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Recommendations of the Working Group on the Evaluation Framework of the IARC Medium-Term Strategy (MTS) 2021–2025 and its Key Performance Indicators (KPIs)

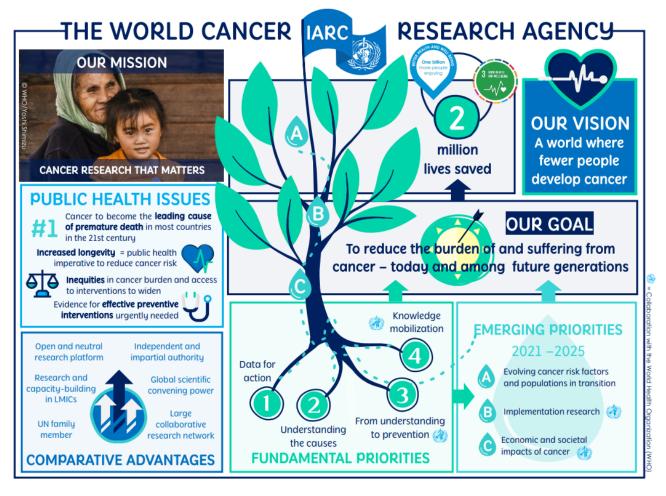
Quote from WHO Director-General Dr Tedros Adhanom Ghebreyesus: "We must be able to measure progress to make progress. (...) Reliable data is the best way to coordinate response efforts and improve health in all areas."

Background

In May 2021, the Governing Council adopted the IARC <u>Medium-Term Strategy</u> (MTS) for 2021–2025. This strategy is based on the <u>IARC Statute</u> and the objective that has guided the Agency's activities since 1965: to promote international collaboration in cancer research. The MTS is a reference document that provides guidance on IARC's priorities over the next 5 years, with a view to ensuring that the Agency's activities have a significant and sustainable impact on the global burden of cancer and, ultimately, on the life and health of the world's citizens.

As the cancer research agency of the World Health Organization (WHO), IARC is focused on cancer prevention research. In that context, the vision of the MTS 2021–2025 is to contribute to *a world where fewer people develop cancer*, which means that IARC will enhance global understanding of causes of cancer, their respective pathways, and potential prevention measures. The action plan of the MTS 2021–2025 will contribute to consolidate the position of IARC as the global leader in cancer prevention research, as the global hub for open science in cancer prevention, and as a recognized United Nations (UN) agency for capacity-building and public health impact.

The MTS 2021–2025 presents IARC's strategic priorities, focusing on four *fundamental priorities* for cancer prevention research: Data for Action (to describe the occurrence of cancer), Understanding the Causes (to identify cancer risk factors), From Understanding to Prevention (to effectively implement cancer research), and Knowledge Mobilization (to share knowledge about cancer). The four fundamental research priorities are represented by the four IARC scientific Pillars. IARC will also invest in three *emerging priorities*, with a stronger emphasis on implementation research: Evolving Cancer Risk Factors and Populations in Transition, Implementation Research, and Economic and Societal Impacts of Cancer. The MTS translates into the IARC Project Tree, which organizes IARC's activities according to projects and the related budget, to ensure proper management of the project portfolio (see Annex 2, on page 72 of the MTS, for the IARC Project Tree).



In May 2021, the Governing Council requested the Secretariat to define a conceptual framework to assess progress in the implementation of the MTS 2021–2025. This work requires defining methodologies to measure the implementation of the new MTS and making available a framework of indicators to assess the Agency's progress in attaining the strategic objectives defined in the MTS.

This document outlines the proposed approach and defines the MTS evaluation framework and the proposed key performance indicators (KPIs) that will enable the monitoring and evaluation of the implementation of the MTS 2021–2025. By means of this evaluation framework, the Director will prepare a report on progress in the implementation of the MTS 2021–2025, including a series of case studies illustrating the main achievements in each of the MTS priorities, complemented by quantitative data on the proposed indicators. It is proposed that a dedicated working group will review the Director's report on the evaluation of the MTS and provide its recommendations to the Scientific Council in January 2026 and to the Governing Council in May 2026.

Therefore, this document has two parts:

- the rationale and the methodology for the evaluation of the implementation of the MTS, and
- the architecture of the evaluation framework and the proposed KPIs to assess progress in the implementation of the MTS.

1. Rationale for the development of the MTS evaluation framework

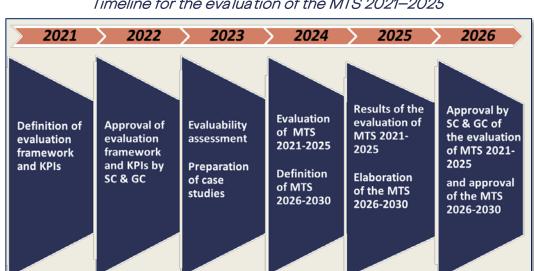
Preparation and process for the evaluation of the implementation of the MTS 1.1

The evaluation of the MTS constitutes the systematic and objective assessment of IARC's strategic programme for 2021–2025: its design, implementation, and results. The aim of this evaluation is to determine the relevance and the fulfilment of the objectives, as well as the development efficiency, effectiveness, and impacts of IARC's activities. This evaluation of the MTS will provide reliable and useful information, which will serve as a basis for IARC to adapt its decisions and to share lessons for the next MTS. This global evaluation of the implementation of the MTS is complementary to the scientific evaluations of individual Branches, which take place every 5 years, through a peer-review process.

The evaluation of the MTS 2021-2025 is a 5-year process, i.e. it occurs over the whole duration of the implementation of the MTS:

- In 2021, the evaluation framework and KPIs will be defined, for discussion by the Scientific Council and for approval by the Governing Council in 2022.
- In 2023, case studies will be prepared for the evaluation, and an evaluability assessment will be performed, to determine the readiness of the MTS for the evaluation.
- In 2024, the evaluation of the MTS 2021–2025 will start, and its contents will feed into the development of the MTS 2026-2030.
- Both documents (the evaluation of the MTS 2021–2025 as well as the MTS 2026–2030) will be available in 2025, to prepare the biennial budget for 2026-2027 and to be submitted for discussion by the Scientific Council and for approval by the Governing Council in 2026.

To prepare this evaluation framework, an extensive literature review of documentation on health policy evaluation was conducted to identify the most appropriate methodology for the evaluation of the MTS 2021-2025. Interviews were conducted with employees and experts who were involved in the development of the MTS 2021–2025, the management of the Agency, the Chairpersons and Vice-Chairpersons of the IARC Scientific Council and Governing Council, and staff in the WHO Evaluation Office.



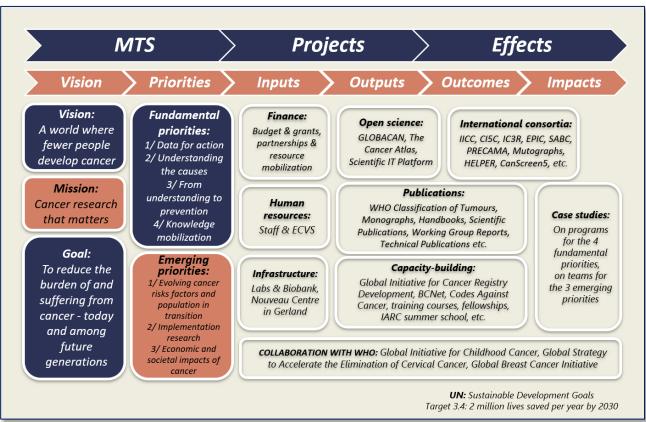
Timeline for the evaluation of the MTS 2021–2025

In May-July 2021, a technical working group composed of IARC personnel proposed a draft of the MTS evaluation framework, with support from the WHO Evaluation Office (Dr Robert McCouch). In September-November 2021, a strategic working group composed of members of the Scientific Council (Dr Luis Felipe Ribeiro Pinto and Dr Mathilde Touvier) and the Governing Council (Dr Yui Sekitani) prepared this document for the 2022 session of the Scientific Council.

Because IARC is the cancer research agency of WHO, the current approach also takes into consideration the UN monitoring and evaluation models for the Sustainable Development Goals (SDGs) and IARC's contribution to the achievement of Target 3.4 of the SDGs: "By 2030, reduce by one third premature mortality from noncommunicable diseases through prevention and treatment, and promote mental health and well-being." The current approach also anticipates the implementation within WHO of the scorecard method, to measure the delivery of outputs of the Thirteenth General Programme of Work 2019–2023 (GPW 13).

To ensure that the MTS evaluation framework covers all the dimensions of the IARC MTS 2021–2025, the logic model shown below was developed. This logic model summarizes, in a graphic representation, the vision and the priorities for 2021–2025 and the relationships among the resources, activities, outcomes, and impacts of the 5-year programme.

Logic model of the IARC MTS 2021-2025



This approach also refers to a conceptual framework for the evaluation of public policy known as the "IOOI" model: inputs, outcomes, and impacts. This methodology analyses the programme as a value chain and considers the relationships among its components, to achieve public health impacts. The definition of the methodology and the reasons for choosing the "IOOI" model for the evaluation of the implementation of the MTS are detailed below.

1.2 Methodology for the evaluation of the MTS

The impact pathway in part 1 (Vision and Mission) of the MTS (see the Appendix to this document) describes how IARC will further strengthen its impact by placing more emphasis on implementation research, driven by feedback from cancer control interventions as well as global public health and economic priorities.

In that context, the methodological framework for the evaluation of the MTS 2021–2025 relies on *the theory of change*. This methodology explains how a particular intervention leads to the intended results and ultimately contributes to the intended impacts. To prepare for the evaluation of the MTS, the theory of change provides a framework to model how short-term changes lead to long-term public health impacts in cancer prevention. This approach includes an increased consideration of health behaviours and access challenges, such as in screening programmes.

This MTS impact pathway perfectly illustrates linkage based on the theory of change, with the causal linkage between Inputs, Outputs, Outcomes, and impacts. To represent the architecture of the MTS evaluation framework, a short definition of the "IOOI" model is provided below, taken from the UN results-based management methodology.

IOOI methodology: UN definition				
INPUTS	Human, financial, technological and information resources used to achieve			
	results.			
OUTPUTS	Specific goods and services produced by the programme. Outputs ca			
	also represent changes in skills or abilities or capacities of individuals or			
	institutions, resulting from the completion of activities within a			
	development intervention within the control of the organization.			
OUTCOMES	The intended changes in development conditions resulting from			
	interventions. They can relate to changes in institutional performance.			
	Outcomes are the collective strategic results for the United Nations			
	system cooperation at country level, intended to support national priorities.			
IMPACTS	Positive and negative, primary and secondary long-term effects produced			
	by a development intervention, directly or indirectly, intended or			
	unintended.			
Source: Results-Based Management in the United Nations Development System, 2016				

The UN result-based management methodology also recommends defining indicators and KPIs to ensure proper monitoring and evaluation of the MTS. Indicators include quantitative or qualitative variables that provide a simple and reliable way to measure the implementation of the MTS 2021–2025. Each category of indicators refers to the main ambitions of the MTS 2021–2025. Those indicators cover the four dimensions of the MTS evaluation framework (inputs, outputs, outcomes, and impacts), to match with the MTS impact pathway to address the global cancer burden.

The MTS evaluation framework also includes KPIs, which are metrics that show the performance related to the Agency's strategy and that are considered particularly critical for the success of IARC's mission. Effective KPIs must be SMART: specific, measurable, attainable, realistic, and time-bound. The UN gives a more precise definition of KPIs in the monitoring framework for the SDGs, based on the 10 criteria shown below.

Ten principles for global monitoring indicators



- 1. Limited in number and globally harmonized
- 2. Simple, single-variable indicators, with straightforward policy implications
- 3. Allow for high frequency monitoring
- 4. Consensus based, in line with international standards and system-based information
- 5. Constructed from well-established data sources

ı en principles 6. Disaggregated

- 7. Universal
- 8. Mainly outcome-focused
- 9. Science-based and forward-looking
- 10. A proxy for broader issues or conditions

Source: SDSN, Indicators and a Monitoring Framework for Sustainable Development Goals: Launching a data revolution for the SDGs, 2015

In the MTS evaluation framework, KPIs are complemented by case studies to provide additional qualitative information about the implementation of the MTS 2021–2025. Indicators, KPIs, and case studies of the MTS evaluation framework will enable performance monitoring of the MTS, through a continuous process of collecting and analysing data and information generated by the 2021–2025 programme. This process will enable the assessment of the implementation of the MTS and of progress in the four dimensions of the MTS evaluation framework. The MTS evaluation framework also serves as a management tool. It will help define personal performance indicators, based on the work plans of the Branches, and the collective and personal contributions to the priorities of the MTS 2021–2025.

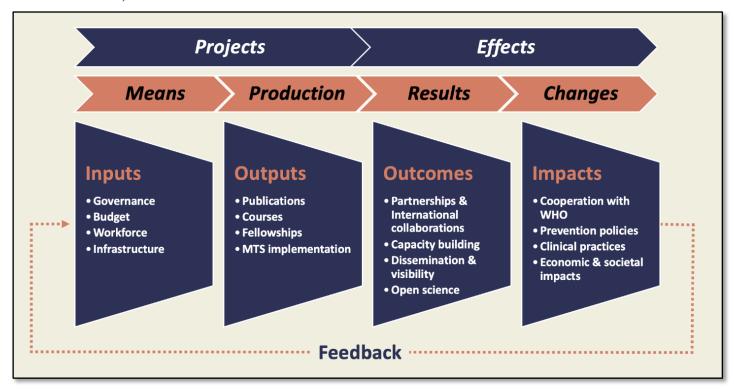
The main sources for the collection of indicators and KPIs are mentioned in the MTS evaluation framework. IARC has limited resources to dedicate to the collection and analysis of inputs, outcomes, and impacts. Therefore, the measures incorporated into the framework are those that can already be captured routinely, supplemented by some additional indicators that can be collected for a modest investment and will provide important information value for the implementation of the MTS.

2. Evaluation framework and proposed KPIs to assess progress in the implementation of the MTS

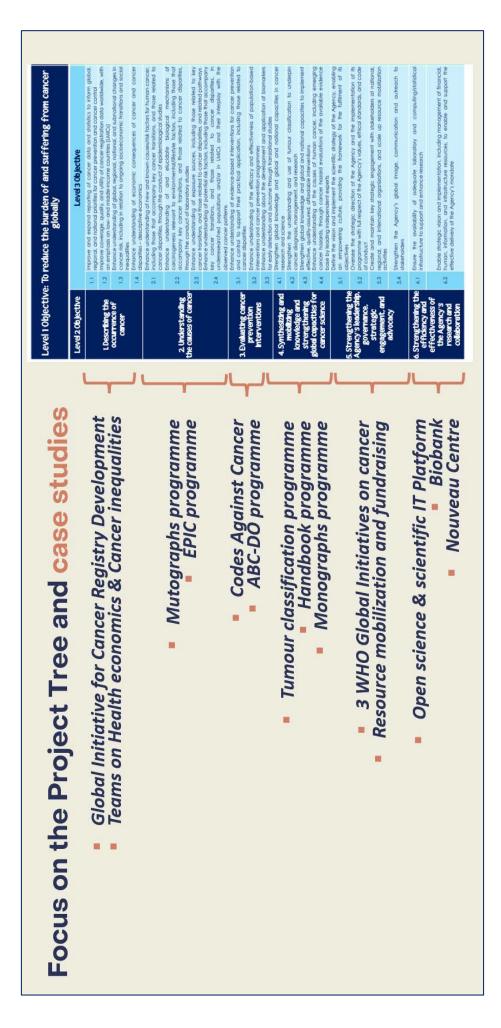
2.1 Structure of the MTS evaluation framework

The architecture of the MTS evaluation framework was defined with four categories of indicators and KPIs for each of the four dimensions of the framework (inputs, outputs, outcomes, and impacts). These categories of indicators and their contents were inspired by the methodological frameworks developed by:

- the United States Centers for Disease Control and Prevention: *Measuring What Matters in Public Health* (Washington DC, USA, 2018), and
- the Canadian Academy of Health Sciences: Making an Impact: A Preferred Framework and Indicators to Measure Returns on Investment in Health Research (Ottawa, Canada, 2009).



This MTS evaluation framework provides quantitative indicators and also qualitative indicators. Most of the quantitative indicators are part of the inputs and outputs, and the qualitative indicators appear mainly in the outcomes and impacts. A list of case studies that will be prepared during the evaluation of the MTS was defined with the scientific coordinators of the IARC Pillars. Those case studies, detailed in the figure below, cover the six main Level 2 Objectives of the IARC Project Tree (see Annex 2, on page 72 of the MTS).



2.2 Proposed indicators and KPIs for the evaluation of the MTS

INPUTS What are the quantity and quality of the resources invested in the implementation of the MTS? Are they relevant according to IARC's ambitions? Main ambitions of the Category of Main indicators Key performance indicators and **MTS** indicators sources GOVERNANCE One new Activities with current Integration of new (Source: DIR, SSR) Participating State Participating States Participating States every 2 years (one Actions to integrate new per biennial budget) Participating States BUDGET ■ Budget increase: Evolution of direct funding Evolution of total and (Source: DIR, SSR) 25% in 10 years Evolution of voluntary regular budget ■ Diversification of contributions Number and Evolution and proportion of resources evolution of funders ■ Increase of grants, donations, legacies, Resource extrabudgetary fundraising, and grants with IARC mobilization and funds as Principal Investigator or Work fundraising (case ■ Innovative resource Package/task leaders study) mobilization Competitive grants: volume, number of funders, contracts, success rates on calls (compared with average success rates) Analysis of grants: % for IARC staff, % for IARC Early Career and Visiting Scientists (ECVS), % for low- and middle-income country (LMIC) partners, % for low-income country partners WORKFORCE Attraction and Number, distribution, and Gender balance at (Source: HRO) building of talents evolution of staff members management level ■ Well-balanced Number, distribution, and (Branch Heads and geographical evolution of ECVS Deputy Branch Staff turnover and comments per representation Heads) ■ Equal treatment of all personnel category Geographical personnel regardless Report of the IARC Equity and diversity across the Diversity Advisory Group (EDAG) of race, gender, Agency and at disability, religion or of IARC referring to the WHO management level belief, sexual Diversity, Equity and Inclusion (DEI) Initiative orientation, and age **INFRASTRUCTURE** ■ IARC's new building New-generation biobank and Nouveau Centre in (Source: ASO) (Nouveau Centre) in laboratories in the Nouveau Gerland -Gerland Centre investment and Implementation of the IT roadmap ■ Support of the operating costs laboratories and (Enterprise Resource Planning (case study) biobank's and Scientific IT Platform) Implementation of sustainability the IARC Data ■ Digitalization, open Protection Policy science and data

OUTPUTS What has been done and produced according to the MTS action plan? Are these outputs aligned with IARC's priorities? Main ambitions of the Category of Main indicators Key performance indicators and **MTS** indicators sources **PUBLICATIONS** Promotion of Evaluation of IARC's contribution Number and (Source: PLW) scientific excellence in the publications evolution of in cancer prevention Manuscripts based on IARC publications Collaborations grants Number and between disciplines Outcome and SWOT analysis of evolution of ■ Implementation the 5-year Branch reviews publications per staff research Analysis of IARC publications, Normalized h-index taking into account the **DORA** and overall and per Pillar <u>Leiden</u> guidelines List of key publications per Pillar and selection of the 5 most relevant per Pillar, and comments on their scientific, public health, and societal impacts Courses organized by IARC, and LEARNING EVENTS ☐ Training of the next Attendees of AND COURSES generation of courses held in LMICs courses, and Number and distribution of (Source: LCB) scientists attendees from ■ Support of capacityparticipants, including from **LMICs** building in LMICs Participating States Available training materials Collaborations with the WHO Academy Diversification of training materials (digital interactive tools, webinars, etc.) TRAINING AND Training of the next Number and distribution of Number of ECVS generation of **FELLOWSHIPS** fellowships (IARC Fellowships and overall and from scientists other fellowships) (Source: LCB) **LMICs** ■ Support of capacity-Number and building in LMICs distribution of IARC Fellowships overall and from LMICs **IMPLEMENTATION** Reduction of Reduction of work travel Monitoring of carbon OF MTS ecological footprint (avoidable working trips), footprint ("green" research) teleworking, e-learning or (Source: DIR, SSR) Compensation ■ Digital transformation blended learning, hybrid meetings programme for for governance, reduction of international travel energy consumption, paperless work

OUTCOMES What progress has IARC made towards achieving the objectives of the MTS? What are the results for stakeholders? Main ambitions of the Category of Main indicators Key performance indicators and **MTS** indicators sources PARTNERSHIPS AND ■ Establishment of MoUs and agreements with International and INTERNATIONAL partnerships research institutes, national MoUs, MoAs, COLLABORATIONS ■ Engagement with UN nongovernmental organization, CRAs, etc., and (Source: DIR, SSR) agencies patient organizations, companies, international ☐ IARC as the leading national cancer centres and consortia global cancer health authorities, etc. (applications and authority Cooperation with UN agencies grants) (UNSCEAR, UNEP, UNFPA, IAEA) International team Cooperation with UICC with Japan (case study) International publications with coauthorship CAPACITY-BUILDING ■ Support of capacity-Expertise missions for Summer School and building in LMICs (Source: CSU, LCB) governments and contribution to ECVS outcomes ■ Training of trainers guidelines surveys and cancer leaders Support to research Global Initiative for infrastructure and governance Cancer Registry BCNet programme (case study) Development Sponsorship of local fellows (CICRNet Training of through IARC grants Trainers) (case Coordination role in consortia study) DISSEMINATION AND ■ Sharing knowledge Access to online tools and Printed publications VISIBILITY and scientific databases and e-publications (Source: PLW, COM) evidence Traffic and downloads on IARC as public goods Dissemination of website Media releases and Amount of sales of IARC information social media ☐ Presence in media, publications presence on the web and Lectures given to public Organization of social media audiences scientific Oral presentations for scientific conferences and conferences, for state actors or events and oral and international organization events poster presentations (governments, EU, WHO, etc.) by IARC scientists at Media coverage congresses and invited conferences **OPEN SCIENCE** Open Access as Development of data analysis Open access (Source: SSR, GEM) cornerstone of Open tools, with open-source code *publications* Science Data sharing on the Scientific IT Scientific IT Platform Platform in line with FAIR (case study) principles Open access biobank (case study)

IMPACTS

What are the long-term, sustainable changes in cancer prevention that are attributable to the MTS?

Category of indicators and sources	Main ambitions of the MTS	Main indicators	Key performance indicators
COOPERATION WITH WHO ON IMPLEMENTATON (Source: ESC, CSU, PLW, ENV, EPR)	 □ Common strategy with WHO NCDs department □ Support of WHO normative work □ Establishment of a formal engagement structure (IARC, WHO headquarters and regional offices) 	 Actions with WHO headquarters Actions with WHO regional offices Contribution to WHO guidelines or policy briefs IARC-WHO co-publications 	 High-level oversight committee and implementation committee Contribution of IARC Handbooks to prevention policies (case study) Contribution to the three WHO global initiatives (case studies)
PREVENTION POLICIES (Source: ESC, CSU, PLW, ENV, EPR)	Translation of IARC's scientific production into WHO public health prevention policies	 Production of IARC Evidence Summary Briefs. Expertise missions. Contribution to WHO guidelines or policy briefs Citations in public health policy documents (Altmetric/Google Scholar) 	 Contribution of IARC Monographs programme to prevention policies (case study) Codes Against Cancer (case study) Documentation on primary prevention advocacy
CLINICAL PRACTICES (Source: CSU, ESC)	Translation of IARC's scientific publications into clinical practices	 Research on cancer survival (SURVMARK-2) Research on patterns of care in cancer Number and scientific production of research programmes on secondary or tertiary cancer prevention and cancer survival 	Contribution of tumour classification programme and scientific production to clinical practices (case study)
ECONOMIC AND SOCIETAL IMPACTS (Source: CSU, other Branches)	Integration of economic and societal impacts into IARC programmes and studies	 3 emerging priorities Contribution of teams related to emerging priority number 3 Integration of economic indicators into the Global Cancer Observatory database Number and scientific production of research programmes on the reduction of health inequalities in cancer prevention 	Teams: Health economics and cancer, Cancer inequalities (case study)

3. Appendix: MTS impact pathway

