Geography · GS - I

Compare the Loo, Chinook and Foehn winds with respect to their regions of prevalence, their nature and climatic impacts.

EXAM YEAR	PAPER	SUBJECT
2026	GS - I	Geography

MARKS	WORD LIMIT
15	~250 words

Answer Hint

Local winds, regional distribution, Loo in northwestern India, Chinook Rockies, Foehn Alps, hot and dry winds, adiabatic warming, agriculture, snowmelt, temperature changes

Model Answer

The Loo, Chinook and Foehn are local winds associated with significant temperature changes, but they differ in geographical distribution, physical setting and climatic effects.

The Loo is a strong, hot and dry summer wind prevalent across the northwestern and northern plains of India, particularly Rajasthan, Punjab, Haryana and Uttar Pradesh. It develops during intense summer heating and can cause heatwaves, dehydration and heat-related illnesses. It also increases evaporation and moisture stress.

The Chinook occurs on the eastern slopes of the Rocky Mountains in North America. It is a warm, dry downslope wind produced when air descends after crossing the mountains. Its sudden warming can rapidly raise temperatures, melt snow and influence winter conditions. Consequently, it can extend grazing opportunities but may also increase evaporation.

The Foehn is similarly a warm, dry downslope wind occurring on the northern slopes of the Alps in Europe. Moist air rises over the mountains, loses moisture and descends as warmer and drier air on the leeward side. It can rapidly increase temperatures, accelerate snowmelt and influence agriculture.

While the Loo is primarily associated with intense continental summer heating, Chinook and Foehn are strongly linked to mountain-induced adiabatic processes.

Thus, all three winds modify local climates significantly, but their geographical settings and mechanisms produce distinct regional impacts.

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