

LAKE CHAD

Lake Chad, in Central Africa, borders the countries of Nigeria, Niger, Chad, and Cameroon. It is a freshwater lake fed by the Chari/Logone river system. Only about 7 meters (22 feet) deep the lake is sensitive to fluctuations in rainfall. In recent decades the warming climate and increasing desertification in the surrounding Sahel region caused the water level to drop dramatically. Because of the lack of rain farmers have had to depend more on irrigation from the lake and the Chari River. There has been inadequate rainfall to feed the river that feeds the lake, and that same lack of rain causes the increase in irrigation from the lake.

Plants, animals, and humans have had to adapt to changes in the lake. Fishermen have had to change their fishing methods, channeling the lake water into deeper areas, but this had led to other problems such as fewer and smaller fish and less diversity. Plant life, too, is changing. Some plants that are drought resistant have been emerging; one, *Typha australis* is a favorite nesting place for the *Quelea* bird. The *Quelea* bird is fond of rice and other grain crops and this has led to loss of revenue for farmers. Some government agencies in Nigeria have sprayed chemicals to reduce the growth of the plant and therefore the numbers of this particular bird. A long-range affect of this chemical spraying is still unknown.

Some cattle herders burn the spare, coarse vegetation around the diminished lake, hoping that better, more lush vegetation will grow in its place; however this has not happened, instead the land has become drier and more prone to erosion, so some herders have relocated southward (at times running into conflict with other herders over grassland), and others have left for cities where they are unable to find meaningful employment.

The shrinking of Lake Chad is a serious concern for Africa and an example of our fragile ecosystem where one change in nature has long reaching affects.