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## FROM THE EDITOR

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Welcome to the August 2007 edition of the Middle East Journal of Business. As usual we have a variety of articles from the region and around the world.

A comprehensive article on the theory of a Saudi Land Bridge (SLB) to create regional opportunities and competitiveness is our main feature and has been eloquently argued by the authors.

A paper from Bangladesh looks at the rights of labourers, in Bangladesh, in both theory and practice, and concludes that existing labour rights need improvement.

A paper from Australia looks at the rights of animals and argues animal husbandry should pay more attention to painful and distressing practices. Guidelines are provided on how these can be improved.

A paper from Czechoslovakia provides an esoteric argument on cosmic energy versus aura and finally a paper entitled New Healthcare in the digital age, argues that the best gains are made when there are no symptoms. Instead of waiting for onset of symptoms, we attend to have a risk stratification when we are young and seemingly in the prime of our lives.

# TRADE UNION AND LABOUR RIGHTS: PERSPECTIVE BANGLADESH

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**Key words:** Trade union, CBA, labour rights, Bangladesh, Constitution of Bangladesh, labour laws.

## ABSTRACT

The existing labour and industrial laws are in favour of the employers while not in favour of the workers in Bangladesh. In this country, the existing laws regarding labourers are primitive in nature. Lack of a proper execution system of the laws is the main cause in the ignorance of labour rights. Though they are existing in the provision of trade unions and collective bargaining agents (CBA) to preserve the workers interests, the trade unions and CBA do not perform their respective duties properly. Politicization of labour and industrial sectors, corruption of the trade union leaders and the role of CBA are responsible in this connection. So, the main purpose of this study is to explore the anomalies of labour laws in implementing labour rights as well as to suggest how to amend the existing laws or to enact new laws, in favour of workers.

## INTRODUCTION

From the very beginning of civilization the rights of labourers have been ignored and labourers have had a lack of awareness of their own rights. Labourers are deprived of all kind of rights, all over the world. This deprivation puts the labour class in an extreme position, which requires them to reinstate their rights. To this they have begun to organize themselves. A Trade union is the outcome of such demands. Every one has the right to form and to join a trade union for the protection of their interests. [1]. The labour laws have given birth to some fundamental industrial rights to labourers in the field of production, and it has also provided protection for those rights [2]. Labour rights in Bangladesh are not justifiable under the existing labour laws and lack of proper execution system of those existing laws is the main course for not ensuring labour rights [3]. In this context Nuruzzaman, M. [4] studied the failure to achieve labour rights and clearly identified the following host factors, including workers' disunity, ideological divide between various trade unions, lack of organizational structure, control of pro-reform national political parties over their respective trade unions, the diminishing influence of leftist trade unions in labour parties and the lack of an alternative leftist political agenda in Bangladesh politics. Viadyanathan, N. [5] discussed that the member states of the International Labour Organization (ILO) after ratification of the ILO conventions, did not take necessary actions to implement the provisions of that very convention in their domestic administration. That is why labour rights were ignored at the presence of law and conventions. The chief inspector and inspectors of labour need to comply with the provisions of existing labour laws in Bangladesh so that labour rights can be wholly ensured in Bangladesh [6]. In summaries of International labour standards [7], it has been pointed out that, international labour conventions and recommendations regarding labour rights are adopted by the international labour conference, after consultation with all the ILO's member states, of which there are 148 at present.

The conference is a tripartite body composed of government, employer's and worker's delegates. When a member state ratifies a convention, it becomes subject to legally binding international obligations. The rights as we find in the labour laws relate mainly to the labourers or employees and few of them relate to the employers. These rights are of a fundamental, civil, political, economic, social or cultural nature.

A great number of research works have been conducted in the field of labour studies, but some findings are unexpected, and some touch on issues that had been given much attention previously. From the best of our knowledge, no research works similar to the present study have been conducted on those rights under the existing labour laws and the role of trade unions in Bangladesh.

## OBJECTIVES OF THE STUDY

The specific objectives of the study are as follows:

1. to review the existing laws relating to labour rights,
2. to study the extent of the application of labour laws containing labour rights,
3. to suggest measures to improve the legal rights provisions of the labour laws, and
4. to examine the role of trade unions in ensuring the labour rights in Bangladesh

## LABOUR RIGHTS IN BANGLADESH

Bangladesh offers an abundant supply of disciplined, easily trainable and low-cost work force suitable for any labor-intensive industry. Of late, there is an increasing supply of professionals, technologists and other middle and low-level skilled workers. They receive technical training from universities, colleges, technical training centers, polytechnic institutions etc. The expenditure incurred by an employer to train his employee is exempted from income tax.

### 3. a. Employment Conditions

The minimum age for workers in Bangladesh is 16 years in factories and establishments. Contracts are

made in the form of a letter of offer. Workers may also be engaged on verbal agreements. In government organizations and in some private organizations as well, a probation period exists for skilled or semi-skilled workers varying between three months to one year and during this period either party may serve one month's notice for termination from, or giving up, the job. In the private sector, the dignity of labor is ensured in accordance with the principles enunciated in the ILO convention and recommendations.

### 3. b. Labor Laws

In Bangladesh 47 labor laws are now in operation. These relate to (a) wages and employment, (b) trade union & industrial disputes, (c) working environment and (d) labor administration and related matters. The main labor laws are:

1. Workmen's Compensation Act, 1923,
2. Payment of Wages Act, 1936
3. Maternity Benefit Act, 1936
4. Employment of Labor (Standing Orders) Act, 1965
5. Shops & Establishments Act, 1965
6. Factories Act, 1965
7. Industrial Relations Ordinance, 1969

### 3. c. Settlement of Labor Disputes

Contract or agreement is usually made between the management and the CBA on settlement of industrial disputes as per the provisions of Industrial Relations Ordinance, 1969. In case a bipartite negotiation fails, conciliation machinery of the government is requested by the aggrieved party to intervene and the conciliation process is undertaken. If it succeeds an agreement is signed between the parties and the Conciliation Officer becomes a witness. If it fails, the party raising the dispute may go for strike or lockout as the case may be. The government may, however, prohibit the same after one month, in the interests of the public. In the essential services like, (a) electricity, gas, oil & water supply etc. (b) hospital & ambulance services, (c) fire brigade, (d) railway and Bangladesh Biman and (e) ports etc., striking is prohibited.

### 3. d. Wages and Fringe Benefits:

In the public sector, wages and fringe benefits of the workers are determined by the government on the recommendation of the National Wages Commission established from time to time. Such commissions were appointed in 1973, 1977, 1984, 1989 & 1992. Wages & fringe benefits declared by the government in 1977 have 20 grades of wages. The public sector employees are, however, covered by the Pay Commission declared by the government from time to time.

In the private sector, the wages and fringes benefits of the workers and employees are determined through a collective bargaining process. Sometimes private industries follow the public sector wages and salary structure for their workers and employees, respectively.

### 3. e. Leave and Holidays:

Leave and holidays of the workers and employees are regulated by the Factories Act, 1965 and Shops Establishment Act, 1965.

### 3. f. Social Security:

Social security is an area where the discrepancy between law and practice appears to be very wide. Workmen Compensation, Maternity Benefit (Tea Estate) Act, 1950, Maternity Benefit Act, 1939, Employment of Labor (standing orders) Act, 1965 etc. deal with provident funds and gratuities.

### 3. g. Working Hours:

Workers in the public or private sector remain at their job for eight and a half hours daily (including half an hour for meal or rest) with Friday a weekly holiday marking 48 working hours a week. Work in excess of these hours, is paid as overtime. The rate of overtime is 2 hours pay for a 1-hour job.

## 4. TRADE UNIONS IN BANGLADESH

Employment in growth sectors used to be a source of workers' empowerment through trade unionism. Unions are generally highly politicized, and unions were strongest in state-owned enterprises. Civil

service and security force employees were forbidden to join unions because of their highly political character. Teachers in both the public and private sector were not allowed to form trade unions. The history of the trade union movement in Bangladesh is linked with the development of a modern industrial society in the sub-continent beginning from 1850. In the Indo-Pak subcontinent the first labour organization was the All India Trade Union Congress [6]. After the independence of Pakistan, East Pakistan Trade union federation was formed on 28th September 1947. In 1959, Pakistan federation of labour was formed; it was the only central labour organization in the whole of Pakistan [8]. After declaring the Industrial Relations Ordinance -1969, freedom was given to labour to form any trade union in any commercial or industrial establishments [9]. Industrial Relations Ordinance, 1969 provides that any worker or employer has the right to form a union without previous authorization. But such a union cannot function as a trade union without being registered under the law. After liberation of the country in 1971, the Government of Bangladesh nationalised the major industries and services including banks and insurance companies. The working class of Bangladesh, with higher hopes and aspirations, demanded higher wages and fringe benefits. It is interesting to note that after liberation, the government-affiliated trade unions always dominated the trade union scene. Industrial Relations Ordinance, 1969 deals with trade unions in Bangladesh. In any industrial and commercial establishment, a trade union may be formed with 30% of the total number of workers employed. If there is more than one union in any establishment, CBA is determined by the Registrar of the Trade Union through secret ballot for a term of two years. Only the CBA is authorized to raise industrial disputes and negotiate with the management. The Director of Labour of the government acts as the Registrar of Trade Union in Bangladesh. In 1972, the number of registered trade unions in the country was 2523, with membership of 682,923 workers. Till December 2004, 6492 trade unions (worker's union - 5242

and employers' association- 1250) exist in Bangladesh having 2,094,887 members. This clearly shows the rate of multiplicity of trade unions in Bangladesh.

## 5. LABOUR RIGHTS UNDER THE TRADE UNIONS

By the very Ordinance, freedom is also given to the labourers to form any federation of trade union [10]. Trade unions or federation of trade unions can be formed in any premises or any commercial or industrial establishments. The Registrar appointed under this ordinance may declare any of the trade unions formed in accordance with the provisions of this ordinance, as the CBA of that very establishment [11]. To declare a trade union as a CBA, the registrar is bound to abide by the provisions of the Ordinance. The function of the CBA is to bargain with the employers and with the government regarding labour interests and labour rights. So, it can be said that the labour organization is recognized by the state.

Forced or compulsory labour may be as a means of political coercion or education, or as a punishment for holding or expressing political views or views ideologically opposed to the established political, social or economic system, or by mobilising and using labour for the purposes of economic development and as a means of racial, social, national or religious discrimination [5]. The labourers of Bangladesh enjoy full freedom to choose their own sector of work, and they have the choice to be a member of any trade union, federation of trade unions or to constitute a new trade union. Nobody can put pressure upon them to do a specific work in a specific factory or establishment, or to be a member in a specific trade union. In choosing the place of work and working sector, full freedom is the fundamental right of a worker in Bangladesh. All forms of forced labour are prohibited and any contravention of this provision shall be an offence punishable in accordance with law [12].

The laid-off workers have their rights for compensation [13]. Retrenched workers have their rights of re-employment [14]. Every employer is

responsible for the payment to the labourer concerned [15]. To keep the health of the worker up to a proper standard and to ensure the welfare of the workers the employers must comply with the provisions stated under the Factories Act, 1965. Every worker has the right to a proper medical examination by a qualified medical practitioner if he or she falls in an accident during working hours [16]. No worker is bound to work more than the working hours prescribed under the different Acts existing in Bangladesh. Overtime allowance must be at the rate of twice of the ordinary rate of wages [17]. Every worker is entitled to weekly holidays, festival holidays, annual leave, casual leave, and sick leave with full wages under the different Acts and Ordinances existing in Bangladesh regarding labour.

Apparently it seems that labourers in Bangladesh enjoy full freedom in choosing their own work and own organization. They are provided with all kinds of rights by the employers and states. But the real phenomenon is quite different.

Every citizen shall have the right to form associations or unions [18]. Obtaining these opportunities employers and other elite forces formed so called trade union and other labour organizations under the shadow of political authorities. They use the weaker worker class at their political interest. A poor and weaker worker who is hand to mouth is not capable of forming any trade union; and cannot express his/her own opinion regarding labour politics and different labour industrial issues. So freedom of association is meaningless to a worker in Bangladesh as there is a major lack of existing labour-industrial laws in Bangladesh. A worker may be dismissed without prior notice or pay in lieu thereof, if he or she is found guilty of misconduct [19]. Without giving prior notice, dismissal only on the grounds of misconduct is a violation of natural justice.

A residual power is always vested upon the government in almost every section of the existing labour industry related Acts and ordinances in Bangladesh, by which the government can do whatever it likes. At present most of the employers of factories and

other establishments are somehow part and parcel of the government directly or indirectly. So, the existing labour-industrial laws are in favour of the employers and not in favour of the workers.

## CONCLUSION

Existing labour rights and emerging trends of trade unions in Bangladesh call for re-thinking. Trade unions in Bangladesh contribute to a lack of solidarity and collaboration on certain issues. The union movements consider 'reaching out to the unorganised and vulnerable' groups as a way to ensure the future relevance of trade unions. By removing the political leadership from trade unions and other labour organizations; by reducing government intervention and at last by amending the existing labour-industrial laws, proper trade unions and labour rights can be ensured in Bangladesh.

## REFERENCES

1. *Universal Declaration of Human Rights 1948, Article 23(4)*.
2. M. Abdul Halim, *Text Book on Labour and Industrial Law of Bangladesh*, CCB Foundation. Dhaka, 2005, P. 27.
3. Kamruddin Ahmad, *Labour Management in Bangladesh* (Dhaka: 1978), P. 48.
4. Nuruzzaman, N. 'Labour Resistance to Pro-market Economic reforms in Bangladesh'. *Journal of Asia and Pacific Studies*, Vol. 41, No. 4, p. 341-357 (2006).
5. Vaydyanathan, N, *ILO Standards for Social Justice and Development of Labour*, Deep & Deep Publications, New Delhi, 1992, 29.
6. Khan, A. A., *Labour and Industrial Law*.
7. *Summaries of International Labour Standards*, Second edition updated in (1990), International Labour office, Geneva.
8. Khan, A. A., *History of Trade Union*.
9. *Industrial Relations Ordinance 1969, Section 3*.
10. *Industrial Relations Ordinance 1969, Section 20*.
11. *Industrial Relations Ordinance 1969, Section 22*.
12. *Constitution of the People's Republic of Bangladesh, Article 34(1)*.
13. *Employment of Labour (standing order) Act 1965, Section 9*.
14. *Employment of Labour (standing order) Act 1965, Section 14*.
15. *Payment of Wages Act 1936, Section 3*.
16. *Workmen's Compensation Act 1923, Section 11*.
17. *Factories Act 1965, Section 58*.
18. *Constitution of the People's Republic of Bangladesh, Article 38*.
19. *Employment of Labour (standing order) Act 1965, Section 17 (1) (b)*.

# NEW PARAGON FOR CONTAINER TRANS-SHIPMENT IN PERSIAN GULF: A SCENARIO APPROACH TO SAUDI-LAND-BRIDGE (SLB)

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## ABSTRACT

This article aims to find a new way into the Gulf's Trans-shipment through Saudi Arabia territories which presently carry on through Jebel Al Ali. The idea of a Saudi land-bridge emerged from an examination of Saudi socio-economics, geographic and transportation policy changes with coincidence excavation of trade and maritime transportation events and trends regionally and globally. Because the world is running on uncertainties, a scenario approach as a means of planning in the ever-changing world has been employed in three phases: scenario generation, and development and contraction to alleviate the uncertainty obstacle. The generated scenario has been developed in technical, geographical, economical and political themes. At last, the idea abstracted to drive a plausible future for a new trans-shipment paragon in the region.

## INTRODUCTION

This article aims to analyze the potential role of a Saudi Arabia Land-Bridge (SLB) for trans-shipment containers to the Gulf's region, which under current circumstances have been trans-shipped through Jebel Al Ali a main distribution port of the region. By excavating trends and events in the global and regional trade and transportation system, an idea for alternative transportation facilities through Saudi territories is proposed. A scenario approach has been applied to generate, develop and contract the idea.

Saudi Arabia's geographical position and new reforms in the socioeconomic and political aspects, gives the nation an excellent role in regional trade. Scenario of a SLB can

accelerate regionalization trends in the Gulf through serving the region a trade facility to let them be more competitive in terms of time and cost. Obviously regional producers suffer from excess transportation costs which are imposed by extra navigation in rounding the peninsula. SLB can reduce time to 5-7 days and cost to \$40 thousands per each day of navigation.

SLB generation phase examines socio-economic and geographic data of Saudi and through land-bridge theory, generates an alternative way for the region's trans-shipment. In the second phase of scenario building, the generated scenario has been developed and tested by technical, geographical, economical and political themes. In the technical theme, future facility requirements to handle containers are tested and in the geographic theme the effectiveness of SLB is examined in terms of cost and time. In the economical theme, three scenarios (optimistic, moderate and pessimistic) are employed to determine potential demand and then the capital expenditure of SLB and its plausible revenue is explored. In the political theme, a picture for the future cooperation with the region is proposed. In the last phase of the scenario, building the two-phase results have been abstracted into a roadmap to show how the scenario is generated and developed.

## SCENARIO APPROACH

Plans are based on perspectives and forecasting and future prospects are the major feed for any long-term plan. But what is our job in a world of uncertainties? Uncertainties are a constant part of our ERA equations. Econometrics models are suffering from permanent uncertain major variables, which limit their usage and burden. Many plausible futures are needed to prepare development managers in a world of uncertainties. In a philosopher's words: 'human brains are laboratories for testing genuine and initiative ideas'. Scenarios are a scientific approach, which are

generated from tested ideas in human brains.

A scenario is known and familiar for many strategists around the world, however, it originated from California Rand Corporation for the military application after World War II, and then Herman Kahn adapted it in 1960's as a decision tool for businesses (Schoemaker's, 1995)<sup>3</sup>. Khan (1965)<sup>4</sup> as a pioneer of scenario adaption defined it as "hypothetical sequences of events constructed for the purpose of focusing attention on causal processes and decision points". Kleiner (1995)<sup>5</sup> described it in other words: "Contrary to what many people believe about scenario exercises, their purpose is not prediction. You do not predict what will happen: you posit several potential futures. A scenario planning exercise is a bit like a storytelling workshop, set up to bring forth distinction and phenomena that the conventional wisdom ignores."

In anycase, scenario and forecasting are fundamentally different, because forecasting assumes that the future can be foreseen but in scenarios it is not. In comparison with strategies, scenarios chase multiple versions of plausible futures instead of one predictive future. Scenarios can be regarded as descriptions of possible futures that seem plausible under different sets of assumptions and provide a background against which policy assessments can be made (Ubbels, Barry, (2000))<sup>6</sup>.

Finlay (2000)<sup>7</sup> expressed scenario elements as; scenario description, scenario variables and scenario themes. Scenario description is a general description of the main scene; Scenario variables are trends and events are those that picture futures through single effective variables,. Themes provide you with a maneuverable scene, to internal and external environments. Scenarios are constructed in two ways; top-down and bottom-up, or themes-based. In the latter inductive pace is used and major related themes applied as the main inputs for picturing plausible scenes.

Famous scenario applications in transport AREA are; US Department of Transportation (DOT) which set a goal to double transit ridership as a means to reduce vehicle miles traveled (VMT) to 2020 baseline, Netherland; Whiliams, (1980)<sup>8</sup>, all modes in project of Scenario explorer for passenger transport, Canada; Dagenais, M.G et al.(1987)<sup>9</sup>, to forecasting Container traffic, Greece; Darzentas, J. and Spyrou, T. (1996)<sup>10</sup> forecast of Ferry shipping traffic, Australia; Tongzon, j. (1991)<sup>11</sup> shipping services in Australian ports EU; Banister, et al, (1998), to construct scenarios for sustainable mobility and apply to transport policy building.

Here the mentioned theme-based approach has been adopted in three main Phases as; scenario generation, scenario development and scenario contraction<sup>12</sup>(Derakhshan, (2005))<sup>13</sup>. In the first phase major DEEPLIST<sup>14</sup> variables provide the opportunity to depict a plausible future for new paragon of containers distribution from the Red Sea to Persian Gulf countries. The scenario will be based

on geographic, economic, political and technical themes. Each theme gives us an aspect of view towards the plausible Saudi-Arabian-Land Bridge (SLB).

**SCENARIO GENERATION PHASE**

Maritime transportation is affected by many variables inside and outside of transportation generally. These changes can be summarized in five major categories according to importance: deregulation, new production patterns, marketing approach, globalization, technologies, and supply chain management. Wide ranges of quantitative and qualitative data have been examined to drive the SLB scenario. These data are called scenario main variables.

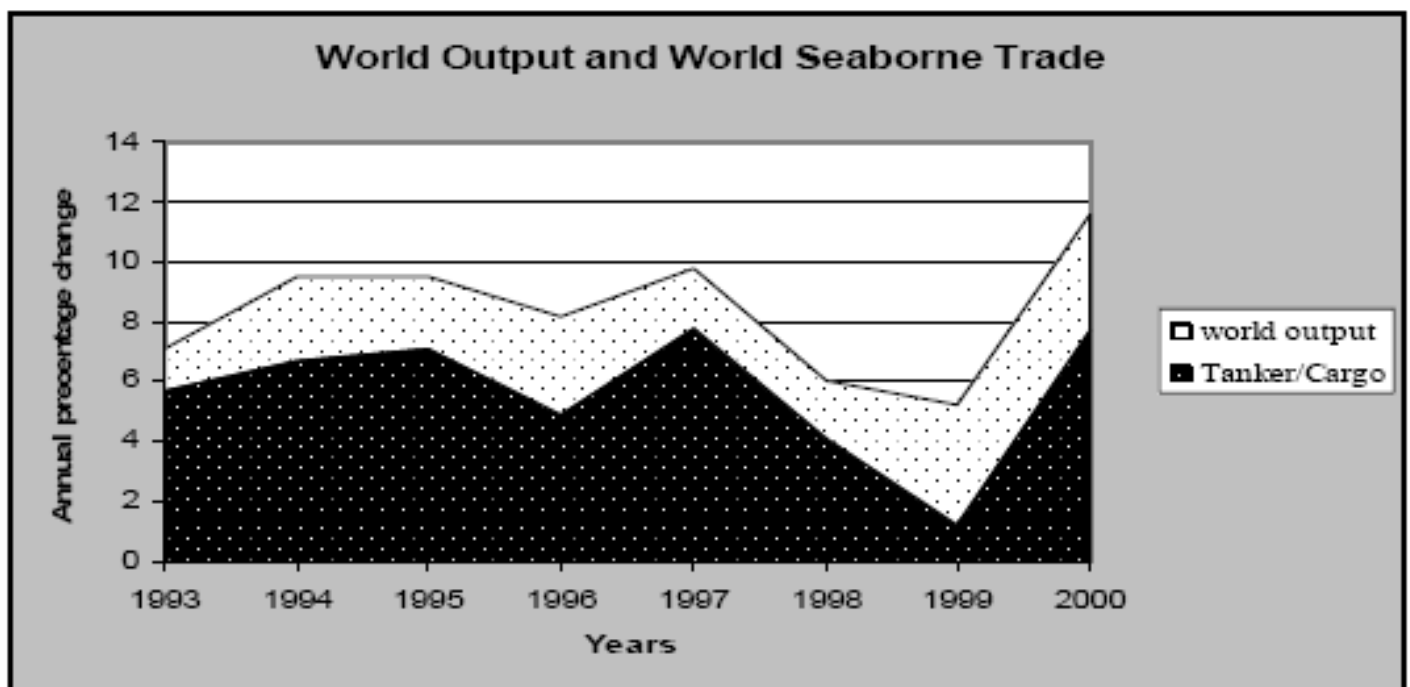
**Maritime Environment and Global Trade**

Geographical dispersion of goods' production and distribution activities, are directly related to the changing patterns in maritime transportation, and hence contribute to the complexity and evolving configurations in

world trade. The changing pattern of maritime transportation and its continued development has had a powerful impact on the world output. There has been a big increase in cross-border transport, especially in Asia. Hinterland development in northwest China and Central Asia provides an opportunity for close cooperation with shipping lines. Accordingly, the corridor development process will involve replicating alliances with marine transport. All these have resulted in an increase in world production and international trade (see figure 1). As the figure clearly indicates, there is a close relation between the movements in world output and prevailing trends in the global sea-borne trade.

As growth of world economic activity increased to 3.3 per cent in 1994 and subsequently slowed down to 2.0 per cent in 1998, sea-borne trade followed this pattern by growing 4.1 per cent in 1994 and 2.2 per cent in 1998. In line with the development of world output, sea-borne trade growth in 1999 has reached a similar rate as in 1997.

**Figure – 1**



Sources: UNCTAD Review of Maritime Transportation 1997-2003

Given these present developments and the prevailing expectations that Asian markets will continue their path to recovery, growth in total world maritime trade is expected to rebound to some 3 to 3.5 percent in the year 2004.<sup>15</sup> Moreover, the total world fleet continued to expand in 2003, increasing by 2.3 per cent to

844.2 million dwt (see table 1). More importantly, Asian economies (the fastest growing economies of the last two decades) gained the largest comparative increase between 1980 and 2003 (Figure - 2). According to UNCTAD, the breakdown of world sea-borne goods by continent was as follows, "Africa's share of world exports

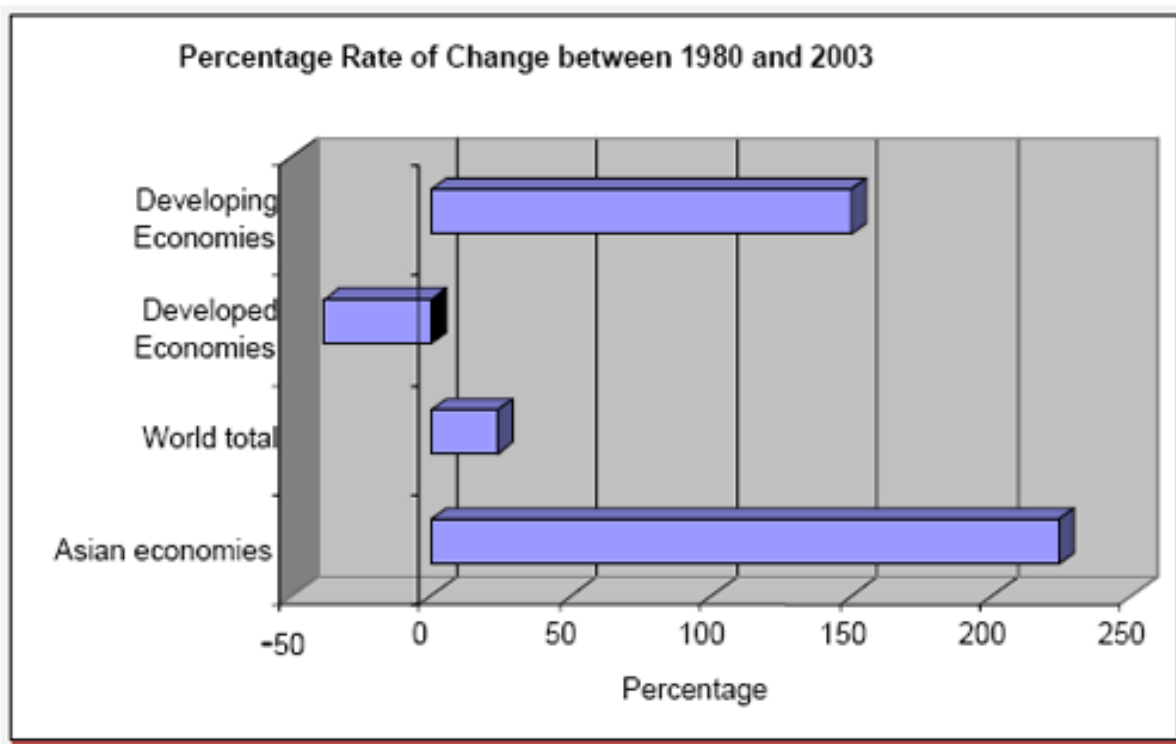
was 8.8 per cent, while America's reached 21.2 per cent. Asia had by far the largest share of the world tonnage of sea-borne loaded goods - 37 per cent. Europe's share was the second largest, at 25.4 per cent, while Oceania's was the smallest, representing only 7.6 per cent of the total.

Table - 1: Distribution of world tonnage (dwt) by groups of countries, 1980, 1990, 2001, 2002 and 2003 <sup>a</sup>

<b>Tonnage and percentage share<sup>b</sup> in</b>					
<b>Million of dwt</b>	1980 <sup>c</sup>	1990 <sup>d</sup>	2001	2002	2003
World total	682.8	658.4	808.4	825.7	844.2
Developed market-economies	350.1	219	203.4	207.7	217.1
Developing economies	68.4	139.7	157	159	171.3
Asian economies	39.1	89.5	115.7	117	126.9

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register

Figure - 2



Source: based on table - 1

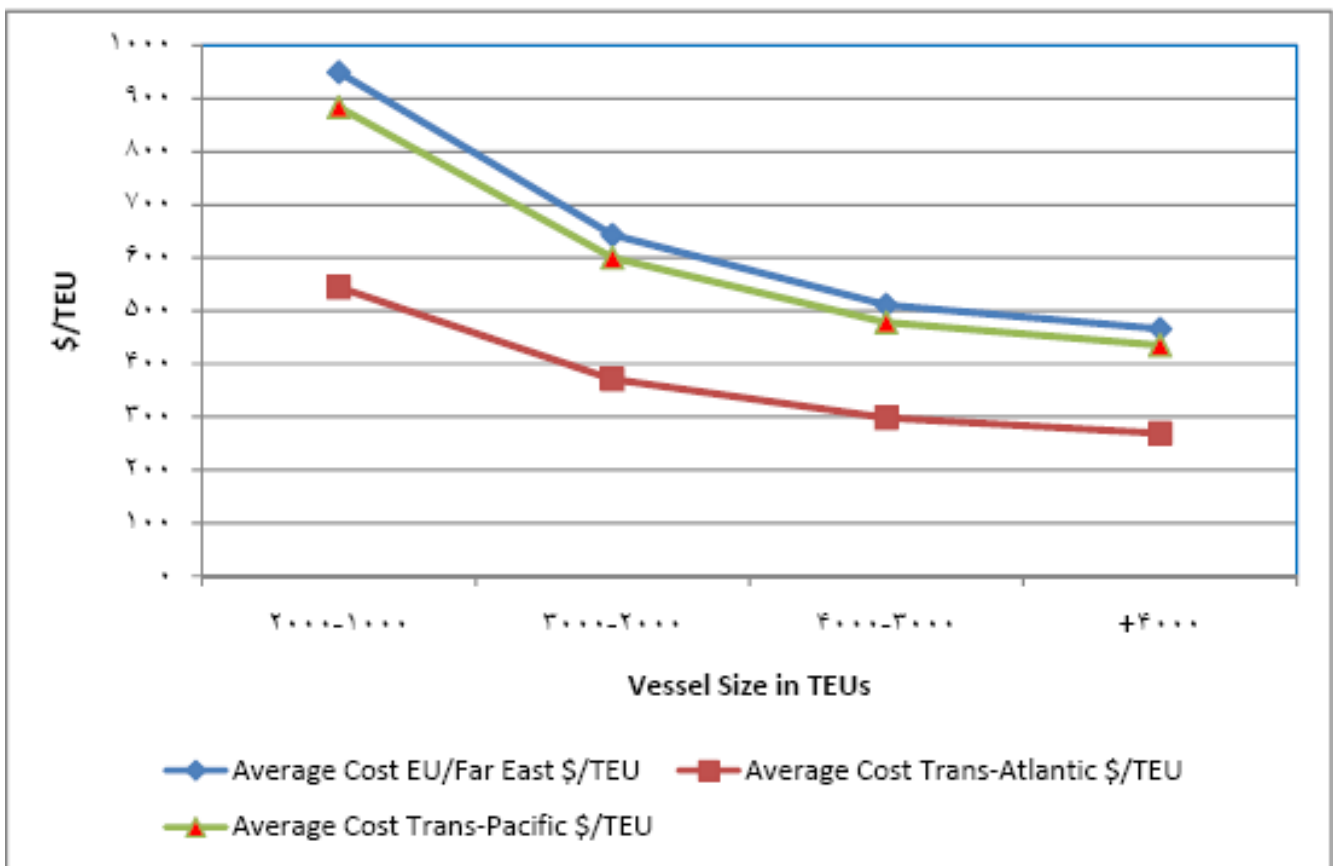
The breakdown for selected trading blocks was as follows: European Union (EU) - 17.8 per cent; Gulf Cooperation Council (GCC) - 12.5 per cent; North America Free Trade Association (NAFTA) - 10.2 per cent; Association of South East Asian Nations (ASEAN) - 7 per cent; South Common Market (MERCOSUR) - 5.2 per cent; and Common Market of Eastern and Southern Africa (COMESA) - 1.6 per cent.<sup>16</sup> Shipping lines competition in more beneficial routes has led them in new cooperation types, of which a modern example is alliances. These alliances are diversified from shipping

services only to port operation and inland transport.

Major goals for the trends are optimization of shipping capacities and market share. High degree of competition between alliances and technological advancements made them available large vessels and concentrate on port operations in hubs. These large carriers allow shipping lines to use advantages of economy of scales and decreased per TEU cost to 40% in some routes (See fig). In 1997 for example 60-70% of total shipping services in main east-west shipping

routes was supplied by the four shipping alliances that put together 13 of the 20 shipowners<sup>17</sup>. This approach heighten the maritime transportation position between other transportation modes by use of advantages of economy of scales allows them to be concentrated on their essential function to ambiguous competition issues. Now, grand vessels in the way of container trade allow more reachable concepts such as capacity optimization, port hierarchy, and Multi-modal transport network and may be Saudi Land Bridge (SLB).

Fig3: Economy of scale through ship size for APL shipping line (2003)



Source: <sup>1</sup> Pierre, Carriou. (2000), "Strategic Alliances in Liner Shipping: An Analysis of "Operational Synergies", University of Nantes,p5.

The above discussion leads us to identification of a variety of forms of causal relationships between transportation and economic development. They include:

- impacts on employer access to workforce diversity and access to specialized
- occupational skills (also affecting wage rates)
- manufacturer / shipper tradeoffs between logistics costs, inventory
- carrying costs and production scheduling costs
- effects on accessibility on development, growth and sustainment of
- business clusters
- role of transportation in supporting development of a manufacturing service nexus
- economies of scale in manufacturing, wholesaling and retailing, due to larger effective market area
- shifts and efficiency changes in trade flow patterns as some transportation facilities become saturated and other options open up
- differences in preceding effects between industries with different labor skill requirements and different market shipping patterns
- differences in preceding effects between different modes - which rely on different types of networks and serve different markets

### Globalization of Container Distribution Centers

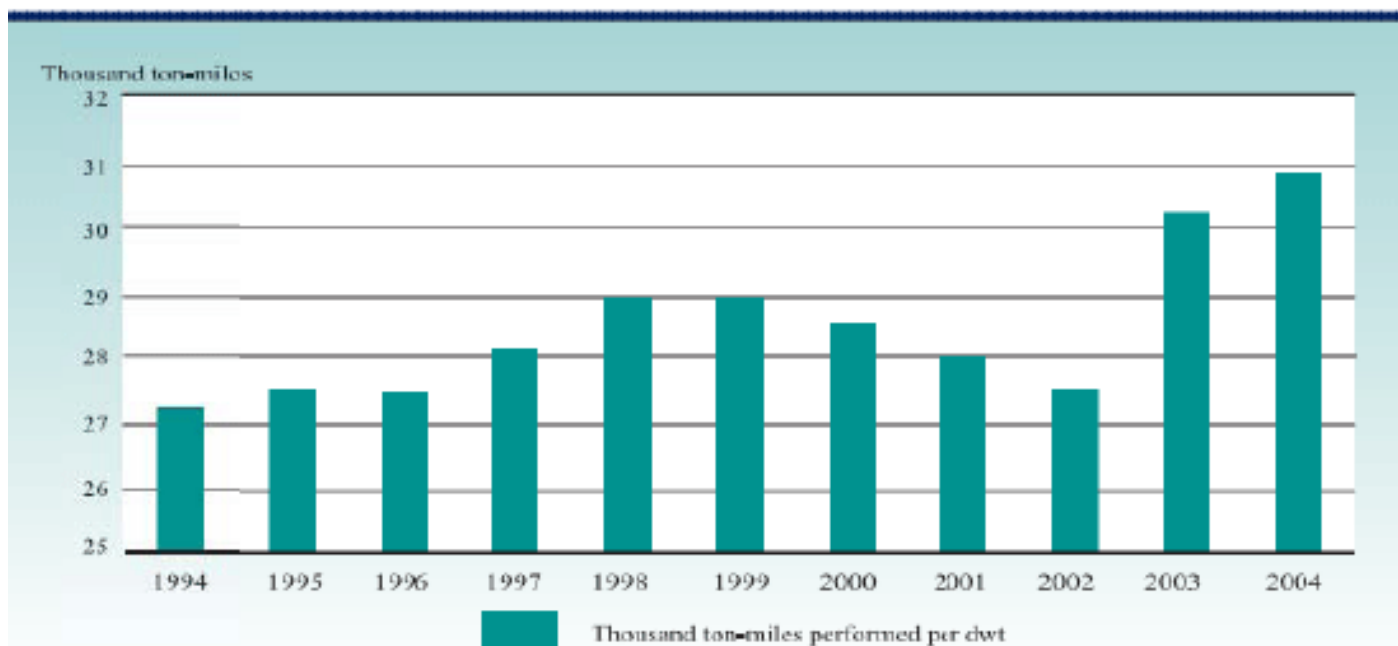
Evolution of containerization in 1960 and its continuous growth in the following years, make feeder shipping a well-designated operational element of container ports. It was the new era of maritime transportation around the developed world. But structure of containerized products was mainly machinery, heavy and light capital goods, durable household goods and like. The developing world needs the mentioned containerized products, leading to a developed-developing container trade pattern. To the end of 1980's major economic blocks consolidated.

South-East Asian official instruments and Japanese communication devices were transported to Europe, America and the Middle-East by container, and then a great amount of container cargoes trade flew. This growth

continued and respectively great sizes for vessels have been emerged. How much the ship size is greater, the feeders volume of operation is greater too.

By increase of ships sizes, ports specialization, new economic blocks and information technology applications, maritime economy was persuaded to optimize ships volume and port performance (See Figure 4). Optimization requested calling only limited ports, then ship size assigned to ports according to new paragon. Classification of ports to support industrial hinterland led to new concept as port business clusters, hub, and spoke. Global hub ports, regional ports, sub-regional ports and local ports are the core of new introduced hierarchy<sup>18</sup>. Now, approximately 30 percent of worldwide container movements are trans-shipped from hubs to other classes of port. Trans-

shipment services provide shippers with additional route options. Shipping lines rely on trans-shipment as a means of reducing the number of ships in use and multi port calls. While debates persist over the extent of future hub ports development, experts have denoted a number of features that should exist as successful hub ports. Gustaaf de Monie et al.<sup>19</sup> have identified necessary criteria for either global or regional hub ports as; Location, Minimum deviation, Access, Container Terminal, 24-hour Operations, Turnaround, Costs, Favorable business environment, Eliminate bureaucratic rules and High-Frequency feeder network. It's obvious that shipping lines have great and effective role in choosing a port as a hub. They discharged containers in hubs, and feeders distribute them between other port classes. Saudi Geographic position and transportation



**Fig4: Ton-Miles performed per DWT of total world fleet (1994-2004)**  
 SOURCE: UNCTAD, Review of Maritime transport 2005. P45.

### Regionalisation of Port Activities

Unsustainable growth of the region in the 1970s is smoothed by restructuring and moving towards industrialization and value-added activities through the region. Awareness of the region's efforts in solving the mono product issue has provided a solution for human

development and infrastructure investment. These changes range from macro socio-economic variables to high productive infrastructures, facilities and technology applications. Transportation and socio-economic changes in the Persian Gulf and Red Sea may activate some distribution centres other than traditional hubs,

such as Dubai.

Great distribution centres of the region emerged because of their location -midway in the great shipping line, which covers all Gulf countries, including Iran as well as the west coast of India and the Eastern coast of Africa.

During this competition many countries of the region, lobbied for their own positioning but success was for UAE ports only, because of their excellent business infrastructure and conditions. Iranian efforts failed due to the revolution and 8 years of war, followed by dubious reformation policies. Now the new authority is 29 years old, but policy-makers in Iran are still making a wish list and have presented it as a plan for national development. Now large vessels call at Iranian ports, instead of Dubai and 80% of Iranian port containerization is due to Dubai trans-shipment.

Yemeni ports had no favor because of the latest communist domain and regionalized geographic position and peripheral socio-economic situations. Omani ports had efficient facilities but no economic attraction to do the role and no proper access for other neighbors. Saudi's western ports were dismissed due to no accessibility to the Gulf region. Now the ace is for Saudi's western ports if they prepare accessibility to the Gulf through railroad and highways from west to east coast in the Gulf. Because they can connect to the Red Sea or traditional shipping routes to rich societies of the Gulf with low distance and time, this provides a strong incentive for a new

trend towards a commodity-based economy. Thus a Saudi Land-Bridge (SLB) is not so far away.

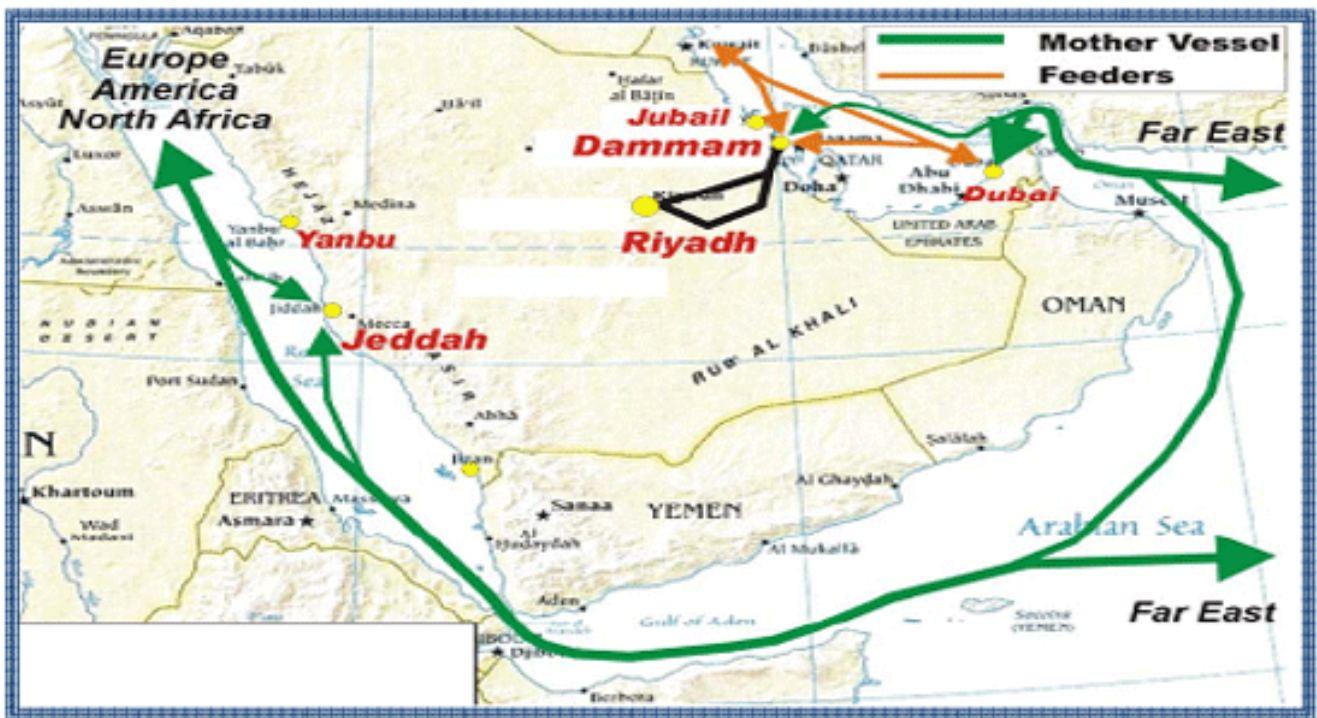
**Current Pattern of Trans-shipment in Gulf's Region**

Currently Dubai's Jebbel Al Ali container port is the regional distribution center; more than 75% of Gulf's container traffic is trans-shipped through Dubai<sup>21</sup>. Max-size container carriers call her from Southeast Asia, Far East, EU and North/South of America. Then an effective network of regional feeders trans-shipped containers to the regional and local ports as Shahid Rejaee of Iran transit to Mid Asia and Caucasus through Iran's borders, Kuwait, Dammam, Karachi, west coast of India and other Gulf States ports. In economic point of view, optimization of shipping lines port calls will be led to lower costs of trade. In other words, development concepts validated it because; this optimization will be led to high competitiveness for regional producers. Globally, can express that hub and spokes concept chooses the distribution network according to their comparative advantages.

According to Gustaaf de Monie criteria the region should revise

the current pattern of container distribution. Jebel Al Ali container port geographically is not located very close to traditional shipping route, but excellent economic and business condition precipitate it to be selected as a hub of region; however, there is another excellent choice. Here we are trying to find another choice that directs region to less transportation cost and time, then more competitiveness for the region. To do the job, scenario approach is chosen.

According to Figure 7, great container carriers, which round the traditional shipping route Jebel Tariq to Malacca Strait, provide services to the Red Sea and Persian gulf states (see Figure 5) through calling at the port of Jebel Al Ali and Salala of Oman, and then these ports are responsible for container distribution to all states covered. To reach Jebel Al Ali these carriers are required to carry at least 3.5 days of navigation costs. It seems that if another suitable port with low cost and time services can be found, the region's competitiveness and efficiency will be increased. Saudi Arabia may be able to do the job well. The scenario of a SLB tries to clarify the topic. A Saudi-Land-bridge multi-modal facility as an alternative to Jebel Al Ali, will be defined.



*Fig5: current transshipment in the Gulf's region through Dubai port of Jebel Al Ali and feeders' network, presently mother ships call Dubai, Jeddah and Salalah of Oman directly.*

Source: Jean-Pierre LOUBINOUX - SNCF I Chairman

policies towards SLB

Mainly traders and pilgrims have used the 1300 miles of coastline to penetrate Saudi from BC, as a holy land for Muslims. Some of Saudi's transport policies have obeyed the Hajj however economic diversification and moving away from oil based economies has led to them providing quality infrastructure for commercial services in the future. According to comparative advantages theory of production, the Saudi geographic position allows them to reap the advantages of transportation services. Saudi is located in a critical geographical position with its Red Sea coasts mud way in the main EU/North America/Far East/ASEAN location, allowing them to provide services to the large carriers with no deviation from the main haul and to the South and East coast of Africa. On the other hand, its long coasts on the Persian Gulf allows them to support the Gulf States and Iran. It can also provide services to mid-Asia and the Caucasus though Iranian borders. Saudi provides access to more than 15 states with about 220 million people though its coast and land territories.

Saudi development is directly related to oil prices and increasing oil prices since 2003 has put aside reserves of many dollars to be spent on infrastructure, we studied the Saudi transport policy in the 2005 speech of the transport minister, who stressed:

"King AbdulAziz, the founding father of modern Saudi Arabia, had a vision for opening Riyadh, the landlocked Capital of his Kingdom to the outside world. He saw that objective was best achieved by building a railway line that would connect Riyadh to the Kingdom's two major ports: Jeddah on the Red Sea, and Dammam on the Gulf". It is obvious that, connecting the Red Sea to the Gulf has been a hope of Saudi's leaders and it is under plan. He noted that "The Supreme Economic Council, chaired by HRH Crown Prince Abdullah Bin Abdul Aziz adopted a resolution authorizing the implementation of a 2900 km Railway Expansion Program. The Saudi Land-Bridge Project represents the cornerstone in the Expansion Program. The Land-Bridge will integrate through a railway-connected

network, Saudi Arabia's three largest commercial ports. It will be the first rail link between the Red Sea in the west and the Gulf in the east and is expected to have an important positive impact on shipping patterns in the Region 24".

Saudi policy makers have understood the strategic importance of SLB and its prospects as a regional Land-Bridge to provide particularly, container services to the region. It can be inferred that the SLB will act as a catalyst for regionalization and opens new markets to the region for peripheral producers (North-South and conversely, into the region). In the next step, the SLB scenario will be developed on three main themes: economic, (SLB demand, cost of institutionalization, service price for container cargo, cost of Saudi's port's instruments); technical, (SLB rail, network); geographic (cargo haulage estimation and geographic decrease in distance and time) and political, (cargo, regionalization, political stability, security).

### Saudi Socio Economic Condition

Saudi Arabia is an Islamic wealthy and oil-rich country, which has occupied 1,960,582 sq km of peninsula (80%)<sup>25</sup> and owns 26% of all proven world oil reserves which supply 15% of US oil imports<sup>26</sup>, with a population of 24 million and a great Middle East economy spending \$150 trillion on development project over the few next years<sup>27</sup>. More than 75% of total national revenue, 40% of GDP making up of oil exports and 8.8 to industry (which are mainly located in the Jubail and Yanbu industrial FTA and Riyadh (3.6 millions of population))<sup>28</sup>.

More than \$150 billion from oil export revenue in 2005 increased the GDP per capita to

12800\$, and economic growth from 7.7, 5.2, 7.5 for 2003-5 respectively<sup>29</sup>. Commercial service exports provide for Saudi more than 4.5\$ billions per year with a growth of 6%, as a great commercial exporter from 1995-2002 in the region, however, 44.1 of GDP was made up of services in 2005. The greatest Saudi trade partner is the US and makes up \$6 billion of the US's export to Saudi or 1% of

total US exports. This has tied them to each other and has made Saudi one of the important US allies in the region. It may secure Saudi's stability for the next decades. However, these great oil industries include only 1.8 of national employment and 8.1 is due to industrial sectors. Unemployment rate is 13 to 25% according to a Saudi and US government statement. Employment is a permanent Saudi problem because it relies on 6 million foreign expert workers. Saudi became the 149th WTO member in Dec 2005<sup>30</sup>.

Although some democratic reforms have been implemented, Saudi Arabia still operates as a near-absolute monarchy<sup>31</sup>. Elections in 2005 for the first time allowed Saudi male citizens to choose municipal representatives<sup>32</sup>. The royal family dominates government and politics in Saudi Arabia. The family's vast numbers (hundreds in the main family alone) allow it to control most of the kingdom's important posts and most members of the Council of Ministers and provincial governors come from the royal family<sup>33</sup>. Saudi Arabia has strong ties to the nations of the Middle East as well as to other Muslim states and developed nations such as the United States and Japan<sup>34</sup>. As the guardian of Islam's holy places, Mecca and Medina, Saudi Arabia hosts millions of pilgrims from neighboring Islamic countries annually. US department of state estimates that the literacy rate is about 85%<sup>35</sup>.

Wealth is very good if it comes from not only oil or natural resource-bases. Saudi is the same as any developing country that wants to diversify its economy and boost it with trade and industry. To do this, Saudi has focused on infrastructure constructions rather than the oil sector. From a legal point of view, they have liberated foreign investment and held many exemptions in the free trade area, especially in port (economic areas).

### Theory of Land-Bridge and Examples

The theory of land-bridge (LB) includes a range of various transportation modes for accessing hinterlands through another country(s) or land(s). Now the Trans-Siberian LB

for carrying cargo between North-East of Asia and North of Europe is well-operated from the Russian port of Vostochny to Moscow and expanded to the north of Europe, the Iranian LB for carrying cargo to the Middle Asia and Caucasus through the Persian Gulf to the Caspian Sea and Salinacrose-Veracrose LB (Mexico) for connecting eastern and western coasts of US and New York -Los Angeles LB in the US, are some famous examples.

Main requirements for SLB include:

1. Well-equipped ports at the Red-Sea (for example Jeddah).
2. Well-equipped ports at the Gulf (for example Dammam).
3. Land transportation services from west to east coasts and conversely (Railway/Highway).
4. Good feeder network services at Red-sea and Gulf.
5. Potential markets (Gulf, east of Africa and west of India).

**SCENARIO DEVELOPMENT**

**Geographical theme**

Saudi Arabia is the third biggest connectivity state in the region; table 1 in the appendix shows the connectivity rank and index for selected economies. The connectivity of Saudi is related directly to their geographical position. The main east-west route crosses Saudi's Red-Sea ports in the midway- and main shipping lines call to their ports. SLB can affect a region's current trans-shipment procedures, in time and cost.

The SLB impacts can be summarized into 5-736 (turn and return of peninsula to the Persian Gulf) days of saving transit times to the Gulf States. However, shipping lines can optimize the capacity of vessels and save costs of shipping to \$4000037 for each day of less navigation. Transit time for containers

will be at maximum 48 hours stack to stack between Jeddah and Dammam ports<sup>38</sup>. SLB charges \$170 excess expenditure per TEU, but shipping lines can decrease their cost to \$200-\$280 thousands per each main EU-Far East voyage. This means they can reduce the Gulf's container cost. Table 2 shows excess costs charged per TEU through the rounding peninsula according to percentage of payment by the region's containers or broken down into other containers, However, SLB railway charged each container only \$170 per TEU. Then, it is obvious that, the competitiveness of region producers will be ensured through the use of SLB.

SLB charged each container \$170 but current transshipment pattern may charged to \$588 per TEU		Cost of 3400 TEU carrier for 5 and 7 days of excess navigation around peninsula					
		\$200000	\$280000	\$200000	\$280000	\$200000	\$280000
% of Gulf containers per voyage		10		30		50	
Gulf's container		340 TEU		1020 TEU		1700 TEU	
Excess costs per TEU: % of if excess costs paid by region's containers(\$)	100%	588	823	196	275	117	165
	80%	470	658.4	156	220	94	132
	50%	294	411.5	98	137.5	59	82.5
	30%	176	246.9	50	82.5	35	49.5

Table2: Container costs to the region in result of excess navigation around the peninsula. If a vessel with the capacity of 3400 TEU carries %10 of her capacity Gulf's containers and all excess charges paid by region it means each container charged \$588-823, if carries only %30 and %30 of excess charged paid by region's container, it means each container should be charged \$50-82.5.

**Technical theme**

SLB will be equipped with 40 double stack container trains per day with a maximum of 400 containers each, running at 120 Kph but 4-5 high speed trains travelling at 220 Kph, carry 5760000 TEU per year for 360 working days. Jeddah as a Red-Sea hub port channeled containers through SLB to Dammam and then trans-shipped to Iran, Iraq, Kuwait, Qatar, Bahrain and UAE ports; however, in a wider view some containers visit two

industrial sites in Yanbu at the Red-Sea coast and Jubail at the Gulf's coast at the ends of SLB. Currently Saudi's rail network is expanded between Jubail to Dammam 115 Km and Dammam to Riyadh with 556 Km, which is used only for freight transportation and is managed by the Saudi Rail Organization (SRO). The expansion program will add 3200 Km to the existing network and connects all major cities around the nation.

Two well-equipped ports with

additional facilities are required to functionalize the SLB to trans-ship containers to the Gulf's states. This means, the Jeddah container terminal will load the discharged containers on the coast of the Red-Sea and Dammam to serve feeder lines in the Gulf.

Regional producers expect to decrease transportation costs and time and also receive frequent and reliable services, because the main producers want to re-schedule themselves to

provide a fast-response and the job is the responsibility of transportation. SLB with fast freight trains will do this, but a comprehensive feeder network in the Gulf area is required to distribute containers to local ports.

Presently about 13.3 million of TEUs cellular ships are traveling in the main haul<sup>39</sup>, which means new hubs should be ready to serve these types of ships. In the SLB transportation process, Jeddah will be called at by cellular and mother ships but Dammam will serve mainly feeder vessels. Now Jeddah is operative with two container terminals with a capacity of 1.2 and 2 millions of TEU respectively, the latter is operated under DPA<sup>40</sup> management. Hub ports in 2010 should be able to serve grand ships with 8000 TEU or more with 4 synchronized gantry cranes with 2500 thousands TEU per berth per year<sup>41</sup>. Each berth needs

to be 300 meters long with 13.5-16.5 meters of draft<sup>42</sup>. Jeddah as the starting point of the SLB should be equipped with these conditions, but Dammam needs to be armed with instruments to serve Handy-size carriers. Presently productivity of each gantry crane in Dammam and Jeddah is 28-32 moves/hour/crane, and the operation process assigns two cranes to each 2000-3000 TEUs ship then productivity of each 250 meters of container berth would be about 65 moves/hour.

**Economic Theme**

To generate another aspect of the scenario, main trends and events in economic, trade and

transportation systems have been examined. To estimate the potential demand for SLB and its establishment justification, market analyses are

applied and they compare its potential revenue to the financial requirements. Saudi Dammam Port, Iran, Iraq, Kuwait, Bahrain, Qatar, and Dubai are potential customers for SLB. To draw the potential demand for SLB, three optimistic, moderate and pessimistic scenarios are used. In the optimistic scenario 50% of Dammam container trade<sup>43</sup>, 10% of Dubai<sup>44</sup>, 75% of Iran<sup>45</sup> and total of Kuwait, Qatar and Iraq<sup>46</sup> container trade is assumed will be trans-shipped through SLB. In the moderate scenario 50% of Dammam, 5% of Dubai, 50% of Iran and 70% of others are examined. In the pessimistic scenario 50% of Dammam, 2% of Dubai, 30% of Iran and 50% of others are estimated as potential and plausible demand for SLB. Oman and Yemen are not included because their position is not proper to receive SLB services.

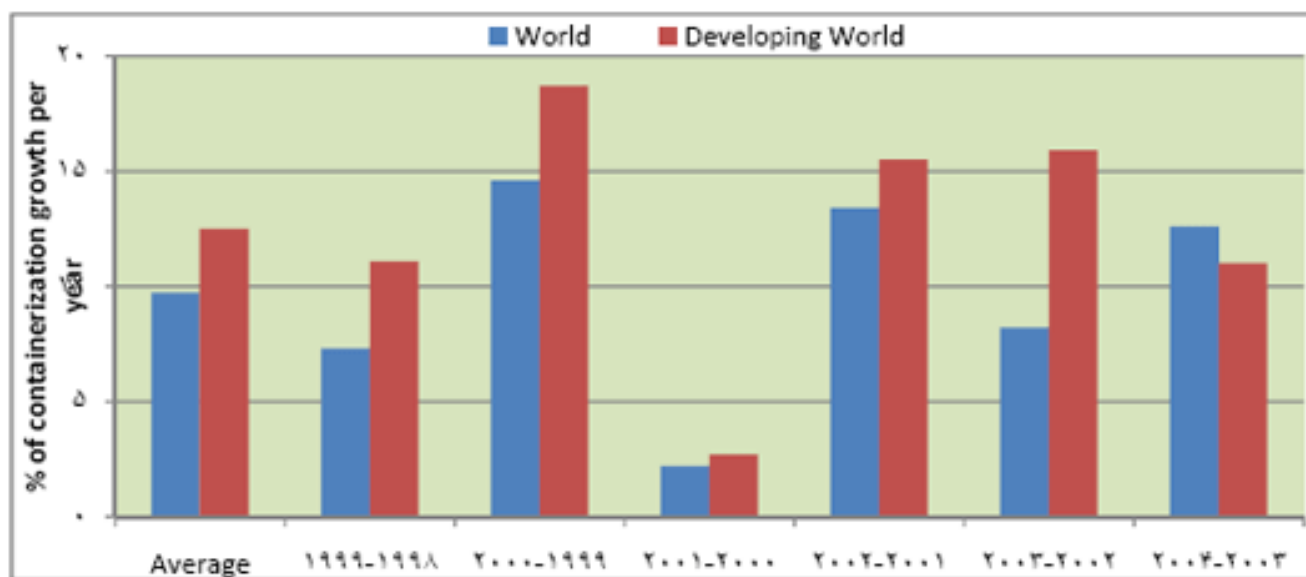


Fig6: Containerization growth (1998-2004) for World and developing economy. Average growth for world and developing economics are 9.72% and 12.48% respectively. Source: UNCTAD, "Review of Maritime Transport (2000-2006)".

1. The average containerization trade rate during 1998-2004 was 9.7%, 12.5 for total world and developing economics respectively (See Figure 6), but in the Gulf area with high fluctuation, ranged from 77% to 12% because some countries such as Oman and Yemen have come into containerization trade only recently. Growth of 2003-2004 registered as 27%, 21 and for 2002-2003 and 2001-2002, 17% and 12.75% registered respectively. We use

them as three scenario inputs to show potential demand. According to above, assumptions Table 3 as the potential demand for SLB has been exploited.

COUNTRY	Actual	Optimistic	Moderate	Pessimistic
	2005	2012	2012	2012
UAE	6955750	37065512.64	20875889.85	16162467.4
Oman	2246826	11972793.37	6743268.819	5220752.9
Saudi Arabia	2440327	13003913.49	7324012.169	5670374.235
Iran	1147656	6115581.782	3444393.522	2666707.787
Yemen	155717	829778.3032	467344.4186	361825.9622
Qatar	164173	874838.2859	492722.9219	381474.4292
Kuwait	243178	1295836.859	729836.0553	565051.432
Bahrain	165700	882975.3003	497305.8186	385022.5854
Iraq	n.a	200000	400000	600000
Total without Iraq	13521332	72043243.31	40574773.57	31413676.73
Total with Iraq	13521332	72243243.31	40974773.57	32013676.73

Table3: Container trade for the region according to three main rate of growth (27%, 17% and 12.8% for Opt., Mod., Pess. scenarios)

Total container trade for the region according to the scenarios' growth assumptions for each nation according to the above table, the 13521332 TEU of 2005 will increase to 72-40-32 millions of TEU for the region. To obtain SLB potential demand, assumptions for SLB potential customers are applied to the above table and then table 4 is derived.

COUNTRY	Optimistic	Moderate	Pessimistic
UAE	3706551	1043794	323249
Oman <sup>47</sup>	0	0	0
Saudi Arabia <sup>48</sup>	6501956	3662006	2835187
Iran	4586686	1722196	800012
Yemen	0	0	0
Qatar	874838	492722	381474
Kuwait	1295836	510885	282525
Bahrain	882975	348114	115506
Iraq	140000	200000	180000
<b>TOTAL Demand</b>	<b>17988844</b>	<b>7979719</b>	<b>4917955</b>
TOTAL Capital Expenditure of Jeddah (\$million)	2430	1080	675
TOTAL Capital Expenditure of Dammam (\$million)	920	344 <sup>50</sup>	0 <sup>49</sup>
TOTAL Capital Expenditure of SLB Railway (\$million)	10000 <sup>51</sup>	10000	10000
<b>TOTAL Capital Expenditure of SLB (\$million)</b>	<b>13350</b>	<b>11424</b>	<b>10675</b>

Table4: Potential demand for SLB, the last row of the table is drowned by excavating and calculating of data of UNCTAD, Review of Maritime Transport various version and assumption of technical theme and World Bank Port Tool Kit, mod3.

In the optimistic scenario, potential demand will be 18 million of TEU at 2012, 8 and 5 million of TEU for moderate and pessimistic scenarios in 2012.

The cost of SLB establishment is estimated at about \$5-10 billion(52) to connect the east port of Dammam to the west port of Jeddah through 449 km of current rail from Dammam to Riyadh and 950km of new rail, but

may well cost double that because of its ambitious groundbreaking, 100 bridges, and 28 Km of tunnels53. The BOT contract for construction is the largest in the Middle East, until now and the private sector will do the job and the Saudi government will support, oversee and coordinate. Under the BOT agreement, the assets of the existing Saudi railways will be transferred to the concessionaires. This shows that Saudi governors

understand the private sector's role more than neighbouring economies such as Iran.

Cost of new equipment for SLB ports is calculated according to World Bank Port Tool Kit assumption for new container terminal and potential demands derived from the scenarios54. Table 4 shows the calculations.

Cost Center (%)	Optimistic	Moderate	Pessimistic	Revenue %Share per TEU
Jeddah	29	17	12	31
Dammam	11	5	0	31
SLB Railway	60	78	88	38
<b>Total Revenue for SLB (\$million)</b>	<b>5756</b>	<b>2553</b>	<b>1573</b>	

Table5: Share of each cost center in establishment of SLB for transshipment of containers to Gulf's States.

The role of Dammam is to transship arrival containers of SLB, then the Saudi share on the above Table, produced from demand scenarios, means Dammam should be ready to serve 11.5, 4.3, 2 millions of TEU in optimistic, moderate and pessimistic scenarios in 2012. Presently Dammam can handle 2 million of TEU per year(55). Here the major cost of SLB establishment relied on the share of railway SLB cost between 60 to 90% of SLB cost. If we assume Saudi railway cost per TEU will be same as Iran56 as a regional country that uses the railway to move containers inland, the average revenue for each container is about \$170 for the railway system and port operation in Jeddah and Dammam cost \$150 in two sides of the SLB, it means each TEU charge is about \$320. Comparing the plausible revenues with plausible costs led to 3, 5 and 7 years for repayment of total capital cost (see table 5).

In any case Saudi policy makers should not view SLB as a revenue or cost center only. In national scope, SLB allows the east and west coast of Saudi to be connected to each other

and the two industrial sites, Yanbu and Jubail can play their role in Saudi development more effectively. In the regional scope of view SLB increases regional competitiveness and acts as a catalyst for regionalization and to be a part of the Arabian railway network57. At last, Saudis' should see SLB as major infrastructure for development and success of the nation.

**Political theme**

In the past Saudi was important because of its holy shrine, servants and oil, moreover, new roles to play can be defined by Saudi territories and government. Through the SLB Saudi will ease other nation's ways into the regionalization process. SLB allows neighbors access to major trade routes through cost/time effectiveness. Saudi political initiatives in national and regional scope are major issues in the acceptance of others' use of its borders for transit and trans-shipment. It is obvious that transportation impacts can be instituted away from political actions; some famous examples are Iran territories for oil transportation by pipes, which

naturalized with the Baku-Ceyhan pipeline and Salinacruise-Verinacruise (Mexico) Land-Bridge that defected by Los Angeles-New York New Jersey Land-Bridge introduction by the US government. Human rights, terrorism, fundamentalism and interventionism are major issues for Saudi during the latter years, but initiative changes in 2003-2005 made Saudi a well-institutionalized country in economic and political sector as to join to WTO and close its relations with the US after the September 11 disaster.

The Foreign Investment Law, enacted by the Saudi Arabian General Investment Authority (SAGIA), was set up to allow foreign investors to own property, and to transfer capital and profits, claim full ownership of their projects and enjoy a reduction in tax rates. The law protects foreign investors from confiscation of property without a court order or expropriation of property, except for in the public interest, against an equitable compensation58. Saudi Arabia and the US in 2003 signed an agreement to strengthen commercial and investment relations. This type

of agreement with a major economic power can guarantee the SLB usage at least for mid-term. Saudi strengthening of cooperation with the Gulf States on one hand and enlargement of the Gulf's Cooperation Council to the upper side of Gulf can lead to an economic alliance, so that their synergies lead the region to more efficiency of production and competitiveness through usage of members' capacities. In any case, Saudi should consider and chase regionalization issues in the region more precisely to use its benefits to development.

**SCENARIO CONTRACTION**

In the scenario contraction phase, all the offered data is gathered on one shelter and shows how the scenario generated and developed. In scenario generation phase we examined global trade trends and events to draw their impact on containerization. Container center or hub ports emerged when technology and trade let the shipping industry produce great size vessels. We examined Saudi economics and geographical attributes to draw a picture of the Land-Bridge theory and scenario planning, to trans-ship the Gulf's containers through a more timely and cost effective route, than Dubai, which is the Saudi Land-Bridge or SLB. Figure 7 shows how the scenario of SLB emerged.

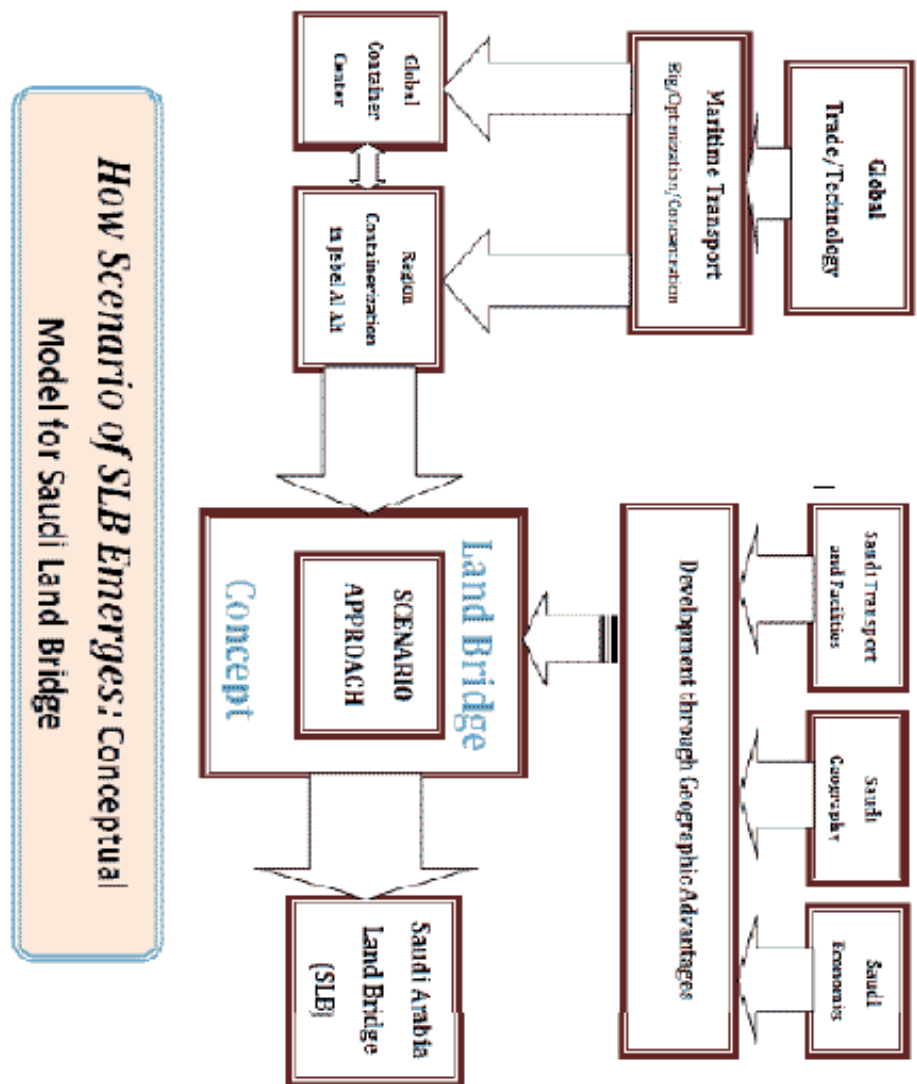


Fig7: SLB scenario emerging through studying some trends and events.

**Here we contract the scenario generation as:**

- \* Geographical dispersion of goods' production and distribution activities, directly related to the changing patterns in maritime transportation. Through this dispersion, containerization led to concentration and global and regional ports emerged; in shipping line activities global alliances were constructed.
- \* In the Gulf region, Jebel Al Ali emerged as a regional distribution center.
- \* Currently shipping lines divert from main haul to call at Jebel Al Ali to deliver the region's containers.
- \* Saudi is a well-positioned territory in the midway of main haul of EU-Far East and their policies are towards using the opportunities, and also this oil rich state has enough money to spend on the transportation development projects. On the other hand, regional producers rationally

want to decrease their cost of production.

- \* Land-Bridge theory requires essential facilities and non-physical instruments also, as trade facilitation, to use of transportation facilities to service regional and international producers.
- \*\*\*Saudi can utilize trans-shipment pattern in the region through a Land-Bridge.

**Contraction of development phase:**

- Currently trans-shipment pattern imposes on shipping lines 5-7 days of excess navigation that means about \$200-280 thousands of excess cost. SLB can decrease it to \$170 per TEU.
- New facilities in the port of Jeddah are needed to handle containers through SLB. Port of Dammam should prepare itself to bring about a well-designed feeder network. SLB railway should offer competitive

freight rates not just with shipping lines but also with other regional railways.

- Total container trade for the region can be 13-32 millions of TEU to 2012 and potential demand for the SLB can be 5-17 millions of TEU with optimistic, moderate and pessimistic scenarios. The capital expenditure for the SLB will be \$10-13 billion and more than 70% of total expenditure is directly for SLB railway. Total revenue for the SLB will be \$1.5-5.7 according to three scenarios.
- Saudi should make ready political circumstances to make usable SLB for all potential customers, especially for Iran and Iraq as major customers.
- Saudi should provide more confidence for the major economies and producers such as EU, and US and for ship-owners.
- When SLB is in operation, the trans-shipment will be as shown in Figure 8.

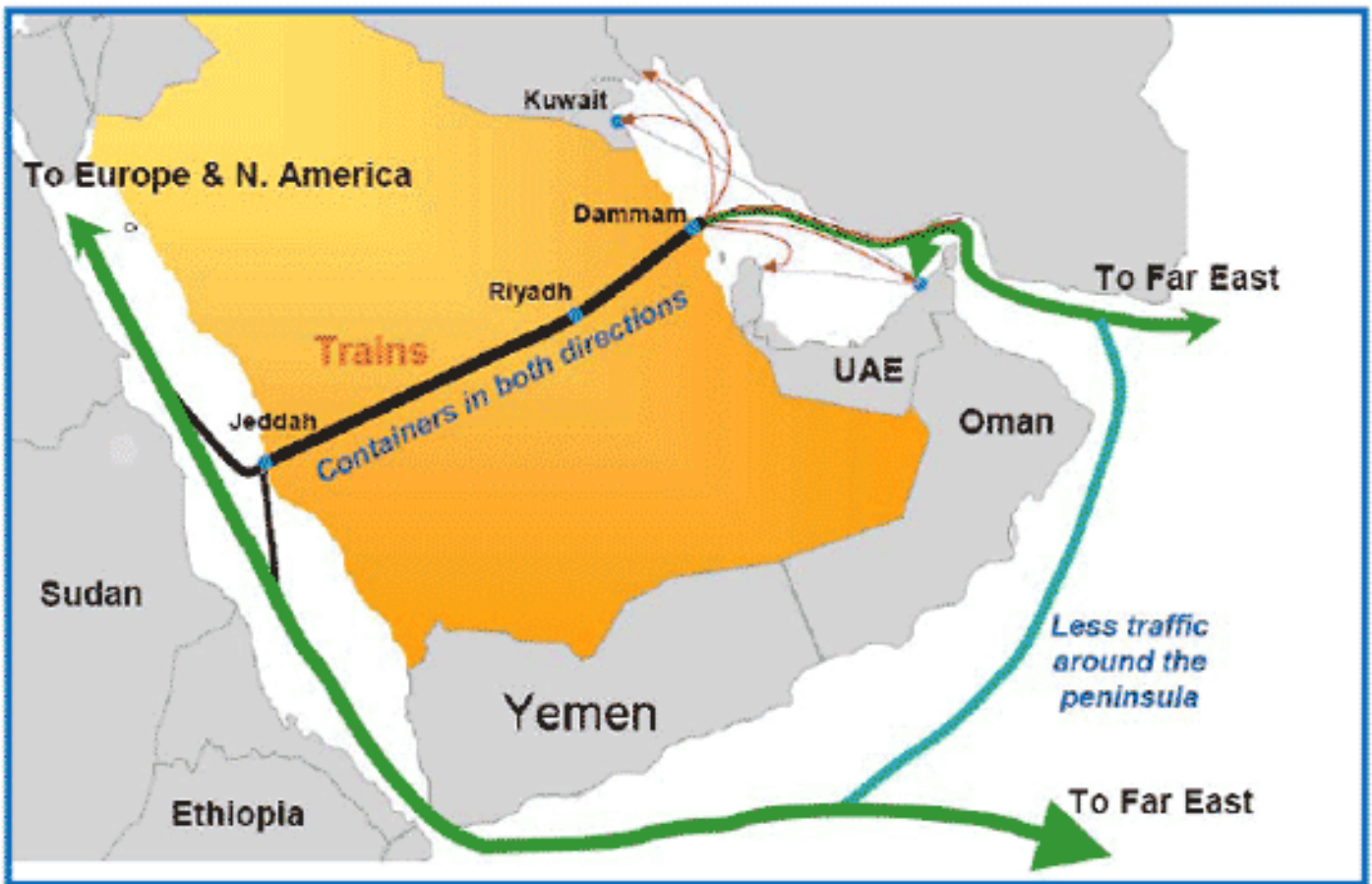


Fig8: new transshipment paragon after SLB construction

**CONCLUSION**

Globalization and regionalization of trade and production led to concentration on maritime transportation and hub ports and shipping alliances emerged as a result. Through looking into trends and events scenario of Saudi Land-Bridge (SLB) emerged to utilize transshipment process to Gulf's State. Presently more than 80% of transshipment carried on in Dubai, brings to shipping lines 5-7 days of excess navigation, and then the cost imposed on the regions' containers. SLB can decrease the cost through non-deviation from the main haul, SLB can do the job by calling in at Jeddah with grand container carriers and then run them into Jeddah-Dammam railway, and then containers would be distributed into the region through well-designated feeder networks.

As mentioned in the body of paper, the scenario is chasing trans-shipment utilization through SLB. Presently Saudi has excellent conditions to do the job, because of its reformation

and joining with the WTO in 2005. The private sector, which works under competitive circumstances, can take part in the SLB project through BOT contracts and offer competitive services to the regions' producers. There are potential demands of at least 5 million of TEU for the SLB, which under prospected arrangements with the Saudi government will be serving the private sector. Albeit, Saudi should make ready many conditions to alleviate the potential demands. Railway is the major cost center and an essential part of SLB, but Jeddah and Dammam should be ready to serve large size container carriers and the latter to serve feeder networks of the region. Feeder markets will be 11.5, 3 and 2 million TEU to 2012.

There are many issues other than cost and time to make a Land-Bridge usable, and then Saudi should alleviate other obstacles, which include political and foreign relations, especially in the region, and persuade other countries such as Iran, because of their economic capacity, to be a member of GCC59. Saudi should work on the

institutions to spread development ideas to prevent retrospective action. SLB as a development instrument not only to connect west to east, or the Red-Sea to the Persian Gulf but also should view it as a development infrastructure, which can help Saudi to make strong institutions for trade and development. Do not forget information and resources are not the only means of development, because they can be purchased from international markets but new ideas are vital for development and are not purchasable.

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I SHOULD STRESS MY DEEP THANKS TO DR ALI PIRZADEH FROM UNIVERSITY OF WASHINGTON, HE LET ME TO USE OF HIS UNPUBLISHED PAPERS AND SEND ME GREAT PROSPECTIVE ON REGIONAL ECONOMICS AND FOR HIS PROMOTION DURING PREPARING THE PAPER. AND TO DR PARVIZ BAVARSAD FROM KHORAMSHAHR UNIVERSITY OF MARITIME TECHNOLOGY FOR INTRODUCING SCENARIO APPLICATION IN MIDDLE EAST TRANSPORT FOR THE FIRST TIME.

APPENDIX

Rank	Country	Index (X)	Container Trade in 2005 (Y)
1	Hong Kong, China	1.00	20449000
2	Singapore	0.904	18441000
18	United Arab Emirates	0.466	6955750
22	Oman	0.409	2246826
23	Saudi Arabia	0.409	2440327
36	Yemen Rep.	0.253	155717
67	Iran	0.175	1147656
121	Bahrain	0.101	165700
126	Kuwait	0.099	n.a
141	Qatar	0.083	164173
154	Iraq	0.060	n.a
<b>Correlation = 0.965</b>			

Table1: Connectivity Rank, index, and Containerization Trade relation in the Region.

Source: UNCTAD, Jan, Hoffman (2006), "Liner Shipping Connectivity".

REFERENCES

- Shipping consultant in Iran, Khoramshahr University of Maritime Technology
- World Bank economist, University of Washington, Seattle.
- Schoemaker's, P., (1995), "Scenario Planning: A Tool for Strategic Thinking", Sloan Management Review, Winter PP25-40.
- Khan, M. A. (1965), "Realistic Planning for Transportation-A Flexible Approach", Long Range Planning, Vol. 22, No. 5, PP128-136.
- Kleiner, A. (1995), "Creating Scenarios In: The Fifth Discipline field book- The Art and Practice of the Learning Organization", Scenge, M.P. and Roberts, Charlotte and others (Eds), Nicholas Brealey Publishing, London. P. 275.
- Ubbels, Barry, et al, (2000), "A Multi-Layer Scenario Analysis for Sustainable International Transport" Tinbergen Institute Discussion Paper.
- Finlay, P., (2000), "Strategic Management: An Introduction to Business and Corporate Strategy" 3rd Mc Graw Hill, PP244-268.
- Williams, W.E., (1980), "The national Transportation Policy Study: Commission and its Final Report", Transportation Policy Study: Commission and its Final Report", Transportation Journal, Vol. 3, pp. 5-19.
- Dagenais, M.G and Martin, G and Martin, F. (1987), "Forecasting Containerized Traffic for port of Montreal (1981-1995)", Transportation Research, A, Vol. 21A: Policy and Practice, No.1, pp.1-16.
- Darzentas, J. and Spyrou, T. (1996), "Ferry Traffic in the Aegean Islands: A Simulation Study", Journal of the Operational Research Society, 47, pp.203-216.
- Tongzon, J. (1991), "A Model for Forecasting Future Supply of Shipping Services at Australian Ports", Maritime Policy and Management, Vol. 18, No. 1. pp. 55-68.
- Derakhshan, Ahmed et al, (2005), "Diversion of containerized trade: case analysis of the role of Iranian ports in global maritime supply chain" No.30, PP61-76.
- Derakhshan, Ahmed, (2005), Tran
- Demographic, Economic, Environmental, Political, Legal, Information, Social, Technological
- UNCTAD Review of Maritime Transportation, 2003.
- UNCTAD, Review of Maritime Transportation Review, 2003, page 4.
- Pierre, Carriou. (2000), "Strategic Alliances in Liner Shipping: An Analysis of "Operational Synergies", University of Nantes, p5.
- Leigh, B., Boske (2003), "Existing and emerging transshipment hub ports in Latin America and the Caribbean" 23th IAPH world ports conference, University of Texas at Austin.
- Leigh, B., Boske (2003), "Existing and emerging transshipment hub ports in Latin America and the Caribbean" 23th IAPH world ports conference, University of Texas at Austin.
- Pirzadeh, Ali, " Importance of Internationally Dispersed Activities and Maritime Transportation in National Policy Design", .....
- SNCF International, "Landbridge Project: Regional dispersed Activities and Maritime Transportation in National Policy Design", .....
- Egypt, Sudan, Ethiopia, Djibouti, Eritrea and Somalia in Africa, Iran, Iraq, Jordan, Oman, Yemen and Five Gulf states lands,
- The speech by H.E. the Saudi's MINISTER OF TRANSPORT in Saudi Landbridge Project Day, LONDON 31 JANUARY 2005.
- The speech by H.E. the Saudi's MINISTER OF TRANSPORT in Saudi Landbridge Project Day, LONDON 31 JANUARY 2005.
- New York Times, 2005-Sep-23.
- CIA.DOC.GOV, (2005), "Country Analysis Briefs: Saudi Arabia" P1.
- PM Communication Reporting "Saudi Arabia mega Project" 2006, p2.
- <http://www.pmcomm.com/pdfs/saudiarabia2.pdf>
- Library of US Congress, (2006) "Country Profile: Saudi Arabia" PP1-28.
- CIA.DOC.GOV, (2005), "Country Analysis Briefs: Saudi Arabia" PP1-15.
- CIA.DOC.GOV, (2005), "Country Analysis Briefs: Saudi Arabia" PP1-15.
- Library of US Congress, (2006) "Country Profile: Saudi Arabia" PP1-28.
- Library of US Congress, (2006) "Country Profile: Saudi Arabia" PP1-28.
- Library of US Congress, (2006) "Country Profile: Saudi Arabia" PP1-28.
- Library of US Congress, (2006) "Country Profile: Saudi Arabia" P18.
- LUBINOUX, Jean-Pierre, (2005) "Landbridge project: regional ports and shipping market" you can find it through the link: [http://www.saudirailexpansion.com/slp/regional\\_ports\\_&\\_shipping\\_market.pdf](http://www.saudirailexpansion.com/slp/regional_ports_&_shipping_market.pdf)
- The cost of a (2300-3400) carrier is \$13.04 per 14-tonne slot per day. "Review of Maritime transportation 2006". P65.
- LUBINOUX, Jean-Pierre, (2005) "Landbridge project: regional ports and shipping market" you can find it through the link: [http://www.saudirailexpansion.com/slp/regional\\_ports\\_&\\_shipping\\_market.pdf](http://www.saudirailexpansion.com/slp/regional_ports_&_shipping_market.pdf)
- UNCTAD, "Review of Maritime Transport 2006" p.63.
- Dubai Port Authority, Jeddah Islamic Container Terminal is privately operated.
- World Bank Port Tool Kit, mod3, PP21-25.
- World Bank Port Tool Kit, mod3, PP22.
- About 50% of Dammam traffic is assigned to near industrial sites as Jubail which carried through SLB transferred to those sites without Dammam visit.
- Now, Dubai is the hub of region, If SLB establish some of industrial site may be transferred to Saudi industrial cities as Yanbu and Jubail and their trade transfer to SLB to be more close to their main regional customers as Iraq, Iran and Gulf's States. I
- Presently 85% of Iran container trades are transhipped from Jebel Al Ali.
- Kuwait, Qatar, Bahrain and Iraq are peripherals from container services because of economy and geographic position.
- Oman and Yemen will not use of SLB, because they located in the mid way shipping and have excellent geographic location.
- For Saudi Arabia only traffic of Dammam is included, other container trade don't use of SLB.
- Dammam throughput is more than 2 millions presently.
- Capital cost of a new container terminal to serves Feedermax carriers is \$80 per TEU according to new Amir Abad container terminal in north of Iran.
- We calculated railway of SLB at the worst condition.
- THINK, Global issues in perspective, (2005), "The fast track across Arabia", London,
- THINK, Global issues in perspective, (2005), "The fast track across Arabia", London,
- Cost of each meter of berth \$156 thousands based on ports of Salalah and Eden in the region, each gantry crane is \$6 millions and each transtainer cost is \$400 thousands, and truck \$140 thousands, however, there are other costs which is not related to port operation directly, as electricity, sanitation, IT, and, ... For each terminal with throughput of 2 millions of TEU per year by applying World Bank conditions, the average capital expenditure is about \$270 millions. Saudi Port Authority reported.
- We derived a comparative condition in to SLB usage. Sabouni, Mourhaf, (1997), "Arab Railways Past and Present", Japan Railway and transport review, pp22-25.
- "Political and Economical Reform in the Kingdom of Saudi Arabia"(2005)
- <http://www.saudiembassy.net/ReportLink/Reform-Report-September-2005.pdf>
- Gulf Cooperation Council

# SCHOLARSHIPS FOR LIFE

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A recent initiative of the Middle East Journal of Family Medicine (MEJFM) a sister publication to the MEJB, has seen the launch of Child-Watch ([www.Child-Watch.org](http://www.Child-Watch.org)).

This focus on the physical, social, emotional and psychological needs of all children is taking, primarily, an academic approach, with articles published on issues pertaining to child health and through the sharing of successful ideas, programs and projects.

While the practical needs of such children are overwhelming the C-W focus is on restoring the dignity of disadvantaged children, This includes ridding impoverished institutionalised children, of scabies, lice etc and providing them with basic personal needs.

The other main focus is on orphans in Iraq, as one of the most disadvantaged and imperiled groups of children. Living in war conditions is not ideal at the best of times, but those children who have lost family and who have lost touch with normal society are greatly endangered. The ongoing conflict affects public health, psychological health, and emotional health. Lack of amenities increase malnutrition, and susceptibility to disease. m

Although there are seven orphanages in the capital, Baghdad, and another 16 in other provinces, "they aren't enough to provide assistance to all the orphans in the country," said Abeer Mahdi al-Chalabi, of Orphans

Houses Department at the Ministry of Labor and Social Affairs. She went on to point out that the increase in the number of orphans countrywide was an inevitable result of the bombings, assassinations and sectarian violence currently plaguing the country.

According to a 2005 report issued by the U.S. Agency for International Development (USAID), there were some 5,000 orphans in the capital alone, many of whom have been ostracized by society and have little hope of finding education or shelter.

Iraq is one of the only three Arab countries (with Yemen and Comoros) in which the incidence of low birth weight exceeds 10%, chronic malnutrition is common, as in anemia in children.

Our main focus however is in giving children a future by giving them an education and with it a 'future' and the means to make a life for themselves, and this includes orphans and institutionalised children. For that reason we have set up "Scholarships for Life".

Our children are inheriting a greatly depleted and violent world and too often they are the easy targets and victims of traffickers, abusers, 'warlords', drug dealers, and even governments and society in general Our children should not be paying the price of adult's inability to create a safe and equitable global society. If we could bring up just one generation unharmed, then we may have the foundation on which to

build a future for all humankind.

"Scholarships for Life" is therefore an initiative to 'buy' children out of slavery or forced servitude and supply them with the financial means to gain an education. This can mean purchase of children from enforced labour and getting them into school, and for those with family but forced to work from a young age to support that family, to provide the family with the wages the child would have earned if they had not been in school. As these are often the poorest families in society, the financial needs are comparatively not that great.

So the task of addressing the global needs of children would seem difficult on the surface but it is also an extremely easy problem to solve if children were afforded basic human rights and adults took responsibility for the world and society they have created.

Child-Watch is a Not For Profit NGO and all donations are tax deductible. Family doctors will assist in many of the national projects, such as identifying children in need.

Middle East members of our International Board include Dr Manzoor Butt, of Rawalpindi Pakistan, Dr Tawfik Khoja Director General, Health Ministers of the GCC States, Dr Abdulrazak Abyad, Editor of MEJFM and Dr Thamer Al Hilfy, College of Medicine, Baghdad Iraq.

[Child-Watch home page](#)

[Washington post - Orphans in Iraq's Storm - washingtonpost\\_com.htm](#)



## NEW HEALTHCARE IN THE DIGITAL AGE

Mike Ellis

Healthcare in developed countries is predominantly reactive. Health insurance systems reward doctors mostly for procedures and less for medical (i.e. non-operation) care. At the bottom of the policy priorities is prevention. This is based on the erroneous belief that if a patient presents with symptoms of heart disease that much can be offered. It is now becoming apparent that the best gains are made when there are no symptoms. Instead of waiting for onset of symptoms, we attend to have a risk stratification when we are young and seemingly in the prime of our lives.

The incidence of HT (hypertension, elevated blood pressure) is high. One in three USA adults has HT. Of the 61% who are under treatment, 35% have it under control and 65% do not have it under control.

WHO estimates, in 2003, 16.7 million people around the globe died of CVD each year. This is over 29% of all deaths globally. ([www.who.int](http://www.who.int))

20 million people survive heart attacks and strokes every year; many require continuing costly clinical care. (WHO. CVD:Prevention and Control. 2006)

Coronary heart disease: in 2002 there were 7.2 million deaths from coronary heart disease globally. (Atlas of Heart Disease and stroke, WHO, Sept. 2004)

The AHA (American Heart Association, [www.americanheart.org](http://www.americanheart.org)) recommended in 2002 that all adults have a risk stratification performed by their doctor at the age of 20years (Circulation. 2002;106:388-391.)

Prevention has been shown to be the best route-from both clinical and economic perspectives. Prevention relies on targeted methods so that early assessment of risk is critically important AND it has to be possible to modify this measured risk with diet exercise and medication

The above does not occur in primary care for a number of reasons. Doctors are under-resourced and do not have machine technologies and IT support

to assist in this process.

At a recent conference in Dubai, 3rd Partners International Cardiovascular conference 13-15 December 2006, it was stated that "The challenge of heart disease-one of the most serious health issues facing the ME was being assessed by a congress which attracted 300 leading specialists. The statistics which are well known were that a staggering 41% of all deaths in the UAE are the result of heart disease. Cardiovascular disease is claiming more and more lives at an even younger age each year and it is vital that public awareness is raised. The conference will help the development of the healthcare system in the region and help to promote the need for a healthier lifestyle"

Also recently, GE Healthcare announced plans to enhance the R&D profile of the ME region through the promise of investment of \$1 billion annually in R&D with a focus on early health and identified that 70 to 80per cent of resources in healthcare are devoted to managing symptom-based advanced diseases. Shifting resources to early health and developing technologies that allow healthcare providers to diagnose disease at the earliest possible stage when there can be many treatment options is better medicine and makes economic sense. One welcomes this new refreshing corporate initiative from a huge global player in healthcare

The author has been a general practitioner in Melbourne Australia since 1975. I have used these new technologies in my general practice since 1999 ([www.hsd.net.au](http://www.hsd.net.au)). I have demonstrated the system at Arab Health Expo. These technologies have been developed in Australia and they assist clinicians in this quest for an early diagnosis of cardiovascular disease using inexpensive machines that can be used by practice assistants to collect data and then this data is transmitted using encrypted encoded web technology to a central server and a detailed report is sent to the testing clinic (which may be in the UAE) of the findings of the testing process. These

results identify BP (blood pressure scores [www.suntecmedical.com](http://www.suntecmedical.com)), ECG ([www.norav.com](http://www.norav.com)) and two novel technologies. These are a measure of arterial stiffness using a SphygmoCor machine, [www.atcormedical.com](http://www.atcormedical.com), and HRV (heart rate variability) using ECG data collection, ([www.norav.com](http://www.norav.com))

.Arterial stiffness using wave form analysis measures the degree of change in the arterial wall beyond normal ageing caused by pathology that gives rise to the development of atherosclerosis (the deposition of gunk in the wall of the artery known as the soft unstable plaque) which decades later causes the wall of the artery to rupture and give rise to serious symptoms and or death. These measurements have been found to better predict the response to drug treatments in trials such as the ASCOT trial.

Together with the blood test results for cholesterol, diabetes and a questionnaire about smoking, a Framingham absolute risk score is determined and this assists the clinician to choose the most appropriate, evidence based, therapy.

The addition of the HRV test permits a measure of the nerve control of the heart. Thus, if adrenaline stimulation is excessive, as it is in diabetes, this causes a serious complication of cardiac autonomic neuropathy where the heart appears to be in a permanent state of stimulation resulting in a faster resting heart and a greater risk of death. Conversely, the improvement in lifestyle including weight loss, exercise, nutrition and addition of the most appropriate medications causes a reduction in risk and an improvement in the scores. Thus, what has been a subjective estimate can now be given a number and this permits the optimization of the otherwise asymptomatic patient to a lower risk. The patient/client leaves the test with a comprehensive report of his health status and as a result of the testing is placed in a better position to participate in his treatment process.

The range from the worst score (both of arterial stiffness and HRV) and the best score is a risk increase of ten times. Certainly, it would be difficult to find anyone who would not feel better placed as a result of knowing the scores to commence and continue a process of change in the lifelong process of reducing risk in that patient who was born with a genetic predisposition to CV disease. Thus it is like a switch from analogue to digital car tune-ups! Also it is the switch from breakdown support with a towing truck for an auto analogy to routine maintenance to keep the auto going. Such a change produces a greater benefit for every dollar spent but all of us resist change and defend the status quo. But unless change is embraced, the need for invasive procedures (angioplasty or open heart surgery) grows and for the 50% who have survived the heart attack, the preventative procedures will be implemented after the patient qualified with the onset of the heart attack.

Thus primary prevention, the process of diagnosing and implementing the changes in lifestyle and addition of appropriate medication is assisted with new technologies that permit

the tester to non-invasively “see” the condition of the circulation system and report the status. The partnership of patient/doctor is then better placed to choose and implement the best strategies to improve the wellness (and not only the health) of the patient. Commentators (The Wellness Revolution) are referring to healthcare as sickness care and not wellness care and the cost of healthcare in the USA accounts for 15% of GDP (\$1.5 trillion dollars) and at 15% it cannot go much higher. The next question is how this money can be better spent to buy what can be described as better value services.

As the Middle East enters a phase of rapid expansion in medical service delivery it is uniquely placed to choose the best systems to buy to serve the population. With thousands of health product choices, as evidenced at major health expos, available it is the policy makers who have a responsibility to obtain the best the world can offer the region. It does not appear to be an easy decision process.

The testing using new technology is readily scaleable to be expanded to population testing and is run on inexpensive machines and the

technician training can be achieved in a matter of days. To enable sufficient population reach, this low cost makes the implementation of the risk assessment and the subsequent intervention achievable in primary care systems with the advantage of limited training.

The reports are generated on a remote computer server and a quality control is put in place.

The appropriate business models will be put in place so that it would allow that such assessments and prevention strategies to be rolled out. The ME population, as a result of the high prevalence of metabolic syndrome, would benefit from such a roll-out. Alternatively, the continuation of usual care western models of testing and implementation of treatment strategies would not, in the opinion of the author, achieve similar scaleable solutions.

**TABLE 1. Guide to Primary Prevention of Cardiovascular Disease and Stroke: Risk Assessment**

Risk Assessment	Recommendations
<p><b>Risk factor screening</b>                      Goal: Adults should know the levels and significance of risk factors as routinely assessed by their primary care provider.</p>	<p>Risk factor assessment in adults should begin at age 20 y. Family history of CHD should be regularly updated. Smoking status, diet, alcohol intake, and physical activity should be assessed at every routine evaluation. Blood pressure, body mass index, waist circumference, and pulse (to screen for atrial fibrillation) should be recorded at each visit (at least every 2 y). Fasting serum lipoprotein profile (or total and HDL cholesterol if fasting is unavailable) and fasting blood glucose should be measured according to patient’s risk for hyperlipidemia and diabetes, respectively (at least every 5 y; if risk factors are present, every 2 y).</p>
<p><b>Global risk estimation</b>                      All adults ≥40 y of age should know their absolute risk of developing CHD. Goal: As low risk as possible.</p>	<p>Every 5 y (or more frequently if risk factors change), adults, especially those ≥40 y of age or those with ≥2 risk factors, should have their 10-y risk of CHD assessed with a multiple risk score. Risk factors used in global risk assessment include age, sex, smoking status, systolic (and sometimes diastolic) blood pressure, total (and sometimes LDL) cholesterol, HDL cholesterol,<sup>12,28</sup> and in some risk scores, diabetes.<sup>29,30</sup> Persons with diabetes or 10-y risk &gt;20% can be considered at a level of risk similar to a patient with established cardiovascular disease (CHD risk equivalent). Equations for calculation of 10-y stroke risk are also available.</p>

CHD indicates coronary heart disease.

# COSMIC ENERGY VERSUS AURA

Miroslav Provod

At the time, when Aristoteles brought up to the world of physics the word "ether", this word had already been known for millenia. Ether is a part of energy that had its name in each culture. Taoists called it "cchi" Babylonians "ti", Inds "Ódžas", the Japanese "rei ki", Hebrews "ruach", Tibetians "šugs rlung", the vedisch religion "prána".

Four thousand years later okultist Reichenbach called the spatial irradiation of life energy "ód". In many cases of the new history this energy of life matter that irradiates into it's surroundings was called "magnetism". This "magical" energy still calls up our attention that is even getting greater and that's why it would be appropriate to summarise its very long terminology. In the literature it is usually described as cosmic energy. That's how we called it in our empirical research and I think that this name is appropriate. Because of the same reason it would be better if we call the first part of cosmic energy, which had been up to now in our research called "energetic space", by it's usual name aura. Cosmic energy consists of three energetic parts - the aura, the zones and the interzones. Ether consists of two energetic parts - the zones and the interzones.

**Cosmic energy = aura + zones + interzones**

**Ether = zones + interzones**

The properties of aura are associated with all matter, not only organisms, as is sometimes described. By experiments with aura we got to know that when the auras of two or more objects are in contact, their auras come together to form one common aura. It was found in another experiments, that the energies of objects that form their common aura are slowly exchanged in between them until their energetic potentials are equal. This phenomenon that hasn't been described anywhere yet could be used to explain many unexplainable events. It's nothing new - the properties of aura, which we will be learning, were already used 2000 years before the first pyramid was built. At [www.miroslavprovod.com](http://www.miroslavprovod.com), you can find in the part called "diagrams" the graphical illustration of the three parts of cosmic energy - the aura, the zones and the interzones, with a detailed description of their properties.

Nobody has yet been successful when

trying to find the motivation for building hundreds of thousands of megalithic constructions, while the properties of aura offer evidential explanation. If we place a rock into the aura of a water stream, the auras of both matters join into one common and the rock gains energy. It works in the same way if we place a different aura into the aura of a water stream, including organisms. It works like this in between matters of all elements - the matter in a common aura that has lower energetic potential gains energy from the matter with higher energetic potential. There are numerous examples, like with other physical phenomenon, of energetic interaction between matters. It's easy to manipulate with the size of aura. It's quickest and most efficient when using groups of capacitors with great capacitance. However, we don't recommend to experiment with capacitors charged to high voltages, because it leads to an increase of potential on the membranes of our cells, which could cause some health anomalies. The properties of aura can't be put together with the result, which we would expect. The aura of a group of capacitors of a radius of 40cm can influence us negatively. However, it has been proved over time that the aura of a mobile telephone with a radius of a few tens of centimetres doesn't affect our health.

Aura - the first energetic part of each matter - is a common name. In connection with cosmic energy, the unknown parts are the zones and the interzones, the second and third energetic parts of each matter. The zones are copying the shape of the aura like peels and in various distances in between them. With greater distance from their source they gain gigantic dimensions and it's not possible to find out how far from the source they go. We don't know why, but each third zone is ten times greater than the first and the second zone. In the space between zones there are energetically weaker interzones. There are usually four of them, but in some cases there are more of them and they are always located closer to the zone that is located closer to the source. Together with the zones there is a great number of them and they create a very dense three-dimensional raster - ether.

In regions of any matter, even in the regions of gas planets or clouds, we always find three parts of cosmic energy. Many objects can have their own aura, for example a stone, a lump of stones, a building, a group of buildings, a person, a stadium filled by people, a stream, a thunderstorm cloud, a tree,

a planet - until the aura gets in contact with an aura of a different matter. In such a case both come together to form one energetically common aura with common energetic parts. It works like this in most cases, but there are also exceptions. Our planet Earth has the greatest aura by the above stated rule; so all the auras on the Earth should then have one common aura with the Earth. It's not like this. Hopefully, some measuring devices will give us a clue in the future.

The crossing zones and interzones fill the surface and surrounding area of our or any other planet. These ethereal parts are located literally everywhere throughout the space and we are able to define the density and composition of their "mother" matter, by looking at their changing ethereal intensity. There are specific widths and distances between zones and interzones of every matter and every matter also causes or sends out into space it's specific etheric parts - it's like a bar code characteristic for each matter. It's not far before we could identify the type, the amount and the distance of some elements under the Earth's surface that is kilometres below the surface by means of special detectors and computers. So we always meet the zones and the interzones on our planet in connection to ether.

The cosmic energy and its three energetic parts have been used by people for millennia. Einstein disregarded ether by his unshakable logic. Ether isn't acted upon by gravity, it's not material - ether is "nothing". It's invisible, it can't be measured nor weighed. We can't calculate it so "NOTHING" can't exist. The logic and knowledge of modern physics don't allow scientists to protest against Einstein and to accept again that ether exists. The modern physics just isn't able to accept the existence of ether based on its knowledge and therefore it must reject it.

However, immaterial or more likely slightly material energetic ether does exist. The fact that ether exists is also supported by satellites whose optic documented that lightning discharges from thunderclouds don't occur only between clouds or between the clouds and the Earth but also between the clouds and somewhere above them, somewhere unknown away from the Earth. Where and how does this incredible energy go? The cause and reason for this fact haven't been explained yet anywhere. Similar physical vacuum is associated with the cause of energy of up to 1000times more energetic lightning discharges on

Saturn as they were documented by Cassini probe.

Einstein was certainly a genius, however, he wasn't infallible. For example at present we know that the speed of light is not a maximum speed. In some time we will also know that the person that was wrong with the hypothesis about ether wasn't Aristotle but Einstein. Some individuals who can, without optical means, identify a moving living thing, for example a person, sometimes even long distance away from them, talk usually about "registering" the movement of the persons aura. This term is however not correct. An aura of a person, whose energy is about average, is about thirty centimetres "fat", wide or more likely high. So if people with extremely developed sensitivity in a static position register a movement of etheric energetic parts of a moving person, they don't register the actual aura to such a distance but etheric spatial "impulses" that are moving from aura into the surrounding space of "infinitely distributed" etherical zones and interzones.

The energetic value of a matter (the level of cosmic energy) is going up for example with increasing pressure on a given matter. The "aura" of water could be in addition also increased by thermal or microwave heating. Another increase of energy with liquids could be realized by so-called dynamization. (In a lab we could reach dynamisation just by shaking, when the molecules intensively act by friction on each other. When sea water is dynamised by inner and outer friction near a shore it shows greater energetic values in that area, which also increases it's surrounding aura or cosmic energy.) It's interesting that each matter has its "energetic memory". It means that if a rock gains cosmic energy when exposed to great pressure, it doesn't lose it straight after the pressure is removed. Each matter, therefore, has an ability to accumulate the cosmic energy in itself for some time.

Everybody knows places such as Lurdy, where people were spontaneously cured in relation to headwaters. In many places like this there are pilgrimage churches built above these headwaters. Many sceptics talk about these miraculous cures in these places or in normal thermal spas with a contempt. In these cases it is energetically modified water, which was subject to great pressure and was warmed up deep under ground. It is known that in some spas the water also gains energy from rocks that contain energetically strong

metals. There are also spas where unexpected cures occur due to the energy taken from water that was close to radioactive rocks that contain very energetic element uranium deep under ground. In some spas the bodily energy is reinforced by drinking underground energetically intensive water, in others the cosmic energy is gained by the body when swimming in the water, when the cosmic energy is transformed from the charged water into the patient's body. It is known that an ill person often doesn't need special medicine for his cure, but a sufficiency of "inner" cosmic energy, in order for the body to initiate the cure processes. Especially elderly people often don't have enough energy to cure their health process. The cells in bodies of some people have often lower intensity of cosmic energy than the molecules of curative water. By being in this energetically rich water the cells of the curing patients gain greater energetic level on their cellular membranes, which is a basic presumption of a proper functioning of these cells and also some mechanism that begins their cure.

The energetic parts of cosmic energy have similar properties to electric energy in many ways. By components of unknown principle that cause cosmic energy there is an effect called "suction by a point", which is similar to that of electrons. The cosmic energy flows from areas with greater energetic levels to areas with lower energetic levels. While the transfer of electrical energy happens immediately, the cosmic energy transfers between different sources at much slower rate. However, some properties of cosmic energy differ from those of electrical energy. The electromagnetic waves don't penetrate Faradays cage but this is not true with cosmic energy. If we place a source of cosmic energy into a safe (any other source of cosmic energy), they are in interaction and the final value is a sum of both energetic sources.

There are traces of manipulation with cosmic energy and ether found throughout the ages. Now we look back in time and search for the effort of our ancestors that knew the equation of the linear relationship between the intensity of their etheric potential of their body and their better health very well.

If we evaluate megalithic constructions from the cosmic energy standpoint, we find out that a rock of a point shape placed into the aura of a water stream or into a place where there are zones of that water stream it gains energy from that water source and it starts to be a menhir. With respect to specific

weight and composition of that rock this standing point - menhir - gains greater energetic value than a standing point - a man - would gain. This rock works like an energetic storage battery. Upper streams that are more "dynamised" with faster flow and with waterbed made of stones show greater energy than lower streams with slower flow and with a soft waterbed. This is also emphasised by the fact that menhirs are situated in the upper parts of water streams, especially in their inner bends, where the zones are denser and create greater energetic value. This can be easily verified by a simple experiment.

We wind a hose around a rock that is about 2 metres high. The value of its aura could be modified by changing the number of threads or by changing the intensity of the water flow. However, the energy doesn't go up quickly. The cosmic energy transfers very slowly as stated above. It's not like an "acceleration" when we press a gas pedal in a car. The matter of the rock has a significant energetic inertia and the energetic increase takes place over a time period that could last from tens of minutes up to hours depending on it's mass. Similar energetic "dope" (an increase of cosmic energy on the cellular membranes of the cells in a human body) could be reached when a person sits on a chair that is wrapped in tens of threads of a plastic hose with flowing water. The rock could be activated not only by the energy of water flows (underground wells, streams, rivers, sea streams), but also by other energetic sources like for example: metals, fire, thunderclouds and many other sources.

A classic example of an energetic gain of a rock from ether was a menhir "Mené er Groah" (it was destroyed by a lightning strike), which was 23.5 metres high and was located near Locmariaquer in Bretagne. It is an isolated case, but is very informative, because it brings up the knowledge of ancient cultures about the energetic properties of ether. The engineers got a task to build an energetic source of the capacity wanted in that place. The easiest solution would have been to spread the matter of a high menhir into more menhirs. However, this wasn't possible, as the ether zones didn't offer the required energetic level - this was located higher above the ground surface. The engineers then had to build a high menhir. The obelisks built in later cultures had the same energetic reason as "Mené er Groah" menhir.

The lonely standing menhir was the easiest megalithic structure that was giving energy to many people. In order

to refill or increase the level of cosmic energy in our body people didn't have to sit on top of the menhir for hours. It was enough when the "cured" person stayed in the region of aura of the menhir or even in a zone that was located further from the menhir. People didn't miss the fact that they could gain more energy faster when they are between two or more menhirs, where the auras are denser. This inspired them to cover the tip of the menhir with another rock. This is how an energetically "richer" dolmen was created. There are hundreds of thousands of dolmens existing. The ancient engineers did know well that it matters what type of rock needs to be placed on top of the "curing platform". The effort to reach a maximum value of cosmic energy and the ability to compare the energetic interaction that is related to the chemical structure of individual types of rocks compelled the ancient wizards and healers to often difficult transport of different rocks and stones. These engineers must have known the energetic values of the interactions very well because even that they could have placed a stone from a close vicinity onto the dolmen desk, they have transported big stones from great distances whose chemical structure was different.

The next level of energetic structures of the past were Ziggurats (Babylonian tower). With time, the progress came to the knowledge that the matter of the structure, which gains energy from etheric zones, must not be a monolith or a rock but it could also be high quantity of earth. Moreover, the matter of the structure of a ziggurat was activated by a metal (on the top there was a golden statue of a gods). Later, this knowledge was used by all megalithic and religious structures. Towers with bells, minarets with golden domes etc. further dynamically increased the energy of the objects. However, the increase of cosmic energy can't be beneficial for human health in a linear relationship forever. When building religious structures it was observed that more means less, in other words - from the present sciences point of view - it was found that going over the optimal level of charge on the cellular membranes is dangerous in the same way or worse than the energetic deficit. The matter of the structure must have been balanced by the energetic gain, the amount of time spent in the sanctuary and the amount of people who were inside. Because of that, pastorates were built out of the energetic reach of the religious structure. The energy could have been regulated by the number and height of towers. The towers then gain energy from three sources - when

penetrating etheric zones, because of the known fact of suction by a point and they are activated by the metal of the bells. We can't pass over the position of the bells. In the 15th and 16th centuries the bells were also hanged in the opposite way than it is usual - with the tongue upwards. This was especially beneficial with heavy bells that were then easily swung - the bell started to swing under it's own weight and the swinging was kept by a paddle. Because this type of hanging bells was considered uncatholic in the 17th century, most bells in most towers that had been hung in this way were hanged with the tongue downwards. By an easy experiment we could easily prove that bells that are hung by the tongue downwards increase the energetic value of the tower by 250%. If the bell is hung with the tongue upwards the basic energetic value of the matter of the tower decreases by 30%. The shape of the matter of the bell works in the same way as the shape of a water stream, dome or cope does: it creates greater energetic density. The towers of religious structures that have a globelet located on their top (it's a similar case like when there is a bell hung with the tongue upwards), decrease the energetic value of the structure.

The calculation of the optimal amount of matter and height of the towers was impossible before the construction has begun because of the creation of different relations between surrounding zones and interzones. It was not until the construction has begun when the energy of the object was being regulated until it reached it's optimal value by changing the volume of the matter, the amount of metals, the energetically strong crystalline pebbles or the height of the suction points. The characteristic energetic properties for all kinds of religious structures was their high mass, towers, rounded shapes and supplemented activation parts like metals, fires, etc.

The motivation for the construction of menhirs, dolmens, kromlechs, mounds, stone mans and other similar structures was usually explained by astronomical, calendar, agricultural and ritual motives. We can't wonder that other arguments couldn't have been offered by known facts. But there are even more mysterious megalithic structures - thousands of stone spheres that weigh more than 15 tons. They are located in Costa Rica and in other parts of the American continent and some even close to the North Pole. The arguments for their existence weren't persuasive but I agree that it's not possible without

the knowledge of ether. A rock in the shape of a sphere that is located in an etheric zone is energetically activated and becomes an independent source, which sends spherical zones out into surrounding space. These cross other energetically stronger etheric zones, interact with them and by their conductive properties bring greater amount of cosmic energy to the place where the stone sphere is located. It is probable that heads of Olmeks that are made from stone and have similar mass could have had similar function.

In Nazca plain the etheric zones are marked in the flat terrain. The water flows that were built underground were built to connect individual zones so that the energy could be transported to another place. A verification that shows that the zones in the Nazca plain were made energetically stronger are the rows of stones located very close to some zones (the stones are in interaction with the zone).

The present architecture isn't interested in the energetic of the structures and some structures could be so called "cancer houses" or could just slowly negatively affect their inhabitants. Sceptics could say that the steel constructions of skyscrapers and their height must show the negative effect more markedly. The answer could be found in history, when people on the American continent built more than hundred thousand mounds, they cared a lot that the clay mounds weren't built on a subsoil made from rock and they carefully isolated them by means of organic matter. When building mounds in Europe, the same technologic progress was abided. When constructing skyscrapers, we can't even imagine that they would be built in another way than on solid subsoil made from rock. We can deduct that the contact of the structure with the seam works in the same way as grounding by the fact that it drains the energy away into the ground. However, it could be different with some low-bed structures that were built on earthen seams. In these connections it could be interesting to find out statistically the death rate in different hospitals.

It's not easy to believe the fact that ancient people already had the knowledge about etheric energy that our civilisation will now only start to learn. The twentieth century, when thousands of scientists unsuccessfully tried to resolve the mysteries of megalithic culture proves that the explanation is not in the region of known facts. Therefore we looked for the answers of puzzles of structures somewhere else.

## GUIDE TO IMPROVING PRACTICES IN CATTLE HUSBANDRY

### RSPCA Australia

RSPCA Australia (Royal Society for Prevention of Cruelty to Animals) has welcomed the release by Meat & Livestock Australia (MLA) of 'A guide to best practice husbandry in beef cattle - branding, castrating and dehorning' and has encouraged producers to embrace the standards.

In addition, the RSPCA has encouraged the livestock industry as a whole to continue developing standards and guidelines to also improve animal welfare in other practices.

The new cattle husbandry guide provides livestock producers as well as agricultural training institutions with practical guidance on how the routine husbandry procedures of branding, castration and dehorning are currently best carried out.

RSPCA Australia Scientific Officer (Farm Animals) Melina Tensen said that while the RSPCA did not endorse

the guide - because it permits hot-iron branding - the animal welfare organisation was consulted in its development and sees the guide as a valuable tool.

"Importantly, the guide acknowledges that all these procedures are painful and distressing for the animals involved, and subsequently highlights the need to perform them in a manner that will reduce the negative impact," said Ms Tensen.

"RSPCA Australia is very encouraged to see that the guide contains reference to analgesics and anaesthetics, as we strongly encourage livestock producers to use such products where available," she said.

"Animal welfare can also be improved by handling the calf quietly, performing procedures at an early age, appropriately restraining the calf, and ensuring cow and calf are not

separated longer than necessary," said Ms Tensen.

Ms Tensen also said that while it was likely many producers would already be performing routine procedures correctly, the guide would help ensure competence of operators in using efficient and effective methods to reduce the pain and distress experienced by the animals involved.

"The continuing development of such guidelines by industry is a reflection of the growing interest by the public in animal welfare and production systems," said Ms Tensen.

"We certainly encourage industry and producers to take proactive measures that go beyond the minimum standard set under the codes of practice, as these will be vital if they wish to keep up with community expectations", she said.