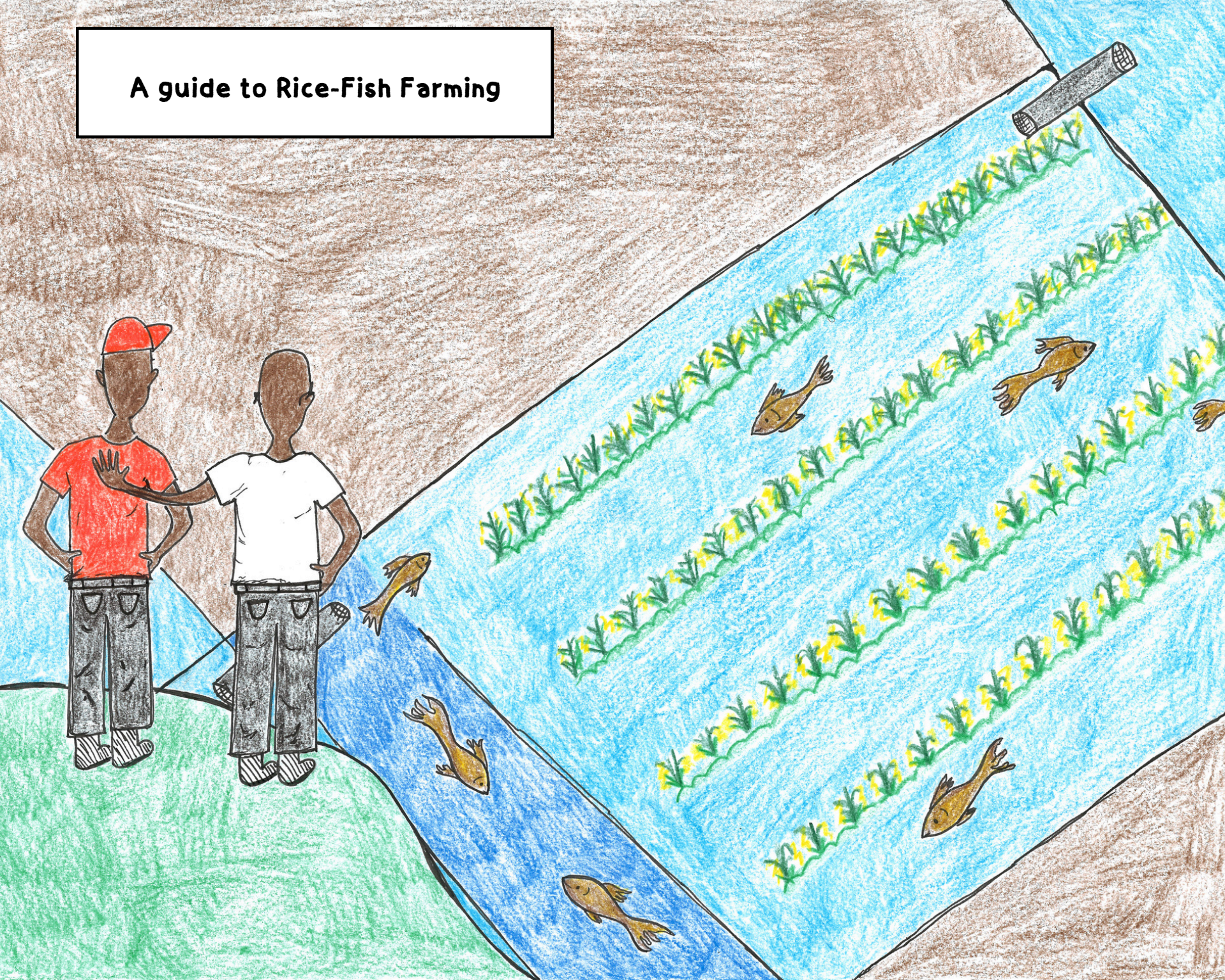


# A guide to Rice-Fish Farming



**Integrating native fish into rice agriculture offers a powerful Low External Input Sustainable Agriculture (LEISA) approach that enhances both productivity and human health. Co-culturing fish in existing rice paddies can boost annual income through fish harvests, naturally enrich soils through fish-driven fertilization, and reduce the number of snails that transmit schistosomiasis/bilharzia. This low-cost ecological strategy adds a high-quality food source, and supports a growing population—delivering health, environmental, and economic gains at the same time.**

By Giulio de Leo and Kayla Kauffman

Concept and artwork by Casey Greene

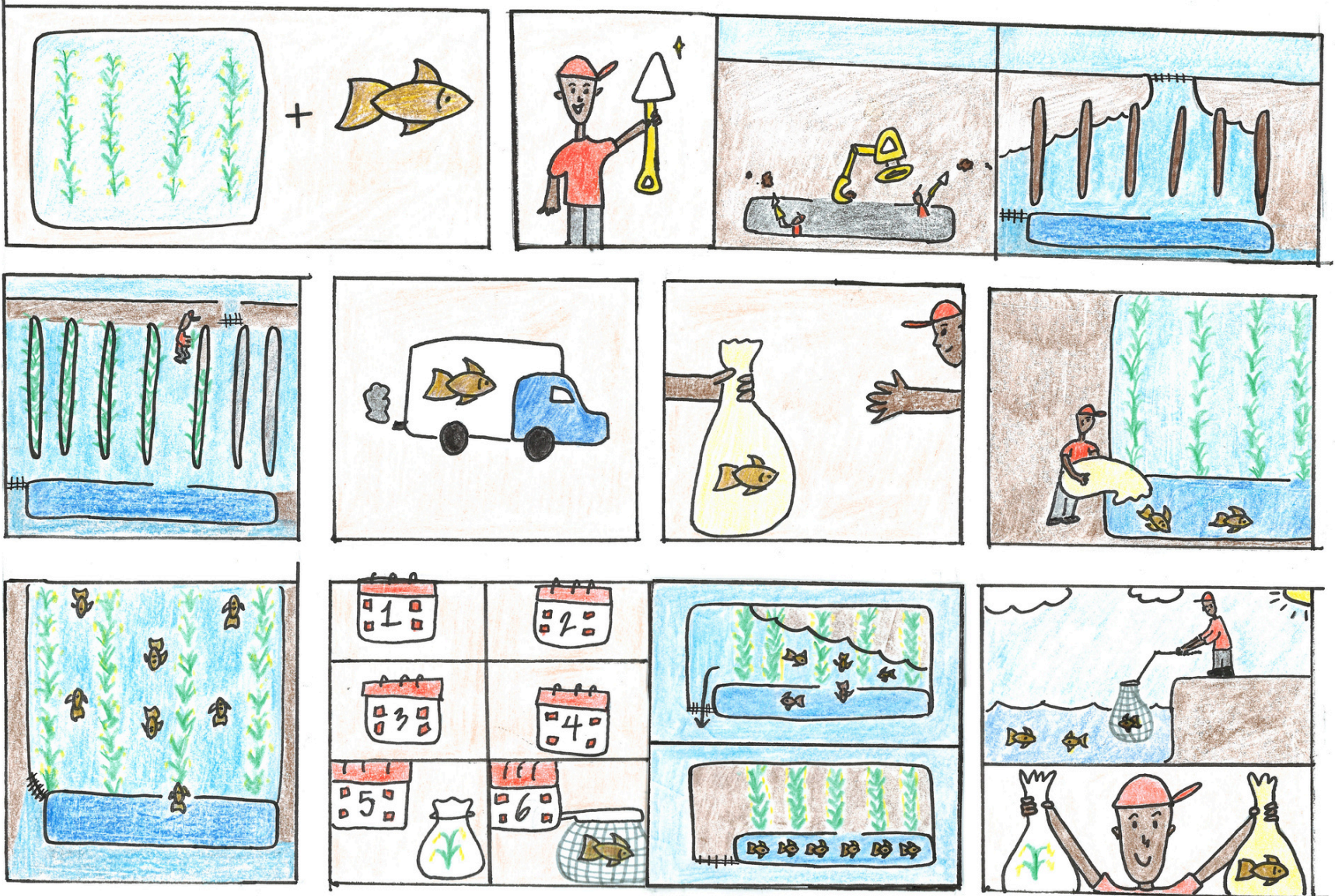


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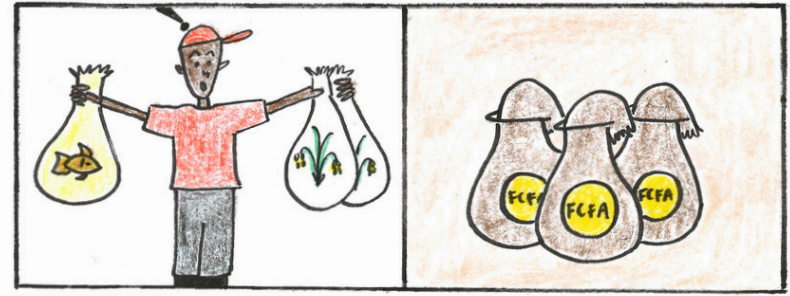
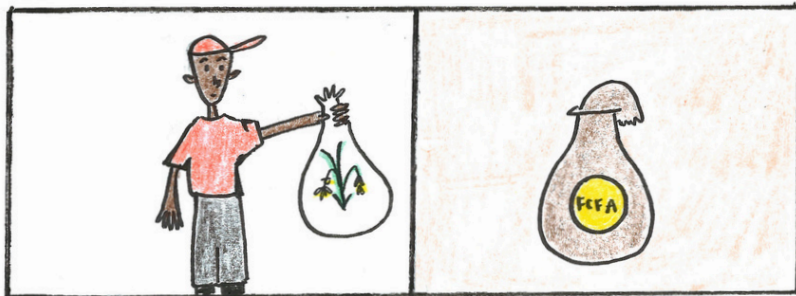
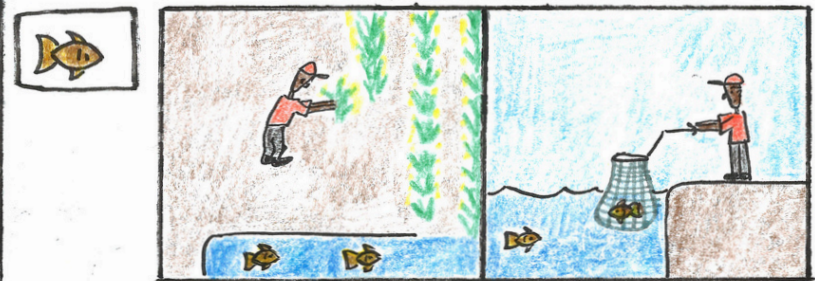
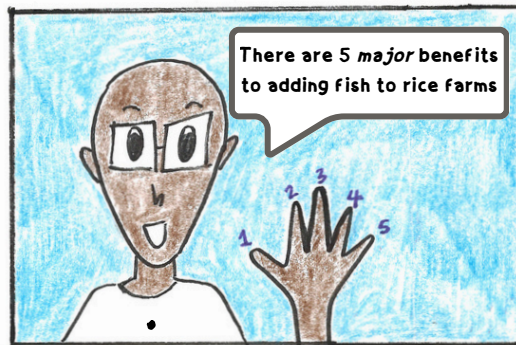
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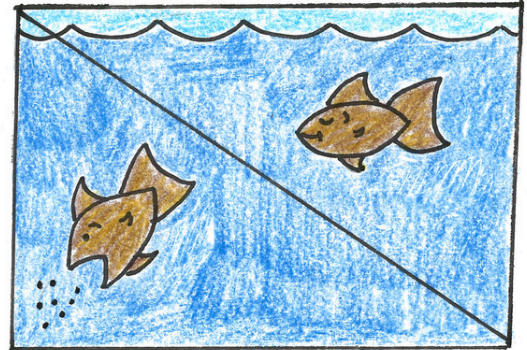
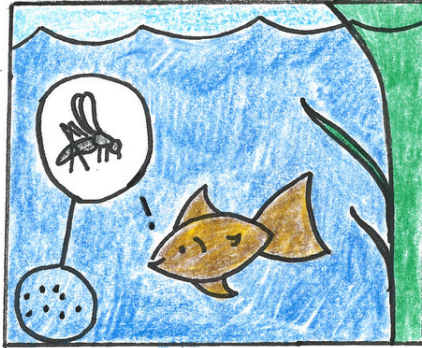
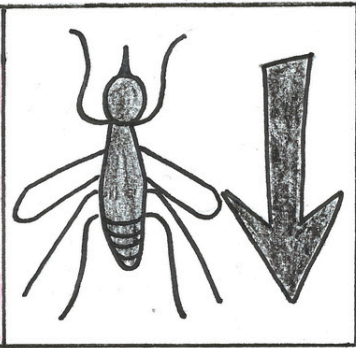
Rice farms... and fish?



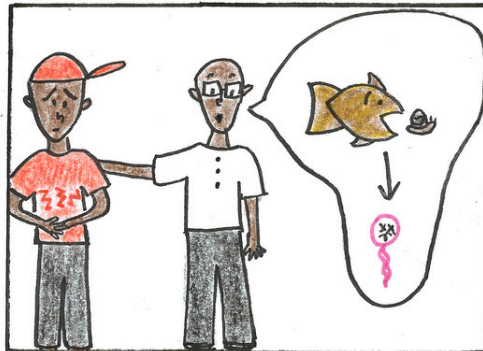
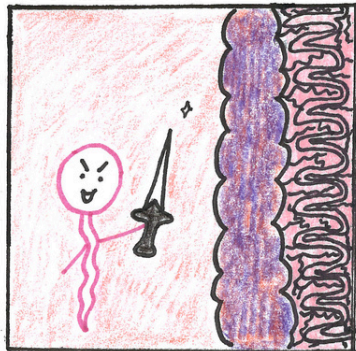
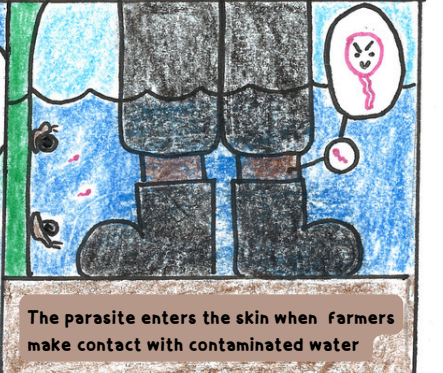
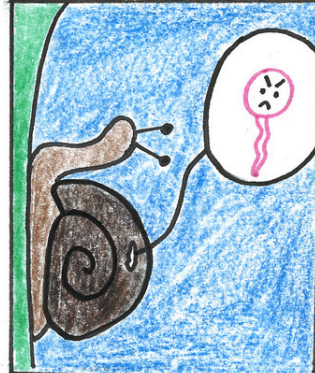
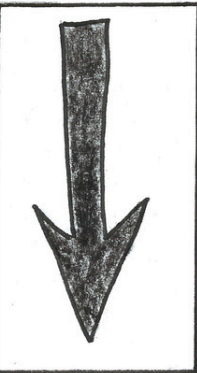
# Why add fish?

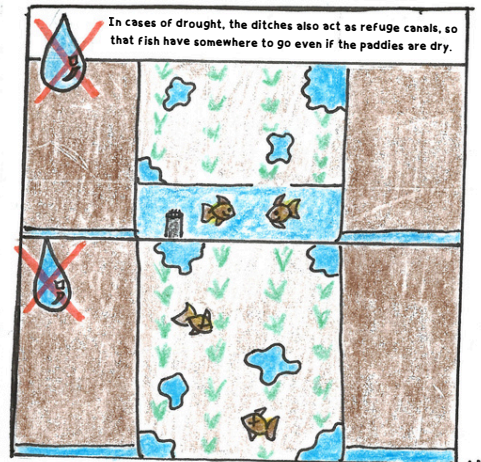
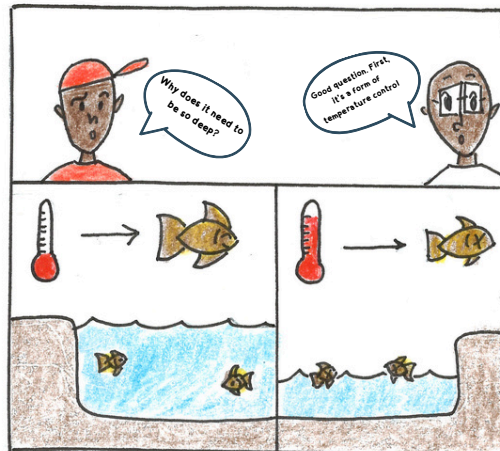
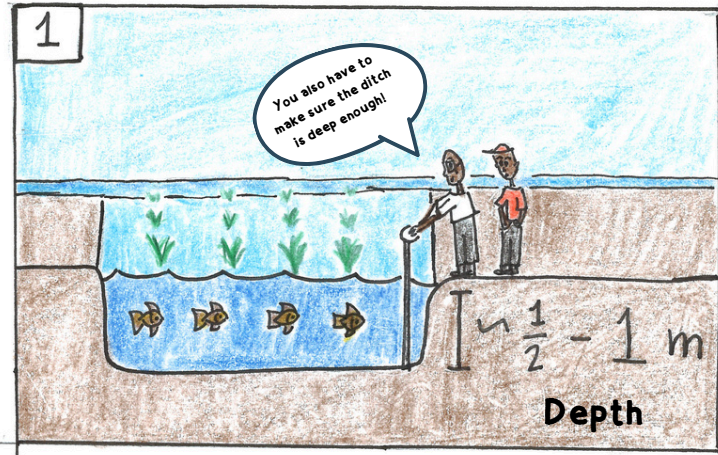
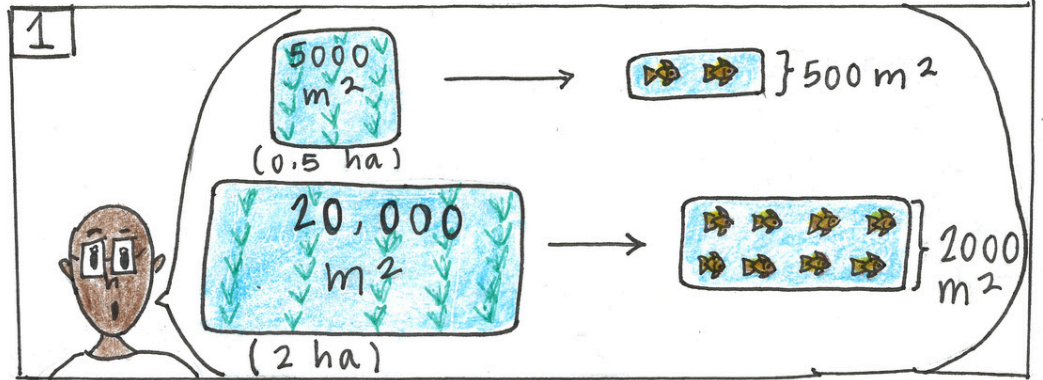
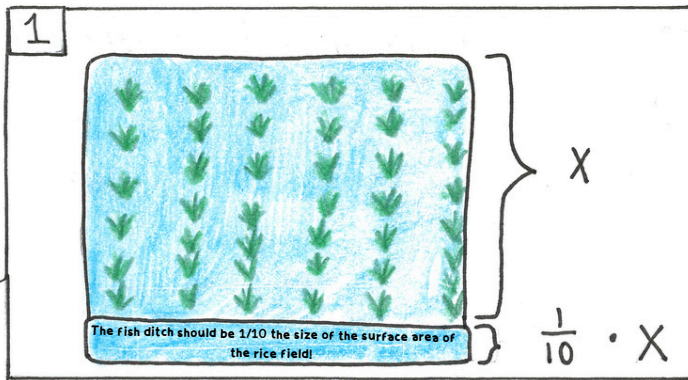
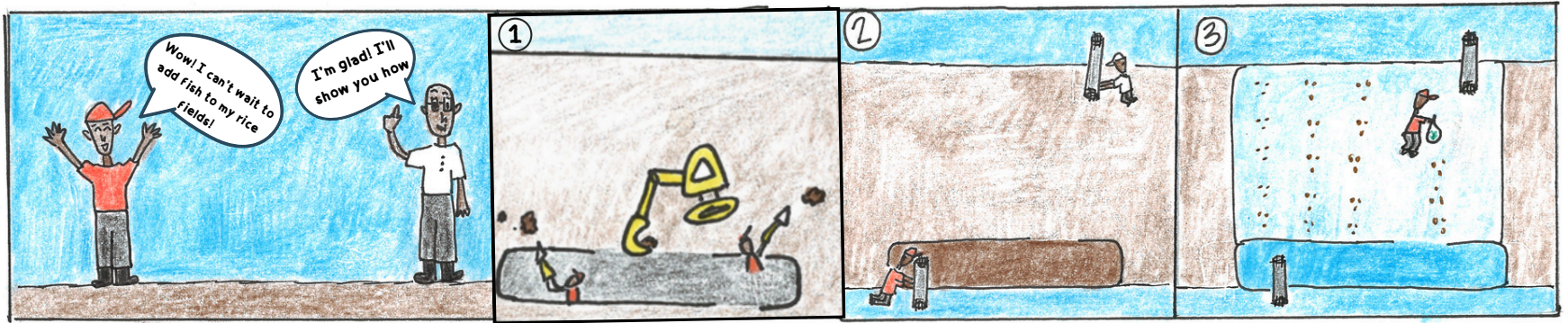


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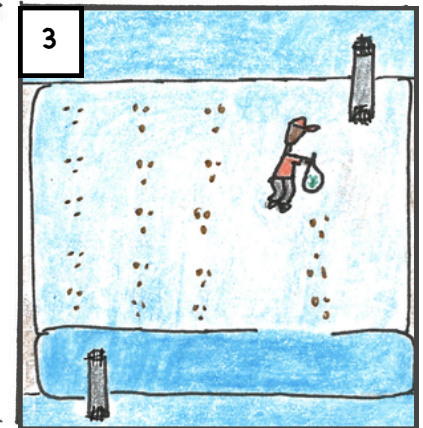
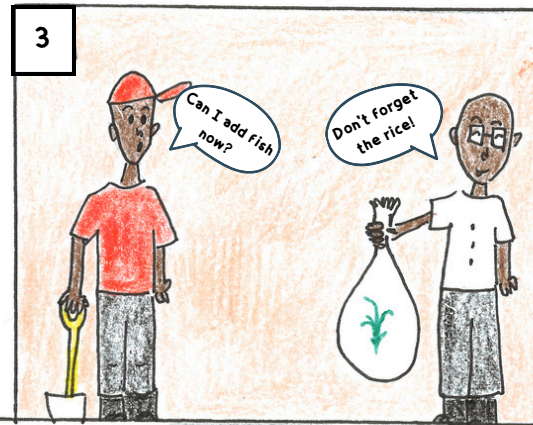
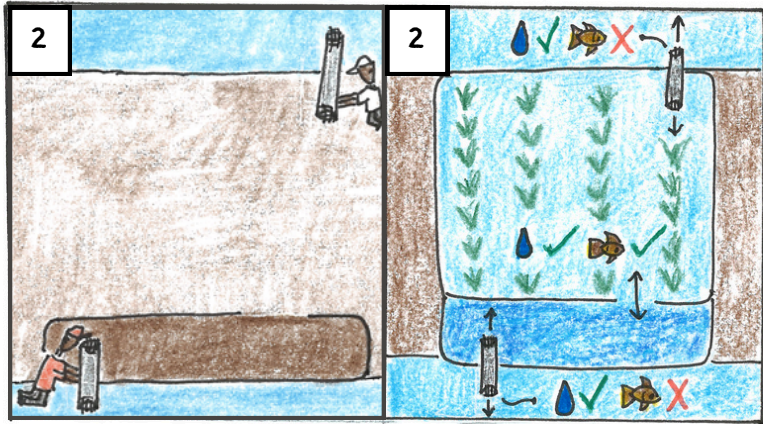
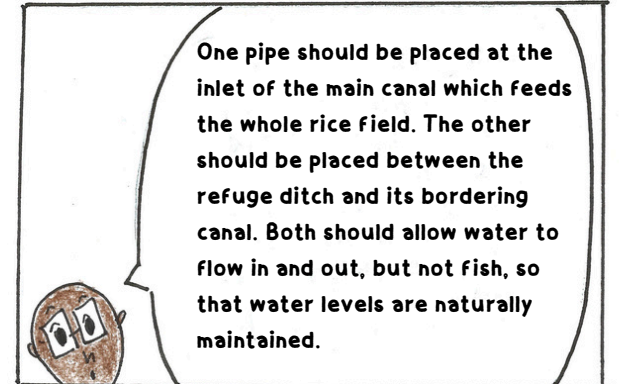
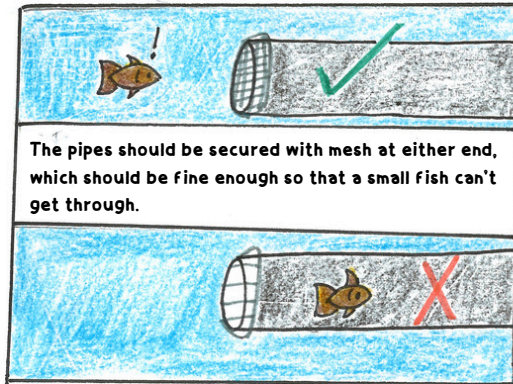
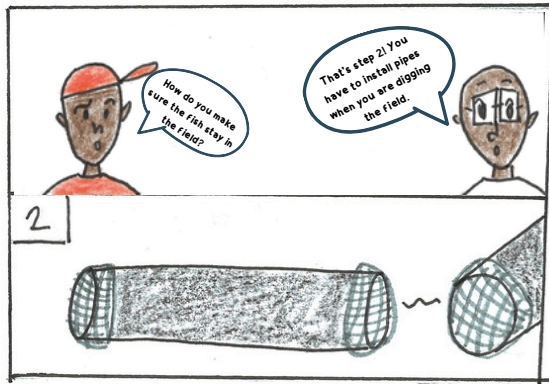
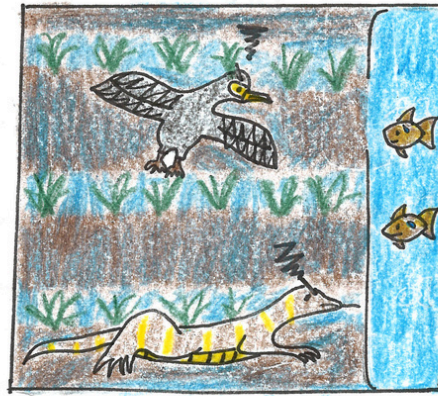


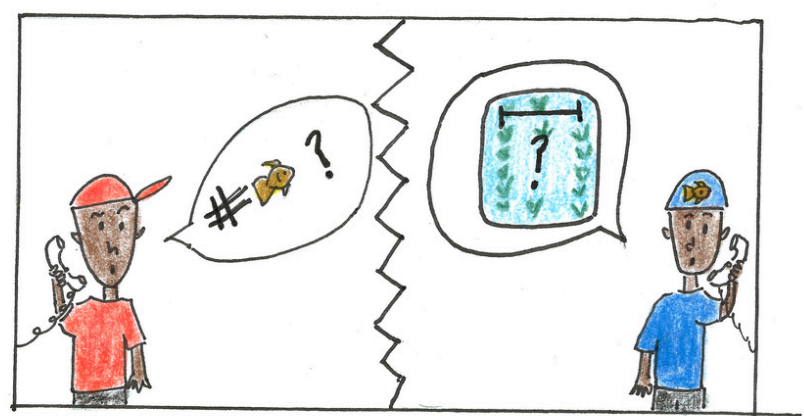
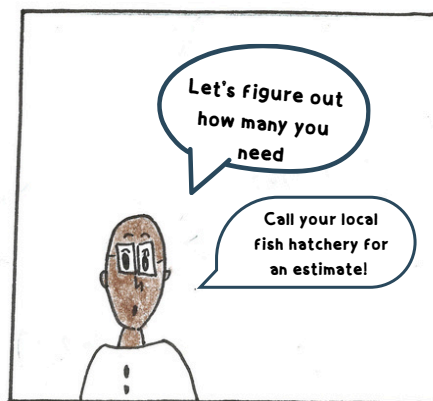
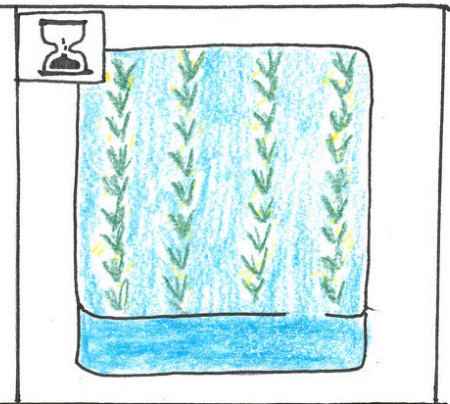
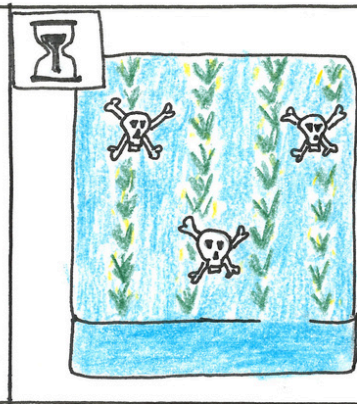
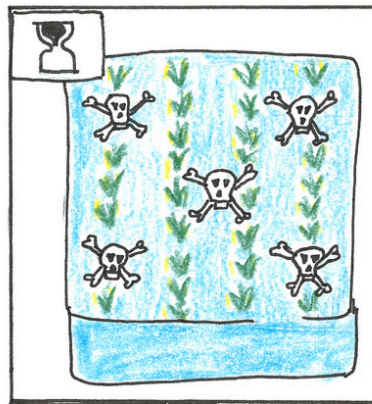
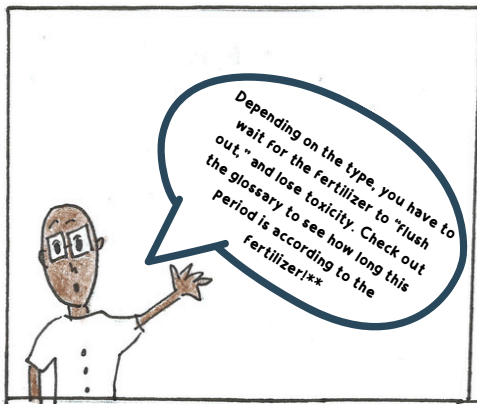
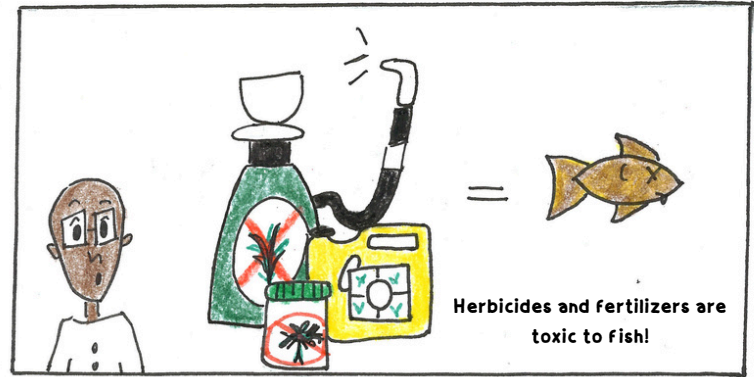
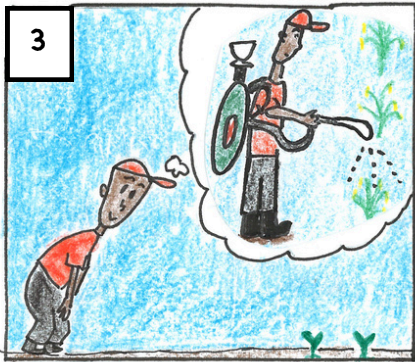
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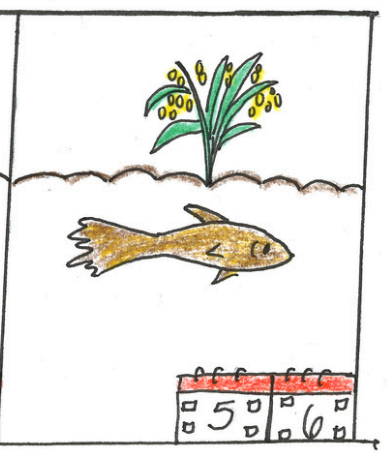
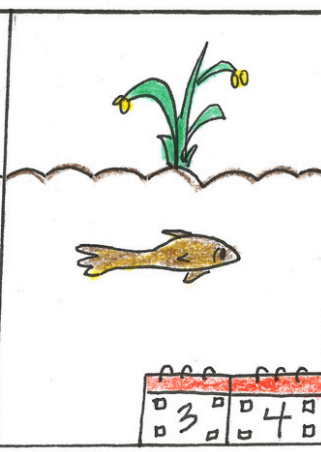
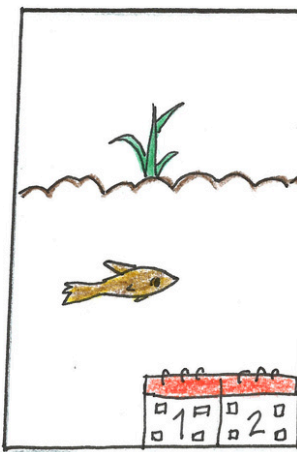
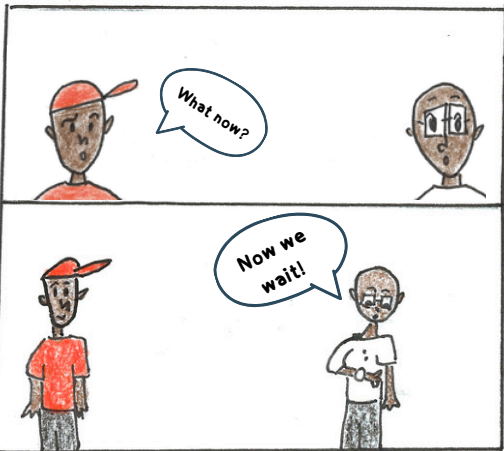
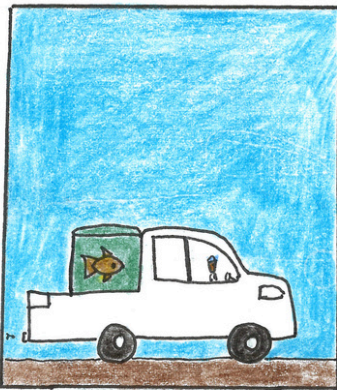
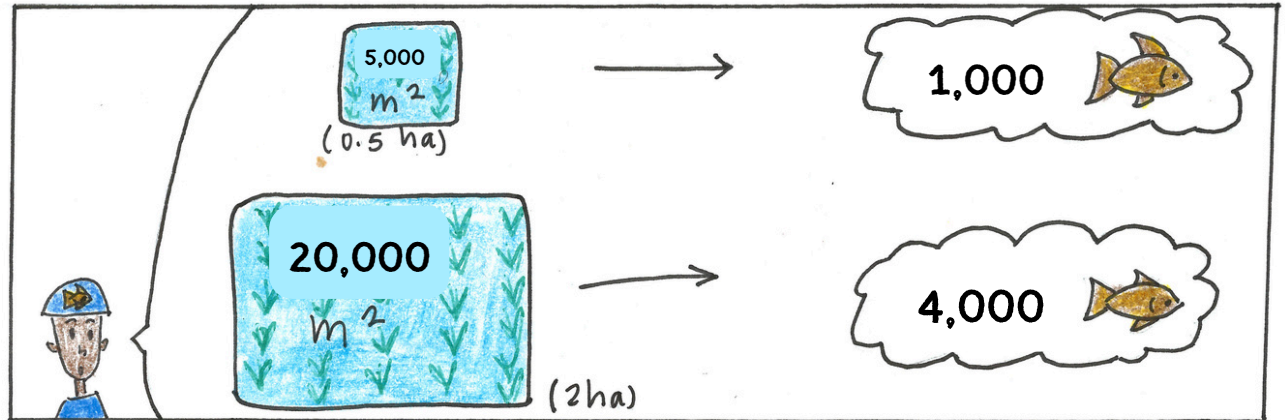


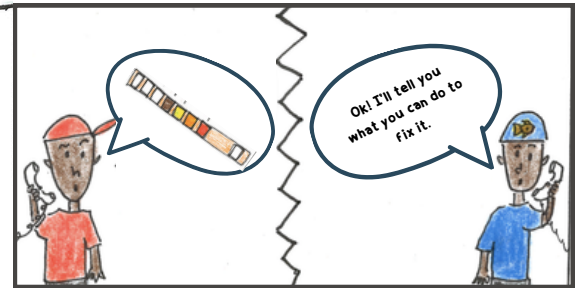
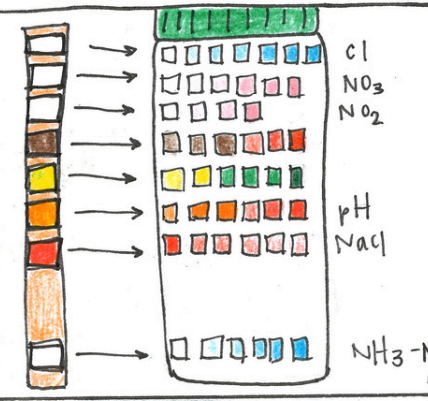
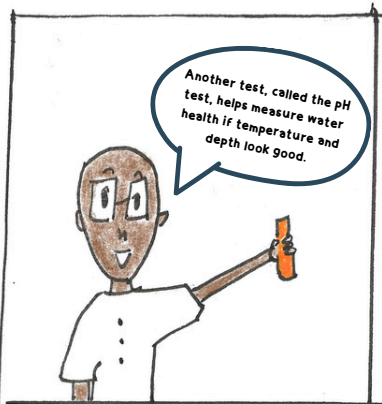
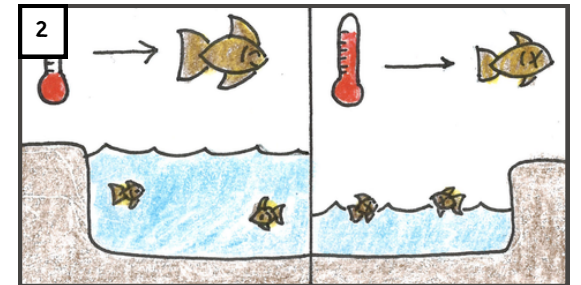
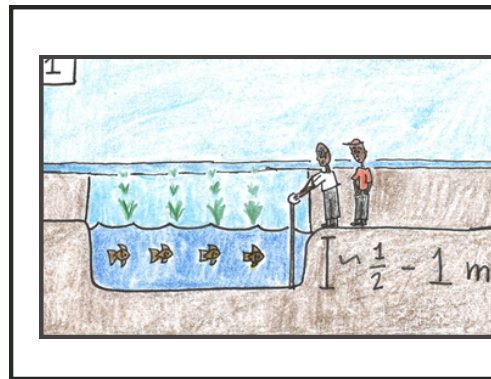
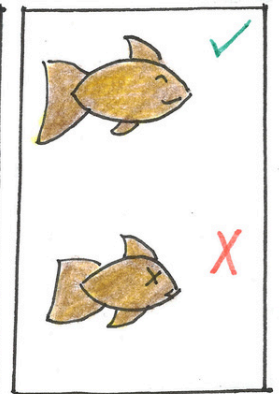
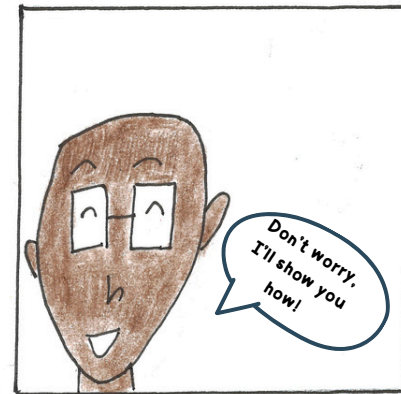
If it's too hot, the fish won't survive. More water means cooler temps!



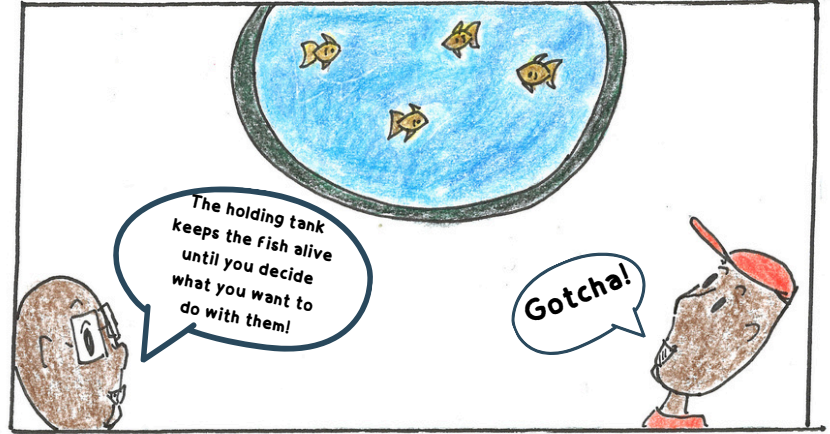
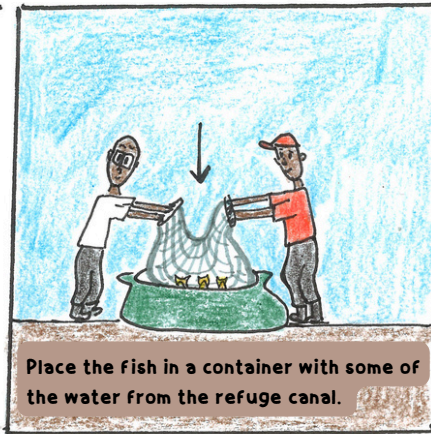
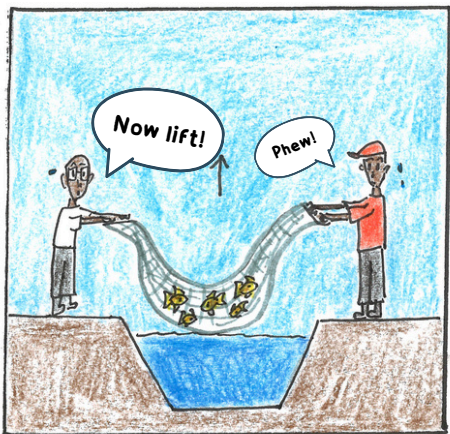
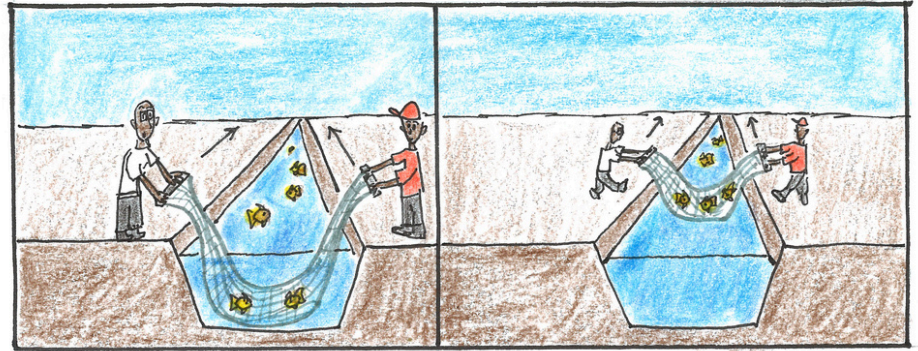
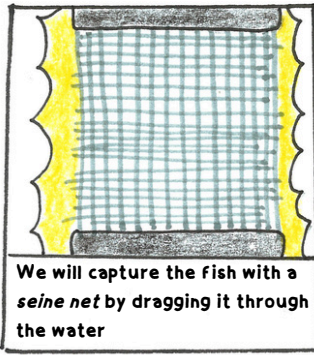
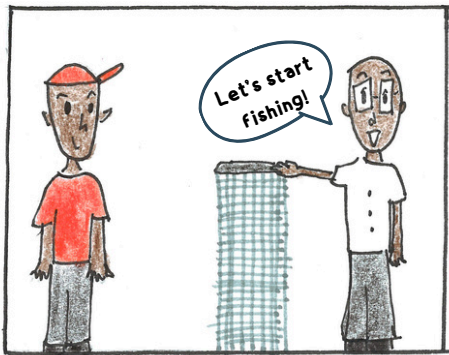
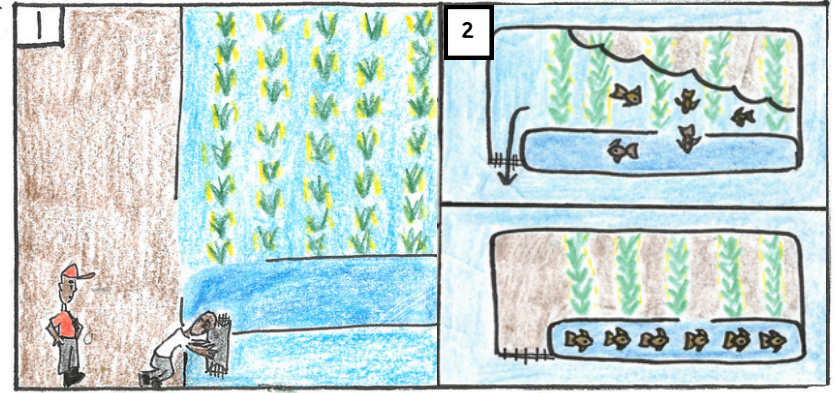
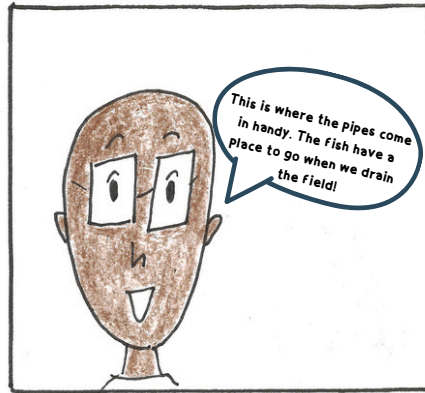


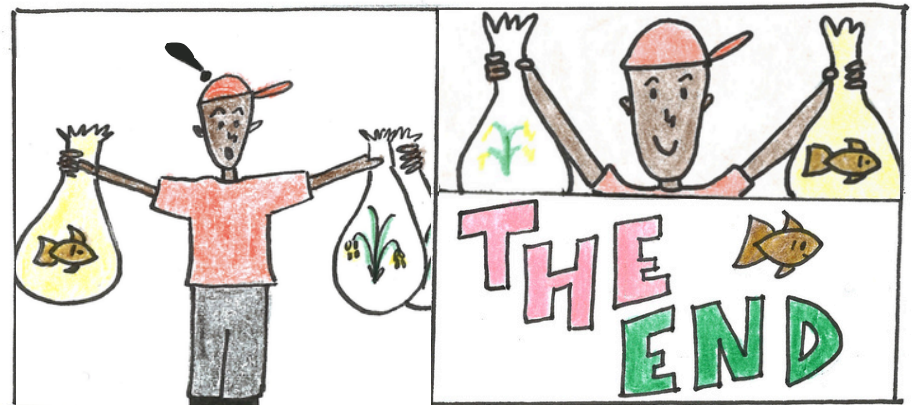
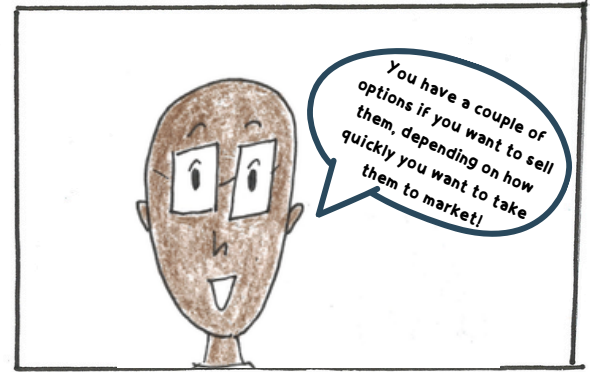
\*\* See glossary on page 11 to scan a QR code for more info





You can call the fish hatchery and explain to them which color you got for each measurement on your pH paper. They should be able to tell you how to fix the water quality if something is harming the fish!





# Guide to integrated rice-fish farming using low external input sustainable agriculture technique in the Senegal River Basin



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