

# Prospective Branches of the Maritime Economy and Changes in the Labor Market of the Maritime Economy Sector in West Pomeranian Voivodeship

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## ABSTRACT:

Due to great natural conditions, development of West Pomerania region since historical times has been strongly connected with functioning of the maritime economy. 185 km of coastline and a network of preferably formed inland waterways allow such industries as shipbuilding, maritime transport, versatile port activities, fishing and fish processing, become pillars of the regional and national economy.

The aim of this paper is to analyze the changes in the labour market that have occurred within the dominant branches of the maritime sector in recent years in West Pomeranian Voivodeship. The results show the impact of changing global economic conditions on regional employment in the maritime sector. The study contains also concepts and new proposals of local authorities, which are to be implemented to stabilize the economic situation of the traditional branches of the maritime sector in the region. The development strategies paid particular attention to the newly emerging branches of maritime economy, which in future could complement and increase the diversity of the labour market of the maritime sector. Several branches are considered as especially promising: water tourism, modernization of ports and shipping lanes, intermodal transport and logistics, offshore/onshore investments (such as gas terminal, wind power plants, shore protection).

[Acknowledgements. This study is a part of the diagnosis of the labour market of the maritime economy sector in West Pomeranian Voivodeship was prepared within the frames and for the purposes of the European Union project Generation Balt. The project is conducted in parallel by countries of the southern Baltic Sea region: Germany, Sweden, Lithuania, Poland and Denmark. Main idea of this project is to improve a cooperation between higher education institutions and maritime business associations, who want to connect their potential to develop regional maritime economy sector by upgrading and harmonizing the maritime curricula ([www.generationbalt.pl](http://www.generationbalt.pl)).]

## 1. Preface

A diagnosis of the labour market of the maritime economy sector in West Pomeranian Voivodeship was prepared within the frames and for the purposes of the European Union project Generation Balt. Main aim of this study is to analyze the changes in the labour market that have occurred within the dominant branches of the maritime sector in recent years in West Pomeranian Voivodeship, Poland. The paper reveals the impact of changing global economic conditions on regional employment in the maritime sector and presents new concepts and proposals of local authorities, which pay particular attention to newly emerging branches of maritime economy.

Since the historical times, the maritime economy sector in the West Pomeranian Voivodeship has been of a great importance for the region's development. It was a natural consequence of the location at the Baltic Sea and presence of inland water bodies, with a special significance of the Szczecin Lagoon being a part of the Odra river waterway transportation corridor. The favourable environmental conditions conditioned the location of the maritime sector entities along the Baltic Sea coastline, 185 km long, as well as in the coastal areas of the Szczecin Lagoon and along the Odra river (Fig. 1). Traditionally, the activity of the maritime economy enterprises was focused predominantly on the versatile seaports' activities, such as shipbuilding and ship repairing, fishing and fish processing as well as maritime shipping.

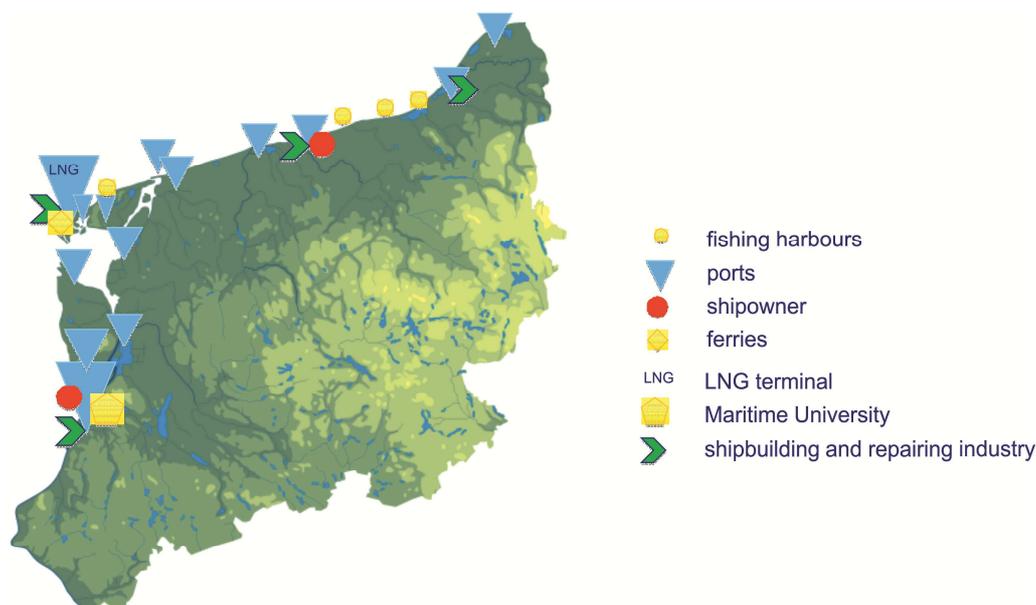


Fig. 1. Location of the most important entities operating within the main subsectors of the maritime economy in West Pomeranian Voivodeship

The economy of the region, including the maritime sector, is currently in a phase of transformation. Recent changes in global economy, with a special impact of economic crisis that has been observed since 2007, revealed that the entities of a traditional structure of activity, operating within the maritime economy subsectors that were of a great importance and a strong economical position in previous decades (namely shipbuilding, fisheries, maritime shipping), do not meet the requirements of the market. Their problems are the result of the strict connections of the traditional maritime subsector with the global economy. Moreover, because of the great regional importance of the traditional maritime subsectors, resulted from the deep dependence of the region from maritime market, changes in the global economy have much stronger impact on the economic situation of West Pomeranian Voivodeship than on the other regions of Poland (Nowak, Sokół 2009). Recent economic changes - of a global and regional scale - showed that the redefinition of the maritime sector structure is urgently needed. It requires, as a first step, the analysis of the maritime economy in the region that comprises its actual conditions and main trends and tendencies that has been observed in recent years. The next phase is to define the most prospective branches of the maritime sector that will be able to play a main role in the region's economy and fill the gap left by the traditional subsectors.

## 2. Materials and methods

The analysis of the condition of the maritime economy in West Pomeranian Voivodeship is based on data from the local statistical offices and databases: GUS (Central Statistical Office of Poland) and BAEL (Monitoring of society's economic activity). The study comprises the data from the last decade (2000-2010). Prospective branches of the maritime economy sector were selected on the basis of the qualitative data obtained from various kinds of (self-)governmental development strategies, reports, elaborations, law regulations and resolutions.

*Maritime economy - definitions*

Maritime economy comprises all the kinds of activities that are directly or indirectly conducted on marine waters (Tab.1). Maritime entities and institutions, linked by commonalities, are complemented by supporting structures and infrastructure, indirectly connected with maritime sector.

Tab. 1. Subsectors of the maritime economy and the profile of their main activities

Sector name	Economic activity	Trend of employment in 2000-2010
<b>Cargo handling and storage in seaports</b>	cargo handling and storage service enterprises, which the basic activity is cargo handling in seaports	decrease
<b>Other activities supporting maritime transport</b>	navigation, pilotage, live saving, dredging and underwater works, port and sea services, towage, mooring and others	decrease
<b>Activity of maritime transport agencies</b>	custom agencies, marine agencies, ship broking agencies, maritime consultancy, marine experts, clearing services, stowage services, cargo control, sea forwarding and others	decrease
<b>Seaports authorities</b>		decrease
<b>Sea and coastal water transport</b>		decrease
<b>Production and repairs of ships and boats</b>	building and repairs of floating units in terms allowing to float on an open sea	decrease
<b>Sea fishing</b>		decrease
<b>Fish and fishing products processing and preserving</b>		increase
<b>Wholesale and retail sale of fish, crustaceans and molluscs</b>	entities performing mainly fish sale	stable
<b>Research and development works and maritime education</b>	schools educating mainly for needs of maritime economy (and groups of schools) as well as scientific and research units, working mainly for needs of maritime economy	slight increase
<b>Marine Boards</b>		stable
<b>Others kinds of activity</b>	extraction of crude oil from sea, construction of water engineering structures for maritime economy, architectural and engineering activities for maritime economy, renting of water transport means, consultancy, technical research and analysis, enrolment of employees and other kinds of activity for the benefit of maritime economy.	fluctuating

All the connections between the entities, institutions and supporting structures create the unique structure of the maritime economy and therefore it should be considered as a coherent and interdependent part of the region's economy. This idea is

further developed in the Polish Maritime Cluster (Figure 2). Substantial part of Polish Maritime Cluster is West Pomeranian Maritime Cluster, established in Szczecin in 2011 (second attempt). Idea of maritime cluster affects the development of constituent entities by increasing their productivity and level of innovativeness. The cluster expands by inducing the new business formation that supports innovation and implementation of new technologies into maritime sector.

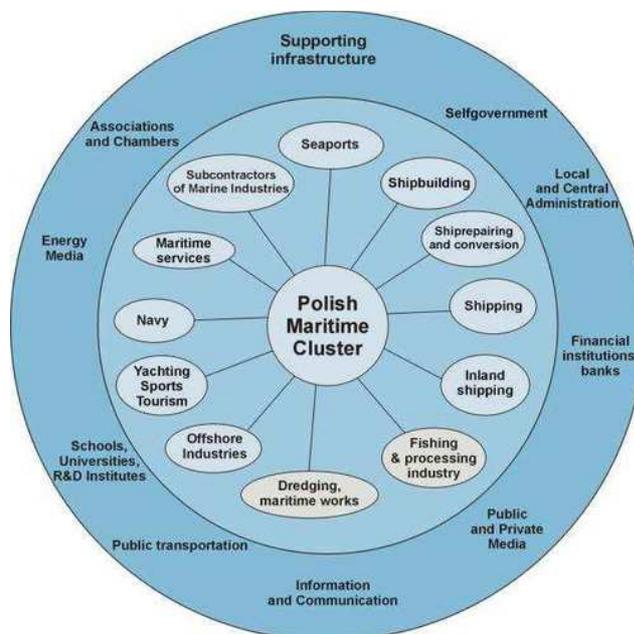


Fig. 2. The sectoral structure of Polish Maritime Cluster  
Source: Krajowa Izba Gospodarki Morskiej (National Maritime Board).

### 3. Changes in employment in maritime sector in 2002 – 2010

The region benefited from the strong economy forcing in 2004-2007. This positive situation resulted from general growing tendency observed in the national economy. Economic conditions in this period in West Pomeranian Voivodeship did not deviate from the general trend. Recently, since 2007, the region has suffered from the global economic crisis and, despite region's attractiveness and potential, it faces the period of recession and downturn in economic activity (Nowak, Sokół 2009). The liquidation of Szczecin Shipyard Nova had the most significant negative impact on the maritime economy market. The closure of one of the biggest companies in West Pomeranian Voivodeship significantly enlarged the level of unemployment, it also had a strong negative impact on all the companies operating within the frames of maritime market.

Regional effect of global economic crisis in the maritime sector led to the deep changes in the number and structure of enterprises (Fig. 3) and employment (Fig. 4). Since 2006, a high increase in number of maritime entities, specially of the private ownership, has been observed, but it has not resulted in the increase in the number of employees in maritime sector. Moreover, the total number of person employed in maritime economy sector has been decreasing since the year 2000, when there was over 33 000 workers while 10 years later – only 20 000. It reflects the significantly decreasing importance of big companies that were too dependent on the global economy, too capital demanding and lacking in elasticity. Main role in the employment was taken over by medium, small and microenterprises with a very strong increase in the ratio of the self employment. It is worth to underline that, when compared with

other regions of Poland, West Pomeranian Voivodeship has the biggest share of SM and microenterprises in general number of entities. Due to their elasticity and adaptability, small employers survived the financial crisis with less harm.

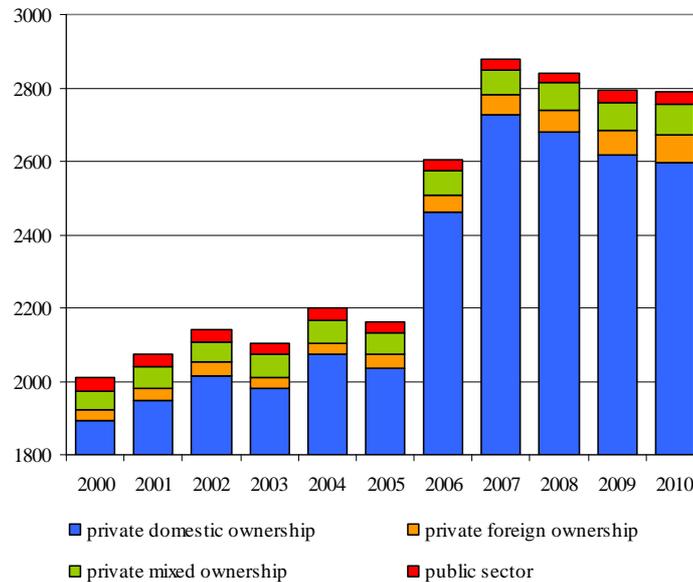


Fig. 3. Number of maritime economy entities in West Pomeranian Voivodeship by ownership (tourism is not included in the statistical data)  
Data source: GUS, Statistical Yearbook of Maritime Economy.

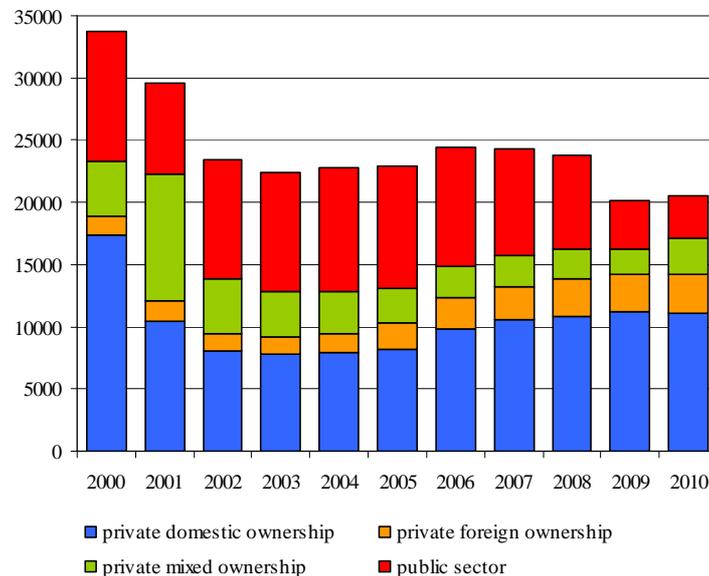
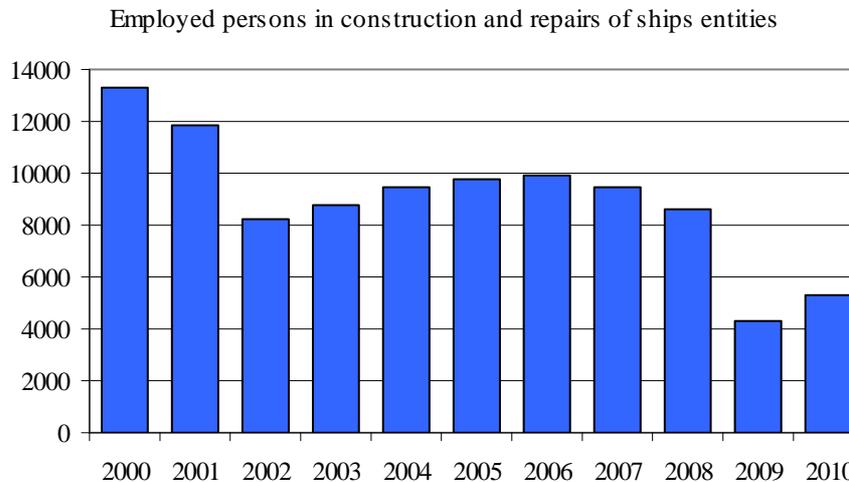
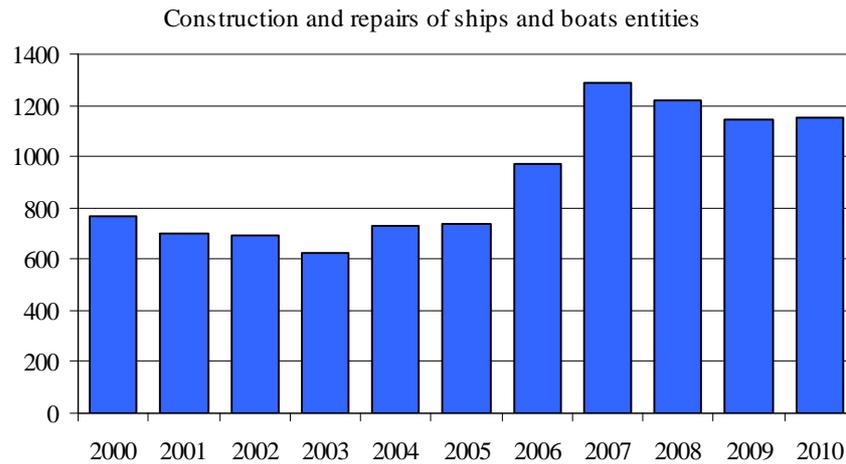


Fig. 4. Number of employees in maritime economy entities in West Pomeranian Voivodeship by ownership (tourism is not included)  
Data source: GUS, Statistical Yearbook of Maritime Economy.

Global economic situation affected not only the structure of entities, but also determined changes in the profiles of economic activity. Recent trend is to change the profile of economic activity from traditional and capital demanding to a modern, less

dependent on global economy situation and cooperative with R&D units. Shipbuilding industry can be a good example of such changes. Statistical data (Fig. 5) show that in the last few years number of entities in shipbuilding industry subsector is on a relatively high level, but number of employed persons decreased, and tonnage of completed vessels equals 0. This situation results from bankruptcy of Stocznia Szczecińska Nowa, when the traditional production of new vessels was stopped. Other companies in this subsector that have survived the financial problems, base their economic activities on ship repairing and servicing, producing the ship components or equipment as well as recreational boats.



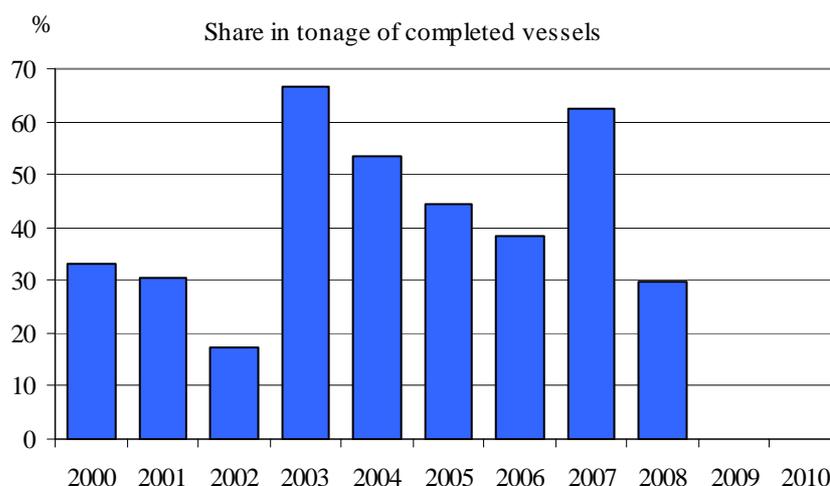


Fig. 5. Trends observed in the shipbuilding industry in West Pomerania Voivodeship in 2000-2010

Data source: GUS, Statistical Yearbook of Maritime Economy.

#### 4. Prospective branches of the maritime economy

Possibilities and directions of future development of maritime economy sector depend on several factors including present situation on the market as well as political decisions on different levels (local, regional and central) creating the favourable environment for particular subsectors development. Strategy of the Polish Maritime Economy Development 2007-2015 defines several sectors of a special importance for the status of the maritime economy and lists the general goals within each sector: maritime transport, seaports, waterborne and coastal transport, shipbuilding and ship repairing, exploitation of marine natural resources, fishing and processing industry, research and development, education and human resources, maritime and inland administration, maritime heritage and social awareness in maritime aspects, marine and inland water tourism. Despite the inalienable importance of all of the listed sectors, only a few of them create the real opportunity for the employment in West Pomeranian Voivodeship and can play a role of the pillars of the regional maritime economy. The most prospective sectors for the future development of the maritime economy in our region were selected according to several self governmental documents and law regulations, with the Strategy of maritime economy development in West Pomeranian Voivodeship to 2015 considered to be the most important.

##### *Water tourism*

The development of tourism infrastructure and promotion of tourism, according to the authorities, should have a strong positive impact on the professional activation of local communities, especially in regions adjacent to the main water bodies and waterways. Improved conditions of tourist facilities could result in increase in tourist traffic and – what is of a great importance for the whole region – extending the tourist season.

The development of maritime tourism, because of its specificity, requires action undertaken both by the local communities and the municipalities; their economic potential should be supported by the entire region (Strategia rozwoju 2010).

*Intermodal transport and logistics*

Investments in the transportation infrastructure are of strategic importance for improving the regional economy (including maritime). Implementation of the strategic objective – to develop the Central European Transport Corridor CETC - ROUTE65 as the main axis of the development of intermodal transport – will reflect in improvement of the situation in the local labour market (Galor et al. 2010). Its development and expansion will increase the availability and competitiveness of the region. Its strategic importance will be manifested by the growth of employment and improved living conditions. Other benefits include enhancement of the environment resulting from intermodal transport, which is of a less ecological risk ([www.cetc.pl](http://www.cetc.pl))

The logistics centres in West Pomeranian Voivodeship are of a distributional character. Unfortunately, these objects are confined mainly to serve the road cargo transport. The solution is to retrofit them in marine terminals and upgrade their range to the intermodal logistics centres.

According to the development strategies, Regional Logistics Centre should offer a variety of services related to loading, transport, cargo units services and drivers. Moreover, it should be a place that provides the good conditions for business, in particular by meeting the requirements of logistics systems. The centre should be oriented to reduce of the negative impact of logistic processes on the environment.

*Offshore and onshore investments*

Investments in the coastal areas of the Baltic Sea and other water bodies can bring a significant growth in the employment ratio in West Pomeranian Voivodeship, especially among the group of highly educated specialists in fields of engineering, but it also gives the opportunity of the professional activation in local societies by creating the favourable conditions of local markets (i.e. demands for services). Currently there is one big project carried out in Świnoujście - LNG terminal - but the development strategies underline the economic importance of expected future investments the wind energy (including offshore) for the local communities.

The construction of an LNG terminal in Świnoujście is the most serious investments in the West Pomerania coastal zone in the recent years. Its construction is related to the policy pursued by the government to diversify the energy supplies. Location of such a large investment will contribute to the economic development of Świnoujście and the region. A modern facility of a strategic importance will raise the international status of the city. This will be an incentive for further capital investment in the region (Strategia rozwoju... 2010).

The development of offshore wind energy is one of the direction which has been assigned to the main strategic objective, namely: the improvement of national energetic security. Along with the search for oil, gas and offshore mineral deposits, the construction of offshore wind farms is a major pillar of the modern Polish energy sector (Galor et al. 2010). It gives the opportunity for close cooperation of the R&D units with the business sector and can stimulate the development of both.

The growing interest of consortiums in location of offshore wind farms in the Polish maritime exclusive economic zone comes not only from the environmental potential of the region, but also from the presence of significant industrial capacity in the province. It is based primarily on the shipbuilding industry which has a profile of economic activity responding to the needs of offshore subsector in terms of installation work, constructions of wind turbine components and production of specialized vessels serving the transportation and installation of wind turbines at sea.

The development of offshore wind energy in West Pomeranian Voivodeship is an attractive alternative to the traditional shipbuilding industry. Therefore, improvement of the conditions for investment in the offshore sector can serve as a catalyst for development not only of the wind energy sector, but also gives a chance to stabilize the economic situation of these entities, in which the source of financial problems was a traditional activity in the shipbuilding industry.

Moreover, planned investments aiming at improvement of energetic situation of Poland can be a prospective employment area for a wide range of specialist in environmental monitoring.

#### *Modernization of ports and shipping lanes*

One of the key concepts of the region's economic empowerment is to raise the importance of the port complex Szczecin-Świnoujście and the smaller ports of the West coast (e.g. Darłowo). Their planned expansion and modernization will require employment of highly specialized engineering staff in the near future. Modern solution, contributing to a more rational use of labour potential in the ports, is the concept of "port job fairs," which would create a possibility to smoothly reallocate the workers in accordance with the rhythm of loading and unloading ships

The ports in Szczecin and Świnoujście are the most important determinants of the position of the West Pomeranian Voivodeship at the national level, but also the smaller ports should not be neglected while planning the future development of the maritime economy sector. These are the areas of concentration of the local economic activity and are characterized by a relatively rapid growth of leading sectors of the maritime economy, including these related to maritime and coastal tourism. Boost in the development rate of the small ports is a strategic objective included in the regional strategies (Galor et al. 2010).

The implementation of all these actions will not only increase the significance and improve the functioning of the ports in the province, but will also have an impact on the economic situation in the region, giving the opportunity to develop the areas indirectly related to the maritime sector. It will have its further consequences in the higher employment rate in the voivodeship.

Maintenance of high standards of navigation within the fairway, harbours and ports requires continuous engineering works that include: deepening and widening of the seaway Szczecin-Świnoujście and the renovation and modernization of the port infrastructure. Special conditions of disposal and storage of dredged material taken during engineering works in the ports and deep water areas are determine in details in the new law regulations. Changes in the law create a new niche in the field of the maritime economy. Efficient management of dredged material requires interdisciplinary, modern education in the field of: geochemistry, hydrology, law, technology, environment, waste management, land management, etc. Multitude of specialists, administrative staff and technical support, already are and will be sought in the labour market to work on the development and implementation of the actions foreseen in the regulations. Adequately trained staff does and will work on several topics, namely: formulation of legal concepts, planning the location and design of useful objects for the storage purposes, preparation techniques and procedures for dealing with this type of waste and the implementation of the planned investment (Skowronek *Problematyka..*, Skowronek 2011, Galor et al. 2010).

## 5. Conclusions

Present condition of the maritime sector in West Pomeranian Voivodeship is rather weak. It has been strongly affected by the recent economic trends, especially global economic crisis. There has been a systematic trend of decreasing the employment in almost all subsectors of maritime economy. Moreover, West Pomeranian Voivodeship does not take the advantage of the possibilities offered by the location at the seaside. Some reports state that if maritime industries in Poland develop properly, there will be an opportunity to create 100 thousand new work-places in the seaside regions of Northern Poland (Sedler 2005). Unemployment in the Polish seaside regions is around 20% so it is very important to take advantage of this opportunity and to develop the maritime industries. It can not only provide work places, but also rise the economic status of the province and boost its development by enhancing further economic investments.

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