



## The Aga Khan Award for Architecture

**ARCHITECT'S RECORD**  
 2001 AWARD CYCLE

**I. IDENTIFICATION** Wadi Hanifah Wetlands - Riyadh Lake District  
 Exploration by Boat 1992 / 93

Project Title \_\_\_\_\_

Street Address \_\_\_\_\_

City Riyadh Country Saudi Arabia**II. PERSONS RESPONSIBLE****A. Architect/Planner**Name Jens Bödeker, Ulrich Riederer, Planungsbüro E.F.E.U.Mailing Address Zionskirchstraße 73City Berlin Postal Code D - 13467Country Germany Telephone -49.30.446 88 60Facsimile -49.30.44 68 86 23 E-mail Boedeker@efeu-Berlin.dePrincipal Designer Jens Bödeker, Ulrich Riederer**B. Client**Name ADA - Arriyadh Development AuthorityMailing Address P.O.Box 94501City Arriyadh Postal Code 11614Country Saudi Arabia Telephone -9661.488 3331Facsimile -966.1.48 29 331 E-mail \_\_\_\_\_**C. Project Affiliates/Consultants**

Please list those involved in the project and indicate their roles and areas of responsibility (e.g. engineers, contractors, economists, master craftsmen, other architects, clients, etc.). Please cite addresses and telephone numbers separately.

Name

Role

see appendix: Additional works and documents on the Wadi Hanifah
and works mentioned in the text - all of them
under cooperation and coordinated by the
Arriyadh Development Authority "

**III. TIMETABLE**

(please specify year and month)

A. Commission Ongoing project

B. Design Commencement 1983 / 84 Completion ongoing

C. Construction Commencement 1983 / 84 Completion ongoing

D. Occupancy \_\_\_\_\_

Remarks \_\_\_\_\_

**IV. AREAS AND SURFACES**

(please indicate in square metres)

A. Total Site Area 60-100 Kilometres long, 10-1000 metres wide

B. Ground Floor Area -----

C. Total Combined Floor Area -----  
(including basement(s), ground floor(s) and all upper floors)

Remarks An accurate definement of the area is not possible

**V. ECONOMICS**

(please specify the amounts in local currency and provide the equivalent in US dollars. Specify the date and the rate of exchange in US dollars at the time.)

|                                         | Amount in<br>Local Currency | Amount in<br>US dollars | Exchange Rate | Date |
|-----------------------------------------|-----------------------------|-------------------------|---------------|------|
| A. Total Initial Budget                 | <u>/</u>                    |                         |               |      |
| B. Cost of Land                         | <u>/</u>                    |                         |               |      |
| C. Analysis of Actual Costs             |                             |                         |               |      |
| 1. Infrastructure                       | <u>/</u>                    |                         |               |      |
| 2. Labour                               | <u>/</u>                    |                         |               |      |
| 3. Materials                            | <u>/</u>                    |                         |               |      |
| 4. Landscaping                          | <u>/</u>                    |                         |               |      |
| 5. Professional Fees                    | <u>/</u>                    |                         |               |      |
| 6. Other                                | <u>/</u>                    |                         |               |      |
| D. Total Actual Costs<br>(without land) | <u>/</u>                    |                         |               |      |
| E. Actual Cost<br>(per sq. meter)       | <u>/</u>                    |                         |               |      |

Remarks Mainly public land, increasingly occupied by the private sector

\_\_\_\_\_

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## VI. PROJECT DESCRIPTION

The Wadi Hanifah boat exploration took place in November 1993.  
In December 1993 the report was completed.  
It was one of the first boat tours down the Wadi Hanifah watercourse.

We explored most of Wadi Hanifah watercourse by canoe. Many parts of the watercourse were difficult to pass because of very dense vegetation. For filming and taking photos we undertook most of our boat trips very early in the morning or late in the afternoon.

The Riyadh Lake District – stretching over an area of approximately 100 kilometres length and 10 – 1000 m width – developed around 1983, when the first large sewage plant in Riyadh started operating and consequently increasing amounts of ground water were pumped off the city centre of Riyadh (see also King Fahad Road). This treated sewage water together with the pumped-off groundwater has been forming a continuously expanding river and lake system since 1983.

E.F.E.U.

Jens Bödeker  
Ulrich Riederer

## VII. MATERIALS, STRUCTURE, AND CONSTRUCTION

It is astonishing how complex and effective Phragmites plantings influence the purification of sewage. Professor Reinhold Kickuth, the father of sewage treatment by plants, came to Riyadh to hold a lecture on this topic in front of executives of the Ministry of Municipal and Rural Affairs and the Arriyadh Development Authority. He cited the Wadi Hanifah Wetlands and the results of the exploration by boat as practical example.

Two environmental experts on university level, Professor Reinhard Grebe and Professor Albert Schmidt, together with experts in the ADA will be going to Riyadh to work out the next steps of development of the Wadi Hanifah in December 2000.

# VIII. PROJECT SIGNIFICANCE AND IMPACT

When looking at the Nile valley from a height of 10 000 metres and the Wadi Hanifah from a height of about 1 000 metres one notices that the two watercourses look astonishingly alike. Before humans noticed this, it had already been noticed by migratory birds who crossed the Arab peninsula every year. Up to 1983 the habitats inviting them to rest were located mainly at the shores of the Red Sea and the Arab Golf. Since about 17 years a large number and variety of migratory birds rest and nest in the Riyadh Lake District, bringing with them plant seeds from other countries – and to some extent probably also other animal germs and fish spawn. At least the water is full of fish, in particular Tilapia, but also Sailfin Catfish – *Glyptoperichthys gibbiceps*.

When going on the first excursions together with the president of the ADA, H.E. Dr. Mohamed al Shaikh, in 1984 – 1985, we could already make out the beginnings of a vegetation and a large variety of birds.

It was amazing that the water became crystal clear already a few kilometres south of Batha and the Manufah Channel. – The purifying effect of the root zones of *Phragmites* (Reed) is immense. – see appendix: Function of the Root Zone – Purification Process.

In the eighties and nineties ideas, plans and programmes for development of the whole Wadi Hanifah (including the arid zones in the north of Riyadh) have been worked out (see satellite photograph). An effective realisation has not taken place and the actual Riyadh Lake District is increasingly shrinking due to growing privatisation of lakeside land.

Since the 1989 cycle – in which the Grameen Bank housing programme project and the Diplomatic Quarter Landscaping were awarded, it has become obvious that this important architectural award is given not only to architectural design but also to projects and ideas of social-environmental and ecological importance.

The Wadi Hanifah Wetlands or Riyadh Lake District is a "man-made environment" created by Riyadh's population of about 3.5 million people and demonstrates in a good way that masses of people can also have a positive influence on the environment. – This was illustrated by Jens Bödeker and Uli Riederer in their boat exploration and the thesis worked out by Jens Bödeker.

*see Appendix: Wadi Hanifah –Riyadh Lake District; Introduction*

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**Please note:** The submission of this Record is a prerequisite to candidacy for the Award. All information contained in and submitted with the Record will be kept strictly confidential until announcement of the Award is made. Subsequently, such material may be made available by the Aga Khan Award for Architecture and you hereby grant the Aga Khan Award for Architecture a non-exclusive licence for the duration of the legal term of copyright (and all rights in the nature of copyright) in the Material submitted to reproduce the Material or licence the reproduction of the same throughout the world.

Name (please print) Jens Bödeker

Signature J.V. Bödeker

Date 21. 11. 2000



RICHARD BÖDEKER  
FREIER LANDSCHAFTSARCHITEKT BDLA • IFLA • DWB

27 NOV. 2000

SAU.P002258  
Wadi Hanifa  
Riyadh, Saudi Arabia

(A)

The Aga Khan Award for Architecture  
1-3 Avenue de la Paix

Ch-1202 Geneva

Neanderthal, 22 November 2000

**2258.SAU – Wadi Hanifah, Riyadh, Saudi Arabia**

Ladies and Gentlemen,

In 1993/94 my son Jens Bödeker and his friend and partner Uli Riederer were assigned by the Arriyadh Development Authority (ADA) to explore the Wadi Hanifah Wetlands. When I visited the Aga Khan Award offices in Geneva in November 1999 I had the opportunity to show the video about the exploration and to leave an A3 copy of the report with you.

This 3-months' exploration was a quite unusual undertaking and is a story that is worth telling.

Jens had accompanied me on a Rub al Khali expedition in 1992/93. Further to this expedition he undertook a Landrover tour through the Wadi Hanifah on his own initiative. – He got stuck, but was able to free himself in an adventurous way so that an already organised rescue team did not have to move out.

In a meeting that took place the following day, he suggested to the president of the ADA, H.E. Abdullatif al Sheikh, and the heads of the departments in charge to explore the wetlands by boat because the dense riverside vegetation made it nearly impossible to reach the open water. The president of the ADA instructed him to buy a boat and train himself on the rivers and lakes in Berlin to be prepared for the Wadi Hanifah exploration, that was to take place by the end of 1993. His friend and partner Uli Riederer was good in white-water rafting, which was very helpful. In January 1993 Jens and Uli visited the International Boat Fair in Düsseldorf and bought a foldable Norwegian canoe that weighed only 15 kilos but had a weight-bearing capacity of 350 kilos. After having trained a lot in Berlin in the summer the expedition could be started. The result of it was a sensational wealth of data that was documented in the presented video and the report.

Jens Bödeker had interrupted his landscape architecture studies in Berlin for this exploration and the research carried out during this exploration finally became the subject of the thesis for his diploma which he successfully completed his studies with in 1996. Since 1994 he is self-employed with his own landscape architecture

## Wadi Hanifah Wetlands – Riyadh Lake District

### Introduction

The Riyadh Lake District – stretching over an area of approximately 100 kilometres length and 10 – 1000 m width – developed around 1983, when the first large sewage plant in Riyadh started operating and consequently increasing amounts of ground water were pumped off the city centre of Riyadh (see also King Fahad Road). This treated sewage water together with the pumped-off groundwater has been forming a continuously expanding river and lake system since 1983.

see  
Appendix 8  
&  
presentation  
panels

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- see cover of  
appendix 8

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- see  
appendix 8 + 9

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see appendices  
8,9,10,11

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- see appendix 6 +7  
and presentation  
panels