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PWRDF in a Warming Climate, and Ethics

The Primate's World Relief and Development Fund (PWRDF) provides immediate emergency relief in Canada whenever required, often before even local governments act (e.g., following the northern Alberta wildfires of May 2011, and during the Calgary flood in June 2013). However, about 90% of emergency and development aid goes to third world countries in tropical and sub-tropical regions (for example, see PWRDF map here or at <http://pwrdf.org/our-work/>). Significantly, those same regions, along with polar regions, have been most impacted by the results of our warming climate, even though the primary source (excessive burning of fossil fuels) has been from the mid-latitude industrial countries. PWRDF aid is provided in partnership with like-minded NGOs, with partners sharing the overhead load of providing relief 'on the ground', thus keeping overhead to a minimum.



Regions where current PWRDF aid is applied, most of which is in tropical and sub-tropical countries (map from <http://pwrdf.org/our-work/>).

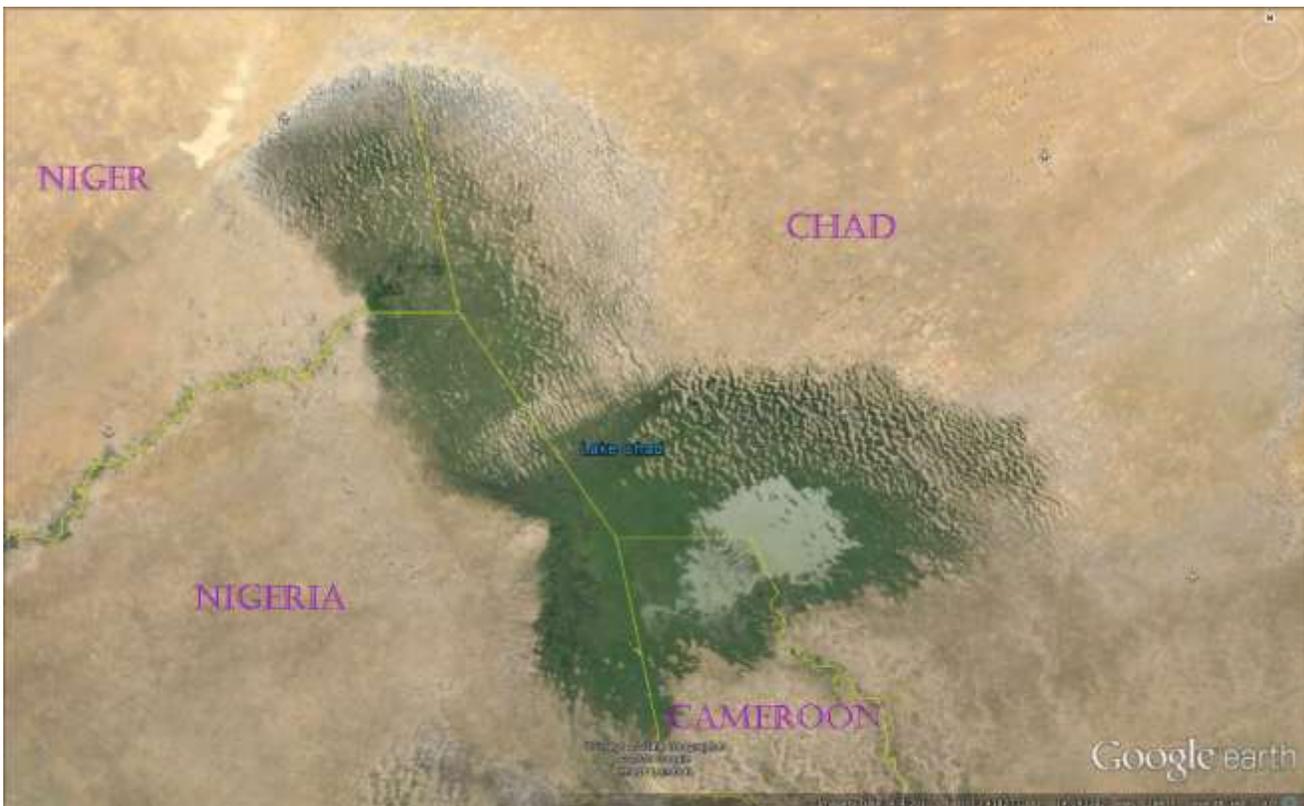
Some recent examples of climate impacts directly affecting PWRDF/partner aid efforts include:

- 1) **Desertification** of the Sahel agricultural band across north Africa, caused by the southward expansion of the Sahara Desert because of global warming. **RESULT:** more common and more prolonged droughts in the past 30 years in the Sahel, severe famines, and intense competition for remaining arable land and water, resulting in civil wars and millions of refugees.

- 2) **Sea-level rise** on low-elevation South Pacific islands (such as in the Solomons and Vanuatu) due to thermal expansion of ocean waters and melting ice sheets of Greenland and Antarctica. **RESULT:** permanent evacuations from low-lying islands where people have lived for thousands of years.
- 3) **Ocean acidification** due to increased absorption of atmospheric CO₂. **RESULT:** carbonic acid breaks down the calcium carbonates of corals and shellfish in tropical oceans. Some studies suggest that these may be non-existent by 2050, causing drastic food shortages.
- 4) **Warming sea-surface temperatures** (SSTs) in the sub-tropics. **RESULT:** more frequent and more severe tropical storms and hurricanes that are born over and feed on high SSTs (> 26°C). The Philippines typhoon *Haiyan* is now on record as the most severe hurricane ever recorded.

Similar natural disasters such as the above have always occurred in these regions of the world. However, climate science has been warning of the increased frequency and severity of these threats since the 1980s, and the influence of global warming is now incontrovertible with disasters becoming more severe.

Some global warming impacts can be identified by the casual observer from remotely sensed Google-Earth imagery. For example, only tiny patches of open water now remain of what was once Lake Chad in the middle of the Sahel, and one can identify drifting sand dunes over large parts of it. The river drainage basin for Lake Chad covers 2.3m km², spans seven countries, and serves a population of 30 million. As the Chad drainage basin has declined, along with decreased rainfall and increased drought over the past 30 years, food and water shortages have led to various regional wars and millions of refugees. While western governments and news media blame these wars on religious and ethnic differences, much of the blame should be attributed to our warming climate caused by atmospheric carbon emissions.



Lake Chad in 2013 in the middle of the Sahel region, with more than 95% of water area of the 1970s gone. Most of the former lake has converted to sand dunes and shallow wetlands (green). [Image from Google-Earth.]

PWRDF is a direct response to Christ's call to us *to feed the hungry, provide water, clothe the naked, take in strangers, and help free oppressed people*. PWRDF does all these things, working in partnership with like-minded agencies such as ACT and Canadian Foodgrains Bank, in countries beset by natural disasters and human-caused misery and wars. In recent years, most environmental disasters, other than from earthquakes or volcanoes, have been exacerbated by our warming climate. This gives added importance to our Anglican Fifth Mark of Mission, *"to strive to safeguard the integrity of creation and sustain and renew the life of the Earth"*, and responds to our covenant with God, who *"took the man and put him in the garden of Eden to tend and keep it"* (Gen 2:15). The impacts of climate change can only worsen as the 21st century progresses, and will increasingly result in climate wars and climate refugees. NGO aid agencies such as PWRDF will be hard-pressed to assist in the disasters that will inevitably occur.

Our hope for a climate solution lies in everybody (on Earth) reducing their carbon footprint. God granted us *'free will'* and will therefore not solve this for us. Given that vehicles account for more than 30% of all carbon emissions, even simple solutions such as reducing our driving by 5% per year for the next five years, and turning heating thermostats down one degree, could go a long way towards easing the climate problem without reducing one's standard of living one iota. However, this requires the cooperation of all, which first requires public education on environmental science, recognition that global warming is a dire and severe threat to mankind, and the commitment to make positive changes. Churches could provide a pivotal role, providing opportunities for public education on the science and ethics, and encouraging and providing forums for government, industry, and public dialogue. PWRDF also has a role to play, since it is already directly affected by global warming impacts. The future welfare of our great-grandchildren and beyond depends on us solving the problem of global warming now, not in a decade or two.

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If this article interests you and you would like to learn more, ask about the Environmental Stewardship Bible Study at St. Peter's.