Terms of Reference
for

imPACT

(integrated missions of PACT)

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Executive Summary

The International Atomic Energy Agency (IAEA) has a long history of successful technical assistance for cancer diagnosis and treatment programmes in the developing world using radiotherapy. **Radiation medicine**[1] techniques are indispensable in cancer cure and care, where radiotherapy plays a fundamental role. The IAEA has worked for over 30 years in some 115 low- and middle-income (LMI) Member States to deploy robust radiotherapy and nuclear medicine programmes, expending over $200 million on cancer-related assistance under its technical cooperation (TC) programme with technical support provided by the Division of Human Health (NAHU). This assistance has enabled many Member States to establish safe and effective diagnosis and radiation therapy capacity providing cure and higher quality care to at least a portion of their cancer patients. But with a cancer epidemic looming in developing Member States, the existing infrastructure is far from adequate to respond to the growing demand. There is need for urgent action.

The Programme of Action for Cancer Therapy (PACT) was created within the IAEA in 2004 as its response to the World Health Assembly's call to action against cancer. It stands as the IAEA's *umbrella programme* for combating cancer and builds upon the above experience in radiation medicine expertise and technology, and to work closely with the World Health Organization (WHO), its Regional Offices and other key players to enable LMI Member States to introduce, expand and improve their cancer cure and care capacity by integrating radiotherapy into a comprehensive cancer control programme that maximises its therapeutic effectiveness and impact. Such a programme integrates and aligns activities and investments in cancer prevention, surveillance, early detection, diagnosis and treatment, and palliative care within a public health system that is set up based on the guidelines of WHO and other leading cancer institutions. It also addresses other challenges such as infrastructure gaps and builds capacity and long term support for continuous education and training of cancer care professionals, as well as for community-based civil society advocacy and outreach, to combat cancer.

PACT's principal goals are:

a) To build a global public-private partnership of interested organizations committed to addressing the challenge of cancer in LMI Member States in all its aspects.
b) To mobilize resources from charitable trusts, foundations, and others in the public and private sectors to assist LMI Member States to develop and implement their radiation medicine capacities within a national cancer control programme (NCCP);
c) To ensure the effective and sustainable transfer of radiation medicine technologies or knowledge to all LMI Member States where unmet needs exist.

To achieve its goals, PACT is being implemented in overlapping stages in order to raise awareness about cancer, assess comprehensive cancer control needs, develop demonstration projects and attract donors to establish effective new funding mechanisms beyond those currently available from the IAEA and bilateral or multilateral donors. PACT is working through innovative public-private partnerships that involve WHO and its Regional Offices, the International Agency for Research on Cancer (IARC), the International Union Against Cancer (UICC), the International

[1] "Radiation medicine" includes both radiotherapy (or radiation oncology) and nuclear medicine (sometimes referred to as "nuclear oncology". Radiation oncology involves treating cancer by radiotherapy through external beam or brachytherapy. Nuclear medicine involves techniques that employ unsealed or liquid radioactive materials in the diagnosis or treatment of cancer.

Network for Cancer Treatment and Research (INCTR), the U.S. National Cancer Institute (NCI), Institut National du Cancer (France), US-based National Foundation for Cancer Research (NFCR), Tata Memorial Centre (India), Lance Armstrong Foundation, the Open Society Institute (OSI), Organisation of European Cancer Institutes (OECI), the American Cancer Society (ACS), the University of Oxford, Axios (US/France), MDS Nordion (Canada), Best Medical International, Inc. (USA/Canada), the Program for Appropriate Technology in Health (PATH), Mondofragilis Network (France), the State Office for Nuclear Safety (Czech Republic), C-Change (USA) and other key leadership organizations in the fight against cancer. Through this collaboration, PACT and its partners will place cancer on the global health agenda and comprehensively address cancer control needs in the developing world over the next 10 to 20 years. The IAEA will continue to invest in PACT with personnel and resources as one of its key priorities. It will also align its cancer-related technical cooperation activities with the PACT model to ensure a unified and harmonized approach at the regional and country levels.

In order to facilitate the implementation of PACT and the achievement of its goals, the IAEA in cooperation with WHO and other partners offers to its developing Member States, upon request, a multi-disciplinary and multi-stakeholder planning tool called **imPACT** (integrated missions of PACT[2]) for cancer control planning, with a view to identifying and responding to needs in critical policy and strategic level areas of:

a) Capacity building related to comprehensive cancer control (prevention, cure and care) and supporting infrastructure for cancer advocacy, epidemiology, registration, training, education, and resource mobilization;
b) Expansion or upgrading of radiation oncology and nuclear medicine infrastructure based on IAEA guidelines[3]; and
c) Other regulatory requirements based on IAEA safety and security standards and codes of practice.

The main purpose of **imPACT** is to assess the national burden posed by cancer and the status of plans, strategies, programmes, policies, capacities and infrastructure related to cancer **prevention, surveillance, early detection (early diagnosis and screening), diagnosis and treatment, rehabilitation** and **palliative care** through a joint international effort. The objective of this joint **needs assessment** is to assist the requesting LMI Member States, the IAEA and partners, and potential donors, to identify assistance packages designed to respond to these multidisciplinary needs in an effective and efficient manner. These could be used by the Member States assisted at their discretion for resource mobilization purposes as well. All **imPACT** reviews also draw from expert rosters of Member States, IAEA, its PACT partners, and other leading cancer control, public health, and policy institutions to provide evaluation and recommendations on capacity building in medical oncology and other areas of cancer prevention and control as determined by specific requirements of the requesting Member State.

The initial imPACT review lasts approximately six to nine months from the initial desk study to the final joint report and recommendations for action by the government concerned. All **imPACT** reviews are performed in close cooperation with the requesting government and specifically

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[2] The term "*integrated*" here refers to the multi-disciplinary and multi-stakeholder nature of these reviews, involving not only IAEA expertise but also that of WHO, WHO Regional Offices, IARC, ACS, NCI, UICC, INCTR and other leading cancer control agencies and institutions. A preliminary listing of possible agencies that may participate in the **imPACT** process can be found in Annex 1.

[3] On Radiotherapy see "Setting Up a Radiotherapy Programme: Clinical, Medical Physics, Radiation Protection and Safety Aspects, IAEA, 2008". On Nuclear Medicine see " http://www-naweb.iaea.org/nahu/nm/default.asp "

through the Ministry of Health or its equivalent and in collaboration with PACT partners, in particular the corresponding WHO Regional Offices.

The final outcome of the **imPACT** review is a phased planning and investment package for comprehensive cancer control based on government priorities and the following outputs:

a) A **Joint Interagency Report** with relevant recommendations for a National Cancer Control Plan/Programme;
b) A **National Cancer Control Plan/Programme** (NCCP) prepared by the Member State [4]
c) A number of interagency multidisciplinary **Specific Funding Proposals**, developed by working groups comprised of local and international experts and stakeholders (based on priorities established by the government).

Follow-up **imPACT** missions and reports are designed to assess the status of implementation of recommendations and any requested support for the NCCP. The outputs are also used by PACT and partners for furthering global programme development and support for fundraising in line with the overall PACT partnership.

[4] A National Cancer Control Plan, also referred to as Cancer Control Strategy, would ultimately lead to the establishment of a National Cancer Control Programme.

Terms of Reference for imPACT

1. Introduction

Since 1980, the IAEA has delivered over $200 million worth of cancer-related assistance under its Technical Cooperation (TC) programme to LMI Member States. In the process of delivering this programme, the IAEA has created an international radiation oncology and nuclear medicine infrastructure which is the largest and most highly developed multi-national effort in building cancer therapy capacity. Although this infrastructure remains far from being able to respond fully to all needs, it has gradually enabled many LMI Member States to provide higher quality cancer treatment and care to at least a portion of their patients. An extension of the IAEA's fight against cancer should be based on this success in transferring radiotherapy to LMI Member States, and should also encourage investments and advancements in other cancer system components, especially prevention, advocacy and palliative care, by countries involved, and strategic partners such as WHO and other leading cancer treatment and research centres, international donors, and active NGOs.

In June 2004, the IAEA Board of Governors approved the Programme of Action for Cancer Therapy (**PACT**)[5] and requested the Director General to "implement, subject to availability of resources, the elements of PACT" [6]. Through PACT, and in the context of sound national cancer control programmes (NCCP), the IAEA seeks to:

a) Build a global public-private partnership of interested parties committed to addressing the challenge of cancer in low- and middle-income (LMI) Member States in all its aspects. Particular emphasis is placed on providing cancer therapy within a broad, multidisciplinary cancer capacity building programme that complements and enhances the clinical and public health impact of treatment investments by concurrently building capacity for cancer policy and advocacy, epidemiology, prevention, early detection, diagnosis and treatment, palliative care and society building;
b) Mobilize resources from charitable trusts, foundations, and others in the public and private sectors to assist LMI Member States to develop their radiation medicine capacity within a cancer control programme;
c) Ensure the effective and sustainable transfer of **radiation medicine** capabilities to all regions and nations where unmet needs exist, so that the essential facilities and skilled personnel for cancer therapy are in place to care for all patients for whom radiation therapy is part of their recommended treatment.

The IAEA recognizes that strategic planning and capacity building for cancer therapy cannot occur without extensive collaboration. The rationale for PACT is based on the need to create a unifying vision and operational framework, including coordinated internal and external management and communication processes, for all IAEA cancer- related investments and activities, so that these can achieve maximal public health impact in LMI Member States, and further facilitate donor interest and commitment to placing cancer on the global health agenda.

PACT was launched to build innovative public-private partnerships for programme development and fundraising to enable LMI Member States build sustainable cancer cure and care capacity. To this end, PACT has formed effective partnerships with key organizations involved in cancer

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[5] PACT website: http://cancer.iaea.org

[6] "Elements of PACT" refers to items B1-B7 in PACT's original Board approval. See Gov/2004/39, Annex, pages 1-3 (http://cancer.iaea.org/documents/GOV-2004-39_GeneralDistribution_final_June_2004.pdf)

control as partners with leadership in the cancer control components for which they have a mandate and experience. Specifically, through PACT, the IAEA utilizes its significant role in cancer therapy to work with WHO and other leading organizations involved in cancer control to develop joint programmes and to mobilize resources to increase investments across the entire continuum of cancer prevention, cure and care in LMI Member States. This initiative or approach was further strengthened in September 2005 when the IAEA General Conference adopted a new resolution on PACT that requested the Director General to "continue to advocate, build support and allocate and mobilize resources for the implementation of PACT as one of the priorities of the IAEA," and "to explore, together with the Director General of WHO, the feasibility of a joint programme of the IAEA and WHO for cancer prevention, control, treatment and research as well as the best means to partner in the implementation of PACT."

The resolution further stressed "the importance of developing an IAEA-wide strategy for the implementation of PACT, making use — inter alia — of available information, identified resources, and of synergies and interactions across all relevant departments, as well as raising funds from extrabudgetary sources." The World Health Assembly (WHA) also gave recognition to PACT in its May 2005 resolution and the WHO Member States also requested its Director General to explore the feasibility of developing a joint programme between WHO and IAEA for cancer prevention, control, treatment and research. The IAEA General Conference resolutions of 2006 and 2007 further reiterated these recommendations and strongly endorsed PACT's current implementation strategies. In May 2007, WHO also launched its ***Global Action Plan against Cancer*** to advocate for cancer prevention, cure and care; to promote and support NCCP development and implementation in high-burden LMI Member States; and to monitor implementation and impact of national and global interventions. The IAEA welcomes and supports this initiative and works closely with WHO within the framework of PACT.

2. PACT Programmatic Approach

Cancer control as an integrated part of a health care system encompasses a wide range of activities, from prevention, surveillance, screening and diagnosis, to treatment, rehabilitation and palliative care. Cancer treatment is most effective when it is linked to a comprehensive NCCP. Such programmes — including prevention and early detection, coupled with a combination of treatments such as surgery, radiotherapy and chemotherapy — now result in increased health awareness and prevention, the cure of 45% of all cancers, and improved quality of life for cancer patients in developed countries. This is because, through effective primary prevention programmes targeting the common behavioural risk factors, over 30% of cancers could be prevented, mainly by not using tobacco, having a healthy diet, being physically active and preventing infections that may cause cancer. Benefits of cancer prevention normally show up in about 20-30 years. However, early diagnosis/screening (secondary prevention) of certain common cancers, has the potential to improve cure rates and hence to significantly reduce mortality from these cancers in a 5-10 year timeframe.

PACT presents ambitious long-term goals for the next 20 years. It advocates that Member State investments in cancer therapy be part of an NCCP as defined by WHO, thereby enabling Member States to address the drastically increasing cancer burden effectively. These investments are needed across the cancer control continuum shown in the **diagram** on Page 9 to maximize the beneficial impact of radiotherapy and all other interventions. The four vertical boxes at the bottom of the diagram show the main components of cancer control: prevention; early detection; diagnosis and treatment; and palliative care. The horizontal bars comprise all cancer control elements which are considered the enabling conditions to ensure positive outcomes for patients within any of the four vertical components. This integrated model is based on WHO-recommended strategies and

practical experience of many public health agencies and NGOs. The system permits the health care authorities to plan any investments in cancer control in a balanced manner in line with country priorities and evidence-based strategies. Such a model also enables LMI Member States to build cancer therapy capacity in a manner which is complemented by – and integrated with – other critical elements of cancer control. This will empower nations to deal with cancer comprehensively and cost-effectively to achieve maximal clinical and public health impact from their investments. For this model to be successful, basic principles of cancer control need to be followed, such as leadership, participation of stakeholders, partnerships, focus on people's needs, systematic decision-making process, continual improvement, and adoption of a stepwise approach.

In line with the above strategy, PACT is being implemented in overlapping stages which raise awareness about cancer, assess comprehensive cancer control needs, develop demonstration projects and attract donors to establish effective new funding mechanisms beyond those currently available from the IAEA and bilateral or multilateral donors. In addition, PACT is working through innovative public-private partnerships that involve WHO and its Regional Offices, the International Agency for Research on Cancer (IARC), the International Union Against Cancer (UICC), the International Network for Cancer Treatment and Research (INCTR), the U.S. National Cancer Institute (NCI), Institut National du Cancer (France), US-based National Foundation for Cancer Research (NFCR), Tata Memorial Centre (India), Lance Armstrong Foundation, the Open Society Institute (OSI), Organisation of European Cancer Institutes (OECI), the American Cancer Society (ACS), the University of Oxford, Axios (US/France), MDS Nordion (Canada), Best Medical International, Inc. (USA/Canada), Mondofragilis Network (France), the Program for Appropriate Technology in Health (PATH), the State Office for Nuclear Safety (Czech Republic), C-Change (USA) and other key cancer leadership organizations.

2.1. PACT Programme Office

In order to facilitate the implementation of PACT, the **PACT Programme Office** (**PPO**) was established by the IAEA Director General in March 2005. The PPO operates through joint programmes and partnership with other organizations, and operates through advocacy, support building, and mobilization of resources to assist LMI Member States put in place effective cancer prevention, and cure and care services. The PPO coordinates a single, unified programme for fundraising and delivery of projects to Member States for cancer-related activities, including those undertaken by the Agency's Departments of Nuclear Sciences and Applications (NA) and Technical Cooperation (TC)[7]. This coordination will be carried out with technical backstopping of the IAEA Division of Human Health (NAHU). Furthermore, since investments in cancer treatment, including radiation medicine, cannot be optimized in the absence of improved national capacity in other areas, the PPO seeks to coordinate and align IAEA's cancer-related programmatic activities with the efforts of WHO and other key agencies and institutions investing in the expansion of cancer control infrastructures in LMI Member States through partnerships and joint programmes. PACT partners play leadership roles in areas beyond radiation medicine as shown on the Page 9 **diagram** discussed above, e.g., epidemiology, surveillance, prevention, early detection, surgical and medical oncology, cancer policy analysis and formulation, advocacy and management.

[7] Concerning the cancer-related TC projects, it should be emphasized that the existing programme development and management of projects remain within the TC department. PACT's coordination role is in connection with support to Member States for comprehensive cancer control planning, development of proposals and coordination of fundraising for any related projects.

PACT has adopted the above model based on WHO's guidelines to address cancer within the framework of an integrated and comprehensive IAEA-wide policy focusing on the broader public health implications of cancer, providing expert advice and assistance on cancer control planning to Member States at strategic and policy level. The IAEA/PACT thereby operates primarily within the public health arena, consistently collaborating or coordinating its actions with WHO, WHO Regional Offices, and other key agencies and cancer organizations. Moreover, consistent with this approach, the PPO is working closely with Ministries of Health, or other relevant public health institutions in LMI Member States to encourage that all future cancer-related projects requesting support from the IAEA's technical cooperation programme, be developed on the basis of strategic and comprehensive cancer control plans. This will also be supported through the joint efforts of WHO and IAEA in all regions.

3. Strategic Planning

In order to facilitate cancer control planning, the IAEA in consultation with WHO and other partners has developed **imPACT** (integrated missions of PACT) as a comprehensive and multi-stakeholder planning tool, to conduct joint reviews in developing Member States, upon their request, with a view to identifying and responding to needs in critical policy and strategic areas of:

a) Capacity building related to cancer prevention, early detection, palliative care, etc., in collaboration with WHO and other PACT partners

b) Radiation medicine infrastructure (both radiation therapy and nuclear medicine capacity)

c) Other regulatory requirements based on IAEA standards and guidelines (the review will follow current mechanisms developed by the IAEA Departments of Nuclear Safety and Security and Nuclear Energy, as applicable)

All **imPACT** reviews are performed in close cooperation with the requesting government and through the Ministry of Health or its equivalent.

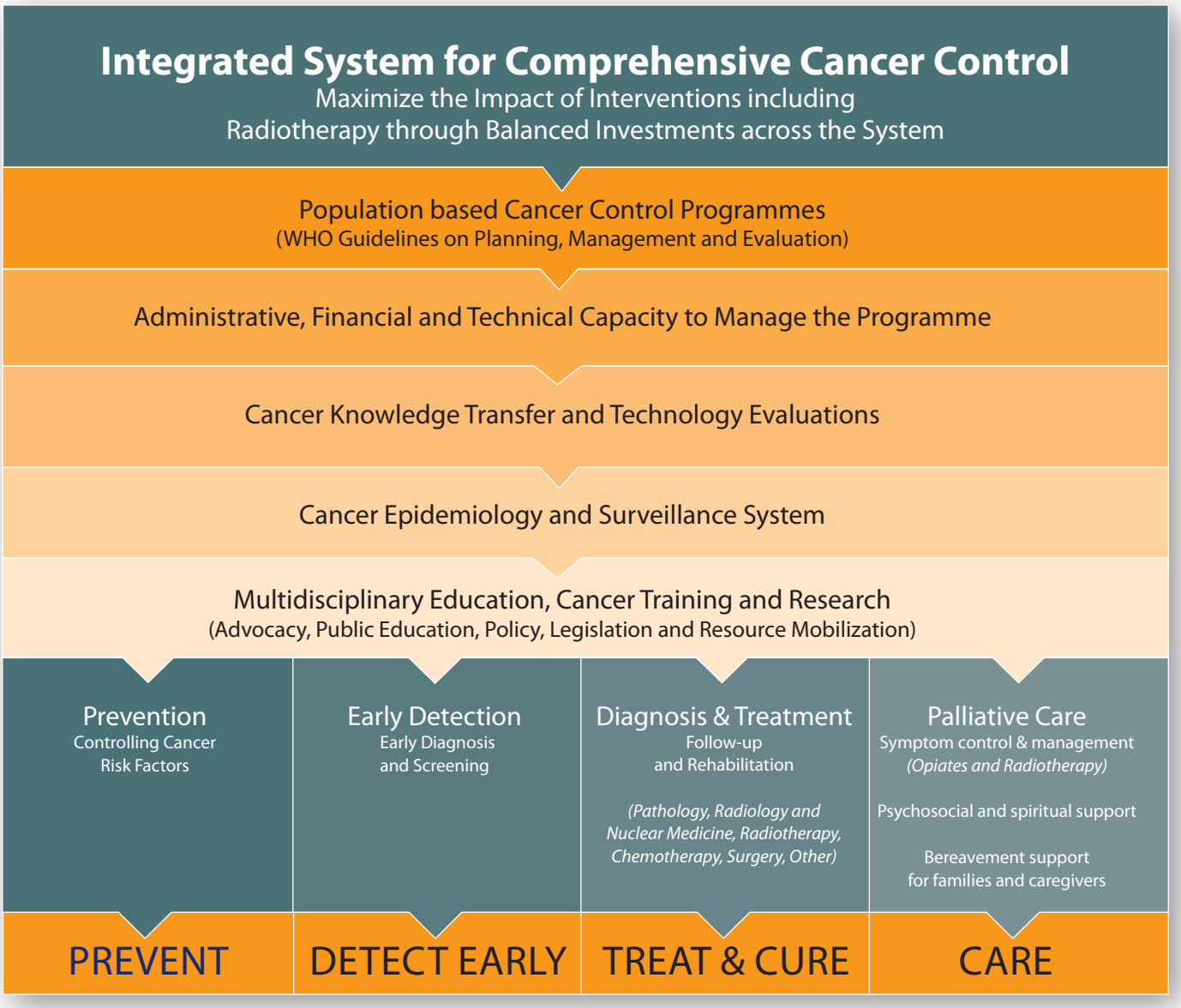
3.1. Purpose and Objectives of imPACT

The main purpose of **imPACT** is to assess the national burden posed by cancer and the status of plans, strategies, programmes, policies, capacities and infrastructure related to cancer **prevention, surveillance, early detection, diagnosis and treatment, rehabilitation** and **palliative care** through a joint international effort. The objective of this joint **needs assessment** is to assist the requesting LMI Member States, the IAEA and partners, and potential donors, to identify assistance packages designed to respond to these multidisciplinary needs in an effective and efficient manner. These could be used by the Member States assessed at their discretion for fundraising purposes.

While conducting **imPACT** review missions, PPO will rely on the IAEA's strengths in radiation medicine and in providing related support to Member States. All **imPACT** reviews will also draw from expert rosters of Member States, IAEA, its PACT partners, and other leading cancer control, public health, and policy institutions to provide evaluation and recommendations on capacity building in medical oncology and other areas of cancer prevention and control as determined by specific requirements of the requesting Member State.

The final outcome of the **imPACT** review is a phased planning and investment package for comprehensive cancer control in each country based on government priorities and the following outputs:

Balanced Investments in Cancer Control from Prevention to End-of-Life Care



The horizontal bars are the enabling components for the delivery of outcomes in the vertical columns. Investments in both the horizontal and vertical fields are determined within the broader context of a particular health system's development and financing, and the prevailing political and social factors.

PACT has adopted the above model based on WHO's guidelines. This *Integrated System for Comprehensive Cancer Control* focuses on timely, planned and balanced investments to improve conditions and outcomes for cancer patients.

a) A **Joint Interagency Report** and relevant recommendations for a National Cancer Control Plan/Programme[8] prepared in collaboration with all participating partners in the mission, that will delineate the current status of cancer prevention and control infrastructure, capacity building plans and needs with specific interagency recommendations for each area;

b) A **National Cancer Control Plan/Programme** (NCCP) prepared by the Member State with WHO, IAEA/PACT and other partners' support, including recommendations for the step-wise implementation of elements of the programme to enable the country to identify, and plan for, the scientific, biomedical, human and financial resources required to meet those needs.

c) A number of interagency multidisciplinary **Specific Funding Proposals**, developed by working groups comprised of national and international experts and stakeholders, for incremental short and long term assistance packages/projects to meet the nation's specific and most acute needs in each component of cancer control capacity building, including cancer policy and advocacy, epidemiology and registration, prevention, early detection, diagnosis and treatment including **radiation medicine (**which will be covered through ongoing or future IAEA/Technical Cooperation projects, or directly managed by the country with technical support from the IAEA**),** chemotherapy and surgery requirements, and drug-based and radiotherapy palliation as needed.

Follow-up missions and reports will be planned to assess the status of implementation of recommendations and any requested support for the NCCP. The outputs will also be used by PACT and partners for global programme development and support for fundraising in line with the above objectives.

3.2. Sequence of Events

Each **imPACT** review lasts approximately six to nine months from the initial desk study to the final joint report and recommendations for action to the government concerned. All imPACT reviews will be performed in close cooperation with the requesting government and specifically through the Ministry of Health or its equivalent and in collaboration with PACT partners, in particular, WHO and its Regional Offices.

The **imPACT** review process consists of the following stages:

a) REQUEST by the Member State for an **imPACT** review, including a country visit(s) as necessary.

b) PACT CONSULTATIONS:

- With corresponding WHO Regional Office to seek advice and to ensure WHO's involvement and support
- Within the IAEA with the respective Regional Director of the Department of Technical Cooperation (TC), the Division of Human Health, the Division of Radiation, Transport and Waste Safety, and the Waste Technology Section

[8] See Footnote 4 on Page 4.

c) SCHEDULING

- Agreeing on a timetable with the requesting Member State
- Inviting PACT partners to participate and to nominate their experts (2-4 weeks)
- PPO issues the preliminary **Terms of Reference (ToR)** for the review and the field mission(s)

d) COSTING AND BUDGETING: Based on the preliminary ToR, the PPO will determine the cost of the review and the related field mission(s). The cost of imPACT reviews are normally expected to be shared amongst the stakeholder agencies and the requesting Member State. Depending on the circumstances of the country involved, and extrabudgetary funds available to PACT for such purposes, the PPO will cover the budget needed for the review and the field mission. If the mission(s) are carried out through Technical Cooperation projects, the PPO will transfer the required budget to the corresponding project to facilitate the implementation of the mission.

e) PREPARATION

- Desk Studies
- Information/data gathering (snapshot approach) in Vienna and from inter-agency partners utilizing data that are readily available.
- For the IAEA's part, data will be collected from TC and NAHU on radiation medicine, and from IAEA Departments of Safety and Security and Nuclear Energy on regulatory requirements.

f) TERMS OF REFERENCE (ToR) finalized by PPO in consultation with the country's authorities involved and partners based on the results under (d) above.

g) FIELD VISITS: Joint or separate field visit(s) (imPACT mission) in which IAEA/PACT and other inter-agency/external advisors visit the country and gather data and interact with the authorities to review the existing infrastructure[9].

h) TRIP REPORT: IAEA **internal imPACT** trip report and preliminary recommendations to the Government and the IAEA, identifying key areas of need (in radiation medicine within a comprehensive cancer control plan) taking into account current IAEA cooperation with the Member State and any other parallel activities.

i) COMPLETION of the **Joint Interagency Report (**hereinafter "***Joint Report***"), with participating PACT partners, based on data collected under (f) above (see Annex 2)

j) SUBMISSION of the "*Joint Report*" to the Ministry of Health for consideration of approval of its recommendations by the government

k) NOMINATION and appointment of a ***National Cancer Control Steering Committee*** by the country's Government (Minister of Health). The Steering Committee is charged with drafting the **National Cancer Control Programme** (NCCP) based on the "Joint Report" and other national requirements and guidelines.

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[9] Flexibility may be needed to accommodate diverse agencies and multiple stakeholders. An ***imPACT*** mission may consist of more than one visit, not necessarily in all cases a joint or simultaneous effort.

l) ESTABLISHMENT of **Working Groups** for various high priority activities to develop Specific Action Packages for: Cancer Control Planning; Society Building; Cancer Registration; Prevention; Early Detection; Diagnosis and Treatment; Palliative Care; Knowledge Transfer and Multidisciplinary Education and Training; Fundraising; and Programme Evaluation. Membership of WGs consists of local authorities with responsibilities for the subject matter and experts from PACT and partner organizations.

m) GENERATION of multidisciplinary **Specific Action Plans** as described in Section 3.1(c) above as well as assistance with the development of the **NCCP**[10] when required by the Government.

n) IMPLEMENTATION of action plans developed under (m) above by the Member State and its relevant institutions, with support from the WGs and oversight by the *Steering Committee*. Involvement of PACT and its partners will be determined by the Government depending on circumstances and funding arrangements.

o) NATIONAL CANCER CONTROL PLANNING AND IMPLEMENTATION WORKSHOP, upon request, either prior to the imPACT missions (to help with the preparatory steps, identification of all relevant stakeholders and collection of data) or after the presentation of the *Joint Report* to assist the Government in the implementation of any aspects of steps (k) to (n) above as required.

p) FOLLOW-UP **imPACT** reviews with missions to assess results within one to two years.

3.3. Planning the Review and Selection of Participating Organisations and Experts

Consultations by PPO with the requesting Member State (Ministry of Health, cancer centres and/or other relevant public health authorities) WHO and all other internal and external stakeholders will determine the type of **imPACT** review needed, preliminary plans for the review and any related missions, and will highlight which organizations and experts (Annex 1) will be of benefit to the review and related missions. Following the selection of organizations and experts, a final plan for the review will be completed, the **imPACT** team will be formed for the country in question, and a timeline agreed for the conduct of studies and necessary country visits.

3.4. Preparing for an imPACT

In order for the **imPACT** to be effective, it is essential to perform several preparatory steps utilizing existing country health and cancer profiles, information in the IAEA Secretariat and its databases, as well as relying on WHO, IARC and other stakeholders' databases and information. The preparatory work would involve IAEA and other international experts producing a series of **Desk Studies** that would form the basis for the mission's final Terms of Reference and the eventual "***Joint Report*"**, which will also contribute in due course to the generation of the draft **National Cancer Control Programme** (see Annex 2 for an outline of the "*Joint Report*"). The PPO will issue a Terms of Reference (ToR) for each imPACT review based on the Government's specific request and the results of above Desk Studies. These ToR will be shared with all stakeholders and interagency partners involved in the mission. This would ensure that, when **imPACT** team members are in the Member State, they are already familiar with the Member State's primary programmes and policies on cancer management, regulatory provisions, technical

[10] Generation of the draft National Cancer Control Programme is likely to be an iterative process involving Member State's interactions with WHO, IAEA and various experts as needed over time in their areas of expertise.

infrastructure, procedures, organizations and key personnel so as to help expedite and facilitate the completion of the "***Joint Report***".

3.5. Carrying out the imPACT Mission

The **imPACT** team involving IAEA[11], WHO Regional Offices, and as relevant, experts from other key partners, coordinated by an expert nominated by PPO, will use the results of **Desk Studies** and the final ToR thereto, as the basis for the country mission. The review process during the field mission will include consultations with Government officials from ministries of health, education, economy, regulatory authorities and others, as appropriate, and visits to and consultations with cancer research institutes, cancer treatment centres; public health agencies, universities and training institutes; as well as cancer advocacy groups, relevant NGOs, and others where appropriate.

3.6. Outputs and Reporting

The main outputs of **imPACT** are, initially, an internal IAEA trip report and preliminary recommendations identifying key areas of need, taking into account current plans and any existing assistance programmes, in particular IAEA's own on-going and planned projects. At the national level, main outputs are a **Joint Interagency Report** for a National Cancer Control Programme **("*Joint Report*")**, and **Specific Action Plans,** and in due course the country will produce its draft **National Cancer Control Programme (NCCP)** with WHO, PACT and other partners' assistance when requested (Annex 3 shows the outline of what an Action Plan might look like for radiation medicine). All reports will incorporate any received feedback and comments of the Member State concerned. Approved official reports are then submitted to the Member State that requested the **imPACT**. Each official report is normally initiated and drafted by PACT Programme Office based on inputs received from all participants and then distributed to the IAEA, WHO and its Regional Office involved, other members of the **imPACT** team and the governmental authorities involved during the various stages of **imPACT** development for review and comments. Any further distribution of the final version of imPACT reports is at the discretion of the Member State.

3.7. Other Pre- or Post-Mission Actions

In order to enhance the effectiveness of imPACT reviews, prior to any full imPACT mission, or following the mission and submission of the "*Joint Report*", and especially to help operationalise the work of the *Steering Committee*, the PPO may arrange, upon request, **National Cancer Control Planning and Implementation Workshops** as follows:

> *PACT and partners may facilitate short practical workshops in cooperation with partners, as applicable, in cancer control planning or specific clinical and managerial issues surrounding radiation medicine, and other cancer control infrastructure components in the context of a national cancer control plan and related strategies. The target participants would be, as appropriate, relevant staff in regulatory agencies, public and private sector institutions, and civil society representatives responsible for, or involved in, public dialogue for the design and implementation of national cancer strategies; systems and regulations relating to cancer prevention, early detection, treatment and palliative care, and issues such as radiation protection. National workshops and other mechanisms including distance learning and web conferences*

[11] The IAEA team normally consists of 1-2 staff from the PACT Programme Office, one Programme Management Officer responsible for the country concerned from the Department of Technical Cooperation, and one Technical officer from the Division of Human Health.

could also be considered together with other partners in order to enhance the country's capacity for cancer control planning and involvement of all stakeholders.

Based on the recommendations of the **Joint Report**, the **Specific Action Plans** will serve as a basis for PACT and partners to collaborate with the Member State to develop the various packages/projects to pursue appropriate resources and technical assistance for advancement of cancer control, consistent with the framework and budget determined in the draft **National Cancer Control Programme (NCCP)**. The **Specific Action Plans** will include recommendations on how to coordinate the development and deployment of radiation medicine capacity and other non-radiation cancer control elements so that they best complement and reinforce each other, taking into account support expected from the IAEA, where relevant, and from others. Other organizations and initiatives in non-radiation medicine related areas of cancer capacity building can similarly, in a complementary fashion, utilize findings and recommendations contained within the National Cancer Strategy and Action Plan in their respective focus areas.

3.8. imPACT Follow-up

Approximately 6-12 months after the **imPACT** review and mission, follow-up visits may be carried out. During such visits, an evaluation will be conducted of the progress made in establishing detailed plans for and implementing provisions of the **Specific Action Plans** and based on the recommendations and actions foreseen in the of the **National Cancer Control Programme**. In addition, as needed, issues raised by the **imPACT** team will be resolved by consulting the Ministry of Health and other relevant authorities, reviewing documentation and conducting site visits. The status of the response to each recommendation will be determined and may be included in an **imPACT** Follow-Up Report.

Annex 1

Preliminary Listing of Possible imPACT Team Participating Organizations

Cancer control capacity building is a complex, cross-sectoral and multi-disciplinary process. No single organization or institutional entity has the breadth and depth of capabilities or resources to single-handedly help nations craft or execute a *National Cancer Strategy and Action Plan.* While the IAEA/PACT seeks to disseminate technology and skills related to its core organizational competencies in radiation medicine, it is essential that additional expertise, experience and resources be brought to bear to maximize the value of a national cancer control needs assessment and planning process that expands beyond the IAEA's focus. The following organizations or types of institutions shall be invited to participate in **imPACT** based on Member State expression of interest:

a) IAEA
b) WHO and its Regional Offices
c) IARC (International Agency for Research on Cancer)
d) UICC (International Union Against Cancer)
e) NCI (American National Cancer Institute)
f) INCTR (International Network for Cancer Training and Research)
g) OSI (Open Society Institute)
h) ACS (American Cancer Society)
i) Tata Memorial Centre (India)
j) Oxford University
k) Leading developed and developing world cancer treatment centres
l) Leading developed and developing world cancer prevention planning and programming centres
m) Leading professional, policy and education organizations in early detection
n) Leading developed and developing world academic medical centres
o) Leading developing and developed nation schools of public health
p) International medical oncology/surgical oncology/radiation oncology/nuclear medicine professional, education and research societies and institutions
q) International health non-governmental organizations
r) National and international cancer advocacy, policy and public education organizations
s) Distance-learning and web-based biomedical organizations
t) International health and cancer donor organizations and philanthropies, including those from the multi-lateral and bi-lateral public sector and from the private sector
u) Leading manufacturers of cancer screening, diagnostic and treatment technology and services

Annex 2

Joint Interagency Report for a National Cancer Control Programme

The **Joint Interagency Report For a National Cancer Control Programme** (the "*Joint Report*")will review and analyse: (i) the current status of national cancer strategies, including cancer statistics and surveillance; (ii) status of radiotherapy and nuclear medicine services and other components of cancer prevention and control; (iii) existing infrastructure, human resources and capacities; (iv) relevant legislation and regulations; (v) relevant socioeconomic and economic factors; (vi) mechanisms for regional cooperation; (vii) past and existing cancer control needs assessments, planning activities, and statements of objectives and desired outcomes; and (viii) provide recommendations for specific actions by the Government, supported by the interagency partners as and when required, to meet the nation's specific and most acute needs in the varied components of cancer control capacity building, including cancer policy and advocacy, epidemiology and registration, prevention, early detection, diagnosis and treatment including **radiation medicine,** chemotherapy and surgery requirements, and drug-based and radiotherapy palliation as needed.

The "*Joint Report"* will also identify gaps in national policies, laws, regulations and standards in radiation nuclear medicine. Each "*Joint Report"* will require the joint efforts and support of international organisations involved in the imPACT review as well as international and national consultants and also resources for the planning and implementation of the review and the field missions.

Next page: a sample **Table of Contents** of the "*Joint Report"* is provided for reference.

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Annex 3

Outline for Specific Action Plans

Example Outline of an Action Plan for Radiation Medicine Capacity

Based on the Country Case Study**,** national goals and policies, and through a process of multi-stakeholder consultations, a Specific Action Plan for Radiation Oncology and Nuclear Medicine will be formulated for the country requesting it. The Specific Action Plan will cover the following areas and will make recommendations for their implementation:

a) review and, where appropriate, upgrading legal and/or institutional arrangements for radiation protection, safety and security;
b) institutional set up and information systems needed for cancer statistics and surveillance, including monitoring of performance at the hospital level and outcomes data collection and reporting;
c) building and strengthening human resources, through group training events, fellowships, scientific visits, expert missions, distance-learning, etc;
d) upgrade of physical infrastructures (hospital tertiary services such as surgical pathology, surgical oncology, diagnostic imaging, teletherapy, brachytherapy, nuclear medicine, immobilization, imaging for target-volume determination, treatment planning computer systems, record and verification systems, other information technology, telelinks, palliative care services, etc.);
e) design and implementation of quality control and quality assurance procedures; and
f) ensuring radiation protection for occupational, medical, and public exposure.