

# DEEP UNDERGROUND CHALLENGE

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## OFFICIAL REVIEW REPORT

**Project: KIRIBATI PINEAPPLE PROJECT**

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### 1. Project Description

According the author, this project explores an alternative housing solution for the residents of Kiribati underground.

Placed in south Tarawa, Kiribati, author propose an housing object, able to tackle needs of residents today and after increasing the sea level, up to 2 m above current sea level. Transport between facilities is provided by cars and buses, but sea and underground transport, constructed by principles of Deep Underground Concept, is provided when sea level will rise.

Underground will be also used for social, commercial and educational facilities.

The housing structure consists from above seas level part and below sea level/underground part in three stories. Facility underground is square shaped. For the construction, natural local materials are provided where possible, or recycled artificial construction materials.

The facility provides clean energy power supply, vegetable garden, and rainwater harvesting. It also provides the solution for ventilation and daylight distribution within facility.

### 2. Evaluation by Criteria

Criterion	Assessment
Relevance to the Deep Underground Concept	The project provides the solution for Kiribati islands, which follow the proposals in video 14, provided by Deep Underground Concept.
Geology	The location of the project is Kiribati island Tarawa.

	<p>Beaches on the Kiribati islands are sandy, and the upper part of the surface consists of coral debris. According to some geological investigations, limestone can be found below (some sources say 11 m below the surface on Tarawa and on the surface on Christmas island).</p> <p>Limestone is not ideal, but acceptable for facility, constructed according the deep underground concept.</p>
Sustainability	Facilities are meant to be as in dependable as possible, using solar energy, rainwater harvesting and food production for that matter.
Benefit to the Community	The proposal envisions a housing facilities as an alternative of leaving Kiribati islands, which can greatly benefit the community.
Use of Modern Technologies	This project provides an use of modern construction techniques, with use of local sustainable construction material or recycled material where possible.
Feasibility of Construction	The realization of this object is feasible using modern construction techniques, except the underground facilities, where there is not enough details to know if there is possible to be constructed.
Quality of the Design	The design contend the detailed description of construction elements of the facility.
Quality of the Presentation	The project consists of a poster with comments. All submitted material clearly communicates the author's ideas and intentions.

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### 3. Conclusions

This project clearly used the leads from video 14, provided by Deep Underground Concept, how to save Kiribati islands, but it takes the different path for housing facilities. Instead of making embanks and protecting the land, the proposed facilities provides homes for families

like tiny island on the top of sinking Kiribati Islands, connected with the underground infrastructure.

This proposal could create an unique sea/underground living society, which could insure a prosperous life on that area even after sea level rise.

From this perspective, \*The Pineapple project \* is a significant project.

For this reason, the jury grants this project a second award.