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A Brief Note on Importance of Plant Phenology Species

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Perspective

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Phenology, the study of phenomena or events. It is used to record and study the date of repeated natural events (such as plant flowering or the first or last appearance of migratory birds) related to seasonal climate changes. Therefore, phenology combines ecology and meteorology. Plant phenology, the time of plant growth and development, is changing with global climate change. Changes in temperature, soil moisture, nitrogen availability, light and carbon dioxide concentration may affect plant phenology. The functional or behavioral response of an organism to changes in the duration of the daily, seasonal, or annual light-dark cycle. The photoperiod response can be reasonably predicted, but temperature, nutrition, and other environmental factors can also change the response of organisms. Phenology, or the time of the annual cycle of plants and animals, is extremely sensitive to climate change. We know that plants and animals can adjust the timing of certain phenological events, such as flowering or tree migration, according to climate change. [1]

Phenology is the study of the timing of plant and animal life cycle events, such as flowering, migration, and cultivation stages. These life stages or phenological periods are directly affected by the local climate and climate, and respond to environmental changes such as temperature and precipitation changes. A precisely defined point in the life cycle of a plant or animal usually marks the beginning or end of the phenological phase. The occurrence of phenological events can be determined in a single date and time. Phenology in tropical forests is dominated by rainfall-related events. Because there's little temperature seasonality in tropical forests, many phenological events commonly observed in temperate climates don't seem to be present. What is present is a few variation in rainfall, and some, but not all, tropical forest plants and trees reply to this seasonality of precipitation. Flowering and fruiting in tropical forests is usually governed by drought or rainfall intensity. A typical pattern is for trees to flower during annual drought periods, with fruit appearing later, when rains have returned. [2]

This pattern is way more common in forests that have a pronounced dry period. Vegetation phenology reflects the dynamics of terrestrial ecosystems and is incredibly sensitive to global climate change and land-cover and land-use change. Thanks to the wide applications, an excellent number of datasets of land surface phenology (LSP) are produced using satellite observations at regional and global scales. Since these LSP datasets are derived from a spread of satellite datasets and methods, their accuracies and also the physical meanings vary considerably. This text provides a short overview of the recent progresses in LSP detections. Specially, after introducing the essential concept of LSP metrics and detection algorithms, long-term LSP data records and real-time LSP monitoring are then introduced. [3]

Plant phenology in Mediterranean type ecosystems is additionally a trait that had been hypothesized to possess converged under the selective pressure imposed by the everyday summer stress. In contrast, Mexical shrub land has not experienced summer drought thanks to its tropical climate. While spring flowering is that the typical phenology of Mediterranean plants, non-seasonal flowering is often produced in tropical communities. To check the load of the evolutionary history within the phenological response of plants to atmospheric condition, flowering phenology of Mexical plants to it of Mediterranean ecosystems. Phenological differences weren't only shown at the community

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level but also between Mexical and their Mediterranean congeneric species. Controls aside from season on tropical forest phenology are less pronounced.

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