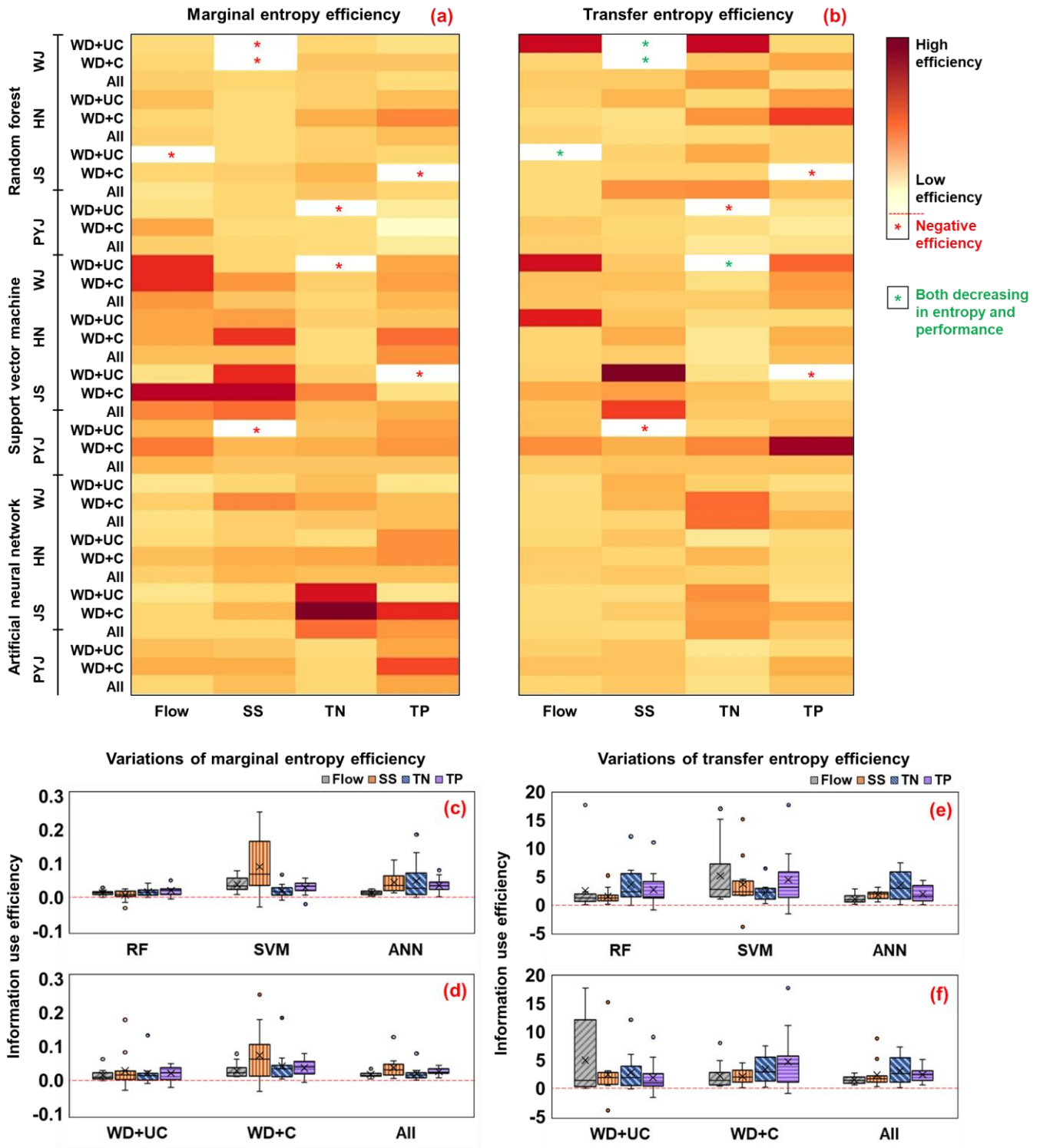**Figure 1.** Overall procedure to investigate the contribution of information quantity and quality to the prediction accuracy of hydrological machine learning (ML) modeling.

Figure 8. Comparison of changes in information use efficiency (IUE) calculated from the entropy (ME and TE) and accuracy (KGE) statistics provided by using the different training sets. (a) and (b) exhibit relative changes in information use efficiency (IUE-ME and IUE-TE) across all factors, including the ML models, watersheds, training datasets, and predicted variables. Red asterisks marks represent "negative efficiency," describing the cases where prediction accuracy decreased with increases in entropy, and green asterisks marks indicate the cases where both IUE and KGE decrease. (c) and (d) summarize, with box-whisker plots, the variations of changes in IUE-ME for the watersheds and training datasets (c) and for the watersheds and ML models (d), respectively; (e) and (f) show the variations of changes in IUE-TE for the watersheds and training datasets (e) and for the watersheds and ML models (f), respectively.
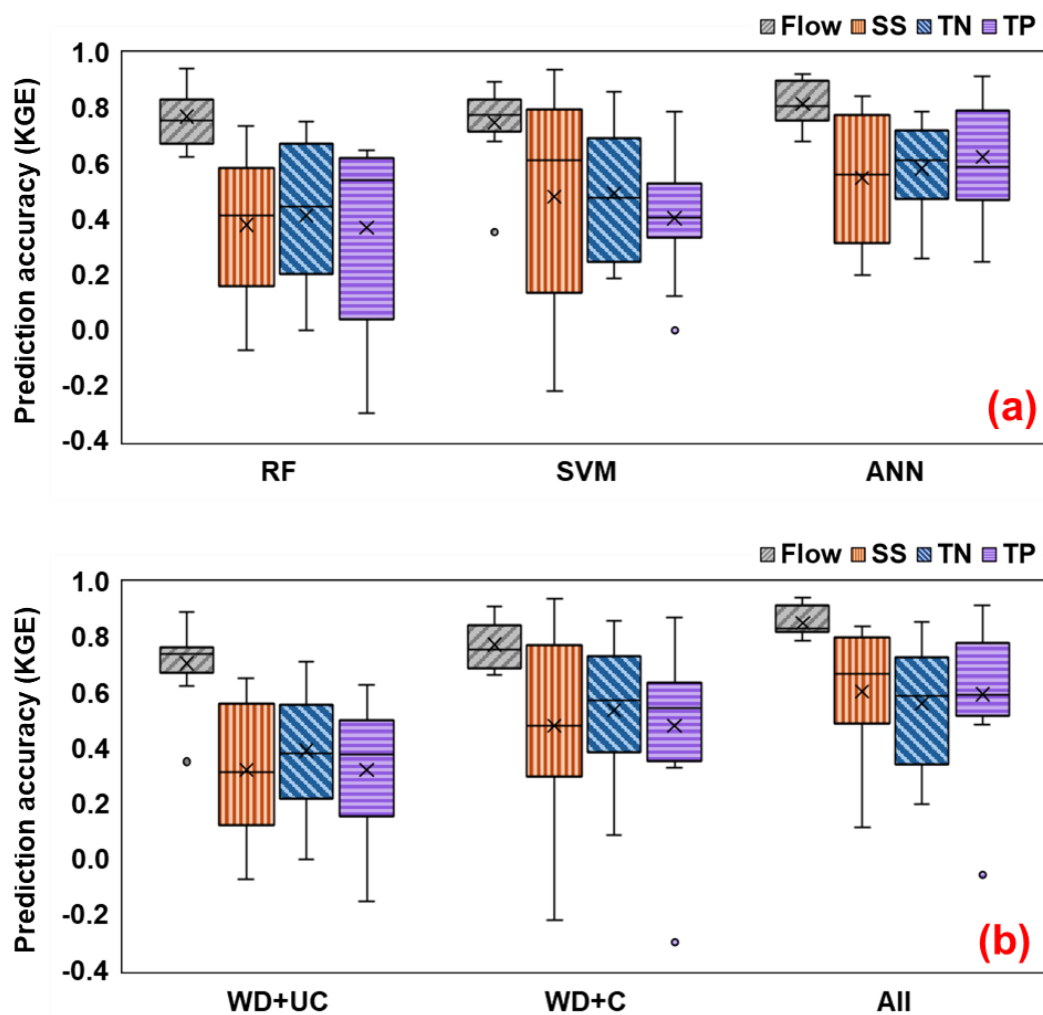
Figure S5. Variations in prediction accuracy (KGE) of the ML models for the watersheds and training datasets (a) and for the watersheds and ML models (b).