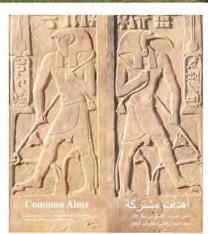
Common Aims -Sudanese-German Co-operation in archaeology National Museum, Khartoum 2003





التغیّر المناخی و البینی Climatic and environmental change



20,000 years ago, the Sudaneae desert was much larger and even drier than to day, covering half of the country and roching about 400 km further south that tackey. About 11,000 years ago, (8,800 BC) an obrupt climatic change turned most of the south-costern Solutin into a savannah. This was the result of a major methoword shift of the tropscal matrial belt bringing monoconal name some 70 km further north than today, up to the Sodaneae Engyttim border (about 22 W). During the early Holocene humie



من شمال المردان مر منطقة بيات بالده هو يم منطقة بيات بالده يوه من منطقة برات بالده بالده و الدينة بيات بالده بالده و الده بالده بيات بالده بالده و الده بالده بال

أرطبة كان وادى هور 1000 كلم طولا و حد 10 كلم عرضا اللي وادى جاف الكور رحم اللي 10 كلم الحصول المواقع الله الله الله على بناء على قابل الجبولوجي، من الواجب الله على بناء على قابل الجبولوجي، من الواجب كردفان، 50 يكور في المورس (1-4) يكور في المورس (1-4)

المسلم المسلم (و) التسلم فرس المرس القيام وحد القرير أو رف و كلمة وقرة من قطع قلا من هرة ما قبل الذي إن الرسطان بشرى حسول الأمط أو الرسط أو الرسط إن مراقع من العالم الما المرس المرسل المرسلة المرسل المرسلة الم







وجود دانات مورقة علقة للنظر، ذيل على الريد مغول الإنطار الثاء النبوك الثليلة الدنسية (2-3) بعض أن يكون هذا أول علامة للإنهاء عور فلسرة متحدة بالمنسراء، مضعلا حدوثها تشيعة لفده كوبي wide Wadi Howar - now a dry wadi was the Nile's most important tributary from the Sahara. According to the geological evidence, it must have resembled present-day environments in Northern Kordofan 550 km to the south (445). Remains of a wide range of aquatic and sayannah animals inchiding fish (6), erocodile, hippo, elephant, trino and grinffe, and abundant prehistoric artefacts attest to most fa-

The increased rainfall allowed for intensive human settlement and also field to a high regional groundwater table that supported numerous lakes such as life so called "West Nubian Palacolake" west of El Artun - once Northerm Sudan's largest freshwater lake 15 5,000 km², i.e. half the size of the Gerico.

About 5.3(0) years ago (1.3.00) BC) was the beginning of the desiceation of the Eastern Sahara. The desert fringe shifted southward crossing the Wadt Howar about 3.000 years ago. The lakes vanished and Wadi Howar turned to a chain of marshes until it ultimately became extinct about 2.000 years ago. leaving the entire region deserted. Recent observations along the Walt Howar however, show a remarkably lush vegetation indicating increasing rainfall during the past few years (3). This could be a first sign of a trend towards a renewed "greening" of the Sahura, possibly as a result of global warming.

مننز ه و ادی هور القومی

As an outcome of ACACIA's house monitoring the contribution of the natural and cultural heritage of northern Sudan and a joint Sudanese German mission in 1998, a Protected Area centred at the Nile sonce most important tributary from the Sibana has been officially declared in 2001 ("Wadi Howar National Park"). The park area covers more than 100,000 km² and stretches over some 550 km from the Sahelian zone to the hyperarid Saharan desert Africa's largest country now also owns the earth's largest natural and cultural reserve with an outstanding potential for conservation and economic develorment.

The Wali Howar region offers a great scenic diversity and a variety of geographical biological and archaeological features. The park area (2) includes the northern part of the Meidob Hills with their numerous volcanic craters, the Jebel Rahib which can be considered as a Geological Museum (1); the endless grantie plants interspersed with inselbergs (3) and crescent-shaped dunes, and the impressive sandstone Landforms of Jebel Tageru and Zolat el Hammad. The Malha and Nukheira lakes (4) as well as the cases of El Arun and Laptya are distinctive landmarks of the Eastern

The exclaves and access zones also offer spectacular sights such as the trueforest in the desert (5) in the upper Wadi Howar, the picture-sque Selman ossis, the Great Selman Sand Stleet, the blue marble hills near Lagya Umrain, the innestone plateau of Jebel Abyad, the huge escargement of Jebel Nagashush with Wadi Milk in its foreland, or the vast dune fields in the foreland of the Enned incountains.

A major reason of WHNP is the preservation, rehabilitation or reintroduction of wildlife adapted to desert environments such as addix, or xx, barbary sheep. Wadi Howar National Park

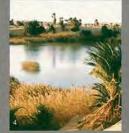


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مثلت لدر إلا لتج بعة الإجبابة و الآثارية من منطقة الشراري بجوات من منطقة الشراري بجوات الشراري بجوات الشراري بجوات المثارية بجوات التركيبة المشترة مع جزات الأركيبة المشترة مع جزات الشرائي بجوات (غلقة المثلثة من حرات الشرائية المثلثة المث



بدق نسبتان تكثير فربطية قبر زمر متره ما تأثر كاريم بسطانها ولاية قسية كلمة مثيل بالإسراء أو مطلقة كارموة على مثيل من الإرجوب أم سلوية وقل فيوشق المسراء أسطانها والإها فقو الما أسطان أمسان إسعاد والمائل فقا لكار ومية إسانة على سائد بدئ المسراء من للملكي أن تعجج للم بشريع حدة مراسعة الإنساد قولي مساهما المسراء داخل براسم القدر القولي مساهما المسراء داخل براسم القدر القولي المسافقة المسراء داخل براسم القدر القولي المسافقة المسراء داخل براسم القدر القولي المسافقة الم





di Hussein; the outstanding prehistoridune settlements with their extremely rich archaeological remans; the presumably Meroitic fortress, or historic remains along the Darb el Arba'in, the Eastern Sahara's most important ancient caravan route.

The barely populated region also provides a unique opportunity for ecological monitoring of desert funge environments. If could become the heart of a pilor research project with international reach, committing to the much disputed problem of desert encountment within Global Change recomment.

Global Change programmes. The development of the Waft Howar area means utilizing the economic potential of a wast, presently almost waster region. It will enhance and complement the country's attraction by environmentally sustainable desert fourism. The involvement and improvement of the bring conditions of the local population is a perequisite for its success. The protection of Sudan's unique desert heritage is of utimost importance for present and future

