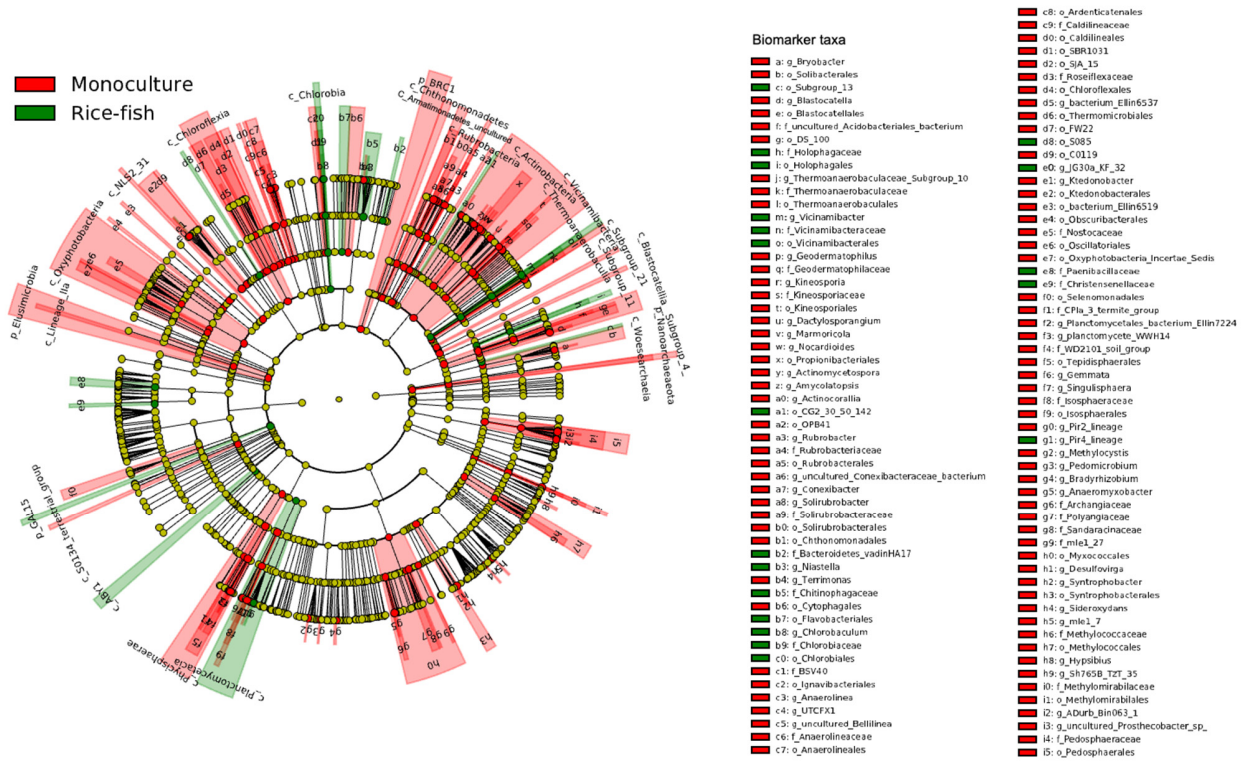
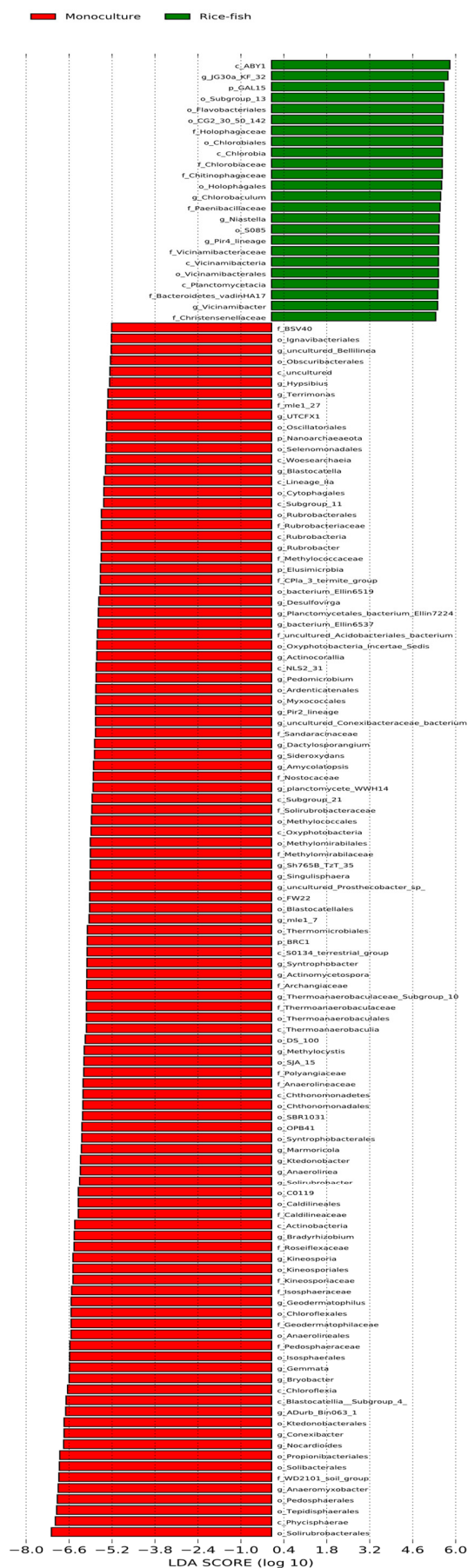


## Supplementary Materials



**Figure S1** LEfSE analysis from phylum to genus level. Cladogram shows differential abundance taxa ( $p > 0.05$ , LDA score  $\geq 2$ ) among monoculture rice fields and rice-fish co-culture fields. Taxa in red are significantly enriched in the monoculture, whereas taxa in green are significant enriched in the rice-fish field.



**Figure S2** Bar plot shows differential abundance taxa with effect size (LDA score). Taxa in red are significantly enriched in the monoculture, whereas taxa in green are significantly enriched in the rice-fish field.