

# Guatemala

IAEA Member State since March 1957

## Selected achievements

**2018–2021:** The General Hospital San Juan de Dios optimises medical imaging, minimizing the risk of exposure to ionizing radiation and enhancing diagnostic capacity.

**2017–2020:** The National Cancer Institute at Hospital Dr. Bernardo del Valle expands its capacity to treat cervical cancer.

**2016:** The sterile insect technique is successfully applied, boosting Guatemala's fruit and vegetable production and contributing to improved food safety and security in the region.

## National priorities

- Nuclear medicine and radiotherapy in human health and nutrition
- Pest control, crop and animal production and health
- Radiation safety
- Marine life and ocean protection
- Environmental monitoring
- Energy planning for sustainable development
- Characterization of non-destructive testing capabilities and nuclear instrumentation

## Main areas of IAEA support

- Agricultural pest control
- Energy planning
- Dosimetry services for equipment calibration in health services
- Radiation safety
- Cancer diagnosis and treatment

## Project successes

### Insect pest control

With IAEA support, Guatemala's MOSCAMED programme has emerged as the world's largest insect rearing and sterilization facility.



During the COVID-19 pandemic, the IAEA dispatched equipment to Guatemala, enabling the country to use a nuclear-derived technique to rapidly detect the coronavirus that causes COVID-19. (Photo: National Health Laboratory, Guatemala)

TC projects contributed to capacity building for the production of sterile insects, strengthening surveillance and emergency response capacities, ensuring robust monitoring programmes and developing standard operation procedures manuals.

MOSCAMED now delivers sterile insects globally, conducts training for international specialists, and has enhanced surveillance and emergency response capabilities. This has solidified its role in safeguarding the horticultural industry and exemplified successful collaboration in pest management.

### Human health

Guatemala's National Cancer Institute/Hospital Dr. Bernardo del Valle reached a significant milestone when it introduced High Dose Rate (HDR) brachytherapy services for public cervical cancer patients with IAEA support.

By enabling a more precise targeting of radioactive doses, this has led to increased access to quality brachytherapy services for patients with gynaecological tumours in Guatemala, thereby radically transforming cervical cancer treatment in the country.

### Enhancing diagnostic capacities

Guatemala's capacity to optimize medical images while minimizing radiation exposure was enhanced through the acquisition of imaging equipment, specifically, a Radiology Information System (RIS) and a Picture Archiving and Communication System (PACS) that replaced outdated and unreliable conventional X ray equipment in the country.

The equipment and associated training have improved not only the quality of the medical care and professional efficiency within the radiology department, but also benefited other healthcare professionals involved in patient treatment.

As a result, the number of radiological interventions has increased, providing better and safer diagnoses and minimizing exposure to ionizing radiation for patients undergoing treatment.

Additionally, facilitating access to integrated medical documents and clinical cases increased productivity and reduced financial costs.

### Participation in the major initiatives

- NUTEC Plastics
- Rays of Hope
- ZODIAC

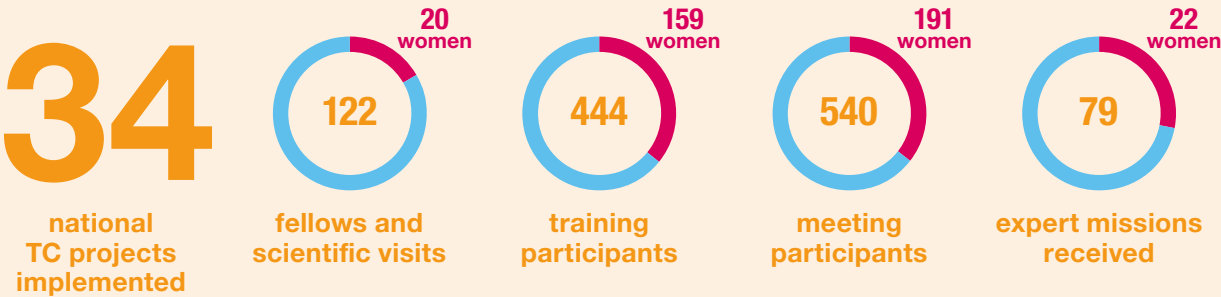


One of the primary health care centres where cervical cancer screening is taking place in Guatemala. (Photo: M. Nobile/IAEA)

### Date of imPACT Review(s)

2024, 2010

### IAEA support received in the 21st century



### Contributions to South-South and triangular cooperation

