

## CHAPTER V

### SUMMARY AND DISCUSSION

The study of systemization of geological information for land management (GILM) is carried out according to intellectual novelty. The information and its system prepared in 67 previous works were reviewed and discussed. The results are varied according to map makers, objective of application, and sizes of the area, and there are no standard to be followed. The investigation leads to conclusion of PIU system, a new structure of information being introduced in formulating of GILM. The system is applied in a study case, in preparation of GILM at regional scale of Changwat Prachuap Khiri Khan. The study can be summarized and discussed as follows :-

1) Reconnaissance of GILM, the observation was made in 67 previous works to investigate individual map and series of maps. Map topics appear in selected works are listed and described. Each individual maps are observed concerning with function of scale; situation of information; habit of information ; and degree of inference. Series of maps in each GILM works are observed relating to aim of works; grouping of map topics; relationship of information; and updating of information. It is observed that GILM prepared by previous works are varied in several aspects according to map makers, objectives of application and size of the area. They are prepared to serve a particular works or are designed for

particular areas. They cannot be generalized as a standard form to be followed in preparation of GILM.

2) Systemization of GILM, framework concept in constructing of GILM are formed according to the results of the investigation of previous works. They are as the followings: 1) all map topics in geology must be collected and demonstrated; 2) level of details of information must be limited to serve GILM applications; 3) information demonstrated on maps must be classified and be arranged to facilitate users and map makers ; 4) information prepared for GILM must be easily updated and evaluated when necessary.

3) Formulating of GILM system, level of details of information should be prepared in two levels, both "Regional level" and "Local level". This is depending on the objectives of GILM applications. In managing of GILM relied on GIS, the scale of map is not a major problem, however it must be noted that in preparation of GILM on local level scale will involve several times of monetary and temporal more than the regional scale. Preparation of GILM, the level of detail of information should be decided being concordant with applications.

4) Structure of information to be used in preparation of GILM, the PIU system is introduced in this study. Accordingly, geological information are classified to map topics being separately demonstrated in thematic form. They are arranged according to subject and characteristics of information to form 9 groups of map topics, which can be

sorted in order of 3 stages of information according to Šmap processing and degree of inferences. They are :-

1st stage of information, PGI - Primary Geological Information, which consists of 5 groups of map topics related to, 1) Landform and process; 2) geologic materials; 3) geological structure; 4) geohydrology; 5) miscellaneous in geological information,

2nd stage of a information, IGI - Intermediate Geologic Information, which consists of 3 groups of map topics demonstrating comparative value in geological properties of the area related to 6) Geological hazard and deterioration; 7) Geological resources; 8) Geotechnical properties,

3rd stage of information, UGI - Ultimate Geological Information, which consists of all map topics belonging to one group of map topics (9), in each of these map topics of geologic information demonstrating suitability of geological characteristics of the area related to objectives of applications.

The first alphabet named for each stages of geological information, PGI, IGI, and UGI, being introduced in this study are used in calling PIU system.

5) For practical uses, geological information are listed in concordant with PIU system. Map topics demonstratinfng geological information being used in GILM are listed and compiled according to PGI, IGI and UGI. The

relationships of informations (map topics) being demonstrated to facilitate geologists in constructing or updating GILM. They are successfully applied for case study.

6) For case study Changwat Prachuap Khiri Khan, there were no GILM being previously prepared, but only geological map, of the scale 1:250,000; soil map of 1:100,000 and hydrological map of 1:500,000 are available. GILM of Changwat Prachuap Khiri Khan are prepared on the scale 1:250,000 and be reduced to the scale of 1:500,000 which is able to be demonstrated on paper at A3 size. The total of 26 maps are prepared to demonstrate geologic information in thematic form, by using TM images interpretation being integrated with geological maps and soil maps. They are classified into stages of information belonging to PGI-stage maps, IGI-stage maps and UGI-stage maps. Maps being prepared for case study indicate that the information structure system, PIU system, introduced in this study is applicable. They are planned for the future to be managed by using computer and can be used in constructing GILM at local scale for Changwat Prachuap Khiri Khan.