# Group\_46 Assignment 3.2 Assumptions

1. Node number 1 is the destination node where all water flows towards:
   * Reason for assumption: Node 1 is placed in the Timor Sea which is the largest notable near-by body of water.
   * Rivers in-land are typically at a higher elevation than sea-level and flow toward a lower elevation.
2. The map we have can be represented with a directed tree; all nodes are connected by exactly one path.
   * This is necessary, as if there exist multiple paths between two nodes, the direction of all edges may not be determinable based on the data we have.
   * This assumption holds true for our map.
3. The range x and y coordinates can only be between the value of 0 to 650, inclusively.
   * This assumption holds true in accordance to the provided map.
4. Dam can only be placed in junction node.
   * We assume that the junction resets the flow rate to 0, as dam will at least temporarily block any flow in the river below the dam while it is filling.
   * Assuming only one dam will be placed at a time.
   * We assume that in the function **`new\_flow(dam\_x, dam\_y)`**, which simulates the flow rate of the subsequent nodes flow rate change if a dam is placed before a junction, takes input of the nearest coordinate to the chosen junction rather than the coordinate for the dam itself.