4 GEOGRAPHIC / THEMATIC CONTENT

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4.1 INTRODUCTION

This chapter outlines the prototype of atlases, presents suggestions on compiling the thematic content and selecting the geographical area to be represented as well as choosing the map face, projection and base map, and attaining the inner balance of the major structural atlas elements (maps, illustrations, explanations). This chapter also includes important information on the use of geographical names. For lucidity, it is practical to distinguish three types of atlases. This division is more or less independent of whether it is a traditional (printed), electronic (DVD) or web atlas (available on the internet), and also of whether the atlas is a general geographic atlas or it presents some thematic content. The three atlases types are as follows:

- world atlases;
- country, national and regional atlases;
- city atlases.

4.2 THEMATIC ISSUES / CHAPTERS

The atlas is a uniform series of individual maps, in which the maps follow a specific order that serves the purpose of the atlas best. For instance, the guiding principle for designing a historical atlas may be the chronological order; or for geographical atlases, the progress from the larger units (Universe, Earth) towards the smaller areas (continents, regions, countries, country districts). As for the web and most digital (electronic) atlases, the order of presented themes has no particular role, because the users can take "adventure tours" among the maps and topics according to their interest.

A *world atlas* portrays the whole Earth: the map pages display the Earth, continents and countries (regions) as well as major districts or provinces. The map scales change according to the size of these areas. The most consequent series of scales is perhaps used in *The International Atlas:* maps of the World (1:75,000,000), oceans (1:48,000,000), continents (1:24,000,000), and major land regions (1:12,000,000). Groups of countries, countries and parts of countries with a physical-geographical background are mapped at 1:6,000,000, 1:3,000,000 and 1:1,000,000. The detail of depiction is in harmony with the importance of the represented region. Finally, the atlas shows the major metropolitan areas and capital cities at 1: 300,0000.

World atlas maps often follow this order: Old World [Europe, Asia, Africa] and the New World [North, (Central) and South America]. Australian maps usually come after Asia or Africa, occasionally after South America. These atlases show the polar regions (Antarctica too) and they may contain city maps too. The *Grosser Atlas der Welt* by Bertelsmann is an example of this type.

The *Times Atlas of the World* follows different logic. It opens with a spectacular series of satellite maps of the continents: Australia and the Pacific islands, Asia, Europe, Africa, North and South America, and the Antarctica. After presenting the world on thematic maps, the atlas goes round the Earth "step by step" from the East to West.

The structure of world atlases may depend on the publishing country *(Grande Atlante Geografico De Agostini)* or the country of the intended audience *(The Macmillan World Atlas)*. Such atlases favour the representation of the publishing country and perhaps its environment by presenting them on larger scale and more detailed maps (e.g., Italy and the USA with Canada, respectively). This solution satisfies the demand of a wide range of users, who want to view more coverage on their nearby regions to understand their cultural and historical links in a globalizing world.

The *geographical atlases for schools* are great examples of the latter type, because they follow the above guidelines of atlas design. For instance, the *Student Atlas* by Dorling Kindersley shows the British Isles, and the *National Geographic Student Atlas of the World* details the USA, Canada and Mexico.

The educational atlases reflect the typical themes of maps and their sequence in atlases. Although the thematic order is mostly set by the national curriculum of the country, the themes logically built on one another cover the following three subjects all over the world: *Orientation in space and time; The geography of geospheres* (lithosphere, hydrosphere, atmosphere, climate and geographical zones); *The geography of societies* (population, settlement, economy). The map content in the interactive versions of these atlases is arranged into very fine map layers, which provide the users with the opportunity to build up their own map by gradually adding new information layers. Unnecessary layers of cartographic elements can be hidden, which makes the map clearer, and this helps interpreting the geographical features and phenomena. The maps that are static in print become dynamic by adding interactivity. Animations and photos may advocate the understanding of geographical processes.

Each *national atlas* is a *regional atlas*, but not every regional atlas is a national one (Lehmann 1978). A national atlas is a series of maps usually accompanied by various illustrations, textual explanations and targeted at citizens and interested foreign readers. The maps present in detail the natural, economic and social conditions of a country. A national atlas follows a logical and balanced structure of maps with relatively uniform cartographic execution in defined scales. In addition to portraying the natural and social-economic spatial pattern of the country, the national atlases

play an important ideological role at home and abroad: they express and strengthen the national identity deeply rooted in their history (Jordan 2002). Many countries of the world have a more than a thousand-year old history, while others' history goes back just a few years or decades. Therefore, the latter countries are ambitious to develop their identity. Several (mainly the developed) states issued their national atlases in the 20th century, while numerous countries still have not published any. In the latter case, the thematic content of the national atlas may be a traditional "inventory", the structure of which became fixed and generally accepted in the second half of the 20th century (Sališčev 1960): 1. Introductory maps, 2. Natural environment (geology, geophysics, relief, climate, hydrology, soils, vegetation, wildlife), 3. Population, 4. Economy, 5. Culture, 6. Politics. When the developed countries prepared the new edition of their national atlases in the past few decades, they did not wish to make a simple inventory; they – depending on the motivation and target audience of the atlas – aspired to present the challenges concerned by the whole society in a modern and captivating way as much as possible. All this is owing to the recognition that the logically related thematic topics (vertical relations) can be very well complemented with the aspect of time (horizontal relations) and the opportunities offered by the synthesis approach (Ormeling 1994). Consequently, the conventional natural, economic and social spheres, which were formerly presented separately, are greatly mingled in order to show the causalities in a more expressive way (for instance, physical environment, settlements, agriculture; natural and transformed environment, natural resources, economy; land-use, urbanization, regional planning). Socially important issues are increasingly added to traditional themes: everyday life and its milestones, life-style and free time, observation and understanding of the environment, usage of space, labour and standard of living, enterprises and markets (NAD 2000–2006).

As there are extremely great differences in the size of countries, the large countries (e.g., USA, Australia, former Soviet Union, Germany) published numerous *regional atlases* (atlases of districts, partial "national atlases") in the past century. In other approach, all those atlases that show several countries, partial or whole continents can be considered here (e.g., Kocsis 2005, 2007). The conventional and modern claims to themes and recommendations for subjects are practically the same as in the case of national atlases.

In *city atlases*, the maps follow a sequence indicated on the overview map. This index of map pages is usually placed on the first pages of the atlas, which may be followed by larger scale maps of the inner city or popular areas (e.g., zoo and botanical garden, major public parks). The order of themes and subjects cannot be generally described in these hardy copy, digital or web atlases or in the products of the global service providers (Google Maps, Open Street Map).

FIGURE 4-1:

MAP IN ISLAND-LIKE FORM

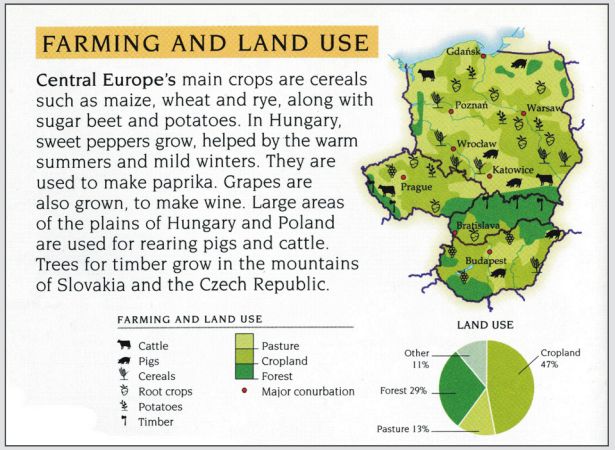
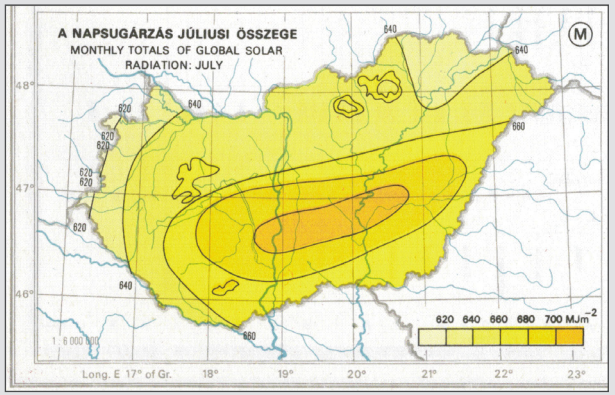


FIGURE 4-2:

MAP IN PARTIALLY ISLAND-LIKE FORM



4.3 GEOGRAPHIC AREA, MAP FACE, PROJECTION, TOPOGRAPHIC BASE

Hard copy atlases contain *map sheets*, which usually bear maps on both *pages*. The *map face* is on the pages of the map sheet, within the *map frame,* in the *map area*. If a publication is printed, the map sheet has the size of the bound paper; in the case of digital and web atlases, the size is given by the display screen. The difference in these publishing surfaces postulates different concepts of defining the map face: the format is mostly upright in the first case, and mostly landscape-oriented in the second case (naturally, there may be exceptions in both). In the case of hard copy atlases, it may happen that a *pair of opposite pages* forms the map face: the (half) map area almost extends to the spine. The map face must always be elaborated so that the *central meridian* of the graticule falls on the centre of the map. If the graticule is not indicated, the map must be oriented to north, and if the map is not *oriented to north*, the *symbol of North* must be indicated!

The geographical space to be represented may not always fill the map frame. The topic may be shown only within the borders or somewhat extended in narrow bands (Figure 4-1), or the theme may be fully drawn in the map area, but the map content outside the target area is limited to the major elements only (Figure 4-2).

World atlases may include such types of maps (e.g., *Student Atlas*), though it is far from typical. The Earth may be covered by maps of uniform scale based on an almost regular sheet system (*The Macmillan Atlas*). However, the atlases normally present the Earth first, and the world follows by the maps of continents without a regular sheet system and with less consistent scales (*Atlas of the World*).

Atlas maps often have a small map at the page margin indicating the location of the map; this helps identifying the represented area in the world (Figure 3/A). Orientation in the geographical space is supported by a linear scale (Figure 3/B) and by the colour scale (hypsometry) of altitude and depth layers (Figure 3/C), if necessary (*The International Atlas*). Displaying these tools continuously in one of the corners of the screen is also useful in digital or web atlases.

The maps on computer screen are generally generated from the complete map of continents and not from predefined map extracts. Thus, island-like representations of maps or individual map sheets are rarely displayed. We can search by scrolling on the map of the continent or by entering a placename of the interested area in the search engine, after which the near environment of the object appears in the middle of the screen.

Publications of national atlas type concentrate on the area of a country or a district. These products extensively use maps in island-like or partially island-like form. However, showing the maps of continents or the world may also be important when demonstrating the relationship of the target area with the nearby countries or the rest of the world.

Publications of city atlas type limit their interest to