



The Nuclear Physics for Youths Towards Sustainable Development is a collaborative effort between four institutions:

- Walailak University
- Thailand Institute of Nuclear Technology (TINT)
- The Cosmic Ray Extremely Distributed Observatory (CREDO) project, Poland
- Princess Chulabhorn Science High School Nakhon Si Thammarat

This project was initiated when the organizers (Assoc. Prof. Dr. Punsiri Dam-o Adamczyk, Asst. Prof. Dr. Thammarong Eadkhong, and Ms. Kanokrat Singnui) observed that students in their physics classes viewed nuclear physics as a distant concept. When the topic of nuclear was mentioned, students often imagined nuclear power plants and nuclear weapons - things that were frightening and not a part of their daily lives. Moreover, science curricula at the secondary level do not include many experimental activities, possibly due to the high cost of nuclear equipment. As a result, most teaching is based on textbook information. These factors may have led students to underestimate the importance of learning about nuclear physics, resulting in incorrect attitudes toward nuclear technology. If the youth, who will be the nation's future workforce, lack knowledge and the correct attitude, it will be difficult for Thailand to sustainably succeed in research and development to prepare for future advancements in nuclear

technology.



With the realization that education is the key to sustainable nuclear technology development, the organizers are eager to be part of providing knowledge and fostering correct attitudes towards nuclear physics among the youth. Based on the belief that "those with knowledge can pass it on to others from generation to generation," the activities are divided into three phases:

Phase 1: Providing Essential Background Knowledge: 24 high school students with a keen interest in nuclear physics were selected to become volunteers. Through this program, they will develop a strong foundation in both theoretical and practical aspects of nuclear physics. Equipped with this knowledge, they will be empowered to educate their peers and the community. The activities include;

- Conducting nuclear physics workshops at Princess Chulabhorn Science High School Nakhon Si Thammarat by Ms. Kanokrat Singnui
- Organizing radiation measurement experiments at the Physics Laboratory instructed by Asst. Dr. Thammarong Eadkhong, and scientists from Science and Technology Instrument Center, Walailak University.

Phase 2: Field Trips to Learning Centers and Meeting Experts: this activity is designed to provide volunteer students with hands-on experience in a learning environment and opportunities to interact with experts. The activities include;

- Visiting the Radiology Department at Walailak University Hospital instructed by Dr. Thanyaporn Direksunthorn
- A lecture on particle physics by Prof. Tadeusz Wibig from the CREDO project, Poland.

Phase 3: Knowledge Transfer to Youth and the Public: as part of their school's Open House, a group of student representatives at Princess Chulabhorn Science High School Nakhon Si Thammarat organized an exhibition titled "Nuclear Technology for Sustainability". The event, which attracted over 1,000 students and parents, aimed to educate the public about nuclear technology and its applications.

Furthermore, these activities will inspire youth to be interested in nuclear physics, leading to the development of a qualified workforce for Thailand's nuclear science sector. This will ensure the sustainable research and development of nuclear technology in the country.