Let

- c be the cluster of boats $c \in C = \{A, B, C\}$
- d be the dock $d \in D$
- δ_{cd} is the distance from cluster c to dock d
- x_{cd} is the number of boats sent from cluster c to dock d
- n_c is the number of boats in cluster c
- q_d is the number of quays in dock d

$$\min \left[\sum_{c \in C} \sum_{d \in D} d_{cd} x_{cd} \right] \tag{1}$$

$$\sum_{d \in D} x_{cd} = n_c \tag{2}$$

$$\sum_{c \in C} x_{cd} = q_d \tag{3}$$

$$x_{cd} \in \mathbb{Z}^+ \tag{4}$$