

AN INTERNATIONAL INTERDISCIPLINARY LATERITE REFERENCE COLLECTION (IILRC)

BY

G. STOOPS *

SUMMARY. – This contribution deals on the one hand with the need for a reference collection of lateritic profiles, as an aid for standardisation of the descriptions and the classification of lateritic materials, and on the other hand with the practical realisation of the IILRC.

RÉSUMÉ. – *Une collection interdisciplinaire internationale de références latéritiques («IILRC»).* – Cette communication traite d'une part de la nécessité d'établir une collection de références des profils latéritiques, en tant qu'aide pour la standardisation des descriptions et pour la classification des matériaux latéritiques, et d'autre part de la réalisation dans la pratique de la «IILRC».

SAMENVATTING. – *Een internationale interdisciplinaire referentieverzameling van laterieten («IILRC»).* – Deze tekst handelt enerzijds over de noodzaak van een referentieverzameling van laterietprofielen, als hulp voor standardisering van de beschrijvingen en de klassificering van laterietmaterialen, en anderzijds over de verwezenlijking in de praktijk van de «IILRC».

Introduction

During the Second International Seminar on Lateritisation Processes, held in São Paulo (Brazil) in 1982, in the framework of the International Geological Correlation Programme (IGCP) project 129, the need for a reference collection of laterite profiles was expressed. The International Soil Reference and Information Centre (ISRIC, formerly International Soil Museum) in Wageningen (the Netherlands) was proposed as a suitable place to display such a collection. It should consist of 12 to 15 selected "laterite

* Laboratorium voor Mineralogie, Petrografie en Micropedologie, Faculteit van de Wetenschappen, Rijksuniversiteit te Gent, Krijgslaan 281, B-9000 Gent (Belgium).

profiles", including e.g. lateritic bauxites, karst bauxites, nickel laterites, plinthite and manganiferous laterites.

The need of the IILR

Discussions during meetings of the IGCP-129 working groups clearly demonstrated the need of reference materials as an aid for standardisation of the description and classification of lateritic materials.

Although geologists, geomorphologists, soil scientists, geochemists and civil engineers have all a different approach towards laterites, their collaboration becomes more and more important, both from a scientific and practical point of view. In many cases however their mutual understanding is hindered by the use of deviating terminologies and classifications for laterite types and structures. Even within a same discipline communication may be poor as a result of the lack of standardised terms. In many cases a similar material or structure is called by different names, or, what is worse, a same name is used for different things.

A standardised terminology for laterite types, structures and textures could serve many purposes. First of all, the immediate advantage would be to make communication between scientists of different schools and different disciplines more easy and more productive. Moreover, it would enable to get a better insight in the regional, chronological and genetical distribution of different types. Hopefully, specific textures and structures can be linked with a given chemistry or mineralogy.

As laterites are very complicated and heterogeneous bodies, a standardised terminology, can only be achieved when scientists can refer to some concrete examples that can be consulted and that are systematically analysed and described.

Practical realisation

In October 1983, a group of specialists, mainly members of the IGCP-project 129, met in Ghent (Belgium) in order to discuss the practical organisation of the International Interdisciplinary Laterite Reference Collection. A Working Party, consisting of following scientists was proposed :

Dr. G. J. J. Aleva (industry), the Netherlands ; Dr. Gy. Bardossy (mineralogy, bauxites), Hungary ; Dr. C. R. M. Butt (geochemical prospection), Australia ; Prof. R. Burland (engineering properties), United Kingdom ; Dr. M. Hermelin (education), Colombia ; Dr. M. J. McFarlane

(geomorphology), United Kingdom ; Mr. M. L. Moura (secretary), the Netherlands ; Dr. W. G. Sombroek (soil science, agronomy), the Netherlands ; Prof. Dr. G. Stoops (soil science, mineralogy), Belgium. In addition about twenty counsellors from different disciplines and countries will ensure the broadest possible coverage.

Although efforts have been made by a group of participants of the IGCP project 129 to establish a systematic terminology and classification of laterite structures and textures (e.g. ALEVA, 1982), no definite agreement was reached. Therefore, one of the tasks of the Working Party is to develop a standard terminology. This should be compiled in a Handbook on the Description of Laterites and Laterite Profiles, which should be well documented and illustrated. A second task is to select the profiles to be sampled for the collection. The problem hereby is to illustrate as much different types and structures as possible, using a limited number of profiles. And last but not least, the morphological, chemical and mineralogical analyses of the different profiles have to be coordinated, in order to make comparisons between different profiles possible. This may lead moreover to a standardisation of analytical techniques for laterite research in future.

For the moment, no international funds are available to start sampling and analysing profiles for the collection. Therefore special efforts of individual institutes or countries are necessary. The example has been given already by the Netherlands, where the study of a few laterite profiles will be undertaken. It would be desirable that also Belgian Institutes would contribute to this international project.

REFERENCE

- ALEVA, G. J. J. 1982. Suggestions for a systematical structural and textural description of lateritic rocks. — *In*: A. J. MELFI & A. CARVALHO (ed.), Lateritisation processes, Proceedings of the 2nd International Seminar on Lateritisation Processes (São Paulo, Brazil, 1982), pp. 443-454.

