

Somalia

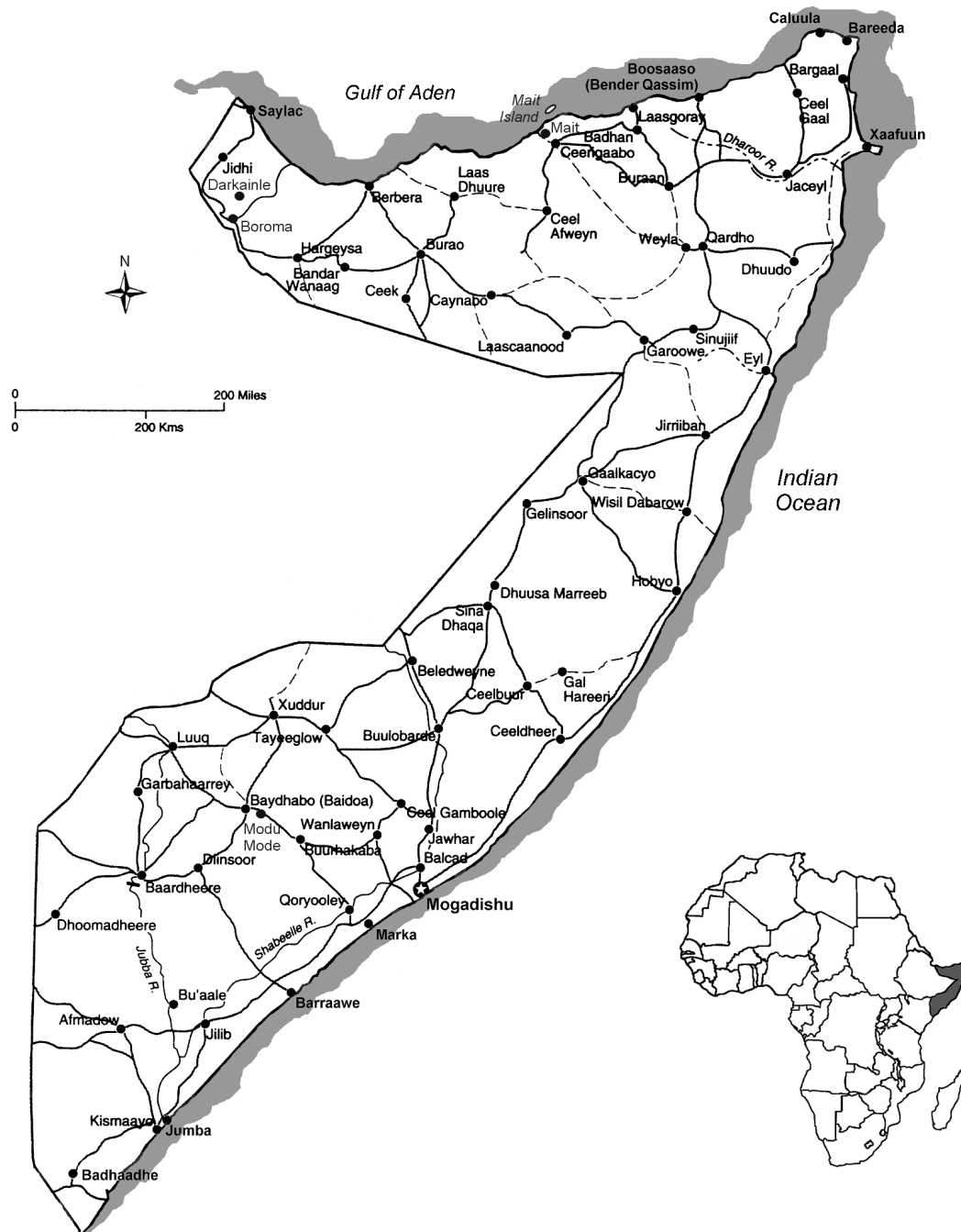
Total population (July 2000 estimate): 7,253,000

Area: 637,657 km²

Annual population growth rate (1998): 2.9%

Life expectancy at birth (2000): 46.23 years

GDP per capita (1999 estimate): US \$600



Somalia forms the Horn of Africa at the Indian Ocean and southern entrance to the Red Sea. The coastline of this semi-arid country is longer than 3,000 km. Somalia consists of a mountainous area in the north and an extensive flat area in the southern part. The Juba River traverses the country in the southern part and the Wabi Shebeli River crosses the centre. Only 2% of the land is arable, mainly along the rivers.

Some 60% of the Somali population is involved in livestock rearing, cattle, camels, sheep and goats. Only small areas are cultivated, mainly for subsistence farming but also as estate farms for sugar cane, and bananas for export.

The mineral sector of Somalia used to be very small, the main export being sepiolite ('meerscham').

Political instability and the absence of a central government since 1991-1992 has resulted in a continued lack of security.

Geological outline

Mesozoic to Recent sediments make up most of the exposed rocks of Somalia. Two isolated uplifted Neoproterozoic and early Cambrian complexes occur to the west of Mogadishu in the Bur region (Bur Massif), and in northern Somalia paralleling the Gulf of Aden. The Bur Massif in central Somalia (Fig. 2.16) consists of gneisses, amphibolites, quartzites and marbles, intruded by granites. It is part of the Neoproterozoic Mozambique Belt. The northern area with outcropping crystalline rocks, including the Darkainle alkaline complex, is part of an early Paleozoic fold belt.

Clastic and marine Jurassic sediments overlie the Precambrian and early Paleozoic. Cretaceous to Tertiary sediments with clastic sequences, evaporites and marine successions cover large parts of Somalia. Small areas with young basaltic to liparitic volcanics are exposed close to Djibouti and in the Gulf of Aden area, as well as in an area close to the Ethiopia/Kenya/Somalia border junction.

AGROMINERALS

Phosphates

Metamorphosed phosphorites containing 24% P₂O₅ have been described in the Bur Massif, at Modu-Mode, some 25 km from Buurhakaba on the road to Baidoa (Figure 2.16). The metamorphosed phosphorites are associated with Neoproterozoic marble beds of the Mozambique Belt (UNDP 1970; Greenwood 1982; Frizzo 1993). The extent of the phosphate deposit is not known.

The 33 km long and up to 3 km wide Darkainle alkaline complex with nepheline-syenites and small carbonatite intrusives northeast of Borama has been summarized in Heinrich (1980) and Frizzo (1993). Apatites have been reported as accessory minerals.

Bird guano deposits have been worked on Mait Island, also called Bur-da Rebschi, in the Gulf of Aden, east of the port of Berbera (Hutchinson 1950). They were mainly exported to Saudi Arabia. Enormous numbers of birds including the Red Sea noddy (*Anous stolidus plumbeigularis*) were reported by previous observers, and 400,000-600,000 pounds of guano were collected annually from this island in 'recent years' (Hutchinson 1950).

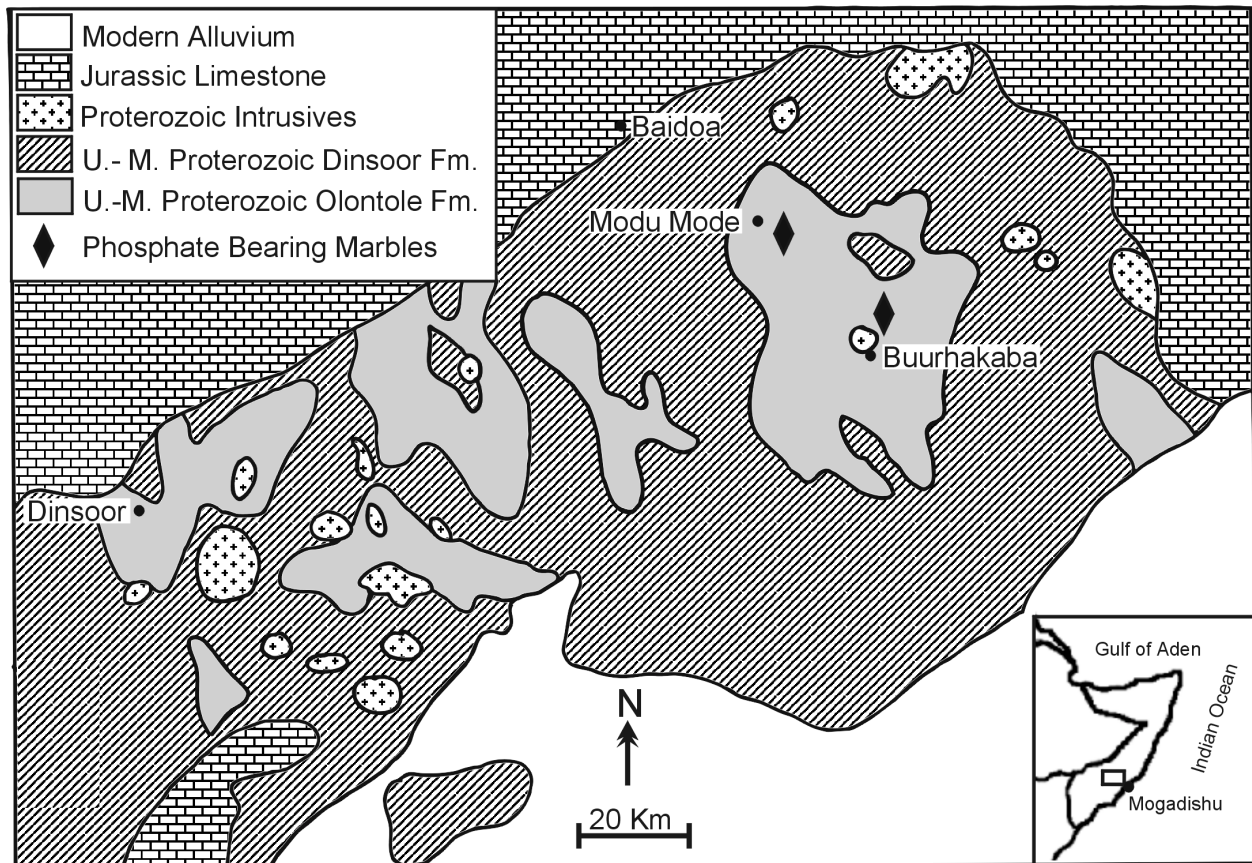


Figure 2.16: Geology and phosphate deposits of the Bur region, Somalia (after Frizzo, 1993). Insert shows the location of the Bur Region.

Other agrominerals

Limestone/dolomite

Limestone, gypsum and sepiolite ('meerschaum') were mined commercially before the recent political instability and civil war. The limestone and dolomite resources of Somalia are very large. Apart from local unmetamorphosed stromatolitic limestones located in the southern part of Somalia (Merla *et al.* 1979) there are extensive limestone resources in Jurassic-Cretaceous and Tertiary sediments. A cement plant with an annual capacity of 300,000 tonnes has operated since 1987 in Berbera, in the north of the country (Roth 1996).

Gypsum

Thick Lower Cretaceous evaporite sequences with substantial gypsum resources have been recorded in the central coastal part of Somalia. Some 1,620 tonnes of gypsum per year were utilized from this source as cement additive (Yohannes 1994).

Agromineral potential

The potential of finding sedimentary phosphates in Somali is good, especially in the Upper Cretaceous Faf Formation and the Eocene Auradu Formation. Both sequences have been singled out in the Ogaden region of eastern Ethiopia as having a high potential for phosphate accumulations, and some phosphorites have

been detected in boreholes in the Ogaden Province of Ethiopia. These sequences are widely exposed in Somalia and should be explored in the post-civil war era for possible phosphorite accumulations.

The potential for utilizing limestones or dolomites as soil amendments is very limited because of adverse climatic and soil conditions in most areas of Somalia.

References:

- Frizzo P 1993. Ore geology of the crystalline basement of Somalia. In: Geology and mineral resources of Somalia and surrounding regions. 1st Agron. Oltremare, Firenze, Italia, Relaz. e Monogr. 113:517-540.
- Greenwood WR 1982. A preliminary evaluation of the non-fuel mineral potential of Somalia. US Geol. Surv. Open file report 82-788, 42pp.
- Heinrich W 1980. The geology of carbonatites. Krieger Publ. Co, Huntington, New York, USA, 585pp.
- Hutchinson GE 1950. Survey of existing knowledge of biogeochemistry - The geochemistry of vertebrate excretion. Bull. Am. Mus. Nat. History, 96, 54pp.
- Merla G, Abbate E, Azzaroli A, Bruni P, Catuni P, Fazzuoli M, Sagri M and P Tacconi 1979. A geological map of Ethiopia and Somalia (1973), 1:2,000,000 and comments. Conigli nazionale delle ricerche Italia, 95pp.
- Roth W 1996. Somalia. In: Bosse H-R, Gwosdz W, Lorenz W, Markwich, Roth W and F Wolff 1996 (eds.) Limestone and dolomite resources of Africa. Geol. Jb., D, 102:348-353.
- UNDP 1970. Mineral and ground water survey - Somalia: United Nations report. 133pp.
- Yohannes 1994. Somalia, In: Mining Annual Review 1994, Mining Journal Ltd. London, p.144.