Metagenome reads
LD1, LD2, SD5

Merged de novo assembly
(IDBA-UD)

Scaffolds

Prodigal

Proteins

Proteins >70aa

MCL cluster

Annotated proteins

Consensus annotations

DIAMOND vs. UniRef, NR, KEGG

Genome bins

MEGAN

Eukaryotes etc.

All annotated Orthologous Groups

Partitioned Trichodesmium and microbiome annotated OGs

Proteins

Prodigal

All annotated Proteins

Annotated proteins

Genes sequences

Metatranscriptome reads
SD2, SD6, SD9
LDB1, LDB2, LDB3

Gene expression

Sum gene expression counts for all genes in an OG (Tricho. and microbiome separate)

Partitioned consortia OG expression

TPM normalize

Downstream analyses

RSEM

Trichodesmium and microbiome separate