба

50-та Дивизија 14,  
1000 Скопје,  
Република Македонија  
Тел. (02) 3112 500  
Сјир: [www.moh.gov.mk](http://www.moh.gov.mk)

Почитувани,

Во врска со Вашата жалба доставена до Комисијата за заштита на правото за слободен пристап до информации од јавен карактер под горниот број во врска со претходно доставено барање со кое ја барате следната информација:

„Испратете ни копија од подготвениот „Извештај за економската анализа и влијанието на проектот“ наведен под активност 6 од додаток 1. План на влезни материјали и излезни резултати за Развојната фаза, во поглавјето 5: Резултати (излезни резултати), под „Резултат за испорака“, од проектот “Воспоставување на интегриран систем за здравствена заштита за мајките и децата во Република Македонија”, во прилог Ви ги доставуваме бараните информации кои се дел од документот: „Economic Impact Assessment Report & Social Impact Assessment Report“.

Напоменуваме дека документот во прилог е во работна, нефинална верзија во Развојната фаза на проектот и негово финализирање требаше да следи во Имплементационата фаза, која не се случи. За појаснување, развојната фаза отпочна во декември и траеше до јуни 2014 година. Со оглед на фактот што во Октомври 2015 год, Агенцијата одговорна за следење на ОРИО програмата на Кралството Холандија не го одобри продолжувањето на проектот во следната Имплементациона фаза, податоците и документите од проектот, преминаа во сопственост на Министерството за здравство и се користат исклучиво за интерна употреба.

Подготвил:  
В.Салевска Трајковска

Копија до:

- Комисија за заштита на правото за слободен пристап до информациите од јавен карактер
- А. Георгиевска
- Службено лице за посредување со информации
- Архива

ЗАМЕНИК МИНИСТЕР  
М-р Јовица Андовски









Прилог:

### 3. Economic Impact Assessment Report

This report starts with formulating the situation "without" the project (ch 3.1), followed by the "with" situation (ch 3.2). The economic impact and the economic internal rate of return (eIRR) are identified (ch 3.3). In the next chapter the indirect impacts of the project are explained, followed by 'private sector development' (ch 3.4), 'impact on employment' (ch 3.5). The report is concluded by the 'impact on SME's' (ch 3.6).

In the previously published Report on Research Topics, in relation to this project (Finance for Health Care, June 21st, 2013), a survey was carried out to assess the socio economic status of geographic areas and in particular the population groups which will benefit from the project: the poor in general and minorities. This involved data collection for social and economic impact analyses, results of which are presented in this Social and Economic Impact Assessment Report. The analysis served as a baseline for impact measurement of the ORIO project.

#### 3.1 The "without" situation

This project aims to set up an integrated system of MCH care services for improved health outcomes in the Republic of Macedonia. The project focuses on three elements of the Macedonian health care system as follows:

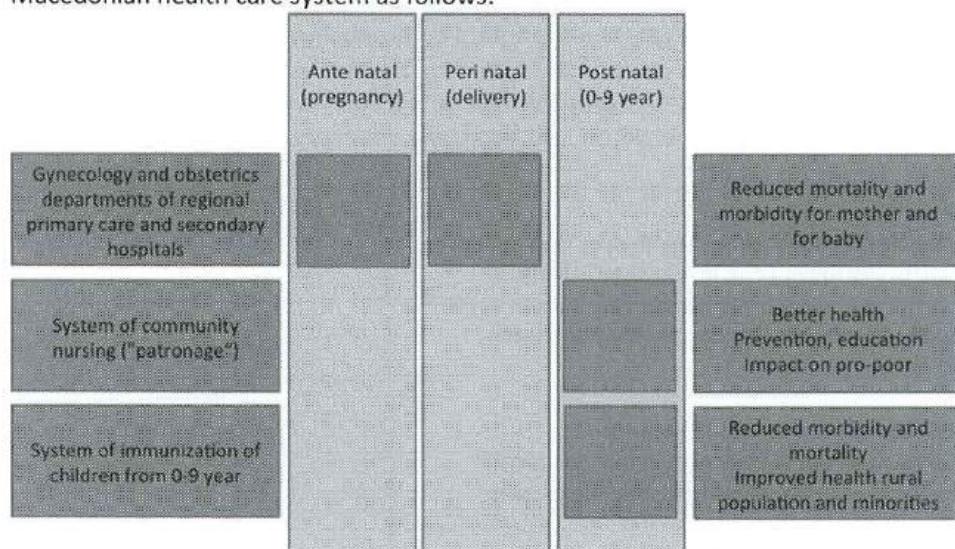


Figure 1 scheme with the focus of the ORIO project (source: F4HC/ EconoVision)

1. Modernization of G&O and neonatology departments of regional secondary hospitals and maternities in health centres;
2. Rationalisation of the system of preventative health care and immunization of children from 0-9;
3. Improving the system of community nursing ("patronage") during and after pregnancy.





The project aims to improve the health care infrastructure and operational conditions for the delivery of adequate health care services and the introduction of new and modern medical equipment and technology in the whole country. The strategy of the project is to bring about a shift from treatment at tertiary care centres to secondary and primary care delivery at a regional and local level. Thus, significant savings in health care delivery cost can be accumulated as expensive tertiary care is replaced by much lower cost of services at secondary and primary level. Within this approach special emphasis is put on the strengthening of the patronage nursing system as the key link between in particular vulnerable population groups and the primary health care system.

Two types of direct economic effects can be distinguished:

- a) Cost efficiency: same health care at lower cost levels;
- b) Effectiveness: reaching more patients with the supply of health care.

The health care system will perform more cost efficient ("the same outputs with lower costs", impact<sub>A</sub> in Figure 14) and more effective ("better value for money", impact<sub>B</sub> in Figure 14) by treating patients at the appropriate level in the system rather than the present over utilization of the tertiary, more expensive higher level in the system. The project will have an impact on the Macedonian life expectancy, as changes in antenatal and infant mortality have impact on life expectancy. It will also reduce the incidence of disabilities and the amount of "sick days" as a consequence of better conditions of the process of delivery.

Improved health status of mothers and children Fewer sick days and faster recovery (women often have complications) will have a positive effect on productivity and on participation in the production process, in all sectors of the economy (formal and informal). The current labour participation rate of women is 49% (for men it is 65%).<sup>1</sup> Lower mortality, disabilities and sick days of mothers and children will positively influence the size of the labour population.

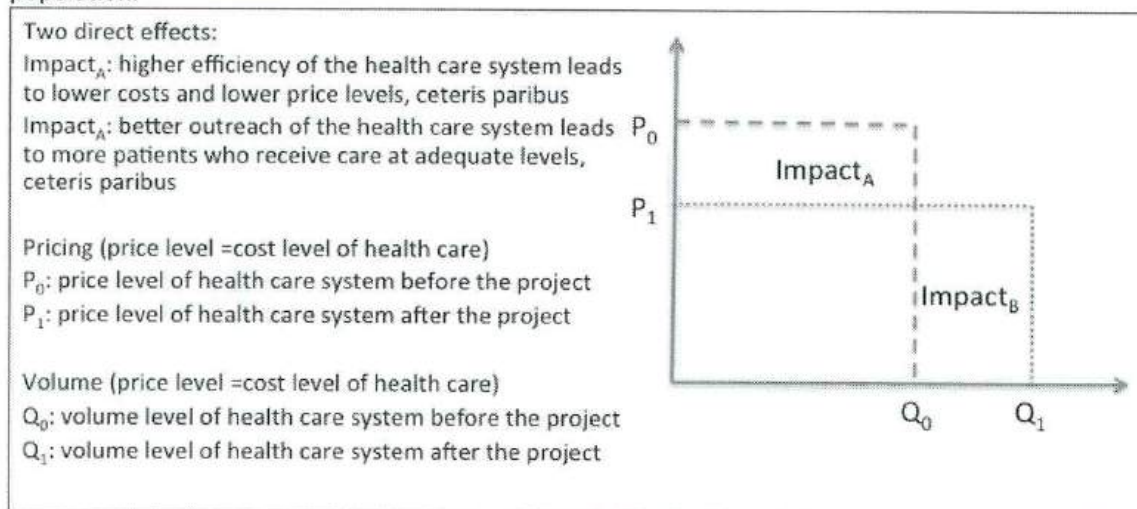


Figure 2 Two direct effects (source: F4HC/ EconoVision)

The "without" situation is defined as the situation when the project will not take place. The "without" situation acts as a reference scenario. To be able to develop this scenario, one needs to identify the (main) envisaged impacts of the project. The parameters that will be affected by the project are:

<sup>1</sup> UNICEF (2009)





Investment in the health sector has been low and insufficient.<sup>2</sup> Total health care expenditure as a percentage of gross domestic product (GDP) in the country amounted to 4.6% in 2010.<sup>3</sup> This represents a significantly lower figure than that of most of the other former-Yugoslav countries and the EU (see figure 14).

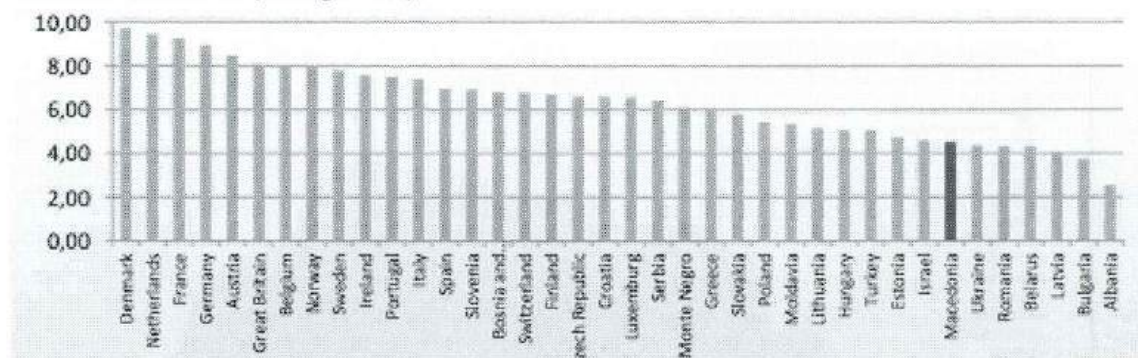


Figure 3 Public expenditures for healthcare in Europe (source Health Insurance Fund Macedonia, 2012)

Macedonia has a compulsory health insurance system that provides universal coverage. The current benefits package is considered comprehensive.

The effectiveness and the efficiency of the operations of the health care system are believed to be suboptimal. This is mainly due to poor utilization of primary and secondary care and overutilization of tertiary care. This applies to the performance of the health care system as a whole and also to the MCH sector within the system. The management of the system would need improvement as well as investments in hard and software to be planned together.

The health care system has a capacity of about 10,000 beds. Skopje is supplied with about 4,700 beds.<sup>4</sup> The share of beds in the tertiary section is very high (see figure 15) and its utilization degree is also high (60-80%). According to expert opinion and WHO a share of 1-2% of deliveries at tertiary level is normal. Almost 50% of Macedonian bed capacity is at the tertiary care level, the obvious conclusion is that this tertiary section is too large in size and skewed towards expensive care.

Health care delivered by 15 regional general hospitals, is relatively easily accessible in terms of travel costs and geography (90% of population is able to get to health services in less than 30 minutes travel distance).



Figure 4 Number of beds, primary, secondary and tertiary health care (source: Ministry of Health, Republic of Macedonia, 2007)

Figure 16 shows where the health centres with immunization units are situated within Macedonia. The numbers on the map correspond with the listing of locations on the left

<sup>2</sup> Gjorgjev, D. (2006)

<sup>3</sup> Health Insurance Fund of Macedonia (2012 a)

<sup>4</sup> Ministry of Health, Republic of Macedonia (2007)





side. The same reference numbers have been used in Figures 17, 18 and 19. In all figures the numbers are used consistently.

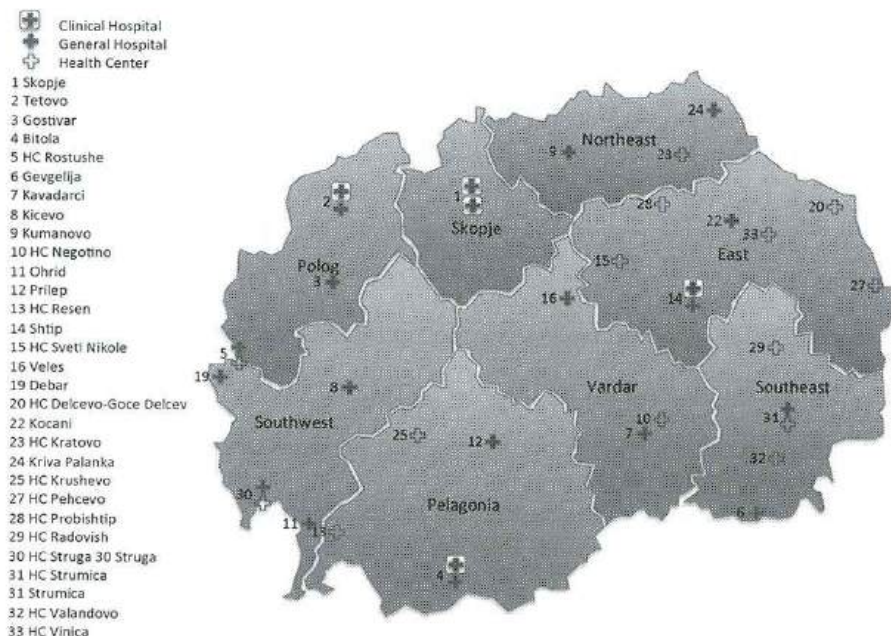


Figure 5 Health centers with immunization units in Macedonia (source: F4HC/ EconoVision)

In terms of MCH service indicators, Macedonia performs less well in comparison with neighbouring countries and falls considerably short of European standards.<sup>5</sup> This dismal situation can be attributed to many factors, but inadequate quality of antenatal (care during pregnancy), perinatal and postnatal care (care for infants) is a major contributing factor.

To summarize, the health care delivery system in MCH, which now exists, is one of:

- Overconsumption of not needed treatment at tertiary level and corresponding redundant cost to the health care system and to the insurance and national budget;
- Low performance utilization at the level of the community, primary, and secondary level. Poor quality makes patients wanting to be taken care of at the highest level because at this level the best care in the country is available;
- Minorities and poor people are underserved because they do not know their way in the system of free healthcare and lack appropriate help seeking behaviour;
- Too low immunization coverage rate of especially minorities and the poor;
- Need for upgrading level of know-how and skills of staff;
- Inadequate management of the health care delivery system in general and of the patronage nurses system in particular;<sup>6</sup>
- Poor state of equipment and facilities.

<sup>5</sup> For more details see chapter 2.8

<sup>6</sup> For more details see chapter 2.9





1 Central Skopje  
5 Rostuse  
9 Kumanovo  
11 Ohrid  
13 Resen  
14 Shtip  
20 Delcevo  
22 Kochani  
24 Kriva Palanka  
25 Krushevo  
27 Pehchevo  
31 Strumica  
32 Valandovo  
33 Vinica

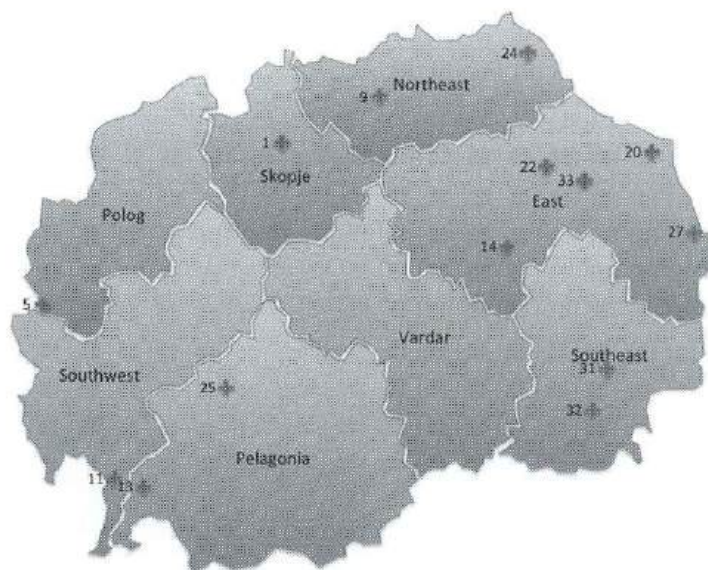


Figure 6 Health centers with maternities in Macedonia (source: F4HC/ EconoVision)

### 3.2 The "with" situation

The MCH system will be much improved after completion of this project, which will lead to considerable economic and health effects. The project will lead to an increased efficiency of the system and will facilitate the outreach and will impact in particular disadvantaged and vulnerable population groups and categories. This translates into monetary/economic gains at a nationally aggregated level.

The project will lead to an improved system:

- (1) Efficient allocation: appropriate care at the appropriate level;
- (2) Availability: more capacity at regional level through modernising of facilities;
- (3) Coverage: better outreach as result of the investment in vehicles and better accessibility for clients, in particular the poor, as every municipality will have its service levels;
- (4) Result: better results through higher quality of service rendered;
- (5) Cost effectiveness: system of community nursing.

Dimension of the impact	Size of impact	Explanation
Volume (number of interactions)	15%-30% increase	Improved access, vehicles, decentralisation
Type of treatment (prim-sec-tert HC)	subst. shift from 3 <sup>rd</sup> via 2 <sup>nd</sup> to 1 <sup>st</sup> care	Increased capacity at primary care
Cost per treatment	substantial reduction	shift to primary health care
Health status	improvement	better coverage of population
Life expectancy	increased	more and better care by improved access
Non actives due to illness	decreased	preventive working





Figure 7 A range of effects (source: F4HC/ EconoVision)

Without the project, in view of historic trends in health care delivery in MCH and the low level of investment in health care overall, improvements in MCH will be difficult to achieve in general and even more difficult in low-income level groups or minority groups.

- 1 HC Skopje
- 2 HC Tetovo
- 3 HC Gostivar
- 4 HC Bitola
- 5 HC Rostushe
- 6 HC Gevgelija
- 7 HC Kavadarci
- 8 HC Kicevo
- 9 HC Kumanovo
- 10 HC Negotino
- 11 HC Ohrid
- 12 HC Prilep
- 13 HC Resen
- 14 HC Shtip
- 15 HC Sveti Nikole
- 16 HC Veles
- 17 HC Vevcani
- 18 HC Berovo
- 19 HC Debar
- 20 HC Delcevo-Goce Delcev
- 21 HC Demir Hisar
- 22 HC Kocani
- 23 HC Kratovo
- 24 HC Kriva Palanka
- 25 HC Krushevo
- 26 HC Makedonski Brod
- 27 HC Pehcevo
- 28 HC Probishtip
- 29 HC Radovish
- 30 HC Struga
- 31 HC Strumica
- 32 HC Valandovo
- 33 HC Vinica

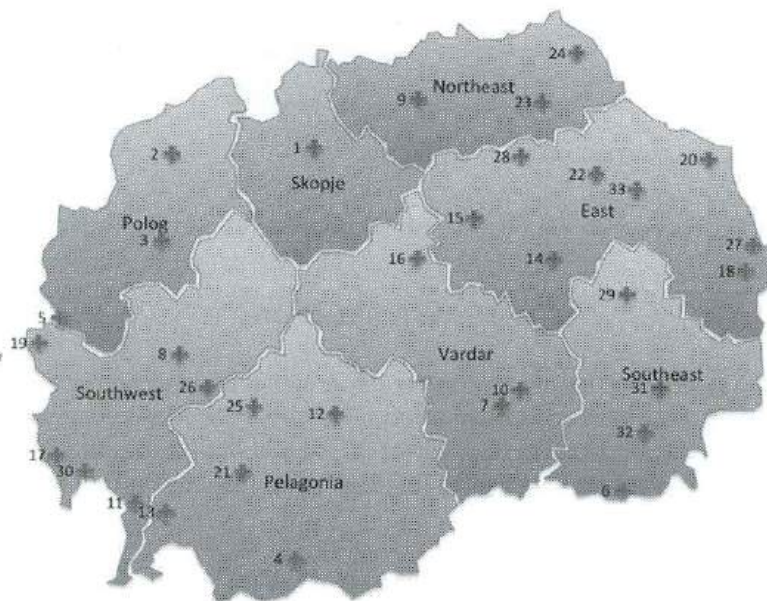


Figure 8 Proposed investment in immunization units and patronage services and proposed vehicle allocation by ORIO (source: F4HC/ EconoVision)

There are direct and indirect effects to be expected from this project. In the following we will focus firstly on the direct effects as they can be monetized best.<sup>7</sup> The indirect will be dealt with in a more qualitative way.<sup>8</sup>

In order to quantify the direct impacts of the project two components can be used:

- a) Cost efficiency: same health care at lower cost levels;
- b) Effectiveness: reaching more patients with the supply of health care.

The most obvious direct effect is the saving in healthcare expenditures due to treatment of the right cases (i.e. normal pregnancies) at the right level in the healthcare delivery system (i.e. primary health care level). Another direct effect is the higher coverage of the population by a better out reach by the health care system. Without doubt the combination of more people supplied with ante, peri and post natal care, including immunization, will lead to health gains: the general health status, mortality and morbidity rates will be positively influenced.

<sup>7</sup> See chapter 3.3.1

<sup>8</sup> See chapter 3.3.3





- Clinical Hospital
- General Hospital
- Health Center
- 1 Skopje
- 5 HC Rostushe
- 9 Kumanovo
- 11 Ohrid
- 13 HC Resen
- 14 Shtip
- 20 HC Delcevo-Goce Delcev
- 22 Kocani
- 24 Kriva Palanka
- 27 HC Pehcevo
- 31 HC Strumica
- 32 HC Valandovo
- 33 HC Vinica

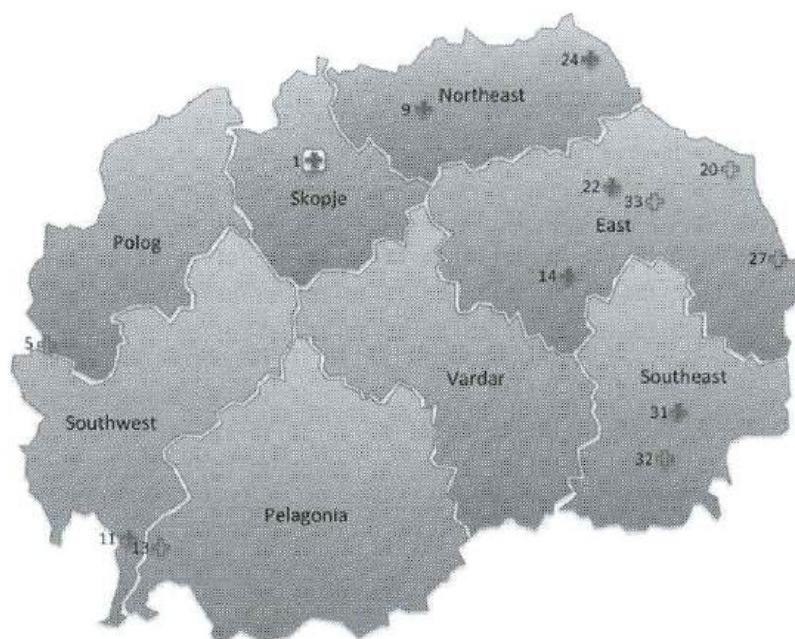


Figure 9 Proposed investment in maternities by ORIO (source: F4HC/ EconoVision)

### 3.3 The economic impact

#### 3.3.1 Quantification of direct benefits

To quantify the direct impacts of the project we distinguish two components: a) cost efficiency and b) effectiveness.

##### (a) Cost efficiency

In the Republic of Macedonia there are 23,500 births annually of which 7,000 in tertiary care (30%), 4,700 in secondary care (20%) and 11,700 in primary care (50%). This project will result in a considerable shift from third to second to first care. Normally, tertiary care is only indicated in high-risk pregnancies and these may comprise only two percent of all pregnancies. The normal allocation would be: 2% in tertiary care, 15% in secondary care and 84% in primary care. We assume that the gap between the Macedonian and the WHO rates will be filled partially (50%). Using this data it means that out of 23,500 annual deliveries, in general only about 3,500 will be high risk and consequently will be dealt with on tertiary level. That means a reduction of 8,500 on the present number of pregnancies dealt with in the tertiary level.

Our estimate for the Republic of Macedonia during the 20 project years is: 23,500 births annually of which 3,500 in tertiary care (15%), 4,700 in secondary care (20%) and 15,300 in primary care (65%). The cost per delivery at tertiary care is about 2,000 Euro, while at secondary level the average cost is about 600 Euro and at primary level about 200 Euro per delivery.<sup>9</sup>

The total savings of shifting delivery care from tertiary to secondary and to primary care could be as much as Euro 6.3 million per annum.

<sup>9</sup> Based on expert opinion and pricing list of Health Insurance Fund of Macedonia (2012)





(b) Effectiveness of the system

The nature of the project is that when implementation leads to more care supplied, the effects will be felt directly. The increased coverage will lead a reduction of the rates of perinatal, infant and maternal mortality. To quantify the impact we assume that the gap between the Macedonian and the EU rates will be filled partially (50%).

	EU average	Macedonia average before the project	Macedonia average during project (20 y)
Perinatal mortality	6 per 1,000 live births	14.6 per 1,000 live births in 2007	10.3 per 1,000 live births in 2007
Infant mortality	3.9 per 1,000 live births in 2011 (Eurostat)	9.8 per 1,000 live births in 2012 (Eurostat)	6.9 per 1,000 live births in 2012
Maternal mortality	6.0 Per 100.000 live births in 2010 (eurostat)	16.7 per 100.000 live births in 2008 (the Lancet)	16.7 per 100.000 live births in 2008 (the Lancet)

According these assumptions, the impact of the project in terms of lives saved would be annually 101 lives through the prevention of perinatal death, plus 69 lives through the prevention of infant death, plus 1 life through the prevention of maternal death.

In total this results in 172 lives saved per year. To monetise this effect we applied the "value of life's saved" method. The average monthly gross wage was around 31,000 Macedonian dinars per employee in 2013.<sup>10</sup> When converted to euro's this is approximately equal to a yearly income of 6,000 euro per employee. With this salary and a 57% labour participation rate as in 2013, the productivity gain will be Euro 592,000 for the first year and two times this amount for the second year as a second group can be added to the first group. This effect continues throughout the project.

### 3.3.2 Economic internal rate of return (eIRR)

The economic analysis values are related to the larger impact of the project on the national economy. The outcomes of the economic analysis, i.e. the economic Internal Rate of Return (eIRR), reflect the economic value of the project. The eIRR is defined as the (maximum) Interest Rate that can be paid for loan facilities that finance 100% of the investment, assuming that net benefits are used to pay the debt service (interest plus repayment) as soon as revenues become available.

The economic analysis for this project is conducted at market prices and without subsidies. The two main impact factors of this project are a) cost efficiency and b) effectiveness. These two factors have been calculated as described in the previous paragraph (prices excluding inflation). In the case of this project, the eIRR, with a twenty-year project horizon, amounts to 50 percent. The economic value lies in the external benefits, as explained before. A sensitivity analysis has been performed.

The basis for the economic value is contained in the two aforementioned components (direct effects). But the wider economic impact (indirect effects, see CH 3.3.3) can be assumed to go beyond these factors. The overall health status of a population is a strategic factor in every society, especially when acute shortcomings in the provision of health care seriously interfere with the further social-economic development of the country in question.

<sup>10</sup> State Statistical Office of the Republic of Macedonia (2014) [http://www.stat.gov.mk/OblastOpsto\\_en.aspx?id=2](http://www.stat.gov.mk/OblastOpsto_en.aspx?id=2)





#### Sensitivity analysis

eIRR base case is 50%

- a) eIRR is 106% (assumption that the project will lead to death rates equal to the EU average and an allocation of deliveries (to tertiary, secondary and primary health care) equal to WHO standards.

Both scenarios are much above the benchmarks. This benchmark is set at the interest rate of government bonds of Macedonia, which yield at 4-5% pa.<sup>11</sup> As such this is a very attractive project from economic point of view.

### 3.3.3 Indirect impacts of the project

The ORIO-project under consideration would be an essential part of the concerted efforts to reduce mortality as well as to reduce illness and longer term disabilities of mother and child in particular among vulnerable population groups.

Improved population health will lead to higher productivity: more women surviving, more children surviving, fewer days lost due to illness, less disability and higher labour participation. Consequently, increased quality of care (as result of the project) will lead to less disease, side effects, associated disability or death. This leads to save health care costs (namely avoided costs of treatment/health care) and avoided economic costs (travel, absenteeism, loss of productivity) sometimes referred as to "intangible costs".

According to Dunkelberg (2007) the health of the children is the most important determinant for mothers participating in the labour market. This suggests that as the introduction of the project improves the health of children, this will result in increased labour participation of women.<sup>12</sup>

These impacts we did not quantify in our analyses. They may be indirect but are certainly not an unimportant part of the facilities installed under this project and will also be available for other medical treatments not directly connected to MCH. These benefits can be generated without extra investments.

### 3.4 Private sector development

By improving the health of people, the employability and productivity of the population, in this case in particular women, will increase. In the longer term improved health conditions for children will have a positive impact on their development and thus will influence their future schooling/education and labour participation and productivity.

The project will specifically focus on improving accessibility to MCH health care services in rural and poor communities, where dependency on the informal sector is still considerable. (Self) employment in remote areas is mainly driven by small enterprises. The government is promoting the development of small businesses in regions where there are unutilized capacities and labour.<sup>13</sup> In rural areas it is important to develop an entrepreneurial spirit to involve a wider spectrum of households to gradually shift from traditional crafts and occupations towards involvement in modern industries.

In small private family businesses the whole family is participating. If the wife's input falls away or is diminished due to health problems with children or with the wife herself, this has an immediate impact on the successfulness of these family businesses. These are difficult to quantify and will differ from sector-to-sector and business-to-business. But is generally

<sup>11</sup> Financial Times, September 12, 2013

<sup>12</sup> Dunkelberg, A. and Spiess C.K., DIW Berlin (2007)

<sup>13</sup> Government of the Republic of Macedonia (2000) p.9





accepted that the impact may be substantial. Taking into account that this Project can be expected to contribute to the success of these small family-run businesses.

The Government of Macedonia is considering breaking away from the concept of development of urban centres and embarking on the concept of "space development" with a view to reducing regional and local differences in terms of infrastructure and economic development.

It is difficult to estimate how many private companies will profit from this ORIO project. Our estimate is that the ultimate contribution to the Macedonian economy, the number of Macedonian private companies benefiting from this project may be substantial.

Private sector development of the project should be seen in the light of companies having to manage their sick leave days; for them the cost of human capital is a very important production factor. It is generally accepted that private sector cannot develop without trained staff and that the sector needs energetic and healthy people on the job.

These factors are not to be taken lightly and are as such an important factor of impact, which this project is going to bring about.

### 3.5 Impact on employment

The impact on employment is defined as the volume of employment created during the implementation phase and the operational phase.

In the implementation Phase the employment will come from construction and installation works. This will involve approximately 50 man-years.

The project will result in four effects with regard to employment in the operational phase of the Project:

1. The entire staff at G&O Department, neonatology, vaccination and patronage nursing system will be re-trained in modern standards and practice of MCH in their respective fields;
2. A number of new positions will be created to reflect the adoption of modern standards and practices in MCH care. Some of these positions will be created to operate and maintain new equipment. New staff positions will be created at the regional hospitals and the specialised neonatology clinics;
3. Regarding vaccine management a number of EPI managerial post will be created to better deal with the regional supply of vaccines.
4. In the patronage nursing system a new managerial layer (case manager) will be created to better manage the system and improve its standing in the Macedonian health care system

In addition, in the implementation phase a large number of people will be working on the project. This will amount to 300 people.

During the O&M phase the employment created will be (almost) zero, as the increase in patients will be combined with an increase in efficiency.

	Employment	Quantity
1	Total number of direct jobs created in implementation phase	350 estimated
2	Total number of direct jobs created in	0 estimated





	operation and maintenance phase	
3	Percentage of women who will be employed	At present 70% of employees in the Macedonian health care system are women and almost 100% in MCH services. This will remain the same upon implementation of this project.

### 3.6 Impact on SME's

The project mainly comprises renovation of regional hospitals and modernization of G&O and neonatology wards, investments in the vaccination supply line and the patronage system as well as the purchase or lease of 77 vehicles.

According to the Statistical Yearbook of Macedonia 2013 the total number of registered business entities was 74,000 of which 53,000 were micro and 20,000 were small enterprises.<sup>14</sup> The remaining 1,000 were medium or large companies of which more than half (550) are established in Skopje. Skopje's share in the combined total of 73,000 micro and small businesses is about a third.

For the renovation local companies will be deployed to supply building materials and services in the construction sector (civil\electrical/mechanical works, plumbing, landscaping, utilities etc.) as well as for the supply, installation and maintenance of medical equipment. Most of the local construction companies that will be involved in the implementation of the project will be small and as such fall under the definition of SME. In the operational phase of the projects local companies will be contracted for the maintenance and repair of the equipment and the building facilities.

The total value of construction in the project is estimated in the region of Euro 2.7 million with an important value added for local SME's. The total value of equipment deliveries to the project is estimated at almost Euro 6 million with a lower value added due to the fact that most equipment will be imported. It is estimated that app. 25% of the project budget will flow to SME's. At this stage of the project this can only be an estimate as all procurement and precise project definition still remains to be carried out during the development phase of the project.

First of all the local construction works will be performed by local construction companies and suppliers. These all fall within the definition of SME. In the O&M phase all deliveries and services to the project will be from local SME's.

Determine which of the goods and services (where possible, refer to bill of quantities) that are procured throughout the project are locally available and substantiate if, and why, they are likely to be sourced from local SME's.







✓ ДО  
ЗДРУЖЕНИЕ ЗА ЕМАНЦИПАЦИЈА, СОЛИДАРНОСТ И  
ЕДНАКВОСТ НА ЖЕНИТЕ - ЕСЕ  
Ул. Максим Горки бр. 20/1-4  
Скопје

Бр. 11-1486/1  
10-03-2017 2017 година  
Скопје

Министерство за здравство

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1000 Скопје,  
Република Македонија  
Тел. (02) 3112 500  
Сайт: [www.moh.gov.mk](http://www.moh.gov.mk)

Врска: Ваш бр. 0801-1511/17-29 од 17.02.2017

**Предмет:** Одговор на Ваша жалба

Почитувани,

Во врска со Вашата жалба доставена до Комисијата за заштита на правото за слободен пристап до информации од јавен карактер под горниот број во врска со претходно доставено барање со кое ја барате следната информација:

„Испратете ни копија од подготвениот „Извештај од анализата на родовиот развој на приватниот сектор, развојот на малите и средни претпријатија во корист на сиромашните, и другите релевантни општествени прашања и влијанија“ наведен под активност 7 од додаток 1. План на влезни материјали и излезни резултати за Развојната фаза, во поглавјето 5: Резултати (излезни резултати), под „Резултат за испорака“, од проектот „Воспоставување на интегриран систем за здравствена заштита за мајките и децата во Република Македонија“,

во прилог Ви ги доставуваме бараните информации кои се дел од документот: „Economic Impact Assessment Report & Social Impact Assessment Report“.

Напоменуваме дека документот во прилог е во работна, нефинална верзија во Развојната фаза на проектот и негово финализирање требаше да следи во Имплементационата фаза, која не се случи. За појаснување, развојната фаза отпочна во декември и траеше до јуни 2014 година. Со оглед на фактот што во Октомври 2015 год, Агенцијата одговорна за следење на ОРИО програмата на Кралството Холандија не го одобри продолжувањето на проектот во следната Имплементациона фаза, податоците и документите од проектот, преминаа во сопственост на Министерството за здравство и се користат исклучиво за интерна употреба.

ЗАМЕНИК МИНИСТЕР  
М-р. Јовица Андовски



Подготвил:

В.Салевска Трајкова, Државен советник

Копија до:

- Комисија за заштита на правото за слободен пристап до информациите од јавен карактер
- А. Георгиевска, Службено лице за посредување со информации
- Архива



Прилог:

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<sup>1</sup> Government of the Republic of Macedonia (2000) p.9





According to the Statistical Yearbook of Macedonia 2013 the total number of registered business entities was 74,000 of which 53,000 were micro and 20,000 were small enterprises.<sup>2</sup> The remaining 1,000 were medium or large companies of which more than half (550) are established in Skopje. Skopje's share in the combined total of 73,000 micro and small businesses is about a third.

For the renovation local companies will be deployed to supply building materials and services in the construction sector (civil\electrical/mechanical works, plumbing, landscaping, utilities etc.) as well as for the supply, installation and maintenance of medical equipment. Most of the local construction companies that will be involved in the implementation of the project will be small and as such fall under the definition of SME. In the operational phase of the projects local companies will be contracted for the maintenance and repair of the equipment and the building facilities.

The total value of construction in the project is estimated in the region of Euro 2.7 million with an important value added for local SME's. The total value of equipment deliveries to the project is estimated at almost Euro 6 million with a lower value added due to the fact that most equipment will be imported. It is estimated that app. 25% of the project budget will flow to SME's. At this stage of the project this can only be an estimate as all procurement and precise project definition still remains to be carried out during the development phase of the project.

First of all the local construction works will be performed by local construction companies and suppliers. These all fall within the definition of SME. In the O&M phase all deliveries and services to the project will be from local SME's.

Determine which of the goods and services (where possible, refer to bill of quantities) that are procured throughout the project are locally available and substantiate if, and why, they are likely to be sourced from local SME's.

#### 4.1.Social issues

##### Gender issues

This project, by its very nature, is very much gender focussed and its effects are to be felt directly and immediately by the women in the service regions of the hospitals, clinics and patronage nursing stations. As the project will result in better access of women and children to good quality health care, women are the key beneficiaries. Improved health for both women and children will positively impact employability and productivity of women (less sick days, faster recovery, less sick members of the family to attend to etc.).

##### Other social groups of the population

The minorities in the Republic of Macedonia especially Roma and Albanians benefit from the project as they are, generally, under served with health care.

There are no adverse impacts social aspects to be expected.

##### Risk and Opportunities





The Project opens new opportunities for a full coverage of the population especially in rural areas and among vulnerable and socially excluded population groups, through professionalization of patronage nursing staff, standardized outreach approach and effective case management. The nurses will visit homes more frequently and inform people in their home environment about healthy life styles, hygiene, food and preventive health care and do (antenatal) check-ups and provide limited curative services. The improved transport modalities provided by the Project will allow for a higher frequency of visits in the towns, villages and remote areas. This will create the opportunities to be more pro-active in capturing vulnerable population groups and will also result in added benefits in general health in addition to an improvement of the MCH situation only.

The project builds on previous efforts over the past 25 years to modernize health care and make it available to ever larger parts of the population including vulnerable population groups. The fact that health incomes, concurrently, have systematically improved over this period suggests that risks are minimal as given that this project operates along policy lines that receive broad international expert support.

A main impetus of the Project is to improve MCH performance and statistics pertaining to ante, peri- and postnatal morbidity and mortality in Macedonia in order be comparable to what has been defined by the WHO and the EU as the European average. Thus, the Project is compliant with international standards formulated in legislation. In addition, the Project conforms to Macedonian legislation in the field of health targets and health care delivery objectives.

The Project will fall within the existing organisational set up of the Macedonian public healthcare system. As part of the training in the Project specific attention will be given to the health and safety issues in dealing with this type of health care. Also specific attention will be given to the management of medical waste, which the Project's operation will produce.

Child labour is not involved in these Projects at all, nor in the construction, nor in the operation. Simply because this is not allowed by law in Macedonia but also because the specifics of the Project will not allow for child labour to be involved as the Project is technically too sophisticated for this to happen.

There will be no security people employed in the Project.

#### 4.2. Pro poor impact

Lack of quality disaggregated sub-national data and national baseline data precludes a comprehensive and up to date analysis of how and to what extent the poor across the entire spectrum of disadvantaged and vulnerable population groups of in Macedonia are going to benefit from the project. Given the nature of this project (improvement of mother and child health care) the relevant unit of analysis are women, infants and children up to the age of five in terms of direct impact of the project. One can thus also argue that this unit in fact comprises households since the health situation of the individuals specifically addressed by the project indirectly but positively affects all the members of households in a socio-economic sense. As





such the very nature of the project, i.e. mother and child health care, implies that in terms of direct and indirect impact the household in question is a relevant unit for measuring as well. Relevant in this connection is that the correlation between a woman's state of reproductive health and her ability to contribute to family income (mostly via the informal economy), to see to the health situation of her children and stimulate their education is generally accepted.

The project seeks to optimize child vaccination rates and reduce MCH mortality rates towards levels prevalent in the EU by improving quality and accessibility of MCH care at the primary health care level which should, amongst others, bring about a better balance and interaction (communication) between the various medical interventions in the regular MCH care chain at primary health care level. At present the existing patronage nursing system in Macedonia, as the key entry point for mothers belonging to the disadvantaged and vulnerable population groups, is biased towards postnatal care at the expense of antenatal care. Infant mortality has been on a continuous overall decline despite up and downs but it remains intimately connected with socially disadvantaged and vulnerable women. Since 2012 infant mortality has been on the rise again. Antenatal care is generally seen as an effective method for improving pregnancy outcomes although the effectiveness of specific antenatal care programmes in terms of reducing infant mortality in socio-economically disadvantaged and vulnerable women has not been conclusively established. Still, it has been found that in particular nurse home visitation and case management as part of a prenatal care package have a positive effect on MCH indicators.<sup>3</sup> Comprehensive home visitation and case management have been identified as fundamental flaws in the performance of Macedonian MCH care at community (patronage) level.<sup>4</sup>

The present lagging MCH indicators correlate with sustained poverty, rampant economic inequality and social exclusion. Although relatively stable as a percentage of the total population, poverty rates vary significantly throughout the country, across the rural/urban divide and among ethnic groups, depending on factors such as the number of household members, the presence of children within the household and employment and educational status.<sup>5</sup>

Given the complexities in the correlation between socio-economic indicators and MCH outcomes and the dearth of useful data in this regard, and in order to arrive at an approximate estimate of the number of poor women and new-borns who would benefit directly from the project we propose to equate the number of new-borns with the number of women giving birth. With 23,500 children born with skilled attendance at delivery in 2012 this means that given a poverty rate of 30% (rounded off), roughly one-third of the mothers concerned were poor, i.e. 7,500 poor women as a conservative estimate.<sup>6</sup> To this number one should add the new-borns themselves, which leads to an outcome of 15,000 direct beneficiaries of the project. This number accumulates annually by a factor four if we would extend postnatal care including vaccinations for each new-born and concerned mother up to the age of five in light of the under-five-mortality rate as a relevant indicator of mother and child health.

<sup>3</sup> Hollowell (2011)

<sup>4</sup> UNICEF (2011 a)

<sup>5</sup> UNICEF (2008)

<sup>6</sup> State Statistical Office of the Republic of Macedonia (2013 a)





This means that if the number of new-borns each year would remain stable over a four-year period  $15,000 + 15,000 \times 5 = 150,000$  new-borns and their mothers are beneficiaries (in each cycle of four years). Within this cycle of 4 years we have to add the number of new-borns and their (poor) mothers in each of the concerned 4 years in order to arrive at an accumulated number on an annual basis. In this manner we arrive at an estimate, on an annual basis, of the total number of poor direct beneficiaries of improved and better accessible MCH care.

In terms of poor indirect beneficiaries, i.e. members of the family of the poor mother, we have to keep in mind that poverty in Macedonia is correlated with large family size. In concrete terms, 48.5% of the poor live in households with five or more members.<sup>7</sup> However, let us assume conservatively that 7,500 poor mothers on average have two members in the (core) family (husband and one child). This leads on an annual basis to a total of indirect poor beneficiaries of 15,000 who will remain in this picture for four years.

Lack of access to proper MCH care and immunization is mainly the result of ignorance, lack of documentation and conservative attitudes resulting from socio-economic status and/or ethnic background of the concerned persons. Financial affordability is not the main factor here as all public health maternity hospital services are free of charge regardless of health insurance status. However, opportunity costs (transport, absence from home, lost time for economic activity etc.) may be playing a role in the limitation of access to services for socio-economically marginalized groups.<sup>8</sup> For these reasons the ORIO-project in question is mainly about accessibility and not affordability. An important factor in limiting access to MCH care has been the lack of pro-active outreach through the concerned health facilities. A particular feature of the ORIO-project is the emphasis on comprehensive outreach to be achieved by improved training and professional development as well as the proposed purchase of 77 vehicles as a major investment within the project. The project is part of an approach, endorsed by the EU in preparation for Macedonia's accession to the EU, to decentralize the health sector as part of the fight against the adverse effects of poverty and social exclusion.<sup>9</sup>

From focus group discussions with a socio-economic mix of beneficiaries it appears that patronage nurses are well known and accepted in the communities.<sup>10</sup> However, the picture is not homogeneous on the national level in terms of experiences, quality of services, range and frequency of services. Beneficiaries seem generally satisfied with the current supply of community nursing services although quite a few of them ask for services outside the present package. Improved health of mother and child should in principle directly and positively affect the productive capacity of mothers and, indirectly, increase educational opportunities for children, which will affect their future income situation. Improving health for mothers and children are part of the Millennium Development Goals (MDG's) meant to break the path for the alleviation of extreme poverty by 2015. Most of the poor are active in the informal

<sup>7</sup> State Statistical Office of the Republic of Macedonia (2012)

<sup>8</sup> Ministry of Health of the Republic of Macedonia (2010 b)

<sup>9</sup> EC (2013)

<sup>10</sup> UNICEF (2011 a)





economy for which no income statistics are available. An important non-labour related source of income are remittances from abroad, which are often not declared. The project is meant to facilitate access for all, and in particular the poor and vulnerable, to the full range of MCH services on the antenatal-postnatal care continuum (maternity wards of health centres and hospitals, patronage nursing services and immunization points). This will give mother and child the best possible guarantee for a healthy life as a result of the project. As such the project, once completed, will in principle fully meet demand of typical individuals.

Major reliability indicators in this connection are the number of four antenatal visits, which is prescribed by WHO and the rate of skilled attendance at birth as well as the increase of the percentage of infants receiving full vaccination by 12 months and subsequent decrease in the number of children receiving full vaccination by 18-29 months. Besides improving the quality of MCH care as such, the project is meant to bring this type of care within actual reach of disadvantaged population groups who, for various reasons including socio-economic status, had so far limited access to regular MCH care also at the level of community nursing. Increased access to MCH care is essential for the poor and un-educated in order to be lifted out of poverty and social exclusion with the help of an improved health status. The project is meant to provide MCH care to vulnerable groups at a level of availability and quality close to EU-standards.

The overall objective of the project is to improve the health outcomes for mothers, infants and children. The trickle-down effects of the project, i.e. a healthier, better educated and therefore more productive population, who will gain, as a result, better access to the labour market.





Бр.

11-1488 /

10-03-2017  
Скопје

2017 година

✓  
ДО  
ЗДРУЖЕНИЕ ЗА ЕМАНЦИПАЦИЈА, СОЛИДАРНОСТ И  
ЕДНАКВОСТ НА ЖЕНИТЕ - ЕСЕ  
Ул. Максим Горки бр. 20/1-4  
Скопје

Министерство за здравство

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1000 Скопје,  
Република Македонија  
Тел. (02) 3112 500  
Сайт: [www.moh.gov.mk](http://www.moh.gov.mk)

Врска: Ваш бр. 0801-1511/17-31 од 17.02.2017

**Предмет:** Одговор на Ваша жалба

Почитувани,

Во врска со Вашата жалба доставена до Комисијата за заштита на правото за слободен пристап до информации од јавен карактер под горниот број во врска со претходно доставено барање со кое ја барате следната информација:

„Испратете ни копија од „Плановите/буџетите на оперативните приходи и трошоци, извештаите за финансиска одржливост, извештаите за комерцијална изводливост, за 10 години“, наведен во активност 8 од додаток 1. План на влезни материјали и излезни резултати за Развојната фаза, во поглавјето 5: Резултати (излезни резултати), под „Резултат за испорака“, од проектот “Воспоставување на интегриран систем за здравствена заштита за мајките и децата во Република Македонија”, во прилог Ви доставуваме копија од бараниот документ.

Напоменуваме дека документот во прилог е во работна, нефинална верзија во Развојната фаза на проектот и негово финализирање требаше да следи во Имплементационата фаза, која не се случи. За појаснување, развојната фаза отпочна во декември и траеше до јуни 2014 година. Со оглед на фактот што во Октомври 2015 год. Агенцијата одговорна за следење на ОРИО програмата на Кралството Холандија не го одобри продолжувањето на проектот во следната Имплементациона фаза, податоците и документите од проектот, преминаа во сопственост на Министерството за здравство и се користат исклучиво за интерна употреба.

Подготвил:

В.Салевска Трајкова

Копија до:

- А. Георгиевска

Службено лице за посредување со информации

- Архива

ЗАМЕНИК МИНИСТЕР,  
М-р Јовица Андовски





## Financial Plan

For the Project: “Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia”

under the ORIO facility (ORIO10/MK/02)

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The Netherlands, February 2014

To: the Ministry of Health of the Republic of Macedonia

By: Finance for Health Care VOF

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## Foreword

This report is part of the development phase of the project “Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia”, under the ORIO facility (ORIO10/MK/02).

For the development of the Financial Plan the team of Finance for Health Care has been in close contact with the Ministry of Health Care. In designing the Financial Plan for the Project, Finance for Health Care’s team applied its own experience and best practices and common sense to provide a model for the financial part of the Project. A model as the financial plan is, only provides a modelled version of the reality, i.e. in practise the figures may turn out to be different.

The Financial Plan provides the basis for the assessment of the financial sustainability and the non-commercial viability (OECD definition) of the Project. It is also a feed-in for the Economic Impact Assessment Report.

This report provides a financing plan for the Project as defined in the Basic Design Report. Please refer to the Basic Technical Design and Specifications Report, the Implementation Plan and the O&M Plan for further details.

The report is structured as follows:

- Introduction
  - General considerations and observations
  - The Project in relation to MoH present operations
- The Financial Plan spreadsheet model explained
  - Assumptions
  - Revenues
  - Costs of operating and maintenance
  - Depreciation
  - Taxes
  - Financing
    - Financing in the Implementation Phase
    - Financing in the O&M Phase
    - Alternative: ECA covered export finance facility
- Analyses of Financial Sustainability; fIRR
  - Time line
  - fIRR
- Analyses of Commercial non-viability as per OECD; cIRR
  - Time line
  - cIRR

In Annex 1 the ORIO format Spreadsheets for cash flow analyses are provided.

## Definitions and abbreviations:

CEDB:	Council of Europe Development Bank
cIRR	stands for “commercial internal rate of return” which is a calculation prescribed by the OECD and provides information on the so called (OECD) commercial non-viability of the Project
Development Phase:	the phase as defined under ORIO wherein the Project is developed in all its aspects under ORIO
F4HC	Finance for Health Care; consultant to MAA and MoH or the development of this Project
fIRR	stands for “financial internal rate of return”
Implementation Phase:	the phase as defined under ORIO wherein the Project is implemented; in this case the actual engineering, design, construction and delivery of the Project.
Input & Output Plan	is the plan which was drafted for define the content of the Development Phase and which has been annexed to the contract for the Development phase as signed between MoH and F4HC
IS:	International Supplier of the goods and services and party for the construction and installation works as well as the training and capacity building.
MoH:	Ministry of Health
MCH:	Mother and Child Healthcare
O&M:	stands for “Operations and Maintenance”
OECD:	Organisation for Economic Co-operation and Development
Operational Phase:	the phase as defined under ORIO wherein the Project is in full operation
ORIO:	Grant facility from the Netherlands Government
Project:	“Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia”, under the ORIO facility (ORIO10/MK/02)
Side Financing:	The financing of the part of the Project costs which is not financed by the ORIO grant
The Contract:	means the contract signed between the IS and MoH for the Implementation phase



## Introduction

### General considerations and observations

The project entails the expansion and modernisation of the MCH system in Macedonia. To achieve that the following will be implemented, financed, operated and maintained:

#### 1. Upgrading of maternities at regional hospitals

- Design, engineering, construction and delivery of renovation or new construction of facilities including needed equipment and training of staff at maternities at regional hospitals across Macedonia; project management services related to the construction process at the various hospitals, procurement of equipment and training  
Related Project Management services

#### 2. Immunisation and vaccination

- Design, engineering and renovation of immunization and vaccination facilities for children, delivery and installation of equipment and training of staff at vaccination and immunization points across Macedonia; project management services related to the construction process at the various vaccination and immunization points, procurement of equipment and training.

#### 3. Polyvalent patronage nursing service

- Design, engineering and renovation of community nursing stations facilities for children, delivery and installation of equipment and training of staff at community nursing stations across Macedonia; project management services related to the construction process at the various community nursing stations, procurement of equipment and training.

#### 4. Spare Parts, consumables and maintenance

- Design a spare part and consumable package to be delivered with the equipment;
- Design maintenance, reinvestment and repair program for 10 years operation of the equipment delivered under the Project.

#### 5. Vehicles

- Full operational lease and fleet management for 77 vehicles delivered at the designated healthcare unit.

#### 6. Training

- Detailed design of training curriculum and program to improve the technical skills level as well as the expertise at maternities, immunisation stations and patronage nursing stations;

- Set up a core Centre of Excellence for training in Nursing (community nursing, vaccination, immunization, skills needed at maternities) in Skopje at the School of Nursing and provide for satellite training at Schools of Nursing across Macedonia;
- Organise and conduct the training of all staff employed on the vaccination and immunisation and patronage nursed point throughout the country at the various Schools for Nursing throughout the country
- Design training program and curriculum for the gynaecologists and other professionals employed at the maternities.
- Organise and conduct the training for the gynaecologists at the Medical Faculty of the University of Skopje.
- Organise and conduct the training of the nurses employed at the maternities at the Schools of Nursing throughout the country.

#### **7. Employers Advisory and Representation**

- Advise, assist and represent Employer and supervision during implementation.

In the Development Phase the project is not designed in all details. ORIO's funding only allows for the functional and basic design and specifications. This also applies for the structuring of the financial aspects of the Project.

#### **The Project financials in relation to MoH's present financials**

MoH is already executing MCH activities. The financials of MoH for MCH will be greatly affected by this Project. For the sake of analysing the financial sustainability and the commercial non-viability (OECD), this Project is treated as separate from all the other activities which MoH has.

The ORIO grant funding is an important factor in the financial planning of the Project. But next to that a side-financing for the other 65% is needed. MoH has already secured the financing for the non-ORIO part; a loan from the Council of Europe Development Bank will provide the funds for the 65%.

### **The Financial Plan; spreadsheet model explained**

#### **Revenues**

The revenues for the MCH system come from the National Health Care Insurance Fund. Every Macedonian citizen pays through his/her taxes to the fund from which all healthcare is financed. That means everyone in Macedonia has free access to healthcare. Such also counts for MCH.

For the practical appliance in our spread sheet modelling we have worked from the assumption that the costs of the system will be covered by the revenues.



## Cost of operations and maintenance

The following Operational Costs are taken up in the cash flow model:

- **Labour costs (wages, incl. benefits).**

To calculate this, the present costs of MoH's personnel were taken and put into relation to this Project.

- **Training.**

The IS will provide for 10 years after delivery an annual training for the staff working in the MCH system, as new personnel is expected to be recruited. ORIO will fund 35% of this out of the grant; only the first 10 years. This includes all costs for the training; travel, lodging and per diem etc.

After 10 years it is assumed that MoH will be in full capacity to further keep up its capacities without the need for outside training.

- **Vehicles lease and fuel.**

This amount is calculated on the basis of 35.000 km p.a. and leased vehicles of medium class type with diesel engine. The lease contract is for 3 years after which it will have to be renewed.

- **Reinvestments**

For the first 10 years ORIO is providing 35% grant funding for these costs.

### **Repair and maintenance.**

This should provide ample funds for keeping the equipment and facilities in good working conditions.

- **Medication.**

Medication costs are included in the financial schemes. We assumed that all expenditures on medication are compensated by revenues from HIF (cost equals revenues). As there are no revenues apart from the revenues from HIF, in the project related schemes the revenues are put at zero value.

## Depreciation

The following depreciations are applied:

Equipment	7 years
Medical kit (for nurses)	2 years
Vehicles (lease)	5 years
Buildings	20 years

For these depreciations we have been taken the standard practices as guidelines.

## **Analyses of Commercial non-viability as per OECD; cIRR**

Please refer to the “ORIO format Spreadsheets for cash flow analyses” as attached in Annex 1. Under the tab cIRR.

The “Analyses of Commercial Viability” (cIRR) serves as the basis for the argumentation by ORIO towards the OECD that the Project is not “commercially” viable and as such the ORIO grant funding is not in breach with the OECD rules and regulations on this subject. The OECD prescribes certain assumptions and ways of calculating the cIRR. As such the cIRR spread sheet presentation is not reflecting the “real” situation.

The calculations in the Analyses of Commercial Viability (tab cIRR) are made applying the OECD rules of appropriate pricing. For the financing of the Project a 85% foreign currency loan under ECA cover is applied with an interest as per the CIRR (Commercial Interest Reference Rate) as set by OECD for a 10 year financing in Euro. This is in conformity with the OECD rules.

### **Time line**

As prescribed by OECD a 10 year Project time line is applied

### **cIRR;**

The cumulative cash flow over 10 years shows a negative result. This means that the Project can be qualified as “commercially non – viable” as per the OECD rules.





Бр. 11-1497/1  
2017 година

Скопје  
10-03-2017

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здравство

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ДО  
ЗДРУЖЕНИЕ ЗА ЕМАНЦИПАЦИЈА, СОЛИДАРНОСТ И  
ЕДНАКВОСТ НА ЖЕНИТЕ - ЕСЕ  
Ул. Максим Горки бр. 20/1-4  
Скопје

Врска: Ваш бр. 0801-1511/17-33 од 17.02.2017

Предмет: Одговор на Ваша жалба

Почитувани,

Во врска со Вашата жалба доставена до Комисијата за заштита на правото за слободен пристап до информации од јавен карактер под горниот број во врска со претходно доставено барање со кое ја барате следната информација:

“Испратете ни копија од “Инвестициско-финансискиот план”, наведен во активност 9 од Додаток 1, План на влезни материјали и излезни резултати за Развојната фаза, во поглавјето 5: Резултати (излезни резултати) под “Резултат на испорака”, од проектот “Воспоставување на интегриран систем за здравствена заштита на мајките и децата во Република Македонија”,

во прилог Ви ги доставуваме бараните информации кои се дел од документот: Financing Plan For the Project: “Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia”

Напоменуваме дека документот во прилог е во работна, нефинална верзија во Развојната фаза на проектот и негово финализирање требаше да следи во Имплементационата фаза, која не се случи. За појаснување, развојната фаза отпочна во декември и траеше до јуни 2014 година. Со оглед на фактот што во Октомври 2015 год, Агенцијата одговорна за следење на ОРИО програмата на Кралството Холандија не го одобри продолжувањето на проектот во следната Имплементациона фаза, податоците и



документите од проектот, преминаа во сопственост на Министерството за здравство и се користат исклучиво за интерна употреба

ЗАМЕНИК МИНИСТЕР,  
М-р. Јовица Андовски



Подготвил:  
В.Салевска Трајкова

Копија до:

- Комисија за заштита на правото за слободен пристап до информациите од јавен карактер
- А. Георгиевска
- Службено лице за посредување со информации
- Архива

Прилог:





## Financing Plan

For the Project: “Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia”

under the ORIO facility (ORIO10/MK/02)

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The Netherlands, February 2014

To: the Ministry of Health of the Republic of Macedonia

By: Finance for Health Care VOF

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## Foreword

This report is part of the development phase of the project “Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia”, under the ORIO facility (ORIO10/MK/02).

In designing the Financing Plan for the Project, Finance for Project’s team applied its own experience and best practices and common sense to provide a model for the financing part of the Project. In the Financial Plan already the financing of the Project has been presented in broad terms. The Financing Plan follows the financing as already arranged by MoH.

This report provides a financing plan for the Project as defined in the Basic Design Report. Please refer to the Basic Technical Design and Specifications Report, the Implementation Plan and the Financial Plan for further details.

The report is structured as follows:

### Introduction

General considerations and observations

### Financing in the Implementation Phase

Foreign loan

### Financing in the O&M Phase

## Definitions and abbreviations:

CEDB:	Council of Europe Development Bank
Development Phase:	the phase as defined under ORIO wherein the Project is developed in all its aspects under ORIO
ECA:	Export Credit Agency; an institutions which provides credit insurance cover for export and export financing transactions
F4HC	Finance for Health Care; consultant to MOH for the development of this Project
fIRR	stands for “financial internal rate of return”
Implementation Phase:	the phase as defined under ORIO wherein the Project is implemented; in this case the actual engineering, design, construction and delivery of the Project.
Input & Output Plan	is the plan which was drafted for define the content of the Development Phase and which has been annexed to the contract for the Development phase as signed between MoH and F4HC

IS:	International Supplier of the goods and services and party for the construction and installation works as well as the training and capacity building
MCH:	Mother and Child Healthcare
MKD:	Macedonian Denar; the national currency of Macedonia
MoF	Ministry of Finance of the ROM
MoH:	Ministry of Health
O&M:	stands for "Operations and Maintenance"
OECD:	Organisation for Economic Co-operation and Development
Operational Phase:	the phase as defined under ORIO wherein the Project is in full operation
ORIO:	Grant facility from the Netherlands Government
Project:	"Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia", under the ORIO facility (ORIO10/MK/02 )
ROM	the Republic of Macedonia
Side Financing:	The financing of the part of the Project costs which is not financed by the ORIO grant
The Contract:	means the contract signed between the IS and MoH for the Implementation phase



## Introduction

### General considerations and observations

The project entails the expansion and modernisation of the MCH system in Macedonia. To achieve that the following will be implemented, financed, operated and maintained:

#### 1. Upgrading of maternities at regional hospitals

- Design, engineering, construction and delivery of renovation or new construction of facilities including needed equipment and training of staff at maternities at regional hospitals across Macedonia; project management services related to the construction process at the various hospitals, procurement of equipment and training Related Project Management services.

#### 2. Immunisation and vaccination

- Design, engineering and renovation of immunization and vaccination facilities for children, delivery and installation of equipment and training of staff at vaccination and immunization points across Macedonia; project management services related to the construction process at the various vaccination and immunization points, procurement of equipment and training.

#### 3. Polyvalent patronage nursing service

- Design, engineering and renovation of community nursing stations facilities for children, delivery and installation of equipment and training of staff at community nursing stations across Macedonia; project management services related to the construction process at the various community nursing stations, procurement of equipment and training.

#### 4. Spare Parts, consumables and maintenance

- Design a spare part and consumable package to be delivered with the equipment;
- Design maintenance, reinvestment and repair program for 10 years operation of the equipment delivered under the Project.

#### 5. Vehicles

- Full operational lease and fleet management for 77 vehicles delivered at the designated healthcare unit.

#### 6. Training

- Detailed design of training curriculum and program to improve the technical skills level as well as the expertise at maternities, immunisation stations and patronage nursing stations;

- Set up a core Centre of Excellence for training in Nursing (community nursing, vaccination, immunization, skills needed at maternities) in Skopje at the School of Nursing and provide for satellite training at Schools of Nursing across Macedonia;
- Organise and conduct the training of all staff employed at the vaccination and immunisation and patronage nursed point throughout the country at the various Schools for Nursing throughout the country;
- Design training program and curriculum for the gynaecologists and other professionals employed at the maternities;
- Organise and conduct the training for the gynaecologists at the Medical Faculty of the University of Skopje;
- Organise and conduct the training of the nurses employed at the maternities at the Schools of Nursing throughout the country.

#### **7. Employers Advisory and Representation**

- Advise, assist and represent Employer and supervision during implementation.

The financing for the non-ORIO part of the Project's implementation has already been secured through a loan from the CEDB.

At this point in time of the Project cycle the amounts for investment and operation are not yet known. These will become fixed after the Procurement Phase is completed. Then the contract prices of the IC are known. For this plan we take the budget prices as presented in the Basic Design.

For ORIO it is important that the financing for the non-ORIO part is secured. Before they provide their grant for the Implementation and O&M Phase, financing has to be satisfactory (to ORIO) secured.

## **Financing in the Implementation Phase**

The Project investment sum (costs for Implementation Phase) will be partially in EURO and in Macedonian Denar (MKD). The ORIO grant is denominated in EURO.

### **ORIO Grant**

The ORIO grant will provide 35% of the costs of the Implementation of the Project. The grant arrangement will be presented after the Development Phase has been successfully finalised and MoH as well as ORIO have agreed to the outcome.

The grant arrangement will be applied for the (partially) funding of the payments under the Contract with the IS, i.e. down payment and stage payments pro rata parte with the contribution from the other financier(s), i.e. for each payment 35% out of the grant and 65% from the other funding arrangement(s) with CEDB.

### **Budget allocation from MoH**

The MKD denominated part of the Project will be paid out of the MoH budget.



### **Foreign loan**

A foreign currency denominated loan will provide for the funding of the foreign currency component of the Project costs. MoH has already secured funding under a loan facility from the CEDB.

## **Financing in the O&M Phase**

For certain capital investments in the O&M Phase separate financing may be required. Costs for training, spare parts, maintenance and some re-investment costs are eligible for ORIO grant funding. Please refer to the Project spreadsheet presentation under the tab fIRR in the Financial Plan. For these costs ORIO will provide 35% Grant. The remaining has to be financed out of other sources. It is not feasible to arrange a foreign loan for these costs as in the Implementation Phase. This means that the funding will have to be obtained from the government budget.

The vehicles are financed under the operational lease. It is estimated that the lease contract will have a maturity of 3 years. Every three years the lease will be renewed. The NPV of the lease rentals (i.e. the investment amount in the lease rentals) will be supported by a 35% grant contribution from ORIO.

The re-investment in the equipment are also ORIO eligible and will benefit from the 35% grant.

The training program will be stretched over the full 10 years of the Project. These costs are also eligible for ORIO and as such 35% of the costs will be paid out of the ORIO Grant facility.



Бр. 11-1498 /  
.2017 година

Скопје 10-03-2017

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здравство

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✓  
ДО  
ЗДРУЖЕНИЕ ЗА ЕМАНЦИПАЦИЈА, СОЛИДАРНОСТ И  
ЕДНАКВОСТ НА ЖЕНИТЕ - ЕСЕ  
Ул. Максим Горки бр. 20/1-4  
Скопје

Врска: Ваш бр. 0801-1511/17-35 од 17.02.2017

Предмет: Одговор на Ваша жалба

Почитувани,

Во врска со Вашата жалба доставена до Комисијата за заштита на правото за слободен пристап до информации од јавен карактер под горниот број во врска со претходно доставено барање со кое ја барате следната информација:

“Испратете ни копија од “Планот за јавни набавки”, наведен во активност 10 од Додаток 1, План на влезни материјали и излезни резултати за Развојната фаза, во поглавјето 5: Резултати (излезни резултати) под “Резултат на испорака”, од проектот “Воспоставување на интегриран систем за здравствена заштита на мајките и децата во Република Македонија”,

во прилог Ви ги доставуваме бараните информации кои се дел од документот: Procurement Plan For the Project: “Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia”

Напоменуваме дека документот во прилог е во работна, нефинална верзија во Развојната фаза на проектот и негово финализирање требаше да следи во Имплементационата фаза, која не се случи. За појаснување, развојната фаза отпочна во декември и траеше до јуни 2014 година. Со оглед на фактот што во Октомври 2015 год, Агенцијата одговорна за следење на ОРИО програмата на Кралството Холандија не го одобри продолжувањето на проектот во следната Имплементациона фаза, податоците и





документите од проектот, преминаа во сопственост на Министерството за здравство и се користат исклучиво за интерна употреба.

ЗАМЕНИК МИНИСТЕР  
М-р. Јовица Андовски



Подготвил:  
В.Салевска Трајкова

Копија до:

- Комисија за заштита на правото за слободен пристап до информациите од јавен карактер
- А. Георгиевска
- Службено лице за посредување со информации
- Архива

Прилог:



# Procurement Plan

For the Project: “Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia”

under the ORIO facility (ORIO10/MK/02)

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The Netherlands, February 2014

To: the Ministry of Health of the Republic of Macedonia

By: Finance for Health Care VOF



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## Foreword

This report is part of the development phase of the project “Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia”, under the ORIO facility (ORIO10/MK/02 ).

For the development of the Procurement Plan the team of Finance for Projects has been in close contact with MoH. It has been applying the rules and regulations under the ORIO Program and the Macedonian procurement laws as well as best practices and common sense with the aim to draft a well-balanced, transparent, effective and efficient procurement process whereby costs of procurement are kept as low as possible while ensuring quality requirements and whereby the capacities of MoH have been taken into account.

This report provides a procurement plan for the Project as defined in the Basic Design Report. Please refer to the Basic Technical Design.

The report is structured as follows:

Introduction

    Scope and basic considerations

Alternatives

Risk Assessment

Project Strategy

Project Organization

    Management of Procurement

    Procurement Time Planning

Appointment of Main Project Functions

The Tender Process

    General

        Tender Coordination

        Time Line

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Risk Allocation

Prequalification Procedure

Publication

Content of Prequalification Document

Evaluation Criteria for Qualification

Tender Procedure

Preparation of tender document

Content of tender document

Receipt and Opening of tender proposals

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Informing ORIO

Informing Minister

Organisational

Appointment of Consultant

## Definitions and abbreviations:

CEB	Council of Europe bank, which has provided funds for the non-ORIO part of the Project's Implantation.
Development Phase:	the phase as defined under ORIO wherein the Project is developed in all its aspects under ORIO
Employer:	MoH
ICB:	International Competitive Bidding
Implementation Phase:	the phase as defined under ORIO wherein the Project is implemented; in this case the actual engineering, design, construction and delivery of the MCH Project
IS:	International Supplier
MoH:	Ministry of Health of Macedonia
MOF:	Ministry/Minister of Finance of Macedonia
OECD:	Organisation for Economic Co-operation and Development
Operational Phase:	the phase as defined under ORIO wherein the Project is in full operation

ORIO:	Grant facility from the Netherlands Government
Project:	the project "Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia", under the ORIO facility (ORIO10/MK/02)
Side Financing:	The financing of the part of the Project costs which is not financed by the ORIO grant
TC:	Tender Coordinator
TComm:	Tender Committee
Facilities:	all healthcare facilities and buildings and maternity wards which fall under the Project

## Introduction

### Scope and Basic Considerations

The project entails the setting up of an integrated system of ante-, peri-, and post-natal maternal and child healthcare to improve health outcomes in the Republic of Macedonia. To achieve that the following is to be procured and implemented:

#### 1. Upgrading of maternities at regional hospitals

- Design, engineering, construction and delivery of renovation or new build and construction of facilities including needed equipment and training of staff at maternities at regional hospitals across Macedonia; project management services related to the construction process at the various hospitals, procurement of equipment and training
- Related Project Management services

#### 2. Immunisation and vaccination

- The detailed design and engineering and renovation of immunisation and vaccination facilities for children, delivery and installation of equipment and training of staff at vaccination and immunisation points across Macedonia; project management services related to the construction process at the various vaccination and immunisation points, procurement of equipment and training

#### 3. Polyvalent patronage nursing service

- The detailed design and engineering and renovation of community nursing stations facilities for children, delivery and installation of equipment and training of staff at community nursing stations across Macedonia; project management services related to the construction process at the various community nursing stations, procurement of equipment and training

#### 4. Spare Parts, consumables and maintenance

- Design a spare part and consumable package to be delivered with the equipment



- Design maintenance, reinvestment and repair program for 10 years operation of the equipment delivered under the Project

## **5. Vehicles**

- Full operational lease and fleet management for 77 vehicles delivered at the designated healthcare unit

## **6. Training**

- Detailed design of training curriculum and program to improve the technical skills level as well as the expertise at maternities, immunisation stations and patronage nursing stations;
- Set up a core Centre of Excellence for training in Nursing (community nursing, vaccination, immunization, skills needed at maternities) in Skopje at the School of Nursing and provide for satellite training at Schools of Nursing across Macedonia;
- Organise and conduct the training of all staff employed on the vaccination and immunisation and patronage nursing point throughout the country at the various Schools for Nursing throughout the country
- Design training program and curriculum for the gynaecologists and other professionals employed at the maternities.
- Organise and conduct the training for the gynaecologists at the Medical Faculty of the University of Skopje.
- Organise and conduct the training of the nurses employed at the maternities at the Schools of Nursing throughout the country.

## **7. Employers Advisory and Representation**

- Advise, assist and represent Employer and supervision during implementation.

ORIO demands an open and transparent procurement process in which best economic value is obtained. ORIO states that the international rules on procurement as well as the Macedonian rules have to be followed. The international rules are defined by the OECD.

For several items in the Project it would be wise and cost effective to contract Macedonian parties. Local contractors for rehabilitation and building activities are preferred above an international company. Macedonian companies are knowledgeable about local building requirements and cost and thus are able to deliver in a cost effective manner at no mobilisation cost and with local labour.

The same principle probably applies to training and capacity building. Language and local habits are an important consideration to opt for Macedonian contractors to be involved.

The project procurement is relatively complex. The complexity lies in the combination and timely coordination of various disciplines. It combines rehabilitation and construction works at the health care facilities, installation of equipment, purchase and delivery of equipment, training and capacity

building, design of the construction works and design of overall package of equipment as well as the design of the curriculum for the training and capacity building). This requires a range of expertise and capacity from consultants/suppliers/contractors. At the same time, the procurement capacity and experience for this type of projects is only limited available within MoH.

At the same time it is important that the design and construction works at the various buildings and facilities and the delivery and installation and the training of the staff that are going to work in the "new" facilities, are done in close coherence and coordination. This is important because one would not like to have the building and equipment all ready for use without the staff trained. And similarly, in the design and engineering of the buildings, it is important to take into account the specifications and requirements for the installation of the equipment.

But also the timely implementation of the various parts of the Project is of importance. In the Plan for the Implementation Phase this is worked out in detail.

In the Development Phase the project is designed in full details. ORIO's funding only allows for the functional and basic design and specifications. Please refer to the Basic Technical Design report for the project. That means that detailed design and engineering has to be part of the Implementation Phase. The design, engineering and construction in accordance with generally accepted practices in building should preferably be left to the party contracted for the implementation of that part of the Project i.e. the international supplier (hereinafter referred to as "IS") to be contracted to supply the equipment. This allows for the use of their specific expertise and experience in this type of projects and it has the advantage that the risks are mitigated. It also has the advantage that design and engineering are implemented by one party (i.e. kept "in one hand") and the contractor will implement according to his own design and engineering. This allows for an optimisation of the implementation process and as such takes away the risks of claims and cost overrun during implementation, as well as clearly identifies responsibilities.

For obvious reasons of price and availability local labour and contracting capacities could be utilised for the implementation of these construction works.

There is a considerable amount of vehicles to be procured in the Project. The procurement, but even more, the operation of the vehicles should be a matter of concern. A suitable and reliable capacity of transport is key for the success of the Project. The management and operation of the fleet of vehicles should be organised, in order for the staff of the project to rely on access to uninterrupted and reliable transport. In the procurement this should already be organised. Further on in the document we will go in more details. The aim is to contract a full operational lease type facility and procure this facility from the market.

#### *Consultant*

The organisation of the implementation of the Project is of vital importance. This can best be achieved by having as only few parties involved in the implementation. The Ministry does not have the resources to manage this process. It is best left to one party to perform these implementation management tasks. This can be done by an outside consultant appointed by MoH. The consultant will



monitor the entire implementation process. These services should be procured early in the process and the consultant should also be involved in the drafting of the tender and the evaluation of the bids and the selection of the contractor by the employer.

#### *Tender, Procurement and Implementation Board*

Within the MoH a procurement and Project Implementation Committee should be established to which the consultant will report. The Board will take all decisions on procurement and implementation. It will have to be assigned and authorised to do so by the Minister. On certain issues of high impact the Board will report to the Minister who will decide taking into account the advice given by the committee and the consultant.

#### *Risk and risk mitigation*

Given the complexity of the project, a structure and consequently the risks involved call for procurement whereby the risks in the implementation are mitigated as much as possible. These risks are:

- Coordination risk; the variety of Project items imposes a considerable risk of coordination. The Project implementation should be organised in such a way that the deliveries and works are organised consecutively in such a way that these risks are minimised.
- Design risks; the risk involved with the design of the Project items. The MoH will have a prior check and approval of the design before the further implementation can start.
- Risk of contractors in sense of quality, timely delivery, financials, risk of quality of works and equipment make. These risks are carefully assessed before the Project is awarded to a tenderer.

The best way to mitigate these risks is to give the Project in "one hand" meaning to contract one party who will take full turnkey responsibility (for a lump sum price) and to pay extra attention to the quality, experience and track record in the selection of this party. In the contract with this party guarantees for quality and payments should be built in as well as conditions to allow for stringent and close monitoring of the implementation of the Project.

Therefore, we propose to select one party for the execution of the entire Project; to appoint F4HC as the consultant for the employer to monitor the implementation of the Project and to install a procurement board and later an implementation board at MoH.

#### *Financing*

Finance comes out of ORIO, Council of Europe Bank and MoH's own budget. ORIO will provide a grant of 35% of the costs of Implementation and 35% of some of the operational costs.

The Council Of Europe Bank has provided a facility from which the remaining 65% will be funded.

Relevant for the setting of the Procurement strategy are the specific conditions the financiers pose on the procurement and on the content of the Project. In the Project Plan this has been dealt with in the sense that the definition and the content of the Project are fully in line with the conditions and rules as set by these financiers. For the Procurement this means that the procurement process has to

be transparent and open to all bidders as much as possible and the procurement process must meet the rules and regulations as set by the OECD. This means that there will be an International Competitive Bidding structure used for the Procurement.

## **Alternatives**

The Project consists of various items:

1. Detailed design of rehabilitation and construction works
2. Execution of rehabilitation and construction works
3. Purchase and delivery of equipment and installation of equipment; medical and non-medical, Including spare parts and consumables
4. Vehicles
5. Training and capacity building and the detailed design of curriculum and training materials and conducting the sessions.

Based on the considerations above for the procurement of the project three alternatives have been identified:

### *Alternative 1*

The project components 1 through 5 (refer to scope) will be placed with 5 different parties under 5 separate contracts.

This will require a very great deal of project management and coordination between the parties working on the Project's implementation and a close management and steering form the project management. This may only be achieved when a spate of project managers is appointed who will be responsible for the performance of this coordination and project management. But already in the procurement great emphasise and care has to be given to the design of the project parts and the "water tight" coherence between the various parts.

Great risks of mismatch in time, design and execution; a situation not to be preferred.

### *Alternative 2*

The project components 1 and 2 will be placed in one hand, 3, 4 and 5 separate.

Here the design of the construction and rehabilitation works and the actual execution is placed in one hand. This does eliminate the risk that design and execution may not fit and as such it is already an improvement over Alternative 1.

The purchase and installation of the equipment is given into other hands. Here the risk of timely delivery of the equipment and a good match between the design and the specifications of the equipment occurs.

Vehicles are procured separately which makes sense after all we are looking for lease construction which is very unlikely that either construction companies or the suppliers of equipment nor the designers and providers of training can deliver at compatible and interesting terms. This is best left to the financial institutions together with the car manufacturer's representatives in Macedonia.



Training may be procured separately from the other parts of the project. But here like also the match in time and training on the right type of equipment may cause risks which need extra management and fine tuning. A task with certain risks to it.

#### *Alternative 3*

Project components 1, 2 and 3 will be placed in one hand under one contract, 4 and 5 to be placed separately with other parties.

Here one eliminates already a great part of the risks which occurred in alternative 2. After all, the design, the execution of the works and the supply and installation of the equipment is given in one hand. This leaves the coordination and project management with the party which is contracted to perform this part of the project. So less performance, price and legal risks. Also a much easier procurement process. And MoH and its consultant will be left to monitor and check and evaluate the implementation. All in one hand makes an optimal coherence of these Project parts best guarded. It provides MoH with a “one party fixed price lump sum turnkey” type of contract which has proven to be manageable.

Vehicles are again separate under the same argumentation as given above.

Training is also separate which may provide some price benefits but leaves a much higher risk of coherence with the equipment etc.

#### *Alternative 4*

Project components 1, 2, 3 and 5 to be placed in one hand under one contract and 4 to be placed with another party.

Under this alternative it is obvious that most of the above mentioned risks are mitigated by giving the entire project into one hand except for the vehicles.

Training being also under the “one contract fixed price lump sum turnkey” contract takes away the risks on incoherence of training and equipment.

To establish the maximum coordination and coherence one party will be engaged to take up the entire Project as one on a “fixed price lump sum turnkey” basis. By applying this procurement strategy, risks of coordination and coherence of design and execution of the various parts of the Project are placed in one hand. For MoH this means a strong mitigation of the risks as well as a more easily to manage implementation process.

At the same time the procurement should be organised in such a way that there will be maximum emphasise on the Macedonian content. The contracted party (IS) should be obliged to maximise this content by involving Macedonian contractors for the construction works with locally available workforce for these works.

In the procurement MoH seeks to receive bids from reputable international companies with specific experience in this type of healthcare projects and with a strong record in integration of the various disciplines needed for each part of the Project. They should also be capable and experienced in working with local contractor and trainers. Project management and transfer of skills and know how are elements of vital importance.

The responsibility for the quality of the product in engineering and design but also in building and construction should be placed with the party which is contracted for the job. Timely delivery may be an aspect for which the IS will not take full responsibility and liability. In negotiations and setting the procurement terms this should be well defined and the risks for MoH mitigated to the max.

It is important that the IS will work closely with Macedonian contractors. They should make all necessary arrangements with these contractors on this cooperation.

To minimise the risk of costs overruns and to make sure that the technical and quality requirements are being achieved, it is best to require that the IS will take full responsibility and liability for these issues.

In this alternative, also the Training and Capacity building should be contracted out to the IS. They are best placed to conduct the necessary training and design the curriculum and program.

In order to enable MoH to perform its duties as an Employer, a Professional Advisor/Consultant will be appointed as MoH's Employers Representative/ Consultant. This party will provide senior staff for project management and administration, supervision and quality control. The team will consist of experts in the field of healthcare provision at primary, secondary and tertiary care level, architecture, construction, finance and legal expertise and project management.

This procurement and implementation of the Project will provide MoH with a costs/price effective implementation for the Project at the one hand and a secured quality and timely execution as well. It will at the same time assure a strong Macedonian content within the Project.

## Risk Assessment

The following risks relevant for the procurement can be determined:	alt 1	alt 2	alt 3	alt 4
- price	0	0	0	0
- quality of design and engineering	-	+/-	+	++
- quality of construction and works	-	+/-	+	++
- technical performance risks of the suppliers and contractors;	-/-	-	+	++
- financial performance risks of suppliers and contractors	-/-	-	+	++
- process coordination, coherency and timely delivery	-/-	-	+	++
- legal/contract risk	-	-	+	+
- meeting delivery times	-/-	-	+	++
- force majeure	0	0	0	0
- overall risk assessment for Employer	-/-	-	+	++



In the Procurement phase these risks should be addressed and mitigated as much as possible. This requires a procurement strategy and actual formulation of terms and conditions in the prequalification and tender documents.

However, an assessment of the above table merits the conclusion that the Procurement process should be developed based on alternative 3 or 4 “fixed price lump sum turnkey” with the contract to be awarded to an International Supplier/Integrator to be selected through an international tender. Vehicle full operational lease to be procured separately.

## Project Strategy

The Project Strategy must aim at a procurement process which leads and safeguards a successful operative Project as was planned and a timely implementation for the budget as fixed. It takes into account the risks that the Project faces in the implementation and the operational phase and it resolves the lack of capacity within the MoH to deal with the Project. It takes a view with regard to the long-term sustainability of the project. It defines the timelines, the origination of the process of procurement, the costs and the risk as well as the human factor.

In short, functions of the strategy are:

- Financing
- Contracts
- Budget planning
- Time line
- Cost estimation
- Operation and Maintenance
- Design responsibilities
- Role of MoH during implementation
- Role of Contractor during Implementation
- Role of Consultant during Implementation
- Risks and its allocation
- Contract Price
- Insurance
- Pre-qualification
- Contract price and payments

In general, one should conclude that this project is complex in the sense that it comprises different items which need different expertise and qualification. It deals with contracting and design as well as the purchase, import, transport and installation of equipment of various sorts. But also the design of a training/educational curricula and the actual training of trainers and staff working in the MCH system in Macedonia. And then there is the issue of spare parts, maintenance and repairs and also the vehicles in the Project.

As already discussed in the section *General considerations and risk assessment* the risk should be minimised for MoH. This means that the risk will have to be placed with the Contractor(s). This involves also the risk of the organisation and management of the implementation of the Project with all its diverse and different aspects. The only way to achieve that is to have one party who takes up the entire implementation of all the various parts of the Project. That does not mean that he has to perform all the works, services and deliveries himself; of course he will subcontract to different sub-suppliers and sub-contractors. This Main Contractor will be responsible for the detailed design, the procurement, the construction; the final turn key delivery of the Project.

In this Project it is not possible to bring all items under one Contract with one Contractor. Two items will have to be procured separately being the vehicles and the training components of the project.

#### *Legislation and rules.*

The Project Strategy is driven to a large extent by ORIO's rules, which basically set out the standard classical project cycle; project definition, project development (feasibility and basic functional design), financing and budgeting after which Procurement and Implementation will commence.

This structure is applied here as a conclusion of the Development Phase which in itself has been structured in compliance with ORIO: feasibility study and preparation for procurement and implementation and obtaining of the financing (ORIO and side financing).

ORIO regulations demand an open and transparent procurement process in which best economic value is obtained. ORIO also demands that the international rules on procurement as well as the Macedonian procurements rules are adhered to. The international rules are defined as those rules as set out by the OECD.

The interpretation of these set of rules defines an International Competitive Bidding (ICB) procedure to be applied for this Project. This also complies with the wishes (requirements) of MoH.

MoH seeks to have the buildings and wards fully operative put into service together with all equipment in it and the staff trained for its operation and vehicles being available for the transportation of the staff. In the procurement process special emphasis is to be put on the timely implementation of these various aspects.

This requires a strict time/critical path planning. The Basic Design as part of this Development Phase has been done in accordance with these requirements.

MoH like all owners (also driven by the financing arrangements for this Project) seek to minimise the risks they face as principal. These risks are the risks as described above; cost overrun, late delivery and substandard quality, but also risk of financial soundness of the contracted party, not only during the construction period but also during the guarantee period and beyond.

But next to that there is also the risk of the coordination and coherence between the various parts of the Project. MoH does not want to end up in a situation whereby for example the equipment is delivered at site when the construction works have not yet finalised and/or the staff is not yet



trained. Or a situation whereby the equipment installations do not “fit” with the construction works. All this needs professional day-to-day management and coordination of the project, a capacity which the MOH cannot provide due to shortage of staff.

*Support for MoH in the procurement and implementation of the Project.*

MOH requires professional assistance to perform its tasks and obligations as an Employer and to manage the tender and implementation process. This means project management, legal, financial but also for the technical aspects (construction, contracting, supply and design of equipment packages and design of training curriculum and program) it is best to bring in outside expertise and manpower. After all it is a complicated Project with many aspects being of a different nature to be covered.

The execution of this Development Phase has been assigned to Finance for Health Care (F4HC); they act as MoH’s advisors and consultants and they conduct the necessary step in this phase. The main goal amongst others is to obtain the grant financing from ORIO for the implementation and to structure and design all aspects of the Project. Amongst which is the technical procurement process which results in the selection and contract award to the party which provides the best economic value and which secures the most optimum solution for the financial, technical, environmental and social aspects in the implementation of the Project. To secure maximum continuity and since F4HC has been MoH’s advisor and consultant during the entire process (from Application throughout the entire Development Phase), it is MoH’s intention to continue the support they have received from F4HC and seek their involvement as consultant also for the procurement and advise and consult during the Implementation Phase.

*Procurement procedure.*

To minimise the risks a sound tender procedure has to be developed. To be able to manage these risks, the procurement will be split up in two phases: at first a pre-qualification phase which will result in a list of qualified tenderers/bidders and consecutively a tender/bidding phase which will result in the selection and award of contract to one of the pre-qualified tenderers/bidders.

The pre-qualification route is chosen because the project requires a strong selection of the bidders on financial strength, technical experience and capacities on “healthcare facilities” design, engineering and construction but also on selection and supply and design and engineering, contracting and project management. And especially on execution of these works in collaboration with local contractors.

The pre-qualification also provides for safeguards that are well worked out and serious offers are obtained in the second phase of the tendering. After all the relative complexity of the Project will require the bidders to spend a serious investigation into the Project before they are able to come up with a responsible bid. In the pre-qualification procedure a maximum of 3 potential tenderers/bidders will be selected and invited to tender. This method will also encourage the better qualified parties to tender since they know that they have a reasonable chance of winning. To ensure to minimize the risks in the bidding process a bid bond will be required from qualified tenderers/bidders.



## Project organisation

### *Management of Procurement*

The different roles during the Procurement and Implementation Phase of the project are the following:

- Owner or Employer: MOH; acting as principal with support of its Consultant;
- Tenderers: the Supplier; the international supplier and lease company to be selected and contracted;
- Financiers; ORIO as an important player imposing specific conditions on the Project along with the Central Government of Macedonia (the MOH and the MOF) as the other financier(s) next to ORIO;
- Employers Representative and Consultant; Owners (MOH's) Consultant;

Each of the above parties has their specific role in the Procurement, whereby the Owner (MOH), supported by the Consultant (F4HC), will structure and execute the Procurement process with the aim to select a supplier which will be awarded the Contract.

The Tenderers/bidders will provide the Employer with their tender bids from which the Employer will select the economically and technically most feasible bid/offer, using the selection criteria as set out below. After awarding of the contracts the Tenderer/bidder becomes the Supplier. The Supplier will implement the Project and deliver the various parts of the Project to the Owner (MOH). The tenderer/bidder will adhere to the rules set out by the Owner for the Procurement in the tender document.

The Financier(s) will have a role in the Procurement process. They have in their financing arrangements imposed conditions of all sorts on the Project's procurement, implementation and operation. These conditions for so far relevant in the selection of the supplier have to be adhered to in the procurement as well.

### *Procurement time planning*

As part of the procurement process, a detailed time schedule will be defined; starting from issuance of the pre-qualification advertisement up to the final awarding of the contract.

This will be done in all detail at the beginning of the Implementation Phase under ORIO, which will commence after the ORIO Grant and the Side Financing have been signed and are in full force and effect. In accordance with the ORIO rules, this is a part of the Implementation Phase. To present an overview, an indicative programme and time planning is presented in this report.

To fulfil the internationally accepted and best practices for tendering, the pre-qualification should be open for a reasonable period of 4 weeks from the date of publishing. The tender for technical and price bids will be open for at least 8 weeks. The selection of the technically and economically most feasible bid/offer will take approximately 10 weeks.



### *Appointment of main Project functions*

#### The Tender Committee (TComm)

The TComm will consist of three persons appointed by the Minister of Health; one representative from MOH acting as Chairman, one from the MCH field, one representative from the hospital sector. The role of the TComm is to decide on all issues concerning the tender procedures and to take the final decision on the basis of the advice provided by the Tender Coordinator. The TC is supported by the Consultant (F4HC). The Consultant, if so wished, will participate in meetings of the TComm. After the Contract has been awarded, the TComm will be reinstated into an Implementation Committee (IComm) and continue its role in the further execution of the Project's implementation.

#### The Tender Coordinator (TC)

The TC is appointed by the TComm at the beginning of the Procurement phase directly after the ORIO Grant and side financing are in full force and effect and all other conditions precedent have been fulfilled.

The TC is the person who will be acting as the focal person within the MOH during the entire tender/procurement of the Project. He will be supported by the Consultant (F4HC). It is proposed that the General Manager of MOH is taking up this assignment. In the implementation phase this function will be reinstated into Implementation Coordinator (IC)

#### The Consultant as MoH's advisor/consultant.

A consultant will be appointed as advisor and consultant to MOH for the procurement and implementation of the Project.

As explained above, for reasons of continuity, quality assurance and time management (new consultant have to take a lot of time to familiarise with the Project and with all the specifics of ORIO), the cooperation with F4HC will be continued. It is considered advantageous to involve F4HC in all stages of the implementation of the Project as it guarantees maximum continuity and efficiency, throughout the entire project with clearly defined responsibilities.

The fact that all functions are fully familiar with all aspects of a previous phase of the Project secures continuity in the approach and will save time as it does not require that new entities have to make themselves familiar with the project.

The Consultant will work closely together and support the TC who will be the first contact person for the Consultant and its liaison to the TComm. The Consultant will draft the necessary documents for the prequalification procedure and will undertake the assessment of the received prequalification tenders and advise the TC/TComm on the tenderers/bidders to qualify. The Consultant will also draft the tender, and assess, evaluate and advise the TC/TComm on the outcome and which parties should be awarded the contracts for the Project. They will manage and monitor the entire procurement process together with and in support of the TC.

The Consultant will draft the tender documents, manage the tender procedure, undertake the assessment of bids and advises the TC/TComm on the economic and technical most feasible offer(s). The Consultant will also construe and/or advise on the financing of the non ORIO part of Project if necessary.

The Consultant will perform necessary checks and monitoring during the design, engineering and construction of the project. The Consultant will make sure that the supplies and construction works and training are performed in accordance with the specifications and the contract.

*Vehicles. Full operational lease and fleet management services facility.*

The main item of concern in procurement of vehicles is the need for uninterrupted operation of the cars i.e. management of maintenance and repair and replacement of broken down vehicles to assure uninterrupted availability of vehicles for those who need it for their work within the MCH and vaccination and immunisations systems.

Making sure the cars keep on functioning means much attention needs to be paid to maintenance and repairs. To secure the success of the project long term this needs to be organised properly.

Considering that the MOH and the healthcare facilities where the cars will be assigned to, do not have a specific own capacity to manage the technical functioning of the cars, it is best to outsource this to an experienced party. After all fleet management (that is what we are dealing with here) is a specialised job.

Taking the above into consideration the procurement part concerning the vehicles should be done in a separate tender. Since it is very much a local capacity which is needed it should be open to Macedonian based parties only.

Considering the economic life of cars this will not exceed 5 years. After 3-5 years a new tender will be issued for a new set of cars/vehicles. The "assignment" for cars to be procured needs to have the following components:

- Delivery of new vehicles as per specification
- Putting the vehicles into operation at the predestined healthcare facilities
- Provision of a fully guaranteed transport availability service; there has to be always a functioning vehicle available at the healthcare facility.
- Immediate replacement of cars in case of breakdown of one of the cars.
- Proper maintenance and repairs on regular basis; preventive maintenance and repairs. Including timely replacement of tires etc.
- Guaranteed safe mode of transport.
- Car cleaning
- Replacement of vehicle in case of damage



A full operational lease and fleet management type of arrangement should be organised in such a way that the staff can rely on transport to be available.

The Consultants have done a preliminary check of vendors in the Macedonian market and have found parties who are interested and capable of performing such a service.

The procurement will be executed in a two steps: (1) Start with a prequalification from which three parties are selected and (2) the opportunity to present a detailed proposal. The bid which is economically most advantageous will be awarded the contract.

The contract will be a full operational lease service contract under Macedonian law. The tender will not have a fully drafted contract as part of the documentation package. This is left to the bidders. A general outline of the contract will be given instead.

In the prequalification parties will be invited who have proven track record in fleet management and operational lease. The bids for the prequalification should provide an insight in their experience, financial status, amount of vehicles in portfolio, their understanding of the issue at hand and their ability to provide an offer which fits the needs and their geographical presence throughout Macedonia. They should be stimulated to come up with their own ideas and solutions.

A maximum of three parties will be selected. They will receive a more detailed tender document in which the Project is described in details relevant for their bid. Their bid should contain the following items:

- Technical bid; which type and trademark of cars are offered
- Repair and maintenance facility and fleet management
- 100% guarantee of transport availability
- Price for the services
- Guarantees for performance; penalties in case of defaulted performance

In the tender document the technical specifications of the facility will be presented in the form of "functional requirements". This will leave the bidders to present their own solution. As such we will give the option to present a "best fitting package" and it will mitigate the risk that they have to perform something which is consultant driven and therefore maybe lacking local expertise and track record needed for the optimal design of such a facility.

The bids will be evaluated by the consultant. The consultant presents the evaluation report to the Tender Committee. The Tender Committee will decide on which bid to award. The Minister will be presented with this decision for his final approval.

The bid will then be awarded and contract negotiations with the selected bidder initiated. Upon successful negotiations, a contract will be signed.

In the MoH budget funds will be allocated for the payment for these services. Part of this will be granted by ORIO. This has to be arranged in the ORIO Grant facility for the implementation and operation phase of the Project.

After the contract period has expired a new tender should be issued along the same lines as the first tender. Adjustments may have to be made: a learning curve obtained with the first 3/5 year contract will be taken into account. Also here the MoH should make available funding from its budget or elsewhere for this second contract. ORIO may be asked to support this with 35% out of the Grant facility.

## The Tender Process

### General

#### *Tender coordination*

The TC will be in charge of the tender procedure and will have the following responsibilities while the Consultant will assist in/perform the actual execution:

- Tender dossier preparation; drafting the invitation to prequalification document, drafting the related information file, as well as drafting the tender document for purpose of receiving bids used for final selection of a tenderer/bidder;
- Publication of Tender;
- Dispatching the prequalification documents to prospective tenderers (those who have formally requested to receive the dossier);
- Receiving and assessment of the prequalification documents as provided by the prospective tenderers/bidders;
- Presentation of the outcome of the evaluation process of all prequalification documents received and the advice to the TComm on the tenderers/bidders to be qualified and invited for tender;
- Dispatching the tender documents to qualified tenderers/bidders (those who have formally requested to receive the dossier and confirmed to participate in the tender by placing a bid bond);
- Ensuring that each tenderer/bidder has formally acknowledged receipt of the tender dossier;
- Managing the site visit to the yard and the landing sites on request of the tenderer(s);
- Receiving and responding to questions from tenderers and providing the answers (Q&A);
- Assess, evaluate, rank and select the bids;
- Presentation of outcome of evaluation process of all tender bids received and the advice to the TComm on the acceptance of bids, inclusive off an advice on the selection/qualification of the tenderer/bidder which will be invited to enter into final negotiations with the purpose to award the contract. Liaise with the tenderers/bidders on the outcome of the tender.



### *Time line*

The entire procurement from start to contract award and getting into force of the contracts, Government approvals etc. will take 52 weeks.

An "Invitation for Prequalification" will be issued approximately 4 weeks after all approvals as well as the financing for the Project has been secured and in full force and effect. The invitation for prequalification will be published in Macedonian and international media. Prospective tenderers/bidders will be given 4 weeks to respond. It will take 6 weeks to select qualified parties.

A maximum of three parties will be qualified for an invitation to participate in the actual tender. The tender will be issued after the qualified bidders have accepted the selection. Tenderers/bidders will be allowed 8 weeks to present their proposal(s). It will take 10 weeks to select the winner. After the acceptance of the outcome of the tender and the obtaining of all approvals the Macedonian authorities and of financiers the contract negotiations will start which will lead to contract signing.

### *Contract type*

The IS is to be assigned the design, engineering, supply, construction, training and delivery to the Owner of all the lots of the Project on the basis of a so called "fixed price lump sum turnkey" basis. The rights, obligations, liabilities and performances will be laid down in an international contract. The contract will combine construction works and services (training and capacity building).

The actual Contract will be drafted as soon as the Grant for the Implementation Phase has been signed. The Consultant (F4HC) will act as the advisor and consultant to MoH for the drafting of the contract.

Best and common contractual practices will be combined with a FIDIC type of contract for construction works and services.

Since the Project consists of a number of items which together form the total Project and since the success of the Project is sensitive to the timely coordination of the design, engineering, delivery, installation of all these items it is best to bring the coordination and the final responsibility in one hand. That means that there will be one overall contract with one Contractor; an integrator if you like.

FIDIC Silver Book standard contract form will be applied. It will have to be adjusted to the specifics of this Project. The actual drafting of the Contract is part of the Implementation Phase under ORIO. It will not be done in this Development Phase. The Drafting of the Contract will benefit from a 35% ORIO grant to cover for the legal costs.

For Vehicles and Training & Capacity Building separate contracts will be drafted. For the Vehicles this will be in the form of an "operational lease and fleet management services contract".

### *Financing*

Finance will be provided by ORIO, Council of Europe Bank and MOH's own budget. ORIO will provide a grant of 35% of the cost of Implementation and 35% of some of the operational costs. The Council of Europe Bank has provided a facility from which the 65% will be covered.

Relevant for the setting of the Procurement Strategy are the specific conditions the financiers require relative to the procurement and the content of the Project. In the Project Plan this has been dealt with in the sense that the definition, the content of the Project is fully in line with the conditions and rules set by these financiers.

For the Procurement it means that this process needs to be transparent and open to all bidders as much as possible and the procurement process should meet the rules and regulations as set by the OECD. This means that there will be an International Competitive Bidding structure used for the Procurement.

### *Cost estimate; Project Cost*

Based on the preliminary and functional design a bill of quantities and work list for the construction works has been prepared as well as Terms of Reference for the training and capacity building programme. From the market prices are obtained as to get a budget price for the Project. Also included are "overhead" costs like legal costs, consultancy costs, cost of finance, development costs, travel and out of pocket expense for the Employer and consultants and altogether involved in the procurement and implementation of the project. Development Phase, Implementation Phase costs and the re-investment costs of 10 years O&M Phase equals to € 21,18 million.

### *Operation and Maintenance (O&M)*

O&M is the responsibility of the MOH as the proprietor of the facilities. This will not be transferred the Contractor or any other third party.

For the vehicles this will be different as a long term operational lease & fleet management party will be contracted, delivering, managing and maintaining the vehicles. Please refer to the separate section on

*Vehicles. Full operational lease and fleet management services facility.*

Training and Capacity Building will be executed during the Implementation of the Project, but will continue after the Project has been finally completed. This means that the party contracted for this part of the Project will continue its work long after completion of the Implementation Phase Project.

In the Procurement and consequently also in the Contracts there will be extra attention to the long term maintenance and delivery of spare parts and consumables. This is among the biggest risks of failure for a project like this: the malfunctioning and disruption of equipment.

### *Insurance*

MoH will not take out insurance for this Project for risks during the Implementation phase.



The IS will be required to cover for the risks during transport and construction of all goods and equipment for the Project and for the period until final acceptance under the contract by MoH. They will also be required to be insured for the loss or damage of the equipment. Generally, in these circumstances a "Construction-All Risk Insurance" is required.

#### *Risk allocation*

All risk of design, engineering and construction of the facilities will be for the IS. MoH will provide under the tender the information which has been collected during the Development Phase. This is information on which the IS can base its design and engineering. For the situation at the facilities throughout Macedonia, the tenderers/bidders will be invited to visit these facilities and make their own assessment on the local situation. A visit to the facilities will enable them to assess the information provided with regard to renovation, construction and installation for the equipment. MoH will take provisional acceptance and final acceptance after 12 months. A warranty bond provided by the IS or a retainer in the payment schedule should allow sufficient coverage for MoH's interests during this period.

The staff and workers will be trained as part of the Project. MoH has to provide for the staff and workers to be trained. The IS is responsible for the quality of the training program and the right match with the level of experience and knowhow and the learning capacities of the staff which will participate in the training.

#### *Design responsibilities*

Detailed Design responsibilities will be placed with the contractor and suppliers. In the Project Plan which has been made up in the Development Phase of the Project, a preliminary/functional design of the Project has been drafted. Based on that the Contractor(s) are asked to make their own design. This is to make maximum benefit from their expertise and experience, to minimise the risk of mismatch between design and actual deliveries and construction and to make sure that the coordination are well taken care of and managed. The detailed engineering is also the responsibility of the Contractor. In the Contracts this will be stipulated clearly. FIDIC provides very good standard contractual arrangements for that.

## **Prequalification Procedure**

#### *Publication*

MoH will initiate the prequalification tender by publishing an advertisement which includes an invitation to prequalify, a brief description of the Project and how to obtain the Prequalification Document in which all the relevant information is given for the tenderers to prepare their prequalification document. The prequalification is to be published in a Macedonian English-language publicly available medium (newspaper or similar), MoH's website, and the ORIO website. Tenderers will be given 4 weeks' time to submit their Prequalification document.

*Content of Prequalification Document to be issued:*

The complexity of the Project lies in the fact that it combines various disciplines. Therefore, it is important to select parties already in the prequalification, which are able to cover the entire Project on a “fixed-price-lump-sum-turnkey” basis. These have to show and certify experience and track record of similar projects in similar environments combined with solid financial strength.

A document will be drafted for presentation to the parties, who in response to the publication have expressed their interest and have officially requested to receive the Prequalification Documents.

The document will provide the tenderer with the following information:

- Short description of the Project, its scope, financing, time planning and expected delivery;
- Invitation for Prequalification , assessment criteria for qualification;
- Dates for return the prequalification document and dates for issue of the tender document
- Time planning for next steps in tender process;
- Expected date of contract award;
- Type of contract; payment structure; financial guarantees required (bonds); applicable law and court;
- Format and questionnaire to be filled in by the tenderers in which they provide all information and data needed for the evaluation and selection under the prequalification;
- Applicable laws, regulation and jurisdiction which will be applicable for the procurement process.

*Evaluation Criteria for Qualification*

A maximum of 3 prospective bidders will be qualified for participating in the tender. Assessment will be based on the following criteria:

- Corporate financial strength; at least 5 years of positive result, a positive cash flow and a balance sheet showing strong company financials able to carry the financial risks of the Project;
- Track record in design, engineering and construction works on similar facilities;
- Experience and track record with contracts of similar character in countries and circumstances and conditions similar to Macedonia;
- Track record as main contractor in multidisciplinary projects
- Track record in providing training to the health care staff in the field of MCH and maternities;
- Strong international reputation/track record.

In order to compare the parties who seek prequalification, this will be set out in a scorecard type of matrix in which scores and weighing percentages will be combined and which will lead to an “overall score” per prospective bidder. This will result in a shortlist and based on that an advice will be submitted to the TComm for their review and decision.



The qualified prospective bidders will be requested to confirm their participation in the tender and to issue a bid bond. They will then be provided with the detailed tender documentation on which the bidders should base their technical and financial proposals.

## **Tender Procedure**

### *Prepare tender dossier and document and obtain tenders*

A tender document and dossier are drafted simultaneously with the above Prequalification document. The Prequalification is not issued before this tender dossier is ready and approved by TC and the TComm, ORIO and if required also the other financier(s) (side financing).

Prior to issuance of the prequalification all necessary licenses and permits and go-aheads are obtained from the government to go ahead with the Project.

The dossier and document are drafted by the Consultant in close cooperation with the TC.

The Tender Dossier describes the entire tender procedure; a manual. This dossier is presented to the TComm for approval and also to ORIO and eventual other financiers.

The Tender Document is a document for presentation to the tenderers. In the Tender Document all information is provided about the scope of the Project and the expected deliveries, the tender procedure, timing, the contract model, bonds and guarantees, evaluation and selection criteria etc. The tender document will be issued to the qualified tenderers/bidders only. It will comprise the following:

- Letter of invitation by MoH and Instructions to the tenderers; official invitation by MoH to the tenderer/bidder. It specifies date of tender opening and close of tender plus the list of documents to be submitted by the tenderer. It provides the tenderers with all necessary information and instructions they need to prepare the tender. It also sets out the evaluation and selection criteria and procedure;
- Format for the tender to be filled in by the tenderers/bidders; it will provide ease of evaluation, comparing and selection;
- Conditions of contract, bonds and guarantees; the contracts to be used will be part of the tender documents;
- Technical and functional specifications of the construction works, equipment, training and capacity building, vehicles and all other services;
- Technical specifications, functional requirement and basic design of the facilities.

The main issue in this Project lies in the timely, coordinated and coherent execution of the various parts of the Project. As said before local sub-contracting is obvious in this area.

This will all require strong planning and project management capacity from the IS. Therefore in the evaluation and selection process there will be a strong emphasis on this part of the tender bid of the prequalified tenderers.

For the training and capacity building component the tender bids will be evaluated and selected on the basis of the specification as set out in the Training Plan. Here the tenderers will be evaluated and assessed on the teaching/training method, the fit with the local staff which will have to be trained and the experiences and track record the tenderers have. The content of the curriculum is important to have a fit with the locally already existing knowledge. Safety and environmental issues are to be addressed.

In short the proposals of tenderers/bidders should provide the following information and data:

- Quality of design
- Fit with local circumstances and environment
- Training for workers in MCH
- Quality and best fit of training and capacity building
- Percentage of contribution of Macedonian based subcontractors and workforce
- Performance guarantees
- Delivery time
- Price
- Aftersales

The tender to be issued to the three prequalified and confirmed bidders will contain the following information:

General:

- General outline of the Project
- Explanatory note on the procedure; Q&A, site visit, time line etc.
- Selection criteria
- Scoring chart for selection
- Contract to be applied

#### *Receipt and Opening of Proposals and Tenders*

MoH will ensure that the TC, the Consultant will be able and are instructed to work in the highest confidentiality. All tenders received will be filed by the TC; stored unopened in a safe place.

At the day of close of the tender period and after the set hour of closure, the TC will open the tender envelopes in the presence of the TComm and the Consultant.

The session will be a so called "in private". MOH does not choose for a public opening of the tenders. This way of opening the tenders is fast, cost effective and less time consuming.

#### *Tender Evaluation, Selection and Award of Contract:*

After having established the tender bids on completeness and correctness, those tenders which comply are assessed and evaluated by the Consultant and an advice with regard to the contract award is presented to the TComm for review and approval.



The economically and technically most feasible tender bid is identified by combining the technical assessment with assessment on price, financing proposal and training/capacity building and services. Also local content will be taken into consideration.

In the score card matrix (maximum of 100 points) for the selection the following values will be applied:

- Price/within budget	10
- Technical design, engineering, construction and performance	30
- Compliance with Environmental Impact Monitoring Requirements	5
- Training and capacity building	20
- Quality of Project team/Management plan and capacities; in view of coherence and coordination of the very aspects of the Project	25
- Local content	10

On the bases of the outcome, a ranking of the tenderers/bidders is made up and presented to the TComm with a motivation and advice. After decision of the TComm on the winning tenderer, the tenderers/bidders will be informed. The winning tenderer/bidder will be asked to accept the decision and has to formally declare that he is still able and willing to implement the Project.

The tenderer/bidder is then awarded the Contract. Negotiations on the Contract will be opened leading to Contract signature and getting into full force and effect of the Contract after fulfilment of all conditions precedent.

This is the start of the Implementation Phase (as defined under ORIO) of the Project. Please refer to the Implementation Plan and the Operational Plan.

#### *Informing ORIO*

After the procurement has been completed the outcome will be communicated with ORIO and the other financiers. Their approval is to be obtained. They may want to perform a check on the procurement process to establish compliance with the procedure as described here in the Development Phase. As soon as the Contract has been signed a copy will be shared with ORIO. They are then aware of the payment schedule, the payment procedures and protocols and disbursement instruction.

#### *Informing the Government officials in Macedonia; Minister of Health and others.*

At the same time the relevant Government institutions (Minister) will be informed about the outcome of the procurement and the award of the tender.

### *Cost of Procurement*

Total cost of Procurement can be split up in the following items. In the table below preliminary cost estimation is provided. This does not include the cost for the officers of MOH, the MOF and possible others who will participate in the process either as member of TComm or acting as TC of others than these. But it includes costs of travelling, per diem, costs for publications, all experts (legal, civil, nautical) and project management.





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Скопје

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✓  
ДО  
ЗДРУЖЕНИЕ ЗА ЕМАНЦИПАЦИЈА, СОЛИДАРНОСТ И  
ЕДНАКВОСТ НА ЖЕНИТЕ - ЕСЕ  
Ул. Максим Горки бр. 20/1-4  
Скопје

Врска: Ваш бр. 0801-1511/17-37 од 17.02.2017

Предмет: Одговор на Ваша жалба

Почитувани,

Во врска со Вашата жалба доставена до Комисијата за заштита на правото за слободен пристап до информации од јавен карактер под горниот број во врска со претходно доставено барање со кое ја барате следната информација:

“Испратете ни копија од “Прирачникот за имплементација на конкретното извршување на Проектот”, наведена во активност 11 од Додаток 1, План на влезни материјали и излезни резултати за Развојната фаза, во поглавјето 5: Резултати (излезни резултати) под “Резултат на испорака”, од проектот “Воспоставување на интегриран систем за здравствена заштита на мајките и децата во Република Македонија”,

во прилог Ви ги доставуваме бараните информации кои се дел од документот: Implementation Plan For the Project: “Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia”

Напоменуваме дека документот во прилог е во работна, нефинална верзија во Развојната фаза на проектот и негово финализирање требаше да следи во Имплементационата фаза, која не се случи. За појаснување, развојната фаза отпочна во декември и траеше до јуни 2014 година. Со оглед на фактот што во Октомври 2015 год, Агенцијата одговорна за следење на ОРИО програмата на Кралството Холандија не го одобри продолжувањето на проектот во следната Имплементациона фаза, податоците и



документите од проектот, преминаа во сопственост на Министерството за здравство и се користат исклучиво за интерна употреба.

ЗАМЕНИК МИНИСТЕР,  
М-р. Јовица Андовски



Подготвил:  
В.Салевска Трајкова

Копија до:

- Комисија за заштита на правото за слободен пристап до информациите од јавен карактер
- А. Георгиевска
- Службено лице за посредување со информации
- Архива

Прилог:





## Implementation Plan

For the Project: “Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia”

under the ORIO facility (ORIO10/MK/02)

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The Netherlands, February 2014

To: the Ministry of Health of the Republic of Macedonia

By: Finance for Health Care VOF

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## Foreword

This report is part of the development phase of the project “Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia”, under the ORIO facility (ORIO10/MK/02).

Please also refer to the Basic Technical Design and Specification Report and the Procurement Report.

For the development of the Implementation Plan the team of Finance for Health Care has been in close contact with the Ministry of Health. In designing a plan for the Implementation of the Project Finance for Health Care’s team applied its own experience and best practices and common sense to provide an effective and efficient implementation of all the different aspects of the Project. The capacities of MoH have been taken into account in design the Implementation Plan.

This report provides a procurement plan for the Project as defined in the Basic Design Report. Please refer to the Basic Technical Design.

The report is structured as follows:

### Introduction

- General, scope and basic considerations

- MoH’s implementation capacities

### Implementation Strategy

- Project Management in the Implementation Phase; appointment of main Project Functions, Consultant; decision making structure

- Project Organisation

- Team members, roles and responsibilities;

- Management/ coordination

- Support for MoH in the Implementation Phase of the Project

- Logistic arrangements

- Graphical presentation of the Project organisation

- Monitoring, admin and reporting

### Main components of the Implementation Phase

#### Planning for the Implementation Phase



Sequence of implementation;

Time planning; time Line

Go/no go moments

Budget of the Implementation Phase

Equipment and technology

Equipment, technical details and compliance to standards, nature of equipment investment

Economic lifetime estimation

Choice of technology or production method

Proposed technology; specific technical details, specifications, dimensions, volumes, capacity needed and capacity used, input and guarantees

Standards of equipment

Choice of technology;

Installation; commissioning and inspections; testing; contractual arrangements

Proven technology, user friendliness and usability

Project location

Training in the Implementation Phase

Need assessment; description of the results and related activities; Know-how and skills taught, level

Training budget

## Definitions and abbreviations:

CEB:	Council of Europe Bank; the bank that provides for the funding next to the ORIO grant
Development Phase:	the phase as defined under ORIO wherein the Project is developed in all its aspects under ORIO
Employer:	MoH
F4HC:	Finance for Health Care; the consultant for MoH for the Implementation Phase
IC:	Implementation Coordinator
ICB:	International Competitive Bidding
ImpCo :	Implementation Committee
Implementation Phase:	the phase as defined under ORIO wherein the Project is implemented
IS:	International Supplier
MoH:	Ministry or Minister of Health of Macedonia
O&M Phase:	Operational and Maintenance Phase
ORIO:	Grant facility from the Netherlands Government
Operational Phase:	the phase as defined under ORIO wherein the Project is in full operation
Project:	“Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia”, under the ORIO facility (ORIO10/MK/02
Side Financing:	The financing of the part of the Project costs which is not financed by the ORIO grant
TComm:	Tender Committee
The Contract:	means the contract signed between the IS and MoH for the Implementation phase



## Introduction

### General, scope and basic considerations

The project entails the setting up of an integrated system of ante-, peri-, and post-natal maternal and child healthcare to improve health outcomes in the Republic of Macedonia. To achieve that the following is to be procured and implemented:

#### 1. Upgrading of maternities at regional hospitals

- Design, engineering, construction and delivery of renovation or new construction of facilities including needed equipment and training of staff at maternities at regional hospitals across Macedonia; project management services related to the construction process at the various hospitals, procurement of equipment and training Related Project Management services.

#### 2. Immunisation and vaccination

- Design, engineering and renovation of immunization and vaccination facilities for children, delivery and installation of equipment and training of staff at vaccination and immunization points across Macedonia; project management services related to the construction process at the various vaccination and immunization points, procurement of equipment and training.

#### 3. Polyvalent patronage nursing service

- Design, engineering and renovation of community nursing stations facilities for children, delivery and installation of equipment and training of staff at community nursing stations across Macedonia; project management services related to the construction process at the various community nursing stations, procurement of equipment and training.

#### 4. Spare Parts, consumables and maintenance

- Design a spare part and consumable package to be delivered with the equipment;
- Design maintenance, reinvestment and repair program for 10 years operation of the equipment delivered under the Project.

#### 5. Vehicles

- Full operational lease and fleet management for 77 vehicles delivered at the designated healthcare unit.

#### 6. Training

- Detailed design of training curriculum and program to improve the technical skills level as well as the expertise at maternities, immunisation stations and patronage nursing stations;
- Set up a core Centre of Excellence for training in Nursing (community nursing, vaccination, immunization, skills needed at maternities) in Skopje at the School of Nursing and provide for satellite training at Schools of Nursing across Macedonia;
- Organise and conduct the training of all staff employed at the vaccination and immunisation and patronage nursing point throughout the country at the various Schools for Nursing throughout the country;
- Design training program and curriculum for the gynaecologists and other professionals employed at the maternities;
- Organise and conduct the training for the gynaecologists at the Medical Faculty of the University of Skopje;
- Organise and conduct the training of the nurses employed at the maternities at the Schools of Nursing throughout the country.

#### **7. Employers Advisory and Representation**

- Advise, assist and represent Employer and supervision during implementation.

The Project consists of various deliverables as follows:

1. Detailed design of rehabilitation and construction works;
2. Execution of rehabilitation and construction works;
3. Purchase and delivery of equipment and installation of equipment; medical and non-medical, Including spare parts and consumables;
4. Vehicles;
5. Training and capacity building and the detailed design of curriculum and training materials and the actual training process.

Hospital renovation and facilities:

- Detailed design;
- Contracting and construction works.

MCH system

- Design of Bill of Quantities based on functional design and listing in Project Plan;
- Hardware; medical and non-medical;
- Installation works;
- Transport to site;
- Vehicles;
- Facilities renovation/construction works;
- Training and capacity building;
- Work manuals on new clinical and non clinical procedures and skills acquired.



### Vaccination and Immunisation system and community nursing

- Hardware, medical and non-medical;
  - Installation works;
  - Transport to site;
  - Vehicles;
  - Facilities renovation/construction works;
  - Training and capacity building;
  - Work manuals on new clinical and non clinical procedures and skills acquired;
  - Training and Capacity Building;
  - Curriculum design; train the trainer concept as well as training of staff;
  - Teaching/training material;
  - Selection of trainers and training of trainers;
  - Staff training after section;
  - Actual training;
  - Repeat/continuous learning installed and executed.
6. Detailed design of remodelling and construction works of physical infrastructure;
  7. Execution of remodelling and construction works;
  8. Purchase, delivery and installation of equipment; medical and non-medical, including spare parts and consumables;
  9. Procurement of vehicles;
  10. Training and capacity building and the detailed design of curriculum and training materials and the actual training process.

The project implementation is complex. The complexity is a function of timely coordination of various disciplines:

- Design and engineering of the buildings;
- Actual building and construction works at the various sites;
- Arrange tenders for equipment and vehicles;
- Design training curricula and conduct training of personnel working in the Project;
- Conduct long term maintenance services and delivery of spare parts and consumables;
- Project management, monitor and evaluate and assess the execution of the various items of the Project's implementation;
- Structuring the ORIO grant and side financing;
- Fulfil conditions of the grant and the side financing;
- Contract negotiations with the selected IS;
- Issue ICB compliant tender for Procurement, selection of bids, evaluation of bids, awarding of contracts;
- Carry out a programme of quality assurance and control of all deliverables of the Project.

This needs a wide range of expertise and capacities. We need to be aware that implementation capacities and experience for this type of projects is limited at the MoH. Tasks of the Ministry are not

focused on implementing international projects, but rather on policy making. Project management of complex implementation processes is a skill in itself, which requires "hands on" project management capabilities.

It is important that the design and construction works at the various buildings and facilities, the delivery and installation of equipment to these sites and the training of staff employed there, are implemented in close coherence and coordination. This is important, as one would not like to have the building and equipment all ready for operation without the staff trained. Another example is the design and engineering of the building and the importance to finalize the specifications and requirements for the installation of the equipment, when the construction is finalised. Consequently, the timely implementation of the various parts of the Project is of importance.

In the Development Phase the project does not need to be designed in all detail. ORIO's funding only requests a functional and basic design and specifications. Please refer to the report on "Basic Technical Design". That means that a detailed design and engineering will be part of the Implementation Phase. The design, engineering and construction in accordance with generally accepted practices in building should preferably be left to the party contracted for the implementation, the international supplier (referred to as "IS").

This allows for the use of relevant expertise and experience for this type of work and has the advantage that risks are mitigated, as design and engineering will be kept "in one hand" and the IS will implement following his own design and engineering. This allows for an optimisation of the implementation process and may avert risks of claims and cost overrun during implementation, as well as clearly defines responsibilities.

For obvious reasons of price and availability local labour and contracting capacities could be used for the implementation of these construction works.

There is a considerable amount of vehicles in the Project. For the vehicles a full operational lease fleet management type of construction will be implemented.

It is important that the design and construction of all aspects of the Project are done in close coherence and coordination. And likewise the implementation of the various parts of the Project in the right order is important and needs to be well coordinated.

For several items in the Project it would be advisable and cost effective to have Macedonian contractors involved. Local contractors for rehabilitation and building activities are preferred over an international company; the Macedonian companies are more aware about specifics of building in Macedonia and this can be done more cost-effective without mobilisation cost using local labour.

This advantage of local contractors may also apply to training and capacity building. Language and local customs are an important consideration to select Macedonian contractors.



The project procurement is complex. The complexity lies in the combination and timely coordination of various disciplines and the simultaneous delivery of rehabilitation and construction works at the health care facilities, installation of equipment, purchase and delivery of equipment, training and capacity building, design of the constructional works and design of overall package of equipment as well as the design of the curriculum for the training and capacity building). This requires a multitude of expertise and capacity from consultants/suppliers/contractors. At the same time, the procurement capacity and experience for this type of projects is limited at the MoH.

At the same time it is important that the design and construction works at the various buildings and facilities and the delivery and installation and the training of the staff that are going to work in the "new" facilities, are done in close coherence and coordination. This is important because one would not like to have the building and equipment all being ready for use without the staff being trained. And similar, in the design and engineering of the buildings, it is important to take into account the specs and requirements for the installation of the equipment.

But also the timely implementation of the various parts of the Project is of importance. In the Plan for the Implementation Phase this is worked out in detail.

### **MoH's implementation capacities**

MoH has limited implementation capacities for multi-disciplinary projects like this project. This does not mean that the MoH would not be able to implement the Project, but to mitigate risk of cost overruns, coordination between the various parts of the Project and to safeguard a timely implementation, it would be advisable that MoH appoints an external party to advise, consult and provide project management services to MoH for the implementation of the project.

## **Implementation Strategy**

In the Procurement Plan, the implementation strategy has been defined as this forms the basis for the Procurement Strategy. There the choice has been made to give the responsibility for the implementation of the entire Project to a selected IS in one hand. This company will design, engineer, construct and supply. But the IS will also provide the detailed design of the training programmes and conduct the actual training.

Another aspect of the strategy is to engage local sub-contractors for construction works to be carried out under the auspices of the IS.

## **Project Management in the Implementation Phase**

### **Project Organisation**

#### *Management of Implementation*

The different roles during the Implementation Phase are the following:

- Owner or Employer: MoH acting as principal with support of its Consultant and;
- Supplier; being the IS which has been selected and contracted;

- Financiers; ORIO as an important player imposing specific conditions on the Project along with CEB as the other financier(s) next to ORIO;
- Employers Representative and Consultant; Owners (MoH's) Consultant;

Each of the above parties will have their specific role in the implementation of the Project, whereby the IS will perform the actual execution of the implementation of the Project. The owner (MoH) supported by the Consultant will monitor, scrutinise and approve the deliveries. The IS under contract with MoH provides a "turnkey fixed price lump sum" arrangement. This leaves the owners to check and accept the process, the progress, the (quality of) (sub) deliveries and the final results against the terms and conditions of the contract and scopes of work.

The Supplier will implement the Project and deliver the various parts of the Project to the Owner (MoH).

In addition, the Financier(s) will play a role in the implementation process. They will impose in their financing arrangements conditions on the Project's implementation and operation. These conditions will have to be adhered to by all parties.

**Team members, roles and responsibilities; appointment of main Project Functions, Consultant; decision making structure**

To manage the implementation of the Project, the Owner will appoint an Implementation Committee and an Implementation Coordinator (executive director level) to the project. A Consultant will be appointed to assist and advise and monitor the entire implementation process.

The Implementation Committee (ImpCo).

The ImpCo will consist of three persons, appointed by the Minister of Health: a representative from MoH, one from the hospital sector, one from the community nursing/vaccination sector. The main task is to monitor the entire implementation process. The role of the TComm is to decide on all issues concerning the implementation and to take final decision on the basis of the advice provided by the IC. The IC is supported by the Consultant (F4HC). The IS and if and when desired also the Consultant will participate in meetings.

The Implementation Coordinator (IC).

The IC is appointed by the ImpCo at the beginning of the Implementation phase immediately after the procurement has been finalised, the Project awarded and the contract with the IS signed and came into full force and effect. Also, the ORIO Grant and side financing need to be in full force and effect and all other conditions precedent have been fulfilled. The IC is the functionary, who will act as the focal person within MoH during the entire implementation of the Project. He will be supported by an experienced international Consultant (F4HC). For reasons of continuity this Consultant will be the same as the one engaged in the Procurement Phase.

The Consultant (F4HC) as MoH's advisor/consultant.



A consultant will be appointed as advisor and consultant to MoH for the implementation of the Project. As explained above, for reasons of continuity of quality assurance and for efficient time management (a new consultant needs to take a lot of time to familiarise with the Project and with all the specifics of ORIO), the cooperation with F4HC must be continued. It is advantageous to involve F4HC in all stages of the Project as this will safeguard maximum continuity and efficiency with clearly defined responsibilities. The fact that all functions are fully familiar with all aspects of a previous phase of the Project secures continuity in the approach and will save time. The Consultant will work closely together and support the IC who will be the first contact person for the Consultant and its liaison to the ImpCo.

The Consultant will undertake the monitoring and perform the role of the principal/owner together with the IC and will advise the ImpCo on all relevant matters, provide reports on a regular basis for the IC and ImpCo to facilitate to closely follow the progress of the implementation of all aspects and progress of the Project. The Consultant will manage and monitor the entire implementation process in support of the IC.

The Consultant will perform necessary checks and monitoring during the design, engineering and construction of the works and supplies. The Consultant will make sure that all the components of the Project are performed in accordance with the specifications and the contract with the IS and financiers.

The Consultant will consist of a team of experts.

- Team manager and healthcare expert. Frans van Andel of F4HC will be in charge of the management of the team of Consultants and will be the contact person and direct coordinator with the IC and ImpCo. He will also act as healthcare expert on all healthcare related aspects of the Project. The team of consultants has various members with technical expertise in training, MCH, community nursing, vaccination and immunization and gynaecology and obstetrics;
- Financing, legal, ORIO expertise and contacts. Jaap Wientjes of F4HC will look after the implementation to be executed in line with rules set out by the financiers and ORIO. All legal matters concerning protocols of acceptance, bank guarantees etc. will be his expert contribution. Specific legal expertise will be made available by F4HC if and when necessary. He will also provide the expertise and inputs for the negotiations and finalisation of the contract with the IS and the contract with the provider of the operational fleet management.
- Engineering and construction and equipment.  
Dick van Dijk of F4HC will deal with all construction works at the hospital and healthcare facilities. He will assess the detailed designs and engineering before the works starts and assess the deliveries during and after construction.  
An expert on healthcare equipment will deal with all aspects of the equipment in the Project.

- A national expert as part for F4HC's team will be present during the entire implementation phase. He will report to Dick van Dijk and be available on a daily basis to MoH to contact on all relevant matters.
- F4HC national representative expert (Iskra Gerazova, (MPH, public health expert) will be available to MoH on a daily basis to contact on all issues concerning the Project's implementation and I act as liaison between F4HC and MoH on a daily basis.
- Biljana Bosnjakovska will complete the team as the liaison officer available at the Ministry for the day-to-day matters and contacts within MoH.

### **Management/coordination**

Day-to-day management of the Implementation process will be executed by the Consultant in the role of Employers Representative in support to the IC.

The IC and the Consultant will work closely together. The consultant will on a regular basis provide reports on the progress of the Implementation to the IC who will report to the ImpCo. The Consultant may be asked to be present at meeting of the ImpCo.

From the side of the IS, the management and coordination of the entire Implementation Phase under the Contract with the IS is placed with a Project Manager in the team of the IS in accordance with the staffing schedule as proposed in the tender bid. He will be appointed at the start of the Implementation phase. He will be the one to organise and manage all IS's works in accordance with the scope, terms and conditions of the contract.

For the vehicles the structure will be that the lessor/fleet manager reports to the Consultant and the IC for all issues on the provision of the transport facility part of the Project.

### **Support for MoH in the Implementation Phase of the Project**

MoH needs professional assistance to perform its tasks and obligations as an Employer and to manage the tender and implementation process. This applies to project management, legal, financial, but also to technical aspects. After all, it is a complex Project with many aspects of a different nature to be covered and thus it is best to bring in outside expertise and manpower.

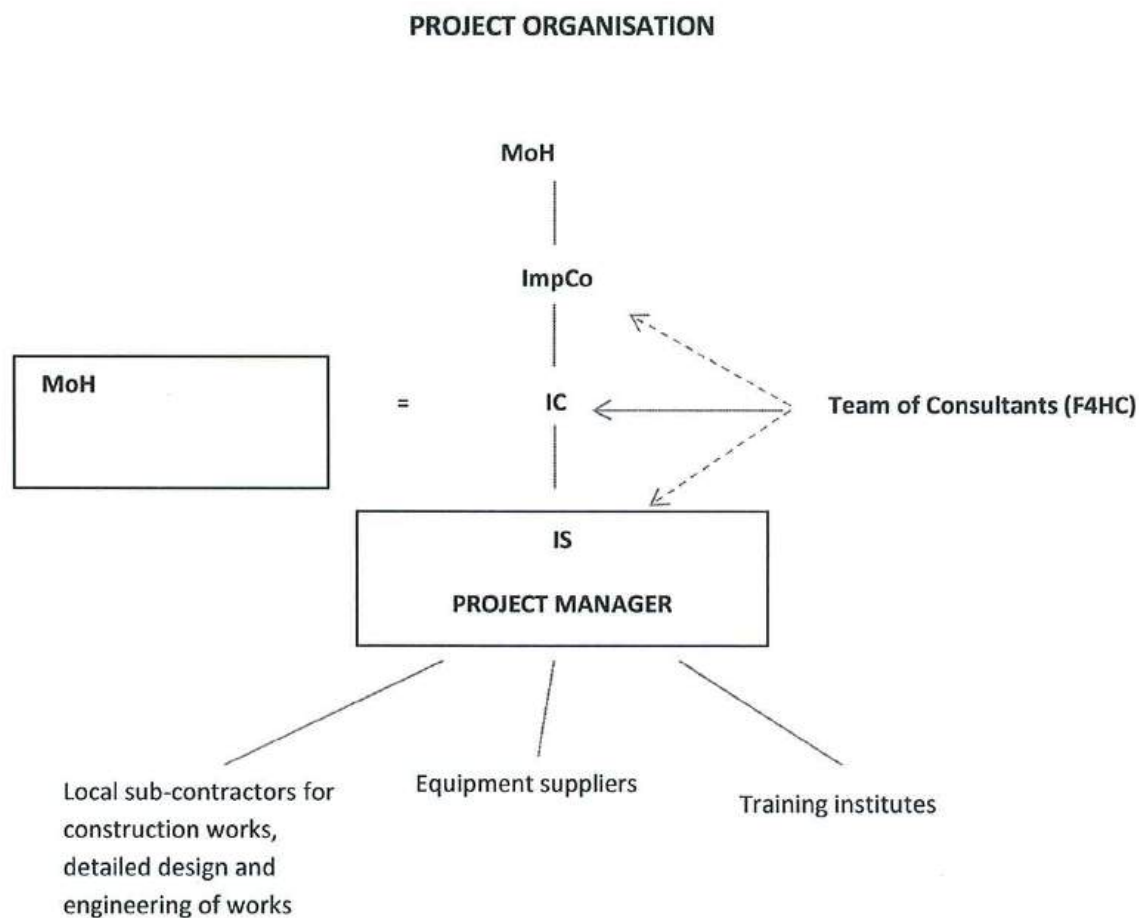
The execution of the Development Phase has been assigned to F4HC; they acted as MoH's advisors and consultants and they conducted the necessary step in this phase. The main goal of this support was to obtain the grant financing from ORIO for the Implementation Phase and to structure and design all aspects of the Project. To secure maximum continuity and since F4HC has been the advisor and consultant during the entire process (from Application throughout the entire Development Phase and Procurement) their supportive role to the MoH should be continued during the Implementation Phase of the Project.



### **Logistical arrangements**

All logistics are assigned to the IS; the IS has a “turnkey” obligation under the Contract. The IS will make all necessary arrangements for the transport of all parts and equipment for delivery to the various sites of the Project in Macedonia.

## Graphical presentation of the Project organisation



### Monitoring, admin and reporting

Monitoring, administration and reporting will be executed by the Consultant for the IC.

Regular reports on progress, payments, deliveries etc. will be provided by the IC to the ImpCo and to ORIO for their review and information.



## Main components of the Implementation Phase

	Main components	Type of investment	Description including activities involved, average life cycle of goods and works, investment needed
1	Hospital renovation and facilities: <ul style="list-style-type: none"> <li>- Detailed design</li> <li>- Equipment supply and installation</li> <li>- Contracting and construction works</li> <li>- Project management services related to the construction works</li> </ul>	Goods and services.	Detailed design and engineering by IS's engineers.  Transport and installation of equipment and goods.  Construction works at the designated hospitals throughout Macedonia.  Average lifetime: 20 years.  Project management. Average life time not applicable.
2	MCH system : <ul style="list-style-type: none"> <li>- Detailed design</li> <li>- Supply and installation of equipment</li> <li>- training</li> <li>- project management</li> </ul>	Goods, equipment, construction and design work services, training and capacity building.	<ul style="list-style-type: none"> <li>- Design of Bill of Quantities based on functional design and listing in Project Plan</li> <li>- Hardware; medical and non-medical</li> <li>- Installation works</li> <li>- Transport to site</li> <li>- Facilities renovation/construction works</li> <li>- Training and capacity building</li> <li>- Work manuals</li> <li>- Related project management services</li> <li>- Detailed engineering and design by engineers.</li> </ul> Obtain approval from Consultant and MoH for all procurement.

			<p>Contract local construction company.</p> <p>Average life time of construction works: 20 years plus.</p> <p>Average lifetime of equipment: between 2- 7 years.</p>
3	Vehicles	Services; financial and operational.	<p>Full operational lease and fleet management services.</p> <p>Average lifetime 5 years (20% residual value) depending on the millage of the vehicles.</p>
4	Vaccination and Immunisation system	Goods, equipment, construction and design work services, training and capacity building.	<ul style="list-style-type: none"> <li>- Hardware, medical and non-medical</li> <li>- Installation works</li> <li>- Transport to site</li> <li>- Facilities renovation/construction works</li> <li>- Training and capacity building</li> <li>- Work manuals</li> <li>- Project management</li> </ul>
5	Training and Capacity Building	Design and consultancy services	<ul style="list-style-type: none"> <li>- Curriculum design; train the trainer concept as well as training of staff</li> <li>- Teaching/training material</li> <li>- Selection of trainers and training of trainers</li> <li>- Staff training after section</li> <li>- Actual training</li> <li>- Repeat/continuous learning installed and executed</li> <li>- Project management</li> </ul> <p>Average life time not applicable.</p>



6	Project management, consultancy; <b>Employers Representation</b> Advisory, project management;	Services	<p>Employer's representation and supervision during the entire Implementation Phase of the Project.</p> <p>F4HC in the role of owners representative i.e. Implementation Consultancy on all aspects of the implementation of the Project.</p> <p>Provision of expertise for project management, admin, monitoring and control, legal, finance, ORIO expertise, engineering, training and capacity building in health care and equipment expertise.</p> <p>Average life time not applicable</p>
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## **Planning of the Implementation Phase**

### **Sequence of implementation**

MoH, like any owner, (and driven by the financing arrangements for this Project), seeks to minimise the risks they may encounter as principal. These risks are the ones of cost overruns, late delivery and substandard quality, but also risk of financial soundness of the contracted party, not only during the construction period but also during the guarantee period and beyond.

But next to that there is also the risk of the coordination and coherence between the various parts of the Project. F4HC will be appointed as consultant to assist MoH in the management of the implementation of this complex Project so that MoH can professionally perform its tasks as Employer.

### **Time planning; time line**

The main issue in this Project is the timely, coordinated and coherent execution of the various parts of its parts. In order to achieve the shortest possible implementation time it is intended that simultaneously and in separate schedules, the various aspects of the Project will be executed. This means simultaneous execution of the construction works at the various sites and the supply of equipment and execution of training and capacity building.

A smooth timely execution of the project is therefore highly depending on a strong critical path planning schedule and dedicated professional project management by the IS.

It is not possible to provide a detailed time planning for the execution of all aspects of the Implementation Phase at this point in time. However, the various critical aspects and requirements will be part of the tender documents. The actual time-planning itself will be detailed as part of the tender bids and a basis for the contract which MoH will sign with the IS of choice.

At this point in the project cycle, it may be assumed that the Implementation Phase will take approximately 36 months from effectiveness of the Contract.

### **Go/no-go decisions**

The first go-ahead is at the moment the Contract is in full force and effect and all conditions precedent are fulfilled. This means the ORIO and other funding arrangements are effective and drawdowns can be made.



For the Implementation the Contract conditions for delivery are defined as “fixed price lump sum turnkey” meaning that the IS has to perform the entire works and services and provide all deliveries. Approvals by MoH will be at the very end of the Implementation.

For the vehicles procurement a separate planning process will be drawn. The IC and the Consultant will manage the timely deliverance of the vehicles.

## **Equipment and technology**

### **Equipment, technical details and compliance to standards, nature of equipment investment**

The equipment will be of international standards applicable for its type of use. Important aspect will be that spare parts and replacements will be available for a period of at least 10 years.

### **Economic lifetime estimation**

The economic life time of the equipment varies from 2- 7 years. For the vehicles this would be 5 years (20% residual value) depending on the mileage. The economic life of the buildings and wards (construction works in the Project) is approximately 20 years.

### **Choice of technology or production method**

The equipment and construction works will be of internationally accepted standards in health care.

**Proposed technology; specific technical details, specifications, dimensions, volumes, capacity needed and capacity used, input and guarantees; Standards of equipment; Choice of technology**

For reasons of conciseness and to prevent repetition, please refer to the Design Report.

### **Installation; commissioning and inspections; testing; contractual arrangements about this;**

In the Contract arrangements procedures and protocols will be provided for the testing, survey and checks to be done prior to commissioning.

The construction and installation works will be commissioned by signing off after surveying the performed works. This will be done by the Consultant. The Consultant will regularly visit the sites to make checks on the works performed.

### **Proven technology, user friendliness and usability**

The equipment will be of proven design and quality.

The construction works will be designed according to proven technology, meeting the local and international standards of building requirements in health care.

## Training in the Implementation Phase

### **Need assessment; Description of the results and related activities; Know-how and skills taught, level**

At present, the staff dealing with the daily operation of the MCH system has the basic skills and knowledge required. However, a different skills and expertise are needed for the different components of the project. For instance, component 1 - renovation of G&O wards of regional hospitals - will need a focus on training staff how to use modern equipment as an important part of that component is to replace old equipment. On the other hand, the component on community nursing needs to focus to an important degree on training issues changing the attitudes and practices of the nurses supporting mothers and children.

Results of the training effort will be that staff dealing in the MCH sector at ante, peri, and post-natal level, is better equipped to anticipate and deal with health problems of mothers and children, resulting in a decrease of infant and mother mortality and morbidity. This will help the MOH to set up and implement more effective health policies and strategies in the MCH sector.

The training will be provided as part of the overall package provided by the IS which is contracted for training of staff of all three components of the project. All training development, elementary training and a major part of the "on the ground training" will take part during the Implementation Phase of the Project, while advanced training and the remainder of the elementary training will be carried out during the O&M Phase of the Project.





Бр.

11-1495/  
.2017 година

Скопје

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здравство

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Република Македонија  
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✓  
ДО

ЗДРУЖЕНИЕ ЗА ЕМАНЦИПАЦИЈА, СОЛИДАРНОСТ И  
ЕДНАКВОСТ НА ЖЕНИТЕ - ЕСЕ

Ул. Максим Горки бр. 20/1-4

Скопје

Врска: Ваш бр. 0801-1511/17-39 од 17.02.2017

Предмет: Одговор на Ваша жалба

Почитувани,

Во врска со Вашата жалба доставена до Комисијата за заштита на правото за слободен пристап до информации од јавен карактер под горниот број во врска со претходно доставено барање со кое ја барате следната информација:

“Испратете ни копија од “Управување и организациона поставеност за функционирање и управување со системот за здравствена заштита на мајки и деца. Планирани поправки и одржување на проектните објекти”, наведена во активност 12 од Додаток 1, План на влезни материјали и излезни резултати за Развојната фаза, во поглавјето 5: Резултати (излезни резултати) под “Резултат на испорака”, од проектот “Воспоставување на интегриран систем за здравствена заштита на мајките и децата во Република Македонија”,

во прилог Ви ги доставуваме бараните информации кои се дел од документот: Plan for the Operational and Maintenance Phase For the Project: “Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia”

Напоменуваме дека документот во прилог е во работна, нефинална верзија во Развојната фаза на проектот и негово финализирање требаше да следи во Имплементационата фаза, која не се случи. За појаснување, развојната фаза отпочна во декември и траеше до јуни 2014 година. Со оглед на фактот што во Октомври 2015 год, Агенцијата одговорна за следење на ОРИО програмата на Кралството Холандија не го одобри продолжувањето



на проектот во следната Имплементациона фаза, податоците и документите од проектот, преминаа во сопственост на Министерството за здравство и се користат исклучиво за интерна употреба.

ЗАМЕНИК МИНИСТЕР,  
М-р. Јовица Андовски



Подготвил:

В.Салевска Трајкова

Копија до:

-Комисија за заштита на правото за слободен пристап до информациите од јавен карактер

- А. Георгиевска

Службено лице за посредување со информации

- Архива

Прилог:





## Plan for the Operational and Maintenance Phase

For the Project: “Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia”

under the ORIO facility (ORIO10/MK/02)

---

The Netherlands, February 2014

To: the Ministry of Health of the Republic of Macedonia

By: Finance for Health Care VOF

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## Foreword

This report is part of the development phase of the project “Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia”, under the ORIO facility (ORIO10/MK/02).

Please also refer to the Basic Technical Design and Specification Report, the Implementation Plan and the Financial Plan.

For the development of the Plan for the Operational and Maintenance Phase the team of Finance for Health Care (F4HC) has been in close contact with the Ministry of Health (MoH). In designing this plan F4HC's team applied its own experience and best practices and common sense to provide an effective and efficient plan for the operations and maintenance of all the different aspects of the Project.

The report is structured as follows:

### Introduction

- General, scope and basic considerations

### Project Management in the Operation and Maintenance Phase

#### Project Organisation

- Team members, roles and responsibilities (which part of the organisation will be responsible for the operations and which for the maintenance), Decision making structure

- MoH's Operational and Maintenance capacities and experiences; Training needs, new staff appointed

- Staff retention policy

### Graphical presentation of the Project organisation

### Performance Indicators, activities and budgets

- Description of the performance indicators and related activities

- Monitoring activities during O&M Phase; Management of spare parts and maintenance; quality standards applied

### Overview of cost categories, sources of revenues and finance

## Definitions and abbreviations:

CEDB:	Council of Europe Development Bank
Development Phase:	The phase as defined under ORIO wherein the Project is developed in all its aspects under ORIO
Employer:	MoH
F4HC	Finance for Health Care; consultant to MoH for the development of this Project
Implementation Phase:	The phase as defined under ORIO, during which the Project is implemented; in this case the actual engineering, design, construction and delivery of the Project.
IS:	International Supplier of the goods and services and party for the construction and installation works as well as the training and capacity building.
MoH:	Ministry of Health
MCH:	Mother and Child Healthcare
O&M	Stands for "Operations and Maintenance"; means operation and maintenance and refers to the activities and programme for the operation and maintenance of all parts of the Project; equipment, facilities and training
Operational Phase:	The phase as defined under ORIO wherein the Project is in full operation
ORIO:	Grant facility from the Netherlands Government
Project:	"Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia", under the ORIO facility (ORIO10/MK/02)
The Contract:	Means the contract signed between the IS and MoH for the Implementation phase



## Introduction

### General, scope and basic considerations

The project entails the expansion and modernisation of the MCH system in Macedonia. To achieve that the following will be implemented, financed, operated and maintained:

#### 1. Upgrading of maternities at regional hospitals

- Design, engineering, construction and delivery of renovation or new construction of facilities including needed equipment and training of staff at maternities at regional hospitals across Macedonia; project management services related to the construction process at the various hospitals, procurement of equipment and training Related Project Management services.

#### 2. Immunisation and vaccination

- Design, engineering and renovation of immunization and vaccination facilities for children, delivery and installation of equipment and training of staff at vaccination and immunization points across Macedonia; project management services related to the construction process at the various vaccination and immunization points, procurement of equipment and training.

#### 3. Polyvalent patronage nursing service

- Design, engineering and renovation of community nursing stations facilities for children, delivery and installation of equipment and training of staff at community nursing stations across Macedonia; project management services related to the construction process at the various community nursing stations, procurement of equipment and training.

#### 4. Spare Parts, consumables and maintenance

- Design a spare part and consumable package to be delivered with the equipment;
- Design maintenance, reinvestment and repair program for 10 years operation of the equipment delivered under the Project.

#### 5. Vehicles

- Full operational lease and fleet management for 77 vehicles delivered at the designated healthcare unit.

#### 6. Training

- Detailed design of training curriculum and program to improve the technical skills level as well as the expertise at maternities, immunisation stations and patronage nursing stations;

- Set up a core Centre of Excellence for training in Nursing (community nursing, vaccination, immunization, skills needed at maternities) in Skopje at the School of Nursing and provide for satellite training at Schools of Nursing across Macedonia;
- Organise and conduct the training of all staff employed on the vaccination and immunisation and patronage nursed point throughout the country at the various Schools for Nursing throughout the country;
- Design training program and curriculum for the gynaecologists and other professionals employed at the maternities;
- Organise and conduct the training for the gynaecologists at the Medical Faculty of the University of Skopje;
- Organise and conduct the training of the nurses employed at the maternities at the Schools of Nursing throughout the country.

#### **7. Employers Advisory and Representation**

- Advise, assist and represent Employer and supervision during implementation.

The goal of the O&M Phase is a renewed up to date MCH health care system in Macedonia.

#### **MoH's capacities**

MoH is already managing and executing MCH services across Macedonia and is well organised to do so. As such MoH is an organisation which is capable to operate the Project, but it needs input of new equipment and training and capacity building, which this Project provides.

## **Project Management in the O&M Phase**

#### **Project Organisation**

The different roles and players during the O&M Phase are the following:

- MoH as project owner who will own, operate and maintain the Project in all its aspects;
- Supplier; being the IS which has been selected and contracted;
- Financiers; ORIO who will provide 35% funding for some of the costs in the O&M Phase and the other financier(s) which will provide the other 65%;

Each of the above will have their specific role in the O&M Phase of the Project.

#### **Team members, roles and responsibilities; decision making structure**

MoH has already a standing organisation which now runs the O&M of the MCH system. The final decision on all matters concerning the Project's O&M will rest with the MoH. In daily practice, the MoH is mainly responsible for strategic and funding issues, whereas the providers of maternal and



child health care are responsible for the operation of the system. This also applies to the O&M of the Project, which will largely be the responsibility of the providers of the MCH system.

#### **MoH's O&M capacities and experiences; Training needs, new staff appointed**

The MoH has been providing MCH services in Macedonia since the early 1950's. They have managed this with often limited resources for facilities and capacities. The Project will invest in a much needed upgrading of existing and construction of new facilities. Concurrently, with these investments in hardware, new capacities of staff and personnel of the MoH and providers of the services in the MCH system need to be developed. This capacity building is an important aspect during the Implementation Phase, but also – and maybe even more importantly - in the Operational Phase of the Project. In the O&M Phase a programme will be implemented and executed to keep the skills and know-how of the staff working in the MCH system up to standards - a continuous learning programme.

#### **Staff retention policy**

MoH has always been a reliable employer, however with relatively low salaries compared to the private sector. The MoH is ascertaining that staff for the Project will be easy to retain.

MoH does not run a specific staff retention programme.

## **Graphical presentation of the Project organisation**

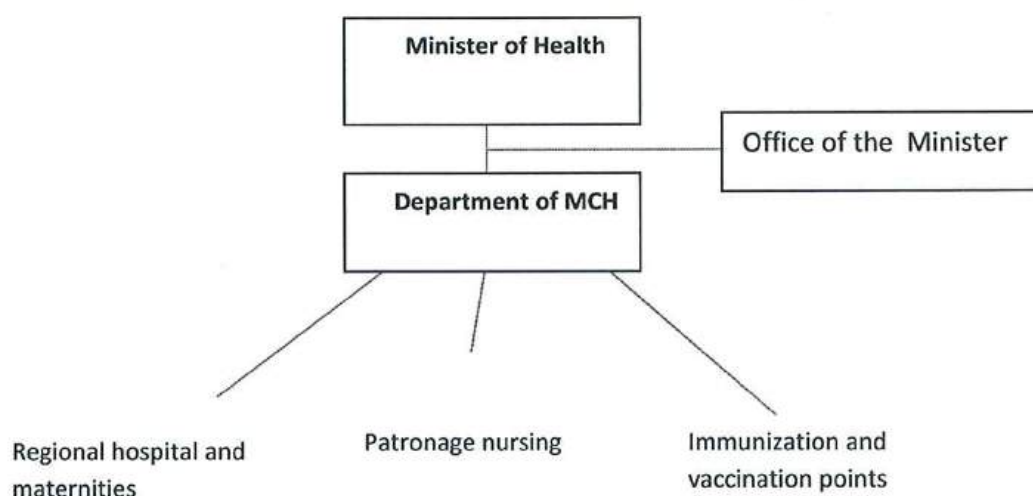
The following graph represents the project organization during the O&M Phase of the Project as follows:

#### **Graphical presentation of the Project organisation**

## **Graphical presentation of the Project organisation**

The following graph represents the project organization during the O&M Phase of the Project as follows:

## ORGANISATION Ministry of Health



## Performance indicators, Activities and budget of the O&M Phase

### Description of the performance indicators and related activities

Performance indicators	Activities	Budget
Shift from number of births from tertiary to primary care by 30%	<p>Description: Number of births at regional primary and secondary care facilities and tertiary hospitals mainly in Skopje</p> <p>Monitoring: Standard collection of data on life births</p> <p>Activities: Adjustment of activities if the number of women given birth at tertiary clinics remains high</p>	No specific budget made available. Such information is already collected for the present operations.
Number of women and children attended by patronage nursing system increasing from 80 to 99% in rural areas and among minorities (e.g. Roma)	<p>Description: Number of women attended by patronage nurses ante and post birth</p> <p>Monitoring: Standard collection of data on visits by patronage nurses to the homes of the</p>	No specific budget to be made available.



	<p>women en women attending the clinic at the Dom Zdravle</p> <p>Activities: Adjustment of activities if the number of women seen in rural areas and among minorities is still sub-optimal</p>	
<p>Number of children properly immunized and vaccinated increases from 90 to 100% in rural areas and among minorities (e.g. Roma)</p>	<p>Description: Immunization and vaccination activities at Dom Zdravles</p> <p>Monitoring: Standard collection of data on immunizations and vaccinations of infants</p> <p>Activities: Adjustment of activities if the number of immunizations and vaccinations of children in rural areas and among minorities is still sub-optimal</p>	<p>No specific budget to be made available.</p>
<p>Financial indicators.</p>	<p>Description: costs of the operations in MCH.</p> <p>Monitoring: MoH's Financial Department provides management information on which the MoH may use for policy operations.</p> <p>Activities: Adjust services and operations to the financial results. Plough back cost savings due to shift of births from tertiary to primary care for additional investments in the MCH system</p>	<p>No specific budget to be made available. The financial department provides the information for management purposes.</p>

### **Monitoring activities during O&M Phase; Management of spare parts and maintenance; quality standards applied**

The MoH will monitor the O&M of the Project. At the MoH, the financial resources available to manage the MCH system are available as well as a reporting system on performance of the system (number of life births for each hospital and Dom Zdravle, number of immunizations and vaccinations per centre and per child, number of home visits of patronage nurses etc.).

## **Overview of cost categories**

The following categories can be distinguished:

### **Operational Costs**

- Labour costs; salaries of nurses, doctors and other staffs.
- Overhead, management, admin etc.
- Depreciation of equipment and buildings.
- Training and retraining.
- Utilities.
- Spare parts, consumables, fuel for the vehicles.
- Repair and maintenance.

### **Finance**

Two sources of financing are applied to the calculations for the O&M Phase. A 35% ORIO grant for certain costs in the O&M Phase which are eligible for ORIO grant funding. The other source (65%) will be reimbursed by the Macedonian Government. These are costs for training, repair and maintenance, spare parts and re-investments.

## **Training during the O&M Phase**

The Training Plan (see separate document) provides a description and specifications of the training and transfer of know-how and skills as part of the Project's Implementation Phase and O&M Phase. Please refer to this plan for the training in the O&M Phase. For the sake of completeness, the general scope of the training is presented in this section for the O&M Phase.

### **Description of the results (output) and related activities regarding training in the O&M Phase**

During the O&M Phase, elementary training of staff working as community nurses and at the Immunisation and Vaccination points will be completed. The reason, that this staff will be trained during the O&M Phase is a sheer capacity problem during the Implementation Phase, during which it has not been feasible to train almost 1,000 staff. In addition, during the O&M Phase advanced



training will be given to selected groups of staff employed at all three levels of the project (hospitals, community nurses, immunization and vaccination).

Main outputs of the training during the O&M phase will be:

- Hospital staff: All training completed during the Implementation Phase
- Patronage nursing: (1) Remaining group of approximately 125-150 nurses receive training in basic skills - 300 were trained during Implementation Phase. Elementary training focuses on acquiring skills for early support of pregnant women to clinical skills development and food and hygiene, (2) Approximately 100 senior nurses receive training in advanced training topics such as complications in child delivery, rare diseases etc.
- Immunization and Vaccination: (1) Remaining group of approximately 150-175 staff receive training in basic skills - 325 were trained during Implementation Phase. An important part of the elementary training is how to set up and run a modern and effective immunization and vaccination service for children from 0 to 7 years of age, (2) Approximately 125 senior staff receive training in advanced training topics such as immunization of rare diseases, cold chain management etc.

#### **Knowledge and skills taught; level of the training**

The IS will be responsible for the necessary transfer of knowledge and skills, needed for the functioning and maintenance of the MCH system. The training will be practice oriented stressing the need for immediate use of skills in the field and daily practice of the O&M of the Project.

#### **Who will be trained?**

At the start of the project: approximately 150 workers at the hospitals (nurses, gynaecologists, obstetricians, nurse practitioners, auxiliaries), about 475 community nurses and about 500 staff at immunizations and vaccination points (50 physicians, 400 nurses, 50 other staff)

During the O&M phase: Due to changes in personnel and changes of positions, an estimated 170 people (20 from maternities, 75 from immunization services and 75 from patronage services) will enter a follow up training each year.

#### **Training plan; provider of training; number of persons to be trained**

A detailed training programme will be among the brief for tenderers reflecting on the tender for Procurement of the Project.

For now, according to an analysis during the Development Phase, it is advised that the training of the community nurses and staff at the immunisation and vaccination points will be carried out by a "Centre of Excellence" based in Skopje. This centre will be based at the School of Nursing, which has a central location in Skopje as well as in the periphery of the country. In designing the training it is

assumed that all staff (around 1,125 persons) need basic education in competence and skills and the management cadres and selected groups will need advanced training.

Staff of the hospitals will be trained at the Medical faculty in Skopje and at various locations in Europe. However, it is assumed that most of the training needed for this group will be completed during the Implementation Phase.

The number and the composition of persons to be trained in the O&M Phase will be approximately 170 per annum (from 1.125 staff).

The 10 years, during which this training will be given (combined with the training provided during the Implementation Phase of the Project) the MCH staff will acquire and maintain adequate expertise and skills levels. Among the staff, there will be those who will maintain the level of knowledge and skills by coaching and instructing others during the time that the IS trainer is not available. These staff members will have access to the IS for Q&A on issues that occur. The communication can be arranged by e-mail, Skype or telephone.





Бр.

11-1494/1

.2017 година

Скопје

10-03-2017

Министерство за  
здравство

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✓  
ДО  
ЗДРУЖЕНИЕ ЗА ЕМАНЦИПАЦИЈА, СОЛИДАРНОСТ И  
ЕДНАКВОСТ НА ЖЕНИТЕ - ЕСЕ  
Ул. Максим Горки бр. 20/1-4  
Скопје

Врска: Ваш бр. 0801-1511/17-41 од 17.02.2017

Предмет: Одговор на Ваша жалба

Почитувани,

Во врска со Вашата жалба доставена до Комисијата за заштита на правото за слободен пристап до информации од јавен карактер под горниот број во врска со претходно доставено барање со кое ја барате следната информација:

“Испратете ни копија од “Програмата за обука на патронажните сестри, на кадарот за имунизација...”, наведена во активност 13 од Додаток 1, План на влезни материјали и излезни резултати за Развојната фаза, во поглавјето 5: Резултати (излезни резултати) под “Резултат на испорака”, од проектот “Воспоставување на интегриран систем за здравствена заштита на мајките и децата во Република Македонија”,

во прилог Ви ги доставуваме бараните информации кои се дел од документот: Training Plan For the Project: “Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia”

Напоменуваме дека документот во прилог е во работна, нефинална верзија во Развојната фаза на проектот и негово финализирање требаше да следи во Имплементационата фаза, која не се случи. За појаснување, развојната фаза отпочна во декември и траеше до јуни 2014 година. Со оглед на фактот што во Октомври 2015 год, Агенцијата одговорна за следење на ОРИО програмата на Кралството Холандија не го одобри продолжувањето на проектот во следната Имплементациона фаза, податоците и документите од проектот, преминаа во сопственост на Министерството за здравство и се користат исклучиво за интерна употреба.



ЗАМЕНИК МИНИСТЕР,  
М-р. Јовица Андовски



Подготвил:  
В.Салевска Трајкова

Копија до:

- Комисија за заштита на правото за слободен пристап до информациите од јавен карактер
- А. Георгиевска
- Службено лице за посредување со информации
- Архива

Прилог:





## Training Plan

For the Project: “Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia”

under the ORIO facility (ORIO10/MK/02)

---

The Netherlands, February 2014

To: the Ministry of Health of the Republic of Macedonia

By: Finance for Health Care VOF (F4HC)

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## Foreword

This report is part of the development phase of the project “Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia”, under the ORIO facility (ORIO10/MK/02).

In designing the Training Plan, F4HC’s team worked closely with Macedonian counterparts from various training institutions in the country (Medical University Skopje, Schools of Nursing, Institute of Public Health, MOH, others as appropriate) and applied its own experience and best practice and common sense. In the Basic Technical Design report and Specification as well as the Implementation Plan and the Plan for the O&M Phase training has been addressed. To stress a comprehensive approach, in this report the training is elaborated once again.

The report is structured as follows:

### Introduction

- General considerations and observations

- Needs assessment

- Results (outputs) to be achieved

- Related activities; Knowledge and skills; Level of training courses

- Training plan; number of persons to be trained, duration and place, level of trainees, number of trainers

- Training budget; working days for each course, daily fees, costs of travel etc.

### Training in the Implementation and O&M Phase

- Description of the results and related activities and skills taught

- Elementary and advanced training topics of staff of all three components

- Training plan; number of persons to be trained, duration and place, level of trainees, number of trainers

- Training budget

## Definitions and abbreviations:

Development Phase:	the phase as defined under ORIO wherein the Project is developed in all its aspects under ORIO
F4HC	Finance for Health Care; consultant to MAA and MOH or the development of this Project
Implementation Phase:	the phase as defined under ORIO wherein the Project is implemented; in this case the actual engineering, design, construction and delivery of the MCH Project

IS:	International Supplier
MCH:	Mother and Child Healthcare
MoH:	Ministry of Health of Macedonia
O&M:	stands for "Operations and Maintenance"
ORIO:	Grant facility from the Netherlands Government
Project:	the project "Set up of an integrated system for maternal and child healthcare to improve health outcomes in the Republic of Macedonia", under the ORIO facility (ORIO10/MK/02).
Facilities:	all healthcare facilities and buildings and maternity wards which fall under the Project



## Introduction

### General considerations and observations

To secure the long term sustainability of the Project training and capacity building are essential. This will require an extensive training effort covering all three components of the Project. When the training component will be tendered at the beginning of the Implementation Phase, the tenderers are requested to provide a detailed plan for the training as "best fit" in their opinion to the Project solution/set-up. The training as described in this Training Plan will serve as the basic specification in the tender for the IS's to base the bids on.

Training needs to be provided on all levels of the project and aims to improve the technical skills level as well as the expertise at maternities, immunization stations and patronage nursing stations. A clear concept providing training in the Project to the three different groups of staff (maternities, patronage nursing, vaccination and immunization), has not been developed in draft by the MoH. According to this concept, training for patronage nurses and immunization staff will be lumped together and a "Centre of Excellence" will be established for this to be based at the present School of Nursing in Skopje. The advantage of this approach is that the Schools of Nursing have regional facilities, which are useful to facilitate the training at a regional level.

On the other hand, the training of gynecologists and other health professionals employed at maternities will be concentrated at the Medical Faculty of the University in Skopje.

### Needs assessment

At present, the staff dealing with the daily operation of the MCH system has the basic skills and knowledge required. However, a different training skills and expertise are needed for the different components of the project. For instance, component 1 - renovation of G&O wards of regional hospitals - will need a focus on training staff how to use modern equipment as an important part of that component is to replace old equipment. On the other hand, the component on community nursing needs to focus to an important degree on training issues changing the attitudes and practices of the nurses supporting mothers and children.

### Results (outputs) to be achieved

Results of the training effort will be that staff dealing in the MCH sector at ante, peri, and post-natal level, is better equipped to anticipate and deal with health problems of mothers and children, resulting in a decrease of infant and mother mortality and morbidity. This will help the MoH to set up and implement more effective health policies and strategies in the MCH sector.

### Related activities; Knowledge and skills; Level of training courses

The training will be provided as part of the overall package provided by the IS which is contracted for training of staff of all three components of the project. All training development, elementary training

and a major part of the "on the ground training" will take part during the Implementation Phase of the Project, while advanced training and the remainder of the elementary training will be carried out during the O&M phase of the Project.

#### **Training plan; number of persons to be trained, duration and place, level of trainees, number of trainers**

In total approximately 1.150 will be trained during the Implementation Phase. During the O&M Phase follow up trainings will be provided, once a year for all new staff. The breakdown by project component is as follows:

	Implementation (total number)	O&M (per annum)
Result 1: Maternities	150	20
Result 2: Patronage nurses	475	75
Result 3: Immunization and vaccination	500	75

Training will be centrally developed in Skopje at the "Centre of Excellence"- School of Nursing for the patronage nurses and the immunization and vaccination staff. For the maternity staff course formats will be developed at the Medical Faculty, University of Skopje.

Staff of the maternities will all be invited to Skopje, while the other two components will be trained at locations of the School of Nursing in the South, West, East of the country as well as in Skopje.

Training material will be developed in a modular fashion and be taught by a mixture of local and international staff. Approximately 20 trainers will be involved in the training effort. They will initially focus on training in elementary skills (i.e. acquiring skills for early support of pregnant women to clinical skills development and food and hygiene, how to set up and run a modern and effective immunization and vaccination service for children from 0 to 7 years of age).

During the O&M Phase advanced training will be developed on topics such as complications in child delivery, rare diseases etc. The next section discusses the training topics in more detail.

## **Training in the Implementation and O&M Phase**

### **Description of the results and related activities and skills taught**

During the Implementation and O&M phases, the training will be developed by the IS. This will be facilitated in two parts; elementary and advanced training for three different groups of trainees as follows: staff at the maternities, community nurses and staff at the vaccination and immunization points.



MOH will participate in the implementation of the Project and by doing so new skills and knowledge is acquired on an "on-the-job" kind of practical way. As part of their obligations the IS will provide for training of all staff at all three levels as described. The training will be developed and provided by the IS. The training will be tailor-made to the staff needs as identified at the surveys which were conducted first quarter 2013.

### Elementary and advanced training topics of staff of all three components

The following tables provide information relative to topics to be covered in the training programme to be developed for the project. Data was derived from the surveys which were launched by the MOH together with F4HC in the first quarter of 2013.

The first table lists training needs of the maternities. It appears that in the maternities, the needs for training in using the new equipment that will be ordered and installed in the frame of the Project is the most urgent. Other topics are related to providing state of the art services in gynaecology and obstetrics.

Table: Summary of training needs of maternities for ORIO support

Maternities/HC with maternities	Capacity building
Central Skopje (GAK Chair)	None
Delcevo	Yes List of topics provided
Kochani	Yes List of topics provided
Kriva Palanka	Yes List of topics provided
Kumanovo	Yes CME topics provided ("Continued Medical Education")
Ohrid	No
Pehchevo	Yes CME topics provided
Resen	Yes Clinical guidelines in Gyn/Obs
Shtip	Yes Selected topics list attached
Strumica	Yes CME selected topics
Valandova	Yes Selected topics list attached

Table: Type of training needed for vaccination and immunization

	Type of needed trainings (Indicated trainings by the health centers)	Total number of Immunization units that noted Needs of trainings for
1	Immunization (global)	22
2	Computer work	9
3	Update and news in the area	8
4	For writing the reports , in association with the new sub law/ regulation	8
5	Practice, technique of application of the vaccine	7
6	Medical waste suspension	4
7	Contraindications	4
8	Vaccine storage, transport and using	3
9	HPV vaccine: application, benefits and damages	3
10	Other trainings	3
11	Cold chain maintaining	2
12	Immunization planning ( how to make a program/agenda)	2
13	Genetic heritable disorder	1





✓  
ДО  
ЗДРУЖЕНИЕ ЗА ЕМАНЦИПАЦИЈА, СОЛИДАРНОСТ И  
ЕДНАКВОСТ НА ЖЕНИТЕ - ЕСЕ  
Ул. Максим Горки бр. 20/1-4  
Скопје

Врска: Ваш бр. 0801-1511/17-29 од 17.02.2017

**Предмет:** Одговор на Ваша жалба

Бр. 11-1441/  
10-05, 2017 година  
Скопје

Министерство за здравство

50-та Дивизија 14,  
1000 Скопје,  
Република Македонија  
Тел. (02) 3112 500  
Сайт: [www.moh.gov.mk](http://www.moh.gov.mk)

Почитувани,

Во врска со Вашата жалба доставена до Комисијата за заштита на правото за слободен пристап до информации од јавен карактер под горниот број во врска со претходно доставено барање со кое ја барате следната информација:

„Испратете ни копија од подготвениот „Извештај од анализата на родовиот развој на приватниот сектор, развојот на малите и средни претпријатија во корист на сиромашните, и другите релевантни општествени прашања и влијанија“ наведен под активност 7 од додаток 1. План на влезни материјали и излезни резултати за Развојната фаза, во поглавјето 5: Резултати (излезни резултати), под „Резултат за испорака“, од проектот “Воспоставување на интегриран систем за здравствена заштита за мајките и децата во Република Македонија”.

во прилог Ви ги доставуваме бараните информации кои се дел од документот: „Economic Impact Assessment Report & Social Impact Assessment Report“.

Напоменуваме дека документот во прилог е во работна, нефинална верзија во Развојната фаза на проектот и негово финализирање требаше да следи во Имплементационата фаза, која не се случи. За појаснување, развојната фаза отпочна во декември и траеше до јуни 2014 година. Со оглед на фактот што во Октомври 2015 год, Агенцијата одговорна за следење на ОРИО програмата на Кралството Холандија не го одобри продолжувањето на проектот во следната Имплементациона фаза, податоците и документите од проектот, преминаа во сопственост на Министерството за здравство и се користат исклучиво за интерна употреба.



Подготвил:  
В.Салеvsка Трајкова, Државен советник

Копија до:

- Комисија за заштита на правото за слободен пристап до информациите од јавен карактер
- А. Георгиевска, Службено лице за посредување со информации
- Архива



Прилог:

### 3.4. Private sector development

By improving the health of people, the employability and productivity of the population, in this case in particular women, will increase. In the longer term improved health conditions for children will have a positive impact on their development and thus will influence their future schooling/education and labour participation and productivity.

The project will specifically focus on improving accessibility to MCH health care services in rural and poor communities, where dependency on the informal sector is still considerable. (Self) employment in remote areas is mainly driven by small enterprises. The government is promoting the development of small businesses in regions where there are unutilized capacities and labour.<sup>1</sup> In rural areas it is important to develop an entrepreneurial spirit to involve a wider spectrum of households to gradually shift from traditional crafts and occupations towards involvement in modern industries.

In small private family businesses the whole family is participating. If the wife's input falls away or is diminished due to health problems with children or with the wife herself, this has an immediate impact on the successfulness of these family businesses. These are difficult to quantify and will differ from sector-to-sector and business-to-business. But is generally accepted that the impact may be substantial. Taking into account that this Project can be expected to contribute to the success of these small family-run businesses.

The Government of Macedonia is considering breaking away from the concept of development of urban centres and embarking on the concept of "space development" with a view to reducing regional and local differences in terms of infrastructure and economic development.

It is difficult to estimate how many private companies will profit from this ORIO project. Our estimate is that the ultimate contribution to the Macedonian economy, the number of Macedonian private companies benefiting from this project may be substantial.

Private sector development of the project should be seen in the light of companies having to manage their sick leave days; for them the cost of human capital is a very important production factor. It is generally accepted that private sector cannot develop without trained staff and that the sector needs energetic and healthy people on the job.

These factors are not to be taken lightly and are as such an important factor of impact, which this project is going to bring about.

### 3.6 Impact on SME's

The project mainly comprises renovation of regional hospitals and modernization of G&O and neonatology wards, investments in the vaccination supply line and the patronage system as well as the purchase or lease of 77 vehicles.

<sup>1</sup> Government of the Republic of Macedonia (2000) p.9





According to the Statistical Yearbook of Macedonia 2013 the total number of registered business entities was 74,000 of which 53,000 were micro and 20,000 were small enterprises.<sup>2</sup> The remaining 1,000 were medium or large companies of which more than half (550) are established in Skopje. Skopje's share in the combined total of 73,000 micro and small businesses is about a third.

For the renovation local companies will be deployed to supply building materials and services in the construction sector (civil\electrical/mechanical works, plumbing, landscaping, utilities etc.) as well as for the supply, installation and maintenance of medical equipment. Most of the local construction companies that will be involved in the implementation of the project will be small and as such fall under the definition of SME. In the operational phase of the projects local companies will be contracted for the maintenance and repair of the equipment and the building facilities.

The total value of construction in the project is estimated in the region of Euro 2.7 million with an important value added for local SME's. The total value of equipment deliveries to the project is estimated at almost Euro 6 million with a lower value added due to the fact that most equipment will be imported. It is estimated that app. 25% of the project budget will flow to SME's. At this stage of the project this can only be an estimate as all procurement and precise project definition still remains to be carried out during the development phase of the project.

First of all the local construction works will be performed by local construction companies and suppliers. These all fall within the definition of SME. In the O&M phase all deliveries and services to the project will be from local SME's.

Determine which of the goods and services (where possible, refer to bill of quantities) that are procured throughout the project are locally available and substantiate if, and why, they are likely to be sourced from local SME's.

#### 4.1.Social issues

##### Gender issues

This project, by its very nature, is very much gender focussed and its effects are to be felt directly and immediately by the women in the service regions of the hospitals, clinics and patronage nursing stations. As the project will result in better access of women and children to good quality health care, women are the key beneficiaries. Improved health for both women and children will positively impact employability and productivity of women (less sick days, faster recovery, less sick members of the family to attend to etc.).

##### Other social groups of the population

The minorities in the Republic of Macedonia especially Roma and Albanians benefit from the project as they are, generally, under served with health care.

There are no adverse impacts social aspects to be expected.

##### Risk and Opportunities





The Project opens new opportunities for a full coverage of the population especially in rural areas and among vulnerable and socially excluded population groups, through professionalization of patronage nursing staff, standardized outreach approach and effective case management. The nurses will visit homes more frequently and inform people in their home environment about healthy life styles, hygiene, food and preventive health care and do (antenatal) check-ups and provide limited curative services. The improved transport modalities provided by the Project will allow for a higher frequency of visits in the towns, villages and remote areas. This will create the opportunities to be more pro-active in capturing vulnerable population groups and will also result in added benefits in general health in addition to an improvement of the MCH situation only.

The project builds on previous efforts over the past 25 years to modernize health care and make it available to ever larger parts of the population including vulnerable population groups. The fact that health incomes, concurrently, have systematically improved over this period suggests that risks are minimal as given that this project operates along policy lines that receive broad international expert support.

A main impetus of the Project is to improve MCH performance and statistics pertaining to ante, peri- and postnatal morbidity and mortality in Macedonia in order be comparable to what has been defined by the WHO and the EU as the European average. Thus, the Project is compliant with international standards formulated in legislation. In addition, the Project conforms to Macedonian legislation in the field of health targets and health care delivery objectives.

The Project will fall within the existing organisational set up of the Macedonian public healthcare system. As part of the training in the Project specific attention will be given to the health and safety issues in dealing with this type of health care. Also specific attention will be given to the management of medical waste, which the Project's operation will produce.

Child labour is not involved in these Projects at all, nor in the construction, nor in the operation. Simply because this is not allowed by law in Macedonia but also because the specifics of the Project will not allow for child labour to be involved as the Project is technically too sophisticated for this to happen.

There will be no security people employed in the Project.

#### 4.2.Pro poor impact

Lack of quality disaggregated sub-national data and national baseline data precludes a comprehensive and up to date analysis of how and to what extent the poor across the entire spectrum of disadvantaged and vulnerable population groups of in Macedonia are going to benefit from the project. Given the nature of this project (improvement of mother and child health care) the relevant unit of analysis are women, infants and children up to the age of five in terms of direct impact of the project. One can thus also argue that this unit in fact comprises households since the health situation of the individuals specifically addressed by the project indirectly but positively affects all the members of households in a socio-economic sense. As





such the very nature of the project, i.e. mother and child health care, implies that in terms of direct and indirect impact the household in question is a relevant unit for measuring as well. Relevant in this connection is that the correlation between a woman's state of reproductive health and her ability to contribute to family income (mostly via the informal economy), to see to the health situation of her children and stimulate their education is generally accepted.

The project seeks to optimize child vaccination rates and reduce MCH mortality rates towards levels prevalent in the EU by improving quality and accessibility of MCH care at the primary health care level which should, amongst others, bring about a better balance and interaction (communication) between the various medical interventions in the regular MCH care chain at primary health care level. At present the existing patronage nursing system in Macedonia, as the key entry point for mothers belonging to the disadvantaged and vulnerable population groups, is biased towards postnatal care at the expense of antenatal care. Infant mortality has been on a continuous overall decline despite up and downs but it remains intimately connected with socially disadvantaged and vulnerable women. Since 2012 infant mortality has been on the rise again. Antenatal care is generally seen as an effective method for improving pregnancy outcomes although the effectiveness of specific antenatal care programmes in terms of reducing infant mortality in socio-economically disadvantaged and vulnerable women has not been conclusively established. Still, it has been found that in particular nurse home visitation and case management as part of a prenatal care package have a positive effect on MCH indicators.<sup>3</sup> Comprehensive home visitation and case management have been identified as fundamental flaws in the performance of Macedonian MCH care at community (patronage) level.<sup>4</sup>

The present lagging MCH indicators correlate with sustained poverty, rampant economic inequality and social exclusion. Although relatively stable as a percentage of the total population, poverty rates vary significantly throughout the country, across the rural/urban divide and among ethnic groups, depending on factors such as the number of household members, the presence of children within the household and employment and educational status.<sup>5</sup>

Given the complexities in the correlation between socio-economic indicators and MCH outcomes and the dearth of useful data in this regard, and in order to arrive at an approximate estimate of the number of poor women and new-borns who would benefit directly from the project we propose to equate the number of new-borns with the number of women giving birth. With 23,500 children born with skilled attendance at delivery in 2012 this means that given a poverty rate of 30% (rounded off), roughly one-third of the mothers concerned were poor, i.e. 7,500 poor women as a conservative estimate.<sup>6</sup> To this number one should add the new-borns themselves, which leads to an outcome of 15,000 direct beneficiaries of the project. This number accumulates annually by a factor four if we would extend postnatal care including vaccinations for each new-born and concerned mother up to the age of five in light of the under-five-mortality rate as a relevant indicator of mother and child health.

<sup>3</sup> Hollowell (2011)

<sup>4</sup> UNICEF (2011 a)

<sup>5</sup> UNICEF (2008)

<sup>6</sup> State Statistical Office of the Republic of Macedonia (2013 a)





This means that if the number of new-borns each year would remain stable over a four-year period  $15,000 + 15,000 \times 5 = 150,000$  new-borns and their mothers are beneficiaries (in each cycle of four years). Within this cycle of 4 years we have to add the number of new-borns and their (poor) mothers in each of the concerned 4 years in order to arrive at an accumulated number on an annual basis. In this manner we arrive at an estimate, on an annual basis, of the total number of poor direct beneficiaries of improved and better accessible MCH care.

In terms of poor indirect beneficiaries, i.e. members of the family of the poor mother, we have to keep in mind that poverty in Macedonia is correlated with large family size. In concrete terms, 48.5% of the poor live in households with five or more members.<sup>7</sup> However, let us assume conservatively that 7,500 poor mothers on average have two members in the (core) family (husband and one child). This leads on an annual basis to a total of indirect poor beneficiaries of 15,000 who will remain in this picture for four years.

Lack of access to proper MCH care and immunization is mainly the result of ignorance, lack of documentation and conservative attitudes resulting from socio-economic status and/or ethnic background of the concerned persons. Financial affordability is not the main factor here as all public health maternity hospital services are free of charge regardless of health insurance status. However, opportunity costs (transport, absence from home, lost time for economic activity etc.) may be playing a role in the limitation of access to services for socio-economically marginalized groups.<sup>8</sup> For these reasons the ORIO-project in question is mainly about accessibility and not affordability. An important factor in limiting access to MCH care has been the lack of pro-active outreach through the concerned health facilities. A particular feature of the ORIO-project is the emphasis on comprehensive outreach to be achieved by improved training and professional development as well as the proposed purchase of 77 vehicles as a major investment within the project. The project is part of an approach, endorsed by the EU in preparation for Macedonia's accession to the EU, to decentralize the health sector as part of the fight against the adverse effects of poverty and social exclusion.<sup>9</sup>

From focus group discussions with a socio-economic mix of beneficiaries it appears that patronage nurses are well known and accepted in the communities.<sup>10</sup> However, the picture is not homogeneous on the national level in terms of experiences, quality of services, range and frequency of services. Beneficiaries seem generally satisfied with the current supply of community nursing services although quite a few of them ask for services outside the present package. Improved health of mother and child should in principle directly and positively affect the productive capacity of mothers and, indirectly, increase educational opportunities for children, which will affect their future income situation. Improving health for mothers and children are part of the Millennium Development Goals (MDG's) meant to break the path for the alleviation of extreme poverty by 2015. Most of the poor are active in the informal

<sup>7</sup> State Statistical Office of the Republic of Macedonia (2012)

<sup>8</sup> Ministry of Health of the Republic of Macedonia (2010 b)

<sup>9</sup> EC (2013)

<sup>10</sup> UNICEF (2011 a)





economy for which no income statistics are available. An important non-labour related source of income are remittances from abroad, which are often not declared. The project is meant to facilitate access for all, and in particular the poor and vulnerable, to the full range of MCH services on the antenatal-postnatal care continuum (maternity wards of health centres and hospitals, patronage nursing services and immunization points). This will give mother and child the best possible guarantee for a healthy life as a result of the project. As such the project, once completed, will in principle fully meet demand of typical individuals.

Major reliability indicators in this connection are the number of four antenatal visits, which is prescribed by WHO and the rate of skilled attendance at birth as well as the increase of the percentage of infants receiving full vaccination by 12 months and subsequent decrease in the number of children receiving full vaccination by 18-29 months. Besides improving the quality of MCH care as such, the project is meant to bring this type of care within actual reach of disadvantaged population groups who, for various reasons including socio-economic status, had so far limited access to regular MCH care also at the level of community nursing. Increased access to MCH care is essential for the poor and un-educated in order to be lifted out of poverty and social exclusion with the help of an improved health status. The project is meant to provide MCH care to vulnerable groups at a level of availability and quality close to EU-standards.

The overall objective of the project is to improve the health outcomes for mothers, infants and children. The trickle-down effects of the project, i.e. a healthier, better educated and therefore more productive population, who will gain, as a result, better access to the labour market.

