### Accepted Manuscript

Partitioning and potential mobilization of aluminum, arsenic, iron, and heavy metals in tropical active and post-active acid sulfate soils: Influence of long-term paddy rice cultivation

Tanabhatsakorn Sukitprapanon, Anchalee Suddhiprakarn, Irb Kheoruenromne, Robert J. Gilkes

PII: S0045-6535(18)30116-4

DOI: 10.1016/j.chemosphere.2018.01.099

Reference: CHEM 20680

To appear in: ECSN

Received Date: 24 November 2017

Revised Date: 17 January 2018

Accepted Date: 22 January 2018

Please cite this article as: Sukitprapanon, T., Suddhiprakarn, A., Kheoruenromne, I., Gilkes, R.J., Partitioning and potential mobilization of aluminum, arsenic, iron, and heavy metals in tropical active and post-active acid sulfate soils: Influence of long-term paddy rice cultivation, *Chemosphere* (2018), doi: 10.1016/j.chemosphere.2018.01.099.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

# Chemosphere June Transmission

<u>M</u>



#### ACCEPTED MANUSCRIPT

| 1  | Partitioning and potential mobilization of aluminum, arsenic, iron, and heavy metals in   |
|----|---|
| 2  | tropical active and post-active acid sulfate soils: Influence of long-term paddy rice   |
| 3  | cultivation   |
| 4  |   |
| 5  | Tanabhatsakorn Sukitprapanon <sup>a,b,*</sup> , Anchalee Suddhiprakarn <sup>c</sup> , Irb Kheoruenromne <sup>c</sup> and Robert |
| 6  | J. Gilkes <sup>d</sup>  |
| 7  |   |
| 8  | <sup>a</sup> Soil Science and Environment Section, Department of Plant Science and Natural Resources,                           |
| 9  | Faculty of Agriculture, Khon Kaen University, Khon Kaen 40002, Thailand   |
| 10 | <sup>b</sup> Research Group of Soil Organic Matter Management and Problem Soils in Northeast                                    |
| 11 | Thailand, Khon Kaen University, Khon Kaen 40002, Thailand   |
| 12 | <sup>c</sup> Department of Soil Science, Faculty of Agriculture, Kasetsart University, Bangkok 10900,                           |
| 13 | Thailand  |
| 14 | <sup>d</sup> School of Agriculture and Environment, The University of Western Australia, 35 Stirling                            |
| 15 | Highway, Crawley, WA 6009, Australia  |
| 16 | * Corresponding author: T. Sukitprapanon (tanasuk@kku.ac.th)  |
| 17 |   |
| 18 | Highlights  |
| 19 | • Soil acidification causes the release of labile Al  |
| 20 | • Mobilization of As, Cu, and Pb is limited by coprecipitation with Fe oxide minerals   |
| 21 | • Mobilization of Co, Mn, Ni, and Zn is elevated in AASS and PAASS  |
| 22 | • Labile Mn, Ni, and Zn are dominant in the unoxidized layer of PAASS   |
| 23 | • Labile fraction of Co is not high in AASS and PAASS   |
| 24 |   |

Download English Version:

## https://daneshyari.com/en/article/8851976

Download Persian Version:

## https://daneshyari.com/article/8851976

Daneshyari.com