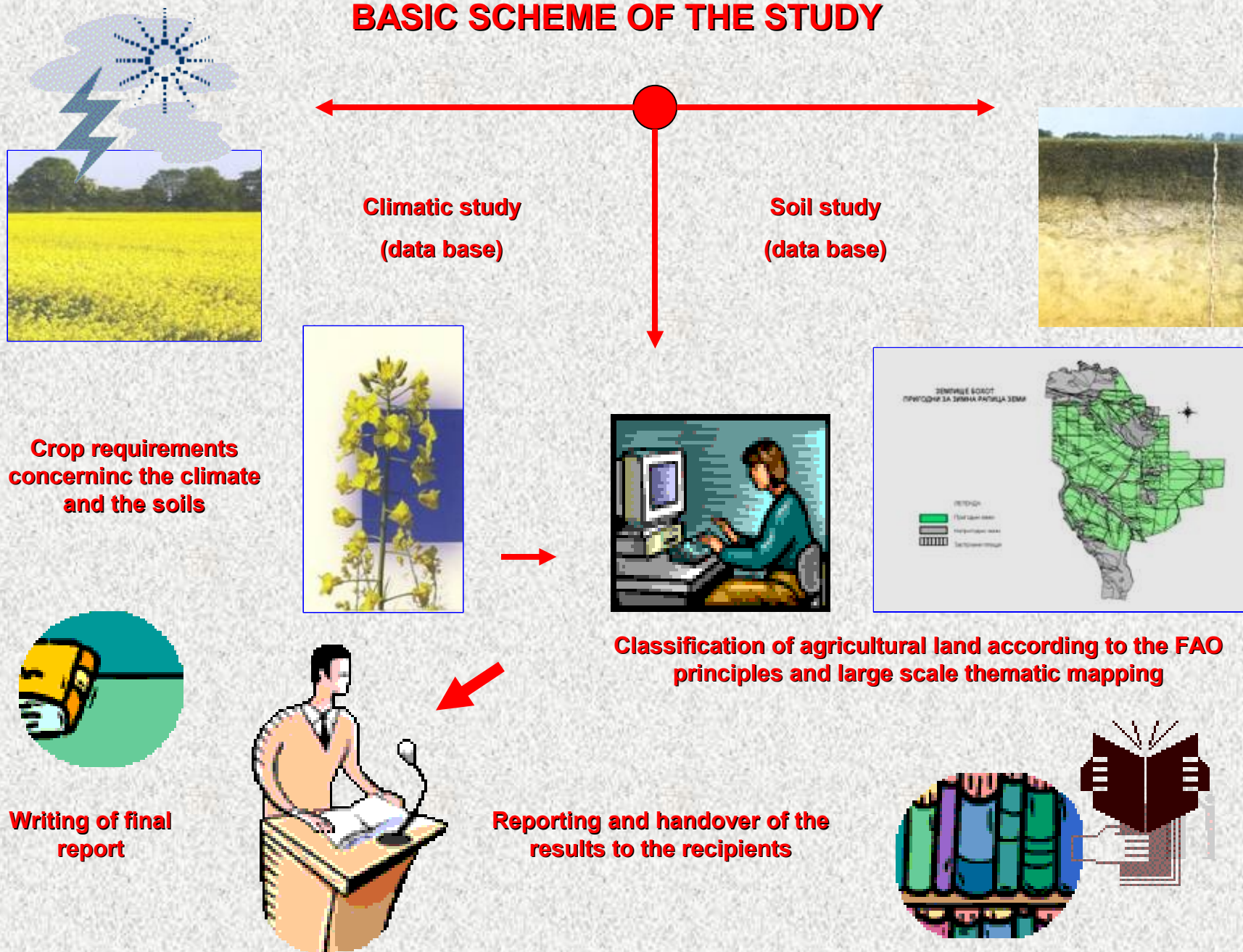


GIS ORIENTED LARGE SCALE STUDY OF AGRICULTURAL LAND FOR SELECTION OF OPTIMUM CONDITIONS FOR PRODUCTION OF BIOFUEL RAW MATERIALS

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BASIC SCHEME OF THE STUDY



General scheme for final evaluation and classification of the suitability of agricultural land, recommended by FAO and adopted in Europe

Classes	Suitability	Marks		
S_1	Highly suitable lands	85	÷	100
S_2	Moderately suitable lands	60	÷	85
S_3	Lands with limited suitability	40	÷	60
N_1	Currently non-suitable, but potentially suitable lands	25	÷	40
N_2	ACurrently and potentially non-suitable lands	0	÷	25

THE SUITABILITY OF LANDS

(CLIMATE, SOILS, LAYOUT)

CAN BE IDENTIFIED FOR THE SPECIFIC REQUIREMENTS

OF ALL AGRICULTURAL PLANTS,

CULTIVATED AT OUR GEOGRAPHIC LATITUDE



**EXAMPLE FOR STUDY OF THE AGRICULTURAL LAND IN THE AREA
OF BOHOT, CLOSE TO PLEVEN,
CONCERNING THE SUITABILITY FOR RAPE CULTIVATION
WITHOUT ARTIFICIAL IRRIGATION**











The evaluation is based on the requirements of modern high-yield rape sorts and hybrids, concerning the basic climatic, soil and layout characteristics

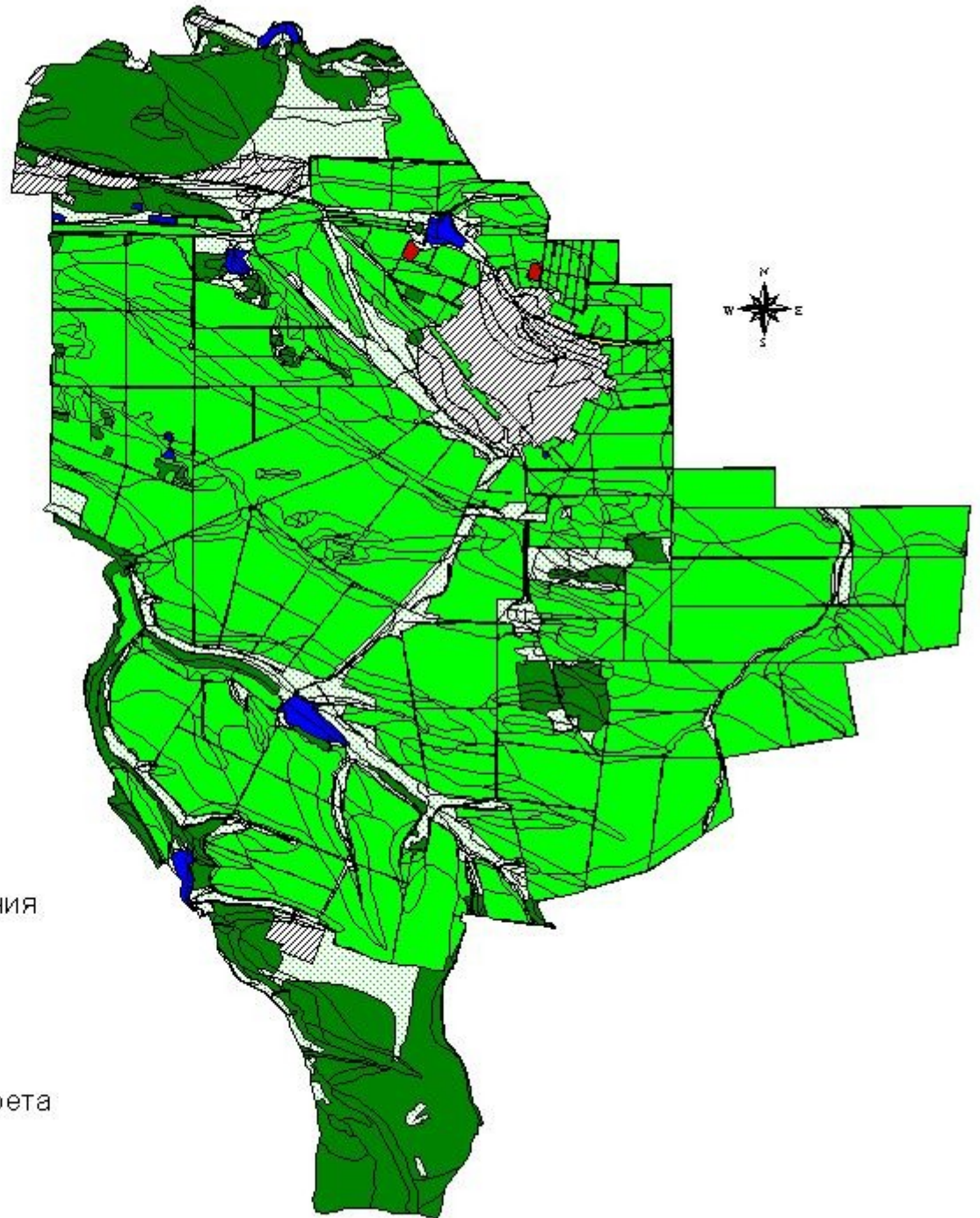
- **Height above sea level - up to 600 - 650 m.**
- **Average slope – up to 25%.**
- **Average air temperature during the coldest month > -3.5 °C.**
- **Returning cold weather periods not later than 15 april.**
- **Rainfall during the period 01. 09 – 25. 09: minimum 30 mm/m².**
- **Rainfall during the period 20. 04 – 20. 05: between 60 and 80 mm/m².**
- **Soil texture (30 – 60 % physical clay).**
- **Texture differnciation of the profile (texture factor up to 1.5).**
- **Strength of the humus horizon exceeding 20 cm.**
- **Root suitable area exceeding 100 cm.**
- **Soil pH, measured in water suspension: from 5.5 up to 8.2.**
- **Organic components in the arable soil (humus) exceeding 1.5 %.**
- **The land should not be swampy and should not have seasonal excess of humidity.**

ЗЕМЕУСТРОЙСТВЕН ПЛАН

**PROVIDED POSSIBILITY TO DISTINCT IN
LARGE SCALE AND GIS ENVIRONMENT THE
SUITABLE AGRICULTURAL LANDS FROM
THE ONES THAT ARE NOT INTERESTING
FOR THE STUDY**

Землище Бохот

-  Водни площи, течения и съоръжения
-  Гори и зелени територии
-  Добив на изкопаеми
-  Застроени територии
-  Обработваеми земи
-  Пасища
-  Скали, пясъци, сипеи, оврази, дерета
-  Транспорт










КОДОВЕ НА ПОЧВЕНАТА ПОКРИВКА

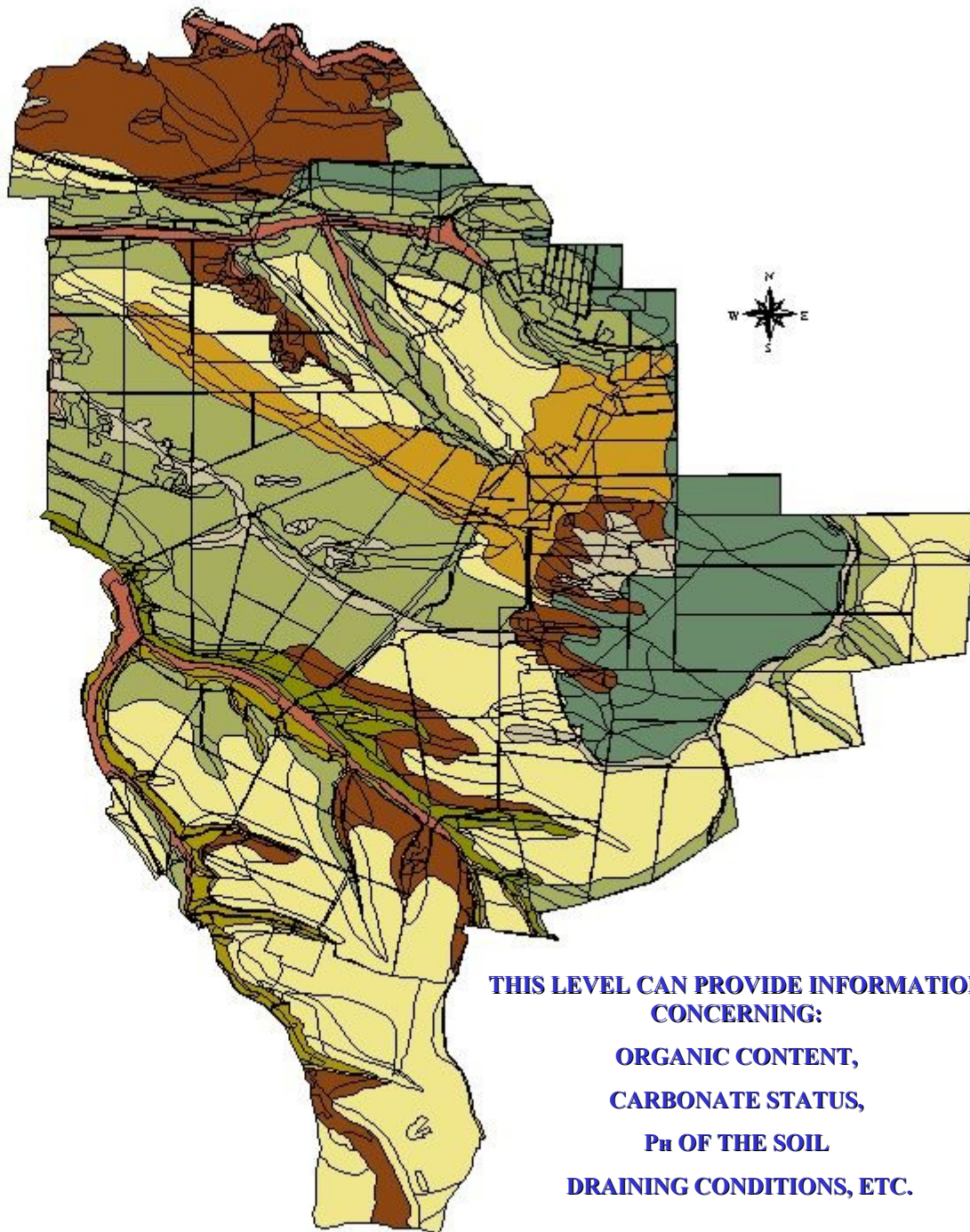
GIS LEVEL WITH SCALE 1:10000

**PROVIDING THE FOLLOWING
INFORMATION:**

- 1. SOIL CLASSIFICATION**
- 2. SOIL TEXTURE (CLAY-SAND)**
- 3. DEGREE OF STONE OCCURENCE**
- 4. SOIL FORMATION MATERIAL (LAYER
BELOW THE SOIL)**

Землище Бохот

	АДЛМ/411/74
	В/000/0
	Г/000/0
	ДЛМ/502/81
	ДЛМ/512/74
	СГ0/504/76
	СС0/504/76
	СС2/504/65
	СС3/504/57
	СС4/504/55
	СС7/506/35
	ТС0/504/80
	ТС4/504/57
	ХК7/416/29
	Ч5/403/50



**THIS LEVEL CAN PROVIDE INFORMATION
CONCERNING:**

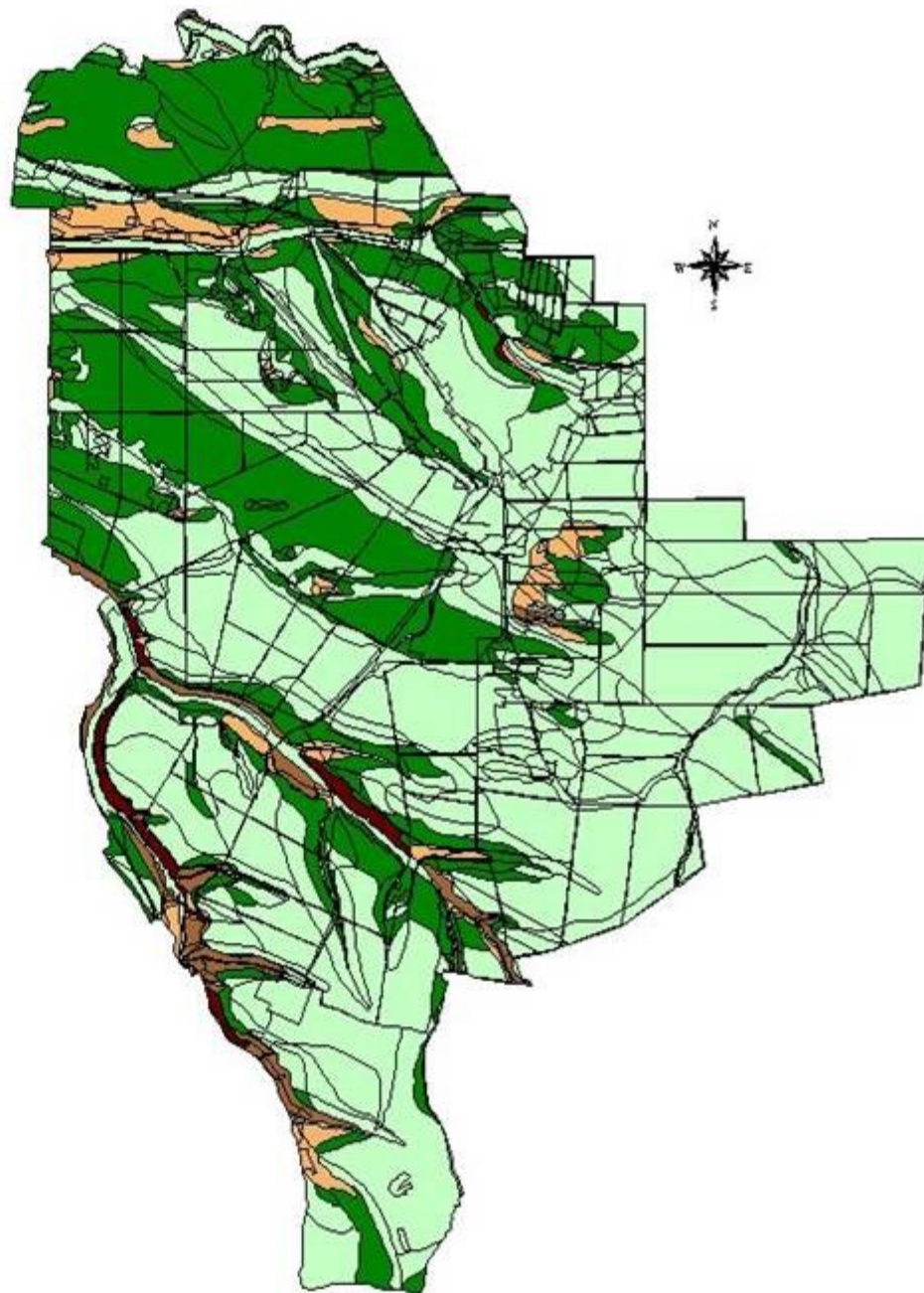
**ORGANIC CONTENT,
CARBONATE STATUS,
PH OF THE SOIL
DRAINING CONDITIONS, ETC.**

ПРЕОБЛАДАВАЩИ НАКЛОНИ НА СКЛОНОВЕТЕ
ЗЕМЛИЩЕ БОХОТ, ПЛЕВЕНСКО

GIS LEVEL SCALE 1:10000

WHICH PROVIDES INFORMATION ABOUT:

**POSSIBLE APPLICATION OF AGRICULTURAL
MACHINES**



ПРЕОБЛАДАВАЩО ИЗЛОЖЕНИЕ НА СКЛОНОВЕТЕ
ЗЕМЛИЩЕ БОХОТ, ПЛЕВЕНСКО

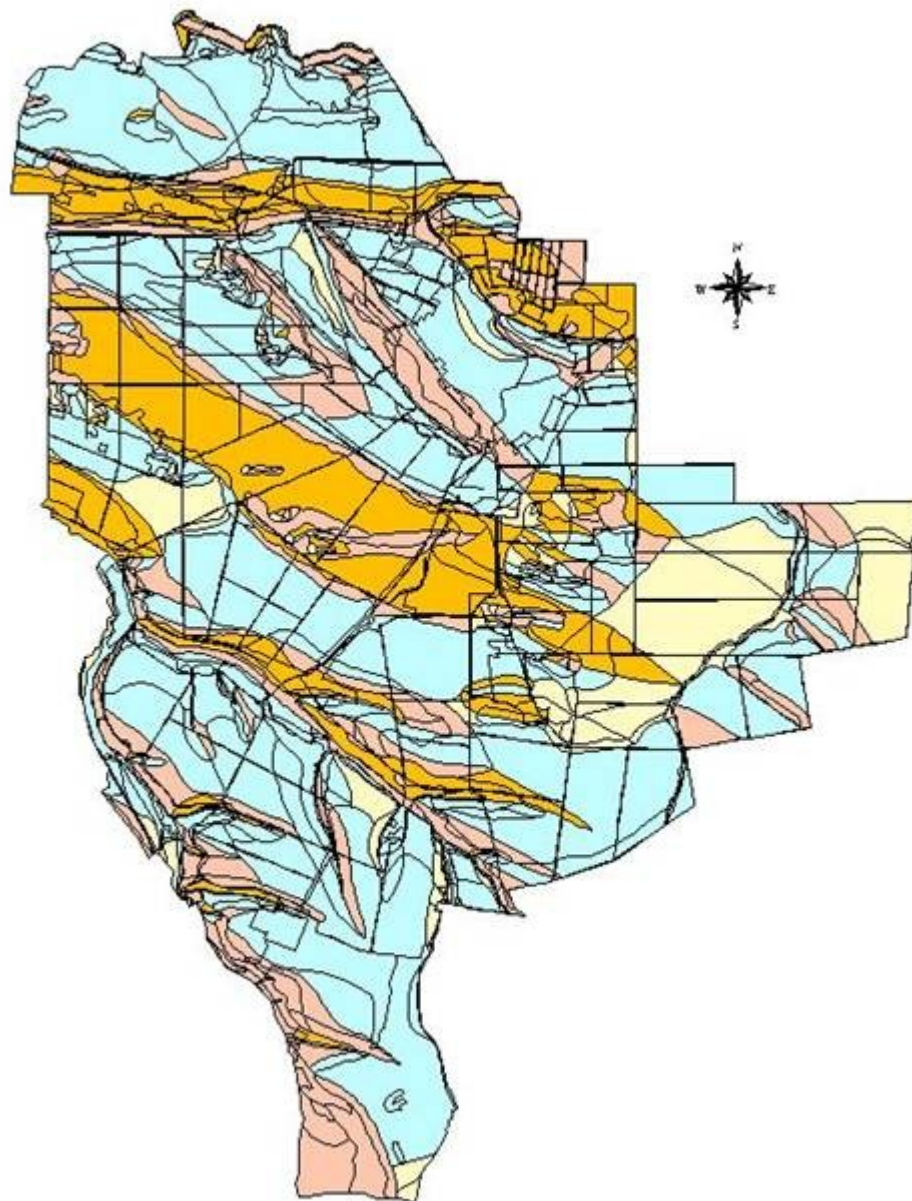
GIS НИВО М 1:10000

WHICH PROVIDES INFORMATION ABOUT:

**CORRECTIONS OF THE TEMPERATURE AND
CLIMATIC CHARACTERISTICS, IN
ACCORDANCE WITH THE SLOPE
ORIENTATION (N, S, W or E)**

Изложение на склоновете

-  Изток
-  Север
-  Юг
-  Запад
-  Недетерминирано



Пригодни за зимна рапица земи
Землище Бохот, Плевенско

GIS LEVEL SCALE M 1:10000

**COMBINING DATA FROM ALL PREVIOUSLY
PRESENTED LEVELS**

**SPECIALY DEVELOPPED ALGORHYTHMS ARE USED,
CORRESPODING TO THE REQUIREMENTS OF EACH
SPECIFIC TYPE OF CROPS IN THE CONCRETE
CONDITIONS**

**MAKES POSSIBLE THE FORMULATION OF FINAL
CONCLUSIONS AND INTERPRETATIONS**

**IN THIS SPECIFIC EXAMPLES, FOR MORE CLARITY 2
CONCLUSIONS ARE SUMMARIZED – “S” AND “N”**

**IN ACTUAL APPLICATIONS, THE STUDY LEADS TO
MORE DETAILED CONCLUSIONS, RANGING
ACCORDING TO THE ABOVE MENTIONED SCALE: S1
– S2 – S3 – N1 – N2**

ЛЕГЕНДА



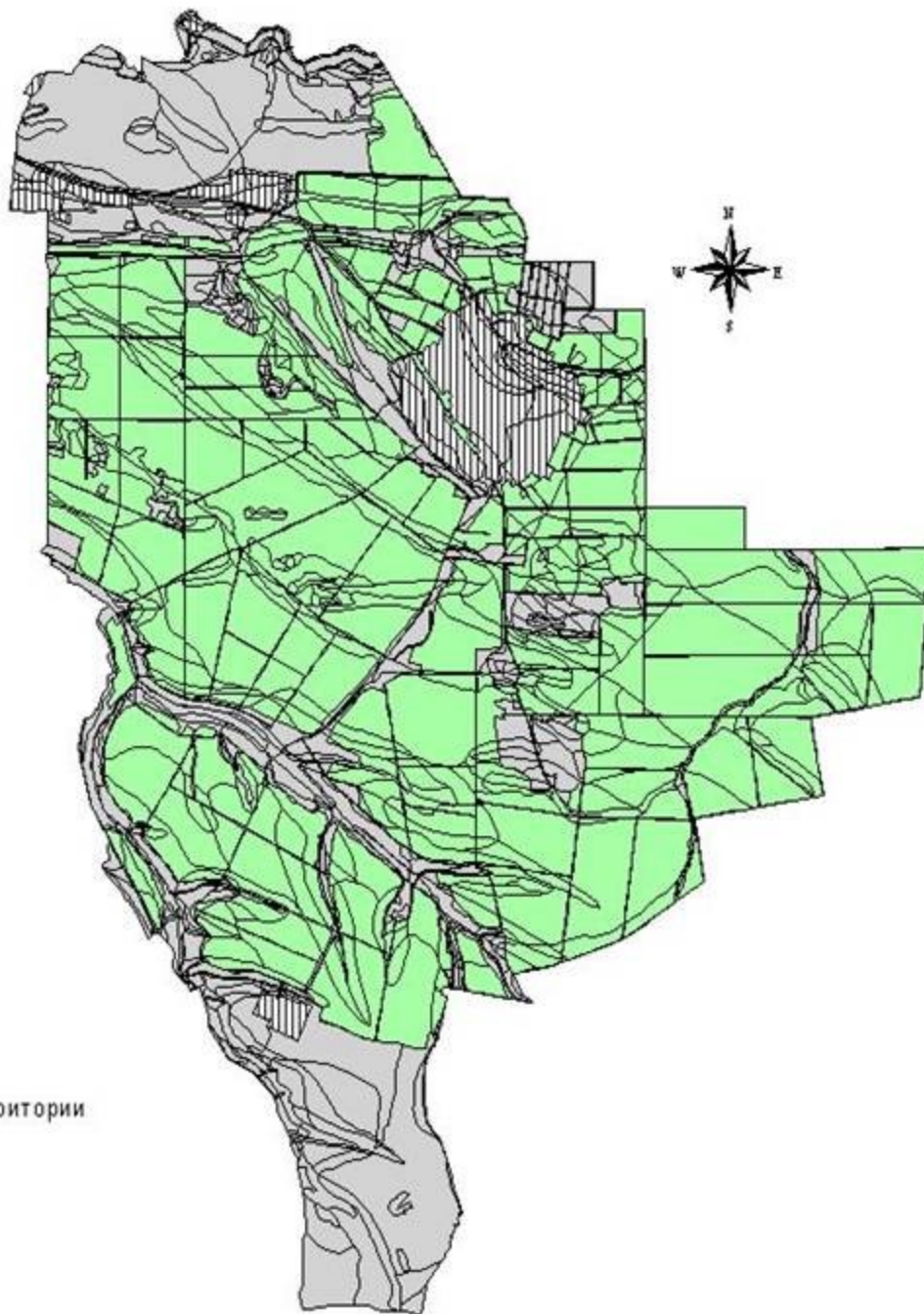
Пригодни земи (S1 - S3)



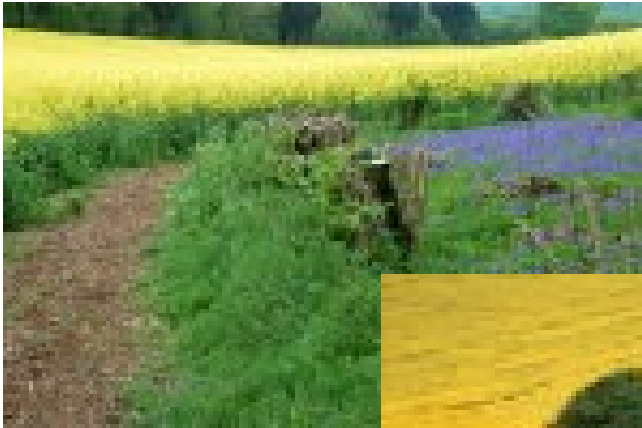
Непригодни земи (N) и усвоени с други цели територии



Застроени площи



**Best wishes for the
Workshop activities**



**Thank you for your
attention and co-operation**