The potential impact of El Niño on Desert Locust in 2015-2016

A clear, definitive relationship between El Niño / La Niña and Desert Locust crises has yet to be demonstrated (Fig 1.). In general, El Niño's impact is felt most strongly in the Central Region with above-average rainfall in November and December from the southern Red Sea to the Horn of Africa, often followed by wetter than normal long (Diraa) rains in northern Somalia during April to June. In contrast, West Africa is affected more by La Niña, which often brings heavier than normal rains to the summer breeding areas in the northern Sahel. These phenomena do not appear to have an impact on Desert Locust in Southwest Asia.

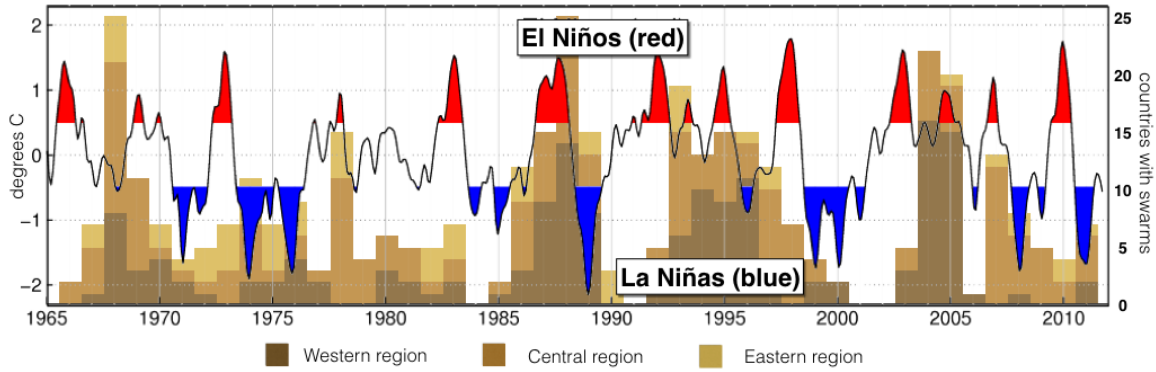

Figure 1. The relationship of El Niño / La Niña and Desert Locust swarms

The World Climate Service suggests that one of the strongest El Niño events in the last century is likely to determine the temperature and precipitation anomalies across much of the globe during the next several months (Fig. 2). It may surpass that of the last strong El Niño in 1997-1998. In that year, hopper bands and swarms formed on the northwest coast of Somalia. In the Central Region, the 1978, 1993 and 2004 upsurges occurred during El Niño years. The first two years of the 1987-1989 plague occurred during El Niño while the last year was during La Niña – the strongest on record.

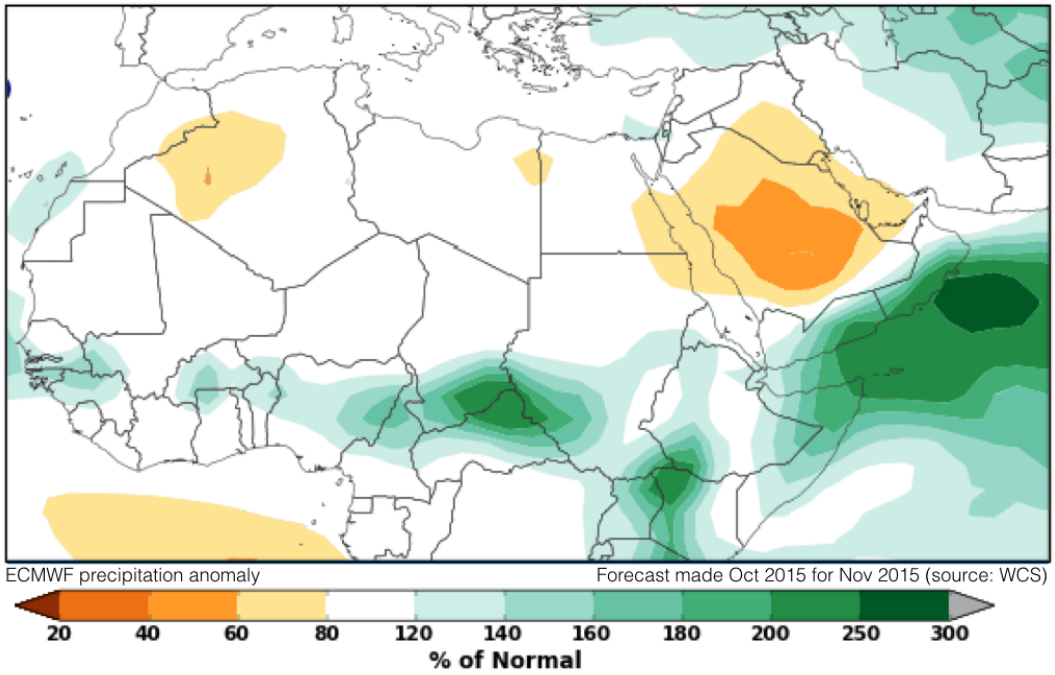

Fig. 2. Seasonal forecast issued in October 2015 suggesting above-average rainfall over the Horn of Africa and Gulf of Aden commencing in November 2015 *(source: World Climate Service)*

As El Niño is a weather-based phenomenon, we must always bear in mind that it is unpredictable. Furthermore, heavy rains do not necessarily produce a locust outbreak. Nevertheless, the Desert Locust Information Service (DLIS), AGPMM is advising northern Somalia, Djibouti, Ethiopia, Eritrea, Yemen and, to a lesser extent, Sudan and Saudi Arabia to be especially vigilant in winter breeding areas along the coasts of the Gulf of Aden and Red Sea during the upcoming season and to ensure that all areas are surveyed regularly and reported in a timely manner.

In the Horn of Africa, FAO has already taken the necessary steps to manage the potential impacts of El Niño. At the beginning of this year, FAO Somalia (FAO-SO) adopted a collaborative approach with the key stakeholders in the region and has just recently concluded an important operational agreement with the Ministry of Agriculture (MoA) in Somaliland. As a result, field monitoring will be strengthened from November 2015 to March 2016 in the winter breeding areas along coastal areas and the escarpment in northwest Somalia. This year there will be three teams instead of one, each using eLocust3, which will allow a near continuous presence in the breeding areas for five months to detect any increase in locust populations and report them in real time. The Desert Locust Control Organization for Eastern Africa (DLCO-EA) will give refresher training to MoA staff that will be involved in the surveys. DLIS will provide technical oversight and backstopping. FAO-SO secured the necessary funding and will supervise the local teams. The FAO Commission for Controlling the Desert Locust in the Central Region (CRC) normally covers the cost of eLocust3 use in northern Somalia, which is trivial compared to the value for early warning and preventive control. Steps are underway in collaboration with CSAP to strengthen early response by examining possibilities to preposition biopesticide in Nairobi.

For more information (Locust Watch):

http://www.fao.org/ag/locusts/en/activ/1307/elnino/index.html