In February 2006 the first outbreak of H5N1 in Africa was confirmed in Nigeria in a commercial layer farm. The disease was then reported in Egypt and Niger in February, in Cameroun in March, in Burkina Faso, in Sudan, in Ivory Cost in April and in Djibouti in May. Rift Valley nations are considered at high risk for the spread of the virus, as millions of migratory birds migrate to the region during the European winter. We have developed a qualitative risk assessment model to assess the likelihood of introduction of HPNAI H5N1 by wild bird migration and the risk of dissemination to domestic poultry. This study is in line with the emergency plan set up by Food and Agriculture Organization of the United Nations for the prevention and control of avian influenza in Ethiopia. Preliminary field work was done to establish a list of data to be collected and to determine the factors/parameters playing a role in the release, the exposure and the dissemination of the virus. Our results suggest that the likelihood of introduction of HPNAI H5N1 in Ethiopia via wild migratory water birds was assessed to be null to low. Here we discuss the potential impacts of our findings and discuss recommendations likely to reduce the risk of introduction by wild migratory birds in Ethiopia.