

# An Early Stage of Biological Impact Investigation in Marine Organisms of Thailand due to Reducing pH in Seawater using Radiotracer Techniques

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## Introduction

Thailand is one of the world leading seafood exporters generating substantial incomes, boosting up the country's economy, and serving as a protein source for Thai people. Recently, increasing CO<sub>2</sub> levels in the environment have caused seawater pH to be decreased. This reducing pH becomes a serious threat to marine ecosystem and to economy growth. To avoid losses and to remediate damaged ecosystems, effective protective and mitigation measures are urgently required. Biological impacts from ocean acidification on commercially important and calcifying species will be investigated to provide scientific data for making sustainable environmental management policies.

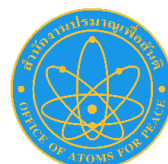
The National Radioecology Laboratory was established providing an opportunity to apply isotopic and nuclear techniques, radiotracer-based Ca-45 technique for example, to examine feasible effects of increased seawater acidity on species calcification rate. Information gained will be used with seawater temperature and pH to improve the environmental management plan to protect ecosystem and economy from being negatively affected by decreasing ocean pH levels.

## Objectives

- ▶ To investigate possible biological effects caused by decreasing pH levels in seawater using isotopic and nuclear techniques
- ▶ To generate high-quality scientific data for strengthening the national environmental policy
- ▶ To serve as the national and ASEAN centre for radioecology and climate change studies and trainings

## Acknowledgement

- ▶ International Atomic Energy Agency (IAEA)
- ▶ Ocean Acidification International Coordination Centre (OA-ICC)
- ▶ Office of Atoms for Peace (OAP)



Ocean Acidification  
International  
Coordination Centre  
**OA-ICC**