

Preface

"You must be the change you wish to see in the world"

Mahatma Gandhi

Volume 3 of this 5 volume series adds some more examples on phytoremediation of heavy metal and metalloid contaminants from terrestrial and aquatic ecosystems. In this volume, various studies on phytoremediation of mining areas, agricultural soil, crude oil contaminated soil, shooting range soil and industrial areas have been included. The importance of fast growing trees, wild grasses, aquatic weeds, ferns, hyperaccumulator and some transgenic plants in removal, degradation or stabilization of heavy metals and metalloid has been described. Information on heavy metal uptake, tolerance mechanisms and the role of metal transporters in phytoremediation have also been provided. The role of phytochelatins, biochar and green sorbents in phytoremediation of heavy metal contaminated soils and water has been described in different chapters of this volume. The chapters in volume 3 also illustrate how phytoremediation applications can serve as one of several useful components in the overall management and control of environmental contaminants especially heavy metals and metalloids. Volume 3 of this book series provides additional accounts of some selected phytoremediation research projects and case histories from specific sites and/or laboratories. The editors and contributing authors hope that one result of publishing this book will be to provide a wide range of useful experimental data derived from global applications of phytoremediation. Hopefully, like the previous two volumes of this book series this volume can also provide new insights into the advantages and disadvantages of phytoremediation to manage the continuing threat of ecosystem degradation resulting from anthropogenic inputs of environmental contaminants.

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Phytoremediation

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