

Seasonal Variations in Pakistan

Introduction

Pakistan has different weather in different months of the year. Some parts are hot while others stay cool. These changes are called **seasonal variations**. They happen because of the change in wind direction, air pressure, and temperature. Two main systems bring rain to Pakistan — the **Southwest Monsoon** in summer and the **Western Disturbances** in winter. These systems affect farming, water supply, and daily life.

Seasonal Changes in Temperature

In summer, Pakistan becomes very hot, especially in Sindh and southern Punjab. The temperature can go above 45°C. In the north, it stays cool because of high mountains. In winter, the north gets very cold, and snow falls in Gilgit and Murree. Karachi and coastal areas stay warm because of the sea breeze. The height of a place, distance from the sea, and wind direction control temperature changes.

Seasonal Changes in Rainfall

Rain does not fall evenly across Pakistan. The eastern areas get more rain, while the west stays dry. Most rain comes in summer from the **monsoon** between July and September. In winter, some rain and snow come from the **Western Disturbances**. The mountains get heavy snow, while the plains get light rain. Deserts like Thar and Balochistan receive very little rain. Rain is important for farming, rivers, and forests.

The Southwest Monsoon

The **Southwest Monsoon** starts in summer when hot air over South Asia pulls moist air from the **Arabian Sea** and **Bay of Bengal**. This air moves towards Pakistan and brings heavy rain to Punjab, Sindh, and northern areas. The season lasts from July to September. Monsoon rains help crops grow but can also cause floods and damage. It is both a blessing and a danger for the country.

The Western Disturbances

The **Western Disturbances** come in winter from the **Mediterranean Sea**. They move across Iran and Afghanistan and reach Pakistan. These winds bring light rain and snow between December and March. They mostly affect the northern and western areas. This winter rain is good for crops like wheat and barley. When these winds are weak, the land becomes dry and farming suffers. They also fill rivers and dams with fresh water.

Effects of Seasonal Variations

Seasonal changes in temperature and rainfall affect farming, water, and power supply. Heavy rain helps crops grow but sometimes causes floods. Less rain leads to droughts and water shortage. The Western Disturbances give water during winter when rivers are low. These weather changes also affect forests, animals, and electricity from dams. Understanding these changes helps people plan better and reduce damage from floods or droughts.