

Minutes of the 2004 IFRAO Business Meeting Agra, India

Organisations present: American Rock Art Research Association (ARARA), represented by Leigh Marymor (U.S.A.); Associação Brasileira de Arte Rupestre (ABAR), represented by Cristiane Buco (Brazil); Associação Portuguesa de Arte e Arqueologia Rupestre (APAAR), represented by Robert G. Bednarik, proxy (Portugal); Association pour le Rayonnement de l'Art Pariétal Européen (ARAPE), represented by Jean Clottes (France); Australian Rock Art Research Association (AURA), represented by Robert G. Bednarik (Australia); Cave Art Research Association (CARA), represented by Elfriede Bednarik (Australia); Centro Studi e Museo d'Arte Preistorica (CeSMAP), represented by Robert G. Bednarik, proxy (Italy); Institutum Canarium (IC), represented by Inge Diethelm-Loch (Switzerland); Moscow Centre of Rock Art and Bioindication Research, represented by Arsen Faradjev (Russia); Rock Art Society of India (RASI), represented by Giraraj Kumar (India); Société Préhistorique Ariège-Pyrénées (SPAP), represented by Jean Clottes (France); Tajik Centre for the Study of Petroglyphs (TCSP), represented by Arsen Faradjev, proxy (Tajikistan).

The meeting was held in the boardroom of the Hotel Jaypee Palace, Agra, India, and commenced at 6:00 p.m. on 30 November 2004. The first part was chaired by the outgoing President of IFRAO, R. G. Bednarik; the second part by the incoming President, G. Kumar. The representative of ARARA, L. Marymor, was appointed as recording secretary.

1. *Apologies and declaration of proxies.* There were no apologies, and three proxies were declared as listed above.
2. *Confirmation of previous minutes.* The minutes of the IFRAO Business Meeting of the AURA Congress at Alice Springs, Australia, on 14 July 2000 were published in November 2000. ARARA moved to accept them, motion seconded by RASI, accepted unanimously.
3. *CeSMAP rock art museum proposal.* A discussion ensued to take up a proposal from CeSMAP that IFRAO endorse a new International Rock Art Museum project located in Pinerolo, Italy. CeSMAP has secured a baroque palace adjacent to the local town hall and is seeking funds to refurbish the building. It would like IFRAO to lend its name to the effort. Pros and cons were discussed, but the committee decided it did not have a detailed enough proposal before it on which to take action. The committee decided to encourage CeSMAP to produce a detailed project proposal in which D. Seglie would publish his ideas, and those of other members, for a world museum. Such proposal could then be considered by the committee for action. AURA moved to accept this, ARAPE seconded, motion accepted.

3. *Reports of the IFRAO Representatives.*

ARARA: Current threatened sites include Petroglyph National Monument, NM; Nine Mile Canyon, UT; and Gillespie Dam, AZ. ARARA has incorporated 'conservation workshops' into its annual meeting format, the intention of which is to benefit a local rock art site, and to highlight conservation management and strategies. ARARA has published a *Public Access Guideline* for land managers of rock art sites on public lands, and is currently working on several education and conservation initiatives. *American Indian Rock Art* No. 30, the conference proceedings from San Bernardino have just been published. *American Indian Rock Art* No. 31, the conference proceedings from Casas Grandes, a volume of student papers, and a volume of papers from the 1994 IRAC conference in Flagstaff are expected to be ready at the ARARA Reno, Nevada conference in May 2005.

Moscow Centre: Conducted a two-week visit to Karelia in 2003. Active with educational outreach. At least two new rock art articles have been published. Consulting at the Lost Valley, Pennsylvania, site in U.S.A., concerning mobiliary rock art.

Institutum Canarium: The website is expanding to take in areas of interest beyond the Canary Islands. It is now publishing in more languages.

AURA: Continues to publish *RAR*, *AURA Newsletter* and *Cave Art Research*, hold conferences and host a large website. Continues to advocate for the protection of the Dampier petroglyphs in Western Australia and feels IFRAO's credibility in proving its effectiveness in influencing national government actions is on the line.

Société Préhistorique Ariège-Pyrénées and INORA: *INORA* continues to appear three times a year, No. 40 is just out. A new book on Cosquer Cave and three new books on Chauvet, as well as new books on Lascaux and on Plains Indian rock art have been produced.

Associação Brasileira de Arte Rupestre (ABAR): Held public course on archaeology and patrimony conservation.

4. *Report of the outgoing President.* During his four-year term, the outgoing President focused on 'large' issues in rock art conservation, achieved a good degree in standardisation in terminology and methods, and secured a Code of Ethics. He feels that standards of research tools and site protection require more work. He reminded the meeting that IFRAO is a democratic organisation, each member is IFRAO in its own area and sphere of influence. The position of the President is honorary only. Hope for the incoming president to build on past progress is expressed.

5. *Rock Art Preservation Fund.* This fund is not directly run by IFRAO, but its representatives will report its grants and donations to IFRAO. Funds are dedicated to specific projects. Any IFRAO member can use the Fund as a vehicle of tax exemption to receive funds for specific projects. The Fund is a charitable fund registered in the state of Victoria, Australia. Substantial donations of funds for conservation of the Dampier rock art precinct have been received or committed.

6. *Matters submitted for consideration.*

- 6.1. The meeting lacks a quorum to vote.
- 6.2. Moscow Centre of Rock Art and Bioindication Research brought forward a letter requesting membership from the Frankfurt Museum Society of Pennsylvania, Gary Yannone, President. The Society will be encouraged to become involved with US rock art organisations and to reapply to IFRAO in the future.
- 6.3. IUSPP is now collaborating with WAC and both organisations are interested in establishing a relationship with IFRAO. The next IUSPP meeting is scheduled for September 2006 in Lisbon; IFRAO may time its next meeting to take place just before or after this congress.
7. *Location of next IFRAO meeting.* APAAR will co-host the next IFRAO meeting with Asociación Cultural 'Colectivo Barbaón' (ACCB) and INORA. The meeting will take place at the University of Tomar, Portugal. AURA moved for a postal ballot to confirm the proposed meeting arrangements, CARA seconded. The vote passed unanimously. The 2008 conference is expected to take place in Salta, Argentina, with a formal invitation expected soon. Failing this, ABAR (Brazil) would be interested in hosting.
8. *New business.*
 - 8.1. *Rock Art Studies: A Bibliographic Database* is a compilation in progress, which was begun in March 1993. Currently the database contains over 14 400 citations to the world's rock art literature. The database is available on-line, free of charge, hosted by University of California, Berkeley Bancroft Library and the Bay Area Rock Art Research Association. An update is expected in May 2005. Address: <http://bancroft.berkeley.edu/collections/rockart.html>
 - 8.2. Welcome to the new IFRAO President, G. Kumar, of RASI. He then reports that the Agra conference had 110 participants. Publication of conference proceedings may not be possible, unless perhaps a subject-focused volume is proposed and taken up by a publisher such as Aryan Books or Brepols. Participants are encouraged to submit their papers independently to appropriate research journals.
9. *General matters.* RASI presents a resolution to promote rock art in India, especially in light of the Minister of Culture's promise to establish a rock art division within the Archaeological Survey of India, made during the congress opening ceremony. The Minister has also instructed the Indira Gandhi National Centre for the Arts and Indira Gandhi National Museum of Man to pay more attention to rock art research. It is moved that a letter of appreciation be sent to the Minister.
10. *Adjournment.* The meeting is adjourned at 8:00 p.m.

Minutes by M. Leigh Marymor, President of ARARA

Agra 2004: a magnificent rock art congress

I trust that the delegates of the tenth congress of IFRAO, held by the Rock Art Society of India in Agra from 28 November to 2 December 2004, appreciate that we cannot make a habit of this standard of hospitality at future rock art conferences. The one thousand employees of the Jaypee Palace Hotel, the most luxurious in Agra, were spoiling us mercilessly, and I would argue that it is not in the interest of rock art research to pamper rock art researchers out of their minds — they might become accustomed to this. And I hope that future IFRAO congresses will not follow the Agra example and carry delegates into the lecture hall in sedan chairs carried by four bearers in magnificent traditional costumes.

Oh yes, and the Congress, too, was quite a treat. First and foremost, the organisational aspects reminded me of a Swiss clock: operational perfection seemed to be the norm. Despite the usual last-minute changes to the academic sessions, these adjustments were made with a minimum of fuss and programming was seamless. Apart from the opening and closing plenary sessions, there were three continuous parallel symposia, totalling about 140 presentations. Bearing in mind that two of the five congress days consisted of plenary sessions, this number of papers demanded a well-paced delivery. In my view, the academic standard of papers given was such that our hopes for an increasingly sophisticated scientific discipline in our field seem entirely justified. Most presentations were of excellent standard, and the large range of topics covered by the twelve symposia is symptomatic of the diversification the discipline has experienced in recent years.

The congress began with the Padmashri Dr V. S. Wakankar Memorial Lecture, given this year by Robert G. Bednarik. The first lecture in this series of annual events to honour the father of Indian rock art studies had also been given by Bednarik — in Ujjain in 1990. The 2004 lecture was entitled 'The lasting legacy of V. S. Wakankar', describing how sixteen years after Professor Wakankar's death, his work lives on in the Rock Art Society of India. This was followed by a couple of rock art films, one from New Zealand and one from Borneo. Next, the event was officially opened by Shri Jaipal Reddy, the Honourable Union Minister for Information, Broadcasting and Culture, and Ms Neena Ranjan, the Secretary of the Department of Culture, Government of India. This was followed by the welcoming address of the Congress Chairman, Dr Giriraj Kumar, the President and Editor of RASI, and the Secretary's report, given by Dr G. L. Badam.

In the afternoon began the first three parallel sessions, which continued on the third congress day. The second day was taken up by a substantial plenary session in the morning, dedicated to the Early Indian Petroglyphs Project (EIP; cf. Kumar et al. 2002). This consisted of three presentations by three of the principal researchers of this major current and ongoing project, which addresses questions of rock art dating in India, most especially the age estimation of the world's earliest known rock art. Petroglyphs at a few sites in central India belong to Lower and Middle Palaeolithic traditions, coinciding at least at two sites with the use of Acheulian handaxes. The EIP Project also endeavours to provide a better chronological framework for the Palaeolithic cultures of the subcontinent of India. This is currently one of the most important rock art projects in the world, and this plenary session was intended as the event's centrepiece. It was also the main reason, albeit not the only reason, for the naming of the congress: '*Rock Art Research: Changing Paradigms*'. The first of these plenary presentations, given by Dr G. Kumar, addressed the current and ongoing excavations at one of the two EIP principal sites, Daraki-Chattan; the second, by R. G. Bednarik, reported the most recent dating results, from optically stimulated fluorescence analyses of the sediments at Daraki-Chattan and Bhimbetka as well as microerosion results from other sites. The third paper, presented by Professor Alan Watchman, reported the first ever AMS radiocarbon dating results from Indian rock art.

The afternoon of the second congress day was taken up by visits of the two world-famous monuments of Agra, the Red Fort and the Taj Mahal. On the third day, the three parallel symposia continued and congress attendees were able to choose from a smorgasbord of presentations and subjects. Symposium topics included the traditional staple topics of global perspectives in rock art studies, new discoveries, rock art dating, conservation and management — but also some new issues, such as the interpretation of rock art and its artistic interpretation, the depiction of animals in palaeoart, and two forward-looking symposia. One of the latter concerned the desired status of the discipline in 2025, the other addressed the future of the Bhimbetka site complex in Madhya Pradesh which has recently been accorded World Heritage status. These papers occupied most of the next three days, and ended with a plenary summing up by Dr K. K. Chakravarty.

There were far too many highlights to begin listing them individually, but one of the most notable developments apparent at this event was perhaps the improvement in Indian work over the previous decade. In 1994, at the rock art session of the New Delhi World Archaeological Congress, most Indian papers were still simple show-and-tell presentations. At Agra, however, the effects of the work of RASI were clearly evident, with many scientifically impeccable and well-documented papers given by Indian participants. This fairly dramatic change augurs well for the Indian school of rock art studies, and congratulations to the leadership of RASI are certainly in order on that account, as well as on the impressive organisational work and congress infrastructure. All sessions were recorded and teams of technical staff were on hand at each of the three sessions. Media conferences were well organised and certainly effective. A small exhibition and poster centre was well attended. Meal breaks were sumptuous affairs on a large lawn, just outside the congress venue, with a great variety of delicacies on offer every day. As acknowledged above, we were pampered as we had never been before, at a rock art event. The luxurious surroundings added a special flavour to the congress. The venue, a large luxury hotel and convention centre, consisted of a sprawling complex of imposing buildings clad with red quartzite outside and white marble inside — a veritable 21st century palace. All of this together resulted in a rock art conference such as the discipline had not seen before: thoroughly organised and presented with an aura of luxury and grace. It was an event those of us who participated will remember for a long time to come.

And then there were the field trips. To travel in India is fascinating even for the average tourist, but rock art sites tend to be in relatively remote places and we had the opportunity of seeing parts of the country not yet affected by international tourism. Indian rock paintings are among the most numerous and most spectacular in the world, and sites such as the superbly preserved Raamchhaya shelters in the sandstone cliffs near Raisen, the extensive galleries of Chaturbhujnath Nala in the Chambal valley and the world-renowned rock art complex of hundreds of painted shelters at Bhimbetka, south of Bhopal, were among the main destinations of the fieldtrips. Many of the congress delegates also availed themselves of the opportunity of visiting the Palaeolithic excavation at Daraki-Chattan, one of the main sites of the EIP Project, to view some of the evidence for the earliest known rock art in the world under the guidance of the site's principal excavator, Dr G. Kumar. The trench was kept open especially for the occasion, and the numerous exfoliated rock slabs bearing cupules — found under the site's Acheulian occupation deposit — have now been examined by many Indian and foreign scholars. Highlights of this calibre, together with the ambience of many sites and the general charm of the Indian countryside ensured that the fieldtrips were valuable experiences, and were well appreciated by those who participated.

The Agra congress included associated events such as the Annual Meeting of RASI, the Business Meeting of the International Federation of Rock Art Organisations (IFRAO) and several media conferences. Its coverage by the electronic and printed media, both in Agra and later in Bhopal, was as magnificent as any aspect of this event. This has no doubt added to public awareness of the importance of rock art and its preservation, as well as to cultivating an improved sensitivity of the public service to the need of affording the required attention to matters concerning ancient cultural heritage. Already there have been noticeable changes in this area, prompted no doubt especially by the World Heritage listing of the Bhimbetka complex, initiated by me (Bednarik 1994; Ray and Ramanathan 2002). As reported at the congress, it has been found during 2004 that there are difficulties in coping with the substantial increase of visitation prompted by the listing. The maximum number of visitors has had to be limited to 1600 persons per day and Bhimbetka

is thus already one of the most heavily visited rock art sites in the world. Visitor facilities, however, remain about the same as they were prior to 2003, when public visitation was quite negligible. It is therefore evident that there are major changes in the public profile of rock art underway in India, and again this can to a large extent be attributed to the tenacity of RASI. If there was one thing every foreign participant of the Agra congress was clear about, it was that RASI, under the leadership of its founder and architect, Giriraj Kumar, has become one of the success stories of IFRAO. It was therefore most appropriate that, on the occasion of this event, the presidency of IFRAO passed to RASI. It is precisely this policy of IFRAO, of promoting effectiveness in rock art studies and preservation in this unique way, that accounts for the continuing vitality of the Federation. As outgoing President of IFRAO, I take this opportunity to congratulate Dr Kumar on his appointment, and on what I regard as one of the most auspicious IFRAO congresses ever held — and certainly the most sumptuous.

Robert G. Bednarik
Convener, IFRAO

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- RAR 22-000

Save Rock Art

Salvanguardia e Studio dell' Arte Rupestre mondiale nei principali siti a rischio
22 to 24 October 2004, Pinerolo, Italy

The international conference and round table session entitled 'Save Rock Art — Protection and study of the world's most endangered rock art sites' were conducted by IFRAO member Centro Studi e Museo d'Arte Prehistorica (CeSMAP), in conjunction with the City of Pinerolo and the Museo Civico do Archeologia e Antropologia. The event took place in the chambers of the Municipal Palace of Pinerolo, celebrating the 40th anniversary of the founding of CeSMAP in 1964, as well as the centenary of the birthday of CeSMAP's inaugural president, Cesare Giulio Borgna, in 1904. Since the conference has produced some momentous outcomes that will affect IFRAO, it is appropriate that a full report be presented here.

The conference began with fieldtrips to some of the rock art sites in the nearby district (Seglie et al. 2004): Balma di Mondon in the Pellice valley (paintings discovered in the 1990s); the *inselberg* rock of Cavour with its cupules and rock paintings; and the Roccio d'la Fantino site above Ponte Raut, in the Germanasca valley, featuring white pictograms that appear to have been applied as slaked lime. A sumptuous lunch during the impeccably organised fieldtrips, for seventy or so participants, was taken in a huge tent erected especially for the purpose on top of the Cavour Rock. The logistics of this event alone would deter any other rock art organisation from attempting it, and CeSMAP has once again shown its great organisational ability.

Two days of oral presentations followed, and they were dominated by the issues of rock art protection and preservation. The sessions were chaired by Dr Maurizio Menicucci, the Director of the Turin office of Italy's state television, RAI, which filmed some aspects of the event for transmission. The opening address set the tone: a full account of the circumstances that led to the severe threat to the massive rock art complex of Dampier, Western Australia, and the history of the current IFRAO campaign to avert the destruction of the greatest cultural monument of that continent. It was presented by the IFRAO President, Robert G. Bednarik, who reported that whilst IFRAO had succeeded in halting most of the planned destruction, the confrontation with the state government was continuing because rock art and stone arrangements were still being destroyed. The two previous major campaigns by IFRAO, both in Portugal, were similarly covered by Professor Luiz Oosterbeek, the Secretary-General of the next UISPP Congress. He addressed the epic struggles to save the petroglyphs in the Cõa and Guadiana valleys, as well as the Tagus and Sabor issues, explaining the history of state vandalism in Portugal and the involvement of archaeologists in it.

These two presentations alone were sufficient to establish the importance of IFRAO's international program of protecting threatened rock art, but there were many others addressing the work of IFRAO members in rock art preservation. The discoverer of the Guadiana rock art, Hipólito Collado Giraldo from the Asociación Cultural 'Colectivo Barbaón' (ACCB), Spain, offered a spirited presentation of rock art preservation issues. Two of the newest

members of IFRAO presented superb reviews of their respective organisations' work, the Association Marocaine d'Art Rupestre (AMAR) and the Hellenic Rock Art Centre (HERAC). Abdelkhalek Lemjidi with Dario Seglie of CeSMAP, Co-Directors of the Jebel Sarhro National Park Project in Morocco, addressed the difficult preservation issues of the rock art between the Atlas Mountains and the Sahara. George Dimitriadis, the Director of HERAC, presented an overview of the pre-Historic rock art of the Hellenic Peninsula. Mario Lazarovich, the Director of the Cultural Heritage Office in Salta, Argentina, spoke about the rock art of a sacred mountain in north-western Argentina, Cerro de Guachipas.

Other notable presentations were concerned with issues in northern Italy and the western Alps, including those of Francesco Fedele on the Archaeological Park of Ossimo in the Valcamonica; Angelo Ardivino and Raffaella Poggiani (Archaeological Superintendency of the Lombardy), also on the Valcamonica rock art; Marina Sapelli Ragni and Filippo Gambari (Archaeological Superintendency of the Piedmont), on the preservation problems of rock art in the western Alps; and Annie Echassoux with Henri de Lumley on the natural and anthropic deterioration of the Mount Bego petroglyphs. The academic proceedings closed with a second presentation by Robert G. Bednarik, which was not concerned with preservation issues, but had been specifically requested by the organisers: a progress report of the Early Indian Petroglyphs Project in central India, presenting the earliest known rock art in the world. This attracted considerable attention and prompted a detailed response from the doyen of Italian archaeology, Professor Fedele, strongly endorsing the paradigmatic revisions this project demands.

In all, this was an auspicious event, flawlessly organised by Professor Seglie and his colleagues from CeSMAP. It included the opening of a public exhibition of the same name in the nearby Palazzo Vittone. That building, a substantial baroque palace of three storeys in a commanding position (alongside the large main square of Pinerolo, and thus flanking the Municipal Palace on the right), has been made available to CeSMAP by the City of Pinerolo, as the site of a new initiative announced at the conference: the IFRAO World Rock Art Museum (IWRAM).

This was not the only significant development announced at this event. It was also proposed, by CeSMAP and others, to establish a European and Mediterranean Prehistoric Art Society. Its primary purpose will be to focus on circum-Mediterranean issues in rock art research and protection. The proposal, which was developed from the collaborative project by CeSMAP and the Moroccan Rock Art Association, AMAR, was warmly received at the conference, and plans were made to establish the new association within two years. The conference formulated a declaration calling for the following measures:

- 1) To create the European and Mediterranean Prehistoric Art Society — EuroMedPAS, aiming at bringing together all pre-Historic art historians, archaeologists, anthropologists, cultural heritage managers and remaining experts, and their organisations.
- 2) That CeSMAP will have the delegation to ensure the proper legal establishment of the Society, according to statutes to be agreed among the foundation members.
- 3) That besides the undersigned, all organisations involved in pre-Historic art research, rescue or valorisation will be invited to become founding members, the process of constitution lasting until the UISPP 15th world congress, to be held in Lisbon in September 2006.
- 4) That a provisional co-ordination, established in Pinerolo, and involving the undersigned, will contact other organisations, namely those mentioned above, for them to become engaged in the process.
- 5) That, simultaneously, contacts will be established with the European Commission, the European Parliament, the Council of Europe and UNESCO, to present the EuroMedPAS and encourage their collaboration as well.

During the lunch break on 24 October, the seven IFRAO members represented at the conference managed to hold a brief meeting. Chaired by CeSMAP (Italy, D. Seglie), it included Argentina (SIAR-SAA, M. Lazarovich by proxy), Australia (AURA, R. G. Bednarik), Greece (HERAC, G. Dimitriadis), Morocco (AMAR, A. Lemjidi), Portugal (APAAR, L. Oosterbeek by proxy) and Spain (ACCB, D. H. Collado Giraldo). Only two items were discussed: the implications of the establishment of the IFRAO World Rock Art Museum, and the proposed founding of European and circum-Mediterranean rock art organisation.

The Pinerolo conference, supported by the City of Pinerolo, the Ministry of Culture, Education and Foreign Affairs, the Archaeological Superintendency of Piedmont and the Piedmont Region, was a great success and has once again shown the effectiveness of the CeSMAP team in organising such events with great flair and style.

Robert G. Bednarik
Convener of IFRAO

REFERENCE

SEGLIE, D., M. CINQUETTI and P. RICCHIARDI 2004. Pinerolese rock paintings, western Alps, Italy. *AURA Newsletter* 21(1): 7–11.

IFRAO Global State of the Art

An International Rock Art Meeting at the UISPP 15th Congress
Lisbon, 4 – 9 September 2006

Rationale

The International Federation of Rock Art Organisations (IFRAO) is a federation of national and regional organisations promoting the study of palaeoart and cognitive archaeology globally. Nine members founded the Federation in September 1988 in Darwin, Australia. Currently IFRAO has forty-two regional member organisations covering most of the globe, involving thousands of both professional and amateur researchers.

Over the last eighteen years IFRAO has organised, supported or promoted dozens of local and regional meetings on all continents. As a world non-governmental organisation, IFRAO has also organised major international rock art congresses. These IRACs took place in countries as diverse as Australia, Bolivia, India, Italy, Namibia, Portugal, South Africa and the United States.

In 2006 IFRAO will start a new kind of international meeting focusing on 'The Global State of the Art' in the discipline of Rock Art Research.

An invitation to this three-day event is extended to researchers and members of the IFRAO organisations, who are warmly asked to present the most relevant discoveries, studies and trends in the field of rock art studies from the last decade. Our sessions will be concurrent with the other sessions and workshops of the UISPP 15th Congress that will take place in Lisbon (Portugal) in September 2006.

Presentation of the event

Academic Committee

IFRAO President, Giriraj Kumar (RASI, India)

IFRAO Convener, Robert G. Bednarik (AURA, Australia)

UISPP General Secretary, Luiz Oosterbeek (IPT, Portugal)

Members

Abdelkhalek Lemjidi, Morocco; Alanah Woody, NV, U.S.A.; Angelo Fossati, Italy; Anne Solomon, South Africa; Anne-Marie Pessis, Brazil; Ara Demirkhanian, Armenia; Arsen Faradjev, Russia; B. K. Swartz, Jr, IN, U.S.A.; Carmen Sevillano, Spain; Carol Diaz-Granados, MO, U.S.A.; Charles Robert Bailey, MN, U.S.A. Chen Zhao Fu, P. R. China; Dario Seglie, Italy; David Coulson, Kenya; David Morris, South Africa; Edithe da Silva Pereira, Brazil; Eileen C. Brownlie, United Kingdom; Fernando Javier Costas Goberna, Spain; Fidelis T. Masao, Tanzania; Freddy Taboada, Bolivia; Gabriela Martin Avila, Brazil; George Dimitriadis, Greece; Graeme K. Ward, Australia; Guillermo Muñoz, Colombia; Herta Mandl-Neumann, Austria; Jack Steinbring Wi, Usa; Jane Kolber, AZ, U.S.A.; Jean-Loïc Le Quellec, France; Joerg W. Hansen, France; Julian Becares, Spain; K. K. Chakravarty, India; Kevin Sharpe, United Kingdom; Leigh Marymor, AZ, U.S.A.; Lothar Wanke, Austria; Majeed Khan, Saudi Arabia; Maria Soledad Crochon, Spain; María Mercedes Podestá, Argentina; Mario Consens, Uruguay; Matthias Strecker, Bolivia; Nobuhiro Yoshida, Japan; Franz Mandl, Austria; Paul Faulstich, CA, U.S.A.; Paul S. C. Taçon, Australia; Pedro Schmitz, Brasil; Rob Burrett, Zimbabwe; Roy Querejazu Lewis, Bolivia; Thomas W. Wyrwoll, Germany; Vadim A. Ranov, Tadjikistan; Werner Pichler, Austria; Yakov A. Sher, Russia; Yann-Pierre Montelle, New Zealand.

Organising Committee

João Carlos Baptista, Cláudia Cunha, Angelo Fossati, Ludwig Jaffe, Pierluigi Rosina

Meeting President

Jean Clottes (Association pour le Rayonnement de L'Art Pariétal Européen and Société Préhistorique Ariège-Pyrénées, France)

Meeting Chairpersons

Mila Simões de Abreu (APAAR, Portugal) and Hipolito Collado (Colectivo Barbon, Spain)

Sessions

The *IFRAO Global State of the Art* (IGSA) will be arranged in geographical or thematic sessions proposed both by the organisers and by participants.

Each session will be co-ordinated by at least two persons from two different countries. The co-ordinators will be responsible for the organisation before, during and after their session. This includes invitations, call for papers and

selection of papers, chairing the session and pre- and post-editing of material for the website or book. The final date for acceptance of new sessions will be 30 September 2005.

Papers and posters

All aspects of global rock art studies will be addressed, with emphasis on current concerns and developments, the future direction of the discipline and its global priorities. The title, summary and keywords should be sent directly to the session co-ordinators or to the secretariat of IFRAO by 31 December 2005. Later arrivals may be considered, depending on the discretion of the session co-ordinators. Summaries will be published on the official website prior to their presentation. Final texts should include congress feedback.

Languages

The official languages will be English, French, Spanish and Portuguese.

Venue

Lisbon is Portugal's capital, a modern cosmopolitan city steeped in tradition. Inhabited since the Palaeolithic, Lisbon has a Roman past that can be seen in ruins like ones of the Roman Theatre in the 'Baixa' (downtown). Alfama and other surrounding quarters inherited an Arabic tradition and are among the few old areas that survived the devastating earthquake and tsunami of 1755. In the monument zone of Belém (UNESCO World Heritage Site), which includes the National Archaeological Museum in the monastery of Jerónimos, you can step back to the age of the first voyages around the oceans. The *Parque das Nações* is a new part of Lisbon, built for the remarkably successful EXPO 98. The surrounding beaches and seaside towns make Lisbon a pleasant place to visit with all the family.

The UISPP congress and IFRAO sessions will take place in the *Faculdade de Letras* in the 'City' of the University of Lisbon. The venue can be easily reached by public and private transport from all parts of town. It is close to the airport and places like the Colombo shopping centre and the football stadiums of Sporting and Benfica.

Excursions

Besides a free trip during the Congress, participants can take part in a selection of special excursions to rock art sites in Portugal and Spain covering different chronologies and techniques. Excursions, both before and after the UISPP congress, will be guided by researchers and include rock art sites in the Tejo/Tagus Valley, Douro/Côa, Spanish Extremadura and Palaeolithic caves. A grand-tour will take in sites in both Portugal and Spain.

Registration

This will be through the UISPP congress. Please see general information in <http://www.uispp.ipt.pt/en/inscri.html>
For further information about the 15th UISPP congress see the official web page <http://www.uispp.ipt.pt/>

International Cupule Conference

The Cochabamba Rock Art Research Association (AEARC) invites cupule experts from all over the world to the International Cupule Conference, to be held in Cochabamba (Bolivia, South America) from 17th July to 22nd July 2007. Cupules are one of the most common forms of rock art and have so far received very little attention. They are found in most countries and belong to different cultural periods. AEARC considers that a specialist gathering is urgently required in order to exchange experiences regarding the research carried out so far in different countries.

The International Cupule Conference will take place in the city of Cochabamba, situated in a beautiful valley in central Bolivia. This region presents a huge variety of cupule sites, which vary in their antiquity, symbolism and functionality. Three days of the conference will be dedicated to the different symposia and the remaining three days to the excursions to cupule areas. Cupule experts are invited to present papers in the following symposia:

- (1) Cupules and their antiquity (dating).
- (2) Possible symbolism of cupules.
- (3) Possible function of cupules.
- (4) The re-use of cupules (ethnographic research).
- (5) Different types of cupules and their combination with other types of rock art.
- (6) Natural cupules (non-anthropic).
- (7) Replication work with cupules.
- (8) The taphonomy of cupules.
- (9) Cupules and rock-gongs (lithophones).
- (10) Cupules and their lithologies (the importance of understanding the relationship between

cupules and the rock types they are found on).

(11) Different types of cupules in Bolivia.

The ten first symposia will be for the international experts that will participate. English will be the main language. All papers will be of an international scientific standard. The last symposium (on cupules in Bolivia) will be reserved for AEARC's and other Bolivian researchers and will have an introductory purpose for the excursions. Spanish will be its language with simultaneous translation into English.

More details about the presentation of papers and the conference will be published in *RAR*'s November 2005 edition. Any enquiries can be addressed to Prof. Roy Querejazu Lewis, President, AEARC.

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Dampier rock art exhibition launched

The opening ceremony of the exhibition *Visions of the Past: the world's most endangered rock art* took place at the Walkington Theatre, Karratha, Western Australia, on 28 April 2005. Karratha had been chosen for the exhibition's world premiere because the town is situated immediately next to the Dampier Archipelago, the very location of the rock art precinct that is the subject of the exhibition.

Speakers at the exhibition opening were selected from some of the principal stakeholders of the rock art. The opening speaker, naturally, represented the primary owners of the cultural monument, the local Indigenous communities. He was Wilfred Hicks, the spokesman of the Wong-Goo-Tt-Oo people, who according to traditional law are the rightful owners of the Dampier rock art. He spoke on their behalf, with senior traditional lawman Tim Douglas by his side to signify his approval. Together they welcomed the audience to their traditional country and emphasised their great concern over the continuing destruction of their cultural monument. This was followed by an archaeological perspective of the great significance of the Dampier rock art precinct, offered by archaeologist Kenneth Mulvaney, President of AURA. He described the forty-year history of neglect and unsuccessful attempts to create a management plan for the Dampier Archipelago. The Chairman of the Chamber of Commerce and Industry of Karratha and District, Gary Slee, then represented the local communities. Gary reminded the audience that rock art, too, has a commercial value, being already a key component of cultural tourism in several other parts of Australia. Two speakers of yet another key stakeholder, the National Trust of Australia, representing the heritage protection agencies, followed him. Thomas Perrigo, the W.A. Executive Director, and Project Officer Karl Haynes spoke about the Trust's great concern, emphasising specific problems endemic to Western Australia. In particular, the Trust had found that the State's relevant government agency, the Heritage Council, adhered to an anomalous definition of heritage, limiting it to European heritage. Robert G. Bednarik, the Convener of the international NGO that initiated the campaign to save the Dampier rock art, the International Federation of Rock Art Organisations (IFRAO), and created the exhibition concluded the presentations.

Representatives of the traditional custodians of the Dampier rock art had acted as consultants to the project, ensuring that none of the images shown in the exhibition included any rock art that may not be viewed by the public. The Dampier cultural precinct features hundreds of sacred sites, comprising rock art and some types of stone arrangements that may not be seen by the uninitiated. In these circumstances, and including the required relevant research and supplementary photographic work, it took many months to assemble the material considered for inclusion in the exhibition. This was followed by its design, the artwork required for the exhibition, and finally by the production of the polypropylene banners forming its core. Literature also had to be created, ranging from brochures, posters, invitation cards and bumper stickers to a series of eight postcards. In addition, promotional displays also had to be created, including two banners designed for suspension in the open, and a floor-standing display banner for use in public places. Finally, several newspaper advertisements were created, flexibly designed for use at different venues.

In all, this work took me from July 2004 to March 2005. In April 2005 I shipped the exhibition and support materials to Karratha, on the north-western coast of Australia, for its premiere within a few kilometres of the location of the Dampier rock art. There, the exhibition was assembled at the chosen venue, the foyer of the Walkington Theatre in the Karratha TAFE campus. After the opening ceremony in the theatre, which seats 400, the public of Karratha and Dampier viewed the exhibition for one week, until 5 May 2005. In that week 1240 local residents saw it. This represents in the order of 8% of the population of Karratha. Because four of the exhibition banners reflected unfavourably on one of the major corporate entities in Western Australia, that company requested that they not be shown in Karratha (but they can be shown anywhere else). The information thus censured concerned the levels of aerial pollution and stored explosive substances at Dampier, and the consequences of an industrial disaster on that basis. We complied fully with the request by the petrochemical company, as it is not our policy to oppose corporate entities. In our view the region's heritage issues are the state government's problem. Other than that, the response by local residents was uniformly positive and

supportive, and many visitors commented favourably on the design and informative values of the exhibition, or offered support for the campaign to save the Dampier Rock Art Precinct.

After a week the exhibition was dismantled and taken to Port Hedland, a harbour town further along the coast, 240 km from Karratha. Here, the only suitable venue was the Gratwick Hall in the Civic Centre. This hall measuring 24 m by 18 m plus a stage offered another fine site for the exhibition. *Visions of the Past* opened in Port Hedland on 9 May 2005 and closed four days later. Visitation was weaker than in Karratha, but a public lecture about the purpose of the exhibition was also given to the Care for Hedland Environmental Association, on 10 May. Local media coverage of the exhibition and its general message, the need to protect and preserve Australia's largest cultural monument, was excellent in both Karratha and Port Hedland, consisting in total of four newspaper stories, two items on local television, and several radio interviews, particularly on ABC Karratha.

Bearing in mind that both Hedland and Karratha are relatively small, geographically very isolated towns, it is obvious that the exhibition achieved an excellent impact. Especially in Karratha, few residents would have been entirely unaware of the event, because we included in our promotion a letterbox drop (invitation card) that was received by all households. Combined with media reports, printed advertising (in four instances), banners and displays in several shopping malls, distribution of flyers and brochures at more than a dozen points, promotion was quite comprehensive. Particularly encouraging was the attendance of many school classes. Without any input from exhibition personnel, teachers had prepared questionnaires for the students, listing eleven questions that prompted the students to study the exhibition closely so as to be able to answer all questions. We found this initiative particularly effective in securing the attention of young visitors. Another positive outcome is that, after viewing the exhibition, a number of Karratha residents decided spontaneously to facilitate our efforts by forming a support group or auxiliary group for the protection of the Dampier rock art precinct. Obviously, such a locally based support group will make our future work in the region, which includes research, inventorying and deterioration studies, significantly easier.

The Dampier rock art exhibition is to travel to venues in Australia and abroad. An Italian copy is being launched by Centro Studi e Museo d'Arte Preistorica in Pinerolo, by Professor Dario Seglie and his team. Other venues are being arranged, both in Australia and in various other continents. The exhibition details the plight of the Dampier Cultural Precinct, which includes the world's largest petroglyph concentration and Australia's largest series of stone arrangements. The Dampier site complex is under severe threat from an expanding petrochemical industry that could easily and more economically be established elsewhere.

The exhibition requires a floor space of approximately 400 square metres. It is a free public service, and is therefore provided free by AURA. This includes the provision of colour brochures, posters, postcards and transfers, and a curator. Preference is given to public venues that can be made available free of cost to AURA. However, consideration will be given to all offers as this education facility is of the utmost importance in generating public support for global rock art protection.

Please support this worthy endeavour by sending me expressions of interest in hosting this exhibition, with preliminary details of proposed venue and timing; and by visiting the Dampier website and signing the petition at

<http://mc2.vicnet.net.au/home/dampier/web/index.html>

Robert G. Bednarik
Convener and Editor, IFRAO
RAR 22-000

PROPOSAL FOR DAMPIER

Preamble

In relation to the issues of the land management of the Dampier Archipelago, there may be considerable disagreement among the various stakeholders, but there appears to be one area of almost universal consensus: the ad hoc approach of the past forty-three years has resulted in conditions most of the relevant stakeholders define as unsatisfactory. There is no management plan for Australia's largest cultural monument, nor is there any effective protection of it. Nobody has any idea of how many more industries will be established in the Archipelago, if indeed any, yet there is massive development of infrastructure occurring now. At no stage has anyone attempted to articulate corporate aspirations along the entire north-western coast with any form of integrated resources management plan. For instance, the idea has been floated that the Western Australian (WA) natural gas pipeline grid be connected to that of eastern Australia, yet no blueprint for such an energy resources plan exists for WA. It is well known that there are great deposits of hydrocarbons offshore, along much of the coast, but there is no integrated plan of how they will be exploited

most beneficially. It is particularly because of this unplanned, unco-ordinated and piecemeal approach that so many stakeholders are critical of the current policies, particularly those concerning the Dampier Archipelago.

This proposal is an attempt by an international NGO that has been deeply involved in similar issues abroad to initiate a debate intended to ultimately lead to the formulation of equitable solutions. Before addressing the possibilities of resolving the Dampier issues to the satisfaction of almost all, if not all the stakeholders, it is necessary to review the historical developments thus far, and the principal problems with the existing approach. This is not intended as criticism for its own sake, but simply an attempt to explore the issues in order to determine common themes and areas of agreement. Interestingly, most of the stakeholders have many common concerns, preferences and mutually reinforcing positions. The lack of dialogue between some of them is therefore surprising, because there are obvious advantages in determining common goals and aspirations. This alone would go a long way towards resolving the main problems, some of which should be of extreme concern.

The stakeholders

First, the principal players need to be identified. They are:

1. *The indigenous owners:* The principal management issue at Dampier concerns the gradual destruction of the Dampier Rock Art Precinct. It comprises the world's largest concentration of rock art and Australia's largest collection of stone arrangements and sacred sites. All of this, undeniably, represents the traditional heritage primarily of specific local Aboriginal groups. Until now, they have had almost no voice in decision making, they have no title to the land, and they have received no apology or compensation for the series of massacres in 1868, perpetrated at by the police Dampier.
2. *The state government:* Consecutive state governments have commissioned a series of management proposals since the 1970s. None was ever implemented; instead the government has sought to develop the region's major commercial resources by inviting proponents and facilitating their operations. In 1996, in response to my requests to preserve the cultural monument at Dampier, the government of the day announced that all new industrial development would be at an alternative site, at Maitland Heavy Industrial Estate. However, the present government reversed this decision and reserved all suitable land at Dampier, 38% of the land area, for industrial purposes.
3. *The Commonwealth:* The national government of Australia has only limited influence, but it appears to be supportive of the calls by the Indigenes, the scholars and the conservationists for nomination of the Dampier precinct to World Heritage. Ideally, the area would become a National Park and be managed by the National Parks and Wildlife Service, which has the heritage management skills the state government lacks.
4. *The appointed land managers:* The remaining land at Dampier Archipelago, i.e. that which is not reserved for industrial use, is under the notional control of the Department of Conservation and Land Management. That body is severely starved of funds and support and currently lacks the resources and expertise to protect a world-class cultural monument. This is unlikely to improve unless there is public pressure.
5. *The environmentalist bodies:* These include the Greens and a number of NGOs involved in the preservation of the environment. Their principal objective is to preserve what is left of the natural and cultural values of the Archipelago, as well as of its landscape and aesthetic ambience. On the whole, the environmentalists have not expressed opposition to the exploitation of the economic resources of the Pilbara region, but they demand that this should occur in a well-planned fashion and without endangering the equally important other values of the area.
6. *The hydrocarbon processing proponents:* They include a few currently operating companies, primarily in the business of processing the offshore natural gas deposits, and a much greater number of potential future players of various sizes. Their installations can be established anywhere a gas pipeline can be taken to, but most of them also need ready access to port facilities. This industry presents considerable dangers to the rock art, because of its very substantial acidic gaseous emissions, and it also works with immense quantities of explosive, volatile and often highly flammable substances; therefore it is not in the interest of any such company (or any other stakeholder) to have similarly dangerous plants established nearby.
7. *The other major industries:* The principal other industries are concerned with the mining, processing and loading of iron ore, and with the production of solar salt. Provided that care is taken in locating their installations and developments, they seem to present no conflict with the interests of other resources of the region.
8. *The local communities:* The several local communities, mostly along the coast, have a variety of priorities. While in Karratha, Dampier and Port Hedland there is a shortage of skills, other centres suffer from chronic unemployment or have an under-employed workforce. The Karratha and Dampier communities are overwhelmingly in favour of effective preservation of the rock art at Dampier, and need to be concerned about the huge explosive power of the petrochemical industries as well as the high incidence of cancers, especially breast cancer.
9. *The scholars:* Their interests are represented by the Australian Rock Art Research Association Inc. (AURA) and, internationally, by the International Federation of Rock Art Organisations (IFRAO). They are biased in favour of custodianship by the Indigenes, and they demand that development be conducted without further destruction of cultural heritage.
10. *The heritage managers:* A number of state, national and international bodies are involved, among them the WA

Heritage Council, the National Trust of Australia, the World Monuments Fund, ICOMOS and UNESCO. The first-named is at significant odds with all others, in that it systematically excludes indigenous cultural heritage from its responsibilities. All others demand effective protection for the cultural precinct of Dampier, including listing on the national as well as state registers of heritage sites, nomination of the precinct as a National Park, and nomination to the World Heritage List of UNESCO.

11. *The tourism industry*: Much the same is demanded by the fledgling tourism industry. The rock art and stone arrangements of the Dampier precinct are the core element of the local tourism industry, and while it is in an early stage of development, it should be noted that even without any significant infrastructure or promotion, the Dampier rock art is visited by about 40,000 tourists a year. Bearing in mind that three other, much smaller rock art concentrations in other remote parts of Australia attract up to 200 000 tourists annually, it is obvious that there exists great potential for a thriving tourism industry at Dampier. While this will not match the economic influence of the natural gas and iron ore industries in the short term, it may well be capable of supporting comparable levels of employment.

The problems

The perhaps most obvious problem concerning the Dampier Rock Art Precinct is the determination of the state government to place a dozen or so petrochemical plants within a limited area of land near Dampier. Already the area is the greatest single-location polluter of Australia, but the government's proposed three-fold increase in gaseous emissions will significantly accelerate the deterioration of the rock art through atmospheric acidification. It will not only 'bleach' the engraved rocks, it will devastate the sensitive endemic flora and marine fauna. More importantly, it will roughly treble the size of the stockpile of explosive, flammable, volatile and dangerous substances at Dampier. These include currently ammonium nitrate, hydrogen, liquid propane, butane, ammonia and light oil, totalling an explosive potential equivalent to 760 kilotonnes of TNT (or 58.4 Hiroshima atomic bombs). To concentrate such potentially destructive energy in one place is reckless, but to advocate its trebling while at the same time excluding adequate safety corridors between individual plants is an inexcusable planning blunder by the state government's agency, the Department of Industry and Resources. Its continuing refusal to accept that this was an error renders meaningful dialogue with the state government difficult.

Another very significant problem concerns the entirely anomalous view of the state's Heritage Council of what constitutes cultural heritage. Until April 2005, that agency was of the opinion that, in WA, 'heritage' refers to European heritage only. The heritage of Indigenous Australians or other people (e.g. the Macassans) was not considered to be part of the State's heritage. Notably, even in cases of non-British European heritage (such as the limited early Dutch history of the State), state involvement has often been appalling. It appears that the state heritage management agency's narrow definition of the term 'heritage' is at significant odds with that of any other country or state in the world. Under such anachronistic conditions of administering heritage legislation it is understandable that the massive Indigenous heritage values of Dampier were of little if any concern.

These two fundamental problems have been aggravated by the lack of continuity in any planning process in the entire Pilbara region. Development was generally proponent driven from 1962 to the end of the century, which obviously accounts for the substantial destruction of heritage sites, especially at Dampier. However, the recent trend towards government initiatives has only made matters worse. Not only has the destruction of heritage sites accelerated since the decision to defer the development of alternative industrial areas, much of it is now occurring in areas previously spared because of their high concentrations of rock art (e.g. at King Bay). Moreover, most of this destruction occurs in the course of quite unnecessary work. Especially the service corridors and new port facilities now being constructed by the government may never be used, as most potential proponents refuse to establish their industries at Dampier. Construction costs are considered too high on the rocky exposures, the flat land available is subject to occasional inundation by the sea and accessibility is relatively poor. The government, which is establishing the infrastructure specifically to entice proponents to Dampier, has in effect already driven most of them away. It threatens any company planning to construct new plants elsewhere in the region with punitive action (consider the example of BHP Billiton, their expressed preference for Onslow and the government's threats to that company). Thus the action of the state government, which is investing in the order of \$200–250 million in Dampier infrastructure, is not only counterproductive, it is actually contrary to the interests of the very companies it is trying to entice to Dampier.

This is one of many examples of the effects of lack of consultation, and the rise of bureaucracy in the Pilbara. Practically all of the non-government stakeholders listed above are strongly opposed to the policy of the state government, and even the Commonwealth government would prefer to see the cultural resource management replaced by a system as it applies in the rest of Australia and the world. At least half the stakeholders are of the view that the state government is secretive and that the specific departments dealing with Pilbara development are dogmatic and poorly briefed.

There are countless further problems caused by the state government's bureaucracy, ranging from tendering policies to inadequate technical competence (a recent example being the faulty welding of an entire pipeline designated to convey a dangerous substance). But this is not intended as an exercise in apportioning blame; rather, it is intended to help resolve problems in macro-planning. Few would suggest that improvements should not be welcomed, and in their

design it is essential that all the stakeholders have an effective voice.

Towards a solution

Significant improvements are in fact quite easy to implement, and some basic issues seem to be almost self-evident. For instance, it is obvious that the greater Pilbara region will be the economic powerhouse of WA at least for this century, and quite probably beyond. Similarly, the wealth of hydrocarbon deposits along the coast has obvious attractions to the rapidly growing economies of Asia, and it can safely be predicted that they will be increasingly utilised. It is essential that the exploitation of the wealth of the Pilbara and nearby regions be undertaken within the framework of a long-term blueprint for the various industries operating in the Northwest, as well as those likely to do so in the course of this century.

An inventory of the known and predicted resources in the earth can be compiled fairly easily. A similar register of cultural and natural heritage sites and areas will be harder to establish, because of the relative neglect of this resource so far, but it is equally essential. As this information becomes available, resource infrastructures can begin to be designed, not on the basis of immediate needs, but on how the various resources can most economically be used, and within guidelines provided by the heritage managers. With the exception of the actual points of extraction (mines, oil or gas wells), all of the structures required for development (processing plants, loading facilities, towns etc.) can be located almost anywhere within the landscape. There are some considerations concerning the locations of ports, airfields, roads, pipelines, railways and water supplies, but on the whole, much flexibility pertains. For instance, there are hundreds of suitable locations for ports along the coast from Carnarvon to Broome, and either dredging or jetties are required in practically all places. The prime heritage sites, on the other hand, occur only at very specific features, taking up less than a thousandth of a per cent of the total land area of the Northwest. Therefore, with appropriate planning, it is perfectly possible to avoid significant detrimental effects on them.

At present there are three basic models of future development in the region:

1. The state government model: all industries are to be established at Dampier until there is virtually no room left there, at which point further proponents will be sited at Maitland.
2. The Maitland model: all new industries are to be located at this alternative estate, which measures 160 square kilometres, or about twenty times the size of the remaining land at Dampier.
3. The nodal model: instead of placing all new industries at either Dampier or Maitland, several nodes are to be established on a pipeline grid extending along the coast, each in the vicinity (within 20 or 30 km) of an existing town, including Karratha/Maitland, Port Hedland, Onslow, Exmouth, Carnarvon and Geraldton. Where appropriate, new population centres could be established as well. Each of these nodes would accommodate only one, two or, at the most, three plants.

The first model is by far the most problematic. It is impossible to implement without widespread further destruction of rock art sites and stone arrangements. The proposed trebling of gaseous emissions will correspondingly accelerate the destruction from acidic precipitation; the natural environment will be devastated. The enormous increase in explosive potential, both in overall size and density of installations, will present a realistic expectation of a mega-disaster, the largest man-made explosion in human history, with the attendant man-made tsunami. The latter alone, estimated to be 52 m high at 50 km from the centre of explosion on the presently stored quantities of chemicals, would have devastating consequences for many nations around the Indian Ocean, particularly the southern coasts of Indonesia. In that sense alone, the first model is realistically unacceptable to any party. Moreover, nearly all the approximately fifteen original potential Dampier proponents listed in 2002, which have since withdrawn or left the negotiating table, have rejected it. Because of the enormous problems with this plan, it is anticipated that the planned Dampier industrial estate will never be filled, and the current construction of infrastructure is in vain and a waste of public funds.

The second model, preferred by some of the proponents, offers considerable benefits. Maitland presents a huge area of land, very accessible, perfectly flat and free of surface rock exposures, all of it at least 6 m above sea level. There is negligible heritage value, and the port required can easily be built by skirting around the north-eastern shore of West Intercourse Island. The cost of the Maitland infrastructure, \$106 million, is much less than half the equivalent cost at Dampier, and this level of saving can be extrapolated to the construction costs of the companies. Most importantly, even the government's plan admits that Maitland will be developed eventually in any case, so the expenditure of \$200–250 million at Dampier is completely unnecessary and even under the government's plan a complete waste of money. The only obvious drawbacks of Maitland are that it will still draw on the resources of just one town, Karratha; that the source of emissions is still close to the valuable Dampier precinct (eventually, one would predict, in close vicinity of a National Park); and that the concentration of explosive industries would still be excessive.

The enormous benefits of the third model are obvious. The two other models are demographically, sociologically, politically and even economically undesirable. Why should the economic benefits from large-scale development only be available to one town, Karratha? The natural gas fields are distributed between Broome and Carnarvon, and it seems only fair that other towns in the region should share in these benefits. The nodal model would break up the otherwise enormous concentrations of both pollution and explosive powers, and thus sharply reduce both local emission levels and

the dangers of a chain reaction of explosions. And with a reasonable level of forward planning, it would facilitate broad protective measures for the region's outstanding cultural heritage.

In a comprehensive long-term plan of this format, numerous further issues could be considered. For instance, is the proposal of diverting water from the Kimberley via the Pilbara feasible? Irrespective of its economy in Perth, it is very likely much more economical in the Pilbara, where both surface and aquifer deposits are not adequate to service a significant growth in population. Similarly, the establishment of a major natural gas grid would facilitate its connection, via a trans-continental pipeline to Moomba, to the eastern states. The Longford explosion (1998) and the two Moomba explosions (2001, 2004) have demonstrated the exposure of the economy to the severe effects of LNG plant failures. Thus in planning a statewide hydrocarbon policy it is advisable to consider the national perspective as well. It is from this base that the planning of individual projects needs to proceed, rather than from the often-vague preferences of the proponents themselves. Their aspirations probably exclude consideration of those of local communities, Indigenous or heritage values. Yet so far this has been the basis of all resource development in the region since 1962. But by the same token, the preferences of the companies have also been ignored by the state government, as those companies who have tried to establish themselves at Maitland have discovered. They were told that, if one or some companies were to be allocated land at Maitland before the Dampier quota was filled, "all others would want to go there too!" Thus the insistence of the government, best exemplified by its public brawl with BHP Billiton over that company's preference to be at Onslow rather than at Dampier, has already driven most proponents away. In short, it is primarily the state government that has retarded development, not because this is its policy, but because of the intransigence of certain parts of its public service and the refusal to address the issues discussed here.

The overriding feature of any future plans should therefore be that the government agencies should be facilitators rather than initiators of policies, and that the primary impetus must come from the other stakeholders. One of the most detrimental features has been the government's reliance on paid consultants that, generally speaking, are servants of the government and are obliged to translate its directives into policy details. The complete inability of NGOs to have any influence in this process is not just frustrating for them, it is also undemocratic and it adds to their perception of a dogmatic administration. It fuels discontent and excludes fair consultation. Replacing it with a process of due consultation would not just pre-empt public dissatisfaction, it would also result in more appropriate policies.

Discussion

If it were our intention to create the world's largest concentration of explosive and volatile substances, one of its largest pollution centres and a great deal of dissatisfaction among the stakeholders (particularly the Indigenous traditional owners, the scholars, environmentalists and heritage managers, but also, for different reasons, among the companies, local communities, tourism industry and Commonwealth agencies), then no change is needed and we can proceed according to the government's current plan. If improvements were preferred, the Maitland model would provide some relief and a temporary solution, in the sense that it would suffice for perhaps some decades. If we favour a long-term solution that finds the approval of all stakeholders, and will serve WA well for perhaps centuries, then an integrated nodal model is the only viable alternative.

To determine the various given factors, it would suffice to begin with a summit meeting of all stakeholders and request that they all provide the required data, ideas and proposals. Once all relevant resources (mineral commodities, hydrocarbons, water, natural and cultural heritage resources) are compiled, the relative timing of their development is known and other relevant factors have been established as far as this is possible, a blueprint for the continuing development of the Pilbara and nearby regions is likely to emerge quite naturally. Port locations can be determined; land can be assigned to one of several possible designations as is normal practice, taking care that there are adequate buffer zones between areas of incompatible designations (e.g. cultural heritage vs high-pollution plants, or urban areas vs explosive industries). At the same time, questions of co-ordinating this master plan with national energy planning can be addressed. The potential industrial players need to declare their individual intentions, the aspirations of the Indigenous can be accommodated, as can the concerns of population centres. Such care would prevent the disheartening loss of potential proponents of industry that we have so far experienced. Companies are not interested in establishing expensive installations where there are prospects of heritage-driven restrictions, or unforeseen land claims by Indigenous people, or submergence by a surge tide. They need to know all the factors that determine the level of profitability of an operation, but the current system tends to leave out many of these potential factors. The tourism industry of the region might be considered only a minor stakeholder, but it must be appreciated that the petrochemical and ore industries will only last a century or two. The rock art has survived for millennia, and if it were allowed to survive a few thousand more years, tourism would economically outperform mining in the long term. Moreover, it tends to provide far more employment relative to investment, therefore it should not be ignored at this stage. However, if we allow the country's largest monument to be gradually destroyed, as is currently the case, we will have pre-empted any possibility of including it in any future tourism plan.

The purpose of this proposal is to initiate the kind of constructive dialogue that we believe is required to determine an outcome that is satisfactory to all concerned. We thank you for reading this proposal, and for considering it in the same spirit as it is being offered.

Robert G. Bednarik

Convener and Editor
International Federation of Rock Art Organisations

This proposal is being widely circulated among the stakeholders identified in it, and to hundreds of other interested parties.

RAR 22-000

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