

## Climate

Although Somalia in general has an arid to semi-arid climate, there are substantial localised differences throughout the country. Rainfall is the defining characteristic of the climate, and can vary greatly both spatially and temporally. The climate of Somalia is determined by the north- and southward movement of the Inter-Tropical Convergence Zone (ITCZ, Figure 1). In most areas of Somalia, this results in two rainy seasons: the Gu as the zone passes northwards, and the Deyr on its southward movement. In both cases, the rain is produced as the moist air from the Indian Ocean meets up with the ITCZ. The north-easterly winds from Asia and Arabia produce little significant rain.

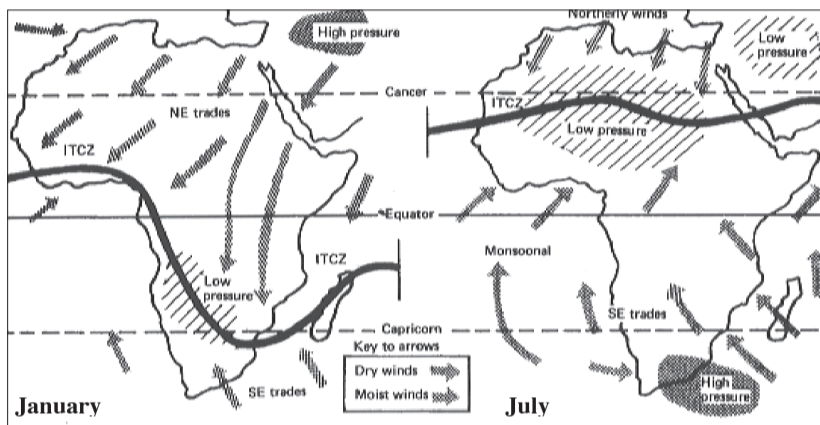


Figure 1. Prevailing winds and approximate location of the ITCZ over Africa in January (left) and July (right) (source: Ker et al., 1978).

The movement of the ITCZ also causes distinct changes in the wind direction throughout the year. When the ITCZ is to the south, the winds are from the northeast, and when it is to the north, the winds are from the southwest. This 180-degree wind shift to the southwest occurs gradually as the ITCZ passes over, spanning approximately March-July, and then returning to the northeast winds by December. While there are some regional variations, this pattern is dominant across the entire country. Sea breezes can be significant, and cause strong southwest winds off the north coast during June-August that are locally known as Kharif.

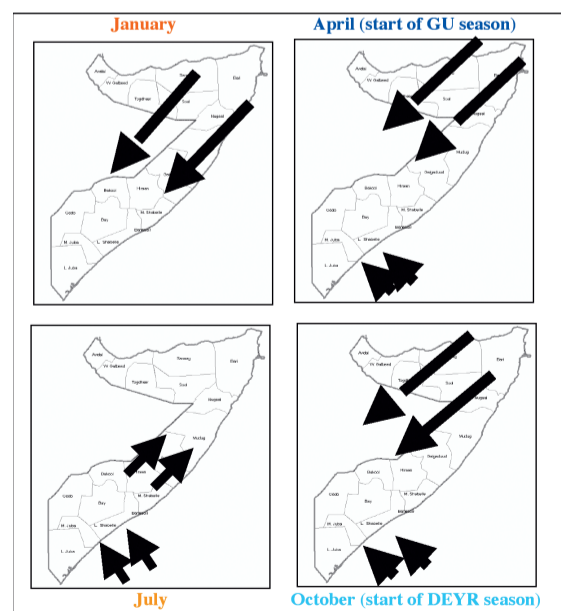
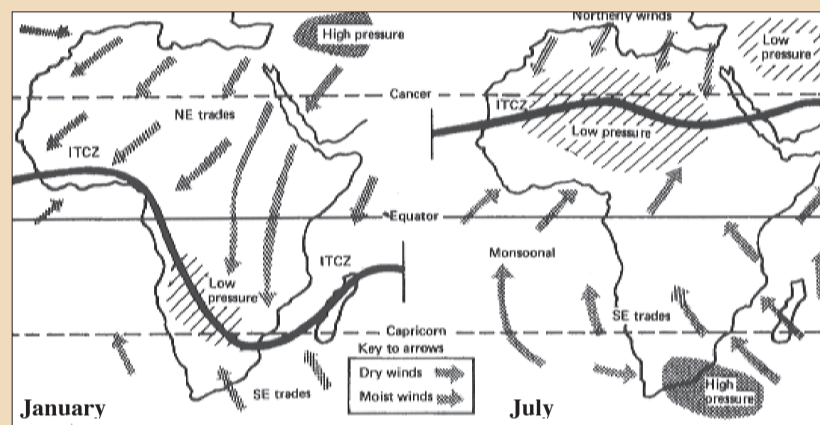


Figure 2. Seasonal wind direction.

Wind speeds are generally quite strong in most parts of the country with an average annual velocity of 8 to 10 m/s (29 to 36 km/h), with the highest wind speed occurring in the Northern Plateau. The strongest winds occur between June and August, and the weakest winds generally occur as the ITCZ passes over the equator in April to May in Southern Somalia (Figure 2).

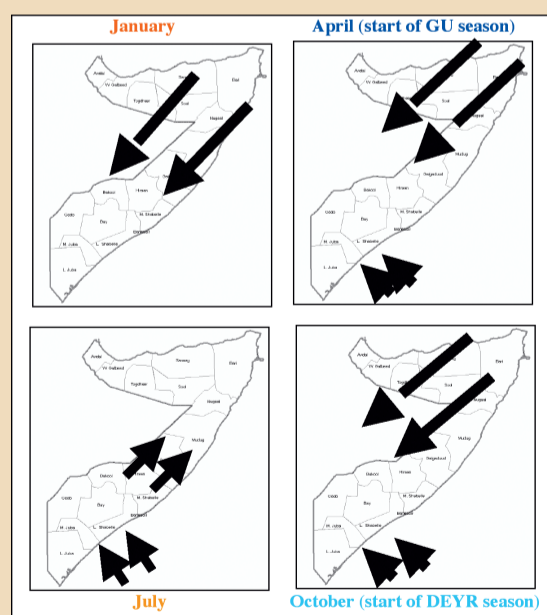
## Muuqaalka Dhuleed

Inkastoo guud ahaan cimilada soomaaliya ay tahay mid qalalan ama yara-qaley, hadana waxaa jira kala duwanaansho deegaanadu ay ku kala duwan yihiin cimilada. Di'itaanka roobka ayaa ku lug leh nooca cimilo ee deegaan, xadiga di'itaanka roobka iyo baaxada uu helana deegaan waa mid kala gedisan marka loo fiiriyo deegaanada kala duwan. Cimilada Soomaaliya waxaa, jaangooya kulanka ay dabayluhu ku kulmaan dhul baraha, arintan waxay ka qeyb qaadataa nidaamka xiliyada roobka. Guga oo da'a marka ay dabeyshu u socoto dhanka waqooyi iyo dayrta oo da'da marka ay u socoto koonfurta. Labadan xiliba roobku waxaa uu da'aa kadib marka uu, uumi bax ku dhaco biyaha bada kadibna ay kulmaan dabaylaha la yiraahdo [Inter-tropical Convergence Zone (ITCZ)].



Muuqaal 1. Dabaylaha Qaalibka Ah Iyo Qiyaastii Meesha Ay Ka Jiraan Itcz (Meelaha Ay Isaga Horyimaadaan Dabaylaha Trobikaalka) Ee Afrika Janawary Dhexdeed (Bidix) Iyo Julaay (Midig) (Xigasho: Ker Iyo Intii La Jirtay, 1078).

Dabeylaha waqooyi bari ee ka yimaada Aasiya iyo Caaraabiya waxay keenaan biyo yar. Dhaqdhaqaaqa ITCZ waxay isbadal ku keentaa jihada ay dabayshu ku socoto sanadkii. Marka ITCZ ay u socoto dhanka koonfurta dabeyshu waxay ka timaadaa dhanka waqooyi bari marka ay u socotana dhanka waqooyina dabeyshu waxay ka timaadaa koofur galbeed.



Muuqaal 2. Jihada Dabayl Xilliyeed

kartaa inay xeebta waqooyi bari ka dhacaan dabaylaha koofur galbeed inta

Dabeyshan oo xadkeedu yahey 180 Digrii waxey u wareegtaa koofur galbeed iyadoo ay isdaba maraan ITCZ inta u dhaxeysa Maarso ilaa Luulyo kadib dabeylaha waqooyi bari ayay u soo noqdaan marka la gaaro Diseembar. Inkastoo waxoogaa kala duwanaan ahi ay jirto hadana waddanka intiisa badan waa mid sidaas ah. Neecaada badda xoog bay lahaan karta, marka ay dhacayso, waxay keeni

Temperatures are over 20 °C for most part of the year throughout the country, even if with strong regional differences. Luuq, near the border with Ethiopia in Gedo region, has the highest mean annual temperature in the country, at over 30° C. Most low inland areas of the country are only slightly cooler. The temperatures along the southern coast are lower than those of inland areas. In the north, temperature is well correlated to altitude, with a lapse rate of 6.5° C per 1000 m. Average monthly temperatures reach as high as 41° C in March, mainly around Bardheere and Luuq (both along the Juba River valley).

Greater contrasts between daily maximum and minimum temperatures occur in inland areas compared to those at the coast. However, these contrasts are generally small in comparison to those which might be expected for most desert environments. Hutchinson and Polishchouk (1989) attribute this to the relatively high humidity throughout the country.

The very few records of evaporation report values varying between about 1000-3000 mm/yr. In general, evaporation is greater than precipitation across the country, but there are localised areas in southern Somalia, around Jilib and Baidoa, where during a few months of the year, higher rainfall than evaporation may be experienced. This occurs at the beginning of both the Gu and Deyr seasons, thus allowing crop growth to commence. Total evaporation generally increases from South to North, with the highest annual evaporation on the north coast. The time of greatest evaporation also varies across the country, being the middle of the year in the north, and the beginning of the year in south and central regions. However, the contrast is greater in the north, with only minor changes in evaporation throughout the year in the south.

u dhaxaysa Juun ilaa Agoosto taasoo loo yaqaan Khariif. Xadigga xawaaraha dabaysha guud ahaan waa mid xooggan, inta badan qaybaha kala duwan celcelis ahaan waa 8-10 m/s (29-36km/s) sanadkii. Xawaaraha ugu sarreeya dabaysha waxa uu ka dhacaa dhulka banaanka hoose ee waqooyiga. Dabaylaha ugu xooggan waxay dhacaan inta u dhaxaysa Juun iyo Agoosto, dabaylaha ugu khafiifsana waxay dhacaan marka ay ITCZ ka kor maro dhulka badhaha inta lagu jiro April ilaa May koofurta soomaaliya.

Dalka oo dhan heerkulku waa mid ka sarreeya 200 C sanadkii gobolada oo dhan. Luuq oo ah degmo ku taal xadka Gedo uu la leeyahay Itoobiya ayaa ah meesha ugu heerkul sarreysa Soomaaliya taasoo ah mid ka sarreysa 30 0C. Inta badan dhulka gudaha ee hoose waa mid xoogaa qabow ah. Heerkulka dhulka ku teedsan xeebta koofureed waa mid ka hooseeya kan dhulka gudaha, dhinaca waqooyi heerkulku waa mid ku jaan go'an xariiqa dhigta isagoo hoos dhacitaan sameeya 1000 mitirkiiba qiyaas ahaan 6.5 0C. Isku celceliska heerkulka bishii waxaa uu gaaraa bisha Maarso 410C agagaarka Baardheere iyo Luuq oo ku yaal daafaha wabiga Jubba.

Kala duwanaansho weyn oo dhinaca cimilada ah ayaa ka jirta deegaanada gudaha marka la barbardhigo kuwa xeebaha, hadana kala duwanaanshaha noocan ahi waa mid yar marka la barbardhigo deegaanada qalalan. Hutchinson iyo Polishchouk (1989) ayaa waxay arrintan u aaneeyeen oo ay sabab u tahay hurrka heerkisu sareeyo ee ka jira waddanka oo dhan.

Diiwaan gelinta ku saabsan xaddiga uumi baxu waa mid kala duwan oo u dhaxaysa 1000-3000m sanadkii, guud ahaan uumi baxa ayaa ka badan heerkul roobka da'a laakiinse waxaa jira deegaano gaar ah sida Jilib iyo Baydhabo oo dhawr bilood oo sanadka ka mid ah hela roob ka badan midka uu keeno kulaylka uumi buxu. Arrintan waxay dhacdaa horaanta xiliyada Gu'ga iyo Dayrta taasoo suurta galisa inuu bilowdo bixitaanka deleyada. Guud ahaan kulaylka uumi baxu waxa uu koofurta kaga badan yahay dhanka Waqooyi, kulaylka uumi baxa ugu badanina wuxuu ka dhacaa xeebaha waqooyi. Xilliga uu dhaco uumi-baxa ugu weyni waa mid kala duwan gobolada, tusaale ahaan dhanka waqooyi wuxuu dhacaa bartamaha sanadka, halka gobolada dhexe iyo koofurtana uu bilowdo sanadka horaantiisa, dhanka waqooyi laftiisa farqi kala duwanaansho ayaa u dhexeeya deegaanada kala duwan halka deegaanada koofurta uu isbadal yari u dhexeeyo.