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## **Assessment of climatic resources for the cropping potential in Northern Ghana**

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Ghana is basically an agricultural country and this accounts for 57 % of the gross national product. Practically all agriculture in Ghana is rainfed. The main food crops are root crops and food grains. Food grains are more largely produced in the north of Ghana than root crops. Northern Ghana is about 41 % of the total land area of Ghana (figure 1).

It is mostly semi-arid and consists of the Northern Guinea and Southern Sudan savanna zones (figure 2). These areas have an erratic monomodal pattern of rainfall with an annual average of about 900-1000 mm. The length of the rainy season although punctuated by drought conditions permits a large portion of the country's millet, sorghum, rice, yam and food legumes, and also some amount of maize to be produced in this part of Ghana [1].

In spite of the area being prone to unreliable rainfall, its potential for grain production probably encouraged the Ghana government to enter into an agreement with the German government by 1975 to upgrade the Nyankpala Agricultural Experiment Station (NAES), with a mandate to improving the prevailing farming systems in order to step up food production in this dry ecological zone of Ghana. The first problem mitigating the execution of the program has been the weather. Many crop failures in the zone have also been attributed to the inability of the farmers to adopt cropping strategies to overcome the intra-seasonal vagaries of the weather, particularly short drought conditions.

This paper therefore describes the approach adopted in the analysis of some historical climatic data for the assessment of climatic resources for cropping potential and the evaluation of risks to cropping in semi-arid Ghana.

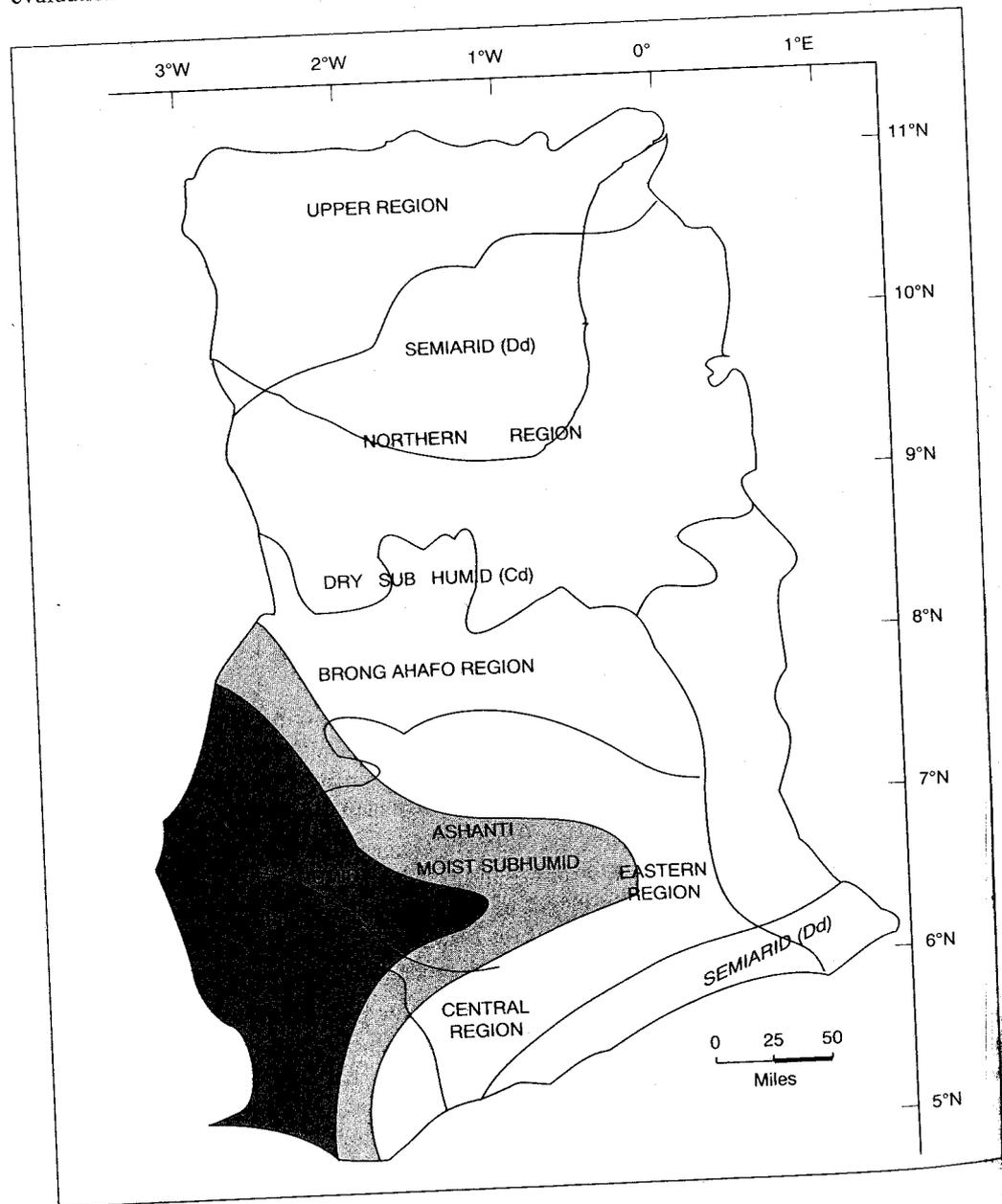


Figure 1. Climates of Ghana.