

Overview document - June 2005

1. INTRODUCTION

The network "The Land of Sumer and Akkad. Reconstruction of its Environment and History" is composed of the following partners:

- University of Gent (coordinating team), coordinator : Prof. Dr. M. Tanret
- University of Liège, promotor: Prof. Dr. Ö. Tunca
- University of Leuven, promotor: Prof. Dr. K. Van Lerberghe
- Royal Belgian Institute for Natural Sciences, promotor: Prof. Dr. C. Baeteman

The total budget allocated for this project is 2.437.398 Euros

The present phase is the third one in which this project runs. The former ones were II (project 34) from 1990 to 1994 and IV (project 15) from 1995 to 1999. The present project phase, V (project 14) runs from 2000 to 2006.

From the beginning it has been the aim to group, coordinate and stimulate most of the research in Belgium concerning ancient Mesopotamia, defined as the Land of Sumer and Akkad, around two interconnected main topics: reconstruction of the environment and history. In the first phase, a more systematic and efficient collaboration was initiated with the aim of boosting research capacity. After the collection of basic data on a wide range of topics this resulted in the setting out of an initial framework in the shape of a Geographical Information System as well as an encompassing evolutionary description of the corpus of Mesopotamian pottery and a number of text publications and studies.

The second phase, from 1995 to 1999 continued this work of integration of the teams, now in work groups as well as further collection of data. The stimulating collaboration led, besides a large number of other contributions, to two groundbreaking studies : the publication of *Changing Watercourses* (1998), a.o. redrawing the course of the Tigris and Euphrates for the third and second millennium, and *Dating the Fall of Babylon*, proposing a new short chronology for the second millennium. It is significant that these studies were published in collaboration with the university of Chicago and that colleagues from Chicago and Harvard participated actively in the research. International collaboration has been one of the hallmarks of this project not only for these publications but for most of its research.

The present phase, from 2000 onwards, saw some changes. Firstly, the team of the Royal Museums of Art and History (Brussels), headed by Prof. Dr. D. Homès, left the project and was replaced by a team from another Federal institution, the Royal Belgian Institute for Natural Sciences, headed by Prof. Dr. C. Baeteman. This allowed to put a greater stress on the geological/geographical aspect of the project, in the prospect of controls in the field of the findings mainly based on aerial photography and satellite imagery. Unfortunately, the

politico-military situation in the region having evolved to a war and its terrible aftermath, field work in Iraq had to be postponed to an indefinite and unforeseeable future. This prompted the network to shift research earlier than had been planned to the southernmost area: that of the Gulf coast. A very large part of this is situated in Iran, which means that it is accessible for field work. Here too, much (if not most) still had to be done because even if everybody agrees that the coastline must have been more landwards in antiquity, nobody had any idea when and how these changes had taken place. This made for a new beginning in the network's research on a twofold level: a new team had to be integrated and new documentation had to be assembled and integrated in the GIS system. Thanks to the experience built up during the previous phases and the efficiency of the new team this was done rather quickly and efficiently as is shown by the fact that the first conclusions of this research, including the campaigns of field work are already published.

Although this was one of the main undertakings of the network, it was far from being the only one. During the whole duration of the preceding phases the Leuven and Liège partners continued their archaeological research to the North of the alluvial plain in Tell Beydar, later also Tell Tweini and Tell Amarna, later Chagar Bazar. The Ghent team has done research in Armenia, a passage to Mesopotamia from the North. A large corpus of real estate texts from Old Babylonian Sippar has been published and a Corpus of Mesopotamian Pottery has been elaborated.

The objective of the present project, as stated in the project proposal introduced in 2000, is "a new interpretation of the complex historical evolution of the Mesopotamian alluvial plain, the ancient lands of Sumer and Akkad. To this end, one of the priorities is to access the interaction of the ancient environment with the population of Mesopotamia and the development of their social, political and economic institutions over time."

In the same proposal the objectives of the partnership are stated as follows: "The collection and integrated interpretation of such diverse data can only be achieved by an interuniversity research unit of experts, working across-discipline with a common data-gathering, data-analysis and data-management structure and thereby exploiting or applying the newest scientific and technical developments and infrastructures in various fields. It must be stressed that the originality and the force of this project is precisely situated in the synthesis between alpha and beta sciences."

The tragic and untimely disappearance in April 2005 of one of our collaborators from the Ghent team, Dr. Nina Pons, has deeply shocked us all. She was a very promising young scholar who had already contributed significantly to this IAP and was finishing a number of important studies at the moment a cruel fate took her from her family and from us. Her absence is deeply felt.

2. RESEARCH RESULTS PER WORK-PACKAGE

1. Work-package Mapping and Surveying the Mesopotamian Alluvial Plain

1.1. THE ALLUVIAL PLAIN (UGENT + KBIN)

The Geographical Information System developed by the Ghent partner and the data it contains were copied into the new GIS package Arc-GIS.

A separate Arc-GIS system has also been developed in Ghent, specifically for the incorporation of 19th century maps and travelers' data. All of these GIS systems use the same data structure and projection system which will enhance future data sharing.

The cartographic data of the Mesopotamian Plain will be made gradually available on the internet in the form of a Scalable Vector Graphics file for each map sheet of 20 x 20 km. This form of publication (Web Mapping) stands for high resolution quality, a degree of interactivity and a cheap and efficient way of dissemination.

The base map was established but no further work was planned on this topic, in view of the political situation of Iraq. Surveys, as planned, had to be postponed.

1.2. TELL ED-DTMR (KBIN)

1.2.1. Study of the borehole data of the surroundings of Tell ed-DTMr

Although the Plain is inaccessible, a number of data, collected before the IAP came into existence, were still in the files of Dr. Baeteman, promotor of the KBIN team.

These data, collected during field work in 1971, '73 and '75 had never been thoroughly studied.

The localisation and elevation of the boreholes was determined. One hundred twenty five borelogs were drawn. Forty-three cross-sections (1/1000) were elaborated and the borelogs were interpreted in this context. Published archaeological data were integrated into the cross-sections (sondages B,E,TB2). Two maps were created of the lateral distribution of the fluvial deposits / channel course (elevation levels 25-27 m and 28-31 m). This work is part of the PhD research (V. Heyvaert). This paper is submitted to Geoarchaeology.

1.2.2. Remote Sensing and GIS

A 3D-model of the topography of Tell ed-DTMr was elaborated in ArcGIS and ILWIS. The contour lines of the site were digitised and corrected as well as the related database (L. Dupin).

1.3. THE SUSIANA (KBIN + UGENT)

1.3.1. An extension of the study area

It is important to note that the geographical area of the IAP research has been extended towards the Susiana Plain and the Iranian Khuzestan province. This was done in part because of the inaccessibility of the central Alluvial Plain but also because it allows to come to grips with the southernmost part of this Plain and its interaction with the Persian Gulf.

To this effect, the new partner, KBIN, has assimilated the scientific literature on the Khuzestan (Sedimentology, geomorphology, fluvial systems; Holocene Climatic Change and archaeology in Mesopotamia; Remote sensing and geomorphology in Middle East areas; Spectral signature of soil features; Mapping techniques in geomorphology), especially in view of the PhD research initiated there. As a preparation for the field work in Iran, they have been studying the application possibilities of multi-electrode resistivity mapping and evaluation of

the method for possible use in the project for the detection of buried sites. This training was undertaken in collaboration with the Dept. of Archaeology, University of Southampton.

A database is being elaborated of all relevant literature on this region and periods in Endnote to exchange with all partners (ongoing process).

1.3.2. Remote Sensing and GIS

Starting from a database, a 3D view was elaborated of the region, based on statistical analyses, including cross-sections and locations of archaeological sites.

The existing topographic maps of the region (25 in all) as well as altitude data of single points have been collected at the Topographic Institute in Ahwaz. They were scanned, and a reference system was chosen. According to this, the maps were reshaped and georectified (1:50 000 and 1:100 000). Digitised maps were produced with contours and altitudes.

Free vectors data (topo30), satellite images (Landsat MSS, TM and ETM+), aerial photos (from Spot images), altitude data were downloaded and satellite image were processed (colour composition and detecting feature classes such as roads, fluvial pattern, drainage systems,É). Images were fused for a better interpretation.

All available data were processed (satellite images Landsat MSS, TM and ETM+, Spot aerial photographs, topography) and integrated into a GIS, resulting in the elaboration of a base map of the study area with special attention to the Kharkeh and Karun and Jarrahi river plains.

The relatively recent geomorphological changes in time were mapped as well as the interrelation between the fluvial and coastal systems on the basis of multiple aerial photographs and satellite images with different resolution and of different periods. The processed data have been linked to a digital elevation model and to the topographic maps. This resulted in the detection of fossil fluvial systems in relation to the changes of the tidal environment. All geomorphological units have been digitised and form the base map on which the (known) archaeological sites have been localised which then can be related to their natural environment.

Several thematic maps of the area around Ahwaz have been drawn (archaeology, geology, geomorphology, and a mosaic of satellite images).

As archaeological sites in Lower Khuzestan are of a small size and many of them are now being levelled for agricultural purposes, it became essential to study older aerial photographs from 1968 (from the National Topographic Institute in Ahwaz).

A compilation of these accurate aerial photographs, together with an accurate Digital Elevation Model and fused satellite images, are being processed to produce a map showing the potential settlement distribution.

The aerial photographs are being mosaiced, enhanced and georectified. ancient settlements as well as ancient waterways and field patterns have been digitalised. This work involves a better interpretation of the landscape and the evolution of the natural and artificial geomorphological features.

1.3.3. Subsurface investigation

The palaeogeography of a flat and low-lying plain cannot be reconstructed solely on the basis of geomorphological features, because the surface of the plain records only the terminal geomorphic features, and not the steps necessary to develop these surfaces. Therefore, a series of over 50 boreholes have been carried out to investigate the Holocene sediment succession (cf. 3.2). Such an investigation has never been undertaken in this area.

1.4. STRATIGRAPHY (UGent and ULg, KULeuven)

During 2003, an essay on the archaeological stratigraphy in near-eastern context was finalised and published. This volume, meant for use in the field, treats, a.o., "Excavation units and stratigraphic units", "Analysis and interpretation" of the deposits and their registration and classification; it ends with an appendix on chronology, considered erroneously by many archaeologists as an integral part of stratigraphy.

The Network partners ULg and KULeuven will contribute to this aspect of the work-package with their basic survey data of the Khabur Region (Beydar and Chagar Bazar Surveys).

2. Work-package Archaeology in context

2.1. CORPUS OF MESOPOTAMIAN POTTERY: THE MIDDLE EUPHRATES (ULg + UGent)

The main topic of investigation for this work package is the Corpus of Mesopotamian Pottery. In previous phases of the IAP project this had been centered on second millennium Babylonia. Attention was now shifted to the Middle Euphrates region at the transition between the third and second millennia, and the relation of this material with the Babylonian production.

The material from two sites was investigated : Mari at the Syrian-Iraqi border (ULg + UGent) and Tell Amarna, at the Syrian-Turkish border (ULg).

In Mari, the pottery of the *ṣakkanakku* and *Lim* periods (\pm 2130-1662 BC) had been focused on during previous stages of the project, so the next (chrono)logical step was to include the production of the Early Akkadian Period (\pm 22nd century BC), especially since there was a close relation between the Middle Euphrates and Babylonia at this time. In fact, Mari was destroyed by a king of Akkad but there was no agreement about the identity of that king: Sargon or *Narām-Sîn* ?

A survey of the material and a detailed examination of the archaeological contexts showed that the pottery belongs to the Early Akkadian Period and that it was found between two layers of destruction. This situation suggested a check of the written sources to find any substantiation of this. It now appears that Mari was destroyed partially or totally by Sargon.

Tell Amarna too was occupied during the Late Early Bronze and the Early Middle Bronze ages. A sequence of contemporaneous pottery shapes from Mari and Amarna was established which was most helpful for dating the Amarna occupation more precisely.

Relations could also be established with the Turkish sites *Kurban Höyük* and *Lidar Höyük* on the Euphrates. It can be demonstrated that, even if the repertoires are different, certain shapes

are attested along the Euphrates, from the south of Turkey up to the Syro-Iraqi border, more precisely to the site of Mari. These shapes too are currently dated quite differently from one author to another, due to a lack of reference points. Now, the well known chronology of Mari can be used as a reference to date quite precisely certain pottery profiles. In this way, a comparison between Lidar and Mari shows that the Lidar material was given a too recent date. In turn, this allows to confirm the validity of the New Chronology, as was done in a note in *Akkadica* (last issue of 2004). It was planned that the results of this research would have been presented at a Colloquium to be organized by the French CNRS at Lyon (5 to 8 December 2005) by Dr. Pons.

CONCLUSIONS

There are clear similarities in shapes between the contemporaneous material from sites extending from Turkey to Mari and Tell Amarna, very distant but both along the Euphrates. This specific pottery corpus can be considered to be diagnostic for the Early Bronze IVB and Middle Bronze I for the Middle Euphrates. This is the *Ḫakkanakku* period, coming immediately after the destruction of Mari by a king of Agade, probably *Narām-Sîn*. It starts around 2100, covers the whole Early Bronze IVB and ends around 1850, in the Middle Bronze age. The oldest material from Tell Amarna that was studied in this context is slightly earlier than Early Bronze IVB. It can be situated in phases VI and V and the next phases IV and III cover the whole of the EB IVB and the beginning of the MB I.

A map was drawn of the diffusion of the material on both sites. The greatest similarities could be observed along the Euphrates, they are much less frequent on the Aleppo-plateau and in Babylonia proper, rare similarities can be observed with the Khabur basin. This highlights the role of the Euphrates as a communication vector.

2.2. PUBLICATION OF THE MIDDLE EUPHRATES CORPUS

In 2004 the manuscript concerning the pottery of the Bronze Age of Tell Amarna has been completed but it has appeared that it could not be concluded without a last mission of verification and collation in Syria. This mission would have taken place in 2005, in collaboration with the Ghent team but this will have to be reconsidered because of the disappearance of Dr. N. Pons. The publication is now programmed for 2006, taking into account practical printing and publication time.

The Bronze Age ceramics from Tell Ahmar (ULg) will be studied and published.

2.3. TELL TWEINI POTTERY (KULeuven)

As in the former seasons the ceramic material was washed, dried, weighed, sorted and selected for storage. Nearly 2.000 kg of ceramics were processed. In total, sixteen different fabrics have been identified. The cooperation with Dr. P. Degryse of the Laboratory for Archaeometry, who was on-site during the 2004 season, will result in a mineralogical determination of each of these fabric groups. It was confirmed during the processing of the ceramics that a typological change, e.g. from Late Bronze Age II to Iron Age I, is often accompanied with a change in fabrics. Whether this change is the result of a different technology or of the use of different clay sources remains an open question.

For the first time in the excavation history of Tell Tweini, the excavation team reached extensive layers datable to the Late Bronze Age. This was obvious by the many traditional indicators of Late Bronze Age pottery including numerous fragments of White Slip II (often as milk bowls), Bas Ring Ware or Syrian Flasks. There is now also a large database of storage jars, cooking pots, bowls, plates, wall brackets and forms which one may term common pottery. Moreover, ceramics from the Late Bronze Age could be connected to clear floor levels and in some cases to walls, which were constructed during the Late Bronze Age.

Certainly, the discovery of a Middle Bronze Age tomb was of utmost importance for the ceramic typology. For the first time a large number of complete vessels dated to Middle Bronze IIB/C were uncovered at Tweini. The resemblance with the individual vessels and the entire assemblage of the tomb at Sukas is striking and suggest that burial rites in the MB IIB/C period involved a very specific set of ceramic vessels.

2.4. TERRACOTTA FIGURINES (UGent+ULg)

A second topic for this work package were the terracotta figurines.

In the framework of the final publication of the artefacts found at Tell ed-DTMr, the late Nina Pons had undertaken a fully contextualized study of the terra-cotta human and animal figurines, masks, reliefs, chariots, and other models of furniture.

She had catalogued and described more than 300 items, all found in well controlled stratigraphic contexts from the second millennium BC.

A first approach of this material shows it is well embedded in a precise regional tradition, such as was also found at Maßkan-ßâpir, centred a.o. around the god Nergal.

The 'woman in the window' (later attested in the Levant), can now be identified with the goddess Ißtar thanks to the presence of this goddess' symbol animal, the lion, on a terracotta plaque representing such a "woman in the window" scene. On the iconographical level, similarities were observed between the figurines and contemporaneous cylinder seals, in particular the "presentation scene". It was planned to include a study of the evolution of the themes, since the Tell ed-DTMr corpus is well documented stratigraphically. The exact find spots of these objects would have been taken into account as an approach to the establishing their function. It was already stated that a good number of them has a widening of the base, showing they were meant to stand by themselves.

3. Work-package Historical Geography

3.1. ANCIENT RIVERS IN THE MESOPOTAMIAN FLOOD PLAIN (UGENT + KBIN)

After the courses of the Tigris and Euphrates (Stage 1), studied in the preceding IAP, and foreclosed for further investigations in the field, a follow-up was undertaken as Stage 2, adding textual data (Cadastre of Ur-Namma, documents concerning the Wall against the Amorites) to complete this picture. A new focus was introduced: the evolution of the coastline of the Gulf and the Khuzestan province in Iran (Stage 3).

Stage 2: The Palaeo-Network of Rivers in the Flood Plain

The reconstruction of the ancient Mesopotamian network of rivers was continued south of a line between the modern towns of Hillah and Kut al-Amarah.

The picture we now have of the network of the rivers between 2500 and 1500 BC is totally different from everything published before. This situation requires a new interpretation of the geopolitical situation during these ten centuries which belong to the most fascinating period of Sumero-Akkadian history.

The Euphrates channel known as the Abgal can be located south of Kish where it branched off from the right bank of the Purattum (Kish Branch) and then flowed on toward Marad along the approximate line of the modern Pa'YY al-Hillah. Another important channel attested since the Ur III period (20th cent. BC), the Me--Enlila, is supposed to have run on a well-developed alluvial ridge located between the Abgal, at some distance south of Kish, and the city of Nippur. This reconstruction allows a more precise location of the districts of Kish, Kiritab, Kazallu, Api-ak and Marad, all known from the 'Cadastre of Ur-Namma'. It also allows to locate securely the western end of the so-called 'Amorite Wall' of Pu-Sîn not very far south of Kish or from the 'mouth' of the Abgal.

For the southeastern alluvium, more precisely for the areas along the main watercourses that ran through or near Nippur, Adab, Umma, Uruk and Larsa, the results of the study published by Piotr Steinkeller (Harvard University) were transferred to our map of the alluvial plain.

Stage 3 : The northernmost extension of the shoreline of the Gulf, and the evolution of the Kar^an, Karkheh and Jarrahi Rivers in Susiana: reconstruction of the palaeoenvironment

THE PROBLEM

There has been much controversy about the position of the northernmost extension of the shoreline of the Gulf during the 8000 year-long occupation, or more, of the Mesopotamian alluvial plain. Geomorphological, archaeological and textual evidence all confirm that all sixth to third millennium sites and most of the second millennium settlements today were much closer to the sea at the time they were occupied. In a very recent article, Paul Sanlaville showed again that the maximum post-glacial rise in sea level pushed the headwaters of the Gulf as far inland as the location of the modern towns of Amirah and Niriyah at about 4300 BC.

This situation provides a better background for the understanding of the spreading of Mesopotamian-like cultures along the shores of the Gulf and strongly increases the probability that contacts and trade were mainly expanded by boats since the late Ubaid period.

However, we do not know much about the migration of the shoreline during the 3000 years which separate the late Ubaid Period from the time of Alexander the Great. On the contrary, we know that the ancient fluvial network of the Lower Khuzestan was different at that time. Therefore, we started to map the fossil fluvial systems located south of Ahwaz as well as the extension of the Gulf during the Holocene.

PRACTICAL ORGANIZATION OF THE RESEARCH

An agreement of collaboration was established between the IAP V/14 and the Iranian Center of Archaeological Research (ICAR), prepared through correspondence and finalized during a visit of IAP representatives to Teheran (24-27 October 2003)

A FIRST SURVEY: THE REGION OF SUSANGERD AND THE UPPER KHUZESTAN

A preliminary exploration took place from 27 to 29 October 2003. Ms. Alizadeh, director of the Ahwaz branch of the ICAR, kindly put a car at our disposal and, besides Tanret and Gasche, two members of the Ahwaz section participated in this reconnaissance.

The evolution of the shoreline of the Persian Gulf

The Susangerd/Bostan plain was visited and chosen as the best place to start geomorphological and geological investigations concerning the position of the northernmost shoreline of the Persian Gulf during the Holocene.

The literature claims that a little more than 6000 years ago, the sea level of the Gulf must have been one or two meters higher than now. This interpretation was based on the fact that the Gulf penetrated into land more than 250 km, as compared to the present coast and centres like al-'Ubaid, Eridu, Ur, Lagaß, but also Susa were much closer to the coast. Still according to literature, sea level seems to have oscillated around the present level with a somewhat stronger regression during the hellenistic/parthian period with a new but relatively weak inland progression during the Middle Ages.

All of these assertions rest upon very fragile hypotheses and assumptions, however, without geological data. It was thus essential to undertake more wide ranging investigations in pilot regions, chosen according to precise criteria and liable to provide answers to these questions.

A first campaign with the geologists of the KBIN team was planned.

The ancient fluvial system of the Khuzestan: a status quaestionis and some perspectives

The Khuzestan plain has been much less studied than the neighbouring Lower Mesopotamia and this is probably why there are still so many divergencies concerning the reconstruction and identification of the courses of the three major rivers irrigating this province: the Karkheh, the Ab-e Dez and the Karun.

Classical sources contain many references to the ancient hydrographic system of the region. Near Susa the Greek and Latin authors name the Eulaois and the Choaspes and, a little further, the Coprates (the ancient name of the Ab-e Dez) and the Pasitigris (now the Karun) or at least its upper course; the last two are generally accepted but the identifications of the first two ones are more controversial. In a recent article, D.T. Potts proposes, following M.J. Kirkby and even L. Dubeux, that the Eulaois and the Choaspes are two different names for one and the same river: the old Karkheh; these equations allow to resolve a number of ambiguities in the modern reconstructions of Achaemenid and Hellenistic/Parthian river systems.

The study of M.J. Kirkby also contains fundamental information for the system in the second millennium B.C. It shows that, in the region north of Ahwaz, the rivers would have incised into the plain around 2000 BC (p. 282) a fact that is worth a thorough reexamination in the field; this means that the courses of these rivers would have evolved very little since that time, which seems to be the case for the Karun north of Ahwaz and for its affluent, the Ab-e Dez; the situation seems to be different for the Karkheh.

The ancient courses of the Karkheh: the Ula

In the neighbourhood of Susa the river developed a very flat and wide alluvial plain (three to four km wide). The plain is bordered by a high-lying loess plateau to its west. The implantation of prehistoric and more recent sites on its eastern bank confirm that this landscape did not change much in the course of the last four millenaries. This contradicts the hypothesis of incision mentioned above.

In the same alluvial plain, at the eastern side, runs the Shaour. This minor watercourse has its source some twenty kilometres north of Susa; its flow is then rapidly augmented by canals derived from the Karkheh. It rounds Susa by the west and follows its course about fifteen kilometres before turning towards the south-east where it engages between the anticline of Haft Tepe and the Chaour.

This feeble watercourse may not be confused with the one the ancients called the 'river of Susa' which must have been the Karkheh, the Ulaï of the Book of Daniel (VIII: 2 and 16), attested for the first time in a text of Putruk-Nahhunte (ca 1190-1155) as Ula . Its course downstream of Susa differs from the one used by the Karkheh since about the sixth century AC (KIRKBY, op. cit., p. 279 and fig. 108: 2 à 5). Indeed, Kirkby could establish that the fossile meanders localised between the two anticlinal ridges of Haft Tepe and Chaour do not belong to an old course of the Shaour but to an old course of the Karkheh, the Ula, before it joined the old Hithite, identified by the majority of the commentators with the Ab-e Dez.

The oldest mention of the Ula goes back to the 12th century BC only. The process of incision of the fluvial system in the Susiana plain starting at the beginning of the second millennium does not contradict the hypothesis that the course of the Ula, as just described, could be older. Older textual sources do not mention this and this silence will have to be compensated by new geo-archaeological investigations.

The ancient course of the Karun: theUknû

The Karun also followed, upstream of Ahwaz, a course close to the present one but the situation changes south-east of this town where the anticline of Ahwaz -initiating rapids- separates the High from the Low Khuzestan. These two regions have different characteristics. Lower Khuzestan is characterised by a very flat plain which is the result of the interaction between fluvial dynamics and sea-level rise during the Holocene.

The cartographic and aerial documentation once more yields interesting information. The most remarkable is a series of fossil meanders south west of Ahwaz, over 80 km, oriented towards an old course of the Karun south of the confluence of the two Mesopotamian rivers. Here too, M.J. Kirkby interpreted that these meanders corresponded to the flow of the Karun, in view of a similar sinuosity of the meanders.

In this stage of the research we have to consider which one of the proposals made for the name of the Karun in the pre-classical period is the most acceptable one.

W. von Soden, using the data assembled by S. Parpola, suggests - without any decisive argument because there are none in the textual material - that the Karun is the ancient Uknû. Other commentators have recently proposed that the Uknû should be the oriental branch of the Tigris, the one that nowadays irrigates the town of Amârah.

Considering the information now available we rather favour von Soden's hypothesis as the most probable. New field evidence should complete this picture and allow us to find other traces which might show us how and by which waterways the people from Mesopotamia travelled by boat to the Susiana.

3.2. KHUZESTAN: FIELD WORK

In 2004 two successful field campaigns have been carried out (18/01 - 7/02 and 31/11 - 23/12) in S. Khuzistan (SW Iran) in an area of about 100 km south and west of the city of Ahwaz. The Archaeological Institute of Teheran and Ahwaz provided the necessary support.

The fieldwork in the plain consisted of 51 undisturbed hand-operated borings (between 5 and 10 m depth) from which the facies have been described in great detail, and the survey of 3 temporary shallow outcrops. Cores and outcrops have been sampled for the following analyses in order to determine the sedimentary environment of deposition: palynology, clay mineralogy, foraminifera, diatoms, petrography, age determination, and determination of shells. The fieldwork also consisted of geomorphological mapping to support the interpretation of the satellite images, and the localisation of not yet registered tells together with the collection of artefacts. Aerial photographs have been studied and interpreted at the National Topographic Institute in Ahwaz.

On the basis of the data collected during the two fieldwork campaigns a palaeogeographical reconstruction is being undertaken of the shorelines of the Persian Gulf during the middle and late Holocene in S. Khuzistan (SW Iran). The interpretation of the borings consists of lithological facies analyses together with age determination by radiocarbon, and results in the delineation of the lateral and vertical extension of coastal, fluvial, freshwater and coastal sabkha deposits.

The identification of the facies is done on the basis of the following analyses (carried out in collaboration with different institutes): palynology (KBIN), diatoms (Durham University, and St. Andrews University, UK), foraminifera (University of Plymouth, UK) macrofauna (KBIN), petrography (UGent) and clay mineralogy (ULiège). The first results show changes in sedimentary environments at different locations through time, which reflect changes in different locations of the estuaries and land-ocean boundary (shoreline), and the balance between fresh- and seawater inputs. The first results demonstrate a landward extension of the Gulf until at least 80 km north of its present-day position at about 8000 years ago. The results also indicate that sea level has been rising continuously, but a sea-level stand higher than the present-day one, never occurred.

A series of 20 samples from organic material and shells have been analysed for age determination by radiocarbon by the KIKIRPA. All results were very consistent. The very young dates found in the area of Bostan are analysed with the ¹⁴C bomb spike technique

which is a useful tool for high-precision dating of very young sediments (in collaboration with the KIKIRPA).

The reservoir age of the freshwater shells which is still unknown, but a major problem for the calibration of the 14C ages, is investigated in collaboration with the 14C laboratory of the KIKIRPA. Therefore, sites where freshwater shells are occurring in organic gyttja have been searched and sampled in different areas to date separately.

During the stay, some interviews to a local newspaper have been given to explain the objective of a palaeogeographical reconstruction of the landscape in relation to human settlement, and to support the protection of the archaeological heritage.

3.3. RECONSTRUCTING THE 19TH CENTURY LANDSCAPE (UGent)

A current PhD research (B. Ooghe BOF) is concerned mainly with the post 14th-century landscape, using pre-modern travellers' narratives, maps and 19th century surveys as main source of information. Due to practical difficulties in obtaining local historical data, these are virtually the only contemporary sources readily at our disposal. As yet, however, there has been only limited study into the nature and interpretation of the information they contain. The study began with research in the archives of the Oriental and India Office Collections at the British Library. This was followed by study of travellers' accounts and cartographic material dated between 1400 and 1920, with specific interest for descriptions of landscapes, hydrology and (both ancient and recent) remains of occupation. An initial study of data regarding southern Iraq has indicated the potential value of these sources, providing insights into short-term change. Some of the results of this study will be presented at the Royal Geographical Society's Annual Conference in September 2005. Attention has now been turned to the Na'ûrawân region, which will be followed by the Fallujah-Borsippa area.

The ultimate aim of the study is twofold. First it hopes to extensively examine the possible use and limitations of this specific type of data for Mesopotamian landscape-studies. Secondly, in partly bridging the gap currently existing between the present-day situation and the available reconstructions of pre-Islamic landscapes, it hopes to give insight into some specific evolutions that have occurred since the fall of the Caliphate and provide a frame for further detailed study of the Arabic geographical texts.

3.4- THE BABYLONIAN TALMUD (UGENT)

All references to Mesopotamian watercourses mentioned in the Babylonian Talmud were collected by Dr. K. De Graef. The aim of this study is to see if and to what extent the Babylonian Talmud can contribute to the reconstruction of the landscape of Mesopotamia especially for the space of time between the Neo-Babylonian and Islamic periods.

3.5. CLASSICAL ARABIC GEOGRAPHERS (UGENT)

A young researcher, Peter Verkinderen, has started a PhD within the Ghent team on the information to be gained from the Classical Arab geographers concerning the ancient landscape.

4. Work-package Environmental Geoarchaeology of the Mesopotamian Plain

4.1. TELL ED-DTMR (UGent + KBIN)

Work has been carried out on the borehole data from Tell ed-DTMr and its surroundings (cfr. Work-package 1) available at the Belgian Geological Survey, including the interpretation and identification of natural and anthropogenic units. This was supplemented by archaeological identification and age determination.

Reconstruction of the fluvial system of the rivers Tigris and Euphrates since 6000 BP in the surroundings of the archaeological site Tell-ed-DTMr, Iraq, based on existing borehole descriptions together with the integration of archaeological data from excavations.

4.2. MULTI-PROXY INDICATORS FOR LATE HOLOCENE ENVIRONMENTAL VARIABILITY (UGent)

A compilation of geo-indicators to assess environmental variability in the Mesopotamian plain for the Late Holocene period is in preparation.

5. Work-package Beyond the Mesopotamian Alluvial Plain

As was indicated sub Work-package 1, the study area was enlarged to include the Susiana and the Khuzestan, areas bordering on the Mesopotamian Alluvial Plain. In Work-package 3 the historical geography of this region was studied. In the present Work-package specific studies within this region are included, not the result of field work but the renewed study of tombs and ceramics, results from older excavations.

In the North and North-West the bordering regions were also subject of investigation, specifically at the sites of Tell Amarna, Chagar Bazar, Tell Beydar and Tell Tweini.

5.1. KHUZESTAN: SPECIFIC STUDIES

5.1.1. The Susa corpus of tombs of the second millennium

This corpus - studied in parallel with that of the burials excavated during the Belgian excavations at Tell ed-DTMr - has been widened to include tombs from the first millennium.

5.1.2. Ghirshman revisited

A study has been started of the stratigraphy, the urbanism and architecture of the areas "A", "B" and "Apadana" of R. Ghirshman's excavations at Susa.

5.1.3. A Susian recycling unit?

In this framework a study has been made of a building from level XIII of area "A", somewhat hastily interpreted by Ghirshman as a school, but which may be a recycling unit for tablet clay, an operation of some complexity.

5.1.4. Pottery

A study was devoted to the eastern extension of Cassite ceramics of the 13th and first half of the 12th century. This allowed to state definitively that Susa and the Susiana were no part of

the territory penetrating into the Zagros more to the north along an axis that gave and gives access to the Iranian highlands desirable for their natural resources.

5.1.5. A Babylonian pottery technique

The transfer to Susa and the Susiana of a Babylonian pottery technique slightly before the middle of the second millennium can be correlated with the appearance, around the same time and in the same city of Susa, of a great number of Babylonian type graves. Knowing that the large urban centres of Lower Mesopotamia were abandoned from the reign of Samsuiluna onwards, it could be proposed that these events were linked and that part of this Mesopotamian population migrated to the Susiana. This was developed for a conference organised by a Geneva foundation .

5.2. CHAGAR BAZAR AND TELL AMARNA (ULG)

For this Work-package the activities of the ULg team concerned mainly these two sites in Northern Syria. As Iraq is unfortunately closed, the ULg team has concentrated its field work on the periphery.

The excavations of Chagar Bazar, begun in 1999, have the advantage of being situated in a region immediately adjoining the alluvial plain and the history of this site and its surrounding region is closely linked to that of Babylonia (as a reminder, Chagar Bazar is situated some 60 km from the Iraqi border and the Jebel Sinjar can be seen from the site).

The excavations are still ongoing at Chagar Bazar. The remains excavated are dated, in Area F, to the Halaf period and, in the Area H, to the third millennium B.C., more precisely to the last part of the Early Dynastic period or Early Bronze III-IV.

Like in 2003, for the second year running, the number of participants in the field work was limited and our plans had to be limited in consequence. The initial plan was to work in three already open sectors covering three different periods:

- the final neolithic (in 2002 in Chagar Bazar the first complete sequence of the final neolithic in the region was excavated),
- the Early Bronze (again, one of our sectors, H, shows a complete sequence of this period, also a first in this region)
- the palace building of the Old Babylonian period in Area I.

As a result of the limited number of participants, only this last sector has been opened and work has progressed in the uncovering of the constructions spanning at least two successive building periods.

These remains date from the first half of the second millennium. The main building excavated was built under the reign of Samsû-Addu (1710-1679 B.C.) who had created the large kingdom of Upper Mesopotamia in this region. As for the moment, it is impossible to carry on field work in Iraq, the information that we can get about this period at Chagar Bazar is essential.

In Area I, for the moment, 10 building phases are identified from Phase XIV (the oldest) to Phase V (the youngest). Between those Phases, Phases XIII-XII correspond to the remains of

the palatial building of Samsî-Addu. More than 130 cuneiform tablets were found since 2000 in the deposits in relation with this building. Unfortunately, until now, no tablet was found in situ, because they were discarded in pits, which were dug at the end of the occupation of the building.

In 2004, the sector has been extended towards the west and it now has a length of 100 m from east to west with a width varying from one sector to another between 10 and 20 m. The 2004 excavation was essentially concentrated on the western side. In this sector, first domestic installations in a bad state of preservation have been uncovered. These buildings are posterior to the palace of Samsî-Addu. They have been registered and evacuated. Under these remains of houses, walls were found, part of a monumental building that must have succeeded to the palace of Samsî-Addu mentioned above. The sector is now nearly ready for the excavation of the underlying palace.

Numerous graves have been unearthed under these late constructions. The funerary material is more or less rich according to the graves. This year's surprise was the find, in grave T.106, of a painted vessel of the category of ceramics known as Habur ware, with a figurative decor.

PUBLICATION PLANNING

The manuscripts of the three excavation reports 1999-2002 have been prepared and three volumes of reports are in press.

The first volume treats the prehistoric soundings (to be published certainly in 2005).

The second volume is the publication of sector D whose remains date from the so-called «post Akkadian» period (the very end of the third millennium) and will also contain two other studies. One is the dating by earth magnetism of firing installations (ovens and hearths). The first results are encouraging but the analyses have to be refined in function of the magnetism curves available for the region.

The third volume contains the Old Babylonian cuneiform tablets and seal impressions found in the sector I between 2000 and 2002. The preparation of this volume has necessitated four collation and verification missions: two in the museum of Der ez-Zôr where the documents from the excavations are kept (June and August 2004), one in the museum of Aleppo (June 2004) and one in the British Museum (August 2004) where the documents from the old excavations of Mallowan (1935-1937) are kept. The texts were studied by Denis Lacambre, Adelina Millet and Michel Tanret, and the sigillographic findings by Dominique Beyer and Önhan Tunca. The study of the texts has allowed us to identify Chagar Bazar, with great probability, as the ancient Abnakkum. This identification will have consequences for the reconstruction of the ancient geography of the region.

5.3. TELL BEYDAR AND TELL TWEINI (KULEUVEN)

Notwithstanding the insecure political and social situation in the Middle East the KULeuven partner of IAP V/14 has continued archaeological and environmental research on two different sites in Syria with special emphasis on topography, geology and restoration techniques alongside with the continuation of the palaeo-environmental programme at Beydar, initiated by Karel Van Lerberghe and Gabriella Voet (KULeuven), and co-sponsored by Ca'Foscari University of Venice.

The KULeuven team headed by K. Van Lerberghe & G. Voet, has been working in Tell Beydar, a site located at ca. 80 km from Chagar Bazar where the IPA V/14 partner of Liège university is excavating under the directorship of Prof. Dr. Ö. Tunca. The occupation levels at Beydar date mainly from the end of the third millennium B.C. whereas the research at Chagar Bazar is focusing on the beginning of the second millennium B.C. From an historical point of view the cooperation between the two groups is most interesting since it gives an insight in the development of local cultures, languages and society over a period of 500 years in the North-East of Mesopotamia. Both teams have been fortunate to discover archives at their sites. These archives have been in particular informative in regard with Upper-Mesopotamian society and its relation with Babylonia proper, the region being studied by historians and philologists belonging to the research teams from Ghent, Liège and Leuven.

5.3.1. Tell Beydar (KULeuven)

In the fall of 2003 the long-standing international research program at Tell Beydar / ancient Nabada in the Syrian Jezirah marked its twelfth season, which has been devoted mainly to an architectural research project, financially supported by the European Union.

By the end of the 2002 season, we were able to draw the definite plan of the buildings on the Acropolis, including private apartments, audience rooms, workshops and four temples.

In 2003 the restoration of the Palace-Temple area on the Acropolis of the Tell was undertaken. The Acropolis is made up of a succession of three terraces dated to approximately 2,400 BC. Official buildings were built on two of these. On top of the tell the higher terrace hosted a series of massive buildings, the major ones being the Palace and the Upper Temple. Three other temples B-D and storage buildings were connected by small streets. The 2003 restoration concentrated on the principal buildings of the IIIrd millennium the Palace, the main street, and Temples A-B-C.

In 2004 the restoration of the Palace-Temple area on the Acropolis at Beydar has continued. The KULeuven team was involved in the restoration of the main buildings of the third millennium, including a Palace, four temples and storage buildings. The definitive map of the Acropolis is drawn now and collaborators of the R. Lemaire Center have made three-dimensional virtual reconstructions for Conservation and Restoration of Historical Buildings.

The third millennium texts discovered during the seasons 1996-2002 have now been published by L. Milano, W. Sallaberger, Ph. Talon and K. Van Lerberghe. The publication of the archaeological data involving a great number of researchers of the KULeuven team will be out in 2006 in the series SUBARTU. In Münster our research was the subject of a lecture given by K. Van Lerberghe & J. Bretschneider: 5000 Jahre alte Stadtkulturen: 10 Jahre Ausgrabungen der W.W.U.Münster und KULeuven in Syrien. Bretschneider was also invited by the magazine Scientific American to write a series of archaeological articles including an overview of the research at Beydar (Life and death in Nabada, Scientific American Special Issue: Mysteries of the Ancient Ones, Feb. 2005).

5.3.2. Tell Tweini

Since a few years the KULeuven started a new project in the West of Syria at a site called Tell Tweini, near the modern town of Jebleh. The discoveries of last season, Old-Babylonian seal cylinders, statuettes, weapons and tools and ceramics show clearly the link between this site

and Mesopotamia. These discoveries are a proof of the cultural and economical exchanges that existed in the second millennium B.C. Amorrite rulers controlled the Babylonian homeland as well as important centres such as Tell Tweini, ancient Gibala, at the Syrian coast. For the study of second millennium Babylonia by all partners of the IPA V/14 the new findings at Gibala offer most welcome information originating from the West next to the new data from the projects in the North-East (Chagar Bazar and Tell Beydar).

The excavations at Tell Tweini form part of the Jebleh Project, a multi-disciplinary research program initiated at the behest of the Syrian Directorate of Antiquities. Project directors are Prof. Dr. Michel Al-Maqdissi and Prof. Dr. Karel Van Lerberghe (KULeuven). Mr. Masaoud Badawy from the Syrian Department of Antiquities and Prof. Dr. Joachim Bretschneider (KULeuven & UCLouvain) are the field directors since the beginning of the excavations in 1999. G. Voet is the coordinator of the project.

The aims of the project are to explore the Middle Bronze - Early Iron age strata, employing up-to-date scientific techniques and examining, in particular, changes in technology and economic strategies. We also aim to produce a full ceramic sequence from the Middle Bronze through the Early Iron Age. During the last five excavation campaigns of 1999 to 2004, different areas have been under investigation and excavations so far have revealed deposits of the Middle and Late Bronze Age as well as of the Iron Age. Of particular interest are the remains of Middle Bronze Age habitation and the archaeological objects dating to the transition to the Late Bronze Age, which remains a puzzle in this region. Likewise, due to the preservation of the crucial Late Bronze to Iron Age transition, Tell Tweini offers a unique opportunity to study cultural, economic and political events during this still very enigmatic period of the "Sea Peoples", events which radically changed the entire Near East.

The main aim of the 2004 season was to extend the excavation in the central part of the Tell and to get a better insight into the chronology and stratigraphy of the Iron Age and of the Bronze Age period at Tweini.

In view of the IPA V/14 project we were in particular lucky to reach Middle Bronze age levels. These levels are characterised by various building phases of the 'Great House' and other houses on top of the Tell and by a tomb containing ca. 35 skeletons. The tomb has niches with funeral lamps and includes funeral gifts such as statuettes, vessels filled with comestibles, jewelry, bronze weapons and tools and cylinder seals. In the houses as well as in the tomb archaeological material was found indicating a cultural and spiritual link with Mesopotamia proper, the area on which the historical-philological research of the IPA V/24 is focusing. The main references to Mesopotamia being the statuettes, the ceramics, the bronze weapons and tools and the cylinder seals. The scenes of the cylinder seals are identical with scenes from Babylonia dated under king Samsuiluna.

Stratigraphically there is an uninterrupted sequence between Middle and Late Bronze age at Tweini. An inscription in Hieroglyphic Luwian linking the site with Karkemish on the Syrian/Turkish border confirms this. The inscription dates the stratigraphical layer to the 14th-13th century B.C.

Finally, at the northern end of the Tell a small trench has been dug in order to recognize the extend of the settlement and its relation with the fluvial system. Here bedrock was hit. The ceramics discovered in that area (in casu complete vessels) can be dated to the beginning of Middle Bronze Age or the end of Early Bronze Age. Further excavation in that area during the

2005 season will give us a clear idea of the date of the founding of Tell Tweini, ancient Gibala.

5.3.2.1. The geophysical prospect ion of Tell Tweini
S. Giese, Chr. Huebner and B. Hemeier (Freiburg)

During the 2004 spring season a geophysical prospection has been conducted at Tweini with the aim of recognizing the physical remains of antique buildings and streets. A Cesiummagnetometer G858 of the company Geometrics has been utilized for measuring the 3.1 ha Tell. The results of the geomagnetism are beyond expectation. The ground penetrating radar was in use for small segments of the excavation proper. This radar is a SIR 3000 with a 400 MHz antenna of the company GSSI. Since it did not make a high quality detection of the archaeological inventory the tool was only in limited use at the site.

The results can be summarized as follows.

An antique street system covering the entire Tell area has been recognized. The main street divides the settlement in a northern and southern part and leads to the West to the area which was occupied by large temples as the excavations in the earlier seasons have shown. The map shows clearly the houses that were built along the streets in antiquity, most probably during the 9th century B.C. The geomagnetic survey in the flatland to the North of the Tell indicates that no manmade structures are to be expected there at a depth less than 3 m.

5.3.2.2. Tell Tweini 2004 : Preliminary Analyses of the archaeobiological samples
Patricia Vandorpe, Basel University (Switzerland)

During the excavation season of 2004, a total of 73 archaeobiological samples were taken. The aims and objectives of this year's analyses consisted in finding new plant species, adding to the interpretation of structures and layers and detecting chronological differences in the plant spectrum. More than 7000 macro plant remains have been recorded.

The analyses of archaeobiological samples in 2004 has given some very interesting results. The recovery of different fruits and their fruit flesh is new to the site. In addition, we have the impression that the plant remains are better preserved and more abundant in the lower levels of the excavation, thus the recovery of plant remains will only become more abundant. So far we have not intended to make any inferences about the chronological differences within the plant remains. More detailed identification of cereal remains and wild weeds is requested in order to detect similarities or changes in the different periods. It is clear that once more material is recovered from the Middle Bronze Age, a comparison with the material collected in the previous excavation seasons will yield a good chronological overview of plant use at Tell Tweini.

5.3.3.3. Geomorphologic and palaeo-environmental study
Etienne Paulissen & Patrick Degryse (Leuven University)

In order to study the stratigraphical build-up of Tell Tweini in the coastal plain near Jebleh, drill cores were taken on and around the excavation site. Coring was performed using a percussion drill of the 'Ramguts' type. This is a type of coring device suitable for heterogeneous underground containing rock fragments. A number of reconnaissance corings were performed. These show, without any doubt, important environmental changes during the

last millennia. Especially the occurrence of ceramics at great depths in the main valley is very striking in this respect. At least the top 4 m of sediments are directly related to the history of Tell Tweini during the Bronze and Iron age.

One of the main palaeo-environmental problems to be solved is the position of the sea during the occupation periods of Tell Tweini. The occurrence of thick deposits of detritic materials in the very upper part of the 'spring valley' has led to the hypothesis that the sea reached the Tell in Antiquity. Recent study in the laboratory at Leuven of the samples taken has proven this hypothesis to be true.

5.4. RESEARCH ON THE LINKS BETWEEN MESOPOTAMIA AND THE COUNTRIES SITUATED AT THE EDGE OF THE FERTILE CRESCENT (UGENT)

5.4.1. Study of transcaucasian tombs

Several studies of the Iron Age necropolises excavated in Armenia by the University of Ghent have highlighted the relations in the material culture for certain practices with what has been observed in Mesopotamia. The diffusion of a custom called the ritual braking has been traced from the Luristan to the Caspian Sea and even in Europe along the Rhine.

5.4.2. Circulation of raw materials

Obsidian has circulated from the Neolithic onwards in all of the Near East in the shape of small very sharp blades or vessels shaped by polishing. In Armenia, this volcanic glass was used during the Iron Age as a temper in the paste of vessels as was demonstrated by the analyses of the technological laboratory of the university of Leiden.

6. Work-package History and Chronology

6.1. CHRONOLOGY OF THE SECOND MILLENNIUM (UGENT)

The publication, in 1998, in the framework of the previous IAP, of a new low chronology has provoked a number of reactions. These have been evaluated in an article in the journal *Akkadica*.

Except for one, all of the critical reactions lack a transdisciplinary approach. This is to be deplored since it weakens their argument. In order to establish an Old Babylonian chronology it is necessary, as has been shown, that the texts, the astronomy and the material culture be taken into account.

A second remark is that most of the critics just cling to the Middle Chronology (or anything close to it) although everybody agrees this cannot be the correct one.

An evaluation of the different criticisms was made, distinguishing between absolute chronologies and ones we dubbed pseudo-absolute. The latter are usually established by measuring the age of a sample of organic material, mostly wood, neglecting the fact that we have no idea what the time gap was between its cutting and its introduction in the archaeological context. Furthermore, these methods never date a historical event such as the beginning of a reign, or any other historically memorable fact.

To date absolutely other sources have to be exploited. The only techniques allowing for the moment to reach absolute dating are astronomical, and these were used in our 1998 publication.

This being clarified, pottery and glyptic sequences adduced (again), chronographic textual sources, the eight year cycle of Venus, the two lunar eclipses announcing the death of Īḫḫi and the destruction of Ur and also one at least of the solar eclipses that could be linked to the first year of Īḫḫi-Adad I's life, all harmonise with a system lowered 96 years as compared to the Middle Chronology and situating the fall of Babylon in 1499 BC. This new low chronology also fits very well with the latest work on the Egyptian chronology. It is suited for the history of the Levant and Cyprus, as well as that of Susa, Elam and the Indus; the Hittite royal generations, according to the data at our disposal, can be incorporated in most of the known chronological systems, including the one we proposed in 1998 .

6.2. ARCHAEO-MAGNETISM (ULG)

The study of the samples taken from the structures at Chagar Bazar (about 180 kg) in 2002 is going on under the supervision of Prof. J. Hus (Centre du Globe, Dourbes). A first report will be prepared and published in 2004 within the publication of Chagar Bazar excavation results.

6.3. 14C (KULeuven)

A new selection of 14 samples from seeds and charcoals was sent to the ORAU (Oxford University Radiocarbon Accelerator Unit) for 14C analysis. Radiocarbon dates obtained from samples sent in 2000, provided very useful cross-references to the chronological framework already established for Tell Beydar on both archaeological and epigraphic ground.

6.4. TEXTS AND SEALS

Collaborators from the universities of Ghent, Liège and Leuven are doing common philological and historical research. The central region of "the Land of Sumer and Akkad", Babylonia, is being studied for the second millennium by researchers from all three centres, the first millennium in Leuven. The region of Elam, to the East, is a study object of Ghent (2nd millennium) and Leuven (1st millennium). Upper Mesopotamia, ancient Subartu in the North-East, is the focus of research, archaeologically and historically, of Liège and Leuven partners. The West, linking the Mediterranean world with Mesopotamia in the second and first millennium, is a new research topic of Leuven.

6.4.1. SUSA TEXTS (UGent and KULeuven)

In 2004 K. De Graef obtained her PhD with a study entitled "Suse à la fin d'Ur III et au sukkalmaÚat ancien. Edition et commentaire de documents sumériens et accadiens inédits provenant du Chantier B fouillé par Roman Ghirshman". A number of these documents are written in Sumerian and can be dated at the end of the Ur III empire. It concerns the rest of an archive belonging to a scribe called Igibuni. Thanks to the knowledge of the archaeological and stratigraphical context in which the tablets were found, she was able to formulate new insights concerning the study of archives in general, and that of loans in particular. The Igibuni texts inform us on Susean society just before the downfall of the Ur III empire and make it possible to date approximately the capture of Susa by the Simaákbeans.

All other documents are written in Akkadian and date from the Simaßkean period as well as from the beginning of the sukkalmaÚat. Based on some crucial documents from this period which prove that Ebarat, PilÚaÚa and Atta-ÚuBu were contemporaries, she was able to determine a more precise chronology of the actual institutionalisation of the sukkalmaÚat within Simaßkean politic culture.

Thanks to the continuation of the texts from the Ur III period to the sukkalmaÚat and the precise recording of the archaeological context of the tablets it is possible to date them accurately. These documents shed further light on the tumultuous transition of the Ur III to the Old Babylonian period in the periphery of Mesopotamia a transition which is not yet attested for Babylonia itself.

The study of the onomasticon of the documents made it possible to develop a picture of the ethnic composition of the population of Susa and its evolution through the periods of different domination.

A first volume of Susa texts ("Les archives d'Igibuni"), should be published in 2005. A second volume on the Simaßki and sukkalmaÚ periods will follow soon afterwards.

One article on the year names of Ebarat I ("Les noms d'année du roi simaßkéen Ebarat I") is already published in *Akkadica* 125/1 (2004), pp. 107-108.

Other topics that were dealt with in the thesis (e.g. the month names) will be published in articles.

J. Tavernier has reworked his Ph.D. thesis 'Iranica in de Achaemenidische periode' and has translated it into English. The thesis will be published in two volumes of OLA. The first one being a syllabary that will be out in fall 2005. With Prof. M. Stolper (University of Chicago) he started a new research project on 'Elamite phonology and language typology'. In 2004 his research was mainly based on texts originating from Susa and Haft Tepe.

6.4.2. A HISTORICAL STUDY (ULg)

D. Lacambre has finished and successfully defended his PhD thesis on the history of Upper Mesopotamia during the Old Babylonian period,

6.4.3. OLD BABYLONIAN LARSA (ULiège)

After a DEA thesis on the Old Babylonian archives of the «Sîn temple» awarded in the Ecole pratique des Hautes Etudes of Paris, Michèle Maggio has started the preparation in 2004 of a PhD. Her study object is the economy of the city of Larsa in the beginning of the Old Babylonian period, until the eleventh year of king Samsuiluna of Babylon.

6.4.4. KISURRA TEXTS (KULeuven)

A. Goddeeris has finished her work on the new cuneiform tablets from the British Museum which she copied in 2003. These tablets originate from the site of Kisurra and are dated to the second millennium B.C. They double the number of Kisurra tablets from the Vorderasiatisches Museum Berlin published so far. The 'archive' will be published in four articles, the first one being in press now in 'Zeitschrift für Assyriologie'. She also gave a talk

on 'Inventories on Cuneiform Tablets' at the symposium on ancient archives and inventories organised at the 'Vlaamse Academie' in Brussels (23-24 January 2004).

6.4.5. OLD BABYLONIAN SABUM AND TELL BEYDAR TEXTS (KULeuven)

K. Van Lerberghe has continued his studies in Old-Babylonian history. A study of a fascinating small private archive at Chicago dealing with the Old-Babylonian army appeared in 'Heidelberger Studien zum alten Orient 9' under the title: 'More Old-Babylonian Soldiers at Sabum' (cf. Bibliography). He wrote a part of the final publication of the archive discovered at Beydar between 1996-2002. G. Jans, a collaborator of the IPA V/14 studied and published the sealings. All tablets, sealings and seal inscriptions excavated at Beydar so far have been published in this way in SUBARTU XII.

6.4.6. OLD BABYLONIAN SEALS (UGent)

The monograph on the seals of the sanga priests of Pamaß, their iconography and seal practice is now in the last stage of reading the final manuscript. Publication has been postponed because it was decided to redraw all of these seals since existing drawings are scattered over several publications and executed in different drawing styles. Thanks to the decision of the British Museum's Oriental Department to allow digital photographing of tablets (for study purposes only) three days of photographing were sufficient to collect all of the material. This will be organised at the beginning of 2005 and subsequently new and very detailed drawings will be made. Publication of the monograph should follow in 2005.

6.4.7. OLD BABYLONIAN MONTH LENGTHS (UGent)

A study has been undertaken on the length of the Old Babylonian months, as expressed in the administrative calendar. Whereas formerly there was a tacit understanding that there were 29 and 30 days months in a year, a new analysis of the relevant texts shows there were only thirty day months. The study is now published in the American Journal of Cuneiform Studies.

6.4.8. THE OLD BABYLONIAN SI.BI CLAUSE (UGent)

M. Tanret and K. De Graef published a study on this clause appearing in sale documents from the beginning of the reign of AbießuŰ onwards. This amount of silver, designated as si.bi, can be seen as a symbolic payment for the transmission of the deeds of the chain of transmission. The relation between si.bi and price can now be further specified in a system of price ranges with a variation due to overlaps, doubling or halving of the si.bi amount. Th study was published in Archiv für Orientforschung 50 (2003/2004, published in 2005).

6.4.9 FIRST MILLENIUM (KULeuven)

T. Boiy has continued his study of the chronology of the first millennium B.C. and was invited by P. Briant to organize seminars on Seleucid chronology in Canada and in France. Next to a series of articles which are in print he published his study of the city of Babylon in the late period (Boiy T., Late Achaemenid and Hellenistic Babylon, Orientalia Lovaniensia Analecta 136). A grant of the von Humboldt Stiftung allows him to collaborate now in a project on Babylonia in the late period at Göttingen University.

3. MAIN ACHIEVEMENTS

Work-package 1 Mapping and Surveying the Mesopotamian Alluvial Plain

Through politico-military circumstances the Plain itself was inaccessible. Work could be done with existing available data but checks in the field were excluded.

The GIS system has been changed into an ARC-GIS in order to be compatible with other similar projects. Many new data have been integrated and maps have been produced.

A specific investigation of older, unpublished, data from the site of Tell ed-DTMr allowed to reconstruct the courses of the channel in its vicinity in more detail.

As a result of theoretical reflection on archaeological practice in a Near Eastern context, an essay on archaeological stratigraphy was published. This is meant as a guide for practical use and is the fruit of discussions within the IAP but also with many other colleagues in the field.

KBIN and UGent mainly have worked together on this WP, with input of data from KULeuven and ULiège.

Work package 2 Archaeology in context

This involved an extensive study of the corpus of pottery of the Middle Euphrates as a complement to earlier IAP studies on the corpus in 2nd millennium Babylonia. Relations as far as from Mari to southern Turkish sites can be proven and mapped along the Euphrates. These relations allow to better date the Turkish sites (thanks to the better known Mari chronology) and confirm the New Chronology published in the previous phase of this IAP.

To these can now be added the extensive and most interesting Late bronze material from Tell Tweini. A study of the terra-cotta figurines ("plaquettes") based on the only extensive corpus of the kind scientifically excavated had been undertaken by the late Dr. N. Pons. H. Gasche will continue this study which will no doubt be a reference work for all published and future material of this kind.

UGent, ULiège and KULeuven have worked together on this WP.

Work package 3 Historical Geography

The work done on the ancient courses of the Euphrates and Tigris was continued in the present project, based on more textual sources and extended further to the South, where a perfect fit could be made with the results of P. Steinkeller's (Harvard) investigation and map.

Hypotheses were formulated concerning the ancient fluvial network in Khuzestan and field work was performed to test them. Innovative results were obtained concerning the chronology and evolution of the Gulf coastline in the framework of a PhD. It is for the first time that the results are based on geological data together with absolute age determinations.

Systematic research has been initiated into the Talmudic sources concerning the Babylonian landscape and two PhD studies were begun in Gent, one concerning the reconstruction of the

19th century (AC) landscape of Mesopotamia; another one will dissect the Classical Arabic texts (the geographers, roadbooks,...) in order to collect information on the landscape.

UGent and KBIN have collaborated on this WP.

Work package 4 Environmental Geography of the Mesopotamian Plain

Due to political circumstances, no field work could be done in Iraq. Only the limited data concerning Tell ed-DTMr were integrated with the borehole data.

A number of geo-indicators of climate variation as well as textual information on this theme were collected.

KBIN and UGent worked on this WP.

Work package 5 Beyond the Mesopotamian Plain

This WP has grown as the study of the Plain itself, in the field, was impossible.

The WP has a twofold content.

The first one consists of a number of smaller studies concerning aspects of regions neighbouring on the Plain, a.o. to highlight relations with the 'core-area'. As such, researches have been undertaken concerning the corpus of second and first millennia in Susa, as well as earlier excavations there. A study of the pottery of this same city was most relevant since it showed that the Susiana did not participate in the spread of Cassite-type pottery (which reached more to the North into the Zagros). On the other hand, the spread of a specific Babylonian pottery technique, slightly before the middle of the second millennium seems to have been accompanied by the appearance of Babylonian type graves in Susa. In this group of studies we must also mention the study of Transcaucasian tombs (from the UGent excavations in Armenia during the previous IAP). These show links with some Mesopotamian burial rituals. The same region participated in the Near Eastern obsidian trade network, as is shown by the use of this volcanic glass as a temper in pottery clay.

The second part of this WP consists of the excavations carried out by two of the IAP partners to the North and the North West of the core-area.

The Liège partner continued work at Tell Amarna and Chagar Bazar. This last site yielded, a.o., a large building containing tablets and dating from the time of Samsi-Addu which links it to the core-area.

The Leuven partner continued long-standing work in Tell Beydar on third millennium buildings on the Acropolis. The find and publications of the texts from this site have shed new light on contemporaneous writing from the South of the Alluvial Plain. This same partner has now initiated work at Tell Tweini, further to the West, applying the most up-to-date excavation techniques. The aim is to gain insight in the Middle Bronze Early Iron age periods. It already appears that there were links with Mesopotamia during the second millennium.

To this WP, KULeuven, ULiège and UGent contributed.

Work package 6 History and Chronology

In this WP, studies of three different types were undertaken.

A general appraisal of reactions to the New Chronology proposed by our preceding IAP. In a follow-up article the various reactions were examined. The conclusion is that criticism is often based on a single argument or arguments of one kind only, whereas it was shown that a transdisciplinary approach is needed to make any valid statement. In fact, data from more and more neighbouring or even further regions corroborate the validity of the New Chronology.

Two technical studies are ongoing. Dating by archaeo-magnetism is being applied by the ULiège team and 14C data are being processed for the KULeuven research. A range of up-to-date techniques have been used for the KBIN research in the Khuzestan.

The third series of investigations are text and sealing studies.

In the shape of two PhD theses within the IAP, K. De Graef (UGent) studied a.o. the transition from Ur III to autonomy in Susa and from Simaßki to sukkalmaÚat and J. Tavernier (KULeuven) worked on the Achaemenid period.

Concerning Mesopotamia proper, a whole series of researches have been published or are in production, mainly on the Old Babylonian period: Larsa (ULiège), Kisurra (KULeuven), Sabum (KULeuven), Sanga seals (UGent), Month lengths (UGent), the si.bi sale clause (UGent). At the KULeuven T. Booij (PhD in the previous IAP) studies first millennium chronology, with international contacts and support.

4. NETWORKING

1. The network services ensured a regular contact between all partners. Apart from the yearly meetings of all participants, the last one of which, in 2003, also included, besides the promoters, researchers from all partner teams, meetings were held as required by the research, often informal and efficient, otherwise email was used to exchange texts and data. Some of these can be described as follows.

1.1. (UGent + KBIN) Several working sessions were held (à ratio of about 5 per year) concerning :

- the interpretation of the archaeological data and their integration with the natural and anthropogenic deposits in and around the site Tell ed-DTMr.
- exchange of maps and aerial data.
- the Khuzestan project.

1.2. Trainings (KBIN)

- Field training was organised on mapping procedures, hand augering and description of cores (in Belgium).
- Field training in Geophysical Prospection methods (electrical resistivity mapping and flux gradiometer), Mougou, France, 24th February-8th March 2003. (Heyvaert V.) In Collaboration with University of Southampton, Department of Archaeology.

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- Field work on fluvial deposits in an outcrop of Holocene Deposits, Ename, Belgium, Third of April 2003. (Baeteman C., Bogemans F., Heyvaert V.,)
- Field work Geophysical Prospection methods, Ename, Belgium, 9th June 2003. (Heyvaert V.). In collaboration with the University of Southampton, Department of Archaeology.

1.3. International Contacts

UGent

- 12-13/10/2002. Boston : meeting of H. Gasche with J.A. Armstrong and D.A. Warburton. concerning the Mesopotamian Chronology (2nd millennium).
- 13-17/10/2002. Boston : meeting of H. Gasche with J.A. Armstrong on the Corpus of Mesopotamian Pottery. Checking of the Plates and description of the Groups.
- 17-21/10/2002. Chicago : meeting of H. Gasche with McGuire Gibson and Steven Cole about future cooperation in the topic : 'Reconstruction of the Ancient River Networks of the Mesopotamian Alluvial Plain'.
- In October 2003 L. De Meyer, H.Gasche and M. Tanret stayed for a week in Teheran to establish contacts with the Iranian Centre for Archaeological Research. Afterwards a one year agreement was signed, establishing a cooperation between Iranian and IAP archaeologists and geologists and allowing for field work.

ULiège

- Regular contacts of Ö. Tunca with the Syrian archaeological services.
- 27-29/08/2003: Meeting of Ö. Tunca at Barcelona with M. Molist and W. Cruells, to correct the final proofs of the volume prepared in collaboration: Ö. Tunca and M. Molist, Tell Amarna I. La période de Halaf.

KULeuven

- Regular contacts of K. Van Lerberghe and B. Voet with the Syrian archaeological services.
- Jan Tavernier works in collaboration with M. Stolper of Chicago University.

KBIN

- Regular meetings for the interpretation of the analyses and collection of further relevant data with other institutions (Contact and collaboration with Dr. Adnan Aqrabi (Senior Geologist, Statoil ASA, Norway). Dr. Aqrabi worked in Iraq, for the Quaternary geological investigation of the Southernmost part of the Mesopotamian plain (Ahwar marshes and Tigris-Euphrates delta).
- Contact and collaboration with Dr. Robert Carter and Dr. Ben Horton. Both of them are part of the British geo-archaeological team, which is working in Kuwait, As-Sabiyah.
 - Dr. Robert Carter (Institute of Archaeology, University College of London). Function : field-director and pottery specialist of the joint Kuwait-British archaeological expedition.
 - Dr. Benjamin Peter Horton (Sea-level Research Laboratory, University of Pennsylvania, Department of Earth and Environmental Science, USA): Quaternary geological investigation focused on the reconstruction of the relative sea-level change of the Gulf along the shoreline of Kuwait. Work meeting planned in October-november 2005).

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- Collaboration with Dr. Kristian Strutt (Geophysical researcher, Archaeological Prospection Services of Southampton, Department of archaeology, University of Southampton, UK): training of PhD student (Heyvaert V.) in geophysical prospection methods.
- Collaboration with Prof. Dr. Helmüt Bruckner (Geoarchaeologist, Department of Geography, Philipps-University of Marburg, Germany): Geoarchaeological investigation of the ancient city Uruk-Warka, based on geological coring and archaeological data. Meeting in September 2004.
- Collaboration with Prof. Dr. C. Morhange (Geoarchaeologist, CEREGE, Department of Geography, University of Provence, France): Geoarchaeological investigation and reconstruction of paleo-shorelines in the Mediterranean region.
- Collaboration with Prof. Dr. Roland Gehrels (Reader in sea-level studies, Department of geography, University of Plymouth): Sea-level reconstruction based on foram-analysis. Responsible for foram-analysis of the Khuzestan/Iran samples.
- Collaboration with Dr. S. Dawson: Responsible for diatom analysis of Khuzestan/Iran samples. Work meeting planned in August 2005 for preparation of international publication.
- Collaboration with ir. Mark Van Strydonk (KIKIRPA)
- Dr. Dirk Werle (AERDE, Environmental Research, Halifax, Canada), Dr. Andrew Farrant, British Geological Survey, Nottingham, UK), Prof. Dr. Hervé Regnaud, (Université de Rennes, France), Dr. Peter Fretwell (Geographic Information Officer, Oxford University, UK), J. Bennett (Dept. of Geography, University of Exeter, UK)
- Collaboration with Dr. Sue Dawson (School of geography and Geosciences, University of St Andrews, Scotland)
- Collaboration with Mark Van Strydonck (Koninklijk Instituut voor het Kunstpatrimonium, Brussel).

Different young scholars stayed abroad:

- Tom Boiy (KULeuven) participated in conferences in Halle and Saarbrücken where he lectured on first millennium history and society.
- K. De Graef (UGent) worked in the British Museum on Old Babylonian texts and in the British Library concerning Talmudic sources.
- Anne Goddeeris (KULeuven) British Museum London (two months) working on the Kisurra archive.
- B. Ooghe (UGent) stayed several times for a number of months in London to work in the British Library on 19th century maps and travellers' accounts concerning Mesopotamia.

2. Dissemination

2.1. Communications

- At the International Conference on The Tower of Babylon, Baghdad, April 2002, H. Gasche, M. Tanret and K. Verhoeven (both UGent) presented the research of the IAP. L. De Meyer held the summation.
- At the 3rd ICAANE, Paris, April 2002, a panel illustrating the main pottery repertoires from Mari and Tell Amarna was presented by N. Pons (ULiège). The manuscript of her contribution has been submitted for the proceedings which will be published in BAASOR.
- At "Enter the Past", CAA2003 Congress on Cultural Heritage, Vienna April 8-12, a poster was presented by K. Verhoeven (UGent) "From Satellite and Survey to Web Mapping".
- At the seminar "Offizielle Religion politischer Oberschichten und lokale Religionsübung unterschiedlicher Volksgruppen Kleinasien und angrenzende Gebiete vom Beginn des 2. bis zur Mitte des 1. Jt." Religionswissenschaftliches Seminar, Rheinische Friedrich-Wilhelms-

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Universität Bonn, February 22th, 2003 G. Bunnens (ULiège) presented a paper entitled « The Storm-God in Northern Syria and Southern Anatolia from Hadad of Aleppo to Iuppiter Dolichenus°

- At the XLIXe Rencontre Assyriologique Internationale, London, July 11th, 2003 G. Bunnens (ULiège) presented a paper entitled « The new Luwian stele of the Storm-God from Masuwari/Til Barsib: The Assyrian connection°.
- At the conference "L'Europe, un espace à découvrir, 1er cycle, Le croissant fertile et le berceau de la culture européenne, Centre de culture européenne, Bruxelles, G. Bunnens (ULiège) presented a paper entitled « La Syro-Palestine et Israël, charnière entre l'Orient et l'Occident (XVe-VIe s. av. J.-C.) ° on november 8th, 2003.
- At the International The Iron Age in the Iranian World K. De Graef (UGent) participated on november 20 2003with a paper entitled "What's in a name? A Demographic study of the Haft Tepe Archives (ca 1450-1400 BCE)"
- At the same conference N. Pons (ULiège) presented the paper "L'activité archéologique de l'Université de Gand en Arménie. Fouilles et prospections".
- At the Colloque international de Milan: Scienze moderne & Antiche Sapienze. Le radici del sapere scientifico nel Vicino Oriente Antico H. Gasche (UGent) presented a paper on january 25 2003
- At the Université de Rennes II N. Pons (ULiège) gave a lecture on "Présentation des recherches de la Mission Archéologique Belge en Arménie" on may 15 2003.

KBIN

- At the XVI INQUA Congress: Shaping The Earth: A Quaternary perspective, Reno, Nevada, USA, 23-30 July 2003 a Poster was presented: "The reconstruction of History and Environment of the Mesopotamian Plain during the Middle and Late Holocene". (Heyvaert V., Baeteman C., Gasche H., Dupin L.) - with publication of Abstract in Book of Abstracts.
- At the The QRA 8th and second International Post-Graduate International Symposium, Department of Geography, Queen Mary university of London, London, UK, 10-12 September 2003. Oral Presentation: 'Geo-environmental mapping of the Mesopotamian Plain during the Middle and Late Holocene'. (Heyvaert V., Baeteman C.) - with publication of Abstract in Book of Abstracts.
- At the BELQUA meeting (Belgian Association for Quaternary Research), Louvain La Neuve, Belgium, 4th December 2003. Oral presentation: 'The reconstruction of History and Environment of the Mesopotamian Plain during the Middle and Late Holocene.' (Heyvaert V., Baeteman C.) with publication of Abstract
- At the IGCP 495 Inaugural Meeting, Quaternary Land-Ocean Interactions: Driving Mechanisms and Coastal Responses, Maine, USA, 14 October 2004 a poster was presented by V. Heyvaert, C. Baeteman: Fluvial dominance in a late Holocene prograding carbonate coastal area. The Northern Persian Gulf, Khuzestan Province, Iran.
- At the same venue, a poster was presented by L. Dupin : Satellite imagery technique for an interpretation of the fluvial-marine geomorphology in SW Iran.
- The Northern Persian Gulf, Khuzestan Province, Iran. At the 3rd QRA Postgraduate International Symposium, Brussels, Belgium, 15 September 2004 V. Heyvaert presented a paper : Flash floods filling marshes in a late Holocene prograding carbonate coastal area.
- At the same venue L. Dupin presented :Investigation of changes in the fluvial and coastal environments in SW Iran using remote sensing.
- At the International Conference and Fieldtrips on Late Quaternary coastal changes: Sea level, Sedimentary forcing and Anthropogenetic impacts, a joint INQUA-IGCP 495 meeting, June 28-July 2, 2005, Dunkerque (France), oral presentation: V. Heyvaert and C. Baeteman: The shift from estuarine infill to delta progradation. The first results from the Holocene sedimentary record of the Low Khuzestan plain, SW Iran, with publication of Abstract.

CONFERENCES (ULg)

- Tunca, Ö., « Les découvertes récentes à Chagar Bazar (1999-2003) », Institut d'Histoire de l'art et d'Archéologie de l'Université de Paris I-Sorbonne, le 4 mars 2004.
- Lacambre, D., « Les découvertes épigraphiques de Chagar Bazar (2001-2004) », Institut d'Histoire de l'art et d'Archéologie de l'Université de Paris I-Sorbonne, le 4 mars 2004.
- Guy Bunnens: 25-3-2004: De Baal-Shamem à Jupiter Dolichenus: Survivances syro-hittites dans l'iconographie religieuse de l'Orient romain, conférence donnée à Institut des Hautes Etudes de Belgique.
- Guy Bunnens: 31-3-2004: Site hierarchy in the Tishrin Dam area and the geographical horizon of the Ebla texts, communication présentée au Workshop "The Archaeology of Boundaries: was there a Carchemish Region in the Early Bronze Age?", 4th International Congress on the Archaeology of the Ancient Near East, Berlin, 29th March - 3rd April.
- Guy Bunnens: 3-4-2004: Tell Ahmar between Middle-Assyrians and Aramaeans, communication présentée au 4th International Congress on the Archaeology of the Ancient Near East, Berlin, 29th March - 3rd April.

A TABLE RONDE SYRO-BELGE was organised by La Direction Générale des Antiquités et Musées, at the Salle Damascène, Musée National de Damas with, on the Belgian side, KULeuven and ULiège, under the title "Nouvelles données sur les recherches archéologiques syro-belges en Syrie" and held 01-02 October 2003.

The two day seminar aimed at assembling Syrian and Belgian researchers working at Syrian archaeological sites: lectures were scheduled to inform Syrian university students and members of staff at the general direction of antiquities, and discussion was stimulated to exchange mutual information.

Lectures by researchers engaged in the IAP V/14 project were:

- Prof. Dr. Önhan Tunca (Université de Liège) & Mr. Abdulmassih Bagdo (Directeur des Antiquités de Hassakeh), Un cimetière du Bronze ancien à Chagar Bazar
- Dr. Marc Lebeau (Directeur du ECUMS - Bruxelles), Nouvelles recherches syro-belges à Tell Beydar
- Prof. Dr. Karel Van Lerberghe (Université Catholique de Leuven), Fouilles récentes à Tell Tweini
- Dr. Michel al-Maqdissi (Directeur des fouilles et des études archéologiques-Damas), Nouvelles recherches syriennes dans la plaine de Jablé
- Dr. Nina Pons (Chercheur-Belgique), Première approche de la poterie de Tell Amarna (Bronze ancien et Bronze moyen)
- Dr. G. Bunnens (Chercheur - Belgique), Les débuts de l'âge du Fer à Tell Ahmar Table Ronde : Nouvelles données sur les recherches archéologiques syro-belges en Syrie, Musée National de Damas, le Octobre 1st, 2003.

ORGANISATION OF SYMPOSIA BY THE KBIN TEAM

- The Quaternary Research Association Third International Postgraduate Symposium, Belgian Institute of National Sciences, 14-17 September 2004, Brussels, Belgium. (V. Heyvaert, organisator, with the collaboration of L. Dupin, B. Petersen, C. Baeteman and with the technical support of P-Y. Declercq en Olivier Wambecq).

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- International Conference and Fieldtrips on Late Quaternary coastal changes: Sea level, Sedimentary forcing and Anthropogenetic impacts, a joint INQUA-IGCP 495 meeting, June 28-July 2, 2005, Dunkerque (France), C. Baeteman