Media GIS – Stamp for ethic journalism

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Abstract

There is global consensus that access to information is a fundamental human right. However, it is necessary that the information be conveyed honestly and effectively to the masses. In the twenty first millennium, thanks to the advancement of technology, news spreads to every nook and corner of the world within split seconds. Therefore, presentation of news in correct, updated format is an essential pre-requisite for media declaration, which is being highly aided by emerging technologies. GIS, being one of these, creates a link between geographical conditions and human, social, political, and environmental events. GIS is an important tool which plays a critical role in conveying the editor's messages to the masses through the media. Maps have incredible visual impacts, thus GIS aided news have the stamp of authenticity. This new technology not only helps in effective diffusion of information intricacies but also aids in competent strategic archiving.

Keywords: journalism, media GIS, news, news authenticity, spatial analysis, strategic archiving

Introduction

News Media is a ready source of information to which people turn on every second in order to have an appraisal of what is happening around their residences, towns, cities, countries and the globe. Other than news, event framing and shaping of public opinion is a powerful tool of the media (De Vreese, 2005). It is however, necessary that event framing and opinion making should avoid yellow journalism and follow the authentic and reliable approach prescribed by law in order to avoid defamation of plaintiff. Therefore, news are established on the basis of truth of the occurrence or whether it is a matter of honest opinion or comment on true facts, to be published as a fair report of what was observed in any incident in the reported area.

A global consensus among people is that access to information is a fundamental right, but it is necessary that the information has significance regarding social values and is true (Crumplin, 2007). In terms of news coverage, the present era has advanced tremendously because news is disseminated over the globe within seconds. Conflict within the media sources is harmful for the society. Globally, media concerns try to ensure that governments do not enact legislation that suppress them, at the same time they should avoid disseminating inaccurate news and biased reporting, analysis and story writing, thereby promoting ethic journalism.

Journalists ought to serve the public with thorough insight by providing them with fact based and accurate information. Reliable information can play a vital role in the development of society. True and accurate information along with helping the public to understand issues, help not only develop informed opinions but to make informed choices as well. It is widely accepted that journalists do have ethical compunction to greater or lesser extent (Meyers, 2011). As media has an enormous social responsibility in addition to political accountability, they have a moral binding to be ethical. Modern society is identified

by the global diffusion of technology in all systems, irrespective of any barriers. GIS has emerged as a ubiquitous technique for highlighting all events whether they are social, political, cultural, environmental, demographic, economic or sundry aspects which may be related to ethnic riots, wars, disasters, epidemics etc. Name it and GIS is available to present the visuals as well as its correlations. GIS aided news not only facilitates in its archiving, but can play a vital role as a corrective for control of violence, rectification of damage etc., subsequent to any news break.

Economic patterns, environmental and political changes, as well as other complex data can be accessed, analyzed, and presented using GIS to help simple presentable news or report on current situations with greater context and insight (Murray & Tong, 2009). Various types of database in any news room make their news more credible for the public and society.

It has been observed that giant media groups and news agencies publish various news, based on map data both electronically as well as in printed form on a limited level in the form of news locations and analysis on maps. Maps have incredible visual impact, thus GIS aided news have the stamp of authenticity. GIS can also be used to help display data in the immediately comprehensible form of a map. The Associated Press, for example, uses GIS to create most of its news maps, increasing the production and quality of its maps it distributes to hundreds of its members.

Pakistan is a developing country where governance is in a disastrous state. Political parties have self-administered armed forces comprising of their workers with the purpose of maintaining party control on the public at large. In addition, parties also play blame games among themselves whereby they resort to breaking rampant news with reference to each other. News of corruption in such societies is very common. Media thrives on such news from various schools of thoughts and in various dimensions.

Due to rapid enhancement of information technologies the present world has become a global village. On this front, media groups display their responsibilities and efficiencies regarding breaking news or stories before they actually go on air or are published. The objective of the present study is to show the significance of Media GIS in journalism based on various types of data and techniques with reference to Pakistan. In this perspective, a Media GIS Model (MGISM) has been designed to ensure credible, research based, accurate, informative and Comprehensive news.

Materials and methods

Applied work in Geographical Information Systems (GIS) and spatial analysis has been a persistent component of research activity in geography and regional science for several decades (Stillwell & Clarke, 2004). GIS provides significant analysis in geo business (Hernandez, 1999; Hernandez & Biasiotto, 2001), location impacts (Birkin et al., 2004; Camara & Dias, 2004) etc. Dawn Media Group is one of the pioneer groups that initiated the establishment of GIS database in modern journalism. MGISM was designed on the basis of optimum demands in journalism. All data pertaining to administration, census, social and economic conditions, disasters and electoral details etc. are acquired from concerned government departments of Pakistan, while some are recorded from daily news. Data are also obtained form satellite images, layout maps, research projects, ground-truthings and world famous data sites as NASA, WMO etc. Organization of data in the present work has been made through MGIS model (Fig.1) while its multi-dimensional applications have proved that software package MapInfo Professional with Encon Discover is the most fabulous GIS package.
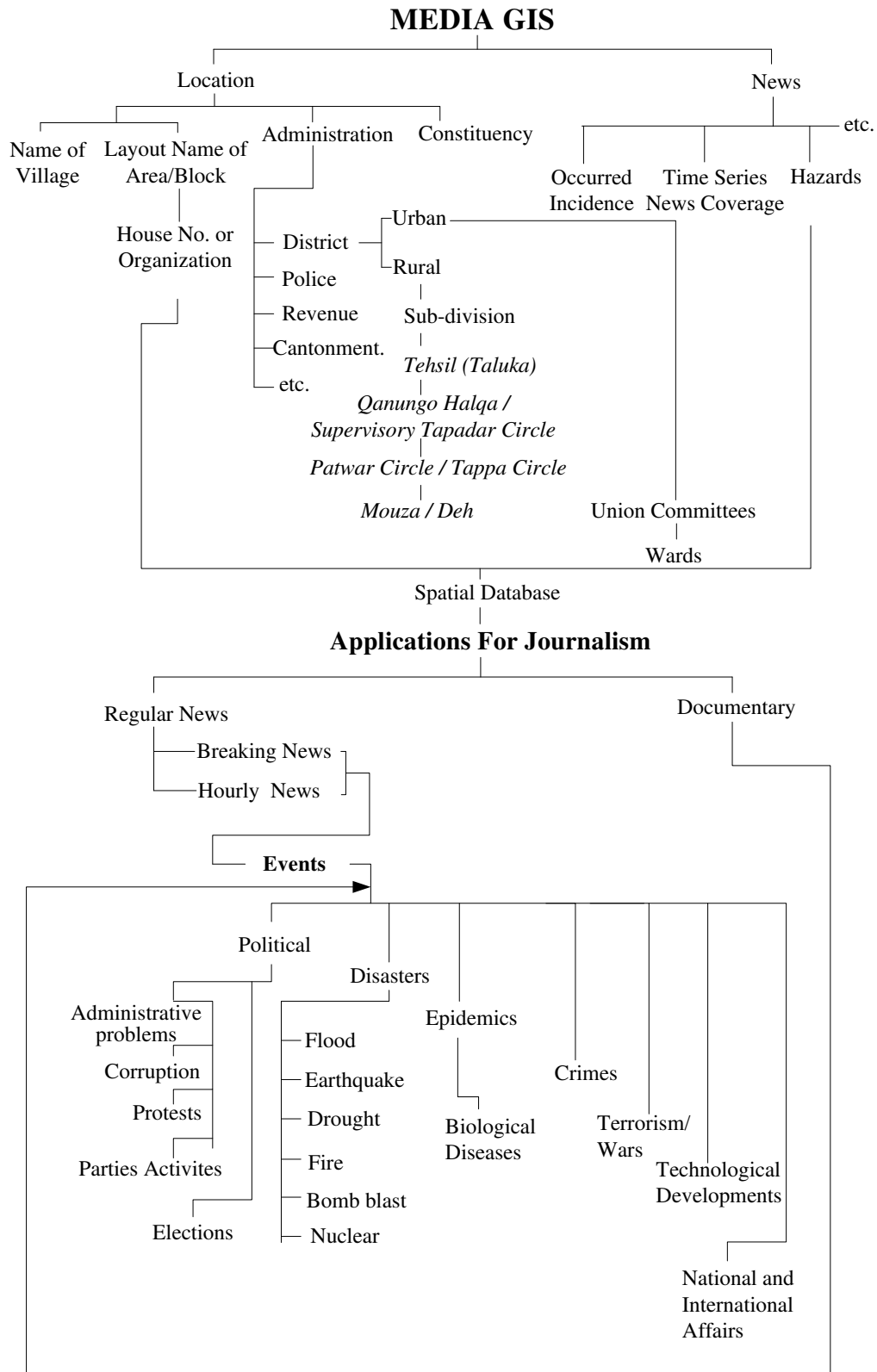
MEDIA GIS

Location — Name of Village, Layout Name of Area/Block, Administration, Constituency

News — Occurred Incidence, Time Series News Coverage, Hazards, etc.

House No. or Organization

Administration — District, Police, Revenue, Cantonment., etc.

Urban, Rural

Sub-division

Tehsil (Taluka)

Qanungo Halqa / Supervisory Tapadar Circle

Patwar Circle / Tappa Circle

Mouza / Deh

Union Committees

Wards

Spatial Database

Applications For Journalism

Regular News

Breaking News
Hourly News

Documentary

Events

Political — Administrative problems, Corruption, Protests, Parties Activites, Elections

Disasters — Flood, Earthquake, Drought, Fire, Bomb blast, Nuclear

Epidemics — Biological Diseases

Crimes

Terrorism/ Wars

Technological Developments

National and International Affairs

Fig. 1. *Media GIS Model (MGISM)*

Results and discussion

Breaking news

In the twenty first millennium, thanks to the advancement of technology, news spreads to every nook and corner of the world within split seconds. Therefore, presentation of news in correct, updated format is an essential pre-requisite for media declaration, which is being highly aided by emerging technologies. Using GIS as a reporting tool, one can provide readers and viewers with a simple map that delivers the story context. When a news such as that of disasters (earthquakes or floods etc.) breaks, the map queries "where is it happening?" and "will it affect our viewers or someone they could relate with?" In case of the flood 2010, Sindh/ Pakistan reporters informed news operation room regarding the breach at Tori location. Officials of DAWN-GIS plotted the water over flooding topography of the area and conveyed an alarm, to the concerned settlements which would most likely be affected due to the oncoming flood (Fig.2). As a result residents of the area were easily evacuated and the administration further planned how to control the flood water, thereby minimizing losses.
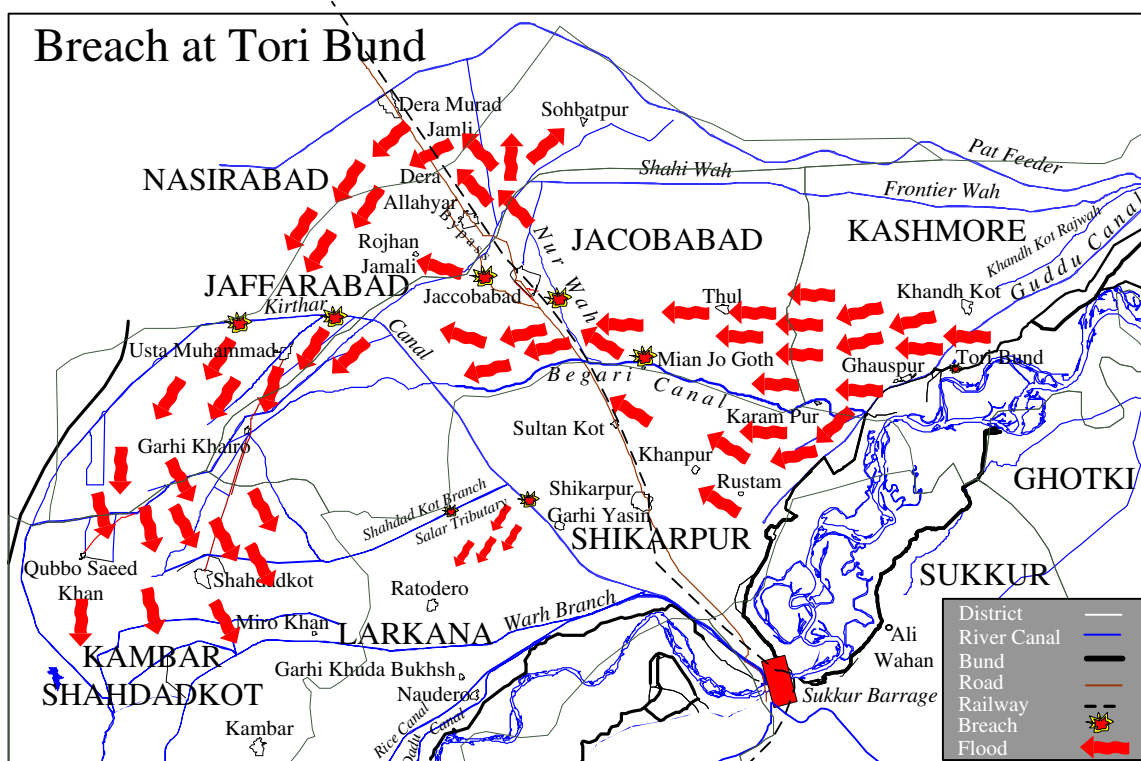

Fig. 2. *Sindh Flood 2010, Breach at Tori and direction of water flow after breach news as an alarm for settlements to save human lives (After Daily Dawn, 20, August, 2010)*

Analytical journalism

Pakistan is a unique country in the world, where violation of laws is rampant and taken causally by the public in general. Protection of endangered species of birds and animals is violated and Emirs and Princes of West Asian countries are given permits for hunting of Houbara Bustard. Accurate information not only facilitates in the understanding of issues, but aids in developing informed opinions, thereby helping in making beneficial choices.

Accuracy, firstly, involves gathering all the relevant facts, which means that if a journalist leaves out even one important detail of a particular story, that story will cease to be accurate. Secondly, it focuses only on the concentration of relevant facts. Irrelevant facts not only occupy space (newspaper) and time (radio and television) but also distort the balance that is so vital for accurate reporting. Thirdly, accuracy involves thorough verification and checking of facts through the use of multiple sources. Reporting of facts prior to confirmation is a violation of one of the basic principles of journalism. Fourthly, it is of overriding significance that all relevant facts must be presented in their proper context in order to ensure accurate reporting. Changing the context is liable to give incomplete and therefore inaccurate story. Consequently, it altogether changes the entire meaning of stories. Finally, it is highly advisable to present facts in a fair and balanced manner. Different aspects of stories must be given due importance. Under the above mentioned domain, the story of Houbara Bustard was very critical due to overriding significance of the Pak- Gulf relationship. GIS can help reporters and editors focus attention on the right area of a story. Figure 3, depicts Houbara Bustard hunting area as per license given by government of Pakistan. Subsequent to the publication of the story, Houbara Bustard viewers and readers reacted strongly against the given license. Realizing the gravity of the case Supreme Court of Pakistan took suo moto action.
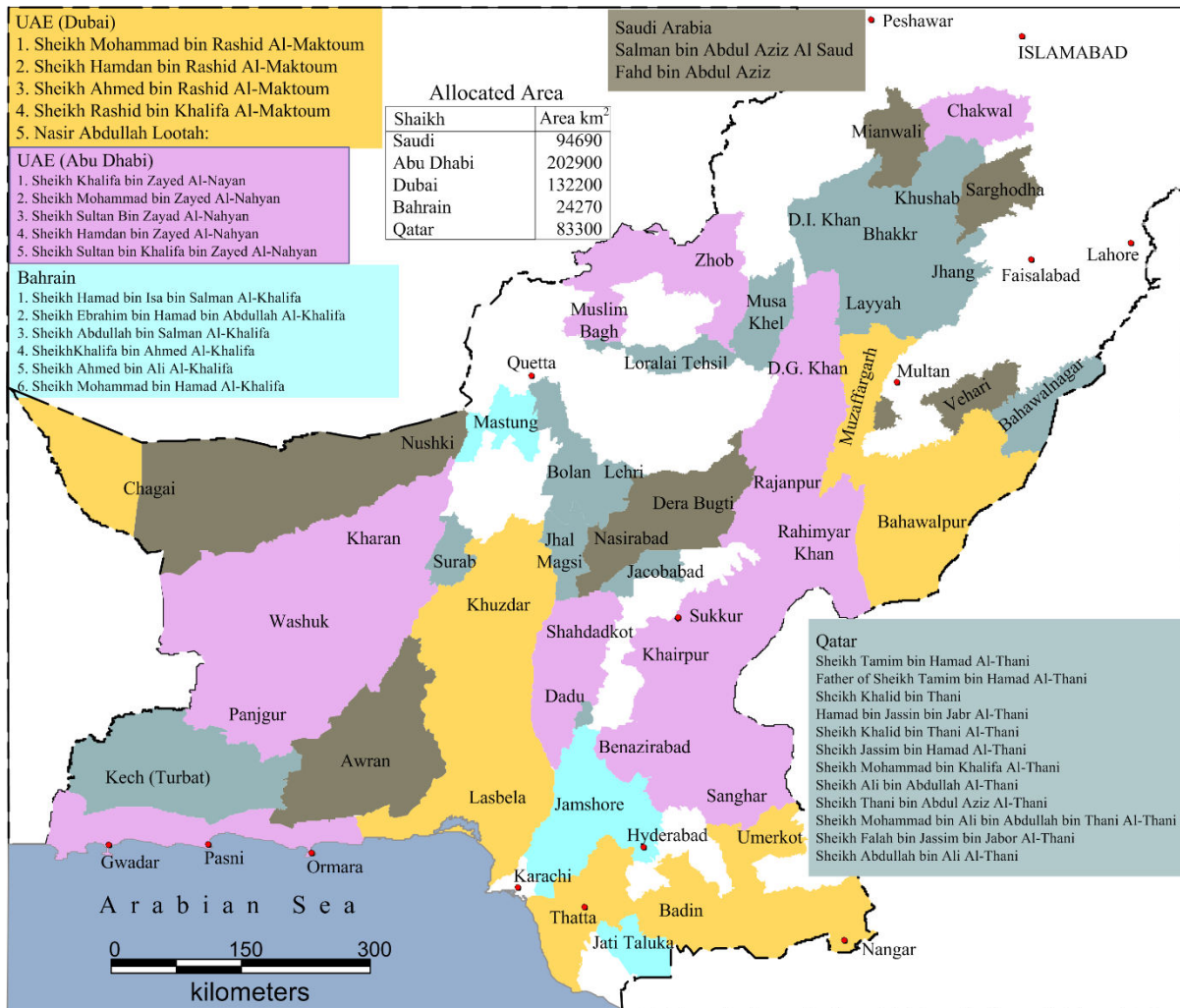

Fig. 3. *Hunting of Houbara Bustard (After Das, 2014, Daily Dawn Newspaper)*

Another interesting analytical story was presented by Herald Magazine in July, 2009 issue, when government of Pakistan took serious action against terrorist organizations in District Swat, through the
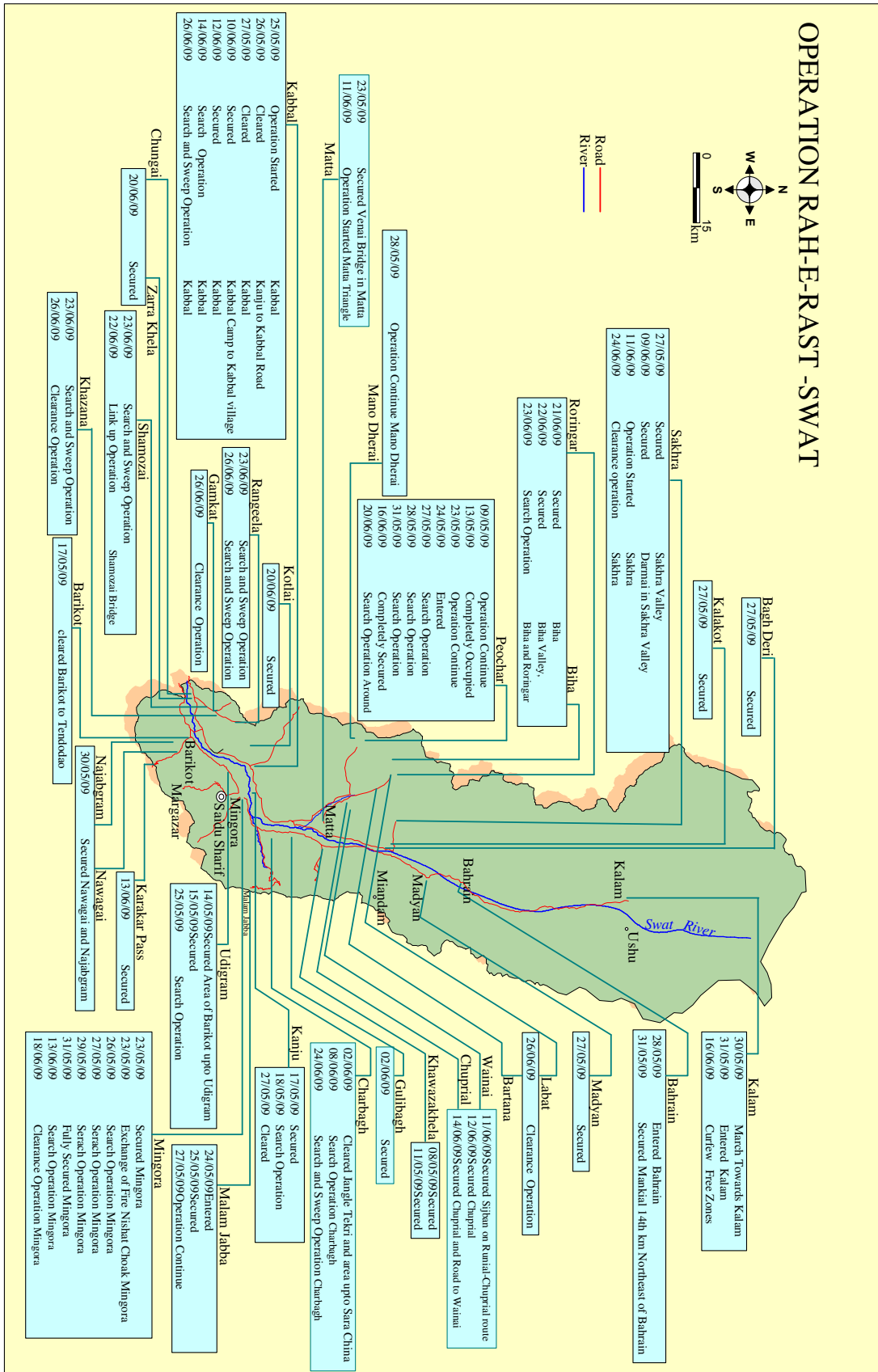
Fig.4. *Shows geo-spatial coverage of Operation of Rah-i-Rast*

Operation Rah-e-Rast. This was second battle against Taliban Militants control & command systems and their hideouts in the Swat district, Khyber Pakhtunkhwa Province. The story was based on daily movement of military actions and plotted spatial analysis of military successes (Fig.4). In this story, readers visualized a critical security situation in an affected area.

Media can also be a source of conflict through the harm they cause to society e.g. when media practitioners pursue their work unprofessionally, their reporting can be potentially harmful to individuals, organizations, societies and the world at large. Harmful media promotion can incite hatred, violence and conflicts, damage peoples' and organizations' reputations, and businesses along with disrupting social and economic life in general. This is one of the reasons why, governments come up with different legislations to protect the public from harmful effects of irresponsible media. There are many laws such as those against libel, defamation etc. which are meant for the protection of those concerned with the media.

There is a marked difference between ethics and laws. One of the functions of MCM is to ensure that government does not enact laws that suppress the media, at the same time this does not extend any license for the media to break laws that are meant to ensure a just and orderly society.

One example of irresponsibility of media is its unprofessional and avaricious role played in the case of damage to the proceedings of Pak-China Economic Corridor because their views aired on the media have created dispute among various ethnics groups of Pakistan. Without prior acquisition of authentic information and data, talk show aired on Pakistan media revealed that the criticisms leveled against the present government had far reaching deleterious effects, as a result of which the government had to replace the Baloch-Pashtoon route with that of the Sindh – Punjab route because the present federal government probably has a greater tilt towards Punjab, Pakistan's largest province in terms of population. Subsequent to this announcement by the Prime Minister of Pakistan, Dawn GIS documented and presented most of the stories.

Various studies have discussed the role of GIS in media (Murray and Tong, 2009; Velasco, et al., 2012).

GIS has been used for decades to help local and federal governments collect and analyze information to aid in making better decisions. Most of the resultant data is freely available in the public domain. Official available data can be extended to the GIS specialists, geographers or researchers related to the relevant fields thereby facilitating not only the development of new patterns but at the same time revealing concealed relationships regarding events and places.

GIS plays an important role in the movement of any story from the paper to the web. Software such as MapInfo allows GIS specialists to create dynamic maps which enable better comprehension and learning of the audience e.g., The Philadelphia Inquirer used dynamic maps to show the relationship between liquor licenses and drunk driving arrests. They found a strong correlation between the two and profiled the street with the largest number of arrests and predicted other points where similar incidents were most likely to occur, thereby offering readers plausibly credible answers regarding the cause of the happenstance. Seeing is believing, e.g., when a viewer can fly through *Tehsils* of Swat or Tribal areas of Waziristan to witness what has been bombed or check out the view of a proposed new road over the mountains, they simply and conveniently observe it through Media GIS.
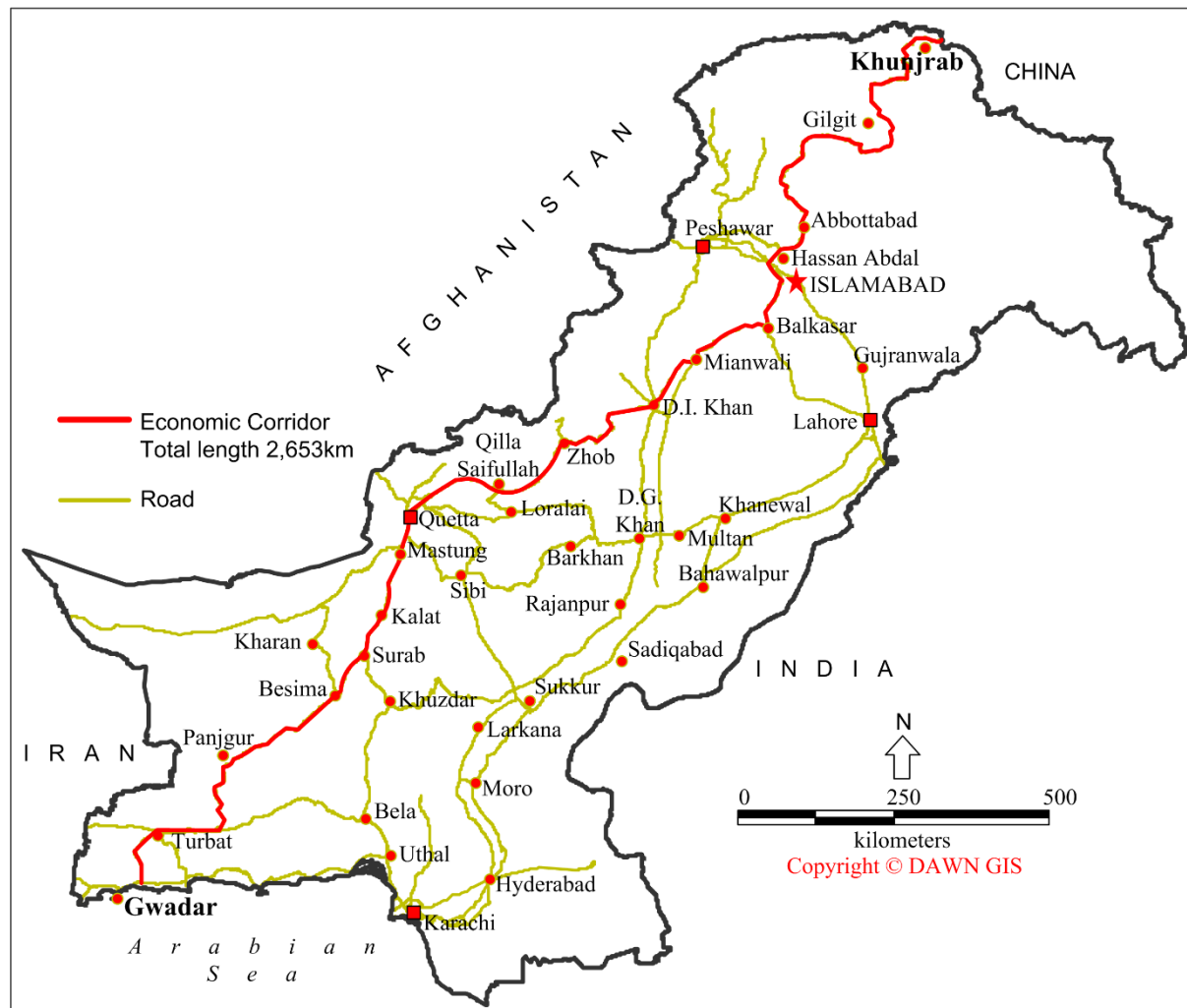
Fig.5. *Pak-China Economic Corridor (After: Daily Dawn 29 May, 2015)*

Conclusion

Unprofessional and avaricious role played by the media may be considered as being partially the cause of damage to the reputation of individuals, organizations, and societies. This new technology not only helps in effective diffusion of information intricacies but also in competent strategic archiving. The traditional role of the media and their key function as reporters of facts is to give the public the information necessary, thereby facilitating decisions made through sound choices using various communication technologies. They are the outlets for disseminating explosive amounts of information to the large, heterogeneous and widely dispersed audiences. While this is a routine duty, it is nevertheless, particularly and especially important in the electoral process when the leadership of the country must be elected.

Dawn-GIS supported stories made solid evidence for reported news stories and authenticated journalism as more responsible for society. Study and practice of journalism ethics also creates job niches for geographers as their task is to present spatial variations with the help of explanations which can be aided by the nomothetic approach of searching for explanations portrayed by cartographic methods and aided by Media GIS . This has not only expedited the solution of such problems but also has made it highly accurate, highly visual, and having direct impact on the masses who have become highly alert and concerned in the twenty first millennium.

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