CHAPTER 7

EXPERIENCE WITH SCIENCE AND TECHNOLOGY POLICY REFORM AND PLANNING

CHAPTER 7:

EXPERIENCE WITH SCIENCE AND TECHNOLOGY POLICY REFORM AND PLANNING

This chapter is designed to provide a vehicle for reviewing all the lessons learned in previous chapters. Further, it demonstrates how to affect significant changes to science and technology policy in a country.

The process of changing science and technology policy is addressed in Professor **Bi Dachuan's** article about policy reform in China. China, like many other Asian countries, has a large informal sector. Also like other Asian countries, China has controlled development from a highly centralized policy perspective.

But, the current reform movement in China is designed to instill more initiative, responsibility and resources in relatively autonomous units. It is intended to put much of the decision-making in the hands of science and technology specialists who are best qualified to make the decisions. In that sense, China's reform movement can serve as a useful model for other Asian countries, many of which probably have to undergo similar but much less drastic reforms to achieve a more effective science and technology policy foundation.

The second article in this Chapter, by **Aqueil Ahmad** examines India's real experiences in science and technology policy and planning. Ahmad starts with the observation that British colonial rule left India's science and technology largely undeveloped and unorganized. He highlights the need, early in India's independence, to establish a political will, or commitment, to build a science and technology program. Reflecting the ideas of Chapters 1-2 of this compendium, Ahmad says that early effort focused on building a program that was sensitive to the relationships between science and Indian social and cultural patterns.

Ahmad then traces the development of India's comprehensive science and technology organizational infrastructure. He identifies the various roles and activities of agencies involved in the effort. In particular, he focuses on organizational weaknesses that came to light during development of the first science and technology plan.

But he also discusses shortcomings in the second plan--poor organizational communication, lack of criteria for decision-making, insufficient information on science inputs and needs. In effect, the Indian experience reinforces the value of Forsyth's conclusions about the essential elements of sound science and technology policy (Chapter 3).

In his conclusions, Ahmad concurs with Rahman and de la Pena (Chapter 4) in emphasizing the importance of a well conceived, participatory organizational structure. He joins Legaspi and Rana (Chapter 5) in arguing for decision criteria that can be supported and evaluated by appropriate indicators. He concludes (like Liyanage *et al* in Chapter 6) that quality indicators are key to a "good policy-making process."

Together the Bi and Ahmad articles share the lessons learned from experience in two of Asia's largest (and most densely populated) countries. Together they provide an empirical basis for examining the role of all policy-making elements discussed in earlier chapters of this compendium. The following questions are offered as a basis for determining the best way to apply these articles to the readers' own countries. They may be used in the self-study setting, or better yet, small-group discussion formats:

1. Briefly recount your country's experience with science and ttechnology planning and policy-making. Compare successive attempts at formulating and implementing plans.

   What science and technology goals were addressed?

   How were they derived?

Which leaders, governmental agencies and independent organizations played roles in planning?

What indicators were used? Where did they originate? How helpful were they?

2. How do Ahmad's "critical factors in science and technology policy-making" relate to your country's experiences?

3. What recommendations would you make for improving the quality of science and technology policy-making and planning, in your country?