

PREFACE

Soil erosion, its transportation and subsequent deposition in reservoirs is a universal problem. Uncontrolled deforestation, forest-fires, over-grazing, improper methods of tillage, unwise agricultural practices and other man's activities are responsible for accelerated soil erosion. Annually huge amount of soil is eroded every year in India as a result of sheet, gully and ravine erosion.

During the last five decades after independence, India has constructed a number of major/medium river valley projects involving and creation of reservoirs for flood control, irrigation and hydropower. As these storages are subject to silting, sedimentation of reservoirs is in fact a matter of vital concern to all associated with water resources development projects. Silting not only occurs in the dead storage but also encroaches into the live storage capacity which impairs the intended benefits from the reservoirs. Therefore, the problem of sedimentation needs careful consideration and there is an urgent need to review the status of reservoir sedimentation.

For proper management of reservoirs, it is essential to assess the current stage of siltation and predict the manner in which reservoir will get silted and will change the hydrologic conditions in the area. The current practice of carrying out sedimentation surveys is costly and time consuming. The remote sensing approach which uses the satellite data can provide synoptic, repetitive and timely information regarding the water spread area of the reservoir for periodic estimation of reservoir capacity between observed water levels. The technique is easy to apply and is cost-effective for assessment of reservoir sedimentation. This technology has passed its nascent stage of development and now it needs to be standardized for wider applications.

On the recommendation of TAC of NIH, this workshop is being organized with specific focus on application of remote sensing techniques for assessment of reservoir sedimentation. It is hoped that there would be enlightened discussions on various aspects of assessment of reservoir sedimentation using the remote sensing data. The experiences of the research workers and field engineers at various organizations will be assimilated and this would lead to standardization of methodology and identification of further research needs in this important area.


(S M Seth)

Director, NIH

Workshop Coordinator

*Dr. S K Jain,
Scientist F & Head
Water Resources Systems
Division*

Tel : 91 1332 72906-09 ext 223

Fax : 91 1332 72123

Email : skj@cc.nih.ernet.in