

RESEARCH PLANNING FOR THUNG YAI-HUAI KHA KHAENG, A CORE CONSERVATION AREA: “DRAWING ON THE PAST TO IMPROVE THE FUTURE”

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INTRODUCTION

In August 1993, a research planning workshop was held at the Khao Nang Rum research station in the Huai Kha Khaeng Wildlife Sanctuary. The workshop was hosted by the Seub Nakhasathien Foundation and the Royal Forest Department with financial support from the Asia Foundation.

The original purpose of the workshop was to give new impetus and direction to the research programme of the Thung Yai and Huai Kha Khaeng Wildlife Sanctuaries (Thailand's only natural world heritage site) by reviewing the history of research in the two sanctuaries, by developing a framework for future research, by identifying priority subjects for research and by preparing a set of guidelines for the management of research projects in general. In the event, discussions focused primarily on Huai Kha Khaeng, not on Thung Yai, but they were applied, and are applicable, to every conservation area in Thailand.

The workshop came out of a feeling among conservationists and wildlife researchers that the principal value of Thung Yai-Huai Kha Khaeng—its value as Thailand's most intact wildlife conservation area—is being undermined by a growing pressure to make the sanctuary more accessible to people, to the recreation industry in particular and all its inevitable by-products. This pressure is evident in a series of developments (actual and proposed) that may, or may not, have a negative impact on the sanctuary. The truth is we cannot know because the information needed to evaluate their environmental impacts is mostly not available. There is too little support for the kind of research that would get that information, and too little effort to match research objectives to present and future management needs.

More worrying still, even if there were more support for research, agencies that promote developmental projects of whatever kind are often unwilling to look at the long-term implications of their plans. They focus instead on the short-term gains. As a result, the principal purpose (and value) of Thung Yai-Huai Kha Khaeng is sometimes overlooked and thereby undermined. Instead of being respected, and cherished, as a refuge for some of Thailand's most threatened native species and the only place that retains a broadly intact ecosystem and fully functioning watersheds, it is seen more and more as a resource that is ripe for exploitation.

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This, of course, overlooks the fact that Thung Yai–Huai Kha Khaeng (together with the adjacent conservation areas) is a significant economic asset already, without being converted more directly into cash. Not only does it help sustain west Thailand's environmental equilibrium and its water supply (indirectly a major source of income and subsistence), it is also one of few places in Asia that can provide baseline data for ecological studies in seasonal tropical forest, now the rarest tropical forest type of all.

That is a priceless attribute and one of the main reasons Thung Yai–Huai Kha Khaeng is a world heritage site. Even so, many people are not aware of that uniqueness or the value it confers. Thus they propose projects for the sanctuary and its buffer-zones (such as bigger roads, reservoirs, mains electricity, plantations and major tourist facilities) that are likely to undermine that extraordinary attribute and gradually diminish the value of the sanctuary, a value that promises much more in the long-term than most development projects will ever deliver.

JUSTIFICATION FOR ECOLOGICAL RESEARCH

The best way to protect the integrity of Thung Yai–Huai Kha Khaeng as a priority conservation area while at the same time allowing it to contribute to the social, economic and ecological well-being of Thailand is to promote the kind of research that can address the bigger management issues, issues that take time to investigate properly. Such research should include socio-economic studies as well as taxonomic and ecological ones.

Research that is directed towards nature conservation (whether it be biological or socio-economic) is valuable many times over. First, it requires financial investments that can amount to a great deal of money. In Thung Yai–Huai Kha Khaeng, the monetary value of research in 1987 alone was Bht. 3,000,000, and that was a year in which the type of research done was actually fairly modest. Multiply that amount by the number of key conservation areas in Thailand and the total investment in research could be substantial. Moreover, given adequate incentive and encouragement, much of that money could come from sources overseas.

The second value of research is that it helps us understand the natural systems of the world in which we live and upon which we depend. Without this knowledge, it is hard to know if we are using nature's resources in the most sensible way. Environmental stresses now affecting Thailand (such as damaging floods, serious drought, longer dry seasons, higher temperatures and worsening fires) suggest that that we are not.

Third, research is an essential component of nature conservation programmes because it provides the information necessary for wise policy, planning and decision-making. Without this information, managers cannot formulate appropriate policies or be sure that their decisions will enhance, rather than reduce, the integrity of their conservation programme.

A REVIEW OF PAST RESEARCH IN THUNG YAI–HUI KHA KHAENG

A detailed review of the research done to date (1964–1993) in Thung Yai–Huai Kha Khaeng, complete with tables and bibliography, has been prepared as a result of this

workshop and is reproduced elsewhere (Stewart-Cox, 1994, unpublished manuscript). What follows is the summary that was presented at the workshop. It documents the evolution of a research station that is located in a uniquely interesting and important conservation area and has a history all its own.

The Huai Kha Khaeng and Thung Yai Wildlife Sanctuaries were gazetted in 1972 and 1974 respectively, but the first recorded wildlife research work in the area took place in 1964, 30 years ago. Since then, 89 projects have been carried out inside the sanctuaries and these have produced 111 research documents, of which 40 (36%) have been published.

Most projects (80%) were undertaken in the last ten years and most (also 80%) were done in Huai Kha Khaeng, not in Thung Yai. In the first sixteen years (1964–1979), only ten projects were done, all but one of them by non-Thai researchers. But in the next five years (1980–1984), a few more projects (8) were carried out and more of them (5:3) were done by Thais. This marked the beginning of a new trend, for between 1985–1989 the number of projects increased dramatically (to 46), 83% of them being done by Thai researchers.

This surge of interest in Thung Yai–Huai Kha Khaeng was partly prompted by the threat of the Nam Choan Dam to the area as a whole but it was also encouraged by a new collaboration between the forest biology unit of Kasetsart University (under Dr Uthis Kutintara) and the newly appointed chief of the Khao Nang Rum Wildlife Research station, Mr Nopparat Naksatit. Thirteen projects during that period were done for MSc degrees by KU students while fifteen others were done by RFD or KU researchers at the instigation of Mr Nopparat.

From 1990–1993, fewer projects were undertaken than in the previous three years (25 versus 33) but there were qualitative improvements in the output. More research documents were produced (39 versus 35) and more papers were published in international journals (17 versus 8). This is partly because more non-Thais have chosen to work in the sanctuary and partly because more western-educated Thais have done research there. It is good to produce papers in English (and better still to publish them) because the primary international language of science is English, but it is also good to have research documents in Thai for local teachers and students, protected area managers, conservation activists and media people. Only three documents to date have been produced in Thai and English in their entirety, and surprisingly few projects (8) have been truly collaborative ventures between Thai and non-Thai researchers.

Almost half (49%) the research projects to date have focused on mammals and birds (42 on large mammals, 4 on small mammals and 13 on birds). This may reflect individual interests and the fact that mammals and birds are the most conspicuous forest animals, but it also reflects the fact that Thung Yai–Huai Kha Khaeng is an exceptionally important sanctuary for mammals and birds, with many threatened species. Other topics include mineral licks, flora, vegetation and other groups of animals, but a lot of research still needs to be done, especially taxonomic work, vegetation mapping, hydrological studies and systematic surveys. Many areas of the sanctuary have yet to be visited by scientists.

To date, 35% of all project fieldwork has taken less than six weeks, 40% has taken less than six months, 20% of the projects spent 6–12 months in the field while only 5% have lasted 1–2 years. No project has spent more than two years on fieldwork although some projects now in progress are doing so but these are plagued by insecure funding.

Many of the projects done to date have been short-term general surveys because these are nearly always done first in an area that is biologically unknown, but the limited duration of fieldwork also reflects the availability of researchers, time and money. The Thai government does not appear to recognise that research is a key component of a good conservation programme so not enough money is provided to develop the skilled team of researchers necessary to do the work that needs to be done.

Approximately 35% of the projects done to date in Thung Yai–Huai Kha Khaeng were self-funded, 33% were funded by international NGOs and only 25% were funded by the government and those were mostly short-term projects. Of course, that ignores the fact the some self-funded projects were done by officials whose time was paid for by government and no doubt the government covered other costs such as transport, accommodation and assistance in the field. Nevertheless, the money provided by the Thai government for wildlife research is inadequate.

It would help a lot if government were to provide more funding for wildlife research since that money would be core-funding and would enable researchers to engage in what is probably the most useful research of all, namely long-term studies of ecosystem dynamics such as forest regeneration, the impact of fire, ecological relationships and population changes. Conservation areas that support long-term research projects usually attract other researchers because they can build on (and then add to) the database of information that long-term research engenders. They in turn bring other benefits such as more equipment, training opportunities for Thai researchers, contact with a range of other research institutions, funding and perhaps most useful of all, the intellectual exchange of ideas. It is hard for researchers to do good work in an intellectual vacuum.

Another way the government can support and encourage research is to provide a research station in a conservation area. A look at the geographic focus of research in Thung Yai–Huai Kha Khaeng shows that the Khao Nang Rum Wildlife Research Station has had a major impact on the research coverage in Huai Kha Khaeng: 69 projects have been carried out in that sanctuary compared with only 11 in Thung Yai, although nine more projects cover both sanctuaries. Furthermore, 44 (64%) of Huai Kha Khaeng's 69 projects were done in the neighbourhood of Khao Nang Rum. The rest either took place before the research station existed or they focused on habitats and species which occur in other areas (eg. the Huai Kha Khaeng itself, water buffalo or green peafowl) or they were sanctuary-wide surveys. But even then, a lot of the fieldwork was done out of Khao Nang Rum simply because it can serve as a base and because it can help researchers get to other parts of the sanctuary. Therefore a well-appointed wildlife research station clearly can generate research projects.

In the last few years, Khao Nang Rum has begun to expand its activities to cover more of the sanctuary. Thus it is gradually becoming more of a research centre, not simply a research station. This is a welcome development. It needs to expand its reach to the whole of the sanctuary and have satellite bases that researchers can use. But it also needs a research programme that defines its new objectives and reflects a broader vision.

In time it should also reach out to the neighbouring areas of Thung Yai–East, Mae Wong and Sri Nakharin to help them develop a research programme. At present we know little about these other parks and sanctuaries except that they are as important to Thailand as Huai Kha Khaeng because they are all part of the western forest complex and protect

the future of many of the nation's rare species and habitats. If their conservation value diminishes, so does the value of Huai Kha Khaeng. Research is the key to their survival because it can unlock information needed to protect the whole area properly. That is assuming, of course, that the first strategy of protection—policing—is effective.

SUMMARY OF WORKSHOP CONCLUSIONS

This workshop identified some of the problems and shortcomings that are constraining, even handicapping, wildlife research in Thailand. Most of the problems are practical, but they are largely the result of two more fundamental problems, namely attitude and organisation.

Attitude

As these workshop proceedings reveal, participants felt that the government does not recognise the fundamental importance of wildlife research to its protected area programme. It has no stated policy for wildlife research, or indeed for wildlife. Consequently, it does not provide adequate support for research, either in terms of money and jobs or in terms of planning. At present, wildlife research is seen as a minor technical service (*wichargarn*) that is peripheral to the planning and decision-making process of the conservation programme. In fact it should play a central role in feeding ecological information (*wichai*) into the planning process at every level of management. Only then can it really help nature conservation in Thailand.

Organisation

Even if the attitude of government changed to give research a bigger role, there would still not be the organisational structure necessary for researchers and research managers to give their best to the national conservation programme. There is, at present, no national body of appropriately qualified experts that can oversee, advise and co-ordinate all wildlife research work, whether it be done by government or non-government researchers, Thai and non-Thai, inside and outside conservation areas, at sea or on land. Instead, there are many separate channels through which research projects can get approval (or not, as the case might be), so there is no co-ordination, no central reference organisation, no common standard of evaluation, no monitoring and no means of arbitration by an impartial, experienced body.

Practical Problems

Most practical problems result from the fact that there is no central research organisation which can screen, evaluate, approve, monitor and co-ordinate all wildlife research projects. There problems include:

- * lengthy, difficult process of getting permission
- * insufficient resources/facilities for researchers
- * tensions caused by overlapping study sites
- * inappropriate or damaging research methods

- * improper or unprofessional behaviour by researchers
- * failure to provide written research results

Three other problems result from limitations within the government system (both at the Royal Forest Department and at universities), themselves a reflection of the fact that research is not given the recognition or resources it needs to contribute as much to nature conservation as it could.

- * time-constraints on researchers and research managers
- * poor use of research results in management/public education
- * inadequate production/dissemination of research results

Practical shortcomings

Even under present working conditions, the efficacy of wildlife research in conservation areas is handicapped by two practical shortcomings:

- a) there is no classification framework for research topics.
- b) there are no research management plans at either national or local level, and no list of research priorities.

Thus, workshop participants drew up a classification framework that can be used and updated over the years. It covers genetic diversity, species diversity, ecological diversity, ecological and behavioural studies and management/socio-economic studies.

Participants also identified research priorities for Huai Kha Khaeng, noting that we still do not have complete inventories of the species (especially plants) that occur there and therefore cannot easily undertake important ecological studies of key species, forest and community dynamics. Research priorities come under two headings:

- a) biodiversity/ecosystems
- b) sanctuary management/socio-economic significance

RECOMMENDATIONS

1. **Develop the role of research.** Ecological research is a necessary component of an effective conservation programme. Therefore the government should develop the role of research by giving it more support (in policy, in jobs and in money for equipment and projects) and by involving it in the planning and decision-making process.
2. **Create a national committee of wildlife research referees.** This should consist of experts in relevant fields who are qualified to review all project proposals and recommend modifications and/or approval (or not) to the relevant legal authority. This committee would solve many current problems because it could:

- * speed up the process of getting permission to do research
- * make the approval process more consistent and effective

- * improve co-ordination by acting as a reference centre
 - * help produce a national research programme and regulations
 - * monitor the results of research projects
3. Establish national regulations and directives for research.
 4. Produce a booklet of regulations and guidelines for researchers.
 5. Disseminate more research information to the public.
 6. Hold research planning workshops every three years or more often.

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