

STRATEGY OF DEVELOPMENT OF ARMS INDUSTRY OF THE THE FEDERATION
OF BOSNIA AND HERZEGOVINA
(2012-2022)

October 2011

1. INTRODUCTION

Strategy of development of arms industry (hereinafter Strategy) represents a set of objectives and measures in implementation of policy of Government of The The Federation of Bosnia and Herzegovina in the arms industry sector. The policy of Government of The The Federation of Bosnia and Herzegovina is expressed in strategic objectives on the arms industry sector level as well as in specific objectives for particular areas of the arms industry. The strategy was not created according to the principles of the world's best practice in this area of economy, where the arms industry is primarily a factor of defence of a country with fixed budget for the development of products and technologies, modernisation of existing capacities, arms and military equipment manufacturing for the reliable buyer, i.e. domestic armed forces.

One of the guiding principles of the Strategy is sustainable development of the arms industry, i.e. the principle of manufacturing for the foreign market, without prejudice to supplying of the armed forces of the country, if there is a need for that in the future. One of the peculiarities of the The The Federation of Bosnia and Herzegovina is that it has more than sixty (60) years old installed capacities for manufacturing of certain types of arms and military equipment at different locations and they typically have been and still are the only industry holders in those areas.

Through the Strategy the development of the arms industry in The The Federation of Bosnia and Herzegovina is directed towards the maximum use of existing personnel and material resources, along with increased use of domestic reproductive materials, introducing measures to stimulate economic efficiency, and application of modern technologies for the arms and military equipment manufacturing. At the same time environmental protection and decrease of harmful effects of the arms industry sector to the minimal extent are required.

The development of the arms industry of the The The Federation of Bosnia and Herzegovina is observed in the conditions of partially damaged technological relations with manufacturers in other countries that emerged with the dissolution of the former Socialist Federal Republic of Yugoslavia, suspension of manufacturing of various reproductive materials and subassemblies in the countries of the former "Eastern bloc" and the increasing number of the countries, including our country as well, whose armies arm with arms and military equipment made according to the NATO standards. The strategy encompasses all elements of sector of the arms industry (ammunition, weapons, equipment manufacturing, services) to lawfully organised and institutional aspects related to successful work and development of arms industry in the stated period until 2022.

2. VISION, MISSION, GOALS

Vision

Period until 2022 is the time period in which Bosnia and Herzegovina will end economic transition and according to the all elements of economy it will be harmonized with European surroundings, and it will also become an equal member of NATO.

The development of arms industry should accompany the needs of Bosnia and Herzegovina, the existing workplaces should be preserved and new ones created through the increased export of arms and military equipment, continuity in supplying NATO forces with arms and military equipment along with taking responsibility of environmental protection should be enabled through connecting with strategic partners.

The strategy guides legal, institutional, organisational, economic and technological processes in Bosnia and Herzegovina, especially in The The Federation of Bosnia and Herzegovina, in the direction of achieving contemporary standards of governing the sector of arms industry

founded on economically sustainable goals of arms and military equipment acceptable for the world market.

Mission

In every country arms industry is the most vital part of the economy and also a generator of development in technological, scientific, educational and economic sense.

In The The Federation of Bosnia and Herzegovina arms industry should accelerate the development and growth of economy, taking into account the environmental protection. Through the development of arms industry a technological development, strengthening of domestic companies, growth of foreign investments and increase in competitiveness of The The Federation of Bosnia and Herzegovina shall be achieved.

Goals

Government of The The Federation of Bosnia and Herzegovina adopted "Analysis of state and directions of further development of arms industry in The The Federation of BiH" and it is a starting point for determining goals for arms industry development in the period from 2012 until 2022 where the first and primary goal is:

- Fulfilment of the immediate financial liabilities of the Arms industry

The other goals are:

- to increase export of arms industry in The The Federation of Bosnia and Herzegovina from annual BAM 40.000.000,00 at present to BAM 100.000.000,00 by 2017 i.e. BAM 200.000.000,00 by 2022 with more equal participation in the export by the companies registered for arms and military equipment manufacturing.
- to reduce import of subassemblies and reproductive material and military equipment by approximately 20% by 2017, i.e. 50% by 2022. The present participation of import reproductive material is 50% in the products of arms industry and the lowest is in Unis-"Ginex" and the highest is in "Igman" and "Pretis".
- to increase participations of personal labour in arms and military equipment manufacturing to minimum 30% by 2017 i.e. 50% by 2022.
- to concentrate personnel and material resources in arms and military equipment manufacturing and development along with increased cooperation when participating together on the foreign market.
- to form material reserves from import components for three-month manufacturing by 2017. To increase material reserves by 50% in the period from 2017 until 2022 but in subassemblies from own production (primers, cases)
- minimum of 30% of the total revenue should be achieved through selling of commodity products and services by 2017 and by 2022 this amount should be increased to 50% of the total revenue.
- military equipment and properties that are not very valuable should be catalogued and a suggestion should be made to the Government of The The Federation of BiH on making the most optimal decision related to that.
- to connect arms industry on all segments of the manufacturing with strategic partners from abroad, and keep at least 51% of capital in the state ownership .
- enable and certify specific companies to perform various service activities that other business entities perform for the arms industry (marking of ammunition and weapons, training area and laboratory testing, various control testings that emerge from the regulation on occupational safety etc.)
- introduce the NATO codification system to the arms industry
- to harmonize the legislation with the legal heritage of the European Union

3. FORMATION AND FUNCTIONING OF THE ARMS INDUSTRY IN THE FORMER SFRY AND THE EXISTING STATE OF THE SECTOR OF ARMS INDUSTRY IN THE THE THE FEDERATION OF BOSNIA AND HERZEGOVINA

Analysis of the existing state and characteristics of arms industry sector of the The The Federation of Bosnia and Herzegovina are a starting point for evaluation of future needs for arms and military equipment manufacturing, possibilities and satisfaction of requirements, defining of goals and measures for achieving goals of development of arms industry of the The The Federation of Bosnia and Herzegovina.

Reasons and objectives of formation of arms industry in the former SFRY

It is impossible to get the real picture of the existing state of arms industry in the The The Federation of Bosnia and Herzegovina without taking into consideration reasons and goals that lead to the formation of arms industry in the former SFRY, and these are:

- arms industry used to be a factor of defence of the country with the exclusive task of supplying of own armed forces and it was located in the two former republics (Serbia and Bosnia and Herzegovina) for the greatest part;
- for strategic reasons all factories from one republic had twin-factories in the other republic, except for the factory "Zrak" Sarajevo and BNT-TMiH Novi Travnik;
- almost all models of weapons, arms, and ammunition were related to so called "eastern option" i.e. there were licenses bought from the former USSR or weapons and arms equipment with which so called "Eastern Bloc" was armed were copied.
- there was a great amount of independence from the import provided in the country when it came to of arms and military equipment manufacturing, because key raw materials (copper, brass, steel) as well as key subassemblies (gunpowder, primers, fuses) for ammunition, weapons and tools manufacturing were produced.
- there as a great personnel support to the development and functioning of arms industry through specialised secondary schools and establishments of higher education as well as specialised institutes.

Export of products arms and military equipment from the former SFRY

Export of products arms and military equipment from the former SFRY was not a strategic goal during the establishment of arms industry, but it became one at the moment when the warehouses were filled with finished products.

The strategy was founded on the following elements:

- in the former SFRY there were no manufactured arms and military equipment that were "attractive" to the world market but they could be bought without political conditioning which was suitable to non-aligned countries which became "target markets";
- there was a credit sale of weapons or it was compensated for various raw materials that were at the disposal of the non-aligned countries;
- the weapons were sold from military stocks, and the money received was directed towards the arms industry which was replacing the sold products;
- Education of military personnel of the non-aligned countries at military academies of the former SFRY and their training in operating arms and military equipment that were manufactured in the country was enabled;

- transfer of certain technologies for arms and military equipment manufacturing and long term technical help in arms and military equipment manufacturing (India, Egypt, Iraq) was enabled.

Weaknesses of the strategy of export are the following:

- Marketing function did not exist in arms factories but it was exclusively concentrated in SDPR, and in some segments in Unis-"Promex" primarily in order to supply Iraq with subassemblies and reproductive material.
- The development function was related exclusively to military institutes so factories were not enabled to develop independently.
- the factories developed an insignificant number of products "only" for the purpose of export and they were not part of the arms of the former SFRY (e.g. rocket parts 122mm GRAD and infantry ammunition 5.56mm)
- Few countries bought the biggest amounts of arms and military equipment for long years (India, Iraq, Kuwait). In the end, during the last ten (10) years of existence of former SFRY a "new strategy" for arms industry was promoted and it consisted of the following elements:
 - the third of the capacities should work for the necessities of army forces;
 - the third of the capacities should manufacture arms and military weapons for export;
 - the third of the capacities should manufacture commodity products by using the existing capacities and personnel.

The existing state of sector of the arms industry in the The Federation of Bosnia and Herzegovina

After the end of the war arms industry in the Federation of Bosnia and Herzegovina entered the period when their business operations were adversely affected for the following reasons:

- factories were devastated, robbed and decreased in personnel during the war;
- the arms industry in Bosnia and Herzegovina was no longer a factor of defence of the country;
- there are no enough financial resources in the state budget for equipping the armed forces so they did not buy anything concerning the arms industry;
- damaged technological relationships with the arms industry in the other countries created by the dissolution of the former SFRY are difficult to establish.

Despite all the difficulties the arms industry proved to be a very vital part of the economy which was reorganised and according to its possibilities made a complete turn toward a foreign market by exporting:

- various subassemblies (different forgings and initiating devices),
- small arms and AA ammunition
- infantry mortar and mines 60, 81, 82 and 120 mm,
- aiming weapons and optical elements;
- periscopes for armoured fighting vehicle NZ-17 GL and NZ-27 GL,
- sniping ammunition 12.7 mm (rach, AP, API, APIT)

It is necessary to emphasize the newly obtained devices of the arms and military equipment that were not included in the armament of the former SFRY and which are "attractive" on the world market today, primarily in the NATO member states, including:

- ammunition 40 mm

- combat helmet and other protection demining and police equipment made from Kevlar.

Capacities

Arms industry sector in the Federation of Bosnia and Herzegovina also has installed operational capacities for the following products of arms and military equipment for a year and working in one shift:

- small arms ammunition	5.56-7.9	75.000.000 pcs
- anti-aircraft ammunition		5.000.000 pcs
- initial primers for small arms and anti-aircraft ammunition		400.000.000 pcs
- detonators and duplex primers		8.000.000 pcs
- hand grenade fuses		1.200.000 pcs
- electric primers		150.000 pcs
- ammunition 40 mm		250.000 pcs
- fuses and cannon primers		500.000 pcs
- anti-tank mine		100.000 pcs
- hand grenades		600.000 pcs
- infantry mortar ammunition	60-120 mm	50.000 pcs
- artillery ammunition (in sub-assemblies)	76-155 mm	20.000 pcs
- tank ammunition	125 mm	5.000 pcs
- artillery pieces	105-152 mm	50 pcs
- infantry mortars	60-120 mm	400 pcs
- aiming weapons		400 pcs
- periscopes		1.000 pcs
- combat helmet		20.000 pcs
- ammunition for starter guns		20.000.000 pcs
- artillery gunpowder and rocket propellant		1.200 tonnes
- commercial explosive		15.000 tonnes
- detonating cord		40.000 pcs

Legal framework and monitoring in the arms sector

Legal and institutional framework for arms and military weapons development, manufacturing, overhaul and trade was established by laws and bylaws for the arms industry sector (at the level of Bosnia and Herzegovina and the Federation of Bosnia and Herzegovina).

By decision number 2006/29/CFSP of 23 January 2006 the European Union removed all restrictive measures related to the arms export from the countries of EU to Bosnia and Herzegovina. All the same, the amendment to the Law on Politics of Direct Foreign Investments enables the entrance of foreign capital to the arms industry to more than 49%. Monitoring at implementation of laws and bylaws is conducted in the Federal Department for Arms Industry which is within the Federal Ministry of Energy, Mining and Industry.

International obligations

The most important treaties that affect the arms industry sector signed by Bosnia and Herzegovina, thereby the Federation of Bosnia and Herzegovina, are the Stabilization and Association Agreement and International Agreement on Environmental Protection. Adoption of legal heritage of the European Union in the area of arms industry was defined by some of the agreements so that by the decision of the Council of Ministers from 2003 the application of EU Behaviour Code became obligatory and procedure of weapon export (8 criteria) as well as Common list of military equipment adopted by the Council of Ministers on 23 February 2009 which defines rules in the control of export of military technology and equipment (Official Gazette of BiH, no 40/10).

The ownership of the arms sector

The ownership of the arms sector in the Federation of Bosnia and Herzegovina is public and private. In one (1) business company there is 100% of state capital, in other two (2) business companies there is 100% of state capital, while in seven (7) business companies there is mixed capital where 51% of it is owned by the state.

Institutional framework of planning in the arms sector

Planning of development of arms industry in the Federation of Bosnia and Herzegovina is achieved through Strategy of development of arms industry and action plans for realisation of the Strategy. The Strategy of development of arms industry is issued by the Parliament of the Federation of Bosnia and Herzegovina for the period of ten (10) years. The Strategy will be harmonized with economic and development plans of the Federation of Bosnia and Herzegovina. Annual arms and military equipment development, manufacturing and overhaul plans shall be issued by administrations and board of directors in arms factories, and realisation of the plans issued shall be coordinated by the Federal Department for Arms Industry.

Arms sector market

Nowhere in the world is arms and military equipment market fully open and free, so this is the case in Bosnia and Herzegovina, i.e. the Federation of Bosnia and Herzegovina. Any kind of export, import or inside trade is regulated by restrictive provisions and is subject to strict monitoring. Besides that there is an international ban on arms export to particular countries (sanctions of United Nations Security Council, EU and OESS) to which Bosnia and Herzegovina adheres. Due to the international obligations on the control of export of arms and military equipment that Bosnia and Herzegovina accepted, the arms and military equipment products market for products from the Federation of BiH was significantly decreased. Until 1992 the primary buyers of arms and military industry were countries of Middle East (Iraq, India) Africa (Libya, Uganda, Estonia, Somalia, etc.).

In the altered circumstances when export to countries in war or countries with politically unstable system where breaking out of ethnical conflicts is possible, politically stable countries become the primary potential market for arms and military equipment export, those are primarily NATO member states.

In 2010 there was an export of finished goods (small arms and AA ammunition, infantry mortar, 40mm ammunition), around 50% of the export belongs to the subassemblies for further incorporating during the arms and military equipment (various initiating devices, fuses, periscopes, forgings for different kinds of grenades, etc.) The countries to which the Federation of BiH exports arms and military equipment and which may be a steady buyer of such products in the future are: Israel, Netherlands, Slovakia, Serbia, Romania, Turkey, Spain, Hungary, Greece, Switzerland, Malaysia, Czech Republic, England, Thailand, Montenegro, United Arab Emirates, France, Germany, USA, Saudi Arabia, Kuwait, Slovenia, Croatia, Italy

etc. There were many enquiries for delivery of arms and military equipment devices coming from the abovementioned countries and the factories were not able to give a positive reply for the following reasons:

- there was a request for improvement of versions of articles from the line of goods of the existing factories;
- there was a request for shorter deadlines of delivery;
- there was a request for lower prices;

Administrations of some arms factories without conducting good analysis accepted and signed contracts of delivery of arms and military equipment with foreign partners which have not been fulfilled which resulted in the material injury of the factories and positions of those factories and the complete arms industry were threatened. It happened to factory "Pretis" d.d. in Malaysia, Pakistan and Egypt.

Something similar happened after the claims about quality of the delivered arms and military equipment from "Binas" Bugojno to Turkey. One should bear in mind that there is one buyer of arms and military equipment in the abovementioned countries (Ministry of Defence) so despite their will to cooperate with Bosnia and Herzegovina these countries are not likely to accept the cooperation with other factories of arms industry in the Federation of BiH as well.

4. ARMS INDUSTRY AS AN ELEMENT OF ECONOMIC DEVELOPMENT

In the economically developed countries arms industry is an elite part of industry employing expert personnel and in comparison to other industries it allocating a very great amount of funds for the development of new products and technologies. The large number of newly adopted technologies that are used for the needs of arms industry becomes applied in the manufacturing of products on the market.

In the former SFRY, especially in Bosnia and Herzegovina, in cooperation with strategic partners from the European Union the arms industry used to be a carrier of development of cars, ball and roller bearings, typewriters, and various materials of other purpose.

Money invested in the development industry will result in significant profit but only when business for a longer time period is taken into consideration. The fact that a great percentage of private capital is being invested in the arms industry of the European Union, and especially USA, proves that.

5. SCENARIOS OF DEVELOPMENT OF ARMS INDUSTRY

Strategy of development of arms industry of the Federation of BiH deals with the three following development scenarios

5-1. Development and manufacturing of arms and military equipment along with employment of the most part of the personnel for the purpose of Armed forces BiH and for the minor part for the foreign market.

5-2. Development and manufacturing of arms and military equipment for the purpose of employment of all personnel for the needs of foreign market.

5-3. Development of spare capacities.

5.1. Development and manufacturing of arms and military equipment along with employment of the most part of the personnel for the purpose of Armed forces BiH and for the minor part for the foreign market

After 1996 the arms industry of the Federation of BiH was left without the largest buyer of finished goods and services and the largest initiator of development of new products of arms and military equipment and technology for manufacturing of arms and military equipment. It

was the Army of the Federation of BiH which later became Armed forces of BiH. Because of the decrease in the number of Armed Forces and their rearrangement according to the NATO standards there were major surplus of products arms and military equipment and whose storing and dismantling and cleaning takes a great part of budget money which would, under other circumstances, be used for equipping of armed forces with new and modernised arms and military equipment. The last letter of the Ministry of Defence BiH number 11-03-23-2671-1/11 of 7 July 2011 confirms the earlier trend of accommodation of Armed Forces to the existing financial opportunities of Bosnia and Herzegovina. Armed forces of Bosnia and Herzegovina do not have their mid-term and long-term plan of equipment and approved budget shall be used primarily for the purpose of maintenance of the existing technology and arms and military equipment, along with further dismantling and cleaning and destroying of old arms and military equipment. According to this scenario arms manufacturing in the Federation of BiH would have no perspective for its further development.

5-2. Development and manufacturing of arms and military equipment for the purpose of employment of all personnel for the needs of foreign market.

This is not the best scenario of development and manufacturing for an arms industry. There is an unwritten rule that the buyers of arms and military equipment, which are usually armed forces of a country, buy the arms and military equipment primarily from their own arms industry and only what is required and missing is obtained through import and through international calls for tenders.

At those tenders arms industry of the Federation of BiH has a very strong competition that sells their surplus of capacities with the maximum support of their own countries. That support is expressed in the following:

- the sale of the finished goods from military warehouses that arms industry shall subsequently return is enabled. This way short delivery deadlines which sometimes are the most important factor for the buyer are offered;
- the export is stimulated by special state premium;
- banking system provides a good conditions of sale of arms and military equipment along with deferred payment;
- the export is conducted through well organised export companies and export companies that own financial power that accept and pay through compensations with certain raw materials or trade products;

Arms industry in the Federation of BiH possesses none of the abovementioned stimulating factors but it still has been succeeding at the world market since 1996 to this day by selling:

- small arms and anti-aircraft ammunition;
- infantry mortars;
- 40 mm ammunition,
- various subassemblies for further manufacturing of arms and military equipment.

Despite all the vitality of arms industry of the Federation of BiH its further existence as exclusive manufacturer for the foreign market primarily requires:

- rational use of existing human and material resources;
- personnel enhancement by primarily technical personnel of arms industry along with compulsory employment of younger management teams with managers educated for the twenty-first century;
- alteration of political climate in Bosnia and Herzegovina towards the arms industry as a factor that shall produce a steady foreign exchange inflow. It should be noted that all provisions at the level of Bosnia and Herzegovina regulating the work of arms industry and arms and military equipment export and especially their enforcement are

too complicated and unnecessary restrictive so that in some instances there is more time wasted on obtaining export licences than on the manufacturing of the arms and military equipment agreed upon. It is particularly difficult to comprehend the negative attitude of the Ministry of Defence of BiH when it comes to requests of arms industry for loans or donations of weapon and ammunition used for testing for the purpose of development of new types of arms and military equipment for the purpose of export or display shootings in the country and abroad in order to attract the potential buyers.

- creation of material stocks in the Federation of BiH made of key import reproductive materials in order to reply to requests for arms and military equipment export.
- banking system is not acting in favour of the arms industry, primarily banks dealing with foreign capital and the majority of banks in BiH are like that so it is necessary to primarily enable Razvojna banka BiH to provide support for export of arms and military equipment.

5-3. Development of spare capacities

Until 1992 former Federal Secretariat of People's Defence (FSPD) decided on the line of goods in arms factories but only if the production was related to needs of FSPD. So "Pretis" Vogošća and Krušik Valjevo produced the same line of goods at almost identical equipment (infantry mortar and artillery shells) but there were differences in calibre. Namely, Krušik manufactured calibres up to 82 mm and Pretis bigger calibre. "MOL" Lički Osik produced the same line of goods but it had a spare capacity status. When it comes to export of arms and military equipment manufacturers did not have to stick to the line of goods for FSPD.

In order to increase the export position of arms industry it is necessary to enable more manufacturers of the same product using small financial investments, with the new manufacturers being treated as "the spare capacity" and they could be used for the abovementioned purposes only upon the request of companies that are regular manufacturers of the abovementioned arms and military equipment with the permission of the Government of the Federation of BiH at the suggestion of the line minister.

5-4. The impact of arms industry sector on the environment

The most important impact of arms industry sector on the environment is creation of wastewater during the manufacturing of primary explosives and their incomplete dissolution before releasing into the drainage basins. Furthermore, dangerous waste that requires to be taken care of in a proper manner is created during the production of explosive materials. When metal parts are being processed thermic and chemical protection of those parts is being used and dangerous waste is created. The impact on the environment is also manifested in increased level of noise at everyday training area testing of finished goods of arms and military equipment. The development of arms industry will inevitably have an impact on the environment, so when making long-term plans it must be taken into consideration to minimize the unwanted effects. The main challenge is to enable long-term development of arms industry along with the categorisation of dangerous and non-dangerous waste and taking care of it and efficient solving of problems related to the waste water along with primary explosives and chemicals in the process of redox.

One of the solutions is also more intensive development batch production of explosive materials and mixture of without heavy metals. Additional problem is dismantling and cleaning of old arms and military equipment in the Federation of BiH that shall be conducted on a long-term basis in arms manufacturers too because that process pollutes the air, soil and water course.

6. Privatisation

Present state

Structural and legislative changes and changes of ownership in arms industry occurred in the previous period. Only in one (1) business company there is 100% of state capital, in other two (2) business companies there is 100% of state capital, while in seven (7) business companies there is mixed capital where 51% of it is owned by the state. Privatisation of state capital was conducted through public registration of shares so this change of ownership did not bring the much needed new capital.

Arms industry products have their own price that is being verified on the global level. That should be the key motif for all activities in this area and refers primarily to fair conducting of business activities, possibility for development and in the future to privatisation of the remaining part of the state capital.

The final goal of all activities in arms industry is a steady production on a long-term basis at reasonable costs. Ownership in the part of arms industry is a matter of long-term national interests and everything that is not treated in this way in accordance with European practices should be privatised. Privatisation is the last step in the process of regulating arms industry and it is not necessary for “EU legal heritage” to be implemented. Prior to that it is necessary to essentially regulate this area which means recovery of the present state and the best moment for the Federation of BiH shall be chosen for the process of privatisation to be conducted.

Of course, controlled introduction of foreign capital into the arms industry is desirable because of its efficiency and effectiveness that has been proved. That does not have to be redemption of shares owned by the Federation of BiH but primarily a stimulation of investment funds to conduct redemption of shares. The other issue related to privatisation is dynamics and content of privatisation.

It is necessary to envision all relations in the arms industry which includes ownership relations too, in order for good decisions to be made. Privatisation should occur as a highly controlled process with clear goals. At the moment foreign capital is being seriously interested in only one company in arms industry of the Federation of BiH.

7. Public, informing and giving advice

Strategic interest of every country is to have informed public that can effectively contribute to the discussion on the development of arms industry. At today's day and age it is necessary to include public in making all important decisions related to arms industry, including especially those that have an impact on environment. By accepting international conventions (as Aarhus Convention is, ratified by BiH on 1 October 2008) and by establishing national legislation it is necessary to regulate a manner of informing and participation of public.

In the former SFRY arms industry had a status of “factor of defence” and everything related to it had a status of military secret. Today arms industry is a part of economic system which largely contributes to employment and export, and because of its specific manufacturing it is specially supervised by competent authorities. So arms industry needs an affirmative support of media that largely effect the formation of public opinion. However, with some honourable exceptions, media in Bosnia and Herzegovina are describing arms industry as disorganised area in which domestic and international norms are broken to the great extent during the production and export especially. In the recent history some state authorities of BiH have bowed to pressure of media which lead to two-month ban on export and severely damaged the reputation of arms industry abroad as a reliable distributor of arms and military equipment.

With the purpose of quicker harmonization of existing regulations that are effective and in the part that refers to better informing and inclusion of public it is necessary to do the following:

- to make available information on the existing assessment of danger for the environment;
- prepare an act regulating the participation of local community before making the final decisions on introducing new technologies that can have an impact on environment;
- make a media coverage of restoration of sources of danger for environment with compulsory engagement of local community;
- to affirm public through media that arms industry disposes of technology which is above average, that they require such personnel and that, with good organisation, it can contribute to of the local community and entire BiH in a promising way.

8. Education and international cooperation

The former SFRY established for that time a good education system of personnel working in the arms industry along with their further specialisation in the country and abroad.

Certain number of faculties of mechanical engineering opened separate “departments for ballistics” while technical military academies that provided education for technical personnel for working in troops were open for “civilian” scholarship holders from arms industry. There was an agreement of cooperation signed with large number of countries in the area of arms industry and for the most it was carried out, especially when it came to visit of technical teams according to the topics that were determined in advance. Unfortunately after 1996, along with all problems of not functioning, arms industry of the Federation of Bosnia and Herzegovina underwent a major professional personnel drain and little interest of young personnel of technical profession to work in this field. Faculty of mechanical engineering in Sarajevo opened a separate department for studies of “Defence technology” but there was very small interest for studying at the department.

Unis-“Ginex” from Goražde should be mentioned as a positive example of education of professional personnel. Along with the modes salary, for long years that manufacturer has been providing scholarships for children of their employees and they guarantee employment upon the graduation from university studies. Immediately after they are employed, young experts are included in the team work with the most professional personnel and are fully monitored by their mentor as long as it is necessary. Also, additional education in the area of computer science, foreign languages and compulsory visit to top arms and military equipment fairs in the world. The result of this practice is visible through steady business activities of Unis-“Ginex” manufacturer and constant expanding of products range of arms and military equipment for the foreign market.

In the period from 2012-2022 arms industry of the Federation of BiH must ensure that there are at least 10% of technical personnel in the under 40 in the personnel structure and to create a good system of their additional education in the field of arms and military equipment. Faculty of Mechanical Engineering can help with this but companies (Unis-Institut, Faculty of Mechanical Engineering) after they have conducted registrations for projecting products and technologies of arms industry. The abovementioned institutes may invite many retired pronounced experts in the field of arms and military equipment to cooperate on certain projects through temporary service contract. There are signed agreements on cooperation in the field of defence at the level of Bosnia and Herzegovina which includes cooperation with Turkey, Greece and Pakistan in the field of arms industry. Unfortunately for long years the implementation of the signed agreement in the field of arms industry has not moved from the starting point.

Full implementation of the agreements that were signed and concluding new ones, primarily with former republics, would significantly help young personnel in technical disciplines to recognise arms industry as attractive field of their future engagement.

Financing

Every year arms industry worldwide launches a great number of new or innovated products and all those manufacturers not following such a trend lose the positions on the foreign market they made with major effort. Due to small investments in personnel and products and capacity development exhausted all their domestic reserves and achieved bad results in doing business since 1996 to this day. Five companies have their account frozen for a longer period of time and outstanding liabilities towards the creditors are around BAM 100.000.000,00.

In order to achieve the objectives that are pursued and related to the development of arms industry for the period from 2012 until 2022 it necessary to enable steady funding of this sector in such a manner that market justification and sustainability to each company. Quality of individual source of funding are determined by two conditions:

- the available funds;
- price of using funds.

At the relation of those two elements of availability of funds and price of capital used in the financing of development of arms industry all positive and negative effects that used capital can have in liquidity, safety, profitability and stability of work and development of individual companies in arms industry emerge.

How to achieve financial stability and success of doing business of arms industry and achieve the pursued objectives:

- enable funds for discharging due liabilities and defreezing of transfer account;
- enable funds for development of new products;
- rationality in building new capacity and exploitation;
- enable three-month funds of import reproductive material in order to shorten delivery deadlines and increase competitiveness at the market.

The solution is in establishing steady funding system that should not rely on banks dealing with foreign capital (because they avoid financing arms industry) but primarily on banks dealing with domestic capital (Razvojna banka, Privredna banka and Union Banka). In addition to that all funds that will belong to the The The Federation of Bosnia and Herzegovina and that are made of surplus of old weapons belonging to the Ministry of Defence should be spent on the procurement of three-month supply of import reproductive material. If the previous method does not provide steady income of financing it is necessary to review the existing objective so that the country keeps the majority of capital in the majority of companies dealing with arms industry and consider an option of intensive entrance of foreign capital in this area.

10. Safety aspects of arms industry

Manufacturing, trade and overhaul of arms and military equipment still has to undergo general and specific safety treatment in the following area:

- a) safety and protection of humans, facilities, data, means of production, special tools and plant,
- b) safety of documents,
- c) safety and protection of trade with and storing of arms and military equipment,
- d) safety of research and development of arms and military equipment,
- e) safety of technological data,
- f) safety of business and financial data,

- g) safety of relations towards the foreign countries in the area of arms and industry manufacturing.

Moreover, manufacturing of, overhaul and trade with arms and military equipment have to be in accordance with Strategy of safety of Bosnia and Herzegovina, which means protection of interests of national safety of Bosnia and Herzegovina on domestic and foreign policy plan through strict adherence to international bilateral and multilateral agreements and safety arrangements and procedures that were signed by the country of Bosnia and Herzegovina, ratified or taken over in the form of process of joining to Euro-Atlantic defence safety associations.

There is an obligatory legal framework at the level of Bosnia and Herzegovina and the Federation of Bosnia and Herzegovina for closer arrangement of all safety aspects of manufacturing of, overhaul, and trade in arms and military equipment based on which material goods, people, confidential data, developmental projects, documents, technological information gained from the possible intelligence research, diversion, alienation, illegal trade and abuse for terrorist or other purposes.

Safety aspect of human resources in the area of production and arms and military equipment trade represent an important segment. This is the most sensitive issue because every idea and project are founded on highly professional and experienced personnel, other scientific and research potentials, with developed safety culture, without safety “vulnerabilities”. When it comes to personnel policy it is necessary to adhere to procedures prescribed by regulations on the protection of confidential data, including the issue of security checks, security clearance, security obstacles, and right to access to security data, i.e. data that are confidential.

Planning, organization and monitoring of security measures enforcement and protection of the abovementioned goods and interests must be conducted in accordance with the provisions regulating arms and industry equipment manufacturing and trade as well as regulations regulating the area of security, defence and protection of secret data in Bosnia and Herzegovina and the entities.

It is necessary for the Federation of Bosnia and Herzegovina to harmonize or yet coordinate regulations regulating the fields of protection of confidential information with the regulations at the level of Bosnia and Herzegovina within the reasonable time period, as well as precondition for legal protection from breach of protected goods in the area of arms industry.

11. Strategy of development of manufacturers

Arms industry manufacturers have the following:

- a) common elements:
 - legislation
 - little connection through mutual delivery of subassemblies (Unis-“Ginex” delivers explosive to Pobjeda-Rudet and Pobjeda-Sport, primers”to ”Igman” and “”Binas”, ”Zrak” delivers aiming devices BNT-TMiH)
- b) differences
 - line of goods
 - market
 - supply lines.

Due to major uniqueness that characterizes every arms industry manufacturer it was necessary for administrations of those manufacturers, according to the instructions and monitored by the

Committee for creating a Strategy of Development of Arms Industry of The Federation of BiH, to create a Strategy of Development for each manufacturer and have it verified by supervisory board, which was done and they represent an integral part of the general Strategy. The quality of individual strategies fully depicts vision and capability of administrations of those manufactures to solve the present problems and requests of present and future times in particular that are placed before arms industry manufacturers in the area of general globalization of the market.

Monitoring of implementation and needs for adjustments to the strategy

Implementation of policy of the Federation of BiH and arms industry development planning that is determined by the Strategy of development of this sector requires measures and activities, i.e. effective mechanisms that would be in the function of the Strategy itself in the purpose of achieving all concrete tasks determined by the Strategy.

In that regard there is a need for systematic monitoring of individual development objectives that are specific for each company, determined development projects, achieving export and way to enable necessary funds primarily for the purpose of financial consolidation so the realization of other tasks within strategic goals could be realized.

The responsibility for conducting the strategy is within the competence of Government of the Federation of Bosnia and Herzegovina that should create framework for efficient achievement of set goals through official plans of how to conduct the strategy.

In accordance with the aforementioned the Government of the Federation of BiH defines measures, activity carriers and deadlines of realization of Strategy through action plans as well as the manner of achieving cooperation with local self-government units bodies in the field of planning of new technologies and environment protection and other subjects in Bosnia and Herzegovina and international institution. Action plan includes measures for realization of Strategy that can be divided in several groups: legislative, organizational, measures of business restructuring, technical measures, financial measures, educational, informational, advisory and promotional measures.

Action plans are the main instruments of planning coordination and monitoring of the Strategy.

The necessity for setting institutional framework for monitoring and assessing the realization of Strategy, action plans and other strategic documents in the area of arms industry can be achieved within the line ministry which would have the task of:

- surveillance and monitoring of realization of Strategy and action plans;
- coordinating measures and activities, i.e. persons in charge of realization of concrete tasks;
- systematically monitoring and gathering data and information that refer to the realization,
- monitoring companies and institutions and persons responsible for implementation of set goals;
- analysing reports of competent authorities on the realization of Strategy and action plans;
- assessment their manners and results;
- suggesting measures for increasing efficiency of realization of Strategy and action plans;
- encouragement and directing of cooperation of state authorities and other authorities, and other persons in charge of realization Strategy and action plans;
- if necessary, preparing reports on implementation of strategic documents for public needs;

- presenting the annual report on their work i.e. results of realization of Strategy and action plans to the Government of the Federation of BiH.

13. SWOT analysis of arms industry in The The Federation of Bosnia and Herzegovina	
STRENGTH	WEAKNESS
1. Availability of high quality infrastructure and key equipment	1. Age of facilities and equipment
2. Manufacture enables steady supplying with key products of arms and military equipment of Armed Forces BiH	2. Lack of interest of Armed Forces for arms and military equipment made by domestic arms industry due to the lack of budget funds
3. Law regulating arms and military equipment manufacture and trade in BiH and the Federation of BiH are adopted	3. International norm are often accepted without previous analysis of their impact on the arms industry (e.g. ban on cluster ammunition manufacturing)
4. Elements and bylaws on arms and military equipment manufacturing and trade at the level of BiH and the Federation of BiH are adopted	4. Slow implementation of adopted acts especially at issuing of import and export license
5. Insufficient number of expert personnel creates possibility of additional employment	5. Low level of interest of young personnel to work in the arms industry
6. Existence of regulative on environment protection and their predominant harmonization with European standards	6. Manufacturers have no environmental permits
7. Agreement on cooperation with Turkey, Greece and Pakistan is adopted	7. There is no implementation of the adopted agreements
8. Aarhus Convention is ratified	8. The public is not sufficiently informed about the arms industry

OPPORTUNITIES	THREATS
1. Export of products of arms and military equipment along with achieving foreign exchange surplus	1. Exposure to the prices of competition at the open market (insecure income)
2. Attracting foreign investors	2. Political instability in surroundings, problems in the functioning of BiH
3. Development of new products and technologies	3. Lack of financial resources
4. Connection of broken technological	4. Lack of political will

14. Conclusion

Strategy of development of arms industry of the Federation of BiH is made in the circumstances when it is not truly possible to estimate when Bosnia and Herzegovina will become a NATO and European Union member state.

However, the vision of Strategy is set in such a way that in the reporting period Bosnia and Herzegovina will certainly be a NATO and European Union member state, so that arms sector should be directed towards the goals that NATO and European Union set to themselves. While doing that in the meantime the surrounding should be acknowledged (Slovenia and Croatia are already member states of NATO, Montenegro is a serious candidate, Slovenia is in the EU and Croatia should be by the end of 2012, while serious candidates for joining the EU are Serbia, Montenegro, Macedonia. It is necessary to especially acknowledge the fact that arms industry in the Federation of BiH used to be an integral part of well organised arms industry in the former SFRY and that majority of capacities in Serbia and Montenegro are functional, while that is not the case in with capacities in Slovenia, Croatia and even the other entity of the Bosnia and Herzegovina. It is inappropriate that Bosnia and Herzegovina, for which European Union sets a first condition of increased regional cooperation, has no agreement on cooperation with Serbia, Croatia, Macedonia in the area of arms industry. Even worse example of non-cooperation in this area is the two entities in the Bosnia and Herzegovina.

By choosing NATO and European Union Bosnia and Herzegovina takes over the obligations to implement legal heritage of NATO and EU too in the area of arms industry. Strategy points at the new trends of enhanced cooperation of individual arms industries with arms and military equipment manufacturers in the EU member states but it also points to quicker connecting by line of the capital of the arms industry of the EU and members with special status (Switzerland) in greater, more complex and economically stronger systems that can disable the approach of arms industry of the Federation of BiH to those markets it does not connect to those systems through capital.

Safety of supplying with key reproductive materials from export is a condition of economic development of arms industry and its effective representation at the foreign market so the Government of the Federation of BiH should primarily implement its “Decision on forming material resources for arms industry” that was made earlier. On the other hand, fulfilment of some of the objectives of Strategy, primarily “financial consolidation” requires relatively substantial financial resources so it is logical and reasonable to expect of Government of the Federation of BiH to encourage domestic and foreign investors to invest in arms industry of the Federation of BiH. Regardless of the fact that world’s economy is in economic holding pattern, there is an interest expressed in investment.

At the level of BiH, safety at arms and military equipment manufacturing and trade follow the legal heritage of EU but due to the complex organisation of BiH (entities, cantons) and similar organisation of safety police, there is a possible danger that increasing security monitoring will end up in the wrong way and significantly decrease efficiency of representation at foreign market (very complex procedure of issuing of import and export license).

One of the questions that need a clear answer is: should the Federation of Bosnia and Herzegovina build arms capacities that shall launch all what they produced on the foreign market. Anyway, that should depend on the investor and they should be encouraged to do that in regions that have tradition, professional personnel and infrastructure for building such capacities.

Based on this Strategy the Government of the Federation of Bosnia and Herzegovina will build an Action plan that will be complementary part together with the Strategy. Action plan will define priorities, deadlines and performers of individual activities so that conditions for realisation of set objectives will be enabled.

In the end the commission would like to remind of the constant presence of inefficiency in the arms industry when it comes to realisation of preconditions for implementing good solutions of competent authorities that are already created. So through Decisions Government of the Federation of BiH created legal preconditions to conduct recapitalisation of arms industry in the amount of BAM 57.062.744,29 by 2012 (paid up amounts from passive sub-balance to the manufacturers' accounts and a decision on using those financial resources as well as real estates that were not included in the opening balance in the process of recapitalisation was made by Government of the Federation of BiH). At the beginning of the last quarter of this year Administrations and Supervisory Boards in manufacturing factories have not yet started realization of the previous task which would make a major help to restore existing state in the arms industry.