

## SUMMARY OF TASK FORCE DISCUSSION PERIOD

### TASK No. 1: Materials Assessments for Congress: Stresses on the Total Materials Cycle

Discussion on the two Task Force reports revolved around five of the major issues raised in the reports: the implications of technology transfer for the U.S. competitive position; the suggestion in the reports that more governmental actions could be utilized as responses to stresses; the role of education in relieving stresses; the importance of recycling as a means to respond to stresses; and an apparent shift in conferees attitudes toward the needs of industry.

Some attendees were concerned that the suggestion to aid developing countries in their mineral exploration and extraction technologies might eventually place these "new" suppliers in competition with the United States in world markets. Although others agreed that such actions did pose such a risk, they felt that trade-offs might be necessary in order to develop adequate world supplies. It was agreed that OTA should undertake an examination of all these alternatives and should attempt to determine the impacts,

It was noted that one of the stresses mentioned had been a proliferation of uncoordinated (and sometimes conflicting) Government actions, such as environmental, health, and safety regulations. It seemed to some conferees that the suggestion of further Government actions in so many of the responses was in conflict; however, the OTA representatives did state that they considered no Government action as an acceptable alternative to be examined. Others in the audience suggested that some actions would be useful such as: Government support of information systems; performance of R&D; or, absorption of the nontechnical risks in international development,

In briefer comments, various attendees noted that recycling should have been given greater attention as a means to relieve stresses on the materials cycle. It was felt that technology was in hand to retrieve usable materials from municipal wastes, but that the more obsolete sources of secondary materials needed examination. There was some disagreement on this issue, since one attendee said that industrial materials users are aware of the value of their materials waste and attempt to recycle such,

The role of the FMS in public education of materials cycle stresses was brought up. This group has a new program for this and desire to have short "papers" in lay language which can be used for talks to public groups.

It was observed that the responses in both reports seemed to indicate a shift in the attitudes of the attendees toward more understanding of the needs and problems of private industry and market forces,

#### TASK No. 2: Government, Supplies and Shortages

Only two issues were raised in the discussion period in response to the two reports: various points about a materials information system; and the question of economic stockpiling,

Attendees discussed the fact that one report suggested that a materials information system need not be sensitive to political considerations. It was agreed that data should always be unbiased, but that attention to policy considerations could make such a system more able to respond effectively and quickly to immediate needs. It was suggested that data format in an information system could be varied according to the apparent decisions that might be called for in the near future. It was cautioned during the discussion that a top-down modification of existing materials information systems could have major perturbations on the accuracy and reliability of subsequent data for many years. OTA representatives pointed out that their report had recognized this possible effect,

It was pointed out that the two task forces had opposite views on the desirability of economic stockpiles. One viewed stockpiles as undesirable for normal conditions, while the other suggested that the strategic stockpiling concept could be extended to include this. Both groups accepted stockpiling of certain commodities in anticipation of abrupt supply disruptions as reasonable. Some attendees felt the task forces had not paid enough attention to this topic, especially in view of the fact that the country has already embarked partially on such a policy by passage of legislation to stockpile petroleum.

#### TASK No. 3: **Conservation of Energy in Materials** Processing

Most of the comments on these reports concerned the selection of certain policy tools to control the conservation of energy and materials. It was suggested that the task forces had been too narrow in their recommendations, since they had focused on tax credits alone. It was stated that such tax credits are generally considered to be ineffective and inefficient for accomplishing a chosen goal. Other policy tools suggested were: taxation of inefficient energy users; direct subsidies; guaranteed loans for equipment modifications; and others. Although one task force said they had discussed punitive measures, they had rejected

them since such measures often resulted in extremely negative economic impacts on certain industries. An industry representative expressed the opinion that certain of the suggested alternatives would result in Government control, an option the industry would not generally be willing to accept. It was also noted that it should not be assumed that industry was not currently attempting to conserve energy on its own, as a response to rising costs and potential scarcities. The problem was that major processing modification took a number of years to gain full utilization.

Other comments from the audience included the notion that perhaps conservation should not even be pursued as a policy. This conferee suggested that energy needs could be met now by conversion of all stationary facilities (coal consumption). New technology could then be relied upon to provide energy solutions for the long term.

Another conferee commended both task forces for making valuable contributions to the reduction of short term energy use but wondered why they hadn't condemned some of the suggestions that are often made about the possibilities for certain long term percentage reductions in energy use by the adoption of certain conservation policies now.

In the final comment, an attendee wondered whether a group such as this could help industry plan for changes in energy costs due to rising prices and conservation measures. He explained that industry must plan years in advance for costing purposes and that the fluid situation in energy costs and payoff from conservation measures made such planning difficult. He felt that a "cross-over" point could be desired in these costs which would be helpful to industry.

#### TASK No. 4: The **Role of Materials in Defense**

Much of the discussion of these reports centered on the "centers of excellence" concept or on the suggested allocating of a set percentage of foreign military sales as R&D costs to be diverted back into fundamental R&D.

The conferees differed on these concepts, although support for and disagreement with each idea could be heard. One of the task forces had supported the idea of creating "centers of excellence" if existing facilities could not be identified. One conferee said such centers never do turn out to be "excellent" and suggested instead that short-lived, interdisciplinary task forces could be formed to solving processing problems. The other task force clarified that they had taken a cautious approach to the idea of these centers and had not suggested creation of permanent centers by the Government,

There was concern among some of the attendees about the suggestion for earmarking of part of the RDT&E costs in foreign military sales for a revolving fund for fundamental/basic research. It was clarified by the task force members that such funds would not be tied to any particular budget but should relate to the basic research needs for meeting broad DOD objectives. One industry participant felt that such a clause would only increase the price of the equipment, and decrease the competitive edge of the United States, or would be taken out of the profit portion of the supplier. He thought that a better method for increasing fundamental R&D efforts for DOD needs would be to change the effects of the Mansfield amendment.

A university participant felt that all the talk of "more fundamental R&D" was rather useless. He suggested that basic research has nothing to do with the real needs of DOD, or any other mission-oriented agency. In further remarks, he stated that the Federal agencies/institutions were "psychologically incapable" of performing basic research in any case.

#### **TASK No. 5: Utility of Organic Renewable Resources**

Most of the discussion on these reports centered on the definition of "resource" in this context, and on two issues not considered by task forces in their reports.

One attendee pointed out that the real resource, in his opinion, had not been clearly defined by these two reports. He felt that it was important when talking of "renewable resources" to consider topics such as genetic stock, nutrients in the soil, and sunlight. Too much emphasis had been placed on biomass, which is really the product of the renewable resources. He suggested that a change in point of view would have led to discussion in the reports of such topics as soil conservation and preservation. The task force chairmen agreed that these topics were important and that they would have included such discussions in any comprehensive report on this subject. They clarified that it was important to distinguish the definition of "resource" as used in this discussion, and that used by the US. Bureau of Mines, or the Department of Interior, in their work. It was noted that the COR-RIM report did try to define the term "renewable resources" and could be consulted when in doubt.

One attendee suggested that it would have been interesting to consider whether materials science programs in universities should include wood-derived materials. He said that there was still some lack of acceptance of these materials in design and engineering which could be overcome partially by university curriculum improvements.

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Another conferee wondered whether the task forces had considered the extent to which this sort of technology could be used to help underdeveloped countries, rather than concentrating so much effort on trying to substitute such materials for established uses in developed countries. Although the reports did not address this issue, the task force members agreed that the issue warranted examination. The opinion was voiced that wood was already used to a great extent by such countries. It was pointed out, however, that poor management practices in such countries had destroyed major areas of the world for renewable resource production. Therefore, it would be useful to examine the possible uses of technology to revitalize these areas,