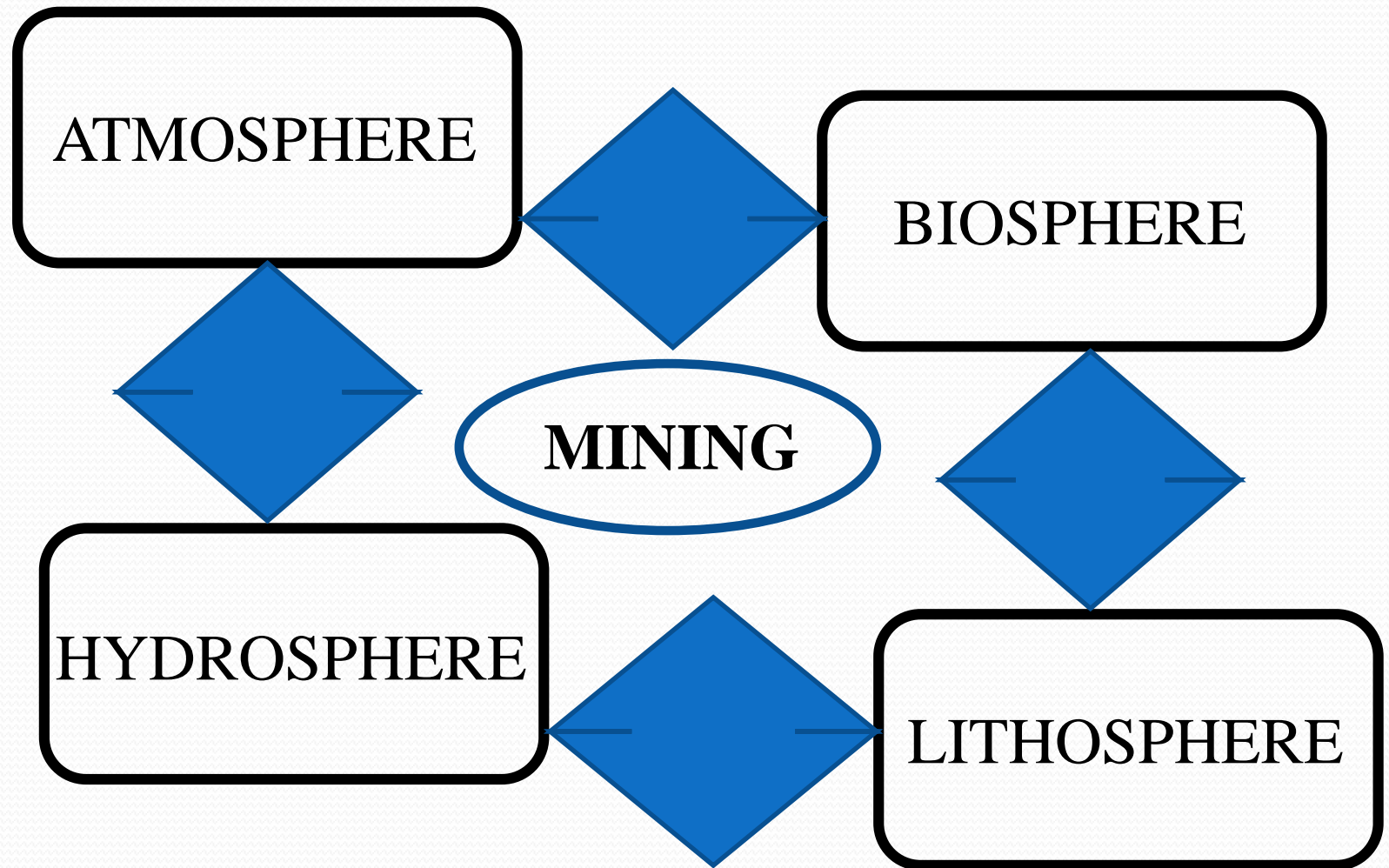


ARTISANAL/SMALL SCALE MINING & THE ENVIRONMENT IN GHANA

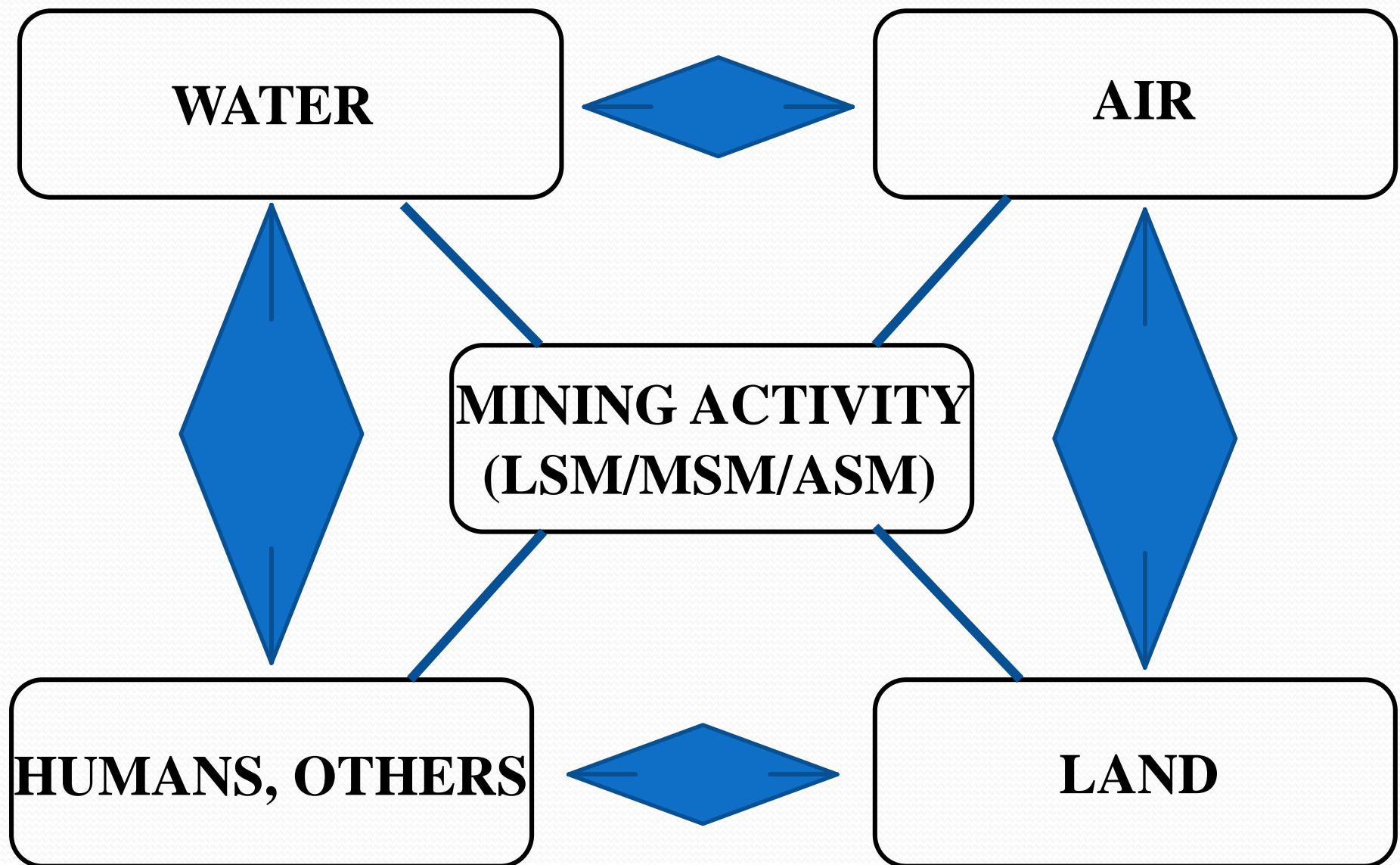


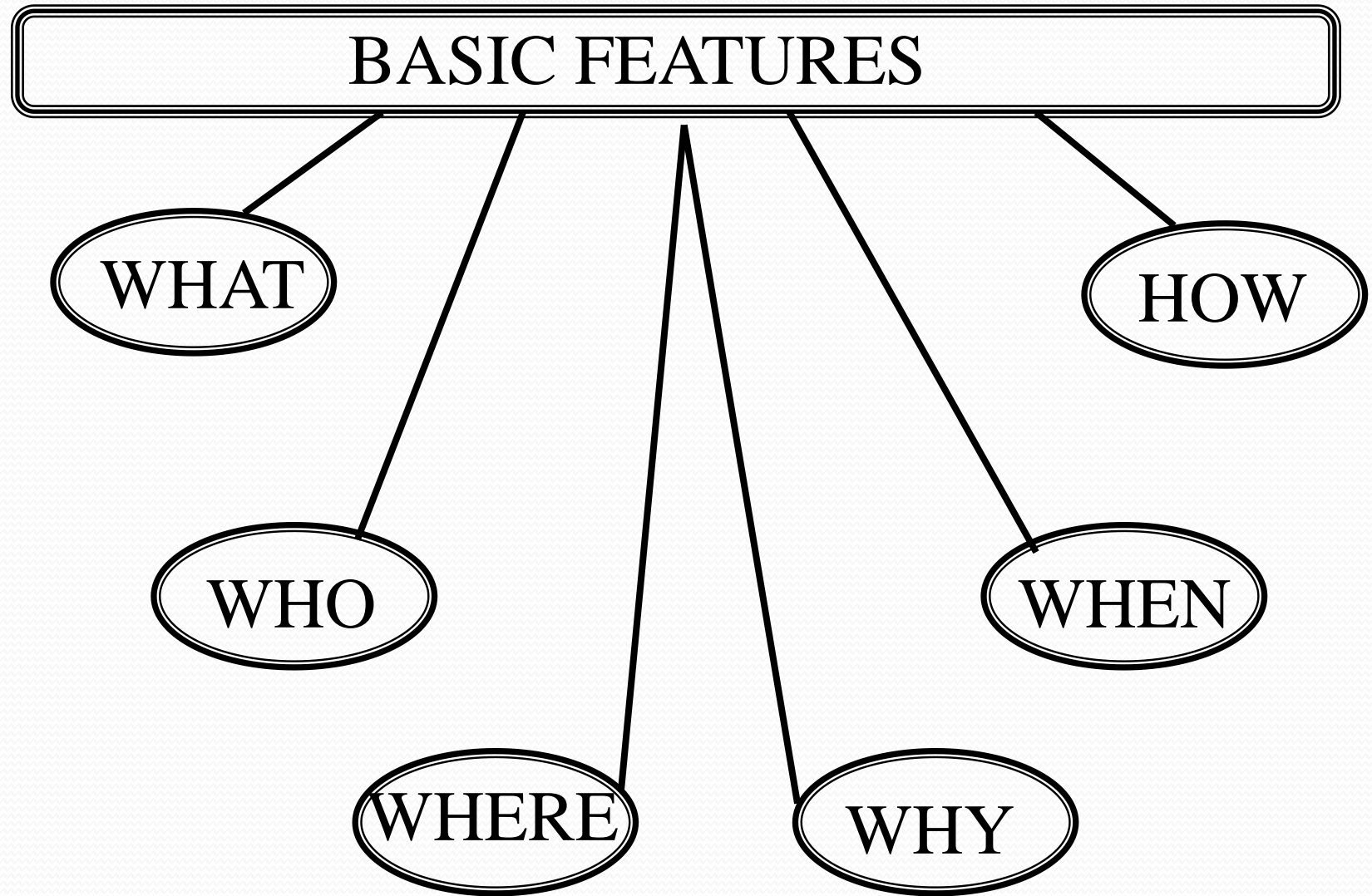
F. K. NYAME (fnyame@ug.edu.gh), DEPT. OF EARTH SCIENCE, UNIV. OF GHANA

MINING & GEOCHEMICAL RESERVOIRS

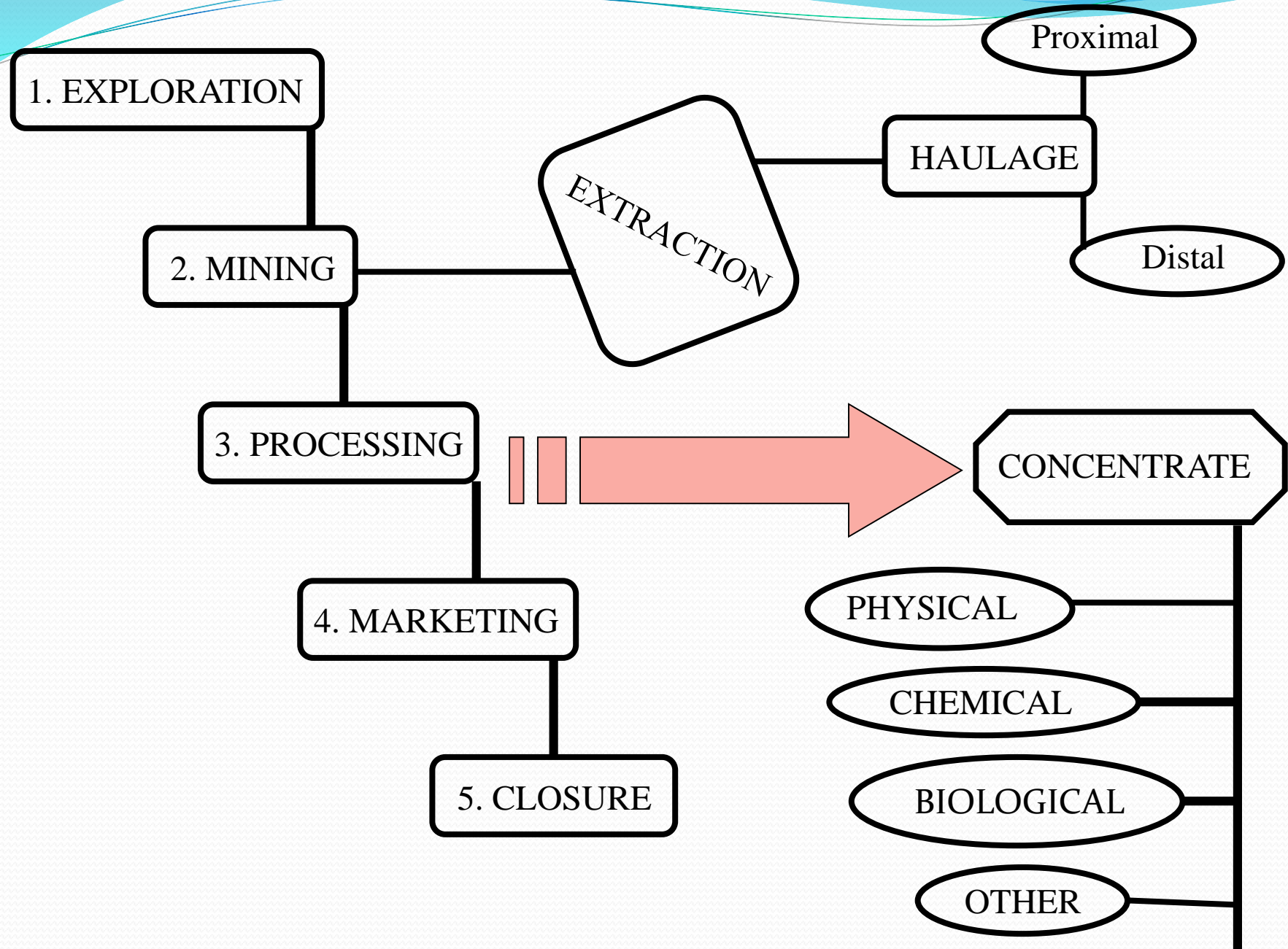


MINING & ENVIRONMENTAL RESOURCES





STAGE OF MINING ACTIVITY & IMPACTS



MAJOR FACTORS IN RELATION TO ENV'TAL IMPACTS

- ❖ LOCAL-GLOBAL
- ❖ NATURE & TYPE OF ASM ACTIVITY
- ❖ GEO-X'TICS OF MINERAL/MATERIAL MINED
- ❖ STAGE OF ASM ACTIVITY
- ❖ GEOG. LOCATION, PARTICIPANTS & SCALE
- ❖ HISTORY & DURATION OF ASM ACTIVITY
- ❖ MINING & PROCESSING METHODS
- ❖ GOVERNANCE ISSUES
- ❖ INFORMATION-AVAILABILITY & DISSEMINATION

ASM SPECIFIC ENV'TAL IMPACTS IN GHANA



LAND RESOURCES

WATER RESOURCES

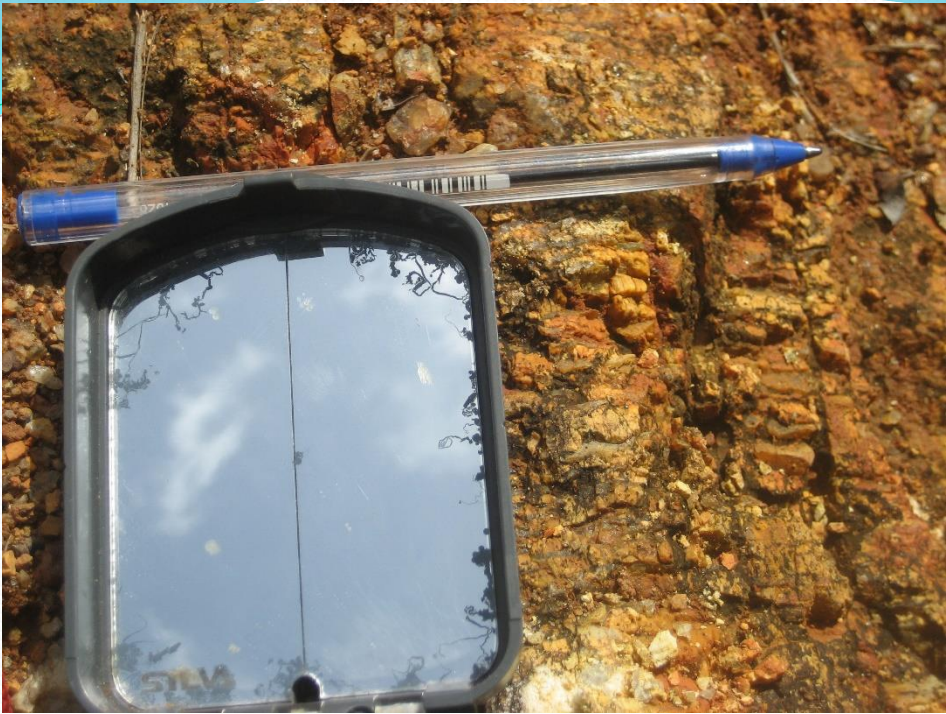
AIR QUALITY

NOISE & VIBRATIONS

MINE WASTE

PUBLIC/HUMAN HEALTH

AESTHETICS



ASM & ENV'TAL IMPACTS IN GHANA

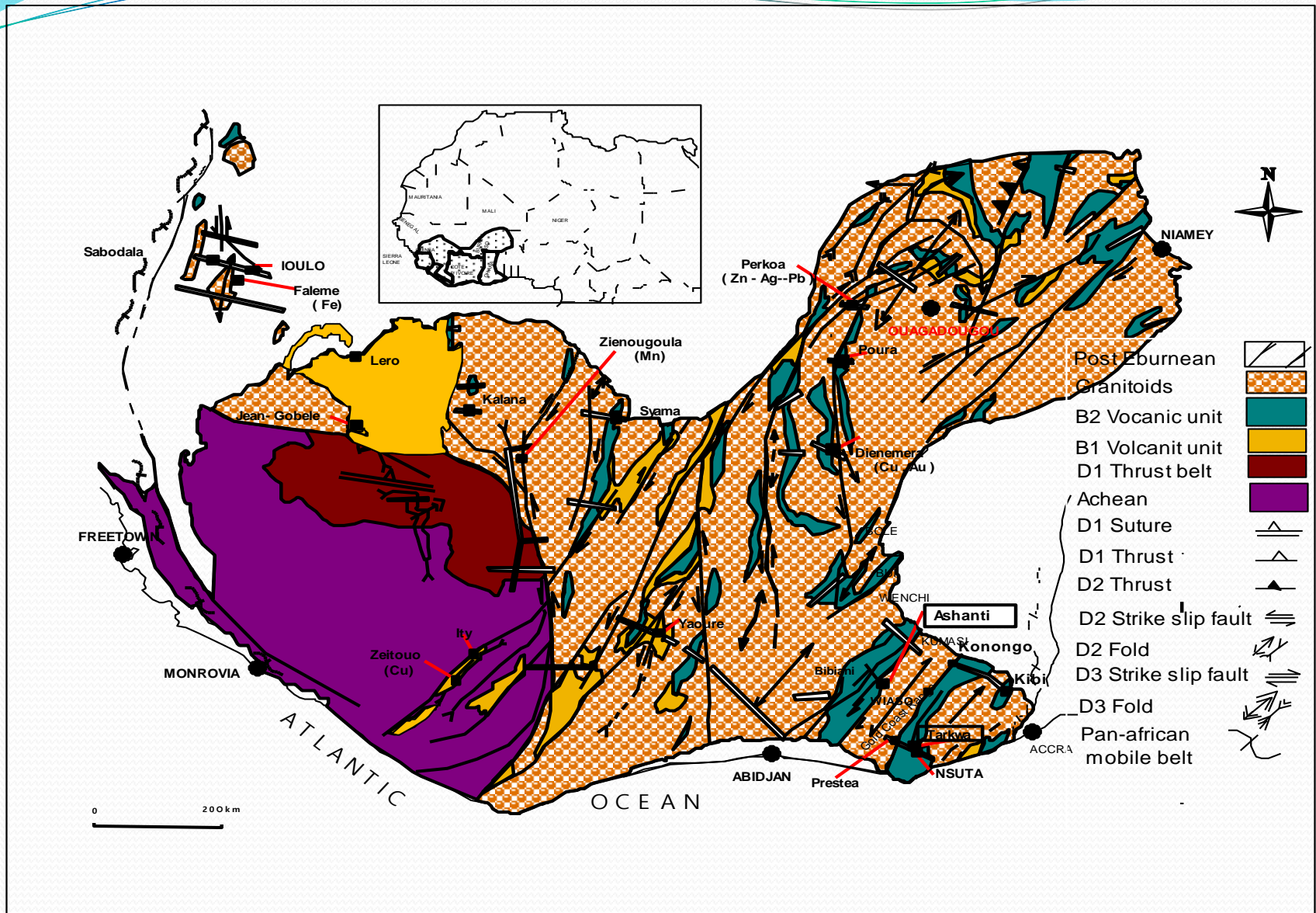
NATURE OF ASM: FORMAL VRS INFORMAL



ASM TYPE: SURFACE VRS SUB-SURFACE



GEOGRAPHICAL LOCATION



[illegible]

Yamfo

**Sefwi
Bibiani**

Ashanti

Mampon

Bogoso

Prestea

Atlantic Ocean

Tarkwa

Sunyani
Basin

Kumasi Basin

Obuasi

Cape Coast
Basin

Takoradi

Cape Coast

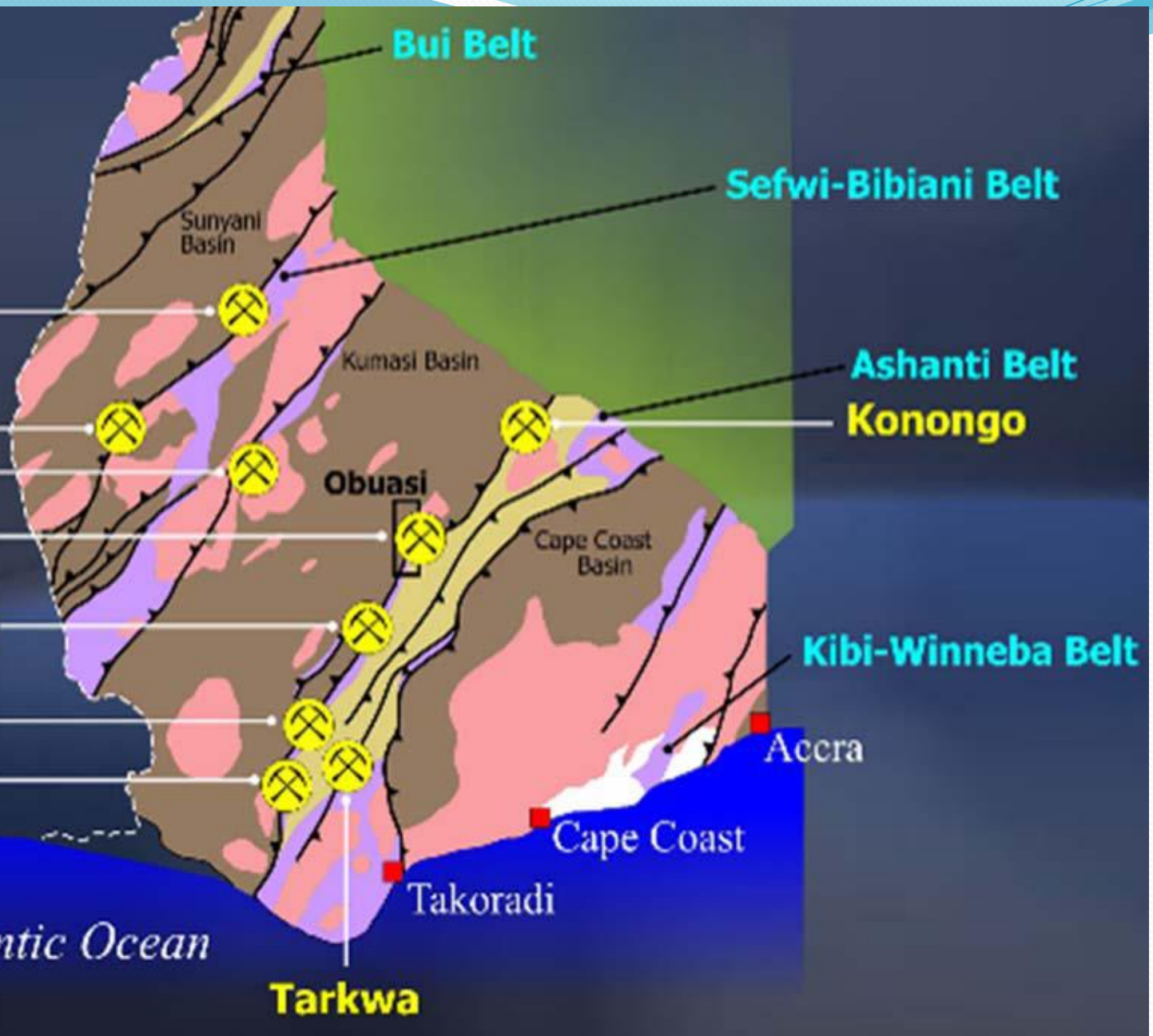
Accra

Bui Belt

Sefwi-Bibiani Belt

**Ashanti Belt
Konongo**

Kibi-Winneba Belt



GEOGRAPHICAL LOCATION (OF ASM SITE)











MINING & PROCESSING METHODS

















GOVERNANCE ISSUE? ASM LICENSING PROCEDURE

Identify Area of Interest and Conduct Search at the Minerals Commission



1. Inspection by District Officers and 2. Publication of Application at Dist. Assembly



Apply for Licence and pay Processing Fee



Evaluation of Application at the Minerals Commission [Head Office]



Applicant Advised to Register with the EPA , Obtain Environmental Permit



[1] Offer Letter to Applicant, [2] Payment of Consideration Fee & Annual Ground Rent and [3] Signing of Licence Agreement by Applicant



Agreement Forwarded to the Minister and Grant of Licence



Registration of Agreement: Courts, Land Valuation Division



Obtain Operating Permit from the Inspectorate Division of MC

SUGGESTIONS/WORKABLE STRATEGY?

1. WELL GROUNDED

PRO-COMMUNITY

VESTED INTEREST IN OUTCOMES

2. PRE-EMPTIVE EDUCATION



EDUCATION, EDUCATION, EDUCATION

FORMAL

INFORMAL

3. TARGETED INITIATIVE TO THE RESCUE?



ACKNOWLEDGEMENTS

JOHN TYCHSEN & PANAFGEO EXECUTIVES

MANAGEMENT & STAFF, GEOLOGICAL SURVEY & MINERALS COMMISSION

TRADITIONAL AUTHORITIES IN MINING AREAS

LOCAL COMMUNITIES, MINERS AND MINING GROUPS

UNIVERSITY OF GHANA & DEPT. OF EARTH SCIENCE, LEGON

MANY PEOPLE & ORGANISATIONS