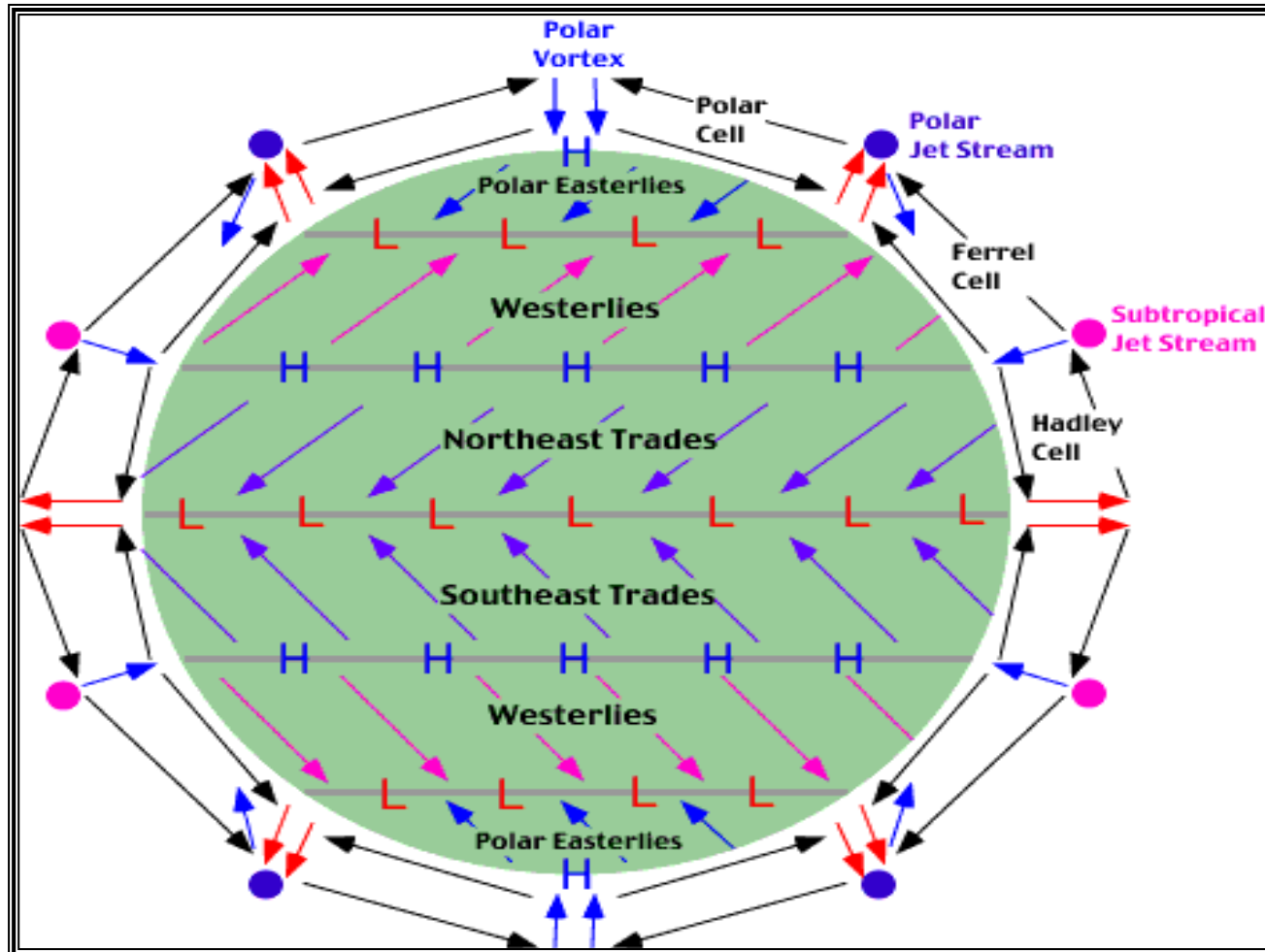


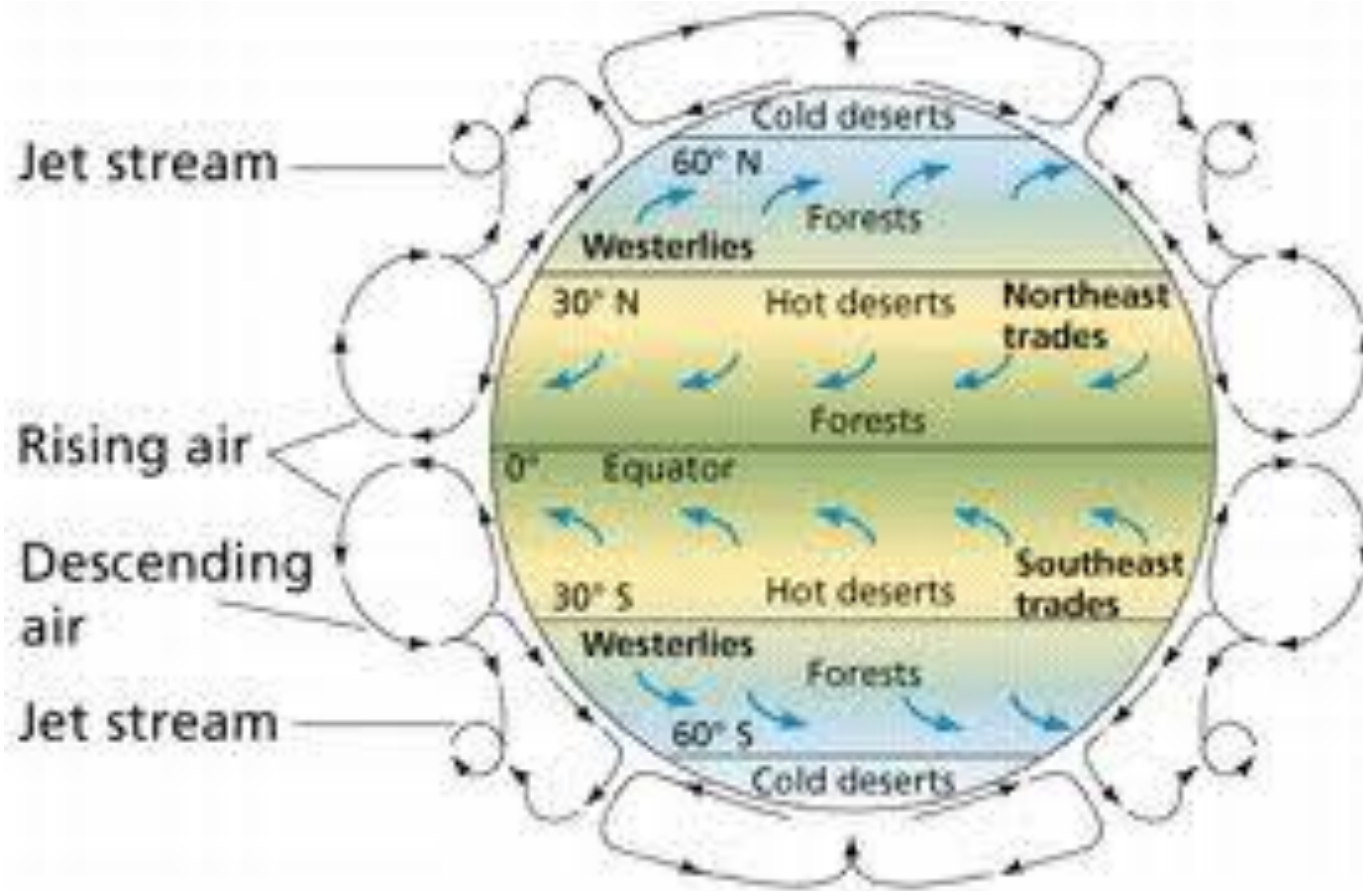
CLIMATE AND ENVIRONMENT

BIOMES OF SOUTHERN AFRICA

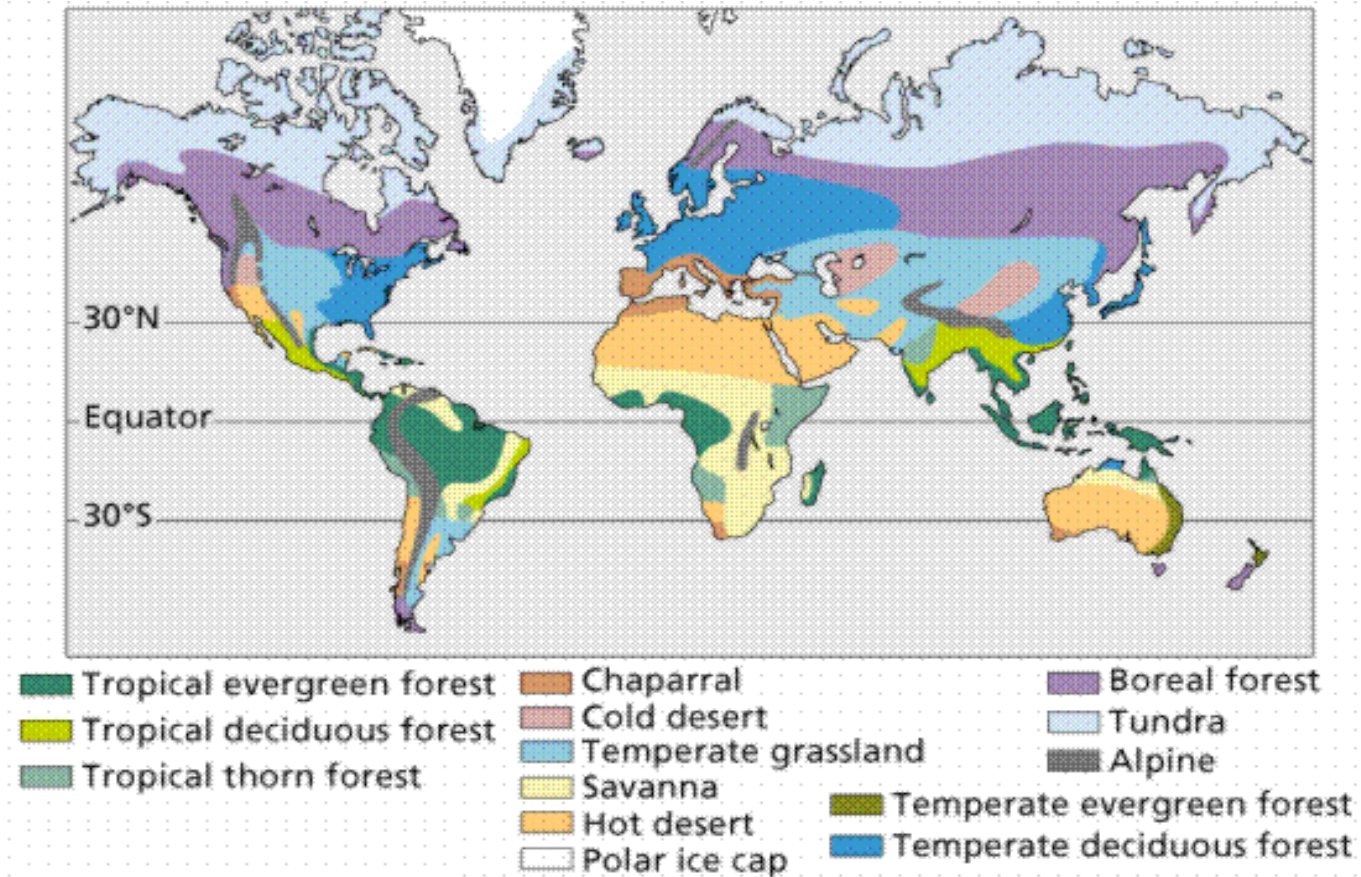
Global circulation



Climate and Biomes



Climate and Biomes



CLIMATE OF SOUTH AFRICA

CLIMATE ZONES

• According to the Köppen classification system, SA has the following climate zones:

BWh – hot desert climate

BWk – cold desert climate

Bsh – hot semi-arid climate

Bsk – cold semi-arid climate

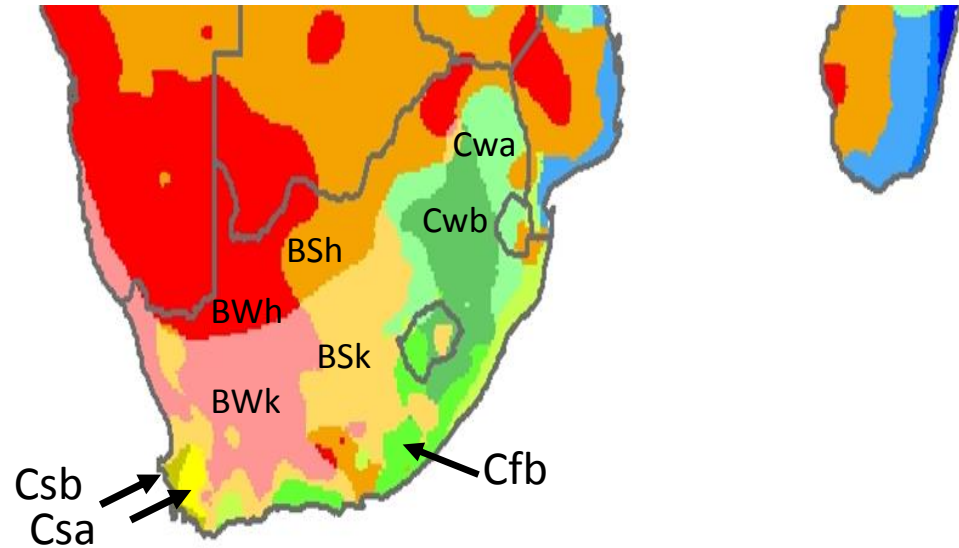
Csa – dry summer sub-tropical (Mediterr.)




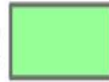





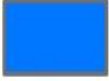
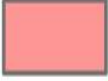


















Csb – dry summer sub-tropical climate

Cwa – humid subtropical climate

Cwb – temperate climate with dry winters

Cfb – maritime temperate (oceanic) climate



	Af		BWh		Csa		Cwa		Cfa		Dsa		Dwa		Dfa		ET
	Am		BWk		Csb		Cwb		Cfb		Dsb		Dwb		Dfb		EF
	Aw		BSh				Cwc		Cfc		Dsc		Dwc		Dfc		
			BSk								Dsd		Dwd		Dfd		

CLIMATE OF SOUTH AFRICA

- **BWh (hot desert climate)** – dry climate (<250mm total rainfall), temperature in coldest month above 0°C (32°F).
- **BWk (cold desert climate)** – dry climate (<250mm total rainfall), at least one month averages below 0°C (32°F).
- **Bsh (hot semi-arid climate)** – semi-arid climate (250-500 mm rainfall), temperature in coldest month above 0°C (32°F).
- **Bsk (cold semi-arid climate)** – semi-arid climate (250-500 mm rainfall), at least one month averages below 0°C (32°F).
- **Csa (dry summer sub-tropical Mediterranean climate)** – winter rainfall, hot dry summer. Are in the polar front region in winter, and thus have moderate temperatures and changeable, rainy weather.
- **Csb (dry summer sub-tropical climate)** – like **Csa** but slight variation (rainfall, temperature).
- **Cwa (humid subtropical climate)** – occur in continent interiors, humid summers due to tropical air masses, dry winters.
- **Cwb (temperate climate with dry winters)** – cooler temperatures than Cwa due to altitude, have humid summers due to tropical air masses.
- **Cfb (maritime temperate (oceanic) climate)** - dominated all year round by the polar front, leading to changeable, often overcast weather. Summers are cool due to cloud cover, but winters are milder than other climates in similar latitudes.

WHAT IS A BIOME?

- Are ecosystem types which are affected by climatic conditions – **spatial distribution**.
- They can be distinguished in terms of structure or composition and **climatic conditions**.
- They serve ecological, economic and social functions (discussed this later in our course).

SAVANNA BIOME

Composition :- scattered trees and grasses.

Fire helps increase diversity.

Climate :- Has rainy season.

Temperate grassland - seasonal drought, fires prevent tree growth.

Function:- Most used for farming.



Geographical Location



KWA-ZULU NATAL, EASTERN CAPE, MPUMALA, LIMPOMPO

FYNBOS BIOME

Composition :- shrubby grasses, and sedges on nutrient-poor soils

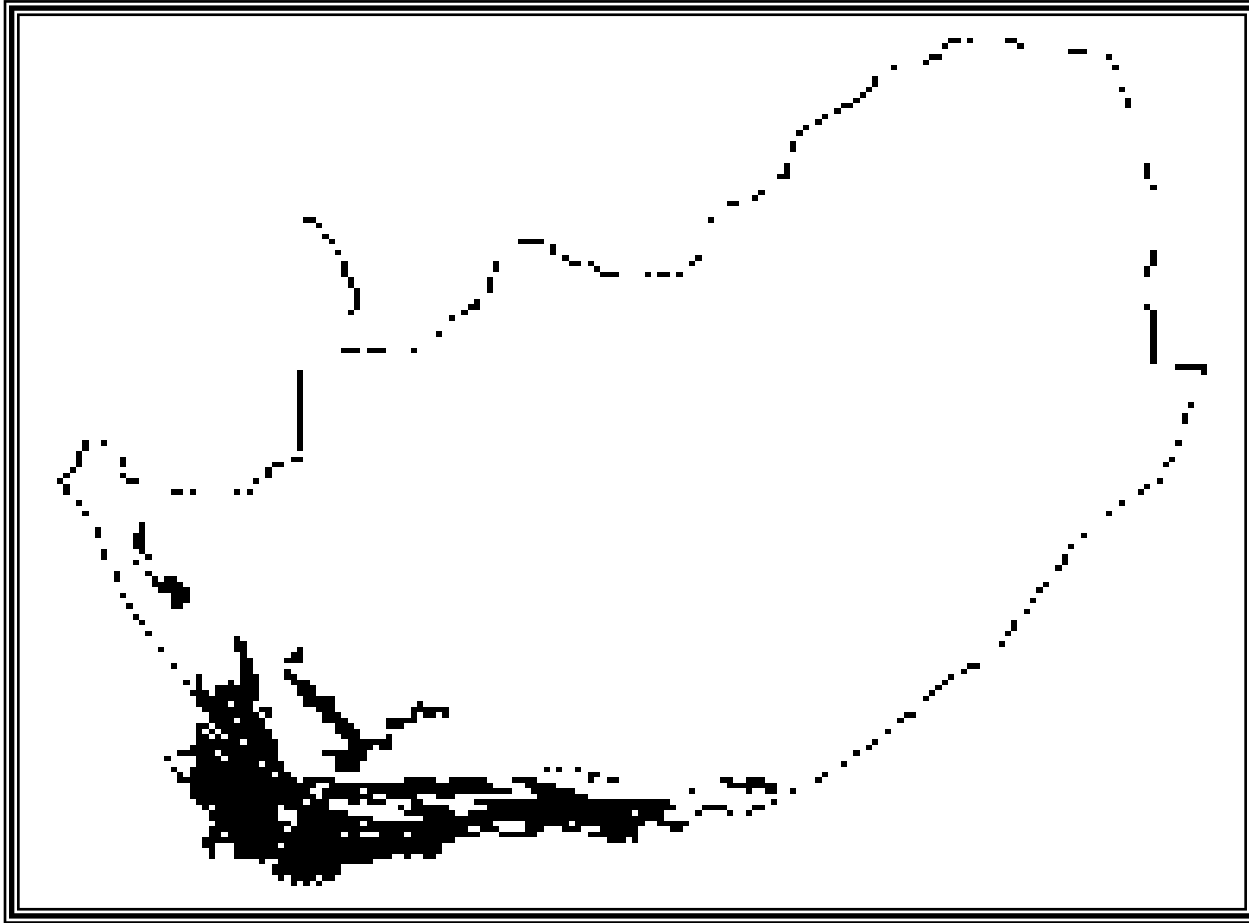
Climate :- Has rainy season - Winter.

Temperate grassland - fires prevent tree growth.

Function:- Carbon sink, Control flooding etc...



Geographical Location



WESTERN CAPE

FOREST BIOME

Composition :- Canopy covered with trees, most evergreen trees beneath it with multilayered trees.

Fire helps increase diversity.

Climate :- Has rainy and high humidity throughout the year.

Function:- Most used for farming, fuel, host of many flora and fauna.



Geographical Location



LOW VELD ESCARPMENT, EC, KZN (COASTAL BOARD)

GRASSLAND BIOME

Composition :- dominated by grasses (both sweet and sour grass species)

Fire, frost and grazing maintain the grassy dominance.

Climate :- Rainy season and with high to moderate humidity..

Function:- Most used for farming, tourist attrac.., host of many flora and fauna.



Geographical Location



**INLAND AREAS OF KWAZULU-NATAL AND EASTERN
CAPE AND MPUMALANGA**

SUCCULENT KAROO BIOME

Composition :- by dwarf, succulent shrubs, of which the Vygies (*Mesembryanthemaceae*) and Stonecrops (*Crassulaceae*) are particularly prominent.

Climate :- Low Rainy season with high temperature and extreme cold conditions (winter)

Function:- Most used for farming (sheep), tourist attrac., host of many flora and fauna.



Geographical Location



NORTHERN CAPE AND SOME INLAND AREAS OF THE WESTERN CAPE

NAMA KAROO BIOME

Composition :- By vegetation is a grassy, dwarf shrubland. Grasses tend to be more common in depressions and on sandy soils

Climate :- Low Rainy season with high temperature and extreme cold conditions (winter)

Function:- Most used for farming (sheep), tourist attrac.., host of many flora and fauna.



Geographical Location



**INLAND AREAS OF NORTHERN AND
WESTERN CAPE.**

THANK YOU