



UPSC & STATE PCS CURRENT AFFAIRS · UJIYARI.COM

EDITORIAL ANALYSIS

When Chillai-Kalan Fails: Warming Winters and Kashmir's Orchards

 DOWN TO EARTH

10 July 2026 ·

ENVIRONMENT

GS1

GS3

CURATED & WRITTEN BY

**Bharat Choudhary**

UPSC Educator & Content Creator

 [linkedin.com/in/epicbharat](https://www.linkedin.com/in/epicbharat)

ALSO FROM THE CREATOR

BharatNotesFree UPSC notes, MCQs, PYQ analysis. **100% Free.**bharatnotes.com → **ADVERTISE****Advertise with Ujiyari**

Reach thousands of UPSC aspirants daily.

 epicbharat@gmail.com



When Chillai-Kalan Fails: Warming Winters and Kashmir's Orchards

 **Down to Earth**

10 July 2026

GS1
GS3

Source: ujjyari.com — researched, fact-checked & UPSC-mapped

 **Every fact web-verified against primary sources** (<https://ujjyari.com/how-we-verify/>)

THE LIFT LINE

An apple tree keeps a calendar written in cold, and when Kashmir's winter no longer delivers the chill the trees are built for, an entire economy loses its footing.

WHY THIS EDITORIAL MATTERS FOR YOUR EXAM

Warming winters and a weakening Chillai-Kalan, the harshest 40-day spell of the Kashmir winter, are disrupting the apple, saffron and paddy cycles on which the Valley's economy rests. For **GS1** this is regional climate and agricultural geography; for **GS3** it is climate change, agriculture and water security. It shows climate change not as a distant abstraction but as a threat to a specific, livelihood-defining crop calendar.

GS Paper 1: the geography of India, climate, and the distribution of key natural resources; changes in critical geographical features.

GS Paper 3: issues related to agriculture, cropping patterns; conservation and climate change.

For **Prelims**, hold the specifics: Chillai-Kalan as the coldest 40-day period of the Kashmir winter; the chilling-hours requirement that temperate fruit like apple needs to break dormancy and fruit properly; the GI tag held by Kashmir saffron, alongside its prized apple crop; and the role of winter snowpack in recharging springs and rivers. For **Mains**, argue that regional warming can devastate a specialised agrarian economy well before global averages look alarming, and that adaptation must be crop-specific.

BACKGROUND AND CONTEXT

Temperate fruit trees are precision instruments of cold. To break winter dormancy and set fruit properly the following season, an apple tree must accumulate a minimum number of chilling hours, that is, hours below a **threshold** (<https://ujjyari.com/vocab/threshold/>) temperature. Kashmir's climate has historically delivered this

reliably, above all during Chillai-Kalan, the fierce 40-day core of winter when snow blankets the Valley and cold settles deep.

Ujjayi Current Affairs · ujjayi.com · Free Daily Current Affairs for UPSC & State PCS

That reliability is breaking down. Winters are warming, and Chillai-Kalan increasingly arrives with less snow and milder temperatures. Two consequences follow. First, orchards may not receive the chilling hours they need, which shows up as poor flowering, uneven fruiting and weaker apple crops, while saffron and paddy cycles shift out of their accustomed rhythm. Second, a thin snowpack means less meltwater later in the year, starving the springs and streams that recharge irrigation and drinking water. In a region where horticulture, especially apples, anchors incomes and where saffron is a prized GI product, this is an economic threat as much as an ecological one.

THE CORE ARGUMENT / ISSUE

The calendar of cold is breaking

An orchard economy runs on a climatic calendar. Trees expect a certain cold in winter, a certain warmth in spring, and rain and snow in a certain sequence. Warming winters erase the cold half of that calendar. When chilling hours fall short, the tree does not simply grow a little less; its whole reproductive cycle is disturbed, and yields and quality drop. A GI crop that depends on a specific climate is only as secure as that climate.

Snow is water, later

Chillai-Kalan snow is not just cold; it is a reservoir. It melts through spring and summer to feed springs, streams and the water table. A weaker snowpack means less recharge, so the same warming that starves orchards of chill also starves them, and paddy fields, of water. The two harms compound: heat-stressed trees needing more water in a landscape holding less of it.

CHANGE	IMMEDIATE EFFECT	DOWNSTREAM IMPACT
Warmer Chillai-Kalan	Fewer chilling hours	Poor apple flowering and yield
Thinner snowpack	Less spring meltwater	Weaker spring and stream recharge
Shifted crop calendar	Saffron and paddy cycles disturbed	GI economy and food security at risk
Erratic precipitation	Untimely rain and hail	Crop damage, income volatility (https://ujjayi.com/vocab/volatility/)

A livelihood on the line

Horticulture is not a marginal activity in Kashmir; it is a mainstay, supporting a large share of households directly and indirectly. Kashmir saffron carries a GI tag, and its apples command premium markets and regional pride. When the climate that made these products possible shifts, the damage is measured in lost incomes, distress and out-migration, not just in tonnes.

HOW TO THINK ABOUT THIS (ANALYTICAL FRAME)

Treat a specialised agrarian region as a system tuned to a narrow climatic band, and note how little warming it takes to push a signature crop out of that band. The transferable rule: climate adaptation cannot be generic; for horticultural economies it must target the specific climatic service, here winter chilling and snow recharge, on which the crop depends, through resilient varieties, water storage and diversification. Global averages hide local catastrophes.

THE DIAGRAM IN WORDS

Warming winter + weaker Chillai-Kalan -> fewer chilling hours + thinner snowpack -> poor apple flowering, disturbed saffron/paddy cycles + reduced meltwater recharge -> lower yields, water stress -> GI horticulture livelihoods hit -> fix: low-chill varieties + water storage + crop diversification + climate-smart advisories

WAY FORWARD

- 1 **Adopt climate-resilient varieties.** Promote low-chill and heat-tolerant apple and horticulture varieties suited to warming winters, backed by research and reliable planting material.
- 2 **Bank water for the dry months.** Invest in water harvesting, spring rejuvenation and micro-irrigation to offset declining snowmelt and buffer orchards against drought.
- 3 **Diversify and insure.** Encourage crop diversification and strengthen crop insurance so households are not wholly exposed to a single climate-sensitive crop.
- 4 **Deliver climate-smart advisories.** Provide farmers timely, localised weather and agronomic guidance so planting, spraying and harvest decisions track a shifting climate.

PYQ LINKAGE AND PRACTICE

UPSC has asked about the impact of climate change on agriculture, about cropping patterns, and about the geography of the Himalayas. This editorial links those themes to a specific 2026 stress on Kashmir's horticulture.

Practice question: “Regional warming can devastate a specialised agrarian economy long before global averages appear alarming.” Discuss with reference to warming winters and Kashmir’s horticulture. (250 words, 15 marks)

Sources: *Down To Earth* (<https://www.downtoearth.org.in/>)

Source: When Chillai-Kalan Fails: Warming Winters and Kashmir's Orchards — Ujiyari.com | Free UPSC & State PCS Editorial Analysis

RELATED DAILY ARTICLES

10 Jul **Centre of Excellence on Human-Wildlife Conflict...**

9 Jul **NTCA 29th Meeting: STRIDES 2026 and the Roadmap to...**

8 Jul **El Nino 2026 Could Strain India's Power Grid**

6 Jul **The Asiatic Lion and the Case for a Second Home**

Ujiyari Current Affairs · ujiyari.com · ~~Free Daily~~ Current Affairs for UPSC & State PCS

CURATED & WRITTEN BY

Bharat Choudhary

UPSC Educator & Content Creator

[in linkedin.com/in/epicbharat](https://www.linkedin.com/in/epicbharat)[Read Full Article on Ujiyari →](#)<https://ujiyari.com/editorials/2026/07/dte-kashmir-warming-winters-horticulture-2026/>

ALSO FROM THE CREATOR

BharatNotes

Free UPSC study platform — subject-wise notes across all 4 GS papers, Prelims MCQs, Mains answer frameworks, PYQ analysis & progress tracking. **100% Free • No Login Required.**

[Start Preparing → \[bharatnotes.com\]\(https://bharatnotes.com\)](#)

OPPORTUNITY

Advertise with Ujiyari

Reach **thousands of serious UPSC & State PCS aspirants** daily through our PDFs, website, and social channels.

Ideal for: Coaching institutes • EdTech platforms • Book publishers • Exam prep apps

[✉ epicbharat@gmail.com](mailto:epicbharat@gmail.com)

Write to us for rates & media kit

Free UPSC & State PCS Current Affairs · ujiyari.com · bharatnotes.com