CASE STUDY: INVITING THE WILD BACK IN

Jacob Katz grew up the son of small diversified farmers in Winters, California -- an early education which nurtured in him an ethic of looking to nature as a collaborator. With time, he became drawn to pressing questions of scale, wondering how he might make an impact at the level of mainstream commercial agriculture, but still with this nimble ethos of a small-scale regenerative farmer.

He is now a Senior Scientist with California Trout, looking for ways to invite the wild back into working lands. He currently manages the Nigiri Project -- one that partners with rice farmers in California's Central Valley to flood seasonally dormant fields, making them available again as food rich habitats for young salmon, especially the endangered winter-run Chinook salmon as they move from the mountains to the sea. The Nigiri Project is a scaled riparian restoration project that models creativity and collaboration with one of the world's most productive and hard-worked agricultural valleys.

Today the Central Valley is a landscape that is highly engineered and controlled by rigid systems of irrigation canals, drains, dams and levees. The cost of this human-controlled design has been the loss of 95% of wetlands, floodplain forests, and the food chain energy that they produce. It is expensive to operate this way.

Before white settlers came and developed this valley into a place of agricultural systems and controlled riverways, the land was a seasonal floodplain fed by winter storms and spring snowmelt from the Sierra Nevada mountains. The seasonal wetlands acted as a giant collector of sunlight and energy: plants and algae processed sunlight into sugars, which were eaten by bugs, whose populations swelled, providing much needed nutrients for juvenile salmon passing through. This kind of food rich habitat only comes to life when the water has a chance to spread out and slow down. Full cycles of food energy are replenished which sustains life for bugs, fish, birds, soil, and thus people too!

The Nigiri Project recreates and mimics this natural process by strategically flooding large monocultural rice fields, which in turn decomposes leftover debris from the year's rice crop. This decomposition turns to biomass, a feast of bugs, then salmon, then ducks, geese, and shorebirds, which are turning out once again in record numbers as they migrate from the Arctic to the Amazon.

The question is how to be in collaboration with the rivers and to let their fluid and amorphous designs shape the land. Katz suggests a mosaic approach, one where water is let out of rigid aqueducts and into fields, as needed, according to the natural ebbs and flows of that specific plot, as well as the farmer's knowledge and economic needs. He calls this a "walking wetland" approach, wherein a rice farmer can agree to take 1/5 of their fields out of rotation yearly, which enables soft profits in the form of habitat creation and hard profits in the form of leasing water rights to neighboring farms during these off times.

This re-thinking also allows for a more holistic approach to sharing the scarce resource of water in Central Valley. Instead of each farm expecting to have water at the same time, this project sets up expectations of sharing these commons for public, economic and ecological gain. There is a rhythm to the water when it is in the right place at the right time.

Through all of these adjustments and fluid collaborations, water is able once again to enter into Central Valley's highly contested water table, instead of being whisked away efficiently to the sea before it can benefit the animals that need it for survival (rural & urban humans included!)

A river is a line, but only on maps. In the field, farmers know rivers to be fluid and shapeshifting. Farmer-led riparian restoration projects can move us beyond either/or thinking and towards productive and profitable design that interweaves habitat and farming.

To learn more about the Nigiri Project visit: https://caltrout.org/projects/nigiri-project#impact