

**Building Adaptive Capacity to Environmental Change in  
Southeast Asia: Integrating Contributions from Theory,  
Models and Case Studies for Better Development Strategies  
(APN 2001-06)**

**Project Leader:**

Dr. Louis LEBEL  
Faculty of Social Sciences  
Chiang Mai University  
Chiang Mai 50200  
THAILAND  
Tel/Fax: +66-53-263-215  
Email: [llebel@loxinfo.co.th](mailto:llebel@loxinfo.co.th)

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Australia, Cambodia, China, India, Indonesia, Japan, Laos, Malaysia, Philippines, Thailand, United Kingdom, United States, Vietnam

**Introduction/Background**

Southeast Asia is a hot spot from both sustainable development and global change perspectives. The rates of economic growth have been faster than most parts of the world for several decades. As a result many parts of Southeast Asia are now more industrialized, diversified and integrated into the global economy than their counterparts elsewhere. Growth has been supported by rapid rates of land-use and -cover change, for the expansion of export-oriented agriculture, production forestry and new human settlements.

There are indications that growth and transformation has not been accompanied by a corresponding increase in resilience or the ability of ecological or social systems to maintain basic processes and behaviour following external shocks. The recent Asian economic crisis, for example, was a sharp reminder to the countries of Southeast Asia about how vulnerable their current development strategies are to the vagaries of investment flows. Almost at the same time the strong ENSO event of 1997/98 underlined the extent and scale of interactions between the climate system and human activities. One important consequence is there is a growing realization among the public and the policy community that such combined ecological-economic-social crises provide windows of opportunity for re-directing development in more sustainable and equitable ways, but this will require thinking about regional planning and management in new ways. Ways that recognize uncertainty, the importance of small disturbances and diversity for system resilience, the likelihood of alternative possible future states and the role of system feedbacks and adaptation processes (see, for example, [www.resilience.org](http://www.resilience.org)).

This project, thus, has three primary objectives: (1) To contribute to building better theories and models of resilience and adaptive capacity; (2) To improve the capacity of groups within Southeast Asia to utilise some of these ideas, theories and modelling tools for analysing adaptive capacity to regional and global environmental changes; and (3) To develop improved awareness among decision makers in business, government and resource management agencies about the behaviour of complex adaptive systems and explore ways of building adaptive capacity.

### **Outline of activities conducted**

The initial working group meeting ran on the 20-22 August 2001 immediately after the Resilience Alliance Science Meeting in Chiang Mai, Thailand. At this meeting the idea of integrated analysis of resilience of socio-economic system was tested out for the Ping River Basin case study in Northern Thailand. A full draft report of this meeting is available at <[www.icsea.org/ra/](http://www.icsea.org/ra/)> Most of the funding for the attendance of twenty-five participants to the meeting was secured from a grant from the McDonell Foundation to the Resilience Alliance.

A second small meeting on the “Resilience of Institutions and Politics” was held in Chiang Mai on the 27 February -1 March 2002. This is highly relevant to the overall aims of this project and was used as the final preparatory working group meeting for the main meeting. A copy of the programme for this meeting is available on the web at <[www.icsea.org/ra/](http://www.icsea.org/ra/)> The resilience meeting was held immediately after the synthesis workshop for APN project on Institutional Response to Global Change: The Consequences of Interplay between International Regimes and Local Institutions for the Forests of Southeast Asia (APN 2001-14) so that it was easy (and cheaper) for key international participants to attend both meetings. A program for this related meeting is available at <[www.icsea.org/pef/](http://www.icsea.org/pef/)>

The main and final wrap-up working group meetings, which may be combined, have been delayed until after the time of printing this report. Exact dates are still being negotiated with the key research groups. Details of the program will be posted on the web site.

### **Outcomes/Products**

Reports from the preparatory working groups and related meetings are available through the web site <[www.icsea.org/ra/](http://www.icsea.org/ra/)>. The final planned products are: (i) A synthesis report on the processes, research highlights and suggestions for future work in the region; (ii) a concise policy brief describing the imperatives for building adaptive capacity in the context of rapid transformation in Southeast Asia; (iii) a synthetic research paper centered on the analysis of the case-studies, but integrating these findings with new developments in theory. In the longer term it is likely that some of the case study groups will combine to write a joint book. The most important long-term outcome will be the nucleus of a network in the Asia-Pacific region with the skills and links to analyze in innovative ways the challenges of adaptation to global environmental change.

### **Future directions/Follow-up work**

The case studies being developed through this and other related projects sponsored by APN and other donors have great potential to be linked together in networks for synthesis and assessment in a comprehensive and more integrated way with many of the central issues of sustainability and global environmental change. I expect that SARCS and other global environmental change programmes in the Asia-Pacific region this will be one of the major goals for the next decade.

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