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বাংলাদেশ লোক-প্রশাসন প্রশিক্ষণ কেন্দ্র
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Art of Crisis Management and its Strategies in Applying at the Organization Level

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Abstract: Crisis management is a systematic efforts of managing and the ways of resolving quickly as well as effectively to an unpredictable phenomena posing the threat to normal activities of an organization. It occurs as a consequence of the organization's imperfection and vulnerability to its environment, which has been explained in management term as intelligence failures or failures in foresight. Over the years as the world continues to become increasingly complex, most of the world's crisis that occur in developed and developing countries cause enormous destruction and human sufferings and the crises are occurring more frequently and becoming larger in scope. In the last three decades for example various types of organizational risk or unpredicted situations have killed more than several hundred people and caused more than 130 billion material loss.

Since the acquisition of fundamental knowledge and critical information on the art of crisis makes the administrator and manager in a stronger position to resolve the crisis management. Therefore the paper is designed and developed with a view to highlight the conceptual theories of crisis and appropriate knowledge and art of handling the crisis management in organizational situation. It also provides understand the significance in today's environment so that the administrator and manager can effectively deal with the crisis circumstances in their own working place. These ideas would also help them to understand the event and enable them to define the situation and specify the objectives to get into the fact and analyze them considering the possible course of action as well as to take appropriate decision to effectively handle the crisis situation. Moreover, it would also help the manager how to thrive under severe pressure and provide best possible leadership qualities in inspiring the team member, encouraging their efforts and giving them confidence in the successful out come of the crisis management process.

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1.0 Introduction

1.1 Crisis is an event that evolves usually from an unseen, unexpected and unpredicted situation. It can occur at any time any place and happen to any organization and no organization is immune to a crisis. Crises occur as a consequence of the organization's imperfection and vulnerability to its environment, which has been explained in management term as "large scale intelligence failures" or "failures in foresight". Over the years as the world continues to become increasingly complex, the potential for crisis escalates. Most of the world's crisis that occur in Asia and Pacific region cause enormous destruction and human sufferings and the crises are occurring more frequently and becoming larger in scope. In the last three decades for example various types of organizational risk or unpredicted situations have killed more than several hundred people and caused more than 130 billion (US dollars) material loss in 2003 to 2004 (UNDP : 2005).

1.2 This situation encourages the management experts to explain and analyze the event in numerous ways and they provide valuable information and insight into this complicated phenomenon. These studies in the mean time identified a multitude of guidelines and recommendations designed to assist those responsible for managing the crisis what may initially seem an unmanageable event. Policy makers, administrator and managers of the new millennium should understand the nature of crisis and its managerial prescriptions, and communication implications in order to deal effectively with the effects of crisis. Understanding of crisis in different dimensions would help the managers to acquire a sense of predictability, insight and competence to handle the situation more effective and efficient way and also assist the administrators to plan and prepare will ahead of time.

1.3 The purpose of this paper is to highlight the concept of crisis management and its theories to understand the significance in today's environment so that the Administrator manager could effectively be able to deal with the crisis circumstance in their respective organizations. To analyze the purpose of the paper it has been divided in to a number of sections. First section deals with concept of organizational crisis and their major causes and characteristics explained by the experts of crisis management. Second section of the paper provides brief description of strategies

in applying organization level and some of the most popular tools for crisis management and its implication with practical example of a few crisis in local and regional context. While the third and last section is an attempt to provide a few recommendations drawn upon crisis management practices in this region and endeavor to relate practically to the need of manager and administrator.

2.0 Concept of Crisis Management

2.1 Crisis management in broad term, is a systematic efforts of managing and ways of resolving quickly as well as effectively to any an unpredictable phenomena posing threat to normal activities of an organization once it occurs. The phrase 'crisis management' was presumably first coined by Robert McNamara at the time of the Cuban Missile Crisis when he said, "There is no longer any such thing as strategy, only crisis management". It is an orderly response to unexpected events that threaten the people, property and operational continuity of the organization. More specifically it has been defined as a formal response to any event that threatens the operational stability and financial activities of an organization.

2.2 Unfortunately, most administrators managers are found to use the term 'crisis' very frequently almost in all cases when they face any complex situation mainly in the organizational context. While some use the term's "crisis" and "disaster" interchangeably. This indicates that majority of the managers are neither completely clear about the term 'crisis' nor is aware about the consequences of this event. The experts on crisis management make a clear distinction that the disasters are generally viewed as large-scale community events (tornadoes, floods, earthquakes, etc.) normally managed by government, community, or social groups. A crisis tends to be triggered by organizational errors, oversights, or deficiencies mainly handled by the administrator/ manager (Quarantelli, 1988).

2.3 Besides, Pauchant and Mitroff (1992) have further clarified term between incident, accident and crisis, the demarcating factor being the magnitude of the event. An incident is an event, which affects a "self-contained" part of a larger system. An accident physically disrupts a system as a whole. A crisis "physically affects a system as a whole and threatens its basic assumptions, its subjective sense of self, its existential core" (p. 12). When amplified by other variables in the system, incidents can evolve

into accidents and, possibly, crises. From this perspective, a major air-carrier crash is both a crisis and disaster, in that it is often caused by organizational inadequacies and managed not only by the airline, but also by the community in which it occurs and government agencies.

3.0 Definition of Crisis Management

3.1 The most important definition of crisis management have been developed over the last thirty years. Among which, Bell (1971) used as a working definition of crisis in an organizational context that "the essence of a crisis in any given relationship is that the conflicts within it rise to a level which threatens to transform the nature of the relationship". It narrows the concept of crisis, seeing it only in terms of relationships. Selbst (1978) in contrast used another definition that "Any action or failure to act that significantly interferes with an on going functions, the acceptable attainment of its objectives, its viability or survival, or that has a detrimental personal effect as perceived by the majority of its employees, clients or constituents". This definition concentrated on action and failure to act. It saw crisis as essentially negative and threatening. This was clearly a limited definition as crisis can also be seen as a turning point or opportunity for some stakeholders and as such could be seen in positive terms.

3.2 While, Pauchant and Mitroff (1992) defined crisis as "disruption that physically affects a system as a whole and threatens its basic assumptions, its subjective sense of self, its existential core." It covers most of the types of crisis and gives a much wider view that are recognized by decision makers, but it depends on how a system is defined. If seen in terms of organization, this definition ignores completely the individual and group and their perception of crisis. They recognized that the term is overused and poorly defined. At the same time they found from their work that managers had a clear idea of what they understood to be a crisis. What could be identified, as a crisis by the management of an enterprise may not be considered a crisis in Pauchant and Mitroff's definition. Instead of looking at crisis from the point of view of the system, a more realistic definition might be "A situation faced by an individual, group or organization which they are unable to cope with by the use of normal routine procedures and in which stress is created by sudden change".

A. Causes of the Crisis

3.4 Organizations become particularly vulnerable to crisis when they have low control over their external environment. When external factors (competitors, suppliers, customers or clients, regulators, society, owners and boards of directors, and natural disasters) negatively combine with internal factors (executive characteristics, experience and history, demographics, and attributes), a crisis may occur. In other words, the events leading up to crisis accumulate because internal and/or external factors were overlooked or misinterpreted as a result of false assumptions, poor communication, cultural lag, and misplaced optimism (Turner, 1986).

3.5 The likelihood of an organization experiencing a severe crisis is highest when it has low control over the environment and a high level of susceptibility due to internal factors. The Bhopal accident in India became a crisis when internal technological problems negatively combined with environmental conditions outside the plant. The plant, under pressure from Union Carbide to make profits, was located in a city totally unprepared to handle a major industrial accident and the consequences were devastating (Shrivastava, 1987). The recent incident of Bangladesh Biman and Bangladesh Power Development Board, could be mentioned as two organizational management crisis (please note Box-1 & 2).

Box – 1

Amidst schedule crisis, the *Biman Bangladesh Airlines* on 19th February 2006 decided to cut in international flights as an immediate solution and lease two aircraft to improve upon its dwindling fleet. To cope with this crisis, the Biman management decided to float tender by tomorrow for dry lease of two aircraft in a bid to recover from the schedule disarray caused by grounding of its three DC-10s and one airbus. The Biman also made an impromptu decision to reduce flight frequencies on three international routes, cutting one flight from Dhaka each from the weekly two flights to New York, six to London and seven to Jeddah. While the reduction on Dhaka-London and Dhaka-Jeddah routes comes into effect immediately, that on the Dhaka-New York route will be made effective from March 13 as passengers have already booked tickets up to then. The Biman will also review its whole flight schedule and go for further cuts in frequencies on other international routes between February 21 and March 27. The national airlines is expecting to gear up its poor fleet situation prior to the commencement to next summer schedule from March 28, 2006.

Failing to arrange any aircraft, the Biman cancelled its scheduled flight of Dhaka-Dubai-Brussels-New York route last night and feared delay in its next flight scheduled for this afternoon. The Biman DC-10 aircraft grounded in Brussels en route to New York last Wednesday is expected to return home by today after necessary repairing, official sources said. However, the two other DC-10s and one airbus still remained in hangar. Talking to the BBC Bangla Service last night, acknowledged failures in Biman's fleet planning and inability to procure sufficient aircraft due to financial insolvency and improper management.

Source : *The daily Star*, Monday, February, 2006

Box-2 : Power Crisis hits irrigation

Power crisis across the country persists making public life miserable. The situation will deepen in the next summer session covering March and April of the current year, according to the officials. A senior official of the state-run Bangladesh Power Development Board (BPDB) said that they would have to resort to massive load shedding to the tune of over 1,000 Mw of power a day as the daily demand for electricity consumption would go up sharply in the next summer session. The Official, however, claimed that the level of load shedding in the city and elsewhere in the country was around 300 Mw over the past several days. But informed circles said that the authorities concerned had to resort to load shedding to the tune of over 500 Mw a day over the past several days. As per official records, currently the power plants under BPDB along with private units generate around 3,300 mw³ against daily demand of 4,000 Mw of power.

In the city The Dhaka Electric Supply Authority (DESA) supplies 1,200 mw of power to the city residents against daily demand of at least 1,500 mw. In many places of the capital city power goes frequently and disruption in power supply lasts for hours causing immense sufferings to the city residents. According to the official records, level of load shedding in the city was more than 300 Mw over the past several days. Power crisis has seriously affected agriculture irrigation in 16 northern districts of the country. Power crisis has deepened due to disruption in power generation by the 50 mw Barge Mountain of Westmont Power Company and the 100 mw Power Plant of Grid Company at Bagha bari.

Source : Bangladesh Observer, Sunday 19 February, 2006.

3.6 Communication failures may also play a key role in causing crisis. Communication climates that discourage open communication about problems and breakdowns and disruptions of coordination often contribute to crisis (Seeger, Sellnow, & Ulmer, 1998). Cushing (1994) examined how miscommunication plays a role in airline disasters. Communication breakdowns between pilots and air traffic controllers as well as misunderstandings due to accent and technical jargon have contributed to numerous aircraft disasters.

B. Characteristics of Crisis

3.7 Each and every crisis is unique in nature and is not identical to another. But the findings of research studies demonstrated that there are common characteristics usually found in most of the crisis. It is characterized by surprise, insufficient information about the problem and limited response time and requires immediate decision making as well as solving the problem (Harman 1983). Even with contingency planning, organizations are surprised by a triggering event and have minimal time in which to respond. The unexpected nature of an event may result in a delayed response to the situation. NASA's challenger exploration in 2002 for example was unanticipated that for a brief time mission control maintain normal procedures before arranging there had been a major malfunction (Brown. D. 2003).

3.8 Moreover, crisis situations generally involve a high level of uncertainty with regard to cause, blame, response, perception, resolution and other possible consequences. A lack of information creates the potential for crisis as well as influencing the resolution of the crisis. The acquisition of critical information makes the authority in a stronger position to resolve it (Billings, Milburn & Scalman 1980). Information is necessary to determine the nature of a response, understand the probabilities and recognize the value of loss.

4.0 Types of Crisis

4.1 Table 1.1 outlines how in general term's different types of crisis might affect an organization. The important point to note here is that different types of crisis will lead to different sorts of organizational impacts and responses (Selbst, 1978). First there is only a gradual change the crisis may only be apparent to those individuals most closely involved. Even if they are aware, they may not be able to convince the leadership of the reality of crisis. In this sort of situation, which has been called a "creeping crisis" (Kouzman and Jarman, 1992), there will be no change in the normal style of the leadership. The result of inaction might well lead to demotivation and frustration on the part of the staff most affected. As the organization diverges more from an appropriate response so increasing numbers of staff begin to recognize its inability to correctly comprehend the situation.

Table-1.1 Crisis Events and Organizational Response

Trigger event	Leadership response	Individual/general public attitude
Gradual external erosion, internal decline, increasing threat to part of organization (creeping crisis)	Bureaucratic response. Traditional procedures, status quo: ignoring issue. Crisis not recognized	Recognition of crisis of individuals involved. Attempt to get issue on to agenda by those affected. Other groups immobilized
Periodic threat or loss to part or whole of organization	Negotiated response Recognition of problem individual demotivation (routinised crisis)	Internal political clashes. All groups/individuals involved.
Sudden threat or loss to whole of organization	Defensive response Reliance on the known and trusted	Rally of all groups/individuals to protection of organization

Source: Simon A. Booth

4.2 In the second category of periodic threat or loss, such as that caused by annual budget cuts or regular changes of government, the leadership will tend to develop what may be called a "routinised crisis" or negotiated response. Contingency plans are prepared which is the subject of inter-organizational bargaining. Over time, this form of routinised crisis may lead to a loss of morale where solution is not identified because of sub-optimal decision making. In other situations, however, the organization may have no control over the nature of the periodic crisis in which case motivation may be maintained and even enhanced. In this situation one might see the development of what might be called professional crisis managers. In the public sector the police, fire and health services all have to be able to respond to unexpected critical situations in a professional way.

4.3 The third type of crisis is the one that most people would normally think of as crisis. It is the completely unexpected sudden threat or loss, which puts the whole organization in danger. In

almost all cases with these situations no contingency plan has been developed precisely because the event was improbable. The leadership, when it realizes the nature of the threat, often makes a defensive response. After the shock has worn off, which can take a significant amount of time, a "siege strategy" is often adopted. This entails selecting what is seen as essential to survival and reducing or abolishing other more peripheral activities. But often this strategy is unsuccessful as significant numbers of employees may have to be sacrificed. As a result of this form of siege strategy the internal conflicts generated by the strategy can ironically be a prime cause of failure. Given that any organization may be subject to any combination of the three types of crisis identified above it can be suggested that there is no easy way of defining crisis.

5.0 Strategies and Tools of Crisis Management

5.1 Within public and private sector, organizations of developed and developing countries are using a variety of strategies and tools including hiring consulting firms for implementing best practices, using computer software packages to track response actions and navigate through a crisis situation, and implementing corporate governance and business continuity programs. Many times, organizations are not equipped internally with the skill sets to help them plan for or respond to unexpected events. Most widely practiced strategies used throughout the organizational context known as the "three Rs: Response, Recovery and Resumption". For an organization to be successful in all three of these areas, it requires coordination, communication and support from the highest level—the crisis management team.

5.2 Another commonly used tool in the public sector is the Incident Command System (ICS). This system was developed several years ago by the Fire Sciences Division of the Emergency Management Institute (EMI) and is used by FEMA, State Emergency Managers, Emergency Medical Services, Fire Departments and other public service organizations. It uses common terminology and team structures adapted by multiple public service organizations to effectively coordinate, communicate and support local, state and regional response efforts.

5.3 The most influential work in this field has been done by Boumediene Belkhouche, Reda Bakeer and Salah Al-Saleh at the

Tulane University, New Orleans in 2002. They developed an integrated model of crisis resolution known as Expert Decision Support System (EDSS) which represented both a sociological and social psychological view consisting of several software packages, a knowledge base and set of expert rules. Main objective of EDSS model is to provide a reliable software model for evaluating a crisis, modeling it, and developing an efficient plan for tackling it. Moreover, it is designed and implemented a prototype that integrates the data capturing power of a Geographic Information System (GIS), the reasoning and inference capability of an Expert System, and the computing power of a programming language.

5.4 Figure 1 shows the major components of the EDSS model. The functionality of this system is to process quickly available information related to the crisis at hand, retrieve the impacted site database, and provide assistance with regard to: (i) identifying the parameters under prevailing environmental conditions; (ii) simulating the evolution of the crisis; (iii) identifying possible threats; (iv) displaying important facilities, which may be highly affected; and (v) suggesting a response scenario.

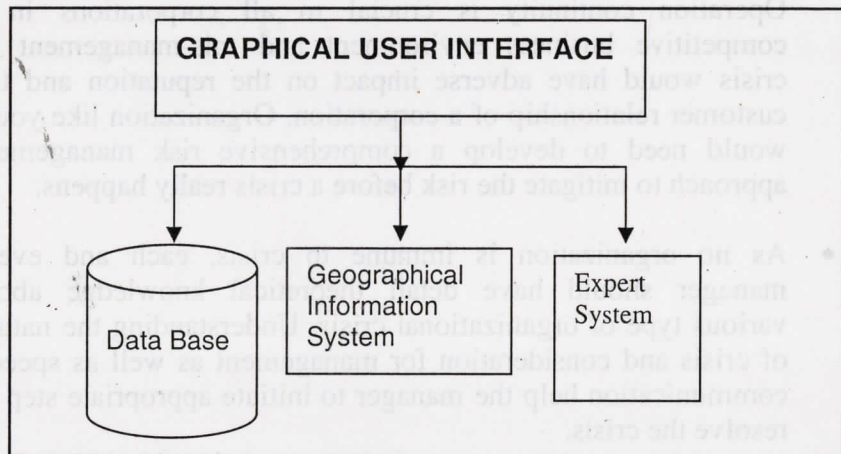


Figure 1: EDSS Structure

6.0 EDSS and Implementation`

6.1 To build the EDSS, Boumediene, B. Reda B. and Saleh integrated Arc View, (Geographic Information System) Visual Rule Studio (VSR, and expert system), and Visual Basic. Visual Basic is used to provide the Graphical User Interface (GUI) and to

coordinate the actions among the other components. The Arc View stores displays and updates spatial (maps) and temporal data (environmental parameters and characteristics).

6.2 A component of Arc View, allows the users to solve a variety of problems using a wide selection of geographic maps or networks such as, streets, highways, rivers, pipelines, and electric lines. VSR uses rules, regulations, and mathematical formulae to determine the shape and the growth of a fire given the current environmental parameters. VSR also calculates the required fire shape parameters such as heat release rate, flame length, and size of shape of fire. The scale and the direction of the fire shape are sent to Arc View for display altogether with the affected site. Then VSR displays advice to help the user tackle this crisis. This is very useful for design and analysis, and for prediction.

7.0 Recommendations

- Increasing crisis events have raised the awareness of the need for clearly defined and effective crisis management system. Operation continuity is crucial to all corporations in a competitive business environment and mis-management of crisis would have adverse impact on the reputation and the customer relationship of a corporation. Organization like yours would need to develop a comprehensive risk management approach to mitigate the risk before a crisis really happens.
- As no organization is immune to crisis, each and every manager should have detail theoretical knowledge about various type of organizational crisis. Understanding the nature of crisis and consideration for management as well as speedy communication help the manager to initiate appropriate step to resolve the crisis.
- Training and seminar on crisis management could be held frequently for the policy makers and administrators so that they could understand its importance and would be interested to integrate crisis issue in their organizational policy.
- Crisis Management System transforms a business continuity plan from a difficult to administer manual process to a well-coordinated, highly effective crisis response solution.

- Moreover, crisis management system provides a framework for the management to keep track of the progress of the crisis resolution and coordinate the interaction with the public media to ensure no sensitive information is released to the public media inappropriately adversely affecting the organization interests. It enables the organization to establish powerful crisis management databases for enhancing the risk management skills and minimizing the impact of future crisis.

8.0 Conclusions

8.1 Crisis management system and theory discussed in the paper provides an overview of conceptual framework and addresses a valuable information that enable the concerned Administrator manager and crisis response team not only to familiar with the important aspect of various type of theory and model but also provides appropriate knowledge and skill of handling the crisis in organizational situation. These ideas would also help the manager to understand the event and enable him to define the situation, specify the objective get into the fact and analyze them considering possible course of action as well as to take appropriate decision to effectively handle the crisis situation. Moreover, it would also help the manager how to thrive under severe pressure and provide best possible leadership qualities in inspiring the team member, encouraging their efforts and giving them confidence in the successful out come of the crisis management process.

8.2 More specifically the EDSS model discussed in the paper may be used not only for fire prediction or crisis management, but it could also be used for design and planning as well as to optimize response time. Another advantage of the EDSS is extensibility. Tests performed suggest that system modeling using GIS is a promising way of bringing the modeling process, within reach of any user and allowing real time visualization over digital maps. Another important point concerning the development of the EDSS model is that the software was designed in a user-friendly manner. This allows even untrained operators to benefit from the software. Moreover, the system is designed to be used as a training tool for new personnel.

8.3 Finally, these theories and model would help the manager to anticipate and deal in advance with most of the issues involved in crisis. The crisis events involve a high level of uncertainty with regard to cause, blame, response, perception, resolution and other possible consequences. And it can be concluded by saying that the acquisition of critical information makes the manager in a stronger position to resolve the crisis.

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Designing School Adolescents' Reproductive and Sexual Health Education Program : Bangladesh Perspectives

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Abstract : Reproductive health situation in the country and reproductive and sexuality health problems especially HIV/AIDS and other STIs etc. around the country is alarmingly high. This makes people of Bangladesh, especially the adolescents and young adults highly vulnerable to deadly degeneration process. Concerning the present and up-coming situation, the study suggested to introduce a scientifically identified need-based and age-specific reproductive and sexual health education program in the regular curriculum of school education system. Parenting roles in such education has been given due importance. The study also suggested to realize the emergence and urgency of the issues at all levels, in the family, community and nation as a whole for safeguarding the country's future generations.

1.0 Introduction

Reproductive health and sexuality education is an integral part of adolescents' development. School Adolescents face great diversity of challenges in maintaining their reproductive and sexual health. Adolescence is a time of rapid personal, physiological and social developments and of learning about gender roles, life skills as well as about sexuality and relationships. Adolescence is a critical time for developing healthy behaviors towards sexuality, reproductive rights and responsibilities. According to the World Health Organization (WHO) the term "adolescent" refers to the children, who fall within the age-group of 10 to 19 years that comprise a large part of the country's total population.

In many societies, educating children about sex is not a task that parents and other family members find easy. Many feel uncomfortable in talking to the children about the subject. Perhaps they are reluctant to expose their own lack of knowledge about anatomy, physiology or other related information. They may worry about how much information to give at what age, based on the unfounded belief that the provision of this information will lead young people to experiment sex. Adult family members, therefore, tend to shy away from actively educating youth about the issues relating to sexuality. Many people fail to realize that giving no information or evading young people's questions can send negative messages about sexuality.

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The concept of teaching school adolescents' reproductive and sexuality health (R&SH) issues is still an unfold chapter in our formal education system. The dimensions and magnitudes of reproductive and sexuality health problems emerging in and around the country have been alarming to create a systematic learning avenue of the issues for adolescents and young adults to save the nation from deadly degeneration process. But the existing socio-cultural practices, religious values and superstitions stands against efforts need to be made for introducing such issues in the prevailing education system.

Studies suggested, when young people do not get information at home they seek answers elsewhere — from peers, media or their observations of other adults. This can lead to misinformation and the persistence of damaging myths, making young people vulnerable to unwanted and unprotected sexual experiences. The result may be unplanned pregnancy, sexually transmitted infections, genital mutilation and low self-esteem.

Family is considered as the best learning institution for all children, where parents usually can play vital roles in children's learning processes. Teachers are regarded as the guide, philosopher and ideal model for the students. They have the power to guide children's development towards healthy sexuality as a natural, normal and progressive experience within the life cycle. In some cultures, parents and family members such as aunts, uncles, elder sisters and grandparents are influential sources of knowledge, beliefs, attitudes and values for children and youth. Therefore, the study intends to design such a learning situation where parents, teachers and the others can get involved in developing school-adolescents' appropriate knowledge and attitudes towards reproductive health and sexuality.

1.1 Reproductive Health and Sexuality Education : Concepts and Issues

WHO defined "Reproductive Health" as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity in all matters relating to the reproductive system and to its functions and process (Akhter, et.al.1996, p.1). The International Conference on Population and Development

(ICPD) held in Cairo in 1994 recommended a “reproductive and sexual health care package” comprising of as many as nine broad elements¹, where adolescents have been considered as a major target group of reproductive and sexual health education (Akhter, et.al.1996, pp.10-11).

The Millennium Development Goals (MDGs) have set out same sorts of action plan or targets to combat reproductive and sexual health problems (UNDP, 2003, pp. 27-32). UNFPA argued that reducing poverty requires progress in adolescents' reproductive health needs. The comprehensive reproductive health care programme incorporates the following components of care:

- Information, education and counselling, as appropriate, on human sexuality, reproductive health and responsible parenthood;
- Education and services for prenatal care, safe delivery and post natal care, especially breast feeding, infant and women's health care;
- Prevention and appropriate treatment of infertility and counselling of the couple;
- Prevention of unsafe abortion and the management of the consequences of abortion;
- Diagnosis and treatment of reproductive tract infections (RTI);
- Diagnosis and treatment of sexually transmitted diseases and other reproductive health conditions;
- Family Planning counseling, information, education, communication and services; and
- Diagnosis and treatment of complications of pregnancy, delivery and abortion.

¹ The package includes (a) Family Planning, (b) Women's Health and Safe Motherhood, (c) Unwanted Pregnancies, (d) Primary Health Care, (e) Child Survival and Health, (f) STDs and RTIs, (g) HIV/AIDS, (h) Adolescents and (i) Disabled Person.

The results from a recent survey conducted in Shanghai show that most of the parents don't know whether they should answer or how to answer the questions when they are asked about sex by their children. Their main priority is their child's test scores. Only 35.5 percent of them concentrate on their children's physical and psychological health. Children and adolescents need accurate and comprehensive education about sexuality to practice healthy sexual behavior as adults. An US studies indicate that teenagers have the highest rates of sexually transmitted diseases (STDs) of any age group. HIV can damage teenagers' health and reproductive ability. AIDS is not curable. HIV infection is increasing most rapidly among young people. A good number of AIDS cases were diagnosed among adolescents (13-19 years of age).

However, reproductive health care and sexuality education reduces sexual risk-taking behaviors, focuses on recognition of social influences, changes individual values, group norms, builds social skills, reinforces clear and appropriate values, strengthens individual values and group norms against unprotected sex.

1.2 Adolescents' Reproductive Health and Sexuality Education Scenario in Bangladesh

Communication about reproductive and sexual health with youth in Bangladesh is clouded with shame and silence. Sex education is not offered in Government or out-of-school education programs. About 42 percent of the country's total population is less than 15 years old and one in every three female youths within age-group of 15-19 years is either a mother or pregnant with her first child, as many as 50 percent youths are sexually active. A recent survey on male clients at an STI clinic indicates that 30 percent of them had sex with unmarried girls. HIV/AIDS rates are currently low but likely to increase steadily. The policy makers are very much concerned about HIV/AIDS spread in the neighbouring countries. Other sexually transmitted infections (STIs), late-term abortion and reproductive tract infections, though not as catastrophic as HIV/AIDS, are growing risks for Bangladeshi youths who are unprepared to meet these challenges.

Studies suggest that the pictures of reproductive and sexual health issues initially cause some shyness, but with more explanation,

people accept them. Although there is no formal institutional arrangement for learning reproductive and sexual health issues, people learn them through natural processes, from health care providers, Kabiraj (traditional healers), Shasthya Shebika (Community Health Workers), pharmacists and quacks. These are not befitting ones for the school adolescents and young adults in getting appropriate reproductive and sexual health education information. But there are some growing interventions, those are at least providing some helpful guidelines to the adolescents and young adults in this regard. The most important ones have been furnished below.

- Different GOs, development partner organizations and NGOs like UNFPA, UNICEF, ICDDR'B, ACTIONAID, DAWN Forum, Save the Children (UK and USA), Bangla Women's Health Coalition (BWHC), Bangladesh Population and Health Consortium (BPHC) etc. organizes seminars, workshops, symposium, advocacy meetings and conferences targeting policy makers, professionals, journalists, researchers, teachers, social leaders, institutional/departmental heads and other influential persons to advocate on adolescents' reproductive health (ARH) in Bangladesh.
- Other than organizing advocacy meetings, ICDDR'B, Population Council, UNFPA, UNICEF, Bangladesh Institute of Research for Promotion of Essentials and Reproductive Health Technologies (BIRPERHT) etc. disseminate their research/survey findings, raise awareness and undertake action programs on ARH.
- BRAC, BIREN and some other local and national NGOs organize community level advocacy meetings with teachers, parents of adolescents, local leaders, Imams, representatives of youth clubs etc. to help them understand the importance of ARH.
- VHSS and some other NGOs organize advocacy meetings among officers and workers to discuss adolescents' reproductive health related issues for assessing their progress.
- Some NGOs and development partner organizations have been working on creating some practicable documents on ARH

including STDs/HIV/AIDS and maternal mortality etc. issues and disseminating messages to their target groups.

- Different development partner organizations and NGOs have been imparting training on advocacy skills regarding ARH.
- Mass media campaigns are also playing a vital role in advocating the importance of the issues, creating awareness and getting social support, influencing policy makers and GOs/NGOs involvement etc.
- In collaboration with development partner organizations, different GOs have been undertaking development projects related to advocacy on reproductive health and gender issues or reproductive and sexual health issues where adolescents have been given due importance.
- UNFPA and some NGOs have been working on development of ARH curriculum, training manuals, booklets, study reports, interactive training videos, news letters etc. Different NGOs have targeted adolescent groups to provide them with ARH messages and advocacy counseling.
- Different organizations and NGOs are catering ARH related peer counseling services covering adolescents of different age-groups. In-school and out-of-school programs, family life education of the Concerned Women for Family Planning (CWFP), BRAC etc. have earned respect of the community.
- Video drama, folk songs, television shows etc. related to ARH are organized by different organizations.

In spite of all these efforts, adolescents' reproductive and sexual health situation is not improving at an expected rate. Experts opine that combating adolescents' reproductive health and sexuality problems requires a well-defined curriculum that has to be introduced in formal education program.

1.3 Curriculum Development for Education Program

Bhatt identified as many as four ideology groups, who conceived and determined curriculum for education program in four different ways (Bhatt 1996, pp. 1-8). The Social Efficiency Ideology group, who believes in "scientific instrumentalism", recognizes the needs

of the clientele, objectives of activities, competencies and changing behavioural patterns of the society (within a cause-effect, action-reaction or stimulus-response context) as the core considerations of curriculum. The Scholar Academic Ideology group believes in the perspective of academic disciplines in a hierarchical framework of searching for, disseminating and learning of the truth within one part of the universe of knowledge. The Child Study Ideology group focuses directly upon the needs and concerns of the individual child, where learning becomes an affair involving the drawing out of the inherent capabilities of the child and the teacher becomes as a facilitator. They also consider the contents, environments, unit of works, materials and methodologies as the integral parts of curriculum. The Social Reconstruction. Ideology group views curriculum in social perspective, where the very survival of the society is believed to be threatened because of its traditional and ineffective mechanisms to deal with problems and actions need to be directed towards reconstructing the society with a new strategic vision. Barnes identified set-objectives, designed contents, adopted methodologies, knowledge, skills & competencies of the instructors, needs of the clientele groups, management, control and evaluation systems as the principal domains of curriculum (Barnes 1985, pp. 1-30 & 109-131). Raffe emphasized on contexts rather than contents (Raffe 1985, pp. 67-69). Bhatt and Sharma considered the process and the procedural aspects with time-dimension as important issues of curriculum development or improvement (Bhatt and Sharma 1992, pp. 41-66).

Workers within the field of curriculum have sought for many years to determine a proper definition of the word "curriculum". The end result of their endeavors always seems to be the additions of another new improve definition over the issue and further criticism of other inadequate definitions (Bhatt 1996, p. 14). A classroom teacher might believe that curriculum is "all of the planned and organized experiences designed to help students learn that take place within the institution". An institution guidance counselor might assert that curriculum is "all the experiences the students encounter within the institution — be they planned or unplanned, organized or unorganized, instructional or non-instructional". A Director in charge of supplies for the institution might think that curriculum is "all of the instructional materials — books, notes,

audio-visuals, other learning kits etc. — used within the institution by the teachers to help students learn”. The others might conceive curriculum that “consists of the curriculum guides or course syllabi published by the authority of the institution”. “Some curriculum writers have claimed that the definitional issues surrounding the word curriculum are of little significance, and that no matter how the word curriculum is defined, the definition does not significantly affect the types of issues and problems dealt with by either curriculum workers or the curriculum field as a whole” (Bhatt 1996, p. 17). However, the present study has encompassed all the elements, as conceived by the above mentioned different ideology groups, under the purview of curriculum.

1.4 Objectives of the study

The main focus of the study is to design an adaptable and effective reproductive health and sexuality education program for school adolescents. The study assumes that parents and school teachers might have profound crafts of inculcating such knowledge and attitudes required in shaping the school adolescents’ reproductive and sexual behaviour. However, the specific objectives of the study are :

- a. to assess school adolescents’ knowledge and attitudes towards and needs for reproductive health and sexuality education;
- b. to devise a befitting reproductive health and sexuality education program for school adolescents; and
- c. to determine adaptable and effective means and suggest appropriate policy measures for implementing such program for the school adolescents;

1.5 The Conceptual Framework of the Study

Although all the adolescents and young adults are not covered by the country’s secondary education system, introduction of R&SH education would develop a new generation consensus in the society that might help in combating the existing and upcoming R&SH problems. Before introducing such issues in the regular curriculum of the existing education system, one must try to understand how

the parents, the school teachers and the targeted adolescents conceive the issues and in what form and to what extent they will accept or accommodate the efforts, which need to be undertaken to overcome the problems. Therefore, the study has attempted first to assess the knowledge and attitudes of the concerned parents, teachers and school adolescents towards the issues and to determine what roles the parents and school teachers are currently playing in enhancing the school adolescents' knowledge and attitudes towards the issues. Then attempts have been made to determine the most effective ways and means for the parents and school teachers in playing such roles. The study has also attempted to determine the extent of R&SH issues to be appropriate to introduce in the school curriculum at different levels of school education programs.

In determining the most effective ways and means for the parents and school teachers in playing roles for enhancing adolescents' knowledge and attitudes towards the issues and in determining the appropriate extent of R&SH issues to be introduced at different levels, the study has analysed the prevailing differences in views among and within rural-urban structures, different gender groups and educational systems environment [i.e. co-education system and mono or uni-education system (e.g. boys' school and girls' school)].

1.6 Rationale of the Study

The tremendous social, economic and demographic changes in and around the countries of the world today have placed the adolescents at crossroads. Out of six million adolescent students reading in the country's 14,000 secondary schools, 3.5 million male students are kept in dark about reproductive health and sexual education. A survey conducted by an NGO named Population Council, revealed that less than 20% of the female adolescent students who take home economics as a subject got a chance to study on sexuality (The Independent, January 13, 2003).

Adolescents constitute more than one-fourth of the country's total population. This large group is at risk for a wide variety of reproductive health problems, such as unwanted pregnancies and STD/HIV/AIDS, especially if reproductive health (RH)

information and services are not available or used. In general, reproductive health knowledge among adolescents is low. The majority has no idea about the changes associated with puberty (e.g., menstruation or wet dreams) until they experience them. Their knowledge of symptoms, transmission and prevention of RTI/STDs and HIV/AIDS is inadequate. Moreover, adolescents generally do not go to the proper health care providers for their reproductive health problems.

Traditionally, early marriage prevents premarital sex. However, as the gap between age at menarche and marriage increases, adolescents are at risk from unprotected sex. Although social customs discourage premarital or extramarital sexual relationships in Bangladesh, such relations were reported in several studies (Cash, 2004, p. 1).

Adequate and appropriate knowledge on reproductive health and development of positive attitudes towards sexuality issues at early stage would prevent malpractices and nourish healthy sexual attitudes. This might be easier than changing practised-old unhealthy habits later. These relatively low cost programs might help prevent early pregnancy, HIV/AIDS and STDs (FOCUS, 1997). Many of the infrastructures and other elements required for successful implementation of the programs are already in existence. Experience suggests that reproductive health education in schools and family spheres would bring the adolescents in a broader context of developmental issues (Family Health International, 1997).

In almost every country, the delivery of sex education through school faces legal, financial, cultural and religious resistance as well as opposition from community leaders, school teachers, parents and even from the students themselves. Other obstacles in most countries include lack of active support, commitment, and coordination from ministry of health and education, school officials, lack of national skilled personnel, training materials, lack of mechanisms, strategies, organization and plan to supervise, monitor and evaluate programs; lack of research capability and infrastructure in school health programmes etc. (FOCUS, 1997).

Till today, motivational activities, counseling & advocacy towards promising future of adolescents remain un-addressed. In Bangladesh, strong family structure and family values play a major

role in shaping adolescents' life style but fails to respond to adolescents' needs for reproductive health information. Although parents tend to act as role models for their children but they remain escapist to provide reproductive information.

In this backdrop the parents and school teachers must have to play important roles in educating the school going adolescents regarding reproductive health and sexuality. The study would find out the ways and means for enabling them to play the appropriate roles. Therefore, the study would be of immense help for the parents, school teachers, adolescents, trainers, policy planners, gender specialists and researchers of relevant fields.

2.0 Methodology of the Study

An empirical approach has been followed for conducting the study. Both primary and secondary information and data have been used for the study. Relevant published and unpublished documents have been consulted. A questionnaire survey method was used adopting a stratified random sampling procedure. In order to prepare the questionnaire a pilot survey was conducted with the help of a preliminary questionnaire. The questionnaire was finalized on the basis of the feedback from the pilot survey. Moreover, some eminent line consultants, subject experts, education specialists, curriculum developers, policy planners and line researchers have been consulted in conducting the study.

Three schools² were selected in such a way that can reflect the differences of the respondents' views in rural-urban settings and in educational systems environment (i.e. co-education and mono/uni-education i.e. in boys' school and in girls' schools). Importance was given in selecting the educational institutions so that it reflects the country's average picture of the issues under consideration. The total sample size of the study was 311. Stratification was made on the basis of category — parents, teachers and school adolescents — of the respondents. It may be mentioned here that the students of class-VI to XII were considered as targeted school adolescents. The samples were further stratified into rural-urban class

² The selected schools were : (a) BPATC School and College, Savar, Dhaka, (b) S. K. Pilot High School, Mirzapur, Tangail and (c) Mirzapur Pilot Girls High School, Baimhati, Mirzapur, Tangail.

structures and gender groups i.e. males and females. Thereafter, a purposive random sampling procedure was followed to collect data from the target groups. The samples were collected in such a way that they could represent their corresponding stratified sample groups. The representative ratios of designed samples were approximately 1 : 1 : 3 in respect of parents, teachers and school adolescents and in respect of male-female and/or rural-urban it was almost 1 : 1.

The study used both simple and cross-tabulation for its analyses. Other statistical techniques, such as corresponding weighing methods to responses with ranks were employed for analyzing and interpreting data. The analytical description has been made mostly according to the corresponding tables and statistical techniques and tests employed (but no table has been presented to minimize the volume of the article).

3.0 Analysis and Findings

Studies indicate that the impact of reproductive and sexual health is not limited to the individual, family, or society at large. It extends across national boundaries to the world as a whole (Akhter, 1994, p. 10). The inability of individuals to address the reproductive and sexual health problems persistently aggravates the damaging health scenario of the country. The adolescents constitute a vital group of any society, who can shape a country's future. Appropriate addressing of the school adolescents' reproductive and sexual health problems has multiplier effects and implications on the individuals, society and the nation as a whole.

Experience suggests that adolescents and youth face multiple barriers to accessing reproductive and sexual health services and maintaining their reproductive health (Ingwersen and Proctor, 2001, p. 15). Studies suggested that the adolescents experience fewer unwanted pregnancies and are less likely to acquire sexually transmitted diseases where comprehensive reproductive and sexual health education, greater social openness regarding sexuality and adolescents' greater ease of access to reproductive health services exists in a society (Singh, 2000, pp. 14-23). Socio-economic disadvantage may contribute to differences in rates of teen-age pregnancy, childbearing and STDs (Johnes et. al. 1985, pp. 53-63).

Studies indicates that socio-economically disadvantaged adolescents often develop sexual relationships at an earlier age (Blum, 2000, pp. 1879-1884) and have less reliance on use of contraceptives (Manning, 2000, pp. 104-110). A comparative study of safe sex practices among girls in Mozambique showed that girls who were married young faced social and psychological barriers to accessing reproductive health services and they were exposed to a range of reproductive health problems that they would not have encountered prior to marriage (Ingwersen and Proctor, 2001, p. 15).

The information on reproductive and sexual health issues in Bangladesh is too scanty to warrant any meaningful interpretation of the status of our country in this regard. Non-existence of information on the issues related to adolescents' problems has made the situation rather more critical for undertaking appropriate interventions or for suggesting to undertake any intervention to this end. Therefore, the present study would mainly depend upon the gathered and generated primary information and data for its analysis.

3.1 Assessment of Attitudes towards Reproductive Health and Sexuality Education Issues

The attitudes towards R&SH issues and reproductive or sexual behaviours are, to a great extent, determined by one's family, educational, cultural, religious and other socio-economic backgrounds (Hossain, 2002, p. 26). Family integration and social values have critical importance in shaping one's reproductive and sexual behaviours. Gender imbalance in sexual decision making influences adolescents' reproductive and sexual behaviours. A study observed that over 57 percent (unmarried) adolescent girls in Malawi find easy to take risk of pregnancy than to ask a partner to use condom (Helitzer-Allen, 1994). Such many other social values and practices exist in different parts of the world. The normal socio-cultural practices of one society may be treated as critical offence in another society by its social norms or by legal practices. And their attitudes towards those issues are developed accordingly.

The people of Bangladesh maintain certain social, family and religious values. There is no data base regarding adolescents

R&SH situation in Bangladesh. Unmarried adolescents do not have access to reproductive and sexual health services. They tend to carry many of their R&SH problems unknowingly. All these influence in shaping one's attitudes towards R&SH issues.

It is often forgotten that the reproductive functions are superimposed on a woman's or an adolescent girl's general health and how well she can cope with the reproductive functions depend very much on her general health status (Chowdhury, 1994, p. 27). The prevalent culture in the country dictates that girls and women have to refrain from eating certain types of food (food taboo) during menstruation and failing to adhere these restrictions would cause heavy bleeding, severe cramps that would lead to infertility, which is again considered as the worst fate for a woman in the society.

Although biologically women need a bit of lesser calorie than men, they require additional cares and calories during and after pregnancy, lactation and menstruation, which are often ignored. Statistics shows that the girl children in Bangladesh suffer from consistent deprivation of nutrition. Girls under-5 and 5-14 years of age usually consume 16% and 11% less calories than those of the boys respectively (Rogers, 1995, p. 97). It is not only a condition prevalent among the young girls; women in Bangladesh also suffer from malnutrition for various socio-economic reasons. They eat last and less, although they have the majority share in family food production (Muntemba, 1995, p. 135). All these create a "Vicious Cycle of Malnutrition" for them. This cycle creates multi-dimensional R&SH problems derived from malnutrition, throughout their life. Therefore, the Government should undertake a strategic plan to improve the adolescents' generic nutritional status for getting rid of their R&SH problems.

3.1.1 Attitudes Towards Major RH&SE Issues

In most of the world, the majority of young people become sexually active during their adolescent years. Therefore, they should have appropriate, accurate and age-sex-specific knowledge about the issues concerned.

The study observed a growing consciousness about different reproductive and sexual health issues amongst school adolescents, parents/guardians and teachers. But there are lack of openness, coordination gaps, lack of institutional arrangements and proper environment for the school adolescents to learn about those issues in appropriate manner. Surprisingly, most of the respondents (more than 70%) believe in several myths, which are very unscientific and nourish those beliefs and maintain them during menstruation cycle. Such beliefs are much stronger amongst the responding females than the males. Similarly, most of the respondents (<77 – 89%) nourish and maintain several food taboos during pregnancy, which are also very unscientific in nature. These need to be taken as serious concerns for mass motivation, conscientization and advocacy efforts.

3.1.2 Existing Sources of School Adolescents' Knowledge /Guidelines

Adolescents report a variety of sources from where they know about sexuality and reproductive health. In many settings, a large proportion of adolescents seem to rely on the least reliable sources — other young people or the entertainment media. They go to different sources for different kinds of information. For example, news media can be an important source for information about HIV/AIDS. In most of the cases, parents are not the primary source of information, although young women may rely on their mothers for information about menstruation and pregnancy risks (UN, 1995, pp. 3-13). Adolescent boys found relying more on teachers, health care professionals and their friends.

Studies on young people's knowledge, attitudes and practice find a mixture of anxiety and ignorance, over confidence etc. They tend to absorb their knowledge haphazardly from family, friends and other peers, school, television, movies and so on. The result is widespread ignorance, partial information, mistaken beliefs and myths. Studies has repeatedly indicated that the best solution, specially for the adolescents — the future generation of a nation — is formal sex education that provide accurate information at the right time and at the appropriate age and encourage responsible behaviour and tend to delay the onset of sexual activity.

The respondents of the present study identified parents, more specifically mother, aunt, grand mother, female house tutor, cousin, sister-in-law, friends/peer group, neighbours, school teachers, print media, electronic media and other media as the sources of adolescents' knowledge and guidelines regarding reproductive and sexual health information. Among those mother (91.5%) and sister-in-law (91.5%) have been identified as the existing sources of R&SH information by most of the urban female respondents. The scenario is almost similar to those of rural female respondents. Mother has been identified as the source of R&SH information by most of the urban male (74.0%) respondents. Although, mother (57.8%), friends/peer group (54.2%), aunt (51.8%) and sister-in-law (50.6%) have been identified as the existing sources of information by more than fifty percent of the rural male respondents, there is no single most important source of such information for rural school adolescents. Both the rural and urban respondents identified sister-in-law, parents, mother, grand mother, aunt as the most important sources of information. The statistical test employed indicates that there is no significant difference of views amongst both rural-urban and male-female respondents regarding the school adolescents' existing sources of knowledge and guidelines about R&SH information.

Again, Most of the responding school adolescent girls opine that they receive R&SH information mostly from sister-in-law (90.2%) and mother (79.3%). Other sources of information identified by more than fifty percent of them are cousin (67.1%), friends/peer group (59.8%), grand mother (57.3%), neighbours (54.9%) and aunt (51.2%). Only mother (56.7%) has been identified as the existing source of information by more than fifty percent of the male school adolescents.

3.1.3 Comfortable Sources of School Adolescents' Knowledge/ Guidelines

Women in Bangladesh usually feel more comfortable discussing their medical problems with women physicians. Services of male physicians are used only in life threatening situation or only when no better expertise is available (Khanam, 1994, p.21.). But female health professionals are far less than desirable. The present study

also picturizes the same scenario in regards to getting R&SH information.

Although, there are gender preferences amongst both the sexes in regards to feeling comfortable in receiving R&SH information, the study reveals that there is no single source, which the adolescents find most important and comfortable. The respondents, even the adolescents themselves could not come out of the existing cycle of information in finding out a single or more most important and comfortable source(s) from where they would like to get R&SH information. In fact, as there is no existence of systematic avenue of transferring age-appropriate, accurate and gender-specific R&SH information to the adolescents and young adults in the country, the respondents might have found themselves confused in choosing better alternatives or options. However, mother, sister-in-law, cousin, grand mother, aunt, friends/peer group and neighbours have been placed in the list of important sources by the respondents, who might not have the satisfying level of knowledge about the issues.

Peer influences appear to be very prominent in adolescents' behaviours. Young people find often easier to talk to a friend or someone closer to their age group especially about sexuality. Therefore, training and education involving peer approach may be an effective means. Bothers and sisters can also act as role models for their positive behaviours.

3.1.4 Learning Needs Identification and Appropriate Learning Environment

Sex education is considered to be a contemporary social problem. School can give adolescents the fact and behavioural skills of healthy relationships which they need to become responsible adults and can break the cycle of ignorance, denial and shame that often passes from one generation to the next.

The challenge in teaching sex education in schools comes mainly from parents and students. Sometimes parents in many parts of the world want the school to take the responsibility so that they do not have to make an attempt to this end. But some other parents feel that it is their responsibility and want to censor what their children are being taught in the school. Some teachers opine that it is not their responsibility to take on such a heavy burden like teaching

sex education. Religious values also play a major role in challenging schools.

However, education programs are recognized as an effective means of addressing the adolescents' reproductive and sexual health needs (Ingwersen, 2001). Despite strong opposition to such programs particularly from religious leaders, decision makers and the media, sexuality education programs have a proven ability to increase knowledge about pregnancy, reproduction, contraceptive methods, to delay the onset of adolescents' sexual activity, to promote gender equality and to develop adolescents' responsible sexual behaviours. An analysis of 68 research reports on sexual health education reveals that it does not encourage increase sexual activity rather it delays the onset of sexual activity, reduces pregnancy and STDs (Ingwersen, 2001). BRAC has been found successfully implementing in-school reproductive health education program incorporated into the curriculum for the drop-outs, where emphasis is placed on involving parents (UNFPA, 2003, p. 33).

More than 90 percent to 99.99 percent respondents identified a number of areas that have been suggested to incorporate into regular curriculum for the school adolescents. According to the respondents' views the adolescents can learn all the R&SH topics/issues both in school and in family environment. But their intensity, magnitudes and approaches may be different. Analysing the views of the respondents the study suggests that :

(i) the following aspects of R&SH issues have been suggested to be taught in the school environment with greater emphasis:

- (a) Physical and mental changes at puberty, (b) The problems brought about by changes at puberty, (c) Knowledge & Awareness of Menstruation, (d) Do's and don'ts during the Menstrual Cycle, (e) Symptom, causes and effects of Reproductive Tract Infections, (f) Prevention and management of Sexually Transmitted Diseases & STI/HIV/AIDS and Hepatitis B & C (g) Spread of Sexually Transmitted Diseases & STI/HIV/AIDS & Hepatitis B, (h) Misconception about Wet Dream, (i) Do's & Don'ts during the pregnancy, (j) Reproductive Right, (k) The sources of information on Reproductive Health Care Services (l) Causes & effects of infertility, (m) The availability of existing Reproductive Health

Care Services, (n) The sources of information on Reproductive Health Care Services, (o) Causes of Eclampsia and (p) Existing values (family, religious, legal, socio-cultural etc.) about Reproductive & Sexual Health Issues.

(ii) the following aspects of R&SH issues have been suggested to be taught in the family environment with greater emphasis:

(a) Physical and mental changes at puberty, (b) The problems brought about by changes at puberty, (c) Knowledge & Awareness of Menstruation, (d) Do's and don'ts during the Menstrual Cycle, (e) Symptom, causes and effects of Reproductive Tract Infections, (f) Prevention and management of Sexually Transmitted Diseases & STI/HIV/AIDS and Hepatitis B & C, (g) Spread of Sexually Transmitted Diseases & STI/HIV/AIDS & Hepatitis B, (h) Misconception about Wet Dream, (i) Do's & Don'ts during the pregnancy, (j) Causes and effects of miscarriage, (k) Causes and effects of unwanted/unexpected pregnancy, (l) Adolescents' pregnancy & its consequences, (m) Food-intake during pregnancy/abortion/MR, (n) Birth Control Methods, (o) Reproductive Right, (p) The sources of information on Reproductive Health Care Services, (q) Causes and effects of Menstruation Regulation (MR)/ abortion, (r) Causes & effects of infertility, (s) The availability of existing Reproductive Health Care Services, (t) The sources of information on Reproductive Health Care Services, (u) Causes of Eclampsia and (v) Existing values (family, religious, legal, socio-cultural etc.) about Reproductive & Sexual Health Issues.

3.2 Proposed Reproductive Health and Sexuality Education Program

Ignorance is never considered as a blessing. Educating adolescents about reproductive and sexual health is a must. Only the questions remain, to what extent, at what level/stage or in what form/method/mechanism it would be appropriate to teach or deliver. As far as the areas and contents of the curriculum are concerned, the present study suggests incorporating all those identified above in the regular curriculum of school education program. Parents and teachers can play unique roles in enhancing

school adolescents' R&SH knowledge and positive attitudes. But there is a need for breaking the existing shields. For example, the HIV/AIDS-advertisement in/on the media provided a big breakthrough for developing mass awareness on the issues. So would be the scenario of R&SH education for school adolescents. Once started, it would get momentum for its practical benefits. But there should be competent teachers at the school level with specialized knowledge and skills on the issues to be taught and they should guide school adolescents' parents under school arrangement for home learning, so that they would not suffer from misconception or misinformation. Peer learning may also be encouraged, which may be brought under the broad framework of the program.

3.2.1 Appropriate Learning Stage

All the respondents, irrespective of rural-urban class structures, gender groups, category and educational systems environment, strongly argued that all the classes from VI-XII would be the appropriate stage of learning (a) "aspects of physical changes of male and female at puberty" in the educational curriculum. On the other hand, all of them have suggested to introduce (b) "prevention and management of sexually transmitted diseases & STI/HIV/AIDS & hepatitis B" and (c) "knowledge about how sexually transmitted diseases & STI/HIV/AIDS & hepatitis B spread" in classes from VI-VII and (d) "aspects of mental changes of the adolescents at puberty" in classes from IX-XII. More than 90 percent of them have suggested to introduce (e) "aspects of mental changes of the adolescents at puberty" in classes from VI-VII, (f) "knowledge and awareness of the problems brought about by changes at puberty" in classes from VI-X, (g) "prevention and management of sexually transmitted diseases & STI/HIV/AIDS & hepatitis B", (h) "knowledge about reproductive rights", (i) "knowledge about the sources of information on reproductive health care services in classes from IX-XII and (j) "existing values (family, religious, legal, socio-cultural etc.) about reproductive & sexual health" in classes from IX-X and (k) "knowledge about how sexually transmitted diseases & STI/HIV/AIDS & hepatitis B spread" in classes from XI-XII. Again, more than 80 percent of the respondents suggested to introduce (l) "knowledge of birth control

methods", (m) "knowledge about effects of unwanted pregnancy" and (n) "knowledge about the availability of existing reproductive and health care services" in classes from IX-XII, (o) "knowledge about how sexually transmitted diseases & STI/HIV/AIDS & hepatitis B spread", (p) "knowledge about the sources of information on reproductive health care services" and (q) causes of eclamsia in classes from IX-X and (r) "knowledge awareness of the problems brought about by changes at puberty", (s) "knowledge about the sources of information on reproductive and sexual health care services and (t) "existing values (family, religious, legal, socio-cultural etc.) about reproductive & sexual health education" in classes from XI-XII. More than 70 percent of the respondents suggested to introduce (u) "adolescents' pregnancy & its consequences" in classes from VI-XII, (v) "knowledge & awareness of menstruation" in classes from VI-IX, (w) "causes and effects of menstruation regulation(MR)/abortion" and (x) "knowledge of food-intake during pregnancy/knowledge of abortion/MR in classes from IX-XII, (y) "knowledge of reproductive rights", (z) "knowledge about the sources of information on reproductive and sexual health care services", (aa) "knowledge about effects of unwanted pregnancy" and "existing values (family, religious, legal, socio-cultural etc.) about reproductive & sexual health education" in classes from VI-VIII, (ab) "do's during the menstrual cycle", in classes of IX-X and (ac) "don'ts during menstrual cycle", (ad) "awareness/knowledge of the symptom of reproductive tract infections", (ae) "knowledge about how miscarriage occurs", (af) "knowledge about effects of miscarriage", (ag) "knowledge about the unexpected pregnancy and its effects", (ah) "knowledge about the sources of information on reproductive health care services" and (ai) "causes of eclamsia" in classes from XI-XII. The rest of the issues identified have been suggested to incorporate in the curriculum of educational systems in respective classes from VI-XII.

The study observed a major difference in views of the parents/guardians and teachers regarding appropriate learning stage of identified R&SH issues in school environment with those of the school adolescents. All the responding parents/guardians and teachers argued that all the issues identified would be appropriate to incorporate for all the school adolescents from classes VI-XII.

But a considerable of the responding school adolescents have been found not interested to learn about (a) do's and don'ts (basically the myths) during menstrual cycle, (b) symptoms of reproductive tract infection, (c) misconception about wet dreams, (d) do's and don'ts during pregnancy, (e) how miscarriage may occur, (f) effects of miscarriage, (g) how unwanted pregnancy occurs and its consequences, (h) food intake during and pregnancy/abortion/MR, (i) birth control, (j) causes and effects of MR/abortion, (k) reproductive rights, (l) causes and effects of infertility, (m) availability of existing reproductive health care services, (n) the sources of information on reproductive health care services and (o) causes of eclampsia. All or almost all of them were found highly interested in learning (a) aspects of physical and mental changes of adolescents of both sexes at puberty, (b) problems brought about by the changes at puberty, (c) STDs/HIV/AIDS and hepatitis B&C and how they spread etc. and they have suggested to introduce all these issues in every stages from classes VI-XII. In fact, they feel ashamed or shy of learning the issues in open forum on which they showed no interest. Analyzing the views given by the respondents, the present study prescribes to incorporate all the issues listed above in the regular curriculum for the school adolescents of class VI-XII. But the detailed contents and their means of presentation may vary from class to class, which may be developed by concerned expert groups.

3.2.2 Means of Effective Parenting Roles

Although a lot of adolescents do not admit, over and over again, research confirms that the adolescents who have warm, involved and satisfying relationships with their parents are more likely to do well in school, to have better social skills and to have lower rates of risky sexual behaviour than other adolescents. But the adolescents having poor relationships with their parents are more likely to have psychological and other problems. Research also suggests that the adolescents whose parents are very strict and do not allow their children any degree of independence are more likely to engage in risky behaviours.

Parents and other adult family members who are acquainted with or participate in sexual education programs are often more willing to favour other efforts such as in-school sex education for the adolescents (www.pathfind.org/focus.htm).

Most of the respondents, irrespective of urban and rural class structures, opined that (a) existence of a Parents'-Teachers' Organization (74.0%), (b) visiting the school fortnightly by the parents (58.5%), (c) arrangement of Parents-Teachers Conference (73.0%), (d) communication between parents and children in response to children's questions and experiences (65.3%), (e) adoption of parental consultation process for amendments of teaching materials (78.8%), (f) parents' delivery of parts of the sex education programme at home (65.0%), (g) arrangement for running parents' workshops (54.3%) and (h) a process of meeting the individual needs of adolescents by the parents at home etc. would be the most effective parenting roles in enhancing school adolescents' knowledge and positive attitudes towards R&SH issues. The proportion of school adolescents who support those means is relatively lower than those of the parents and teachers. Again, the responding girl adolescents have been found comparatively more supportive to those interventions than the boys.

3.2.3 Means of Effective Teachers' Roles

School teachers are considered to be the architects of school adolescents' future, of their behaviours and life skills. The study observed almost similar views of the respondents regarding the means of the most effective teachers' roles in enhancing school adolescents' knowledge and positive attitudes towards R&SH issues.

Most of the respondents, irrespective of urban and rural class structures, opined that (a) existence of a Parent Teacher Organization (74.0%), (b) visiting the school fortnightly by the parents (58.2%), (c) arrangement of Parents-Teachers Conference (68.5%), (d) administrative and financial support for effective R&SH education (60.0%), (e) adoption of teachers consultation process for adolescents' sex education classes (60.8%), (f)

adoption of teachers' consultation process for amendments of teaching materials (67.2%), (g) school teachers to be supplied with copies of sex education materials (64.0%), (h) arrangement for running teachers' workshops (57.6%), (i) engaging qualified teachers for R&SH education (65.3%) and (j) a process of evaluation of the efficacy of different programs to be run by the teachers etc. would be the most effective teachers' roles in enhancing school adolescents' knowledge and positive attitudes towards R&SH issues.

3.2.4 Breaking the Shields and Bridging the Gaps

The study indicates that most of the responding parents and teachers (81.6%) and school adolescents (82.8%) consider R&SH education as an important issue. But most of them have never had any conversation with each other about any aspect of the issue. They are not even questioned by either side. Parents and teachers do not find easy to talk about the issue to their children and students. Students are found ashamed of asking R&SH issue-related questions to their parents or teachers. In fact, cultural barriers strongly stand against such initiatives. The study suggests that a formal arrangement of educating school children about R&SH issues would be the best option to this end. Observations and research findings suggest that sensitizing parents and school teachers is an important determining factor of success of any school-based reproductive and sexuality education program in anywhere in the world. This can be supplemented by the measures prescribed in 3.2. Moreover, Sexuality education has great potential to reach a large audience, at least in countries where a high proportion of young people attends school. A major challenge is to expand the use of approaches and the curricula that have been successfully tested on a small scale. The study also observed that GOs'-NGOs' efforts (96.5%), mosque-based programs led by imams (98.1%), seminars, workshops, conference programs to be organized by the Board of Education (83.6%), programs to be undertaken by the print and electronic media (94.9%), community organizations and civil societies (95.8%) will of immense help in the processes of breaking the shields and bridging the gaps.

4.0 Suggested Policy Measures and Conclusion

Reproductive and sexual health education is getting importance day by day throughout the world. The study observed growing awareness about the disastrous danger of the R&SH problems, specially the HIV/AIDS/STDs and RTIs issues. The future generation has to face more challenges to cope with the problems. Therefore, young generation, especially the adolescents and young adults need to be ready to fight such challenges. Preparing school adolescents would be a step forward to this end.

4.1 Suggested Policy Measures

The present study suggested the following measures, which need to be undertaken under a broader framework of national development:

- There should be a regular and systematic process of generating age and gender specific data and information on adolescents' reproductive and sexual health (R&SH) issues.
- The adolescents should be provided some parts of the R&SH education (as identified in the needs identification part) by their parents at home.
- Reproductive and sexual health education should be functionally considered as the most important tool for enhancing school adolescents' knowledge and bringing about their positive attitudinal changes towards R&SH issues.
- The Government should undertake a strategic plan to improve the adolescents' generic nutritional status for getting rid many of their R&SH problems.
- Since the school adolescents have been suffering from the ignorance of accurate, appropriate and age-sex-specific R&SH information and services, the Government should undertake policies, plans and programs to make them easily and affordably available for them in a systematic manner.
- Parents and teachers should be considered as the role models for enhancing school adolescents' knowledge and

attitudes on R&SH and accordingly, their capabilities to guide adolescents' reproductive and sexual behaviours should be developed first.

- It is highly necessary to incorporate positive family, social and religious values in the reproductive and sexual health education system, if such education is introduced for the school adolescents in the country.
- All the identified R&SH issues should be incorporated in the regular curriculum for the school adolescents of classes VI-XII. But the magnitudes, dimensions and approaches of teaching such issues under regular curriculum should be age-specific and befitting to their level of acceptance.
- The process of enhancing school adolescents' R&SH knowledge should incorporate a package program consisting of establishing a school-based parents'-teachers' organization, parents-teachers consultation, peer counseling, parents' workshops, guidance and text-based life skills education.
- Only qualified and devoted teachers should be engaged in implementing school based R&SH education programs for the school adolescents where parents should participate occasionally for acquiring appropriate knowledge and self-motivation.
- There should be process of monitoring and evaluating the efficacy of R&SH education programs to be run by the teachers.
- Appropriate and adequate copies of R&SH education materials for the parents, school teachers and the school adolescents should be developed and made easily available at schools.
- Advocacy, counseling and motivation exercise training need to be undertaken for the concerned teachers and parents on how to teach, motivate and advocate adolescents about R&SH issues effectively.

- A parents'-teachers' sensitization programme should be undertaken involving social, community and religious leaders, educationists, programme managers and media. Workshops, seminars conferences, advocacy, counseling etc. would be effective means to such efforts.
- Adequate financial, administrative and political supports need to be extended to make the efforts a success.

4.2 Conclusion

Adolescents' reproductive and sexual health problem is not their individual problem. It is a social as well as national problem. But the problem should be owned at individual, family, community, social and at national level. Still, parents and school teachers would be the best architects to develop a new generation adolescents capable of coping with the existing and up-coming challenges in R&SH arena. Adequate financial, administrative and political supports would make the efforts effective and lead them to a success.

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Assessing Social Imprint of Technology in Gender and Development

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Abstract: *Technology covers a wide area from nadir to zenith. It does not always benefit humans equally. How much benefit one can get from technology depends on how much control one has over technology. Wajcman points out that 'Technologies result form a series of specific decisions made by particular groups of people in particular places at particular times for their own purposes.' As such, technologies bear the imprint of the people and social context in which they developed' (1991:22). Taking this view as the premise of the article, I would first give an overview of technologies that includes domestic and education technologies and then concentrate on reproductive technology- its impact on women's life.*

Introduction

Technology touches our work, bodies, living patterns, and communication process. It is both commodity and infrastructure for all these and other aspects of human life (Star, 2000:1910). Technology, a product of science, developed out of the human need and desire to live comfortably and compatibly with our social and physical environment (Martins, 1969:269). It includes tools and machinery and the knowledge connected to their development and use. 'Technology is widely associated with maleness' (Willoughby, 2000:536) and it is 'a gender symbol of specific importance because of its connection to the sexual division of labor...a symbol of maleness and a source of male identity' (Lie, 1991). Design of technology also reinforce male dominance, for example, in Bangladesh, a rickshaw is made in such a way so that the puller can be a man. We cannot think of a rickshaw that may be pulled by a female rickshaw-puller. A bicycle is made in Bangladesh (iron rod in the middle) with the idea in mind that only male persons would use it. The idea that women would use it is not taken into consideration. Wajcman argues that 'technology is more than a set of physical objects or artefacts. It also fundamentally embodies a culture or a set of social relations made up of certain sorts of knowledge, beliefs, desires and practices' (1991:149).

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Domestic Technology

It is a common view that domestic technology liberates women from ordinary tasks. But studies mirror the different picture. Surveys on six developed countries (USA, UK, Canada, Norway, Denmark and the Netherlands), from the 1960s to the 1980s, observed that although in some cases, technology made work more efficient, additional technology such as ironing created new tasks. Studies of child rearing in these countries found that that demands on women rose with the influx of technology (Wajcman, 1992).

Cowan (1983) shows that each device such as dishwasher does speed the cleaning of dishes, standards and number of tasks also rose during this period that cause the actual decrease in women's leisure time. Thus, as Defrancisco (2000:411-2) argues, 'domestic technology has not liberated women from housework' rather accompanied by predominant social ideology, it reinforces the idea that the proper place of women is the home. Wajcman argues that 'the significance of domestic technology lies in its location at the interface of public and private worlds. The fact that men in the public sphere of industry, invention and commerce design and produce technology for use by women in the private domestic sphere, reflects and embodies a complex web of patriarchal and capitalists relations' (1991:106).

Education: Technology

Girls and women's participation in technical education also mirrors gender stereotypes. Irrespective of educational systems, economic development, prosperity, employment patterns, and political systems, educational patterns are similar, with girls and women constituting a small percentage of technology students and practising professionals. 'Traditional arguments tended to centre on the nature of technology as dirty and heavy work or on women being genetically unsuited to science and technology. Such views were then enforced and reinforced by bars against women in certain jobs, in trade unions and engineering institutions, and in science and computing clubs in school' (Willoughby, 2000:536). Committee on Women in SET, 1994 documented that 'Girls do perform well in math and science until puberty, after which the gender separation becomes notable, although those girls continuing

with these subjects achieve results that are as good as boys'. "Gender differences in educational experience are not simply the result of what is taught in courses of formal instruction. In a more profound way the culture of the school is involved in constructing gender and sexuality through the 'hidden curriculum'-teaching in an implicit way meanings and behaviours associated with femaleness and maleness, with femininity and masculinity" (Wajcman, 1991:152).

Reproductive Technology

Now there would be an attempt to discuss about reproductive technology, which is directly related to women's reproductive behaviour. Wajcman (1991:54) sees that 'nowhere is the relationship between gender and technology more vigorously contested than in the sphere of human biological reproduction. Women are the bearers, and in most societies the primary nurturers, of children. This means that reproductive technologies are of particular significance to them'.

Klein (1987:65) defines " 'reproductive technologies' as the full range of biomedical/technical interferences during the process of procreation whether aimed at producing a child or preventing/terminating pregnancy". Reproductive technologies can be divided broadly into two categories- fertility control technologies and infertility treatment devices. Fertility control technologies includes pill, Norplant, IUD, Depo Provera, condoms (both male and female), abortion, drugs etc. Infertility treatment devices include IVF (in vitro fertilization)- GIFT (gamete intrafallopian transfer); ZIFT (zygote intrafallopian transfer); super ovulation with fertility drugs; TUDOR (trans vaginal ultrasound-directed acolyte recovery; and fetal reduction or seductive pregnancy. Other reproductive technologies are concerned with sex predetermination; embryo transfer; surrogacy; surrogate gestation; embryo and egg freezing; fetal tissue transplant; post-mortem caesarian and genetic screening.

Raymond (1993:viii) argues that 'all these technologies, drugs, and procedures violate the integrity of woman's body in ways that are dangerous' destructive, debilitating, and demeaning, they are a form of medical violence against women. Some of these, such as reproductive contracts (surrogacy) create traffic in women's bodies.

Technologies for Fertility Control

Most of the contraceptive devices made and developed for women. It seems that women are responsible for population growth without being impregnated by men. Unwillingness of using condom during intercourse further reinforces male control over reproduction. Infertility is considered to be epidemic in the developed countries while sterilization is prevalent in developing countries. Women of the Third World are considered as population polluters. As a result massive termination of female fetuses is observed in many parts of India (Raymond 1993:xxiv). So, one can look back the past history of Arab countries when female child were killed immediate after birth.

Norplant is another device to protect pregnancy. It is an 'economic benefit to women who cannot afford another child or who do not want to confront the alternatives to another pregnancy' (Wall 1999:61). Who are the women who cannot afford another child? These women are living in developing countries like Bangladesh. Thus, the media manipulate their success by hiding (or not observing) the harmful side effects experienced by Bangladeshi and Brazilian women (Akheter et al., 1993; Raymond 1993:xxiv). Norplant also undermine the abortion for unwanted pregnancy by blaming young women in the US, especially women of colour, for their pregnancy when Norplant is available (Wall 1999:60). It seems that Norplant implant brings more sexual pleasure for men and in this way women's bodies are used as vehicles for sexual pleasure.

Abortion is another way to control unwanted pregnancy. Right to abortion and right to reproductive technology is treated same. However, right to abortion is directly related to the cause of pregnancy. An unwanted pregnancy needs a safe, legal abortion. 'There is vast difference, between however, women's right to choose safe, legal abortion and women's right to choose unsafe, experimental, and demeaning technologies and contracts. One allows genuine control over the course of a life; the other promotes abdication of control over the self' (Raymond, 1993:xi). Albury (1999:x) argues that 'demand for choice about using technology to terminate an unwanted pregnancy sounds odd when converted into a demand for choice about the use of technologies of assisted reproduction to achieve pregnancies for women past menopause'.

Technologies for Infertility Treatment

IVF (in vitro fertilization) is the latest and most advanced and technology of reproduction for infertile women. New reproductive technologies, for example, IVF undoubtedly benefited few infertile women who wanted to get a child. However, the strong debate around these technologies is whether they reinforce male control over women's bodies. Reproductive technologies as Meyer (1997:37) argues, 'increase the options available to some infertile women. The control over who can and cannot become mothers with the aid of reproductive technology lies with the medical profession, a patriarchal system'. This technology also reinforces men's control over motherhood. Pro-choice women often perceive the technologies as a way to strap women into compulsory motherhood. Now there is no excuse for childlessness; women without male partners, women with fertility problems, women past childbearing age- all can become mothers.'(p.38). Thus new technologies represent a threat to women's psychological and physical health as well as a means to undermine their control of their bodies.

Women at Risk

Although, some of these technologies, with some extent, benefit certain group of women, they also bear the cost and burdens when the male-developed reproductive benefits fail. In gamete donation it is always woman who is at risk. The semen donor is in no danger, while semen recipient often risks the transmission of sexually transmitted or other infectious diseases from semen not tested adequately or not frozen and/or quarantined. Women are also at risk in egg donation. Most donors experience some side effects from the procedure, sometimes-serious ones. The recipient risks complications from hormone manipulation and implantation, which can lead to temporary or permanent damage (Meyer, 1997:35).

Pill also has led to higher rates of cancer and thrombosis, and continues to be a drug, which is taken on the basis of little, and poor research into its side effects. Depo Provera, the most 'efficient' contraception, has placed many women at risk. The Dalkon Shield, a contraceptive inter-uterine device (IUD), has in fact caused death of women through infection and septic abortion

and represents again the use of women's bodies by a medicine little concerned for the well-being of its victims'. (Rowland, 1987:80). Women also have been used as guinea pigs testing oral connectives and alleged anti-abortifacient, DES. They have experienced strokes and blood clots and cancer. Women have also been the victims through sterilization and even death after using the male-developed IUD (intrauterine device), the Dalkon Shield' (Steinbacher and Holmes, 1987:58). 'Reproductive technologies have been developed not because women need them, but because capital and science need women for the continuation of their model of growth and progress' (Mies, 1993:175).

Sex Selection

Sex selection is another way of control over number of female population. Abortion gives women control over their bodies and lives while sex selection gives men control over sex of the next generation (Rowland, 1987:84). Son preference is a reality in both developed and developing countries. The number of sons she has produced determines the status and treatment of a woman. Holmes and Hoskins (1987:25) argue that as sex choice technologies are patriarchal, 'it can be another way of oppressing women. Under the guise of choice we may indeed exacerbate our own oppressions'.

Study shows that amniocentesis is now widely used in China and India to determine the sex of the fetus. Due to strong pressure for one-child families in China, and as both countries preferred boy child, female fetus are frequently aborted (Davin, 1985) which results the use of reproductive technology for femicide.

Amniocentesis is also used for detecting genetic or developmental disabilities of the fetus during pregnancy so as to prevent the birth of disabled infants. Aborting such a fetus seems contradictory to women's right to abortion. Hubbard appeals for meeting women's education, healthy home and work environment, good nutrition and parental care to produce healthy babies rather amortize the investments in technology through marketing the techniques as widely as possible (1988:233).

Whether the new reproductive technologies are used to enhance or decrease the autonomy of women will depend on who makes decisions about how they are used. Most feminist scholars argues

that women have no control over the development and use of new reproductive technologies (Whitback, 1988; Sarah, 1988; Corea 1988).

Here, I argue not on whether women are benefited or not, rather the ideology behind the development of these technologies. Is not it the century long ideology that see women as mother, nurturer, carer? Is not it the ideology that sees women inferior than men? It is the socio-biological deterministic thinking, as Bleier argues that 'Woman is to be legally defined and socially confined as mother, reproducer, and nurturer; dependent and subordinate' (1984:11). It, as Shannon argues 'also reinforce the perspective that the primary or exclusive role of women is to have children. An assumption may be that a female is not fully a woman until she has been able to bear a child. There is an implicit affirmation that the worth of a woman is centred on her ability to reproduce. This attitude reinforces stereotypes of women and helps keep them in their subordinate social position. It reinforces attitudes that claim women's worth is derived from biology, not ability' (1988:164). Thus, in my view, reproductive technologies do not bring reproductive freedom for women rather reinforce male domination over women's bodies.

Conclusions

From the above discussions and arguments made by different feminists scholars, it is understood that all technologies reflect their socio-cultural and historical context in which those technologies were made and developed. Technologies, through their discourses on sexuality always play an important role in the social construction and control of women's sexuality and idealized temperament. Technologies always consider women as passive, dependent, martyred, and masochistic, who have reinforced the existing social stereotype of woman as a subordinate member of the patriarchal household and social order. 'Through their prescriptions and definitions of normality and maturity, science and medicine have lent tacit support to structures and ideologies that condone direct and indirect violence in the social control of women, and have, in fact, themselves been the instruments of violence against the bodies and minds of women' (Bleier, 1984: 190). All technologies bear the burden of social values, which are 'linked to the people who create them and to the social concerns of those people' (Osler, 1980:123)

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A Sociological Search for Uncovering Different Dimensions of Crime and The Context of Bangladesh Society

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Abstract: *In every society human behaviour is treated differently. Some behaviour is rewarded, some ignored, and some results in legal punishment. Crime is a human behaviour punishable under criminal law since this behaviour is socially harmful and dangerous. In the study of human behaviour, people identified as criminals do not become so until the process of lawmaking defines them as such. However, every country has enacted a criminal code in which the nature of criminal behavioral pattern is depicted and accordingly provision of prosecution and punishment is kept. Although the nature of criminal laws varies through history and in localities, one must accept the necessity of criminal laws if one desires to live in a society that is ordered. Hence, there is a vivid interrelation between crime and society. Crime is an inevitable social fact; it was, it is, and perhaps, it will be with us. It is deemed to be an acute social problem for all the courtiers in the world and as such, it demands a broad analytical spectrum that will include society's reaction to law-breaking, the way people become criminals, patterns and types, theoretical understanding and many more. Only sociological interpretation can explore the gamut of crime more scientifically, and in a more organized way. It is hoped, once the gamut is explored the fight against this deadly social fact will become easier. From this intention, in this write-up, attempts have been made to make orient everybody ranging from queries readers to policy makers about the ins and outs of crime. Above all, attempts to do so will exclusively be sociological; because typical legal sense is too narrow cover it up.*

1.0 Introduction

Every society has categorized certain behaviours as seriously anti-social, wrongful, harmful or obvious violation of social norms. Hence, specific sanctions are levied formally or informally to control these behaviours. A law is a tool of formal sanction which is defined by a particular culture as a code or rule that people must abide by; if not, it will be used against them who do not conform. Crime is, in that sense, deemed to be a behaviour or an act determined by law to be harmful to society since it leads to break the code of a particular community and as such, punishable under law. Crime is, then, is a threat to smooth functioning of a society in a orderly manner. Traditionally, order is the state of tranquility prevailing among members of a society established and maintained by a body of law.

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Hence, the notion of order and law to deal with crime. Apparently, crime is a legal construct; but it is, in fact, a social and cultural construct too since every society and its culture has differentiated which behaviour should be proper or improper, right or wrong, moral or immoral, social or anti-social.

Recently, modern societies are suffering from a rapid increase in crime. It has, therefore, been felt to be a need for an objective analysis of crime as a social phenomenon. A sub-field of sociology called criminology has flourished in many countries with a view to uncovering the gamut of crime and criminality so as to pragmatic measures might be taken to fight in the crusade against crime. Nevertheless, crime has been taken to be considered as one of the persistent global problems, affecting all countries rich or poor, developed or developing, capitalist or socialist what so ever. In this write-up, attempts will be made in the broad spectrum of sociological thinking to uncover different dimensions of crime that will include a conceptual orientation, development of theories, patterns and etiology, means and ways of dealing with criminals and proposals for reducing crime from society. It is needless to say, in terms of crime and criminality Bangladesh is one of the vulnerable countries in the world. Therefore, it is an obligation to relate the context of Bangladesh to draw attention of the appropriate authority so as to necessary measures can be carried out to ensure peace and tranquility in society.

2.0 Explaining the concept of crime

Apparently, the explanation of the concept 'crime' is very difficult since what constitutes crime varies from society to society, culture to culture and time to time. It is regarded that the definitional problem to be the most important task in criminology since there is no word in the lexicon of criminological term which is so elusive and complex to get defined. Some of the common definitional approaches are:

a) Crime and law: Crime is first of all a legal concept. It is defined as those acts or omissions that are specifically proscribed by law as these are tended to violate criminal code. Basically, criminal law is a means of social control and as such, any attempt of breach of rule or law must be punishable under certain sanctions

(fine, imprisonment, death penalty etc.) [Silver: 2]. The age and state of mind of the offender are also required to seriously consider before any punishment is imposed. There will be no crime if the offenders are too young, too deranged and too weak-minded. In fact, crime is such a concept whose necessary elements are proscribed action, evil intention and prescribed punishment. For lawyers and judges these are the necessary elements for legal argument and decision making in the courts (Walsh & Poole :49).

b) Crime and violation of human rights: Human rights are universally inherent, inalienable and inviolable rights of all members of the human family which the states are to recognize and ensure for their citizens because without these they can not live as human beings. This view identifies any action to be a crime if it thwarts the rights required for dignified human existence e.g., freedom of speech and movement, the right to life, liberty and security, the right to education, standard of living, work, rest and leisure etc.

c) Crime and deviance: Crime & deviance are not synonymous; and in many cases they overlap. Deviance may be defined as non-conformity to a given set of norms, rules and laws, and, in that sense, the concept of deviance is broader than that of crime. Absolute crime (rape, murder, theft, robbery etc.) is a type of deviance that defies criminal law; but many forms of deviance e.g., homosexuality, living-together without marital affinity, wearing unusual cloths etc. sanctioned under certain cultures as well as punishable by certain laws too. Many western cultures have legally sanctioned such deviancies but the law of a traditional culture like Bangladesh does not sanction such deviancies. For example, according to the Penal Code of Bangladesh (Article: 377):

whoever voluntarily has carnal intercourse against order of nature of any man, woman and animal, shall be punished with transportation for life, or with imprisonment of either description for a term which may extend to ten years, and shall also be liable to fine (cited in Khan:158)

It is to note that, all crimes are deviancies; but all deviancies may not be considered as crime. To be declared as crime it must be

legally sanctioned. Hence, there is a significant difference between crime and deviance.

However, any activity will not be labeled as criminal unless they do not constitute the following propositions as indicated by renowned criminologists Sutherland and Cressy:

- (1) Before behaviour can be called crime, there must be certain external consequences of harm..... even if one decides to commit a crime, but changes one's mind before doing anything about it, no crime has been committed. The intention is not taken for the deed.
- (2) The harm must be legally forbidden; antisocial behaviour is not crime unless it is prohibited by law.
- (3) There must be 'conduct', i.e. there must be an intentional or reckless action or inaction, which brings the harmful consequences about.
- (4) There must be mens rea (criminal intent). The issues of intent, liability (at law) for the consequences of one's actions, and mens rea are all important controversial subjects to those who study jurisprudence (cited in Prins:5)

Suffice it to say, for behaviour to be labeled as 'criminal'; there must be (i) harm, (ii) conduct, (iii) criminal intention, and of course, (iv) prescribed punishment (ibid.)

3.0 Theories of Crime Causation — Roots of Criminal Behaviour

There have been a number of theories on criminal behaviour which are attempted to understand what is crime, who becomes criminal and why? Basically, the theories have been derived from biological, psychological and sociological point of view. After a brief discussion of biological and psychological explanations; a special focus will be thrown on sociological perspective. It is widely regarded crime is a socially learned behaviour and too many factors stand behind crime causation; therefore, the search

for a single general causation as depicted in the biological and psychological theories have doomed to failure. Theories of multiple causation derived from sociological line of thought have been proved more acceptable and meaningful than any other theorization (Mays:3).

a) Biological theories: The early attempts to explain crime were biological. In the late nineteenth and early twentieth century some theories attributed to the tendency toward criminal behaviour to innate biological factors were constructed. The most famous theory-constructor in biological line is Cesare Lombroso (1835-1909), an Italian origin scientific criminologist, who believed criminal types could be identified by certain anatomical characteristics. In his opinion, 'born criminals' could be distinguished from normal individuals by certain physical stigmata such as; slapping forehead, twisted nose, small brains, large ears, over developed jaws, and certain internal cerebral deficiencies (Colesman & Cressy : 382). Lombroso also opined that crime is a function of criminals defective or degenerative condition; hence, it is a kind of disease (Walsh & Poole: 50). Since the criminals have not developed like normal individuals; they tend to act in ways that were not socially recognized (Giddens:205). Lombrosian ideas became totally discredited and widely criticized; even Lombroso himself admitted that physical degeneration could be counted only for 40% of known criminals, but it is, still, a prominent approach in understanding the causes of criminality in individuals (Silver :44). The later biological theory was developed by Sheledon (1949), Gluecks & Gluech (1956) and Gibbens (1963). They suggested criminality related to three main types of human physique. According to this line of thought, criminal tendency is more common among muscular or active type of people than that of thin and fleshy individuals. This notion has also been criticized and has little support today (Safra:803). The last one is, perhaps, a mild review of Lombrosian approach since the views on chromosomal abnormalities have brought a considerable interest in recent years. The carry of an extra chromosome in males (xxy) may be more likely to be involved in criminal behaviour than the general population (Prins:58).

b) Psychological theories: Biological approaches focus on physical features while psychological approaches concentrate on

personality type. In this theoretical notion emphasis was put on some psychological traits of criminals i.e., feeble-mindedness, moral degeneration, mental retardation which were thought by many to be the major causes of crime (Silver: 44). Some attempts have been made to prove that such abnormal mental states are inherited, and these may lead an individual to criminality and create problems in the process of socialization. It happens because the inability of the criminals to control their conduct for such genetic predisposition (Giddnes:206). In psychological theories, the ideas about psychiatry were influential since there is a wide belief that many criminals are insane or psychiatric patients. People are labeled psychopathic because they have broken the law and on the other hand, it is said, people break the law because they are psychopaths. The approach is called 'New- Lombrosion' as it matches to a great extent with Lombroso's search for criminal type which is based upon physiology while this notion on personality (Coleman & Cressy:389). Some psychological explanations suggest that crime is committed from frustration and aggression. If the needs of individuals are not fulfilled frustration builds up, it, in turn; leads to aggression and finally paves the way for antisocial or criminal behaviour. Eminent psychologist Sigmund Freud linked criminal behaviour with defects of the superego or conscience. People with weak egos are unable to carry out rational courses of action (Eshleman & Cashion :172).

However, both psychological and biological theories are not that much applicable in understanding criminal activity, and have little relevancy to reality. If all the physically degenerative, psychopaths, aggressive or frustrated people were criminals then the earth could have been non-livable. Sociological theories, on the other hand, consider genuine factors for criminality other than acts or actors. That is why, sociological theories are so prominent, so applicable.

c) Sociological theories: Sociologists have proposed a variety of theories on crime and criminality. According to their arguments, any satisfactory account for the nature of crime must be sociological, for that, crime depends on the social institution of a society. In fact, social variables, not individual variables, are responsible for criminal behavior. There are a number of sociological theories, some of the important ones are: theory of

differential association, theory of anomie, conflict theory, control theory and labeling theory.

i) Differential association: Sutherland's theory of differential association proposed that criminal behaviour is a learned behavior, and the process of such learning depends on the extent of the individual's contact with other persons. The more the individual is exposed to contact with persons whose behaviors are unlawful, the more likely he is to learn and adept their values (Safra:803). The theory postulates that criminal behaviour is learned through interaction within intimate personal groups. Members of different gangs, for example; socialize one another as to what types of behaviour are appropriate or inappropriate, and what norms & laws can be violated and what would be the strategies of violation. Sutherlans's stress on intimate personal relationships has an air of unreality because there is nothing special about the learning processes which are common to all types of behavior (Rao:110).

ii) Theory of anomie: Searching for an explanation of suicide rates in different cultural context, the great French sociologist Emile Durkheim developed the concept of anomie. According to Durkheim, anomie is similar to normlessness, or a state of confusion produced by sudden or dramatic changes in the social structure. Robert Merton, a modern American sociologist in his 'Social Theory and Social Structure', had taken the concept one step ahead in studying crime & criminality. Merton suggested criminality is a result of offender's inability to attain socially acceptable means & goals. These means and goals may be termed as the norms & regulations of society. However, if any disjunction is found somewhere in such cultural goals and institutionalized means; a condition of anomie prevails (Scarpitti: 474). When such situation happens, acute problems of crime and delinquency may follow the way.

iii) Control theory: Crime commits in society when there are inadequate social and physical control mechanism to deter it from happening. Nearly everyone recognizes that certain amount of social control is inevitable for smooth functioning of society and forces like socialization, community opinion, police force and other law enforcing agencies constrain people's behavior (Stewart: 275). Even though, if any loopholes in these constrain devices are

detected; crime rates will undoubtedly be increasing. It is meant, people commit crimes since the society fails to stop them due to lacking of instilling an internal sense of morality and severe punishment as and when required (Coleman & Cressy: 409)

iv) Conflict theory: Conflict theory depicts that repression of the weak by the powerful, exploitation of the commoners by strong interest groups, unequal distribution of wealth & opportunities lead towards class conflict in society. The conflict between the powerful & the weak, the oppressor and the oppressed, the rich and the poor instigates people to commit crime in society. The great theorizer of conflict school Karl Marx argued people are treated to be criminals by the ruling class or by the capitalists when they disturb, obstruct and raise question about any of the following issues : a) patterns of capitalist society; b) the ideology that supports capitalist society; c) the socialization of productive and non production roles; d) tools of oppression etc. (Eshleman & Caslion :176).

v) Labeling theory: Labeling theory argues that criminals learn to be criminals. This theory is very similar to conflict theory. The theory not only sheds light on criminals personalities but also on societies reaction to them. Labeling theory is concerned with the way of branding people as criminals and with the effects of such labeling on the individuals (Coleman and Cressy: 387). Once such branding is firmly attached; a tendency of criminality might be noticed in the scapegoats. People who represent the forces of law, order, wealth and power, do most of the labeling. In fact, people who are stigmatized as criminals or delinquents; for reasons or not, may be boosted to commit crime.

Nevertheless, sociological approach to crime perceives it as a phenomenon caused and determined by numerous factors; therefore, it is not a single theory but many theories are required to get it explained.

4.0 Types of Crime

As the contents of criminal law vary from society to society, culture to culture; the classification and distinctions of crime will, of course, be different. It is needless to say that the diversity of criminal behaviour makes a comprehensive list impossible.

However, crimes at first should be classified according to the seriousness of the offences. The seriousness of the offence makes people understood whether the crime is a felony or a misdemeanor. The more serious offenses are called felonies which are usually punishable by imprisonment or by death; the less serious ones are called misdemeanors which are punishable for less than one year and so, or only by a fine (Silver: 18). It varies from society to society up to which crime may be categorized as felony and which as misdemeanor. Secondly, in legal sense, crime can be classified according to the nature of the offense. Thus, some crimes may be against persons (homicide, murder, vandalism, rape, assault, robbery), some against public order (loitering, terrorism, alcoholism, treason, riot), some against property (larceny, burglary, destruction of public property), some against public decency (sexual crimes, prostitution, sale of obscene materials, gambling) and crime against public justice (corruption in public offices, extortion) [ibid:18]. The Dutch criminologist Wilhem Benger classified crimes by the motives of the offenders. His classification was like; economic crimes, sexual crimes, political crimes and miscellaneous crimes. But classification according to motive is seemingly inadequate since no crime can be reduced to a single independent motive.

Distinctions may also be made on the status of the offenders. The two known categories are lower class crime and white color crime. The lower class crime traditionally commands the headlines. It is said, the lower class people are engaged in most of the criminal activities committed in society as most known offenders are relatively poor. Even the violent offenses are committed by lower class criminals since they are socialized in such a way which push them to be criminals. Besides, the lower class people can easily be used by others in the criminal activities. Economic and social conditions of lower class people pave the way to become criminals.

White-collar crime, on the other hand, covers many varieties of non-violent crime committed by respectable people. The term 'white-collar' was first coined by sociologist Sutherland who defined white-collar as a crime committed by a person of respectability and high social status in the course of his occupation. There are white-collar criminals in every occupations and in every organizations. Sutherland believed the economic loss from white

collar crime is greater than the combined total of all other crimes put together, and this crime is more costly to society. Apparently, many of the victims of such crimes do not even know why they have been victimized; therefore, do not complain to the law enforcing agency. Criminals receive lenient treatments since many criminals of this kind bear high status and can afford the best legal defense available (Coleman & Cressy: 393).

The persons who are under eighteen are called juveniles, and the crimes committed by this age-grade termed as delinquency. Different laws and courts are directed to address the offences committed and handled by this age-grade (Scarpitti: 478). In fact, juvenile justice system functions to help, to rectify and to make them prepared back to the mainstream of the social system.

Gresham Skyes, a renowned modern criminologist, has shown some new trends of crime: one is crime for fun and another one is political crime. Shoplifters, computer hackers commit crime for fun. Political crime though is not new but the abuse of political power in every country is a common phenomenon because of the growing role of government and secret government agencies. Terrorism, today, has become a common concern. Hijacking of passenger aircraft, suicide bombing, assassinating, kidnapping, acts of sabotage have become increasingly common terrorist acts in many countries. Terrorism is aided by the growth of fanatical groups of different nature and by more effective weapons and techniques provided by underground sources of national and international nature (Stewart: 282). Besides, activists of such organized crime groups are also becoming international. Criminal activities with the help of information technologies are now being operated internationally. Criminals maintain strategic alliances with one another. Narcotic trades, weapon trafficking, trafficking of antique goods, money laundering all have become linked across borders. Moreover, under the broad spectrum of information technology another form of crime named electronic crime or e-crime has come to the scene. This term is interchangeably used as computer abuse, computer crime, computer related crime, cyber crime, net crime and hi-tech crime. Some of the types of e-crime are: a) hacking, cracking and unlawful intrusion into computer system; b) writing computer viruses; c) copyright infringement; d) online gambling; e) electronic money laundering or funds transfer;

f) pornography and offensive content in cyberspace and many more. The cost of electronic crime is increasingly growing day by day. Advancement in technology has provided new opportunities and benefits, conversely; prepares criminals to become more equipped with to carry out their tasks (Giddens:233).

5.0 Factors Related to Crime

Different factors are correlated with crime and delinquency in society. Sociological studies of criminality focus on five important variables in this regard: sex, age, social class, race & ethnicity and geographical location (Scarpiti: 469).

a) Sex: Men commit greater number of crimes than do women at all times, at all ages and in all societies. The fact was nicely coined by Sutherland as:

The crime rate for men is greatly in excess of the rate of women- in all nations, all communities within a nation all age groups, all period of history for which organized statistics are available, and for all types of crime except those peculiar to women, such as infanticide and abortion (Cited in Coleman & Cressy: 377).

Certain offenses are found to be committed by women more than men such as shop-lifting, prostitution, assaulting servants and baby stealing from hospitals (Prins:214). Today, the gap between the crime rate of men & women are significantly decreasing. Females are being increasingly arrested for being engaged in different nature of criminal activities usually committed by males. Women, now a days, are more involved in outside world so as to crime.

b) Age: Convictions and records around the world indicate that teenagers and young people have sustained a higher crime rate than adults though the specific age of maximum criminality may vary slightly in different nations. Usually, when a young person commits his first crime the more likely he will quickly commit a second one if he is not arrested or rectified immediately after his first drive; in the way, the sense of immunity gets the momentum within him. It is noteworthy, young people are soft natured, hence, they can easily be diverted towards the wrong way. Failure to

achieve success in schools & colleges, lack of attention from family & community level, ill company instigate them to adopt illicit means. Age has a direct link with sex, males tend to commit most of their crimes at earlier ages but females tend to do these at their adult stage. Besides, high crime and delinquency areas tend to produce younger criminals than do low-crime areas. Moreover, the higher the proportion of young people to the population as a whole, the greater the crime rate (Silver :47).

c) **Race & ethnicity:** The racial and ethnic differences have been politicized in all countries. The relationship between race and ethnicity with crime is an exceedingly complex one. Many racial and ethnic groups are made scapegoats as the suspected offenders of many crimes e.g., in America, studies have shown that blacks are more likely to be arrested, indicted and imprisoned than the whites (Scarpetti: 472). On the other hand, the whites are less likely to be condemned for the same offences as committed by the blacks which, in turn, instigate the blacks to commit crimes of different nature. This sociological fact is equally applicable in the context of other countries where racial, ethnic or religious minorities are frequently repressed under dominant culture.

d) **Social Class:** It is sometimes said that the greater percentage of criminals and delinquents come from lower classes. One sociologist argued if all crimes were counted, a 'u shaped' curve would emerge, indicating more crime in the lower and upper classes and less in the middle class (Coleman & Cressy: 379). But such projection, which derives from the background of the criminals might not be reliable all the time because middle & upper class criminals have greater personal resources; as a result, they are better able to protect themselves from the threat of detection, arrest, conviction and imprisonment more than the lower class criminals. Evidence indicates poor people commit blue colour crimes such as, assault, burglary, robbery etc., but the staggering amount of white colour crimes committed by higher socio-economic classes make the theory quite plausible (Scarpiti :472).

e) **Geography:** For a number of reasons, big cities seem to produce and nurture considerably more crimes than small cities and rural areas. There are number of reasons for booming up of criminality in urban areas. The favorable conditions of the slum or

ghetto areas e.g., poverty, unemployment, over crowding are closely associated with crime. On the other hand, the city dwellers live in the world of strangers where a criminal is not likely to be recognized. Moreover, the city attracts the young people who as a group literally have the highest crime rate in every society. Sometimes, people living in hilly areas and areas which are difficult to reach by the law-enforcing agencies commit considerable number of crimes than plain land dwellers. Nonetheless, in recent years there has been a notable increase in criminal activities in suburban and rural areas since these areas are gradually being complicated in nature.

6.0 Detection of Crime

In most countries the detection of crime is the responsibility of the police and other special law enforcing agencies. Crime broadly falls into three distinguishable phases: the discovery that a crime has been committed, the identification of a suspect, and the collection of sufficient evidence to produce the suspect before the court. It is found that a high proportion of crimes are discovered and reported by persons (witness or victims) other than the police. In many cases the police are found on the horns of dilemma. They are criticized for not arresting criminals in the legitimate way as well as they are also criticized for excessive exercise of authority. However, once the commission of a crime has been discovered, the identification of the suspect becomes essential. There are a number of methods to detect crime:

a) The role of forensic medicine: Forensic science has been an important part in the investigation of serious crimes. The application of this medical practice in relation to the detection of crimes cover mental disorder, cause of sudden death and changes after death, wounds, effects of injury, sex offences, abortion, intoxication, poisoning, occupational hazards and accidents (Walsh & Poole: 90-91). A broad range of scientific techniques are adopted for law enforcement agencies attempting to identify suspects or to establish a connection between the suspect and that of crime. Techniques include autopsies, collection of fingerprints, analysis of bloodstains and groups, identification by bones, teeth, body fluids, hair samples and fibers. Moreover, many inorganic

substances such as glass, paper and paint can yield considerable information under microscopic or chemical analysis (Safra: 804).

b) Identification of the suspect: Identification of the suspect is an important part of detection of crime. Various methods are used to identify a suspect. For example, if a victim or witness believes that he can recognize the offender; the police may show him photographs of known criminals or in lining them up in the hope that one can be picked out (ibid.: 804).

c) Gathering evidence: Only identification of the suspect is not all. It is required for the investigating agency to gather sufficient legally admissible evidence to convince the court. The investigating agency must produce genuine evidences why an individual is responsible for a crime. In order to secure necessary evidence, the police apply a variety of powers and procedures including visit of place of occurrence, examine the nearby places, collect related materials etc. (ibid.:805).

d) Interrogation and confession: The interrogation of suspected persons is another important aspect of investigation of crimes. The aim of interrogating is to obtain an admission of the offence by the suspected person. In most of the cases some restrictions on the methods of interrogation are imposed upon in order to ensure that suspects are not coerced into confessions by unacceptable and unlawful means (ibid: 805). Sometimes the investigating agency adopts very crude method of interrogation including heavy torture for extracting confessional statement.

7.0 Punishment of Crime

Crime and punishment go aside. Punishment may be defined as the deliberate decision of society to inflict pain upon individuals or to teach the offenders for the purpose of some presumed social good. In early days punishment concept was tooth for tooth, blood for blood. Now-a-days, commonly deterrent punishment is not awarded. Modern social scientists believe pain should be inflicted as punishment which will, in turn, rectify the offender and deter others. This idea may be explained through the Durkheimian sociological notion that interprets punishment as a morality affirming, solidarity producing mechanism of society. If social

solidarity is to maintain, punishment must be imposed upon socially derailed persons.

Marxist studies depict punishment as an economically conditioned apparatus that plays an ideological and political role in ruling class domination. In this view punishment is imposed only upon economically suppressed people. In fact, these are the predominant notions of modern social reaction to crime and justice system. Punishment has different types and dimensions, and it varies society to society. However, punishment can be characterized as means of coercion that is applied by the state acting through specific agencies. Punishment is implicated in the name of the state in accordance with designated and communicated norms that the state and society believe are must (Silver:113).

As we know, the objective of punishment is to prevent the offences. Thus, different types of punishments are imposed on the criminals, but its nature scope and implication vary from society to society, time to time. While crime reduction is a major social goal in every society, but its means are limited because of certain notions of the value of human liberty. The most common forms of punishment are: **i) Imprisonment:** It is the most widely used punishment. The idea of imprisonment is that criminals should be hurt by depriving them of freedom and movement. It might be both rigorous and simple. Sociologically, there are four basic ideas of imprisonment; firstly, the prison is expected to make life unpleasant for people who have made others' lives unpleasant; secondly, the prison is expected to reduce crime rates by deterring the public from behaviour that is punishable by imprisonment; thirdly, its aim is to isolate criminals so that they can not commit more crimes against the public and, finally; the prison is expected to change the mind-set of the criminals through positive rehabilitative methods as a result they may be desisted from committing further crime (Coleman & Cressy: 400); **ii) Death Penalty:** Death penalty was the most prevalent form of punishment during the Middle Ages, but today, many countries have started to eliminate it, where it still exists practiced only for a small number of crude nature of crimes. In many western countries there has been a huge outcry against such penalty. On the other hand, public opinion, in those countries, has also modified the manner of execution and each modification framing the newest short and

painless methods (Silver:115); **iii) Torture:** Torture is form of punishment which, in fact, now rarely practiced because of its cruelty and inhumanity, but for police, it is still an effective tool to a obtain confession of the suspect before producing him before the court; **iv) Hard Labour:** The idea is that that who breaks the criminal law might be compelled not only to do compulsory work but of hard labour too. The practice of hard labour derives from the notion that those offend the criminal law refuse to perform the social duty of labour. Thus, it is a lesson for them so as to inure the body and train the mind to the habits and philosophy of industry (Walsh & Poolé:99); **v) Fines & Property Penalties:** Such penalties have been imposed through out the history more frequently than any other form of crime. The jurisdiction of such penalties derive from civil rather than criminal law and involves less stigma than any other penalty. Moreover, this is a source of income for the state; **vi) Preventive Detention:** It is intended to apply to cruel offenders with the aim to protect society from their illicit activities by segregating them in prison for long periods of time (ibid.:174). In modern days, the reaction regarding punishment has been started to shift towards correctional programmes based on an understanding of why the criminals break the law. Probation and parole systems, prison rehabilitation programmes have been introduced to understand and correct criminals rather merely punishing them.

8.0 Crime in Bangladesh

In the above discussions, we have tried to touch upon different dimensions of crime & criminality generally applicable to all societies of the globe. Even though, it is also an obligation to shed light especially on some of the aspects of crime and criminality of Bangladesh society. As we know, crime is one of the persistent social problems in Bangladesh. It creates crisis in public order and governance and hinders the process of development. Different forms of crime in the country have not been accumulated over months or years; in fact, these have developed over a period of time spanning the tenure of several governments in succession. The major forms of crime that committed in Bangladesh are smuggling, robbery, abduction, hijacking, acid-throwing, murder, women and children trafficking, sexual offences, family violence, drug peddling, mugging, pick-pocket, rape, destruction of public

property, corruption of diverse nature, crime related to tender, collecting money by force and of course, the recent trend of terrorism. In terms of the extension of crime and criminality every individual of this society is vulnerable, and at times it becomes a seemingly difficult task for the government to combat or to control crime.

As we know, over the last few years and so Bangladesh has achieved a significant improvement in different aspects of socio-economic condition, but unfortunately law and order situation has not been able to keep pace with the on going process of development. Crime has a direct link with the law and order situation of a particular society, if law & order deteriorates crime rates get the momentum for skyrocketing. In fact, cent percent containment of law and order situation in any society is realistically impossible; but the maintenance of law and order has been an ever increasing challenge for both 'developed' and 'developing' societies. In Bangladesh, thousands of unlawful and criminal activities are making peoples' lives so miserable that it has become one of the prime indicators to assess the government's success. All forms of criminal activities are found to become very difficult to handle; but sometimes it becomes seemingly impossible for crimes that are committed by politicians, businessmen, public servants, and by persons enjoying proximity to power or commanding position in the society. By using their power and ill-intellect they can keep themselves disguised and remain far away from the focus of law and justice system, and as such; they are more harmful to the society than the organised or born criminals.

In Bangladesh, as we see, poverty, unemployment, social disorganization, political instigation, rapid urbanization and industrialization, weak social control mechanism, social inequality, degradation of ethical values and morality, implication of globalization do a lot in leading people to organize in criminal activities. In this write-up as I have little scope in discussing ins and outs of each and every criminal activity noticeable in Bangladesh; I, therefore, shall limit myself only in the line of giving an overview of two acute nature of criminal activities. The two serious forms of are; corruption and terrorism. The former one is the activity of white colour criminals while the later one is the activity of more organized criminals.

Corruption is a complex and pervasive issue. The dictionary of social science defines corruption as the abuse of office for personal gain, usually through bribery, extortion, influence peddling and special treatment given to some citizens and to others (Begum & Salim: 250). The most agreed definition of corruption is the misuse of public power for private gain or the destruction of integrity in the discharge of public duties. In corruption, a person willfully neglects his specified duties in order to have an undue advantage. Bangladesh has been stigmatized five times in a row by Transparency International as the most corrupt nation in the world. Corruption has been a part of our social, cultural, political and administrative heritage. The corruption in Bangladesh may be termed as '**transparent corruption**', because we talk about it, know all about it, but do nothing about it. The most common form of corruption in Bangladesh is pecuniary bribes. Other forms are: abuse of authority, nepotism, favoritism, patronage, fraud, theft and deceit of different dimensions. Corruption in Bangladesh leads to economic malaise, squandering of public and aid resources with a negative, deleterious and diversifying influence on investment and economic growth. Corruption undermines public confidence in government, jeopardizes administrative reform efforts and accountability measures, widens social inequality and reinforces political instability and underdevelopment. It acts as an impediment to the reduction of poverty. In Bangladesh, according to a report of World Bank, GDP would have been increased up to 2-3% in a year if corruption could be checked (ibid:254). However, the main reasons of corruption in Bangladesh are: a) monopoly of government over public services; b) lack of accountability of public servants as well as the governing elite including the political leaders; c) ill salary structure; d) particularistic value of society which leads the public servants and the governing elite to the practice of nepotism, favoritism and regionalism in discharging their duties; e) ambiguity in legal explanation; g) nature of soft-government etc. Combating corruption is very easy. Following elements can make an effective anti-corruption strategy: a) increasing political and administrative accountability; b) strengthening civil society participation in all sectors; c) implementation of the rule of law; d) creating a competitive public sector and of course; e) decentralisation public services; f) freedom of press and electronic media will help to reduce corruption in Bangladesh.

Terrorism, today, is the number one threat globally. After the 9/11 incidence the world has understood how destructively the terrorist activities can appear in the scene. This particular incidence has completely changed the scenario of the world. It has made us understood who much vulnerable we are and how much destructive the terrorists could be. The relationship between state to state, community to community has been a matter of disbelief, dispute and of course, is on the verge of distinction. It is needless to say, the citizens of the Islamic countries are the worse sufferers since the Muslims have been the targeted terrorists and they are becoming economically, politically and socially ostracized globally. However, most terrorist groups are associated either with revolutionary movements on an international scale or with nationalist movements of a particular ethnic, religious, or other cultural focus. There are three broad categories of terrorist crime such as; i) the use of violence or the threat of violence to create public fear, attacks to injury, abduction, assassination, suicide bombing are the major crimes in this regard; ii) crimes are committed by terrorist organizations in order to strengthening their polices and practices i.e., extortion, illegal arms dealing, drug trafficking, bank robbery are among the principal crimes in this nature; iii) crimes may also be committed by any country, known as state or state-sponsored terrorism, when terror is used against its own citizen or against civilian citizens of another country (Safrat: 801). Terrorist activities or attempts that are carried out by Jamatul Mujahideen Bangladesh (JMB), an Islamic insurgent group, have made the innocent inhabitants of Bangladesh so peripheral terms of safety & security. The JMB criminals, under the leadership of Shaikh Abdur Rahman and Md. Siddiqui Isam, in their means of persuasion of 'Islamicising' of the country have deformed the costly-earned stability of the society. These miscreants and their followers are able to carry out different organized, and new forms of attacks including the much devastating suicide bombing; therefore, failure to recognize and combat their threat will bring more deadlier consequences in future. Their intention is to establish an Islamic society but they have adopted the wrong paths and means. They are, in fact, not the actual followers of Islam. Islam, as we know, is the religion of peace and tranquility and virtually there is no room for such miscreants in the domain of Islam. These fundamentalists not only have deformed the

philosophy of Islam rather they have stigmatized the identity of Bangladesh as a moderate Muslim country. Politics in no case may be a means or a tool of Islam. Nonetheless, we must confess, due to our negligence and of hidden political provocation this fundamental group has been able to gather pace of their capability to strike deadly blows on innocent citizens and government as well. Certainly, the arrest of the bigwigs can not make any significant change of the scenario unless the elements supportive to the militancy are identified and brought to justice.

We have tried to discuss briefly some aspects and issues regarding two major forms of criminal activities of Bangladesh. In fact, it is a million-dollar question why law & order situation in Bangladesh is getting bad to worse. Speaking frankly, there are obviously some genuine reasons; one important reason may be that only three percent of the criminals in a year receive punishment in Bangladesh. This statistics is quite encouraging for individuals and organized criminal groups to commit crime frequently. Corruption and insincerity of law-enforcing agencies, involvement of political leaders and influential people in protecting criminals discourage victims from adopting legal or social action against them. Secondly, the law enforcing agencies in Bangladesh do suffer from various short comings including the shortages of manpower, inadequate logistic support, lack of scientific and technical skills to detect and combat the criminals and place them before the court timely with sound charge-frame. The third factor is very alarming, in Bangladesh, trial process severely suffers from procrastination which makes us remembered the fact of; 'justice delayed justice denied'. Nonetheless, the two most recent initiatives of the government to improve the law and order situation in the country are the 'Operation Clean Heart' and the establishment of a new anti-crime and anti-terrorism force 'Rapid Action Battalion' or RAB under the jurisdiction of Ministry of Home Affairs. 'Operation Clean Heart' was started in October, 2002 as a drive against growing crime. The Army was called upon to work jointly with the police, BDR and ANSAR for restoring law and order in the country. In fact, the Army led the operation to cleanse Bangladesh of rampant corruption and crime. Though the legal status and justification of the army's involvement in this operation still remains as a matter of dispute, but this could bring some

changes at the end. 'Rapid Action Battalion' or RAB, on the other hand, consisted of members of the Army, Navy, Air Force and the Police, was formed in March 2004. It was incepted on the basis of the necessity to organize a permanent special force in order to make the society crime free. Since its inception RAB has been remarkably successful in apprehending several high-profile terrorists and in seizing illegal arms and ammunitions. Though RAB has been blamed for many extra judicial killings and arbitrary tortures but a desire for law and order has exceeded all the criticisms and paves the way for a fair amount of public support to the RAB.

In Bangladesh, proper attention must be given from all sections of society to make the activities of law enforcing agencies more transparent and accountable, they must be made skilled by imparting high level professional training and be kept free from obnoxious political pressure to escape the criminals. Above all, there should be a strong commitment in the government to let the agencies work freely, honestly and sincerely.

9.0 Concluding remarks- How to overcome the problem?

So many factors stand behind the causation of criminality in society. All crime prevention theories ranging from biological to sociological frame their solutions in reference to certain beliefs about crime causation. Crime, therefore, has been a multidimensional phenomenon because the views regarding the process of eradication of crime are diverse and sometimes contradictory as well. Accordingly, we must go for a holistic approach to tackle the problem. The approach might encompass the following important strategies in particular:

- a) The solution to the problem of crime is to impose tougher punishment on the criminals. Punishment should be very severe as a result it can be exemplary to others. If required, law must be revised accordingly. Law enforcing agencies to be given freedom to become hard nut to crack in dealing with crime and criminals.
- b) Law enforcing agencies not only be given freedom to act wisely, but also be strengthen to a great extent to be able to

penetrate the criminals and their patrons. We know criminal justice system consists of police and courts, and this system must work well. Police & court should not suffer from inadequate resources and staff, archaic administrative procedures and promotion scope, lack of codes & laws, ill salary structure; and above all, there should not be any political or administrative intervention that instigates the agencies to be corrupt.

- c) Any criminal can be changed and made an acceptable and functioning member of society. Prisons must be converted into rehabilitation or correction centres as have done for juvenile delinquents. Prisoners must be made skilled on a particular area of interest so as to they find themselves fit to be engaged in work when they are released. If possible, government can arrange jobs and training for them.
- d) Punishment can not be the only resort to eradicate criminality from society. If it were, we would not have seen criminals serving jail time and again. Then, solutions of the problem lying in some where else. Generally, people get involved in criminal acts to put food in their mouth with some exception of white-color criminals. Inequality and inadequate income could motivate people to commit crime. Many reformists have argued for the basic change in social and economic conditions that would specifically reduce crime and make the society more responsive to the needs of its members. No human being is genetically criminal, the social environment in which we grow up shapes the attitudes, rules and life-styles. Consequently, it is the responsibility of the society to urgently reverse inequality, implement welfare approaches and promote social security as a result every body can understand he or she has the right to access into the arena tranquility and equity. In a social order where inequalities are not large and in which every one has the chance to lead a full and satisfying life- the rate of criminality is low.

This would be a serious mistake to regard crime in a negative sense. Criminals are the human beings and we know, to err is human. Apparently, the values, activities and norms of criminals

do not conform to the norms followed by the majority, but it may be for the time being. There are ample of possibilities to get them back in the mainstream of society. Social leaders must try wholeheartedly to find out the ways and means in this regard. In fact, it is not a utopian dream.

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An Appraisal of Groundwater Recharge in Netrokona District

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Abstract : A research work was conducted in Netrokona district to make an overall assessment of groundwater resource for its optimum utilization. The annual potential recharge was estimated by Well Hydrograph method and Sehgal's empirical method. By Well hydrograph method potential recharge was found in the range of 226 mm to 904 mm with an average recharge of 549 mm. By Segal's method the potential recharge varied from 532 mm to 779 mm with an average recharge of 689 mm. The difference between the two methods is minimum. Optimum well spacings were also estimated which ranged from 398m to 989m for various combination of well discharge and operation hours based on the peak-irrigation demand and available recharge.

Introduction

Groundwater is extensively used as a reliable and dependable source of irrigation in Bangladesh. Now a days it is considered as one of the significant components of the natural resources of the country. About ninety percent of the total potable water is supplied by groundwater (Rashid et al., 1989).

Though Bangladesh is blessed with abundant groundwater resources but this resource is not unlimited. Most of the surface water bodies dry up in irrigation season. Therefore use of groundwater is increasing day by day at an accelerated rate. Its judicial utilization depends on reliable information of the aquifers. The future strategies should be established on the basis of extensive study on groundwater reserve. Groundwater is a renewable

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resource. Proper management of this resource requires knowledge of the factors governing the aquifer potentiality and its utilization strategies viz. recharge depletion characteristics of the basin, appropriate extraction technology and optimum well spacing. These all are equally important for any groundwater development project. If optimum technique of groundwater extraction based on the resources availability is not established and unplanned withdrawal is continued, the resulting effects may lead to a dangerous imbalance in the local geology in near future.

Well-planned development of groundwater resource is a complicated task, especially for hydro- geologically dissimilar regions. The available literatures on groundwater revealed that the aquifer systems are very heterogeneous over various regions of the country. A good number of research works were carried out in the past. Most of these works are confined in northwest region of the country. Very little work has so far been done on the northeastern region. In the context of the aforesaid situations Netrokona Sadar Upazila has been selected to justify the feasibility of groundwater development programme.

Recharge and depletion are the two key factors, which govern the dynamics of a groundwater system in a basin. The recharge process is governed by many factors, natural and man-made, which makes the process very complex. The recharge rate for different regions of Bangladesh were estimated by simplifying processes in various ways by many researches (UNDP, 1982; Karim, 1984; and MPO, 1984).

The average annual recharge of Bangladesh had been estimated to be 30 to 91 cm (Hyde 1979). MacDonald (1983) estimated groundwater recharge in the northwest and northeast regions of Bangladesh by the water Balance study. He determined wet and dry deep percolation ratios for 27 defined aquifer units from model calibrations of the study area. The wet deep percolation ratios were ranged from 1.5 to 3.3 mm/day. Nevertheless minimum recharge period during monsoon is assumed to be about 90 days; a minimum and maximum potential recharge might have been quantified on the basis of wet land deep percolation rates; and the use of the wet land deep percolation rates might be affected by the plough pan appearing beneath the agricultural land. The recharge rate established from the water balance model is obviously the annual recharge applicable to the calibration period (1978-81) only. In this water balance model the annual recharge rate was assumed to be far less than potential,

because it did not take into account of all the rejected recharge. Pitman and Haque (1984) observed that the maximum exploitation of groundwater resources was determined by the mean annual potential recharge available. Bangladesh water Development Board (Karim, 1984) applied ground water level fluctuation method for estimating thana-wise recharge covering major part of the country. Based on this method, the calculated annual recharge of different study areas varied from 50 mm to 700 mm per unit area with an average annual recharge of 320mm per unit area. It is stated that the entire potential recharge was both available for pumping, as it was subjected uncertainty and part of the annual potential recharge was lost before it could be used. Recently Ahmed et al. (1991) made a simple approach to assess groundwater recharge in Muktagacha aquifer under Mymensingh district where rainfall was considered as the single source of recharge. An empirical relation known as Sehgal's Method was used for calculating recharge. Accordingly an average recharge of 596 mm was estimated from an average annual rainfall of 2654 mm in the study area. Kabir (1993) estimated groundwater recharge for an unconfined aquifer situated within Jamuna flood plain in Tangail district using soil moisture balance method. Using this method the potential recharge of 201.07 cm was obtained from the total rainfall of 1077.57 cm during the period of January 1988 to May 1993, which was about 18.66% of the total rainfall. Again applying the groundwater level hydrograph analysis method and the Sehgal's empirical method the estimated recharge values were found to be 23.15% of rainfall respectively. There are no better national estimates than the MPO (Master Plan Organization) estimates (Matt MacDonald, 1991). MPO (1991) estimated usable recharge (75% of potential recharge) for Netrokona Sadar Thana as 617 mm.

Though conceptually sound the major failing of MPO's investigation of potential recharge has been the failure to calibrate the result against field data of abstraction and ground water levels. The required proper well spacing for Barind area was calculated by Reza M.S (1991) from a equation modified from the relationship given by Chowdhury (1978).

By studying the above literatures it might be concluded that the detailed aquifer study in northeastern region is very few. Though some investigations were done on aquifer properties but those all are rough estimation. Accurate recharge rates for the aquifer must be

estimated before groundwater resource utilization. With a view to this, a research was undertaken for estimating groundwater recharge of Netrokona Sadar Upazila. The objective of this research is to assess groundwater recharge by well hydrograph method for the study area and to verify the estimated recharge with the results obtained from Sehgal's method. Another objective is to recommend optimum well spacings between different tube wells in the study area.

Methodology

Groundwater recharge is the amount of water, which enters into the aquifer. It is often defined as the amount of water, which remains available for often long term abstraction. Ground water recharge of an area is usually estimated by the following Methods.

1. Water balance method.
2. Analysis of ground water level fluctuations.
3. Field experiments.
4. Mathematical modeling.
5. Other empirical methods.

1. Well Hydrograph Method: Analysis of ground water level fluctuation is the most easiest method and reliable to some extent. Therefore this method was used in this study to determine the annual recharge. In this method the annual fluctuation (maximum) in ground water is multiplied by specific yield of the aquifer as shown below:

$$R = \Delta H * S \quad (\text{Twort et. al., 1974})$$

Where, R= Annual Recharge,

ΔH = Annual fluctuation of static water level (maximum)

S = Specific yield.

1.a) Determination of Annual fluctuation of static water level (ΔH)

The monthly static groundwater level is monitored by BADC (Bangladesh Agricultural Development Corporation) in 10 deep tubewells at the representative locations of the study area. From 1986 to 1995 i.e. ten years data have been collected from BADC office. From these data minimum annual fluctuation of static water level have been calculated by deducting the minimum from the maximum water level. Thus ten year annual fluctuations have been determined for the ten selected DTWs, which are shown in Table.1.

Table.1: Annual Groundwater level Fluctuations (maximum) at Ten Representative places in Netrokona Sadar Upazila for 10 years (1986—1995)

<u>Annual Fluctuations (m)</u>										
Well No.	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
1	6.00	7.20	7.85	7.54	3.63	4.88	7.01	4.60	6.10	6.70
6	5.88	9.05	8.57	8.27	3.80	5.46	8.70	5.80	7.70	7.60
7	6.05	8.47	8.79	8.69	3.17	4.82	9.15	5.65	8.10	7.10
11	6.11	7.26	7.78	9.25	3.43	5.46	8.41	4.90	5.50	6.60
15	5.67	8.46	8.34	8.60	4.25	5.65	9.05	5.75	7.80	7.10
21	6.15	9.62	11.30	9.23	2.85	5.62	7.53	4.45	6.58	6.10
25	6.00	7.85	8.44	8.01	3.70	5.68	7.74	6.00	7.90	7.00
39	6.12	7.75	8.12	9.03	2.83	4.67	7.25	4.75	6.00	6.90
53	5.94	7.93	8.58	10.00	4.34	5.97	9.95	6.20	8.80	7.30
68	6.15	8.35	9.37	10.15	4.20	5.39	7.48	6.10	7.85	7.00

1.b) Determination of specific yield

In the present study specific yield of the aquifer has been estimated by lithological analysis of 52 bore log data collected from BADC. The hydrological laboratory of the United States Geological Survey (USGS) in Denver, Colorado, under the direction of A1 Johnson had under- taken a research study on the specific yield of unconsolidated materials based on litho logical analysis. The results of this work are shown in Table.2.

Table. 2: Values of specific yield after U.S.G.S. Hydrologic Lab provisional Values

<u>Material</u>	<u>Specific Yield (%)</u>	<u>Material</u>	<u>Specific Yield (%)</u>
Clay	1	Fine San	26
Silty Clay	2	Medium Sand	35
Sandy Clay	3	Coarse Sand	33
Clay Silt	5	Sand (Undifferentiated)	32
Silt	7	Fine Gravel	25
Clay-Sand	7	Medium Grave	20
Sandy Silt	14	Coarse Gravel	14
Silty Sand	20		

The specific yield of any volume of geologic material can be obtained by summing up the specific yield values of all unit volumes it contains. Since nearly all such zones include various types of

materials with different specific yield, it is necessary to weigh each material according to the proportion of the entire volume. This method was used to calculate specific yield value of the investigated area. The results of lithological analysis done from 52 bore log of BADC were used as base. In the present study the specific yield values were determined for the soil strata of the water table fluctuation zone.

2. Sehgal's Method

Another empirical method was used to estimate and verify annual recharge amount in the present study viz. Sehgal's empirical mathematical model (1973). It is expressed by the following equation.

$$0.5$$

$$R = 2.5(P - 16)$$

Where, R= Annual Potential Recharge (inch)

P= Annual Rainfall (inch)

Here 10 years monthly rainfall data have been collected from Bangladesh Water Development Board recorded at the Station No. 123 Netrokona.

3. Determination of optimum and safe well spacing

3.a) Well spacings based on peak irrigation demand

The spacing of tube wells must consider the peak irrigation requirement to irrigate all the areas within a well field. Aside from the maximum water requirement, well spacing is controlled by well discharge and period of pumping. The required proper well spacings were calculated from the following equation (Reza, 1978) modified from the relationship given by (Chowdhury, 1978).

$$R = 60 \times \sqrt{\frac{Q \cdot tp \cdot Dp}{Wp}} \text{----- (1)}$$

Where, R= well spacing in meters,

Q= well discharge in lit/sec,

tp= period of pumping in hours/day,

Wp= peak water requirement in mm/week or month; and

Dp= number of days/week or month, depending on Wp.

3.b) Well spacings based on available recharge

Spacing of tubewells in the overall ground water development of an area may be controlled by the amount of recharge to the ground water reservoir. The annual recharge to ground water must not exceed the total extraction. The relation of well spacing to recharge, well discharge and period of pumping is described by the following equation (Chowdhury, 1978).

$$R = 60 \times \sqrt{\frac{Q \cdot t \cdot N}{R_g}} \text{-----(2)}$$

Where, R= well spacing in meters

t = period of pumping in days/ year

R_g =ground water recharge in mm/year

N= Number of operating hours/day

Q= tube well Capacity in litre/sec.

4. Results and Discussion

Annual potential recharge: Annual potential recharge has been estimated in the investigated area by two methods viz:

i. Ground water level hydrograph analysis method and ii. Sehgal's empirical method. In well- hydrograph method, the fluctuation of ground water levels were multiplied by specific yield of the aquifer. Recharge was calculated at ten representative places of Netrokona Sadar Upazila for the past ten years (1986-1995) shown in Table 3. Specific yield was estimated for the study area as 8% on an average by using U.S. geological provisional lab-values (Heath. 1984) as shown in table 4. The annual recharge amount was found to vary from 226mm to 904 mm. Year wise average value of recharge varied from 290 mm to 710 mm and the 10 years average recharge was found to be 549 mm. The higher recharge was observed in the northern part of the study area and lower recharge in the southern portion. The annual recharge was found to be 8 to 22 percent of total annual rainfall. Using Sehgal's empirical method, the annual potential recharge was estimated ranging from 532 to 779 mm for different years and 11 years average recharge was 689 mm (Table.5). According to this empirical method 18% to 24% of total rainfall was found to occur as recharge to the aquifer. Sehgal's method gave almost similar result in comparison to the Well hydrograph method.

Table 3: Annual Recharge (mm) at Ten Representative places of Netrokona Sadar Upazila for 10 Years (1986-1995) obtained from groundwater level fluctuation method.

<u>Annual Recharge (mm)</u>										
<u>Well No.</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>
1	480	576	628	603	290	390	561	368	488	536
6	470	724	686	662	304	437	696	464	616	608
7	484	678	703	695	254	386	732	452	648	568
11	489	581	622	740	274	445	673	392	440	528
15	454	677	667	688	340	452	724	460	624	568
21	492	770	904	738	228	450	602	356	526	488
25	480	628	675	641	296	454	619	480	632	560
39	490	620	650	722	226	374	580	380	480	552
53	475	634	686	800	347	478	796	496	704	584
68	492	668	750	812	336	431	598	488	628	560
Average	481	656	647	710	290	430	658	434	579	555

* Specific yield = 8 percent

Table 4: Estimation of specific yield obtained from 52 Bore logs data for different location.

<u>WNSY</u>	<u>WN</u>	<u>SY</u>	<u>WN</u>	<u>SY</u>	<u>WN</u>	<u>SY</u>	<u>WN</u>	<u>SY</u>	<u>WN</u>	<u>SY</u>	
1	3	11	20	29	14	38	14	6	11	4/K	11
9	13	20	11	30	4	39	15	48	14	3/K	3
12	10	21	14	31	6	40	15	49	9	2/K	8
13	14	22	14	32	8	41	15	50	22	72	3
14	2	23	2	33	8	42	5	51	2	5/K	9
15	2	24	2	34	2	44	15	52	7	D1	2
16	5	25	20	35	2	45	2	53	14	D2	2
17	2	26	11	36	6	46	7	69	3		
18	2	27	14	37	8	47	2	57	4		

Average Specific Yield = 8 percent

(Here, WN is Well No. and SY is Specific Yield (%))

Table 5: Potential Recharge (mm) estimated by Sehgal's Method.

<u>Year</u>	<u>Annual Rainfall</u>	<u>Recharge</u>	<u>Recharge in percent of annual rainfall</u>
1985	2189	532	24
1986	3098	654	21
1987	3664	685	20
1988	4243	781	18
1989	3475	694	20
1990	3630	715	20
1991	4234	779	18
1992	3426	692	20
1993	4081	764	19
1994	2491	575	23
1995	3500	700	20
Average	3430 mm	689 mm	20 %

Optimum and Safe Well Spacing: An attempt was made to find a more or less proper well spacing in the investigated area on the basis of some parameters viz: well discharge, period of pumping, peak water requirement and ground water recharge. Well spacings were calculated by using the equation no. 1 & equation no. 2. Table.6 shows the results. For different tubewell capacities and different operating hours the optimum well spacings among tubewells have been recommended in the present study which varied from 398 m to 989 m. These spacings could be maintained in the study area reliably.

Table.6: Proposed well spacing between tubewells (m)

<u>Tube well capacities</u>		<u>Based on peak irrigation requirement operation hours</u>					<u>Based on available recharge</u>
<u>L/S</u>	<u>Qusec</u>	<u>8</u>	<u>10</u>	<u>12</u>	<u>16</u>	<u>20</u>	<u>8</u>
56.6	2.0	625	699	766	885	989	563
42.5	1.5	542	606	663	766	857	487
28.3	1.0	442	444	542	625	699	398

* Peak irrigation requirement 500 mm (MPO, 1991)

Conclusion

In this study ground water recharge was estimated from ground water fluctuation using well hydrograph method and was verified by Sehgal's empirical method. The estimated recharge can be used reliably in any groundwater development programme for Netrokona district. For the purpose of actual recharge estimation some other method should be adopted like field measurement using Lysimeter study and nuclear techniques. In addition, computer-based simulation methods may be applied for higher precision. The recommended well spacings are very important during the installation of tube wells. It may check uncontrolled installation of tube wells and hence conservation of the environment would be enhanced. The investigation revealed that the study area is highly potential for ground water abstraction. But recharge mechanism is a dynamic process. Therefore, results obtained from this study can be considered as informative, but should not always be used as the absolute information for the entire location of the study area without further verification.

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সাহায্য নামের শৃঙ্খলে আবদ্ধ বাংলাদেশের অর্থনীতি মুক্তির উপায় কি ?

মোঃ আবুল হোসেন *

Abstract: For Bangladesh foreign aid is considered a decisive government policy tool which the successive Bangladeshi government has been using in shaping the economy and development. It is interesting to note that after 35 years of independence, the successive government took millions of dollars as foreign aid, little development has taken place. A broad review of the literature on development suggests that foreign aid played very little role in promoting economic development and improving human welfare. Rather the abundance of foreign aid has created a culture of dependency, polarized the society, destroyed nation's creativity and demolished the image of nation state. The paper argues that we need to recapture our self-respect and self-image. For that matter, there is a need for a campaign against the danger of foreign aid. Foreign aid and social well-being of the mass population are not synonymous we have to understand this reality.

বৈদেশিক সাহায্য কি ?

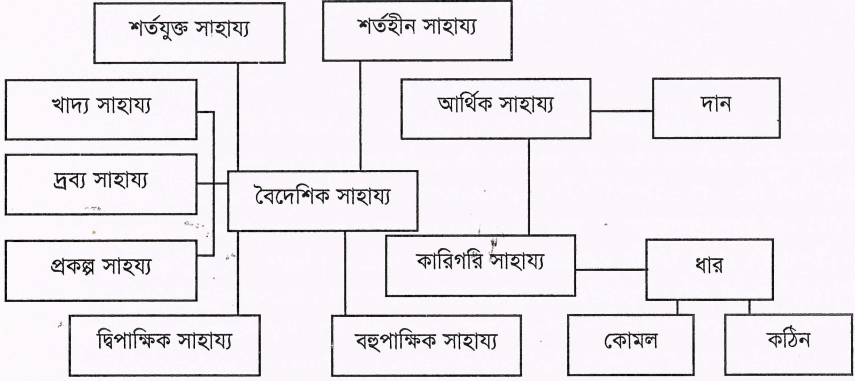
সাহায্য হলো বিশেষ সুবিধা প্রদান সাপেক্ষে এক দেশ থেকে অপর দেশে সম্পদ হস্তান্তর। ব্যাপক অর্থে বৈদেশিক সাহায্য বলতে সামরিক ও বেসামরিক পর্যায়ে সাময়িকভাবে অর্থসম্পদ ও কারিগরী সহায়তাকে বুঝায়। বিশ্ব পুঁজি বাজারে প্রচলিত ঋণদান ব্যবস্থা থেকে অপেক্ষাকৃত সহজ শর্তে দাতাদেশ কর্তৃক গ্রহীতা দেশে সম্পদ হস্তান্তরকেই বৈদেশিক সাহায্য বলা হয়ে থাকে।

বৈদেশিক সাহায্যের প্রকারভেদ

বৈদেশিক সাহায্যকে বিশেষজ্ঞগণ তিনটি পর্যায়ে বিভাজন করে থাকেন। পর্যায় তিনটি হলো, (ক) খাদ্য সাহায্য (খ) দ্রব্য সাহায্য (গ) প্রকল্প সাহায্য (সারণি -১ দ্রষ্টব্য)। সাহায্য বিভিন্নরূপে আসে। কোন সময় প্রত্যক্ষ মূলধন আকারে, কোন সময় প্রযুক্তির আকারে, আবার কোন সময় ব্যবস্থাপনা ও উপদেশ আকারে। সাহায্যের শর্ত অনুসারে বৈদেশিক সাহায্য শর্তযুক্ত কিংবা শর্তহীন হতে পারে। আর সাহায্যের ব্যবহার অনুসারে একে আর্থিক ও কারিগরি সাহায্য এবং বাণিজ্যিক দান হিসাবে একে দান ও ধার বলা হয়।

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সারণি -১ বিভিন্ন প্রকার বৈদেশিক সাহায্য ও তাদের সম্পর্ক



উৎস: মুহাম্মদ সেলিম আকন্দ (২০০১) সাম্প্রতিক বাংলাদেশ ও বিশ্বের ঘটনাপ্রবাহ, গুরুগৃহ প্রকাশনী।

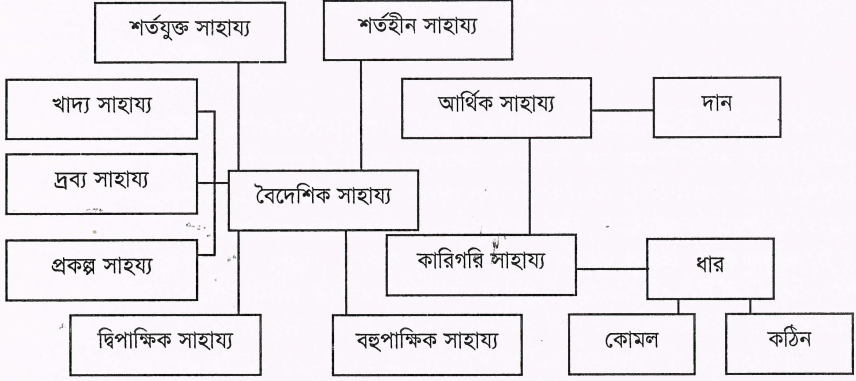
বৈদেশিক সাহায্যের উদ্দেশ্য

বিদেশী সাহায্য আসে মূলত পাশ্চাত্যের শিল্পোন্নত দেশ ও বিভিন্ন সংস্থা থেকে। এদের মধ্যে শীর্ষস্থানে রয়েছে পাশ্চাত্যের ঊনিশটি দেশ নিয়ে গঠিত ওইসিডি। এরপরে ওপেকভুক্ত দেশগুলো। আর ঠাণ্ডা লড়াইকালীন সময়ে তৃতীয় স্থানে ছিলো সমাজতান্ত্রিক দেশগুলো; এছাড়াও বিভিন্ন আন্তর্জাতিক প্রতিষ্ঠান যেমন, বিশ্বব্যাংক, আন্তর্জাতিক মুদ্রা তহবিল ইত্যাদির ভূমিকাও কম গুরুত্বপূর্ণ নয়। প্রশ্ন হলো দাতা দেশ বা সংস্থাগুলোর সাহায্য প্রদান কি নির্মোহ? নিরপেক্ষ বিশ্লেষণে এর উত্তর নেতিবাচক দাতাদের সাহায্য প্রদানের অন্তর্নিহিত কারণগুলো থেকে এ ধারণার যৌক্তিকতা খুঁজে পাওয়া যাবে। কারণ মূলত তিনটি: প্রথমতঃ বাণিজ্যিক স্বার্থ, দ্বিতীয়তঃ রাজনৈতিক নিয়ন্ত্রণ, তৃতীয়তঃ অর্থনৈতিক নিয়ন্ত্রণ।

অধিকাংশ বৈদেশিক সাহায্যই যে মানবিক কারণে দেয়া হয় না তাতে কোনো সংশয় নেই। বৈদেশিক সাহায্য দেয়ার সময় দাতা দেশ গ্রহীতা দেশের উপর রাজনৈতিক শর্ত আরোপ করে এবং দেশের বৈদেশিক নীতির ওপর প্রভাব বিস্তার করে। এ ক্ষেত্রে যুক্তরাষ্ট্রের সাবেক প্রেসিডেন্ট জন. এফ. কেনেডীর বৈদেশিক সাহায্য সংক্রান্ত উক্তিটি স্মরণ করা যেতে পারে। সাহায্য সম্পর্কে বলতে গিয়ে তিনি বলেছিলেন, Foreign aid is a method by which the United States maintains a policy of influence and controls around the world and sustains a good number of countries which would definitely collages or go into the communist block (সারণি-২ দ্রষ্টব্য)

সারণি -১

বিভিন্ন প্রকার বৈদেশিক সাহায্য ও তাদের সম্পর্ক



উৎস: মুহাম্মদ সেলিম আকন্দ (২০০১) সাম্প্রতিক বাংলাদেশ ও বিশ্বের ঘটনাপ্রবাহ, গুরুগৃহ প্রকাশনী।

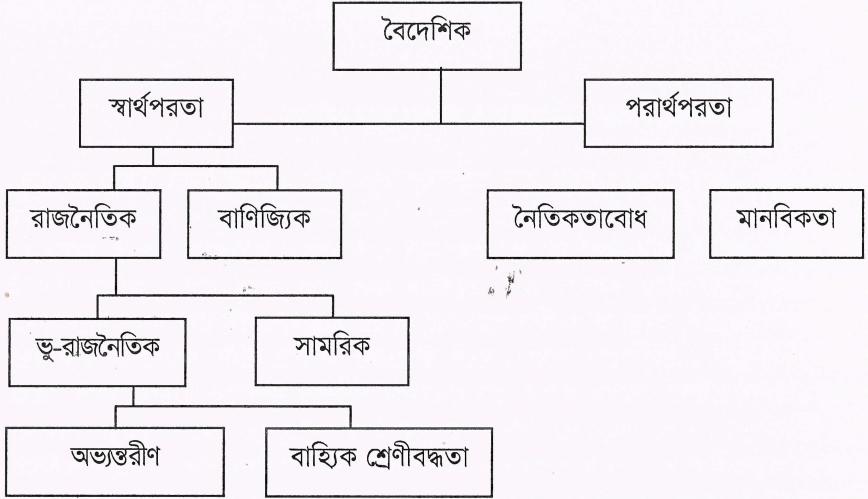
বৈদেশিক সাহায্যের উদ্দেশ্য

বিদেশী সাহায্য আসে মূলত পাশ্চাত্যের শিল্পোন্নত দেশ ও বিভিন্ন সংস্থা থেকে। এদের মধ্যে শীর্ষস্থানে রয়েছে পাশ্চাত্যের উনিশটি দেশ নিয়ে গঠিত ওইসিডি। এরপরে ওপেকভুক্ত দেশগুলো। আর ঠাণ্ডা লড়াইকালীন সময়ে তৃতীয় স্থানে ছিলো সমাজতান্ত্রিক দেশগুলো; এছাড়াও বিভিন্ন আন্তর্জাতিক প্রতিষ্ঠান যেমন, বিশ্বব্যাংক, আন্তর্জাতিক মুদ্রা তহবিল ইত্যাদির ভূমিকাও কম গুরুত্বপূর্ণ নয়। প্রশ্ন হলো দাতা দেশ বা সংস্থাগুলোর সাহায্য প্রদান কি নির্মোহ? নিরপেক্ষ বিশ্লেষণে এর উত্তর নেতিবাচক দাতাদের সাহায্য প্রদানের অন্তর্নিহিত কারণগুলো থেকে এ ধারণার যৌক্তিকতা খুঁজে পাওয়া যাবে। কারণ মূলত তিনটি: প্রথমতঃ বাণিজ্যিক স্বার্থ, দ্বিতীয়তঃ রাজনৈতিক নিয়ন্ত্রণ, তৃতীয়তঃ অর্থনৈতিক নিয়ন্ত্রণ।

অধিকাংশ বৈদেশিক সাহায্যই যে মানবিক কারণে দেয়া হয় না তাতে কোনো সংশয় নেই। বৈদেশিক সাহায্য দেয়ার সময় দাতাদেশ গ্রহীতা দেশের উপর রাজনৈতিক শর্ত আরোপ করে এবং দেশের বৈদেশিক নীতির ওপর প্রভাব বিস্তার করে। এ ক্ষেত্রে যুক্তরাষ্ট্রের সাবেক প্রেসিডেন্ট জন. এফ. কেনেডীর বৈদেশিক সাহায্য সংক্রান্ত উক্তিটি স্মরণ করা যেতে পারে। সাহায্য সম্পর্কে বলতে গিয়ে তিনি বলেছিলেন, Foreign aid is a method by which the United States maintains a policy of influence and controls around the world and sustains a good number of countries which would definitely collages or go into the communist block (সারণি-২ দ্রষ্টব্য)

সারণি - ২

বৈদেশিক সাহায্য দানের উদ্দেশ্য



উৎস: মুহাম্মদ সেলিম আকন্দ (২০০১) সাম্প্রতিক বাংলাদেশ ও বিশ্বের ঘটনাপ্রবাহ, গুরুগৃহ প্রকাশনী।

বৈদেশিক সাহায্য-নির্ভরতার ঐতিহাসিক প্রেক্ষাপট

বাংলাদেশের অর্থনীতির বৈদেশিক সাহায্য নির্ভরশীলতা স্বাধীনতা-উত্তর প্রক্রিয়া নয়, যদিও স্বাধীনতা উত্তর কালে অনুসৃত ধারায় তা আরো ব্যাপক ও গভীর রূপ লাভ করেছে এবং যুক্ত হয়েছে নতুন মাত্রা।^১ পাকিস্তানের রাষ্ট্রকাঠামোয় তৎকালীন পূর্বপাকিস্তানের ক্ষেত্রে জাতিগত নিপীড়ন ভিত্তিক বৈষম্যমূলক নীতিমালা কার্যকর ছিলো। এরই ধারাবাহিকতায় ও বিভিন্ন আন্তর্জাতিক শোষণের মাধ্যমে পাকিস্তানের পূর্বাংশ থেকে নিয়মিত ও পদ্ধতিগতভাবে সম্পদ পাচার হতো যার ফলে দেখা যায় যে, ষাটের দশকের দিকে বাংলাদেশ একটি ঘাটতি অর্থনীতির দেশে পরিণত হয়েছে। স্বাধীনতার প্রাক্কালে বাংলাদেশকে আমদানী করতে হতো প্রয়োজনীয় খাদ্যশস্যের শতকরা ১২.৭ ভাগ। অভ্যন্তরীণ সঞ্চয়ের হার ছিলো শতকরা ৭ ভাগের কিছু ওপরে এবং বৈদেশিক সম্পদ প্রবাহের পরিমাণ ছিলো দেশজ উৎপাদনের শতকরা ৪.২ ভাগ। এই সময়ে (১৯৬৬-৬৭) ন্যূনতম ১৮০৫ ক্যালরী খাদ্যপ্রাণের প্রয়োজনীয়তার ভিত্তিতে বঞ্চিত দারিদ্র্যসীমার নিচে বাস করতো এ অঞ্চলের ৪২ শতাংশ জনগণ।^২

স্বাধীনতার পর প্রাথমিক বছরগুলোতে যুদ্ধ বিধ্বস্ত দেশের পুনর্গঠনের জন্য বিদেশ থেকে প্রচুর সম্পদ দেশে আসে। ফলে বিদেশী প্রভাব বৃদ্ধি পায়। তদানীন্তন নেতৃত্বকে যুদ্ধবিধ্বস্ত দেশটির পুনর্গঠনের প্রয়োজনে আগ্রহের সাথে বৈদেশিক সাহায্য গ্রহণ করতে হয়। পুনর্গঠন প্রক্রিয়ায় ব্যাপক পরিমাণে বিদেশী সাহায্যের সহজপ্রাপ্যতা উন্নয়ন কাজের জন্য আরো অধিক হারে বিদেশী ঋণ নেয়ার আগ্রহকে তীব্র করে তোলে। ফলে বিদেশী ঋণ নির্ভর হয়ে পড়েছে আমাদের উন্নয়ন বাজেট। প্রকৃত অর্থে রাষ্ট্রীয় ক্ষমতার সাথে সংশ্লিষ্ট ব্যক্তিদের কাছে বিদেশী সাহায্য আজ উন্নয়নের আদর্শ হিসাবেই পরিগণিত তাদের কাছে বিদেশী সাহায্য ও উন্নয়ন শব্দ দুটি যেন একই মুদ্রার এপিঠ ওপিঠ। বাংলাদেশের উন্নয়ন পরিকল্পনা এখন সাহায্যদাতা

কনসোর্টিয়াম দ্বারা অনুমোদিত হতে হয়। সাহায্য দাতাদের দ্বারা প্রকল্প ও কর্মসূচি পরীক্ষিত, সংশোধিত এমনকি প্রণীত পর্যন্ত হয়। বিশ্বব্যাংক ও আইএমএফ দেশের উন্নয়ন তৎপরতার খবরদারী করে থাকে। উন্নয়ন কর্মসূচি প্রক্ষেপে সাহায্যদাতাদের মতামত এবং ইচ্ছা অনিচ্ছা অধিকতর কার্যকরী হয়, এমনকি বাংলাদেশের দৃষ্টিতে অন্য কোনো প্রকল্পে অগ্রাধিকার বিবেচিত হলেও !

সাহায্য পুষ্ট হাজার হাজার প্রকল্প : আঁতুড়ঘরে যাদের মৃত্যু ঘটেছে

যে কোন প্রকল্প গ্রহণের সিদ্ধান্ত গ্রহণ করে বাস্তবায়ন শুরু করার আগেই দফায় দফায় যে প্রাক-সম্ভাব্যতা জরিপ, সম্ভাব্যতা জরিপ, বাস্তবায়ন সমীক্ষা, ডিজাইন সমীক্ষা, প্রকল্পপরিকল্পনা, প্রকল্প সমীক্ষা, প্রকল্প স্ট্রাটজি, পরিকল্পনা মূল্যায়ন ইত্যাকার পর্যায়ক্রমিক কাজগুলো সম্পন্ন করতে হয় সেগুলোর জন্য মোট প্রকল্প ব্যায়ের এক- চতুর্থাংশ খরচ হয়ে যেতে পারে। আবার যদি ঐ সমীক্ষাগুলো দাতাদেশ, সংস্থা বা গোষ্ঠীর পছন্দসই না হয় তাহলে একই কাজ বারে বারে করার প্রয়োজন দেখা দেয়। এমনভাবে সাহায্য যখন কতগুলো কাণ্ডজে দলিল রচনার পেছনে খরচ হতে থাকে তখন গ্রহীতা দেশের ঋণের খাতায় দেনার পরিমাণ সুদাসলে বাড়তে থাকে, অথচ এতসব দীর্ঘমেয়াদী ও ব্যায়বহুল দলিলের শেষ কথা হতে পারে, ‘এ ধরনের প্রকল্প দাতাদের জন্য যথেষ্ট আকর্ষণীয় নয় বিধায় অর্থায়ন সম্ভবপর নয়।’ বাংলাদেশের বন্যা নিয়ন্ত্রণ কর্মসূচি, রূপপুর আণবিক প্রকল্প, জয়পুরহাট সিমেন্ট প্রকল্প, জামালগঞ্জ কয়লাখনি প্রকল্প, রেলওয়ের ডবল লাইন প্রকল্প- এগুলো উপর্যুক্ত ধরনের প্রকল্প যেগুলো আদৌ বাস্তবায়িত হবে কিনা তার নিশ্চয়তা এখনও নেই। অথচ যে গুলোর সুবাদে বাংলাদেশের বৈদেশিক ঋণের খাতায় কয়েক’শ কোটি টাকা দেনা লেখা হয়ে গেছে গত চার দশকে। উপরের কয়েকটা বড় বড় প্রকল্পের মত কয়েক হাজার প্রকল্প বাস্তবায়নপূর্ব অবস্থায় প্রচুর ঋণ ও সাহায্য চেটেপুটে খেয়ে কাগজের স্তূপ হিসাবে নিদ্রামগ্ন রয়েছে দেশের এবং দাতাদের দপ্তরে। প্রফেসর ইউনুস সখেদে বলেছিলেন, বাংলাদেশ হাজার হাজার অসমাপ্ত, পরিত্যক্ত এবং পরিকল্পিত প্রকল্পের কবরস্থান। তার হিসেবের মধ্যে উপরে বর্ণিত ‘সম্ভাব্য’ অথচ ব্যয় বরাদ্দ প্রাপ্ত প্রকল্পগুলো ধরলে দেখা যাবে ঐ ‘Yet to be born’ ক্যাটাগরির কল্পিত (পরিকল্পিত নয়) প্রকল্পের পিছনেই প্রায় সাহায্য খরচ হয়ে থাকে। এভাবে প্রকল্প সাহায্যের একটা উল্লেখযোগ্য অংশ বিদেশী দাতারা ফেরত নিয়ে যাওয়ার কাহিনী এখন পুরানো শুনাতে কারণ এগুলোর কারণেই প্রকল্প সাহায্যকে Donor- Sponsor employment service আখ্যায়িত করা হয় রাজনৈতিক অর্থনীতির পরিভাষায়। আর্থ-সামাজিক উন্নয়নের লক্ষ্যে বাংলাদেশে গত চব্বিশ বছরে (১৯৭২/৭৩-১৯৯৪/৯৫) মোট ২৭,৬১৪টি উন্নয়ন প্রকল্প গৃহীত হয় এগুলোর মধ্যে (১৯৭২/৭৩-১৯৯৩/৯৪) তেইশ বছরে ২৬,৫১৯টি প্রকল্পের মধ্যে মাত্র ৩,০০০ প্রকল্পের সুষ্ঠু বাস্তবায়ন হয়। শতকরা হিসাবে যার সংখ্যা দাঁড়ায় ১১.৩১%। উপরোল্লিখিত প্রকল্পগুলোর জন্য উন্নয়ন কর্মসূচির আওতায় ১ লাখ ৪২ কোটি টাকা বরাদ্দ করা হয়। বরাদ্দকৃত এই অর্থের মধ্যে ১৯৯৪-৯৫ অর্থবছর পর্যন্ত ব্যয় করা হয়েছে ৮২ হাজার ৯১৫ কোটি টাকা। আর্থ-সামাজিক উন্নয়নের জন্য গৃহীত এসব প্রকল্পের সফলতার হার খুবই হতাশাব্যঞ্জক।^৭

বাংলাদেশের অর্থনীতিতে বৈদেশিক সাহায্যের প্রভাব

দেশের অর্থনৈতিক, সামাজিক, সাংস্কৃতিক ও রাজনৈতিক জীবনে দাতাদের ব্যাপক প্রভাব ও হস্তক্ষেপ এ দেশে স্বনির্ভরতার বদলে নির্ভরতার প্রসার ঘটানো এবং বিরাজমান দুরবস্থার মুখে পানি সিঞ্চন করেছে।^৮ আমাদের দেশ কিভাবে চলবে, এর অবকাঠামো কি হবে, বার্ষিক উন্নয়ন বাজেট, আমাদের নীতি, খাদ্যনীতি এমনকি কতোজন শিশু বছরে জন্মগ্রহণ করবে তা নির্ধারণ করার জন্য আমাদের নীতি নির্ধারকগণ টেকিও, বন, ওয়াশিংটন, প্যারিসের ওপর সাগ্রহে নির্ভর

করে থাকে। উন্নত দেশের নীতি নির্ধারকগণ আমাদের দেশের প্রত্যেকটি কর্মসূচি, চিন্তা ভাবনা, ধ্যান-ধারণায় এতো বেশি প্রভাব বিস্তার করে থাকে যে, দু'দশক পূর্বে এ ধরনের অবমাননাকর, ন্যাক্কারজনক পরিস্থিতিকে কেউ চিন্তার মধ্যেও আনতে পারেনি। বাংলাদেশের স্বাধীনতা, সার্বভৌমত্ব ততোদিন পর্যন্ত এই আত্মসনের করালগ্রাস থেকে মুক্ত হবে না যতোদিন না এদেশের রাজনীতিবিদ, আমলা এবং দেশের নীতিনির্ধারকরা তাদের চিন্তা-চেতনা, ধ্যান ধারণা, আদর্শ ও মূল্যবোধকে পরিবর্তন করতে পারবেন।^৫

ঋণের একটি বড় অংশ অনুৎপাদনশীল খাতে (সামরিক বাহিনী, প্রশাসন, বৈদেশিক মিশন ইত্যাদি) বা সামাজিক উন্নয়ন খাতে (স্কুল, কলেজ, হাসপাতাল, সড়ক নির্মাণ ইত্যাদি। ব্যয় হওয়ার কারণে এসব খাত থেকে কোন প্রকার রাজস্ব আয় না হওয়ায় কেবলমাত্র ঋণের সুদ বা ঋণ পরিশোধ করা দরিদ্র দেশগুলোর পক্ষে দুঃসাধ্য হয়ে পড়ে। বস্তুতঃপক্ষে বৈদেশিক ঋণ সাহায্য দ্বারা অনুন্নত দেশের সংখ্যাগরিষ্ঠ দরিদ্র জনগণের কোন উপকার হয় না। এসবের দ্বারা উপকৃত হয় কেবল সামরিক বেসামরিক আমলাবর্গ, ব্যবসায়ী, শিল্পপতি, আমাদানীকারক, রাজনীতিবিদ, গ্রামীণ ভূস্বামী, শহুরে জনগণের সংখ্যালঘু অংশ ইত্যাদি। অথচ বোঝা বহন করতে হয় মূলত দরিদ্র জনগোষ্ঠীকেই। দাতাদেশ ও সংস্থাগুলো যে শুধুমাত্র ঋণ সাহায্য ও বৈদেশিক বিনিয়োগের মাধ্যমে পুঁজিবাদী মুনাফার প্রবাহ সমুন্নত রাখে তাই নয় বরং প্রকল্প ও কারিগরী সাহায্য চুক্তির মধ্যে শুভঙ্করী ফাঁক রেখে অনুন্নত দেশগুলোকে প্রত্যক্ষভাবে ক্ষতিগ্রস্ত করা হয়। এটা করা হয় দাতাদেশ বা সংস্থাগুলোর নিযুক্ত বিশেষজ্ঞ উপদেষ্টা প্রকল্প কর্মকর্তাদের বেতন-ভাতা বা তাদের বিলাসবহুল বাড়ী-গাড়ী, আহার-বিহারের ব্যয়ভার চাপিয়ে দেয়ার মাধ্যমে। অধিকাংশ ক্ষেত্রে বিদেশী কর্মকর্তাদের থাকা খাওয়া ও যানবাহনের ভাতা হিসাবে প্রদত্ত অর্থ সাহায্য গ্রহীতা দেশে প্রদান করা হয় আর করমুক্ত বেতনের অর্থ তাদের নিজ নিজ দেশের ব্যাংক একাউন্টে প্রেরণ করা হয়। এতে গ্রহীতা দেশ ঋণের অর্থে লালিত বিদেশীদের আয়-ব্যয়ের নানা প্রত্যক্ষ বা পরোক্ষ সুবিধা (স্থানীয় কর, ভোগ্যপণ্যের চাহিদা বৃদ্ধি, বৈদেশিক মুদ্রা ইত্যাদি) থেকে বঞ্চিত হয়। প্রকল্প ও কারিগরী সাহায্যের চেয়েও খাদ্য সাহায্য অনুন্নত দেশগুলোর সাধারণ কৃষি অর্থনীতির ওপর সর্বাধিক বিরূপ প্রভাব বিস্তার করে থাকে। খাদ্য উৎপাদনের চেয়ে খাদ্যের আমদানী বৃদ্ধিই যে এই সাহায্য কার্যক্রমের মূল লক্ষ্য তা আজ প্রমাণিত সত্য। আর এই সত্যকে সুসংহত করার লক্ষ্যে দাতাদেশ ও সংস্থাগুলো গ্রহীতা দেশের কৃষি নীতি, কৃষি উপকরণ এবং কৃষি পণ্যের বাজারজাতকরণ বিষয়ে নানাভাবে হস্তক্ষেপ বা প্রভাব বিস্তার করে থাকে।^৬

ঋণদাতা দেশগুলো তাদের পণ্যের উন্মুক্ত বাজার চালু ও তাদের রাজনৈতিক প্রভাব বলয়ে রাখার জন্যই মূলত ঋণের অব্যাহত ভাণ্ডার দরিদ্র দেশ সমূহের দিকে প্রসারিত করে থাকে। ১৯৮৩ সালে মার্কিন পররাষ্ট্রমন্ত্রী জর্জ সোলজ এক বক্তৃতায় বলেছিলেন, 'উন্নয়নশীল দেশসমূহে কেবলমাত্র ১৯৮০ সালে যুক্তরাষ্ট্র ৫৮০ বিলিয়ন ইউ. এস ডলার মূল্যের পণ্য রপ্তানী করেছে যা ঐ সমস্ত দেশে প্রদত্ত সর্ব-প্রকার আর্থিক সহায়তার সতেরো গুন বেশি। জর্জ সোলজ- এর স্বীকারোক্তি থেকে স্পষ্ট হয়ে উঠে যে, নিজেদের স্বার্থসিদ্ধির বাইরে ঋণ গ্রহীতা দরিদ্র দেশটি শিল্প বা কৃষিতে স্বয়ংসম্পূর্ণ হলো কিনা, জাতীয় আয়ের বৃদ্ধি ঘটেছে কিনা বা সত্যিকারের ন্যায্য বিচারভিত্তিক রাষ্ট্রকাঠামো চালু হলো কিনা ঋণ প্রদানের ক্ষেত্রে দাতা দেশগুলোর কাছে এসব বিষয়গুলো কখনই মুখ্য বিষয় হিসাবে বিবেচিত হয় না। উৎপাদন বৃদ্ধির জন্য সার ও কীটনাশকের সহজলভ্যতার বিষয়টি অনস্বীকার্য। অথচ ১৯৭৪-৭৫ সনে তৃতীয় বিশ্বের দেশগুলোতে সারের প্রয়োজনীয়তার গুরুত্ব উপেক্ষা করে মার্কিন যুক্তরাষ্ট্র পরিবর্তিত রপ্তানী

নীতির জন্য বিদেশে সার রপ্তানীর পরিমাণ হ্রাস করে দেয়। যুক্তরাষ্ট্রের এই পদক্ষেপ তৃতীয় বিশ্বের খাদ্যোৎপাদনের ওপর বিরূপ প্রভাব ফেলে। পাশাপাশি নির্মম বাস্তবতা হলো এই যে, ঐ একই সময় মার্কিন যুক্তরাষ্ট্রের গলফ ক্লাব, ঘাসের লন ও কবরস্থানের জন্য প্রায় তিন মিলিয়ন টন সার ব্যবহৃত হয়।

আমরা যাতে খাদ্যে স্বয়ংসম্পূর্ণতা অর্জন করতে না পারি সেজন্য সাহায্যদাতা দেশসমূহ সার কীটনাশকের ওপর ভর্তুকী তুলে নেয়ার জন্য সরকারের ওপর চাপ সৃষ্টির পরিপ্রেক্ষিতে দেখা যায় ১৯৮৫ সালের জানুয়ারী মাস থেকে সারের মূল্য হঠাৎ করেই বাড়িয়ে দেয়া হয়েছে যা ক্রমান্বয়ে সার থেকে ভর্তুকী তুলে নেয়ারই পদক্ষেপ। অথচ এক হিসাবে দেখা গেছে, সরকার যদি সার থেকে ভর্তুকী তুলে নেয় তাহলে সরকারের সাশ্রয় হবে মাত্র ৬০ মিলিয়ন টাকা। অপরদিকে বাৎসরিক খাদ্য উৎপাদন কমে যাবে প্রায় ৩০০ হাজার টন।^৭ আর এই পরিমাণ খাদ্য- ঘাটতি পূরণের জন্য বিদেশ থেকে খাদ্য শস্য কিনতে সরকারের ব্যয় হবে প্রায় ৬০ মিলিয়ন ডলার। অনুরূপভাবে প্রকল্প সাহায্য হিসাবে শর্তযুক্ত যে ঋণ দরিদ্র দেশসমূহ পেয়ে থাকে তার বিপরীতে গ্রহীতা দরিদ্র দেশসমূহকে যদি নিঃশর্তে ঋণের আওতায় প্রকল্পটি বাস্তবায়নের সুযোগ দেয়া হয় তাহলে প্রকল্প ব্যয়ের এক তৃতীয়াংশ সাশ্রয় সম্ভব। উদাহরণ হিসাবে এখানে বুড়িগঙ্গা নদীর ওপর স্থাপিত সেতুটির কথা উল্লেখ করা যেতে পারে। চীন সরকার ১০৮.০০ কোটি টাকায় সেতু নির্মাণ করেছে অথচ একই সেতু স্থানীয় একটি প্রতিষ্ঠান মাত্র ৩৮.০০ কোটি টাকায় করে দিতে চেয়েছিলো।

বিভিন্ন পরিকল্পনায় বৈদেশিক সাহায্য

বাংলাদেশের রাজস্ব বাজেট ক্রমবর্ধমান হারে বৈদেশিক সাহায্য-নির্ভর হয়ে পড়েছে যদিও রাজস্ব বাজেটের পরনির্ভরশীল চরিত্রটি চট করে ধরা পড়ে না। বাংলাদেশের রাজস্ব আয়ের গড়ে শতকরা ৬৩ ভাগ এর অধিক পরিমাণ অর্থ আসে শুধুমাত্র আমদানী শুল্ক থেকে। যদি আমরা স্মরণ রাখি যে, বিগত বছরের সময়কালে বাংলাদেশের আমদানী ব্যয় গড়ে অর্ধেকেরও বেশি মেটানো হয়েছে বৈদেশিক সাহায্যের মাধ্যমে তাহলে স্পষ্ট হয়ে ওঠে রাজস্ব বাজেটের বৈদেশিক সাহায্য নির্ভর চরিত্রটি অপরদিকে রাজস্ব বাজেটকে কোনোরকমে পৃথক করা গেলেও আমাদের উন্নয়ন বাজেট যে স্পষ্টতই বিদেশী সাহায্য নির্ভর বিভিন্ন বাজেট বিশ্লেষণ করলেই তা বুঝা যায়। কিন্তু আমাদের নির্ভরতার মাত্রাকে শুধু এই বাজেটের আকারে দেখলে এটাকে পরিপূর্ণভাবে উপলব্ধি করা অসম্ভব। কারণ বাংলাদেশ যেসব আকারে বৈদেশিক সাহায্য পেয়ে থাকে প্রকল্প সাহায্য তন্মধ্যে একটি, যদিও এটি সময়ের সঙ্গে পাল্লা দিয়ে বেড়েই চলেছে। এমনকি সাম্প্রতিক বছরগুলোতেই প্রকল্প বহির্ভূত সাহায্য যেমন, খাদ্য সাহায্য, দ্রব্য সাহায্য ইত্যাদি প্রাপ্ত সমস্ত সাহায্যের শতকরা ৫১.৭৮ ভাগ থেকে ৫২.৫৭ ভাগ স্থান দখল করে আছে। (সারণি ৩ ও ৪ দ্রষ্টব্য)

সারণি - ৩

বাংলাদেশে মোট বৈদেশিক ঋণ ও অনুদান

খাত	ঋণ	অনুদান	মোট	শতকরা
খাদ্য	৭৬.৩	৫০৬.৯	৫৮৩.২	১৬.৮
পণ্য	৫২১.৫	৪৮৭.৪	১০০৮.৯	২৯.০
প্রকল্প	১২০২.৫	৬৮১.১	১৮৮৩.৬	৫৪.২
মোট	১৮০০.৩	১৬৭৫.৪	৩৪৭৫.৭	১০০.০
শতকরা	৫১.৮	৪৮.২		

সূত্র: এনজিও এফেয়ার্স ব্যুরো, প্রধান মন্ত্রীর কার্যালয় (ফেব্রুয়ারী ২৭, ২০০০)।

নির্দেশিকাঃ ই আর ডি কর্তৃক প্রকাশিত (ফেব্রুয়ারী ২৭, ২০০০) তথ্যের ভিত্তিতে হিসেবকৃত। হিসেবে অন্তর্ভুক্ত হয়নি আই এম এফ ড্রেডিট ও কিছু বিশেষায়িত খাতের ধার/কর্জ, যার মধ্যে আছে খাদ্য মন্ত্রণালয়, বাংলাদেশ শিপিং কর্পোরেশন, পেট্রোলিয়াম কর্পোরেশন, দেশরক্ষা বাহিনী, এনজিও ও ব্যক্তি মালিকানাধীন খাত।

সারণি-৪

গত দশকে সাহায্য প্রাপ্তি (১৯৯০/৯১.....১৯৯৬/৯৭)

খাদ্য		সাহায্য	পণ্য	সাহায্য	প্রকল্প	সাহায্য	সর্বমোট	
অর্থবছর	প্রতিশ্রুতি	অবমুক্তি	প্রতিশ্রুতি	অবমুক্তি	প্রতিশ্রুতি	অবমুক্তি	প্রতিশ্রুতি	অবমুক্তি
১৯৯০-৯১	১৮৩.৮	২৬৮.৬	২৯৫.৯	৪০৮.১	৮৯০.৬	১০৫৫.৯	১৩৭০.৩	১৭৩২.৬
১৯৯১-৯২	২২৬.০	২৪১.২	৫৭৫.৭	৩৮৬.০	১১১৩.৯	১০৬৪.০	১৯১৫.৬	১৬৯১.২
১৯৯২-৯৩	১৭৭.৭	১২১.০	৩৩৬.১	৩৭২.১	৭৬০.৭	১১০১.৯	১২৭৪.৫	১৫৯৫.৬
১৯৯৩-৯৪	৮৩.৪	১১৭.৪	৩৬৫.৪	৪৫১.৩	১৯৬১.৪	৯৮৯.৫	২৪১০.২	১৫৫৮.৬
১৯৯৪-৯৫	১৩২.১	১৩৭.৪	৩৫৪.৩	৩৩২.৮	১১২৫.৮	১২৬৮.৯	১৬১২.২	১৭৩৯.১
১৯৯৫-৯৬	১৩২.৮	১৩৮.০	১৬৩.১	২২৯.৪	৯৮৩.৬	১০৭৬.৪	১২৭৯.৫	১৪৪৩.৮
১৯৯৬-৯৭	১৩৭.৯	১০০.৮	১৭০.৫	২৬৩.১	১৩৫২.৮	১১১১.৪	১৬৬১.১	১৪৭৫.৩

*সাহায্যের অংশ মিলিয়ন ডলারে,

সূত্র: ভোরের কাগজ, ৩১ অক্টোবর ১৯৯৭

বৈদেশিক সাহায্যের প্রকৃত সুবিধা ভোগী কারা?

বিদেশী সাহায্য আমাদের অর্থনীতিকে যে চাপা করতে পারেনি তার প্রকৃষ্ট প্রমাণ ১৯৭২-৭৫ সময়ে জাতীয় আয় বৃদ্ধির হার- এর দিকে দৃষ্টি ফেরালেই বুঝা যায়। এ সময় সবচেয়ে কম ঋণ বা অনুদান গ্রহণ করে দেশের সব চাইতে সমস্যাসঙ্কুল সময়ে জাতীয় আয়ের বৃদ্ধির হার ছিলো শতকরা ৭ ভাগ। কিন্তু পরবর্তী বছরগুলোতে দেশের আবহাওয়া তুলনামূলকভাবে উৎপাদনের অনুকূলে থাকা সত্ত্বেও ১৯৭৫-৮০ বছরগুলোতে জাতীয় আয়ের বৃদ্ধির হার কমে দাঁড়িয়েছে শতকরা ৪.৭ ভাগ। এরপর ১৯৮০-৮৬ বছরগুলোতে তা আরো কমে দাঁড়িয়েছে শতকরা ৩.৬ ভাগ এবং সাম্প্রতিক বছরগুলোতে এর গতি শতকরা ৫.৫ ভাগকে অতিক্রম করতে পারেনি। গত চৌত্রিশ বছরে আমরা উন্নয়নের জন্য বিদেশী বন্ধুদের কাছ থেকে পেয়েছি

২৪ বিলিয়ন ডলার। ডলারের বর্তমান বিনিময় মূল্যে সেটা প্রায় এক লক্ষ কোটি টাকাতে দাঁড়ায়। সুন্দর কথায় জড়ানো প্রকল্পের পেছনে এই অর্থ ব্যয় হয়েছে। প্রত্যেক প্রকল্প চমৎকার যত সব ফলাফলের অঙ্গীকার ব্যক্ত করেছে। প্রকল্পের ফলাফল কি হয়েছে সেটা পরে আর শুনা না গেলেও প্রকল্প রচনাকারীরা তাদের মোটা ফি নিয়ে গেছেন এবং বাংলাদেশের অভিজ্ঞতায় তারা সমৃদ্ধ হয়েছেন। এই সুবাধে আরো উচ্চতর ফি-তে নতুন প্রকল্প রচনার কাজ পেয়ে গেছেন। পরামর্শকরা তাদের মূল্যবান পরামর্শের জন্য মূল্যবান প্রতিদান নিয়ে গেছেন। সরবরাহকারী চড়াদামে মালামাল, যন্ত্রপাতি সরবরাহ দিয়ে গেছেন, ঠিকাদার আরো দশজনের সঙ্গে ভাগাভাগি করে মোটা মুনাফা ঘরে তুলেছেন।^{১০} বাংলাদেশের প্রবাদ পুরুষ প্রফেসর মুহাম্মদ ইউনুস এর মতে, ১৯৯২ সাল পর্যন্ত প্রাপ্ত ২৫ বিলিয়ন ডলার বৈদেশিক সাহায্যের ৭৫ শতাংশ এই দেশে ব্যয়িত হয়নি। এই অর্থ মালামালে, মূল্য ও পরামর্শক, বিশেষজ্ঞদের বেতন ভাতা বাবদ দাতা দেশগুলোতে ফিরে গেছে। যে ২৫ শতাংশ এদেশে ব্যয়িত হয়েছে তার মোট অংশ গেছে সিদ্ধান্ত গ্রহণকারীদের ঘুষ প্রদান বাবদ। বাকী অংশ পেয়েছেন দেশীয় পরামর্শক, বিশেষজ্ঞ, ঠিকাদার ও ইনডেনটাররা। এদেশের প্রকল্প উন্নয়নের ক্ষেত্রে ও ব্যয় হয়েছে এই টাকার যতকিঞ্চিৎ পরিমাণ।^{১০} অর্থনীতিবিদ সেলিম জাহানের মতে, এদেশে ১০০ ডলার আসলে যন্ত্রপাতি কিনতে লাগে ৭৯ ডলার বিদেশে বিশেষজ্ঞ (Consultant) নিয়োগে ১০ ডলার, দালালরা পায় ৩ ডলার এবং স্থানীয় (আমলারা) পায় ১ ডলার, এসব কিছু মিলিয়ে ৯৩ ডলার পায় এবং ৭ ডলার পায় জনগণ।^{১১}

প্রাপ্ত বিদেশী সাহায্যের শতকরা ৬৬ ভাগ সরাসরি খাদ্য সাহায্য এবং পণ্য কেনার জন্যে ব্যয় হয় যা কঠোর শর্তযুক্ততার কারণে দেশে অর্থনৈতিক উন্নয়নে কোন অবদান রাখতে পারছে না। অবশিষ্ট শতকরা ৩৪ ভাগ ঋণের মধ্যে প্রকল্প ঋণের শতকরা ৭৫ ভাগ চলে যায় সাহায্যদাতা দেশসমূহের চাহিদা মেটাতে। এছাড়া যে কোনো প্রকল্পের প্রাথমিক জরিপ, মূল্যায়ন ইত্যাদির বাবদ বিদেশী সাহায্যদাতারা মোট প্রকল্প খরচের শতকরা ১৫ ভাগ প্রকল্প স্থাপনের পূর্বেই নিয়ে যায়।^{১২}

বৈদেশিক সাহায্যের বদৌলতে আমাদের দেশে সৃষ্টি হয়েছে একটি বিশেষ শ্রেণী যারা মূলত এই সাহায্য থেকে প্রত্যক্ষভাবে সুফল ভোগ করছে। আর এই সুবিধাভোগীদের অধিক বিত্ত-বৈভব সমাজে সৃষ্টি করছে এক নতুন মেরুকরণের। ধনী এবং দরিদ্রের মধ্যে ব্যবধান হচ্ছে গগনচুম্বী। সুবিধাভোগীদের একটি অংশ হলো বিভিন্ন ধরনের পণ্য আমদানীকারকগণ। এরা স্বল্প বিনিয়োগের মাধ্যমে খাদ্যশস্য, যন্ত্রপাতি আমদানী করে উচ্চহারে কমিশন গ্রহণ করে অল্প সময়ের মধ্যে প্রচুর মুনাফা করে থাকে। বৈদেশিক সাহায্যপ্রাপ্ত প্রকল্পগুলোর একটি বড় অংশ হলো নির্মাণ কাজ। এক্ষেত্রে ঠিকাদাররা গড়ে ২০ থেকে ৩০ ভাগের মতো মুনাফা নিয়ে থাকে। একইভাবে দেশীয় আমলাশ্রেণী বিভিন্ন ধরনের সিদ্ধান্ত গ্রহণের ক্ষেত্রে বিভিন্নভাবে প্রকল্প থেকে এক বিরাট অংশ নিয়ে থাকেন। এর বাইরে রয়েছে দেশী-বিদেশী উপদেষ্টা শ্রেণী। সাহায্য প্রকল্পের অগ্রগতি তদারকি, বিভিন্ন প্রকল্পের সম্ভাব্যতা যাচাই, কারিগরী বিষয়ে পরামর্শদান ইত্যাদির নামে প্রকল্প সাহায্যের একটি ভাগ তারা পেয়ে থাকেন।

পশ্চিমা বিশেষজ্ঞ সমাচার

পশ্চিমী সাহায্যদাতাদের পাঠানো বিশেষজ্ঞ সম্পর্কে বিশিষ্ট অর্থনীতিবিদ ডঃ খলীকুজ্জামান আহম্মদ বলেছেন, ‘তারা আমাদের শিল্পকারখানা এবং দেশের বাস্তবতা সম্পর্কে সামান্যই জানেন। তাদের সুপারিশ উপর ভাসা ও মেকানিক্যাল। আমি তাদের প্রণীত কয়েকটি রিপোর্ট দেখেছি। আমি নিশ্চিত যে, এই সব রিপোর্ট কাজে আসবে না এবং অর্থ জলে ঢালা হয়েছে। এই সব বিশেষজ্ঞকে নিয়ে আসা আরও ক্ষতিকর। কারণ তাদেরকে সকল তথ্য সরবরাহ করতে হয়। আমি মনে করি স্থানীয় বিশেষজ্ঞগণ বিদেশীদের চেয়ে ভাল কাজ করতে পারেন’।^{১৩}

আর অপর দিকে অর্ধশিক্ষিত লোকদেরকে যারা সেসব দেশের অর্থনীতিতে বোঝাস্বরূপ এদের অনেককে এসব দেশে কনসালটেন্ট বা উপদেষ্টা করে পাঠানো হয়। এদের বেতন ভাতাও এত বেশি দেয়া হয় যে, তার কয়েকগুণ কম বেতন দিয়ে দেশীয় অনেক বেশি যোগ্য পরামর্শক পাওয়া যায়। কিন্তু যেহেতু তারা সাহায্য দিয়ে থাকে, সেজন্য তাদের আর্থিক সাহায্যের সাথে সাথে কারিগরি সাহায্যের নামে (Technical Assistance) কতগুলো অদক্ষ বা আধাদক্ষ লোকদেরকে তৃতীয় বিশ্বে পাঠানো হয়। বাংলাদেশের অর্থ মন্ত্রণালয়ের অধীনে ই, আর, ডি, (Economic Relations Division) এ বিষয়ে এদেশে বিদেশী পরামর্শকদের যোগ্যতাসহ ব্যবহারের উপর একটি গবেষণা পরিচালনা করে যাতে দেখা যায় যে, এদের অনেকেই অষ্টম শ্রেণী পর্যন্ত পড়াশুনা করেছিল মাত্র। এ ধরনের দু- একটি উদাহরণ দিয়ে বলা যায় যে, কৃষি মন্ত্রণালয়ে অধীন একজন পাট বিশেষজ্ঞ (Jute Expert) হয়ে এসেছিলেন যিনি জীবনে কখনো পাট গাছ দেখেননি। তেমনি স্বাস্থ্য ও পরিবার কল্যাণ মন্ত্রণালয়ের অধীন জনসংখ্যা বিষয়ে পরামর্শক হয়ে এসেছেন যিনি জনবিজ্ঞান (Demography) কি কিংবা জনসংখ্যা বৃদ্ধির হার কিভাবে নির্ণয় করতে হয় সে বিষয়টি পর্যন্ত জানেন না। অথচ এ ধরনের লোককে এদেশে মাসিক ৬-৮ হাজার ডলার পর্যন্ত বেতন দিয়ে পাঠানো হয়ে থাকে।^{১৪} সাহায্য নির্ভর প্রযুক্তি হস্তান্তরের ক্ষেত্রে সবচেয়ে বিরক্তিকর কাজ হচ্ছে দাতা দেশ গুলো থেকে আগত বিশেষজ্ঞদের নিয়োগ। বাংলাদেশ প্রকল্প ব্যবস্থাপনা ইনস্টিটিউট পরিচালিত সমীক্ষায় দেখা গেছে যে ডিসেম্বর ১৯৭১ থেকে জুন ১৯৮৬ সাল পর্যন্ত ২৪০ টি প্রকল্পে মোট ১৩৯০ জন বিদেশী বিশেষজ্ঞদের নিয়োগ করা হয়েছে। সমীক্ষায় দেখা গেছে, শতকরা ২০টি ক্ষেত্রে বহিরাগত উপদেষ্টারা প্রকল্পের প্রাথমিক প্রস্তুতিমূলক কাজ ও তথ্যনুসন্ধানমূলক সমীক্ষায় নিয়োজিত থাকেন, শতকরা ২৪টি ক্ষেত্রে জড়িত থাকেন সমীক্ষা ও প্রকল্প বাস্তবায়ন এর কাজে, শতকরা ৭ টি ক্ষেত্রে তারা প্রকল্পের নির্মাণ ও যন্ত্রাদি স্থাপন কাজে শতকরা ৩১টি ক্ষেত্রে তারা কারিগরি জ্ঞান বা নৈপুণ্য স্থানান্তর করনের ভূমিকা পালন করেন এবং ১৮ শতাংশ ক্ষেত্রে শুধুমাত্র মৌখিক পরামর্শ দানের মধ্যে তাদের কাজ সীমিত রাখেন।^{১৫} তাদের অনেকেরই জ্ঞান এবং শিক্ষাগত যোগ্যতা প্রশ্নাতীত নয়। বাংলাদেশ প্রকল্প ব্যবস্থাপনা ইনস্টিটিউট পরিচালিত এক সমীক্ষা হতে জানা যায় স্বাধীনতা পরবর্তী ১৭ বছরে ৩০০টি প্রকল্পে বিশেষজ্ঞ হিসাবে চিহ্নিত করে বিদেশী উপদেষ্টা নিয়োগ করা হয় ৩ হাজারেরও বেশি। অথচ এদের অনেকেরই বিশেষজ্ঞ হবার মত ন্যূনতম জ্ঞানও নেই। এদের জন প্রতি মাসিক বেতন ভাতা দেয়া হয়েছে ৯৫ হাজার টাকা থেকে সাড়ে চার লাখ টাকা পর্যন্ত। অন্য একটি তথ্য থেকে জানা যায় ১৯৭৩ থেকে ১৯৭৮ সাল পর্যন্ত উপদেষ্টাদের পিছনে খরচ হয় ১৩৩ কোটি টাকা। এর মধ্যে বিদেশী উপদেষ্টাদের পেছনে খরচ হয় ১২৪ কোটি টাকা বা ৯৩ শতাংশ। অবশিষ্ট ৮ কোটি ৬০ লাখ টাকা ব্যয় হয় স্থানীয় উপদেষ্টাদের জন্য। ১৯৭১ থেকে ১৯৮৬ সাল পর্যন্ত বাংলাদেশে কর্মরত ১১৩৬ জন বিদেশী উপদেষ্টা বা বিশেষজ্ঞদের শিক্ষাগত যোগ্যতা সম্পর্কে জরিপ চালিয়ে একটি সংস্থা দেখেছে এদের মধ্যে মাত্র ৯১৪ জনের শিক্ষাগত যোগ্যতা সংক্রান্ত কাগজপত্র সংশ্লিষ্ট

মন্ত্রণালয় কিংবা বিভাগে সংরক্ষিত আছে। এর মধ্যে ১৮ জন ছিল আনুষ্ঠানিক শিক্ষাগত যোগ্যতা বিহীন, ৩৭ জন ছিল হাইস্কুল পাশ, ৫০ জন ছিল জুনিয়র কলেজ লেভেলের, ২৫৭ জন প্রাজুয়েট, পোস্টপ্রাজুয়েট ৩৮০ জন, ১৪৬ জন পি এইচ ডি এবং মেডিসিন বিষয়ের ডিগ্রীধারী। এদের শিক্ষাগত যোগ্যতা যাই হোক না কেন এবং তারা যে ধরনের উপদেশ বিতরণ করুক না কেন তাদের জন্য কিন্তু আমাদের উচ্চহারে বেতন ভাতা দিতে হয়েছে।

বিভিন্ন সরকারের আমলে প্রাপ্ত বৈদেশিক সাহায্য

২০০১-০২ অর্থ বছরের শেষ পর্যন্ত বাংলাদেশের ঘাড়ে বৈদেশিক দেনা ছিল মোট ১ হাজার ৬শ' ২৭ কোটি ৬০ লাখ মার্কিন ডলারের সমান অংকের অর্থ। বর্তমান বিনিময় হার অনুযায়ী বাংলাদেশী মুদ্রায় ওই দেনা হয় মোট ৯৪ হাজার ২শ' ৩৮ কোটি ৪লাখ টাকা। ২০০২-২০০৩ অর্থবছরে বাংলাদেশ ৭ হাজার ৪শ' ৩০ কোটি টাকা পেয়েছে। তার ভেতর থেকে বাংলাদেশ ২ হাজার ৮শ' ৯০ কোটি টাকা শোধ করে দেনার কিস্তি ও সুদ বাবদ। সে হিসেবে বর্তমানে বাংলাদেশের ঘাড়ে বিদেশী দেনা ৯৮ হাজার ৭শ' ৭৮ কোটি ৪লাখ টাকা। সরকারি হিসেব অনুযায়ী, বর্তমানে বাংলাদেশের লোকসংখ্যা প্রায় সাড়ে তের কোটি। তাতে বাংলাদেশের প্রতিটি নাগরিকের মাথাপিছু দেনা হয় ৭ হাজার ৩শ' ১৭ টাকা।^{১৬} বঙ্গবন্ধু শেখ মুজিবুর রহমানের আমলে সুদসহ সরকারের বৈদেশিক দেনার স্থিতি ছিল সাত শত ত্রিশ কোটি উনচল্লিশ লক্ষ টাকা। প্রেসিডেন্ট জিয়াউর রহমানের আমলে ঋণ আনা হয় চারহাজার পাঁচশত চুয়াল্লিশ কোটি টাকা। সরকারের পক্ষ থেকে ঋণ পরিশোধ করা হয় সাত শত কোটি সাতষটি লক্ষ টাকা। ১৯৮১ সালে বৈদেশিক দেনার স্থিতি ছিল পাঁচ হাজার সাত শত দশ কোটি একান্ন লক্ষ টাকা। এরশাদ সরকারের আমলে সুদসহ নতুন ঋণ গ্রহণ করা হয় ২৬ হাজার ৫ শত ৮১ কোটি টাকা। তার আমলে সুদসহ বৈদেশিক ঋণ পরিশোধ করে পাঁচ হাজার তিন শত চুয়াত্তর কোটি ছাব্বিশ লক্ষ টাকা। খালেদা জিয়া সরকারের দায়িত্ব নেওয়ার সময় দেশের বৈদেশিক ঋণের স্থিতি ছিল বত্রিশ হাজার দুই শত একানব্বই কোটি বাইশ লক্ষ টাকা। বি এন পি সরকার নতুন করে সুদসহ ঋণ গ্রহণ করে উনত্রিশ হাজার ছয় শত ছয়চল্লিশ কোটি তিয়াত্তর লক্ষ টাকা। তার সরকার বৈদেশিক ঋণ পরিশোধ করে নয় হাজার দুই শত একাশি কোটি তেইশ লক্ষ টাকা। ১৯৯৬ সালে দেশে পুঞ্জীভূত বৈদেশিক ঋণের পরিমাণ ছিল একষটি হাজার নয়শত আটত্রিশ কোটি টাকা। বিগত আওয়ামী লীগ সরকার গত ১৯৯৯ অর্থ বছর পর্যন্ত বৈদেশিক ঋণ গ্রহণ করেছে ছয় হাজার নয় শত নিরানব্বই কোটি টাকা।^{১৭} (সারণি-৫) বর্তমান সরকারের ২০০৩-০৪ বাজেটটিও এ দুষ্টচক্র হতে বের হতে পারে নি। (সারণি-৬) ২০০৪-২০০৫ অর্থবছরে বার্ষিক উন্নয়ন কর্মসূচির (এডিপি) জন্য ২০,৩০০ কোটি টাকা বরাদ্দের প্রস্তাব করা হয়েছে। যা ২০০৩-২০০৪ অর্থবছরে সংশোধিত বাজেটের তুলনায় ৩ হাজার ২শ' কোটি টাকা বেশি। এবার এডিপি বাস্তবায়নে ১০,৩০১ কোটি টাকা (মোট ব্যয়ের ৫১%) বিদেশী সম্পদ এবং ৯,৯৯৯ কোটি টাকা দেশীয় সম্পদ (৪৯%) যোগান দেওয়ার ব্যবস্থা রাখা হয়েছে। ১০,৩০৪ কোটি টাকা বিদেশী সাহায্যের ৮,৪৮৪ কোটি টাকা প্রকল্প সাহায্য, ১,৪৬০ কোটি টাকা বিশেষ উন্নয়ন সহায়তা/ঋণ, ১৮৩ কোটি টাকা পণ্য সাহায্য, ৮৭ কোটি টাকা খাদ্য হিসাব থেকে স্থানান্তর এবং ৮৭ কোটি টাকা অন্যান্য খাত থেকে আনার ব্যবস্থা করা হয়েছে। ৯,৯৯৯ কোটি টাকার মধ্যে নীট দেশীয় সম্পদ থেকে আসবে ৭,৩৯৬ কোটি টাকা আর বাকী ২,৬০৩ কোটি টাকা ব্যাংকিং ব্যবস্থা থেকে ঋণের মাধ্যমে সংগ্রহ করা হবে।

(সারণি-৫)

স্বাধীনতার পর বিভিন্ন সরকারের আমলে বৈদেশিক দেনা

আমল	বৈদেশিক দেনার স্থিতি (কোটি টাকা)	নতুন ঋণ গ্রহণ সুদসহ (কোটি টাকা)	পরিশোধ (কোটি টাকা)
শেখমুজিব	৭৩০৩৯	৭৩০১২	৭৭.৩০
জিয়া	৫৭১০.৫১	৪৫৪৪.১৪	৭০০.৬৭
এরশাদ	৩২২৯১.২২	২৬৫৮১.০০	৫৩৭৪.২৬
খালেদা	৬১৯৩৭.৯৫	২৯৬৪৪৬.৭৩	৯২৮১.২৩
হাসিনা (জানুয়ারী)	৬৭৮১৫.৯২	৬৯৯৯.০০	৪২৫২.০০

সূত্র: যায়যায়দিন, প্রতিদিন, রবিবার, ২১ শে মার্চ ১৯৯৯

(সারণি - ৬)

বিবরণ	বাজেট	সংশোধিত	বাজেট
	২০০৩ - ০৪	২০০২ - ০৩	২০০২ - ০৩

সংযুক্ত তহবিল - রাজস্ব প্রাপ্তি

কর রাজস্ব	২৯০৭১	২৪৯৫০	২৫৫০০
কর বহির্ভূত রাজস্ব	৭১০০	৬১৭০	৭৫৮৪
উপমোটঃ	৩৬১৭১	৩১১২০	৩৩০৮৪

সংযুক্ত তহবিল - ব্যয়

অনুন্নয়ন রাজস্ব	২৮৯৬৯	২৫৩০৭	২৩৯৭২
বার্ষিক উন্নয়ন কর্মসূচি	২০৩০০	১৭১০০	১৯২০০
বার্ষিক উন্নয়ন কর্মসূচি বহির্ভূত প্রকল্প	৩৯০	৩৯০	৩৭১
মূলধন ব্যয়	২১৫৫	১৪৫৯	৯৭৮
অভ্যন্তরীণ ঋণ ও অগ্রিম (নীট)	-৮৭৫	-১০২৯	-৫৬৪
খাদ্য হিসাব	৫১৯	- ৭৬	২৩৪
কাঁচাখাসহ এডিপি বহির্ভূত উন্নয়ন ব্যয়	৫২২	৭৫৩	৬৬৩
উপমোটঃ	৫১৯৮০	৪৩৯০৪	৪৪৮৫৪
সামগ্রিক ঘাটতি	১৫৮০৯	১২৭৮৪	১১৭৭০

অর্থ সংস্থান

বৈদেশিক সম্পদ

বৈদেশিক অনুদান	২৫৯৬	২৪৪৭	৩০৪১
বৈদেশিক ঋণ	৯৮০৫	৭৪৩৪	৬১৩৯
বৈদেশিক ঋণ পরিশোধ	৩০৯২	- ২৮৯১	- ৩০০৭
মোট বৈদেশিক সম্পদ	৯৩০৯	৬৯৯০	৬১৭৩

অভ্যন্তরীণ সম্পদ

মেয়াদী ঋণ	২৩৭	৯৩	৩৯
অতিরিক্ত বাজেটরী	০	২০০	২০০
সম্পদ/নিজস্ব অর্থায়ন			
টি এ্যান্ড টি বন্ড	২০০	২০০	২০০
প্রজাতন্ত্রের সরকারি			
হিসাব স্থানান্তর (নিট)	৩৪৬০	৩৮০০	৩৮০০

মোট অভ্যন্তরীণ সম্পদ	৩৮৯৭	৪২৯৩	৪২৩৯
ব্যর্থকিং ব্যবস্থা থেকে ঋণ	২৬০৩	১৫০১	১৩৫৮
মোট অর্থায়ন	১৫৮০৯	১২৭৮৪	১১৭৭০

শৃঙ্খলিত অর্থনীতি: মুক্তির উপায় কি ?

জাতীয় সম্পদের পূর্ণ বিনিয়োগের মাধ্যমে একদিকে যেমন সমাজের বঞ্চিতদের কর্মসংস্থান সৃষ্টি করা সম্ভব, অন্যদিকে তেমনই অবহেলিতদের জন্য অধিক সুযোগ সুবিধা বৃদ্ধি করাও প্রয়োজন। মোটকথা রাজনৈতিক ও অর্থনৈতিক ক্ষেত্রে আত্মনির্ভরশীলতা চেতনার পরিপোষণ একান্ত প্রয়োজন। বাংলাদেশের মত অনুন্নত দেশের বৈদেশিক সাহায্যের প্রয়োজন হয়ত অনুভূত হবে বহুদিন, কিন্তু নিজেদের সৃষ্টিশীল উদ্যমের কণ্ঠরোধ না করে এবং তার অপচয় না ঘটিয়ে যেন তার আগমন ঘটে তা দেখতে হবে। সর্বোপরি দেখতে হবে, প্রাপ্ত সাহায্যের পূর্ণ বিনিয়োগ সম্পন্ন হচ্ছে। কেননা দেশে অর্থনৈতিক কর্মকাণ্ড বৃদ্ধির সঙ্গে সঙ্গে অর্থবাজারে অর্থের প্রবাহ বৃদ্ধি পায়, যা প্রকারান্তরে কর্মের পরিধি বাড়ায় এবং মানুষের ক্রয়ক্ষমতা, উৎপাদন ও ভোগ বৃদ্ধি করে, অর্থনীতির চাকা গতিশীল হয় এবং দেশ ক্রমান্বয়ে দারিদ্র্য বিমোচনের কাঙ্ক্ষিত লক্ষ্যে এগিয়ে যায়। ঋণ নয়, বিনিয়োগ বিশেষত আমাদের মতো দরিদ্র দেশের জন্য বৈদেশিক বিনিয়োগই অর্থনীতিতে সত্যিকার গতিশীলতা আনয়ন করে। কিন্তু বিএনপি সরকারের আমলে বিদেশী বিনিয়োগের চিত্রটা দেখে দেশবাসী হতাশ হবে। গত দুই অর্থবছরে বিদেশী বিনিয়োগ প্রায় নেই বললেই চলে।

(সারণি - ৭)

১৯৯৬ - ৯৭ থেকে ২০০২ - ২০০৩ পর্যন্ত তথ্য নিচে দেওয়া হলো

১৯৯৬ - ৯৭	১, ০৫৪ মিলিয়ন ডলার
১৯৯৭ - ৯৮	৩,৪৪০ মিলিয়ন ডলার
১৯৯৮ - ৯৯	১,৯২৬ মিলিয়ন ডলার
১৯৯৯ - ০০	২,১১৯ মিলিয়ন ডলার
২০০০ - ০১	১,২৭১ মিলিয়ন ডলার
২০০১ - ০২	৩০৪ মিলিয়ন ডলার
২০০২ - ২০০৩	২১২ মিলিয়ন ডলার

সূত্র: বাংলাদেশ অর্থনৈতিক সমীক্ষা, পৃষ্ঠা ৭০, ২০০৩

শুধুমাত্র বৈদেশিক সাহায্যের উপর নির্ভরশীল হয়ে কোন সমাজ অগ্রগতি সাধন করেনি ইতিহাস তার সাক্ষী। উত্তরোত্তর ঋণভারে জর্জরিত দেশকে স্বাবলম্বী পর্যায়ে আনতে হলে নির্বিচারে ঋণ গ্রহণ বন্ধসহ প্রাপ্ত ঋণের সুষ্ঠু ব্যবহার, রপ্তানী বৃদ্ধি এবং অবাধ আমাদানী নিষিদ্ধ করতে হবে এছাড়া আর কোন বিকল্প নেই। এখানে উল্লেখ করতে হয় যে ঋণদাতা সংস্থা/দেশসমূহ তাদের পণ্যের উন্মুক্ত বাজার চালু এবং তাদের রাজনৈতিক প্রভাব বলয়ে রাখার জন্যই মূলত ঋণের অব্যবহৃত ভাণ্ডার দরিদ্র দেশসমূহের দিকে প্রসারিত করে থাকে।

নির্ভরশীলতার ধারাবাহিক পটভূমিতে বাংলাদেশের অর্থনীতিতে কোনো নিজস্বতা নেই, নেই কোন স্বকীয়তা বরং ক্রমশ সে হয়ে পড়ছে শৃঙ্খলাবদ্ধ। স্বাধীনতা প্রাপ্তির চৌত্রিশ বছর অতিক্রম করেছে দেশ। অথচ স্বাধীনতার পরিপূরক স্বাবলম্বিতার সোনার হরিণ এখনো রয়ে গেছে আমাদের ধরা ছোয়ার বাইরে। আমরা অনেক নেতা পেয়েছি। সেই সাথে পেয়েছি অনেক রাজনৈতিক দর্শন। এসব নেতাদের বক্তব্য আর রাজনৈতিক দর্শনে সংখ্যাগরিষ্ঠ সাধারণ

মানুষের জন্য কল্যাণকর সুখম একটি অর্থনৈতিক ব্যবস্থা প্রতিষ্ঠার অঙ্গিকার ব্যক্ত করা হলেও প্রকৃত অবস্থার কোনো পরিবর্তন হয়নি। মিথ্যা প্রতিশ্রুতির নষ্ট রাজনীতি যে বিষবৃক্ষ জন্ম দেয় তার অবধারিত পরিণাম হিসাবে এদেশের কোটিপতি পরিবার তের থেকে শতক, হাজারের ঘর অতিক্রম করেছে খুবই দ্রুত। অন্যদিকে ললাটে বঞ্চনার পদচিহ্ন আঁকা দরিদ্র মানুষের সংখ্যাও অযুত, লক্ষ, কোটির ঘর ছাড়িয়ে বাড়ছে ক্রমাগত। দুঃসহ এ অবস্থা থেকে আমরা সবাই মুক্তি পেতে চাই। কিন্তু পথ কোথায়?

উপসংহার

স্বাধীনতা অর্জিত হবার পর বাংলাদেশের অর্থনৈতিক দর্শন ছিল অর্থনীতিতে স্বয়ং সম্পূর্ণতা অর্জন এবং শর্তযুক্ত বৈদেশিক ঋণ বা অনুদান সম্পূর্ণরূপে বর্জন। কিন্তু বাস্তবতা? বাস্তবতা হচ্ছে ‘মানি ইজ নো প্রোরলেম’ এর খাতক সংস্কৃতিতে আকর্ষণীয় নিমজ্জিত হয়ে উন্নয়নের নামে ৩৪ বছরে বিদেশীদের কাছ থেকে আমরা অমর্যদাকর ভিক্ষা বা সাহায্য গ্রহণ করেছি এক লাখ কোটি টাকা। আমাদের মাথা পিছু ঋণের পরিমাণ আজ ১২০ ডলার। এই বিপুল পরিমাণ বৈদেশিক ঋণ সাহায্য প্রবাহিত করা হয়েছে অর্থনৈতিক উন্নয়ন প্রক্রিয়াকে ত্বরান্বিত করার লক্ষ্যে অন্তত আনুষ্ঠানিক ভাবে সেটাই বলা হয়ে থাকে। এ বিষয়ে অধ্যাপক রেহমান সোবহান ইতোমধ্যে কিছু মূল্যবান গবেষণা করেছেন, যা ১৯৮০’র দশকে ও ৯০ এর দশকের শুরুর দিকে প্রকাশিত হয়েছে। এ প্রসঙ্গে সমসাময়িক সময়ে ডঃ আতিউর রহমান, ডঃ তাজুল ইসলাম, সৈয়দ এম হাশেমী বেশ কিছু উল্লেখযোগ্য গবেষণা সম্পন্ন করেছেন। বৈদেশিক ঋণ সাহায্য প্রবাহ যে বাংলাদেশের সামগ্রিক মানের উন্নয়ন ত্বরান্বিত করেছে এমনটি এখনও পর্যন্ত কোনো উন্নয়ন গবেষণার প্রমাণিত হয়নি। বরং বৈদেশিক সাহায্য এ দেশে জন্ম দিয়েছে ব্যাপক পরনির্ভরশীলতার সংস্কৃতি, ধ্বংস করেছে আমাদের আত্মবিশ্বাস। এই নির্ভরতার কারণে নীতি নির্ধারণ থেকে কর্মসূচির প্রণয়ন ও বাস্তবায়ন সকল ক্ষেত্রে দাতাদের খবরদারীর নজির বিদ্যমান।

উন্নয়নের শক্তিসমূহের বিকাশ ঘটানোর জন্য স্বাধীনতার প্রয়োজন, প্রয়োজন আত্ম-বিশ্বাস ও আত্ম-গরিমার। বৈদেশিক সাহায্য এগুলোকে ঋণাত্মকভাবে প্রভাবিত করে। অতিরিক্ত বৈদেশিক সাহায্য নির্ভরতা একটি জাতির আত্মবিশ্বাসকে নষ্ট করে, আত্মগরিমা এবং রাজনৈতিক ও মতাদর্শগত স্বাধীনতাকে হরণ করে। অর্থনৈতিক স্বাধীনতা ছাড়া রাজনৈতিক স্বাধীনতা অর্থবহ হতে পারে না। অর্থনৈতিক স্বাধীনতা তথা আত্মনির্ভরতা অর্জন করতে হলে আমাদের সমুদয় মেধা, মনন ও শ্রমকে কাজে লাগাতে হবে। আর এর জন্য প্রয়োজন সুসমন্বিত আত্মনির্ভর উন্নয়ন কৌশল - যেখানে জাতির সব সদস্যের অংশগ্রহণের পাশাপাশি ফল ভোগের অধিকারও নিশ্চিত হবে। শিক্ষা, সচেতনতা ও প্রশিক্ষণ সম্প্রসারণ এবং সামাজিক ন্যায় বিচার প্রতিষ্ঠার মাধ্যমে বিচ্ছিন্ন, বঞ্চিত জনগোষ্ঠিকে মূল ধারায় সম্পৃক্ত করার ব্যবস্থা গ্রহণ করতে হবে যাতে করে তাদের মেধার বিকাশ ঘটে এবং উৎপাদনশীল কর্মসংস্থানের মাধ্যমে তারা উন্নয়ন প্রক্রিয়ায় যথোপযুক্ত অবদান রাখতে পারেন আর তা থেকে ন্যায় সুফল ভোগ করতে পারেন।

তথ্যসূত্র

১. Ministry of Finance Govt. Of Bangladesh Economic Survey. 1984 – 85, Dhaka.
২. ভট্টাচার্য দেবপ্রিয়, জাতীয় স্বাধীনতা ও অর্থনৈতিক স্বাবলম্বনের প্রেক্ষিতে বাংলাদেশের আন্তর্জাতিক সম্পর্ক, পৃষ্ঠা ১৬৩, বি আই ডি এস, ঢাকা।
৩. মোস্তফা হাসান ও মোঃ আবুল হোসেন, ১৯৯৯, পরিকল্পনা ও প্রকল্প প্রণয়ন, গতিধারা প্রকাশনী, বাংলা বাজার, ঢাকা।
৪. আহমদ কাজী খলীকুজ্জমান, বাংলাদেশ বৈদেশিক সাহায্য কি মূল্যে? উন্নয়ন বিতর্ক, পঞ্চম বর্ষ, মার্চ - ডিসেম্বর ১৯৮৬, ঢাকা।
৫. আহমদ কাজী খলীকুজ্জমান, বাংলাদেশ অর্থ + সামাজিক বিকাশঃ পথের সন্ধান, পৃষ্ঠা ৮৭, বাংলাদেশ উন্নয়ন পরিষদ, ঢাকা।
৬. Rehman Sobhan (1982), The Crisis Of External Dependence, University Press Limited, Dhaka.
৭. চৌধুরী হাসানুজ্জমান (১৯৯৩), সমাজ ও উন্নয়ন, পৃষ্ঠা ৭১- ৭২, বাংলা একাডেমী, ঢাকা।
৮. ১৯৮৫ সালে আন্তর্জাতিক বাজারে চালের মূল্য হচ্ছে প্রতিটন ২২০ মার্কিন ডলার আর গম প্রতি টন ১৫০ ডলার। ১৯৮৪ সালে এই মূল্য ছিল যথাক্রমে ২৫০ ও ১৫০ মার্কিন ডলার?
৯. সম্পাদকীয়, দৈনিক সংবাদ, ২রা নভেম্বর ১৯৯৪, ঢাকা।
১০. Sobhan R. and Islam T. (1999), Foreign aid and domestic resources mobilization in Bangladesh. BIDS, Vol xvi.
১১. মোঃ আবুল হোসেন ও মোকাম্মেল হোসেন (১৯৯৯), উন্নয়ন প্রসঙ্গঃ বাংলাদেশ প্রেক্ষিত গতিধারা প্রকাশনী, বাংলাবাজার, ঢাকা।
১২. ইউনুস ডঃ মুহাম্মদ (১৯৯৪), পথের বাধা সরিয়ে নেন, মানুষকে এগুতে দিন, পৃষ্ঠা ১৫- ১৬ সুবর্ণ প্রকাশনী, ফেব্রুয়ারী, ঢাকা।
১৩. বাংলাদেশ অর্থনৈতিক সমিতির জার্নাল (১৯৭৭), সংখ্যা ১, খন্ড ৩।
১৪. আলম খুরশিদ (১৯৮১), উন্নয়নমূলক সমাজবিজ্ঞান, মিরনাভা প্রেস, ঢাকা, ডিসেম্বর।
১৫. Bangladesh Project Management Institute, Utilization Of Expatriate Consultancies IN Bangladesh, Vol- 1, Main Report Page 65.
১৬. দৈনিক সংবাদ, ২০ জুন, ২০০৩।
১৭. যায় যায় দিন, প্রতিদিন, রবিবার ২১ শে মার্চ ১৯৯৯।