

Introduction

A large number of Commonwealth countries are making efforts to popularise science and technology to achieve scientific and technological literacy amongst the public at large. A number of strategies are being employed to reach different target groups. In order to assist member countries in their efforts, the Commonwealth Secretariat has started a project on popularisation of the culture of science and technology.

Regional Expert Group Meetings were organised to identify the efforts which have already been made by different countries, problem being faced by them, ways forward and strategies that could be employed in the popularisation of science and technology programmes. The Regional Expert Group Meetings made a number of recommendations, which are being followed by the Commonwealth Secretariat and individual countries. A number of case studies from Asia have been published. The present booklet is a further contribution to existing Commonwealth countries in their efforts to popularise science and technology and contains a set of case studies from Africa. In the same series a book on Using Museums to Popularise Science and Technology has also been published.

There is a growing worldwide concern about pragmatic strategies for initiating entire populations into the important form of human understanding enshrined in science and technology. It is now widely acknowledged that science and technology exert a profound influence on such diverse areas as our interaction with the physical world; patterns of production and distribution of goods and services; socio-economic life styles of communities; and even the value systems of some nations. An understanding of science and technology can therefore be regarded, as one of the most essential pre-requisites for coping with facts, principles, forces, gadgets and practices, which shape the human world. It is now a globally accepted reality that science and technology are indispensable components of modern society and can be used as potent means for development. It is largely because of their capacity to meet our unending quest for social and economic prosperity besides comfort and security. The achievement in genetic engineering and medicine, information technology and space science are indeed mind-boggling. But in the wake of the existing economic divide and the knowledge gap between the 'haves' and the 'have-nots', science and technology assume an added significance for developing countries. And in this perspective, science and technology education becomes imperative for societal development. Undoubtedly this is an extremely formidable task, particularly, because the developing nations are facing

tremendous resource crunch in providing even 'basic education for all'. The efforts made so far in this direction have fallen woefully short of societal needs and expectations.

We have had rich and poor nations, people in each village/society, and that we still continue to have, but a whole group of nations being reckoned as rich and another as poor is a relatively new phenomenon. It is unfortunate situation that a little over 23 per cent of the world living in developed countries have access to nearly 80 per cent of the resources, and the remaining about 77 per cent have access to only 20 per cent of the resources – an imbalance that has vast potential for unrest and instability. What has contributed to this imbalance? Is it language, religion or race, the economic organization of the political systems, or the area of the land and natural resources that have generated this inequality? The rich nations are what they are because of their mastery over science and technology (S&T), ability to create new knowledge in S&T, and capacity to apply the knowledge so generated for the social and economic uplift of their people. The capacity of a nation to create, master and apply knowledge in a discipline depends on the level of higher education and research. Moreover, the capacity to absorb new tools and processes that may be generated depends on the level and spread of education.

Even to be able to buy or borrow knowledge in science and technology and to put it to appropriate use, a nation has to adapt it to suit its special requirements and it is believed that for one to be able to make use of an innovation with necessary modification and adaptation, one should have very nearly the capacity for making the innovation itself. Further, any new tool or process can be used only if disseminated among and absorbed by the people. This requires that science and technology must be rooted in the cultural ethos and values of the respective societies. Further, to build bridge and minimize inequitable distribution of resources requires collaboration and learning from each other. It is in this context that Commonwealth Secretariat sponsored this volume and it is heartening to note that several indigenous technologies/experiences have been presented that should benefit the practitioners of science and technology.

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PART I

Chapters 1 and 2 review the role of science and technology in individual, community and national development. Despite high hopes and a substantial allocation of scarce funds, science and technology have not fulfilled the expectations of countries of sub-Saharan Africa. Part I argues that most of what has been and is currently being practised is not truly science and technology. Rather than participating in knowledge production, Africa consumes the products of science and technology. Only when African countries break with tradition and popularise an inquiring, problem-solving science and technology can her peoples solve pressing problems of development and participate actively in the democratic process. Chapter 3 suggests ways to reprioritise the research portfolios of the countries of sub-Saharan Africa to better meet the continent's development needs.