



BOARD OF STUDIES  
NEW SOUTH WALES

An ecosystem is a biome in which living and non-living organisms inhabit. Within an ecosystem is a diverse array of species ~~not~~ which live off one another through the interaction ~~of~~ <sup>is of</sup> the biophysical environment ~~to~~ <sup>for</sup> survive. Within Kiribati, the largest atoll in the world, we can observe how these biophysical interactions between humans and the biosphere have lead to it being a diverse ecosystem with many functions.

The people of Kiribati live off the natural resources provided to them by land and sea. The land covers a total <sup>area</sup> of  $717 \text{ km}^2$ , with the ~~the~~ longest distance stretching from north to south at 2.050km. The topography of this atoll is relatively flat with the highest distance above sea level reaching just under 2 metres high. Over the years the people of Kiribati ~~has~~ have fished the surrounding waters for food. As the years have gone on, traditional management combined with new laws have

helped keep the Kiribati waters ~~as~~ rich with a diverse abundance of fish species.

Surrounding Kiribati is an ~~extended~~ extended region of protected water, keeping commercial fishing boats away to keep the aquatic species reproducing. Over time, people have found that canoe fishing is effective for close to shore fishing, whereas motored boats ~~are~~ <sup>are</sup> effective for deep sea fishing. New laws were set in place, stating it economically effective and environmentally friendly to deep sea fish in large groups on one boat. This would cut costs in equipment whilst increasing profits.

However, fish species are dropping in numbers and traditional ideas need to be set back in play to improve the ecosystem and its functioning for survival. Examples that are being re-enforced are tuna trolling in restricted areas. In other areas, deep line fishing is allowed, this is where the fisherman attaches

hooks at particular intervals along a line with a leaf wrapped around a rock at the end.

When the line is deep enough the fisherman makes a sharp tug at the line and attracts fish (~~other~~ effect B, fish aside from tuna and flying fish).

When these regions appear low in tuna and other fish species the areas are reversed, allowing tuna to reproduce and increase in numbers whilst deep line fishing occurs and so forth for the other regions. Another traditional management idea is that of coconut leaf lamps being used to attract flying fish instead of pressure lamps.

It is said to be believed that pressure lamps are too bright, scaring away the flying fish and reducing its numbers. New and old ideas for human survival and co-existence have helped keep this ecosystem, the Kiribati Island Atoll, diverse and functioning. However, there are other threats to the area that

may cause future problems. There are global warming and the risk of tide variations. As the world has evolved and continued to develop, so to have the risks of the disappearance of Kiribati.

Although, as we are becoming more aware of these risks, we are becoming more careful with what we do and how we act or respond to things. The people of Kiribati interact eternally with their home environment in the way they live and survive. They have, through years of caring and thinking before acting, made their ecosystem and surrounding environment a diverse and well functioning ecosystem.