

# **2007 TAIWAN INTERNATIONAL SCIENCE FAIR**

**CATEGORY : Environmental Science**

**PROJECT : Low Cost Housing and Sanitation based  
on Hygiene**

**AWARDS : Environmental Science Third Award**

**SCHOOL : Walvis Bay High**

**FINALISTS : Firuzeh H Rostami**

**COUNTRY : Namibia**

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I live in the harbor town of Walvis Bay in the heart of Namib Desert which is surrounded by sea and dunes and both are famous in the world. Walvis Bay is situated in Namibia formally known as South West Africa.

Walvis Bay is a fishing industry town with an international harbor

The population of Walvis Bay is about 54000 people and growing daily.

Our fish is daily exported to many European and some of Asian countries.

Industry in Walvis Bay is contributing nearly 50% to the Namibian economy.

The town has also been declared as an EPZ (Economic Production Zone). Its harbor serves as a corridor to the neighboring land locked countries.

Walvis Bay offers more job possibilities than most other Namibian towns.

Every year many jobless people, even foreigners, stream to this town to seek employment as laborers or as specialists in the various industries.

These people are in need of accommodation and often have to make due with any sort of shelter in Walvis Bay.

Those who can find a steady income can afford to buy land parcels and build houses, not all succeed in finding jobs and have to live with friends and family. Many house owners in the suburbs supplement their income by allowing homeless and stranded people to build rooms, in form of shacks, in their backyard and charge a monthly rent. Due to the lack of sufficient funds these shelters are built with all sorts of recycled materials such as cardboard, plastic sheeting, scrap wood and old roof sheets etc.

Due to the lack of additional sanitary facilities this causes unhygienic conditions and put much strain on especially the sewer network. Where it was designed for about five people per property there are now twenty or more. In addition these shacks are built around a Municipal manhole blocking the access for maintenance team. The manholes are opened and used as latrines and used to dump waste, which causes of serious blockages. At times sewerage overflow starts running into the streets. By the time the authorities are informed and blockage removed, it poses a threat to public health. These practices can mainly be seen in the community of Kuisebmond, a suburb of Walvis Bay, where the majority of factory workers live.

People living under crowded condition can spread diseases to each other. Domestic workers, cooks and waiters working for different restaurants, hotels, etc. will carry infections to other parts of town.

After discussion with some officials of the Municipality I was convinced that the subject I am going to select for my project is the issue of housing and hygiene in our community.

The aim is to make suggestions and perhaps find solutions to overcome the problem of the shortage of housing, to improve the sanitation component and through this increase the level of hygiene and provide better living conditions in our community.

It is also important to raise the awareness of companies and especially the fishing industry, who are the employers of those people, to assist the workers and their families.

Finding ways and means to educate the community how to become aware and involved in protecting our sanitation systems and utilize them responsibly.

## 評語

本研究對於社區之廁所設施和衛生影響以及改善之道，做了完整之規劃評估。此研究頗具實用性，已得到當地機構之重視。