

FEASIBILITY STUDY FOR THE ESTABLISHMENT OF A REGIONAL CENTRE FOR HUMAN EVOLUTION, ADAPTATION & DISPERSALS IN SOUTHEAST ASIA IN INDONESIA

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INTRODUCTION

1. The Republic of Indonesia hereinafter referred to as “Indonesia”, has proposed the establishment of a Regional Centre for Human Evolution, Adaptation & Dispersals in Southeast Asia (CHEADSEA) hereinafter referred to as “the Centre”, in Jakarta, Indonesia.
2. There are numerous Pleistocene (Palaeolithic) sites in Indonesia, as well as similar and comparable evidence of hominid (*H. erectus* and *H. sapiens*) dispersals and adaptations during the Pleistocene era up to the height of the Flandrian Transgression found throughout Southeast Asian countries, Papua New Guinea, and Timor Leste (ASEAN Plus Two)ⁱ.
3. Many of these sites are either already inscribed on the World Heritage List or are on the Tentative List of World Heritage of States Parties. There are also numerous sites identified in these same countries, which with further investigation may also qualify for World Heritage nomination. However, these sites remain inadequately researched due to lack of capacity in the use of modern research tools, or because of the need for collaboration with colleagues in the same geo-cultural areas who are working to research similar issues of early hominid evolution, dispersals, and adaptations during the Pleistocene when Southeast Asia (as well as the entire world) experienced a prolonged era of radical climate change.
4. The abundant Pleistocene (Palaeolithic) sites already identified in Indonesiaⁱⁱ and the potential for the discovery of many additional sites due to Indonesia's strategic geographic location and intact environmental setting, places Indonesia in a unique position to contribute to the region's compelling scientific need to enhance the capacity to develop methods, techniques, and technologies for investigation and conservation of the evidence of early hominid presence; to train and build capacity in the application of these methods and techniques; to foster research collaboration across the region; and to communicate to the scholarly and general public of the results of this research and its relevance to the understanding of human adaptation to climate change past and present.
5. For these reasons, Indonesia has proposed to UNESCO to establish and host CHEADSEA, a UNESCO Category 2 Centre within the framework of UNESCO's General Programme advancing the strategic objectives of the World Heritage initiative for the study of Human Evolution, Adaptations, Dispersals, and Social Developments (WH-HEADS).
6. On 24 December 2014, the Permanent Delegate of the Republic of Indonesia submitted to the Director-General of UNESCO an official request to consider the establishment of the Regional Centre for Human Evolution, Adaptation & Dispersals

in Southeast Asia (CHEADSEA) under the auspices of UNESCO (Category 2).

7. Following a request from the Government of Indonesia, UNESCO, with the assistance of a regional specialist consultant, conducted a study in October 2016 to assess the feasibility of the proposed regional Centre. The main findings are as follows:

(a) the establishment of a regional Centre in human evolution, adaptations and dispersals is justified in terms of the need for collaboration to build human resources capacities for the development of research and conservation methods, techniques and technologies; training and capacity-building in these methods; facilitation of research collaboration and for the communication of results of this research to the scientific community and to the general public.

(b) given the existence of a number of university research centres engaged in various disciplines of palaeontology, including institutions with competence in DNA analyses and dating techniques, entities specialized in digital documentation systems among other technologies within Indonesiaⁱⁱⁱ, as well as research and training institutions in some of the countries of ASEAN Plus Two involved in the study of palaeolithic sites, a regional centre with objectives and activities as proposed by the Government of Indonesia is essential for both a global and regional understanding of this field of study, conservation and interpretation of the remains. Collaboration through this regional Centre for research among these national institutions of the region, as well as for structured training opportunities for knowledge and skills upgrading in countries where required, would be the most effective way to support the efforts of States Parties and scientists of the Southeast Asian region in this regard, particularly for sites on the World Heritage List or on the National Tentative Lists of the States Parties to the 1972 World Heritage Convention^{iv}, before rapid urbanization and intensive land-use activities in these countries erase forever the important traces of the evolution of humanity in the region.

(c) the objectives, activities and modes of operation foreseen for the Centre are fully in accordance with the criteria approved by the UNESCO General Conference in 37 C/Resolution 93 (November 2013) concerning the creation of institutes and centres under the auspices of UNESCO;

(d) there is no regional institution of this kind in the Southeast Asian countries that at present offers, or has confirmed plans to set up in the foreseeable future, research and training activities such as those foreseen by the proposed Centre;

(e) given the instructions of the General Conference not to engage UNESCO resources in the establishment and operation of institutes, centres and the like, but rather to make UNESCO's technical and professional support available in other appropriate ways, the Director-General could extend UNESCO's cooperation in the creation and running of the proposed Centre on a cost-recovery basis, meaning that all costs including travel expenses, daily subsistence allowances and all other UNESCO staff-related costs incurred by calculated UNESCO staff time will be reimbursed through the Centre.

OVERVIEW OF THE PROPOSAL

8. The CHEADSEA proposal presented by the Government of Indonesia has endeavoured to address in detail the requirements specified in document 37 C/Resolution 93 (November 2013) “INTEGRATED COMPREHENSIVE STRATEGY FOR CATEGORY 2 INSTITUTES AND CENTRES UNDER THE AUSPICES OF UNESCO” approved by the UNESCO General Conference. Some of the salient aspects of the proposal are as follows:

(a) Objectives and functions

The objectives of CHEADSEA are to promote, facilitate and support collaboration between States Parties to the UNESCO 1972 World Heritage Convention in Southeast Asia (ASEAN Plus Two) in the field of human evolution, adaptations and dispersals during the Pleistocene era. The functional goal of this collaboration is to build human resource capacities for the realization of UNESCO strategic objectives with regard to the World Heritage HEADS initiative, through:

- development of research and conservation methods, techniques, technologies,
- training and capacity-building in these methods;
- facilitation of research collaboration; and
- communication results of this research to the scientific community and to the general public.

(b) Geographical coverage: ASEAN Plus Two: Brunei, Cambodia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam, Papua New Guinea and Timor Leste

(c) Temporal Range of Inquiry

The temporal range of the research collaboration to be fostered by CHEADSEA is that of the Pleistocene (Palaeolithic) era, now commonly agreed to date from approximately 2.5 million years ago to approximately 11,700 years ago when the Flandrian Transgression of sea levels reached their height, following the global melting of the last (Younger Dryas Sub-stage) period of glaciation, and Southeast Asia became an archipelagic region with a tropical monsoon climate. To date, the earliest evidence for the presence of hominids in the Southeast Asia comes from sites in Malaysia and Indonesia, two of which - Archaeological Heritage of Lenggong Valley and Sangiran Early Man Site- have been inscribed on the World Heritage List. Lenggong Valley has yielded stone tools dating to approximately 1.3 million years ago, while Sangiran Early Man Site and nearby sites have fossil remains of *H. erectus* which have been dated to as early as 1.49 to 1.66 million years ago. While these finds constitute the earliest evidence of the presence of hominids discovered to date in Southeast Asia, there are numerous other known sites which have yet to be investigated using modern tools and techniques, and presumably other sites remaining to be discovered, both in the island and continental regions of Southeast Asia, as evidenced by the dramatic recent discoveries of the World's oldest Palaeolithic rock and shell art in Maros Regency, South Sulawesi Province.

Other sites throughout Southeast Asia, some which have either been inscribed on the World Heritage List (for example, Trang An Landscape Complex in Viet Nam) or are

on the Tentative List of States Parties (for example, Tabon Cave Complex and all of Lipuun Point in the Philippines), and numerous other sites as well (including Tam Pa Ling in Lao PDR and Niah Caves in Sarawak, Malaysia on the island of Borneo) yield evidence of the presence of *H. sapiens* throughout the region by the Middle to Late Pleistocene approximately 50,000 years ago, at the height of the last glacial period when sea levels were lower than at present and land bridges connected much of what are today the islands of Southeast Asia with the continental mainland Asia.

There is also the intriguing evidence for the presence of possibly a third hominid species, *H. floresiensis*, in Southeast Asia. The fossil remains on the island of Flores in Indonesia have been found in association with stone tools in stratigraphic layers dating between 94,000 to 13,000 years ago, spanning from when Southeast Asia was a connected land mass, through the late Pleistocene when sea levels rose, until they reached their present-day height at the end of the Pleistocene era and beginning of the Holocene era. The changing climate and environment during the Pleistocene and the impact these changes had on the evolution, adaptations and dispersals of early hominid species during this period frames the temporal range of inquiry of CHEADSEA.

(d) Scope of Inquiry

1. The relationship of climate change to human evolution, adaptations, dispersals, and social developments during the Pleistocene Era
2. Climate change during the Pleistocene Era and during Pleistocene to Holocene Transition, including:
 - a. Sea level rise
 - b. Habitat diversification
 - c. Settlement patterns
3. Comparative fossil analysis of *H. erectus* and early *H. sapiens*
4. DNA genetic studies of *H. erectus* and early *H. sapiens*
5. Analysis of artifact assemblages, impacting on:
 - a. Resource extraction
 - b. Brain evolution
6. Biogeography
 - a. adaptation, migration and isolation across the Wallace Line
 - b. continental confluence in early human populations
7. Human role in environmental change and effect on flora and fauna
8. Role of humans in the extinction of (mega) fauna
9. Deposits of human remains and their relationship to land and settlement patterns
10. Reconstruction of (human) palaeo-environments and palaeo-diets

(e) Modalities of Collaboration

CHEADSEA programme supports the World Heritage Committee's five strategic objectives that guide the implementation of the World Heritage Convention (the "5 Cs": Credibility, Conservation, Capacity-building, Communication, Community).

CHEADSEA activities contribute specifically to the third C (Capacity building) to promote collaboration between ASEAN countries, Timor Leste and Papua New Guinea for developing methods, techniques, technologies; training and capacity-building; research collaboration; communication and community on the impact of climate change on hominid evolution during the Pleistocene Era within the framework of UNESCO

World Heritage HEADS programme.

To this end, the specific modalities of collaboration between concerned Member States shall include:

1. Developing new methods, techniques and technologies, for research and conservation e.g.
 - a. Conservation, in/ex situ
 - b. Materials analysis
 - c. Statistical methods
 - d. Mapping, remote sensing, and non-invasive site investigation
 - e. Underwater investigation
 - f. 3-D scanning, SEM (Scanning Electron Microscope), and other laboratory techniques
2. Training and capacity-building, eg in
 - a. Application of new methods, techniques and technologies (as above)
 - b. Environmental, archaeological and heritage impact assessment
 - c. GIS mapping tools and techniques
 - d. Design of research methodologies
 - e. Documentation
3. Research collaboration on areas outlined in the CHEADSEA Scope of Inquiry
4. Communications
 - a. Website (linked to UNESCO WH-HEADS website)
 - b. Reporting, publication, other media (television, video)
 - c. Public education, community out-reach
 - d. Conventions, exhibitions
 - e. Seminars, workshops, field trips

(f) Alignment with UNESCO and World Heritage Committee's Strategic Objectives:

CHEADSEA programmes will be undertaken in line with the framework of the UNESCO Medium-Term Strategic Objectives, Approved Programme and Main Lines of Action, as well as the World Heritage Action Plan for Capacity Building in the Asia-Pacific Region, and the World Heritage HEADS initiative for the study of Human Evolution, Adaptations, Dispersals, and Social Developments as outlined below:

Major Program IV - Culture

37 C/4 Strategic Objective 7: Protecting, promoting, and transmitting heritage

37 C/5 Main Lines of Action 1: Protecting, conserving, promoting and transmitting culture, heritage and history for Dialogue and Development

Expected results: Tangible heritage identified, protected, monitored and sustainably managed by Member States, in particular through the effective implementation of the 1972 Convention

World Heritage Action Plan for Capacity-building and training in Asia and the Pacific: utilization of Category 2 Centres and existing programmes

UNESCO HEADS:

- Deposits Useful for the reconstruction of palaeo-environments;
- Deposits with human remains, including intentional ones such as burials, burial mounds and megalithic graves;
- Evidence of human occupation, use and modification of caves or rock shelters, be it ephemeral or long-standing, such as in tells, and monumental or scarcely visible, such as kill and butchery sites;
- Long-sequence evolutive-landscapes related to hunter-gatherer communities;
- Places with intangible values related to criteria (vi) and associative cultural landscapes, such as palaeo-landscapes and rockart sites;
- Sites related to human mobility and traces of long-term repeated human movement.

(g) Legal Status of the Proposed Centre

The proposed Centre will operate within the framework of the Directorate General of Culture, Ministry of Education and Culture of the Republic of Indonesia. In accordance with UNESCO Document 37 C/Resolution 93 (November 2013) outlining the guidelines and criteria for the establishment of category 2 centres and institutes under the auspices of UNESCO, the centre will be granted the legal capacity (as per local jurisdiction) necessary to exercise its function. It will be in a position to manage funds, obtain and give payments for services rendered, and acquire all means necessary for its functioning. In addition, the structure of its Governing Body will allow UNESCO as well as representatives from other countries and/or institutions to be represented.

(h) Type and Nature of Cooperation Sought with UNESCO and the WH Committee's HEADS Programme

The collaborating CHEADSEA Member States and States Parties may seek the cooperation of UNESCO and the World Heritage HEADS Programme Secretariat and its Advisory Bodies, in the following:

- To participate, through a designated representative, in the Governing Board of the proposed CHEADSEA Category 2 Centre;
- To contribute intellectually to the construction of the CHEADSEA programme of activities,
- To contribute expertise and/or experts to the organization and execution of CHEADSEA training and capacity building activities;
- To inform and include CHEADSEA in WHC-HEADS programmes and activities,
- To utilize the CHEADSEA structure in the delivery of WHC-HEADS and other training and capacity building activities in the Southeast Asian region, as appropriate;
- To facilitate the Collaboration between CHEADSEA and other World Heritage Category 2 Centres.

(i) Network of Partnerships

CHEADSEA will be hosted by the Government of Indonesia and its secretariat hosted within and supported by the Directorate General of Culture, Ministry of Education and

Culture. The CHEADSEA network of partnerships will consist, in the first instance, of the World Heritage Focal Points of the participating States Parties and, through these Focal Points, the Site Management Offices of those inscribed World Heritage Sites and Tentative List Sites which are pertinent to the CHEADSEA scope of inquiry as outlined above and as elaborated by the CHEADSEA Governing Board.

Initially, it is foreseen that the founding Member States of CHEADSEA will include the following countries: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam, Papua New Guinea, and Timor-Leste (ASEAN Plus Two)

Subsequently, other Member States having congruent research, training, and conservation interests and those States Parties with inscribed or Tentative List sites of geographical, temporal, or other direct relevance to the CHEADSEA programme will be welcome to participate in the CHEADSEA network.

In addition to the above network of core partners, CHEADSEA will encourage the participation of archaeologists, researchers, conservation professionals, and site managers from other Palaeolithic sites with evidence or potential evidence of human occupation during the Pleistocene Era and during the Pleistocene-to-Holocene Transition.

To this end CHEADSEA will actively seek the collaboration of relevant research institutions located in the participating Members States and States Parties, and will invite the collaboration of other research institutions as may be appropriate.

CHEADSEA also anticipates to enter into a close partnership with other WHC Category 2 Centres for the realization of both the research and training objectives of the agreed upon CHEADSEA programme of work and as may be required to respond to the recommendations of the UNESCO World Heritage Center, the World Heritage Committee, and the WHC-HEADS programme initiative.

(j) Governing Board

The Governing Board shall comprise of:

1. Representative of the Government of the Republic of Indonesia
2. Representative of Member States
3. Representative of the Director General of UNESCO
4. Representative of WH HEADS programme

(k) Responsibilities of Participating Member States and States Parties

Member States and States Parties participating in CHEADSEA will be individually and independently responsible on a self-financing basis for contributing to the realization of the CHEADSEA objectives through:

- Participation in meetings of the Governing Board, either in person or by electronic means,
- Intellectual contribution to setting the annual programme of activities, as part of their role in governance of the proposed center;
- Promotion of CHEADSEA programme objectives and activities, as well as research results, to both the scholarly community and the general public in their respective countries.

- Timely provision of information about activities related to or impacting upon CHEADSEA programmes in their respective countries, including the provision of access to relevant research results.
- Compliance with UNESCO and WHC international standards of safeguarding, protection, and conservation of all identified and potential Palaeolithic sites located on their territories, including those in their territorial waters, irrespective of whether these sites have been inscribed on the World Heritage List or not;
- Identification and provision of logistical and financial support for the participation of trainers and trainees from their respective countries in the programme activities, including training and capacity building activities, of CHEADSEA, including those that take place within their respective countries or on the territory of other participating countries
- Provision of access to and available suitable venues, or research and/or training and/or communications activities organized by CHEADSEA
- Identification and provision of relevant in-country experts/expertise for the promotion and realization of CHEADSEA activities
- Provision of liaison and logistical in-country support for participants in research, training, and/or communications activities organized by CHEADSEA.

(I) Organizational Structure

The organizational structure of CHEADSEA shall consist of a Governing Board and a Secretariat.

The Governing Board will function as the decision-making body of CHEADSEA with the responsibility to set, modify, or annul all policies incumbent upon participating Member States, States Parties, and other affiliated institutions, bodies, and persons, and The Governing Board will set the requirements and standards for membership in the CHEADSEA network and its programme activities, The Governing Board will also set the annual CHEADSEA programme of activities, upon the advice of the Secretariat of CHEADSEA.

The Secretariat will be responsible for the implementation of the decisions of the Governing Board through the management of CHEADSEA administrative and its operational activities.

CHEADSEA will function under the Directorate General of Culture, Ministry of Education and Culture of Indonesia and the established support services of which will be made accessible to CHEADSEA as a regional hub for the implementation of integrated research, field training, and the promotion of network cooperation in human resource capacity building in the field of early human evolution, adaptations, dispersals, and social developments as well as in the protection, conservation, presentation, and management of Palaeolithic sites according to UNESCO international standards as exemplified by properties inscribed on the World Heritage List.

Terms of Reference of the CHEADSEA Governing Board: The major functions of the Governing Board, as a decision making body of the CHEADSEA, will include:

- Facilitate coordination among relevant representative of ministry, experts, and stakeholders at the national and international levels,
- Approving short, medium and long term programmes of activity,
- Approving an annual administrative operating budget, which will be submitted

- to the Indonesian Ministry of Education and Culture, for financing,
- Checking and evaluating quarterly, mid-year, and annual reports prepared and submitted by the Secretariat;
- Monitor staff performance and compliance with relevant laws and regulations.

Terms of Reference of the CHEADSEA Secretariat: The major functions of the Secretariat, in charge of the administration and implementation of the CHEADSEA network and its approved programme of, will include:

- Propose short, medium and long term programmes of activities, in line with CHEADSEA objectives and goals, for approval by the Board of Governors;
- Prepare and propose an annual budget (and other budgets which may be required) for the execution of the proposed programme of activities, as well as the operations of the administrative functions of the Secretariat and the statutory functions of the Governing Board to be submitted to the Board for onward transmission to the Ministry of Education and Culture,
- Develop and execute plans for the implementation of the programme of activities as approved by the Governing Board;
- Preparing quarterly, mid-year, and annual reports, to be submitted to the Governing Board
- Proposing new ideas to develop and expand CHEADSEA activities and programmes of co-operation to the Governing Board;

The Secretariat will consist of 4 divisions:

1. Division of Methods, Techniques, and Technology Development

The major functions of the Division, in charge of developing methods, techniques, and technology, will include:

- Compiling relevant current methods, techniques, and technology,
- Sharing best practices on current methods, techniques, and technology,
- Preparing modules of training together with Training and Capacity Building Division;

2. Division of Training and Capacity Building

- Developing training programmes in the field of human evolution, adaptations and dispersals,
- Fostering close cooperation between international and national experts, universities, research institutions, advisory bodies and the UNESCO WH Centre to develop capacity building programmes on management and conservation for related WH Sites,

3. Division of Research Collaboration

- Developing research collaboration activities in the field of human evolution, adaptations and dispersals among network of partnership;
- Coordinating research collaboration among network of partnership;

4. Division of Communication and Community

- Compiling data information and documentations on the activities undertaken by CHEADSEA,
- Disseminating results of CHEADSEA activities;
- Documenting activities;

CHEADSEA Secretariat personnel will include:

- Staff seconded and appointed by the Indonesian Government, namely the

Directorate General of Culture, Ministry of Education and Culture, or by the local government with related duty and function in the field of culture,

- Experts in the field of CHEADSEA Scope of Inquiry as proposed by the Secretariat;
- Experts in the field of World Heritage management as proposed by the Secretariat.

(m) Financing model

All start-up, on-going administrative and support functions of the proposed CHEADSEA World Heritage Category 2 Centre will be fully funded by the Government of Indonesia, with funds already allocated in 2015 within the national budget for the preparatory phase and in anticipation for the establishment of the proposed center in 2017. The Indonesian Government's allocation of funds for the operation of the proposed Center are secured for a six-year period through to the end of the year 2021 with the option of renewal for further periods of six years upon the positive evaluation of the Center's operations, as required by the Agreement with UNESCO for the establishment of UNESCO Category2 Centers.

Additional contributions to finance the CHEADSEA programme of activities will be obtained from national and international stakeholders, partners and cooperating institutions, benefiting from the services provided by the Centre.

The Government of Indonesia commits to facilitate and support, financially and with the required logistics, periodic evaluation by UNESCO and the WHC of the proposed Centre in accordance with the provisions of the Model Agreement.

CONCLUSION:

In light of the foregoing, the Executive Board may wish to consider the following decision:

The Executive Board,

1. Having examined the basic outline of the proposal to establish a Regional Centre for Human Evolution, Adaptations, Dispersals and Social Development (CHEADSEA) in the Republic of Indonesia under the auspices of UNESCO (document 37 C/Resolution 93 (November 2013)),
2. Aware of the importance of international and regional cooperation in building human resource capacities in the development of research and conservation methods, techniques and technologies; and in training and capacity-building in these methods, as well as in the facilitation of research collaboration and communication of the results of such research,
3. Welcoming the proposal of the Republic of Indonesia,
4. Taking note of the observations and conclusions of the present feasibility study,
5. Deeming the considerations and proposals contained therein to be such as to meet the requirements needed for the creation of institutes and centres under the auspices

of UNESCO (category 2), as stipulated in 37 C/Resolution 93 (November 2013)

6. Recommends that the General Conference at its 39th session approve the establishment of the Regional Centre for Human Evolution, Adaptations, Dispersals and Social Development in Southeast Asia (CHEADSEA) in Jakarta in the Republic of Indonesia under the auspices of UNESCO, and that it invite the Director-General to sign the corresponding agreement between UNESCO and the Government of the Republic of Indonesia

ⁱ ASEAN Plus Two : Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam, Papua New Guinea, and Timor-Leste

ⁱⁱ Palaeolithic sites in Indonesia : 1. Pacitan, 2. Leang Bua, 3. Semedo, 4. Patiayam, 5. Trinil, 6. Ngandong, 7. Parning , 8. Kedungbrubus, 9. Bojonegoro, 10. Sambungmacan, 11. Bumiayu, 12. Cijulang

ⁱⁱⁱ see Annex xx for List of Indonesian research and training partners of CHEADSEA

^{iv} see Annex xx for List of palaeolithic sites on the WH List and Tentative List in ASEAN Plus Two States Parties :