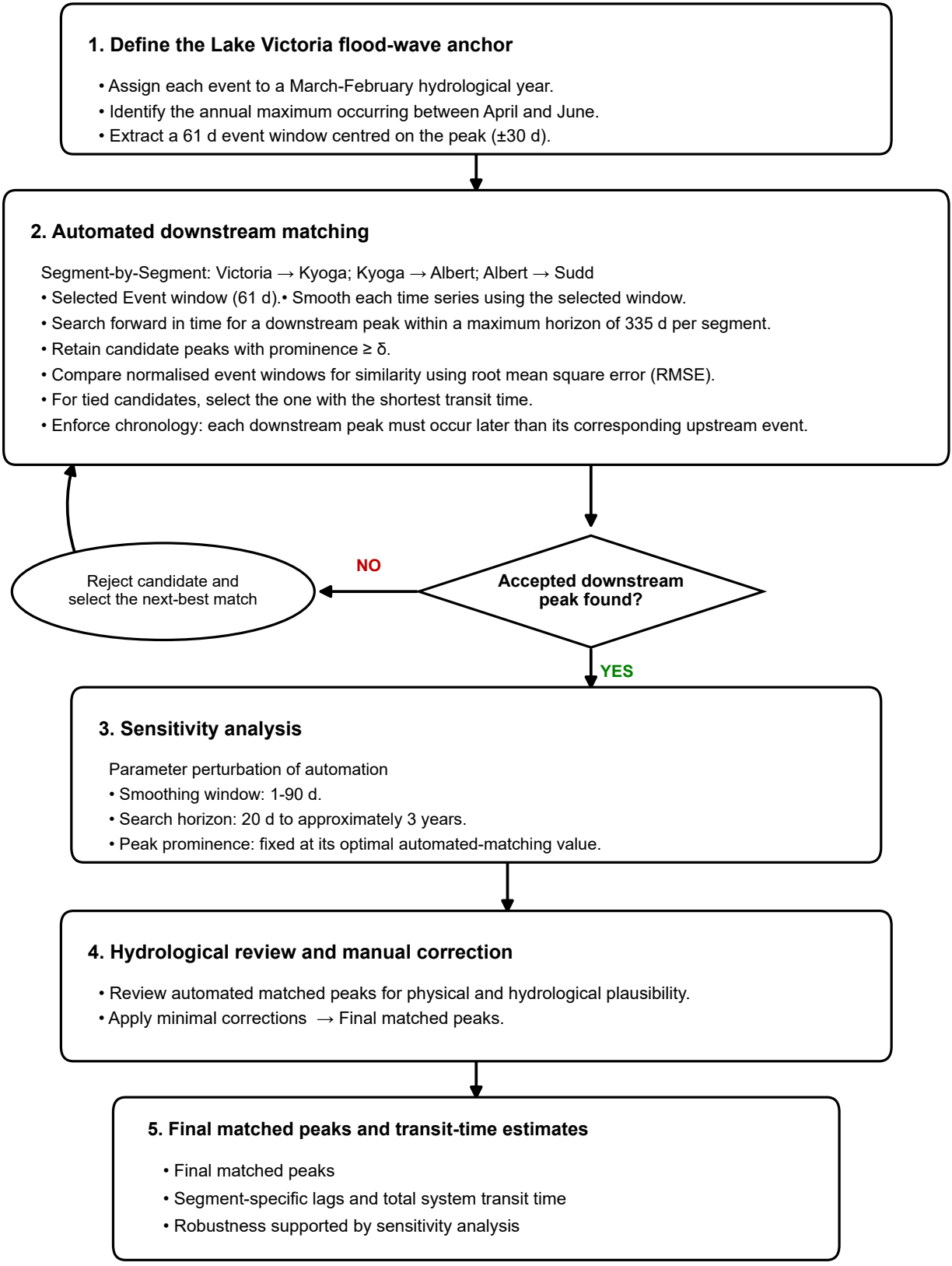
1. Define the Lake Victoria flood-wave anchor
• Assign each event to a March-February hydrological year.
• Identify the annual maximum occurring between April and June.
• Extract a 61 d event window centred on the peak (±30 d).
2. Automated downstream matching
Segment-by-Segment: Victoria → Kyoga; Kyoga → Albert; Albert → Sudd
• Selected Event window (61 d).• Smooth each time series using the selected window.
• Search forward in time for a downstream peak within a maximum horizon of 335 d per segment.
• Retain candidate peaks with prominence ≥ δ.
• Compare normalised event windows for similarity using root mean square error (RMSE).
• For tied candidates, select the one with the shortest transit time.
• Enforce chronology: each downstream peak must occur later than its corresponding upstream event.
Accepted downstream peak found?
NO
Reject candidate and select the next-best match
YES
3. Sensitivity analysis
Parameter perturbation of automation
• Smoothing window: 1-90 d.
• Search horizon: 20 d to approximately 3 years.
• Peak prominence: fixed at its optimal automated-matching value.
4. Hydrological review and manual correction
• Review automated matched peaks for physical and hydrological plausibility.
• Apply minimal corrections → Final matched peaks.
5. Final matched peaks and transit-time estimates
• Final matched peaks
• Segment-specific lags and total system transit time
• Robustness supported by sensitivity analysis