Abstract: This paper presents the logistics problems faced by World Food Programme in the distribution of food and non-food items to vulnerable populations in emergencies. In particular two experiences are reported from Angola during that country’s civil war: weekly planning of deliveries of food aid and non-food items by air; and the transportation by air of humanitarian workers involved in delivering humanitarian services to the vulnerable population. The first problem has been tackled by building an ad hoc ILP (Integer Linear Programming) model, called the VRVDFL (Vehicle Routing Variable Depot Full Load) model, the second one by a heuristic, called PATS (Passenger Air Transportation Service). Both models have been successfully tested on available data.

Keywords: emergency, air-transportation, routing, scheduling.