Supporting Non-Print Figures

Title of the paper: Generation of Zonal Map from Point Data via Weighted Skeletonization by Influence Zone

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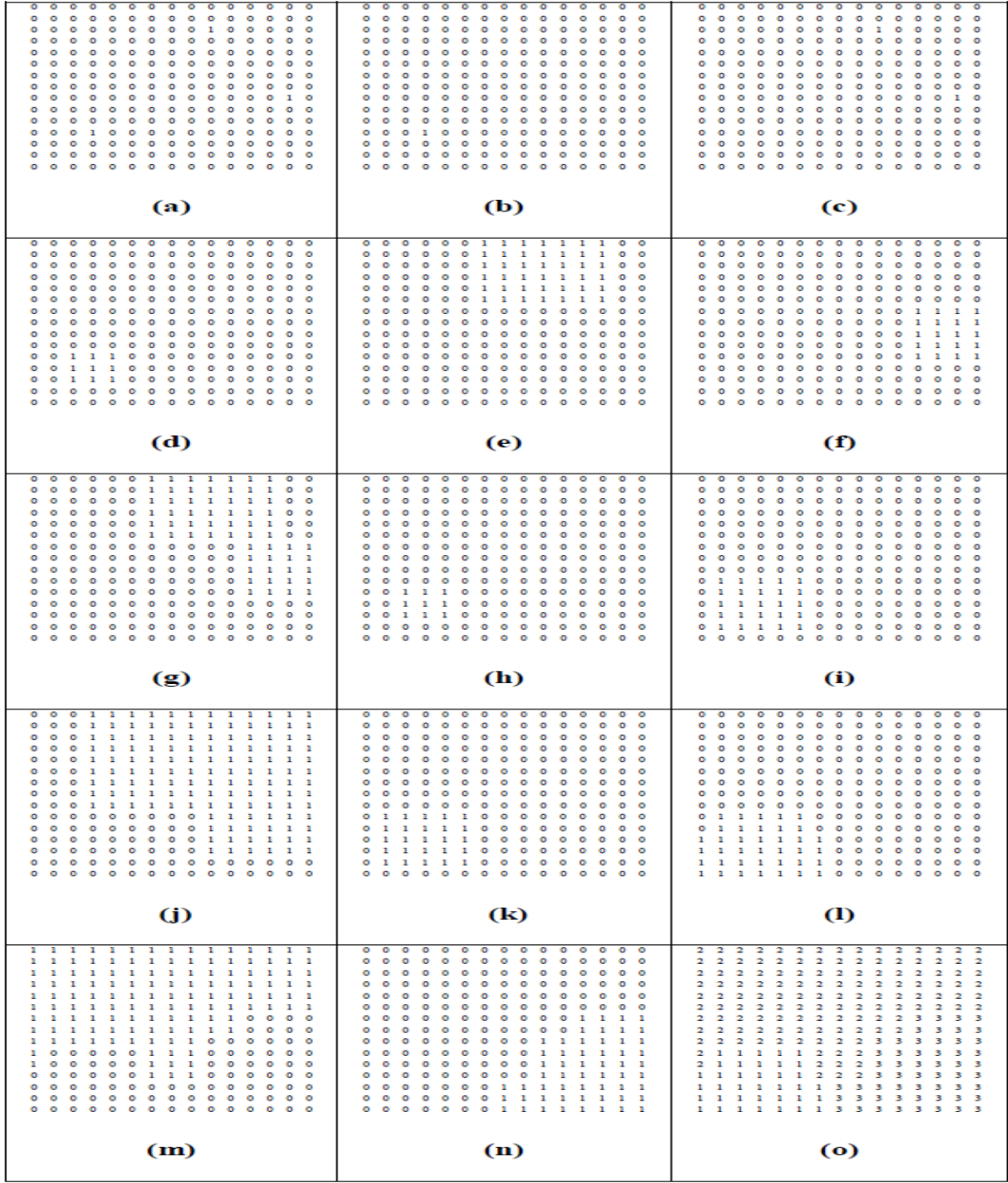
Fig. S1. (a) original map with three points (shown with 1s) for (A_1), (A_2), and (A_3), (b) i^{th} point $(A_i)=(A_1)$, (c) union of jth points, $\bigcup\limits_{\substack{\forall j \\ j\neq i}} A_j =(A_2)\bigcup(A_3)$, (d) first cycle of dilation of ith point by B (Square in shape) with the propagation speed of $\lambda=1$, denoted by $\delta_{\lambda=1}^{n-1}(A_1)$, (e) first cycle of dilation of jth point (A_2) by B with the propagation speed of $\lambda=3$, $\delta_{\lambda=3}^{n-1}(A_2)$, (f) first cycle of dilation of ith point (A_3) by B with the propagation speed of $\lambda=2$, $\delta_{\lambda=2}^{n-1}(A_3)$, (g) union of $\delta_{\lambda=3}^{n-1}(A_2)$ and $\delta_{\lambda=2}^{n-1}(A_3)$, (h) $\delta_{\lambda=1}^{n=1}(A_1)\backslash\delta_{\lambda=3}^{n=1}(A_2)\bigcup\delta_{\lambda=2}^{n=1}(A_3)$, (i) $\delta_{\lambda=1}^{n=2}(A_1)$ (j) similarly for next iteration: $\delta_{\lambda=3}^{n=2}(A_2)\bigcup\delta_{\lambda=2}^{n=2}(A_3)$, (k) $\delta_{\lambda=1}^{n=2}(A_1)\backslash\delta_{\lambda=3}^{n=2}(A_2)\bigcup\delta_{\lambda=2}^{n=2}(A_3)$, (l) $Z(A_1)=\bigcup\limits_{n}\left[\delta_{\lambda=1}^{n}(A_1)\backslash\delta_{\lambda=3}^{n}(A_2)\bigcup\delta_{\lambda=2}^{n}(A_3)\right]$, (m) similarly follow the steps from (b-l) by changing the ith point from (A_1) to (A_2), and by treating (A_1) and (A_3) as i^{th} points; the $Z(A_2)$ is obtained, (n) obtained $Z(A_3)$, and (o) three zones $Z(A_1)$, $Z(A_2)$, and $Z(A_3)$ are shown with 1s, 2s, and 3s.
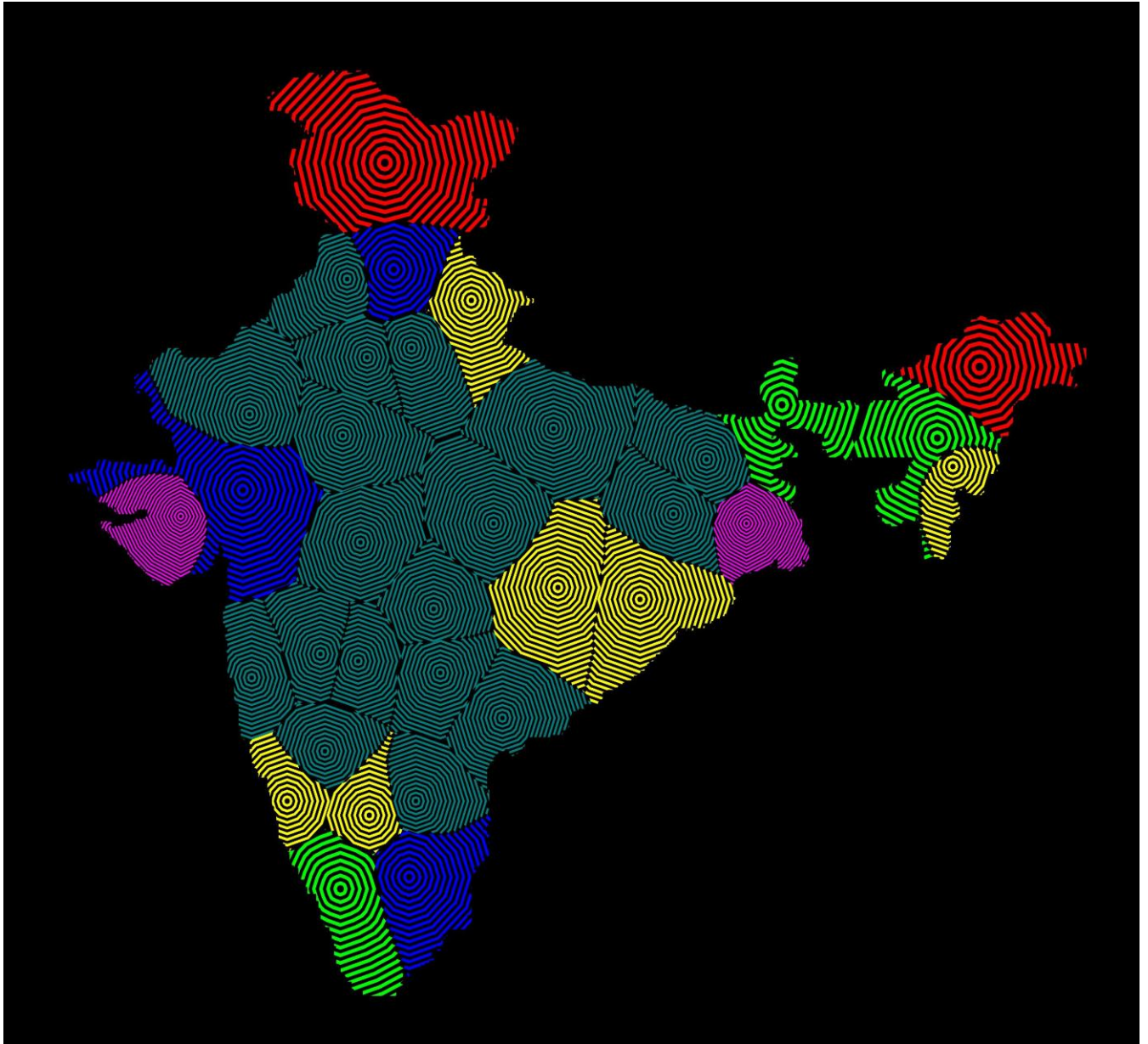
Fig. S2. The propagation frontlines with region-dependent propagation speeds for rainfall values considered from 34 gauge stations. Corresponding 34 gauge-station location map and WSKIZ map can be seen in Fig. 4a and b.
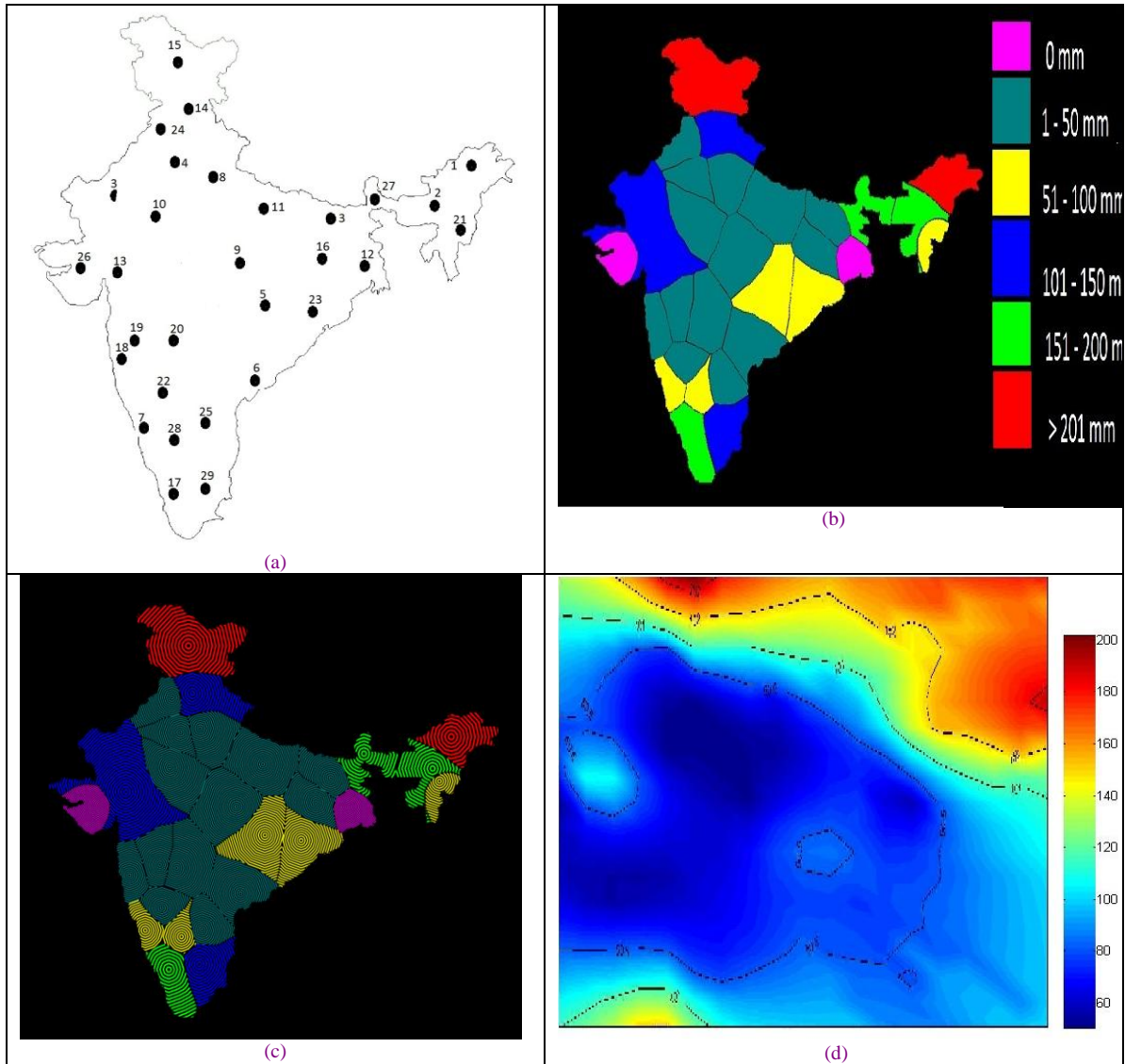
Fig. S3. (a) Locations of 29 gauge stations, (b) WSKIZ map generated by considering only 29 gauge station data, and (b) propagation frontlines. It is obvious from S2 and S3c that there exist no much difference even after reducing the gauge stations. (d) kriged map generated for 29 gauge station data.