HANDOUT Koppen Climate

Classification System

Tropical Humid Climates (Group A)

- most extensive, occupy —36% of the Earth's total surface (land & water); located roughly bet. 20°N to 20°S; coolest month >18°C & thus have no winter; among the wettest in the world

1) Tropical Wet Climates (Af)
2) Tropical Monsoonal Climates (Am)
3) Tropical Savanna Climates (Aw)

Dry Climates (B)

- occupy >35% of Earth's land area; only climate classified by precipitation rather than temperature; arid (deserts) & semiarid (steppes) regions; sparse vegetation

1) Subtropical Desert Climates (BWh)
2) Subtropical Steppe Climates (BSh)
3) Midlatitude Desert Climates (BWk)
4) **Midlatitude Steppe Climates (BSk)**

Mild Midlatitude Climates (C)

- occupy -27% of the Earth's total surface (land & water); together with A occupies *1A* the Earth's oceans & -1/3 the land; more than *Vi* the world's population lives in C climates; have the greatest weather variability with true seasons (long hot summers & short mild winters); located along the equator ward margin of the middle latitudes & occasionally extending into the subtropics; subdivisions are based on precipitation

1) Humid Subtropical Climates (Cfa, Cwa)
2) Mediterranean Climates (Csa, Csb)
3) Marine West Coast Climate (Cfb, Cfc)

Severe Midlatitude Climates *(D)*

- occupy ~21% of the Earth's land surface which is —7% of the total surface; occur pole ward of C climates; long winters with some summer warmth; experience great temperature ranges; experience little maritime influence; have 4 seasons: long cold winter, warm to hot short summer, & spring & fall transitional periods; in S.H. occur only in the highlands; extends broadly across N. America & Eurasia

1) Humid Continental Climates (Dfa, Dwa, Dfb, Dwb)
2) Sub arctic Climates (Dfc, Dfd, Dwc, Dwd)

Polar Climates (E)

- cover -19% of Earth's total surface (-17% of its land area); most remote from heat & farthest from the equator; no month has an average temperature >10°C (50°F); coldest summers & lowest annual & absolute temperatures; extraordinarily dry

1) Tundra Climate (ET)
2) Ice Cap Climate (EF)
3) Polar Marine Climate (EM)

Highland Climate (H)

- not defined the same as the other climatic types; relatively high uplands (mts & plateaus) with great complexity of local climatic variation within small areas; latitude is less important than altitude & exposure; changeability is the most conspicuous single aspect of this climate; ex: Rockies, Sierra Nevada, Cascades, Andes, Himalayas, Tibetan Plateau, Alps, Pyrenees, Atlas Mts, etc; Koppen did not recognize these as a separate type