

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

**We would like to invite you to participate in this survey on IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY (PART II).**

**Your insights will provide invaluable data that will enable us to measure and document the progress and impact that our collective efforts have brought about since the beginning of the 21st century.**

**The information gathered through the survey will be used to develop comprehensive publications that will be used to inform research into the impact of the TC programme and to guide the programme's development in the future.**

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

### PART 1. INFORMATION ABOUT RESPONDENT

\* 1. Please select your **role** the from dropdown list

\* 2. Please select your **country** from the dropdown list

\* 3. Please enter your **first and last name**

First Name

Last Name

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

### PART 2

#### THEMATIC AREAS

\* 4. In which of the following **thematic areas** has the IAEA **TC programme** made a substantial **contribution** to the socio-economic **change** in your country?

- ☐ FOOD and AGRICULTURE
- ☐ HEALTH and NUTRITION
- ☐ ENERGY PLANNING and NUCLEAR POWER
- ☐ INDUSTRIAL APPLICATIONS and RADIATION TECHNOLOGY
- ☐ WATER and ENVIRONMENT
- ☐ SAFETY AND SECURITY

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

### FOOD and AGRICULTURE

5. In which of the following **Fields of Activity** has the TC programme made a substantial contribution to **socio-economic change** in your country?

- ☐ Increased **sustainable crop** and **improved climate resilience** in **agriculture**
- ☐ Improved **food authenticity, quality** and **reduce contaminants** and **residues** in the **food supply**
- ☐ Enhanced **livestock**
- ☐ Improved **surveillance, detection**, and **control** of major **insect pests** of **agricultural** and **veterinary** importance, including emerging or re-emerging **zoonotic diseases**

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

### FOOD and AGRICULTURE

#### *Increased sustainable crop and improve climate resilience in agriculture*

6. **How many National New Seed Distribution Programmes** have been supported by IAEA TC programme are currently in place in your country?

7. How many **operational labs** that have been supported by IAEA TC Programme are applying enhanced **biotechnology** and **accelerated mutation techniques** in your country?

8. Please provide the **names** of the operational **labs** that have been supported by IAEA TC Programme in your country applying **enhanced biotechnology** and **accelerated mutation techniques**.

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

### FOOD and AGRICULTURE

*Improved food authenticity, quality and reduce contaminants and residues in the food supply*

9. **How many labs** have been established in your country with the support of the IAEA TC programme for **food authenticity**, food **safety**, and related purposes?

10. Please provide the **names** of the **labs** supported by the IAEA TC programme that have been established in your country for **food authenticity**, food **safety**, and related purposes.

11. **How many testing laboratories** supported by the IAEA TC programme are currently in place in your country?

12. Please provide the **names** of the **testing laboratories** supported by the IAEA TC programme that are currently in place in your country.

13. Are there currently any **radiation surveillance programmes** in your country in place that are supported by the IAEA TC programme?

☐ Yes

☐ No

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

### FOOD and AGRICULTURE

#### *Livestock production*

14. Has there been any reported **increase** in **food security** in your country due to the introduction of **genetic breeding techniques** as a result of support from the IAEA TC programme?

☐ Yes

☐ No

15. **How many laboratories, institutions or centres** with capacity for **livestock reproduction** and **breeding practices** have been supported by the IAEA TC programme?

16. Please provide the **names** of the **laboratories, institutions or centres** with capacity for **livestock reproduction** and **breeding practices** supported by the IAEA TC programme:

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

### FOOD and AGRICULTURE

#### *Improved surveillance, detection, and control of major insect pests of Agricultural and Veterinary importance, including emerging or re-emerging zoonotic diseases*

17. **How many centres** in your country have received IAEA TC programme support for developing, planning, and implementing regional or area-wide strategies for **pest control** specifically targeting **fruit flies**?

18. Please provide the **names** of the **centres** in your country that received support from the IAEA TC programme to develop, plan and implement regional or area-wide strategies for **pest control**, specifically targeting **fruit flies**?

19. **How many centres** in your country have received IAEA TC programme support to develop, plan and implement regional or area-wide strategies for **pest control**, specifically targeting **mosquitoes**?

20. Please provide **names** of the **centers** that have been supported by IAEA TC Programme in developing, planning, and implementing regional or area-wide strategies for **pest control** specifically targeting **mosquitoes**?

21. **How many centres** in your country have received support from the IAEA TC programme to develop, plan and implement regional or area-wide strategies for **pest control** of pests such as **new world screwworm**, etc.?

22. Please provide the **names** of the **centres in your country** that have received support from the IAEA TC programme to develop, plan and implement regional or area-wide strategies for **pest control** of pests such as **new world screwworm**, etc.?

23. Is there a **surveillance system** in place in your country for the **timely detection** of **invasive regulated insect pests and vectors** that has been supported by the IAEA TC programme?

☐ Yes

☐ No

24. How many **centres in your country** have received IAEA TC programme **support** specifically for **COVID-related** efforts?

25. Please provide **names** of the **centers in you country** that have been **supported** supported by IAEA TC Programme specifically for **COVID-related** efforts?

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

### HEALTH and NUTRITION

26. In which of the following **Fields of Activity** has the IAEA TC programme made a substantial contribution to **socio-economic change** in your country?

- ☐ Improved **imaging** and **treatment capacity** for cancer and other NCDs, including on related safety and security considerations; on cancer control ensure integration of diagnostics and treatment interventions in comprehensive cancer control strategy
- ☐ Increased **production** and use of **safe radioisotopes** and **radiopharmaceuticals** to be used in **medical applications**
- ☐ Increased **effectiveness** of **nutrition** programmes **interventions** and **practices**
- ☐ Improved **surveillance**, **detection** and **control** of major **insect pests**, including emerging or re-emerging **zoonotic diseases** that affect **human health**

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

### HEALTH and NUTRITION

*Improved imaging and treatment capacity for cancer and other NCDs, including on related safety and security considerations; on cancer control ensure integration of diagnostics and treatment interventions in comprehensive cancer control strategy*

27. Have your country had a **Ministry of Health endorsed national cancer control programme** (NCCP)?

☐ Yes

☐ No

28. Have your country had a national cancer control programme (NCCP) **governance structure/ system**?

☐ Yes

☐ No

29. How many **diagnostic imaging centres** / services have been established in your country with the support of the IAEA TC programme?

What is the **total number**?

How many of them are **currently in operation**?

How many of them are **not yet operational**?

How many of them are **no longer in operation** ?

30. Please indicate the kind of **support** that your country has received for diagnostic **imaging centres** through the IAEA TC programme during the following **time periods**.

	Established	Supported	Enhanced cooperation regionally	N/A
2000-2004	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2005-2009	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2010-2014	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2015-2019	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2020-2023	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

31. Please provide the **names of diagnostic imaging centres in your country that have received** support through the IAEA TC programme that are currently in **operation**.

32. How many **treatment-related education programmes** (for all professions) have been established in your country with the support of the IAEA TC programme?

What is the **total number**?

How many of them are **currently in operation**?

How many of them are **not yet operational**?

How many of them are **no longer in operation**?

33. Please indicate the **type** of **support** that **education programmes in your country** (for all professions) have received from the IAEA TC programme during the following **time periods**.

	Established	Supported	Enhanced cooperation regionally	N/A
2000-2004	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2005-2009	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2010-2014	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2015-2019	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2020-2023	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

34. Please indicate the **type** of support that **treatment centres/ services** in your country have received from the IAEA TC programme during the following **time periods**.

	Established	Supported	Enhanced cooperation regionally	N/A
2000-2004	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2005-2009	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2010-2014	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2015-2019	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2020-2023	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

35. Please provide the **names** of **treatment centres in your country that have received** support through the IAEA TC programme that are currently in **operation**.



## HEALTH and NUTRITION

### *Increased production and use of safe radioisotopes and radiopharmaceuticals to be used in medical applications*

36. Please indicate the **type of support** that **medical cyclotron facilities** in your country have received from the IAEA TC programme during the following **time periods**.

	Established	Supported	Regional Cooperation	N/A
2000-2004	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2005-2009	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2010-2014	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2015-2019	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2020-2023	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

37. **How many centres** in your country that have received **support** from the IAEA TC programme are currently using **medical radioisotopes** for **local radiopharmaceutical preparations**?

38. Please provide the **names** of the **centres** in your country that have received **support** from the IAEA TC programme that are currently using **medical radioisotopes** for **local radiopharmaceutical preparations**?

39. Has your country received support from the IAEA TC programme for the establishment of governance for radiopharmaceutical health regulations?

☐ Yes

☐ No

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

## HEALTH and NUTRITION

### *Increased effectiveness of nutrition programmes interventions and practices*

40. Has any **institution** in your country in collaboration with the IAEA TC programme **contributed** to evidence-based decision-making on national nutrition intervention **programmes for children**?

☐ Yes

☐ No

41. **How many institutions** in your country in collaboration with IAEA TC programme **contributed** to evidence-based decision-making on national nutrition intervention programmes for children?

42. Please provide the **names of institutions** in your country that, in partnership with IAEA TC programme, have made **contributions** to evidence-based decision-making on national nutrition intervention **programmes for children**?

43. Has any **institution** in your country in collaboration with IAEA TC programme **contributed** to establishment or modification in nutrition policies/strategies for **pregnant women** and **infants**?

☐ Yes

☐ No

44. **How many institution** in your country in collaboration with IAEA TC programme **contributed** to establishment or modification in nutrition policies/strategies for **pregnant women** and **infants**?

45. Please provide the **names of institutions** in your country that, in partnership with IAEA TC programme, have made **contributions** to establishment or modification in **nutrition policies/strategies for pregnant women** and **infants**?

46. Has any **institution** in your country in partnership with the IAEA TC programme, made **contributions** to establishment or modification in **nutrition policies/strategies for the elderly population**?

☐ Yes

☐ No

47. How many **institutions** in your country in partnership with the IAEA TC programme, have made **contributions** to establishment or modification in **nutrition policies/strategies** for the **elderly population**?

48. Please provide the **names** of **institutions** in your country that, in partnership with the IAEA TC programme, have made **contributions** to establishment or modification in **nutrition policies/strategies** for the **elderly population**?

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

### HEALTH and NUTRITION

*Improved surveillance, detection, and control of major insect pests including emerging or re-emerging zoonotic diseases affecting human health*

49. **How many centres** in your country have received **support** from the IAEA TC programme to develop, plan and implement **Sterile Insect Technique** for **mosquito pest control**?

50. Please provide the **names** of the **centres** in your country that have received **support** from the IAEA TC Programme to develop, plan and implement **Sterile Insect Technique** for **mosquito pest control**?

51. **How many centres** in your country have received **support** from the IAEA TC programme to develop, plan and implement **Sterile Insect Technique** for **control** of **zoonotic diseases**?

52. Please provide the **names** of the **centres** in your country that have received **support** from the IAEA TC programme to develop, plan and implement **Sterile Insect Technique** for **control of zoonotic diseases**?

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

### ENERGY PLANNING and NUCLEAR POWER

53. In which of the following **Fields of Activity** has the IAEA TC programme made a substantial contribution to **socio-economic change** in your country?

- ☐ Improved **energy planning** and **inform policies** to meet **future energy needs**
- ☐ Supported **clean energy production** and safe **introduction, operation**, and lifetime **management** of **nuclear power**

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

### ENERGY PLANNING and NUCLEAR POWER

#### *Improved energy planning and inform policies to meet future energy needs*

54. Has your country utilized IAEA **energy modelling tools** to develop energy plans? Please select all tools that apply:

- ☐ WASP
- ☐ MAED
- ☐ FINPLAN
- ☐ MESSAGE
- ☐ SIMPACTS
- ☐ No, we have not used any of these tools
- ☐ Other (please specify)

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

## ENERGY PLANNING and NUCLEAR POWER

*Supported clean energy production and safe introduction, operation, and lifetime management of nuclear power*

55. If your country already has an operational **nuclear power programme** (NPP), in what areas has the country received **support** from the IAEA TC programme:

- |   |  |
|---|--|
| <input type="checkbox"/> Site characterization                | <input type="checkbox"/> Life extension  |
| <input type="checkbox"/> Transition to operation              | <input type="checkbox"/> Decommissioning |
| <input type="checkbox"/> Lifetime cycle (long-term operation) |  |

56. **How many** nuclear **power plants** (PPs) are **currently in operation** within your country's **nuclear power programme**?

57. If your country is currently **embarking** on a **nuclear power programme**, which **milestones** have been reached?

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

### INDUSTRIAL APPLICATIONS and RADIATION TECHNOLOGY

58. In which of the following **Fields of Activity** has the IAEA TC programme made a substantial contribution to **socio-economic change** in your country?

- ☐ Improved **efficiency, productivity, quality**, and **safety** across industries, using **nuclear technology**
- ☐ Increased the safe and effective **utilization, operation**, and **maintenance** of **research reactors**

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

### INDUSTRIAL APPLICATIONS and RADIATION TECHNOLOGY

*Improved efficiency, productivity, quality, and safety across industries, using nuclear technology*

59. In which areas are **non-destructive testing** (NDT) applications being used in your country? Please select all that apply from the following options:

- |  |   |
|--|---|
| <input type="checkbox"/> Structural and damage assessment of buildings (e.g., after earthquakes, etc.) | <input type="checkbox"/> <b>Sterilization</b> and <b>disinfection</b> of medical components   |
| <input type="checkbox"/> Analysis of <b>paintings</b> and other <b>cultural heritage items</b>         | <input type="checkbox"/> <b>Monitoring</b> and <b>optimization</b> of <b>industrial</b> processes   |
| <input type="checkbox"/> Identification and assessment of <b>material properties</b>                   | <input type="checkbox"/> <b>Industrial radiography</b> for inspecting materials and detecting hidden flaws by using the ability of <b>short X-rays, gamma rays</b> and <b>neutrons</b> to penetrate various materials |
| <input type="checkbox"/> Measurement of <b>pollution levels</b>  |   |
| <input type="checkbox"/> Other (please specify)  |   |

60. How **many irradiators** are currently operational in your country?

61. Please **indicate** the relevant **thematic areas** in your country that use industrial **applications of irradiation**. Select all that apply from the following options:

- ☐ **Food safety**
- ☐ **Medical sterilization** (skin, blood, medical equipment)
- ☐ Industrial applications - **Radiotracers**
- ☐ Industrial applications - **Environmental remediation** and **industry** (industrial-scale electron beam facilities for wastewater treatment or flue gas purification from coal-fired boilers)
- ☐ Industrial applications - **Materials modification**: Changing chemical, physical, and biological properties to produce novel materials
- ☐ **Cultural heritage** (characterization and preservation of artifacts)
- ☐ Other (please specify)

62. Is there a **national strategic plan** in place in your country for **research reactors**?

☐ Yes

☐ No

63. Is there a **regulatory framework** established in your country with the support of the IAEA TC Programme for **research reactors**?

☐ Yes

☐ No

64. How **many research reactors** in your country have obtained **licenses** or been **commissioned** with the assistance of the IAEA TC Programme?

65. How **many research reactors** in your country have **undergone enhancements** in their operation, utilization, and safety with the assistance of the IAEA TC Programme?

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

### WATER and ENVIRONMENT

66. In which of the following **Fields of Activity** has the TC Programme made a substantial contribution to **socio-economic change** in your country?

☐ Improved integrated, sustainable **land** and **water management** practices for **agriculture** and **freshwater resources**

☐ Improved **management** and **reduced pollution** of land, air, coastal ecosystems, and the oceans, including from plastics

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

### WATER and ENVIRONMENT

*Improved integrated, sustainable land and water management practices for agriculture and freshwater resources*

67. **How many laboratories** in your country have received **support** from the IAEA TC programme to establish or consolidate themselves as **credible institutions** for **sample analysis, data interpretation, decision making** and **consultation**?

68. Please **provide** the **names** of these laboratories.

69. Has an **evidence-based water resource management strategy** or plan been adopted, or is currently being developed, in your country with the support of the IAEA TC programme?

☐ Yes

☐ No

70. Has any transboundary operational cooperation arrangements applied to **transboundary basins** used data or monitoring mechanisms supported by the IAEA TC programme?

If yes, please specify which arrangements have made use of this support.

☐ Yes

☐ No

If yes, please specify which arrangements have made use of this support.

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

### WATER and ENVIRONMENT

*Improved management and reduce pollution of land, air, coastal ecosystems, and the oceans, including from plastics.*

71. Are there **regulations** and/or **strategies** in place in your country for the **prevention, remediation, and sustainable management** of **land, air, coastal zone, and marine environment** that have been developed with the support of the IAEA TC programme?

☐ Yes

☐ No



72. Has the IAEA TC programme provided **support** for the conduct of **ocean monitoring activities** in your country to assess the impact of the **following factors**? If yes, please tick the corresponding box:

☐ Harmful Algal Blooms

☐ Microplastics

☐ Acidification

☐ No

☐ Other (please specify)

73. Has the IAEA TC programme supported the establishment of **plans** and **strategies** in your country for the **remediation** or **management** of **sites in your country contaminated by nuclear substances**?

☐ Yes

☐ No

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

### SAFETY AND SECURITY

74. In which of the following **Fields of Activity** has the IAEA TC programme made a substantial contribution to socio-economic change in your country?

☐ Improved **nuclear installation safety**

☐ Improved **radiation safety**

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

### SAFETY AND SECURITY

#### *Improved nuclear installation safety*

75. Has the national **governmental** and **regulatory infrastructure** needed for **nuclear safety** been **established** or **enhanced** with support of TC programme?

☐ Yes

☐ No

76. In **how many nuclear power plants** in your country has **safety** been **strengthened** with the support of TC programme?

77. In **how many nuclear fuel cycle facilities** in your country has **safety** been **enhanced** with the support of TC programme?

78. In **how many research reactors** in your country has safety has been **enhanced** with the support of TC programme?

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

### SAFETY AND SECURITY

#### *Improved radiation safety*

**Please respond below with "Yes" or "No" for each question.**

79. Has the **governmental** and **regulatory infrastructure** needed for **radiation safety** in your country been **established** or **enhanced** with the support of the IAEA TC programme?

☐ Yes

☐ No

80. Has **radiation protection** for workers, patients, and the public been **strengthened in your country** with the support of IAEA TC programme?

☐ Yes

☐ No

81. Has the **management** of **radioactive waste** in your country been **improved** with the support of the IAEA TC programme?

☐ Yes

☐ No

82. Have **national capabilities** and **arrangements** for **emergency preparedness** and **response** been **established** or **enhanced** in your country with the support of the IAEA TC Programme?

☐ Yes

☐ No

83. Has the **safety** of **radiation material transport** in your country been **enhanced** with the support of the IAEA TC programme?

☐ Yes

☐ No

## IAEA TC PROGRAMME ACHIEVEMENTS IN THE 21ST CENTURY - PART II

**Thank you for your participation!**

Your response has been successfully recorded. Your feedback will contribute to improving the IAEA TC programme. We sincerely thank you for taking the time to complete this survey.

We appreciate your input and look forward to working with you in the future.

Best regards,  
2023 TC Survey Team  
Department of Technical Cooperation  
IAEA