## ANNEX I –IPA III Action Fiche

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|  | Indicative title of the Action | **EU FOR AN IMPROVED HEALTH CARE SYSTEM** |
|  | Programming year | **2023** |
| CRITERIA FOR RELEVANCE ASSESSMENT | IPA III Window and thematic priorit(y)/(ies) | **WINDOW 4-COMPETITIVENESS AND INCLUSIVE GROWTH**  ***Thematic Priority 1: Education, employment, social protection and inclusion, and health*** |
| Links with specific policy instruments of the enlargement process | **The objective of the action is to improve the health and well-being of the population of North Macedonia** through the optimisation of the health care service in North Macedonia.  The Action aims at**:**   * improving the emergency medical service and strengthening the emergency response; * upscaling the prevention of colorectal and lung cancer and the use of teleradiology in diagnostic and treatment of non-communicable diseases; * improving the electronic health system (E-Health) at all levels of the health system.   The Action encompasses three components:  **Component 1: Modernised Emergency Medical Service (EMS)**  The network of Emergency Medical Service (EMS) is based on thirty-three (33) primary level Health centres covering the full territory of the country. Each EMS provides diagnostic and therapeutic services for life-threatening emergencies and urgent intervention cases, and is on the front line in crises and emergencies. The EMS’ undertakes on-the-spot measures for resuscitation and intensive care and ensures the transport to the nearest health care institution for the necessary treatment, rehabilitation and reintegration.  Currently, the EMSs have a fleet of 160 vehicles, of which 90% have been in use for more than 10 years and 50% - for more than 15 years. The majority of the vehicles are not equipped up to the EU standards (**CEN standard** 1789:2020), are high-energy intensive and in poor technical status. Their use and maintenance are expensive and ineffective. Moreover, North Macedonia does not dispose of an adequate system to manage and monitor the full fleet of ambulance vehicles across the country.  The action will address these needs by strengthening the pre-hospital and hospital response to emergency medical, surgical and trauma situations in line with international and European standards. This objective will be achieved through the following outputs:  *Output 1.1. New piloted EMS model*  The Action will support North Macedonia to develop and pilot a new EMS model including paramedics in the emergency medical response, including curricula for training of paramedics.  *Output 1.2. Modernised fleet of ambulances*  Replacement of 50 technologically old and far from the standards emergency health care vehicles to strengthen the emergency response at the site of events/accidents and in transit.  *Output 1.3.* *Upgraded EMS ICT technologies*  The Action will establish fully-functional dispatch centres and will connect them with a new ITC system for managing the EMS. The new system will allow the EMS to collect, track and dispatch emergency and accidents-related information and crew report data. Interoperability and data traceability will be achieved with the 112 Emergency Centre, hospital emergency departments and the digital health system. The action will improve the management of EMS resources will contribute to a faster emergency response.  **Component 2: Reduce Mortality due to Cancer**  ThisComponent aims at strengthening of the radiology services and the early diagnosis of non-communicable diseases, in particular lung and colorectal cancer. It is complementary to the IPA 2022 Action “EU for Health, Social Protection and Gender Equality”, which focuses on strengthening the screening programmes and methodology for oncological diseases, improving the medical skills, and upgrading the equipment and technologies related to breast and cervical cancers. The IPA 2023 Action will extend the coverage of the screening programmes by including the lung cancer, will upscale the activities for prevention of colorectal cancer and will boost the tele-radiology. It is expected to achieving the following outputs:  *Output 2.1. Improved National Teleradiology System to allow remote use of radiologic data*  North Macedonia needs to address the challenge of a decreasing number of radiologists and increasing number of rural and peripheral areas without adequate medical diagnostic and treatment service. The Action will support the country in:   * establishing a national database of medical image recordings from various diagnostics (tomography, magnetic resonance imaging and mammography) reliable for scientific and professional analysis. * simplifying the implementing procedures for quality control of the operation of radio diagnostic cabinets across the country. * putting in place of the needed ICT software solutions connecting the radiological equipment with the National eHealth System.   *Output 2.2 Improved prevention and control of lung and colorectal cancer*  Cancer is the second most common reason for death in North Macedonia. Lung cancer remains the leading cause of cancer death, representing 12,9% of all cancer incidents. It affects primarily men; in the period 2010-2020, the mortality for bronchus and lungs cancer has been increasing ranging from 64.8 in 2010 to 66.9 in 2014 and 67, 6 per 100,000 men in 2020.  Colorectal cancer accounts for 5,8% of all cancer incidents and only 14% of these are discovered at an early stage. North Macedonia has not yet developed a systemic screening of colorectal cancer for the whole territory. So far, only a screening programme for Skopje has been put in place, and it is based on Faecal Occult Blood Test (FOBT), which faces some important accuracy challenges.  To address these challenges, the EU will support North Macedonia to:   * Put in place a program for screening of lung cancer, which will define the criteria for enrolment in the screening programmes, qualification and responsibility of the personnel involved, modules for lung cancer screening, quality standards, technical requirements for the imaging. * Raise the awareness on lung cancer causes, and particularly smoking and air pollution. * Improve the colorectal cancer screening programme by enhancing the use of colonoscopy. For this purpose, EU assistance will be used to purchase colonoscopy equipment and ensure an integrated IT solution to link all actors in diagnostics and treatment of colorectal cancer (doctors in primary health care, specialists, university clinic, pathology labs, etc.). The improved screening programme will be piloted in Skopje and will cover 5,000 people per year aged 50-74. Multiplication is expected at a later stage on the grounds of lesson-learnt.   **Component 3: Enhanced e-Health system**  This component will support further the digitalisation of the health care in North Macedonia. It is complementary to the IPA 2022 Action “EU for Health, Social Protection and Gender Equality”, which will define the ERP and LOINC standards for the public health institutions and laboratories, and will consolidate the IT systems of the Ministry of Health and the Health Insurance Fund.  In 2011 North Macedonia established the National System for e-Health – „Moj Termin“, proposing only basic functionalities. The system has been updated several times, including in the last 2 years to reflect the COVID-related diagnostic and vaccination indicators.  Today, “Moj Termin” is used by approximately 19,000 professional users, of which over 10,000 are doctors (4,800 doctors from primary, 3,700 from secondary, and 900 doctors from tertiary level of health care). By end of 2022, patients will become direct users of the system, which is expected to result into the generation of over 1.8 million active patient files. Patients will receive the opportunity to schedule a visit to a family doctor or a vaccination appointment online.  Therefore, the system must be upgraded to ensure security and business continuity[[1]](#footnote-1). Full system availability must be guaranteed during the entire working hours - 99.95% of the time, while the lowest degree of unavailability should be less 4.38 hours on year basis.  Another important challenge is the mobility of some health services, which do not take place in the premises of the health institution, but are conducted in the field. While supporting such services in the interest of the patients, there is need to ensure the data security, the connection to and synchronisation with the centralized working environment.  To address these challenges, the EU support will be focused at achieving the following outputs:  *Output 3.1. Improved health cloud infrastructure*   * Establishment of a Cloud Infrastructure able to support the e-Health system security, business continuity, numerous potential points of outage; * Setting up an integrated modular security solution that includes: Endpoint, Network and Data Centre security; * Elaboration of a model for business continuity with a level of unavailability lower than 43 seconds per day. * Establishment of a solution without a Single Point of Failure. * Provision of the components of the Health cloud infrastructure (hardware components, system hosting and internet connections, Database system licenses, migration of the "Moj Termin" system to the new infrastructure)   *Output 3.2.* *Improved mobile primary health care services (EMS, patronage, duty service, home treatment, vaccination, rural doctor)*   * Provision of hardware and network infrastructure for virtualisation of operations (servers, storage, networking) installed at the central location. * Provision of local units with equipment and work devices -static and mobile. * Provision of an integrated IT solution based on “Moj Termin” as a separated module for the mobility services and telemedicine.   The proposed Action will contribute addressing certain issues recognised in **Chapter 28: Consumer and health protection** of the EC Country report **(SDW(2021) 294 final),** suchas the need for specialised training for using advanced health equipment.  The Action is also in line with the Conclusions of the **Stabilisation and Association Sub-Committee on Internal Market and Competition (Consumer and Health Protection)** hold in February 2021, which recommend, among other aspects, *to provide for adequate and sustainable funding in the field of public health to facilitate health care reforms and provide for well-managed good quality accessible public healthcare for all citizens, as well as continued strengthening of administrative capacity.*  The Action follows the **Economic Reform Programme (ERP) 2022-2024**and represents a significant contribution to overcoming the country's challenges. The programme recognises that the country still faces challenges with regards to the necessary reforms on the underdeveloped primary health care whose main goal is to improve the health of the population, by improving the quality and availability of primary health care and providing comprehensive primary care.  Regarding the Commission Communication **"A credible enlargement perspective for and enhanced EU engagement with the Western Balkans" (COM (2018)65),** this Action supports its strategic purpose related to the socio-economic development and the necessity to increase the financial assistance in the social sector, notably investments in education and health to support social inclusion. As well, the Action is in line with the need to support the Digital Agenda for the Western Balkans in particular on the e-Health services.  The proposed Action will contribute as well to achieve the objectives of the **Economic and Investment Plan (EIP) for the Western Balkans (COM (2020) 641 final).** Boosting investment and economic growth is only possible if the fundamental reforms, particularly those that strengthen or improve human and entrepreneurial capacity to innovate and develop an economic niche. In this sense, this Action is a fundamental element to promote and improve the investments included in the EIP related to the health system reform in the light of lessons learnt from the tackling of the COVID-19 pandemic and the need to reduce costs and ensure all citizens have access to better treatment. |
| Contribution to the IPA III Programming Framework objectives | The Action is designed to contribute to the achievement of the specific objective of the IPA III Programming Framework, thematic priority **education, employment, social protection and inclusion, and health** within **Window 4: Competitiveness and inclusive growth**, and more specifically to support candidate countries to ensure equal opportunities, access to the labour market, fair working conditions, social protection and inclusion, and a *high level of human health protection* and, where appropriate, *make a contribution to health system reforms with regard to raising the coverage and standards of care provided to the population as a whole.*  The proposed Action is in line with the Strategic Response and addresses the Objective 1.4 in window 4a, Thematic Priority 1 aiming at improving the health and well-being of the population and to improve healthcare by providing a sustainable and high-quality patient-centred health system. In particular, it addresses the following areas of intervention included in the Strategic Response:   * Raise the coverage and standards of care provided to the population as a whole trough Improvement of the infrastructure and equipment in health care institutions. * Improve system for self-reported unmet need for medical care. * Inclusion of the electronic health system at all levels in the health system and incorporating the integrated health information system into the EU electronic cross-border data transmission system. * Improve standards of care for communicable and non-communicable diseases. |
| Links with national, regional and global strategies | The proposed Action is in line with the following global, regional and national strategies in the field of health reforms:   * The objectives of **United Nation’s 2030 Agenda for Sustainable Development**, more specifically, the Action contributes to the **Goal** **3. Good Health and Well-being,** and more concretely to the target 3.4: Reduce premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being**.** * The **South East Europe (SEE) 2030 Strategy** whose objective is to reach regionally sustainable economic growth shared by all. The Strategy aims to reduce poverty and inequality, empower women, improve social inclusion, decelerate depopulation of the region through enhancing the quality of life for its citizens and speed up the green agenda and digital transition, without widening socio-economic inequalities and disrupting competitiveness and private sector development, through a genuinely regionally owned political process. The SEE establishes, among others, priority 9: Facilitate access to health and support the improvement of its quality.  The Health Strategy 2021-2030 Republic of North Macedonia defines different activities within six priorities and 17 objectives. Objective 10 is about the policy change and reconfiguration of the emergency medical service system for more effective pre-hospital and hospital response to emergency medical, surgical and trauma situations in line with international and European models and standards of service; and Objective 6 is related to creation and implementation of the national programs for preventive care and early detection of diseases in accordance with the best practices and international experiences with economical and clinically effective approach aiming to engage high % of people from the target groups -85-95 each year. Objective 15 relates to the Health Information systems developments to enable all levels of the health system to function more efficiently and effectively and to significantly improve and develop overall health system governance, accountability and management by improving knowledge management skills and capacities and providing contemporary technical IT and communication systems to support improvement in the planning, management and operational effectiveness of the health care system.  * The **National E-Health Strategy[[2]](#footnote-2)**, that is prepared based on the recommendations for future development and improvement from review on the state of digital health system in North Macedonia. * The Action takes in consideration the priorities set out in the **National Programme for Adoption of the *Acquis (NPAA),*** asfor instance the implementation of the recommendations of the Report for the assessment of the secondary and tertiary health care system conducted by EU experts or the non-infectious diseases and malignant diseases activities. * The **Revised Employment and Social Reform Programme 2022** which emphasize that the key challenges in the field of health system and health care are ensuring high quality healthcare services and improvement, promotion, and maintenance of the public health. Upgrading the integrated health information system “Moj Termin” with new modules are among the indicators to measure the tackling of the key challenges in the field of health system and public healthcare. |
| Coherence with the Sector Approach | The Action falls under **Sector Health**, which was previously (IPA II) included in the Sector Education, Employment and Social Protection. However, the importance of health care for people has been recognised by the Government of North Macedonia, which took measures to separate it as a specific sector. In February 2020 a sector working group on health (SWG Health) was established, chaired by the Minister of Health and comprising of representatives of all bodies and authorities dealing with health care, the international donors and key civil society organisations in the sector. The SWG is chaired by the Ministry of Health and co-chaired by the NIPAC.. The SWG health has the mandate to lead the sector policy dialogue, which includes the definition of sector priorities and the reporting on their implementation. As of 2020, the country put in place a **Performance Assessment Framework** (https://pafnorthmacedonia.mk/PAF/), streamlining the policy objectives, the indicators and the targets.  The objectives of this AF were discussed by the plenary session of the SWG on Health held on the 15 of March and confirmed in the follow-up technical meetings**.**  The sector **strategic framework** is well developed, and important policy documents are prepared, such as the Health Strategy 2021-2030; Mental Health Strategy 2018-2025 and E-Health Strategy (under elaboration). All these documents are based on rich data, coming from the existing IT system, and solid assessments, driven by the international partners.  The **institutional set-up** is supportive to on-going and planned sector reforms with clear responsibilities allocated to the relevant national authorities.  **National budget for health** was increased for 20% between 2018 and 2020. The health care is financed mainly through the contributions for the health insurance of the citizens and from the Budget of North Macedonia; in 2021 for their implementation approx. 5.7 billion denars are provided, i.e. about 4% more than last year. |
| Regional dimension | Not applicable |
| Indicative budget (in EUR) | | Total: EUR 11.8 million  EU funding: EUR 10 million  National co-financing: EUR 1.8 million |
| Implementation Modality | | Direct Management |
| Budget Support Readiness (only in the action is implemented through Budget Support) | | Not applicable |

**LOGICAL FRAMEWORK MATRIX**

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| **OVERALL OBJECTIVE(S) / (IMPACT(S))** | **OBJECTIVELY VERIFIABLE INDICATORS** | **BASELINES (VALUE AND YEAR[[3]](#footnote-3))** | **MILESTONES (OPTIONAL)** | **TARGETS** | **SOURCES & MEANS OF VERIFICATION** |
| To improve the health and well-being of the population of North Macedonia through the optimisation of its health care service | Life expectancy at birth (years) *[[4]](#footnote-4)* | Total: 76.34  Male: 74.39  Female: 78.29 (2017-2019) | N/A | Total: ≥ 77,70  Male: ≥ 76,00  Female: ≥ 79,30 (2027) | SSO |
| Healthy life expectancy at birth (years)*[[5]](#footnote-5)* | 66.14 (2019) | N/A | ≥ 67.70 (2027) | WHO |
| **SPECIFIC OBJECTIVE(S) / OUTCOME(S)** | **OBJECTIVELY VERIFIABLE INDICATORS** | **BASELINE** | **MILESTONES** | **TARGETS** | **SOURCES OF VERIFICATION** | **ASSUMPTIONS** |
| 1.To modernise the Emergency Medical Service (EMS) system | Rate of ambulances available (100,000 inhabitants) | **160/1,836,000x100,000 = 8.7 (2022)** |  | **210/1,836,0000x100,000 = 11,4**  **(2027)** | **MoH** | Government continues investing in the health protection  Population becomes more aware of the health risks created by certain behaviours and adjusts it accordingly |
| % of vehicles older than 10 years | **90% (2022)** |  | **100-50/210 = 77% (2027)** | MoH |
| Number of teams | **176 ( 2022)** |  | **≥ 308 (2027)** | MoH |
| 2.To reduce cancer mortality | Percentage (%) of new lung cancer cases by sex[[6]](#footnote-6) | 21% (males)  7,2% (females)  (2020) |  | ≤ 17% (males)  ≤ 5.9% (females)  **(2027)** | The Global Cancer Observatory (WHO) |
| 5 years prevalence of lung cancer (100,000 inhabitants) [[7]](#footnote-7) | 59,04 (2020) |  |  | The Global Cancer Observatory (WHO) |
| Colon cancer mortality rate (per 100,00 inhabitants) 6 | 6% (2020) |  | **≤ 3% (2027)** | Cancer registry IPH |
| Proportion of early detected CRC | 14% **(2021)** |  | ≥ **50% (2027)** | Program reports |
| % of health professionals -radiologists with implemented digital health tool-teleradiology | **0% (2022)** |  | **100% (2027)** | MoH |
| 3.To enhance e-Health system | % of population with access to its health records | **0%** |  | **20% (2027)** | E-health monitoring system |
| **OUTPUTS** | **OBJECTIVELY VERIFIABLE INDICATORS** | **BASELINE** | **MILESTONES** | **TARGETS** | **SOURCES OF VERIFICATION** | **ASSUMPTIONS** |
| 1.1 New piloted EMS model | Number of new EMS model developed | 0 (2022) |  | 1 (2026) | MoH |  |
| Number of curricula for paramedics in the new EMS model developed | 0 (2022) |  | 1 (2026) | MoH | Improved public awareness on early screening and health prevention  Reforms in the health sector continue and the funding model for health care is improved |
| 1.2 Modernised fleet of ambulances | Number of new equipped and operational ambulances delivered | 0 (2022) |  | ≥ 50 (2026) | MoH |
| 1.3 Upgraded EMS ICT technologies | Number of fully functional dispatch centres connected with ICT system for managing the EMS | TBD |  | TBD | MoH |
| Number of software prepared for integrating dispatch information and communication with hospital emergency departments | 0 (2022) |  | 1 (2026) | MoH |
| Number of software prepared for management and monitoring of vehicles for EMS | 0 (2022) |  | 1 (2026) | MoH |
| 2.1 Improved National Teleradiology System to allow remote use of radiologic data | Number of national databases of medical image recordings (tomography, magnetic resonance, mammography) for scientific and professional analysis | **0 (2022)?** |  | 1 (2026) | MoH |
| Number of simplified procedures for quality control of radio diagnostic cabinets | **0 (2022)** |  | 1 (2026) | MoH |
| Number of software connecting radiological equipment with the National e-Health System | **0** |  | 1 | MoH |
| Number of radiologists using teleradiology system | **0 (2022)** |  | ≥ 140 (2026) | MoH |
| % of results of CT, MRI, Mammography, PET CT read 2 day plus the exam is done | 25% (2021) |  | ≤ 5% (2026) | MoH |
| 2.2 Improved prevention and control of lung and colorectal cancer | Number of lung cancer screening programmes | **0** |  | 1 | MoH |
| Number of public awareness actions on lung cancer causes | **0** |  | 3 | MoH |
| Number of colonoscopy equipment for screening delivered | **0** |  | 1 | MoH |
| Number of IT solutions to link all actors in diagnostics and treatment of colorectal cancer | **0 (2022)** |  | 1 (2026) | MoH |
| Number of people annually dying of lung cancer | **805** |  | < 645 (2026) | MoH |
| Number of people per year encompassed with the CRC (Colorectal Cancer) screening | **0 (2022)** |  | ≥5000 (2026) | MoH |
| 3.1 Improved health cloud infrastructure | Number of IT solutions -cloud infrastructure- to support the e-Health system (security, business continuity, point of failure) | **0 (2022)** |  | 1 (2026) | MoH |
| Number of integrated modular security solutions, including Endpoint, Network and Data Centre Security | **1(2022)** |  | 2 (2026) | MoH |
| Number of business continuity models with a level of unavailability lower than 43 seconds per day | **1(2022)** |  | 2 (2026) | MoH |
| Number of IT solution without a Single Point of Failure | **0 (2022)** |  | 1(2026) | MoH |
| Number of components of the Health cloud infrastructure delivered | **0(2022)** |  | 4(2026) | MoH |
| level of information security (scale 7-10) | **7 (2022)** |  | 10 (2026) | MoH |
| Average response time (API) | 145ms **(2021)** |  | ≤50ms (2026) | MoH |
| % of business continuity provided | **<99% (2022)** |  | ≥ 99,95% (2026) | MoH |
| 3.2 Improved mobile primary health care service | Number of IT solutions (hardware and network infrastructure) installed at the central location | **0 (2022)** |  | 1(2026) | MoH |
| Number of local units with equipment and work devices delivered | **0 (2022)** |  | ≥30 (2026) | MoH |
| Number of IT solutions based on “Moj Termin” a separate module for mobility services and telemedicine | **0 (2022)** |  | 1 (2026) | MoH |
| no of modules for mobile primary health services | **0 (2022)** |  | 1 (2026) | MoH |
| **BROAD ARRANGEMENTS FOR IMPLEMENTATION (IF AVAILABLE)** | Direct Management | | | | | |

1. Where General hospital and health centers are merged [↑](#footnote-ref-1)
2. 2021-2026 to be adopted by the Government [↑](#footnote-ref-2)
3. The baseline value may be “0” (i.e. no reference values are available as the Action represents a novelty for the beneficiary) but cannot be left empty or include references such as “N/A” or “will be determined later”. [↑](#footnote-ref-3)
4. <http://www.stat.gov.mk/Publikacii/SG2019/03-Naselenie-Population.pdf>(Population; T.03.02.1.; page 79.) [↑](#footnote-ref-4)
5. https://www.who.int/data/gho/data/themes/topics/indicator-groups/indicator-group-details/GHO/life-expectancy-and-healthy-life-expectancy [↑](#footnote-ref-5)
6. <https://gco.iarc.fr/today/data/factsheets/populations/807-north-macedonia-fact-sheets.pdf> [↑](#footnote-ref-6)
7. <https://gco.iarc.fr/today/data/factsheets/populations/807-north-macedonia-fact-sheets.pdf> [↑](#footnote-ref-7)