Emulating Seasons for Fish **Warning!** Check Notes Below Table!

Season	Months (Flexible)	Key Changes	What to Do	Benefits
Dry Season	Jan-Mar / July-Sept	Shorter days, cooler temps, low nutrients	- Reduced photoperiod (9-10 hrs, depends on latitude) - Lower temp by 2-3°F (or more, depends on the fish) - No water changes, let water level go lower naturally (fill to counter evaporation if needed) - Let leaves & mulm accumulate	- Promotes dormancy in some plants (bulbs especially) - Shrimp longevity - Builds biofilm & detritus - Triggers rest/reset
Transition (to Wet)	Apr / Oct	Gradual warm-up	- Increase photoperiod (10-11 hrs) - Increase temp by 2°F (varies) - Add live foods	- Restarts growth cycles - Conditions fish for breeding
Wet Season	May-July / Nov-Dec	Longer days, warmer temps, high nutrients	- Full photoperiod (12-13 hrs) - Raise temp (78-84°F, varies by latitude and species) - Feed generously (esp. live foods) - Slowly raise water level with softer and slightly cooler water (Possibly DI / RO with added buffers) - Add botanicals for tannins/ humics	- Plant growth peaks - Fish & shrimp breed - Biofilm & microfauna boom
Transition (to Dry)	Aug / Dec	Gradual slow-down	- Reduce photoperiod (10-11 hrs) Decrease temp by 2°F (varies) - Decrease feeding	- Prepares system for reset - Mimics real-world seasonal dieback

- **This is at your own risk.** The procedures here are safe when done as prescribed, deviation can cause problems. **Do not attempt if you are unsure or have a new tank.**
- The table assumes the fishes' habitats are located between 0-35° latitude and naturally encounter shifts in their climate.
- Additional clues as to the seasons native fish habitats experience can be gained by searching for the **Climatogram** for that area. This displays temperature and precipitation through the year. Air temperature is not the same as water temperature.
- Changes should be gradual and not sudden. These naturally happen over weeks, not days or hours. Temperatures will be dependent on species and range of tolerance.
- **Keep a Log or Journal**: Track seasonal shifts, fish health, plant dieback, and regrowth.

Safety Concerns & Solutions:

1. Temperature Swings Can Stress or Kill Fish
    - Sudden changes of more than 2-3°F can shock or stress sensitive species. Warmer temperatures also mean less oxygen
        - Solution: Adjust temperature slowly over several days using a thermometer. Provide proper aeration during warmer temperatures.

2. Light Reduction Must Be Gradual
    - Quickly reducing light can cause some plants (especially light-demanding ones like red plants) to melt or drop leaves.
        - Solution: Dim lights gradually or reduce duration over 1-2 weeks, not overnight. Monitor for excess plant melt.

3. Water Chemistry Changes Can Be Dangerous
    - Mimicking the rainy season with soft water (e.g., Reverse Osmosis) can lead to pH crashes or unstable parameters.
        - Solution: Buffer your water if using RO/DI and monitor GH/KH carefully. Avoid drastic shifts via large water changes.

4. Breeding Booms Can Overload Biofilter
    - Seasonal cues may trigger breeding in microfauna, leading to bioload spikes.
        - Solution: Make sure your filter is mature and large enough to handle increased wastes.

5. Leaf Litter and Mulm Can Lower Oxygen
    - Allowing leaf litter and detritus to build during the dry season adds realism, but too much can deplete oxygen or raise ammonia.
        - Solution: Aerate well and monitor. Choose botanicals that decompose slowly. Have plenty of plants and a mature filter to deal with excess nutrients.

6. Inconsistent Cycles Can Cause Confusion
    - If the seasonal pattern is inconsistent (e.g., dry season too short), it can confuse the life cycles of shrimp, plants, or fish.
        - Solution: Stick to more natural cycles of at least 6-8 weeks per phase to allow natural behaviors to align.

7. Some Species May Not Respond at All
    - Fish and plants from directly equatorial regions (like many Amazon or SE Asian species) may not respond to seasonal changes because their environments are more stable year-round (not much seasonal change during the year).
        - Solution: Research species-specific natural habitats. **Not all fish benefit from this approach. Not all plants can survive lower/higher light or temperatures. Monitor continuously, abort if needed.**