DEVELOPMENT OF NATIONAL BIOSAFETY FRAMEWORK FOR

SERBIA AND MONTENEGRO

Belgrade and Novi Sad, 2006

UNEP-GEF Project on Development of National Biosafety Framework for Serbia and Montenegro

Global Environment Facility

United Nations Environment Programme

The National Biosafety Framework for Serbia and Montenegro was prepared during the UNEP-GEF project "Development of National Biosafety Framework for Serbia and Montenegro".

Published by:

UNEP-GEF - United Nation Environment Program – Global Environment Facilities
Ministry of Agriculture, Forestry and Water Management of Republic of Serbia

Reviewer:

Darja Stanič Racman

Contributors:

Dragana Miladinović, Vanja Kojić, Darko Lojen.

Edition:

200
December 2006

EXPLANATORY NOTE

At the beginning of the Project "Development of Biosafety Framework for Serbia and Montenegro" (the Project in further text), Serbia and Montenegro were in the common state. There were two representatives from Montenegro in National Coordinating Committee, and the representatives from Montenegro were invited to take part in all activities and Workshops in connection with the Project. Montenegro became an independent state on 03. 06. 2006 and all the activities afterwards regarding the Project were done only in Serbia. The same stands for the data collection. All the data given in this Document, as well as descriptions of policies, administrative system and legislation are for Serbia only.

CONTENTS

PROJECT BACKGROUND

The UNEP-GEF Project Number GFL/2328-2716-4801 on the Development of the National Biosafety Framework for Serbia and Montenegro started in October 2004 and ended in July 2007.

The National Executing Agency for the UNEP-GEF project was Ministry of Agriculture, Forestry and Water Management of Republic of Serbia (Ministry of Agriculture in further text). Contact person was Mrs. Vanja Kojić, Department for Agricultural Resources, Section for Analysis and Agricultural Policy, Ministry of Agriculture, Forestry and Water Management, Omladinskih brigada 1, 11070 Belgrade, phone +381 11 2604 457, fax +381 11 3131 971, e-mail: vanja.kojic@minpolj.sr.gov.yu.

At the beginning of the Project the National Project Coordinator was Mr. Nemanja Velimirović, but as he left his job in summer 2006, the Project was finalized by Mrs. Vanja Kojić.

The National Coordination Committee consists of 14 members, who are representatives from different Ministries, scientific and academic institutions, as well as NGOs. The list of members of NCC and their respective institutions is given in *Appendix 1*.

ABREVATIONS

BCH	Biosafety Clearing House
CBD	Convention on Biodiversity
CPB	Cartagena Protocol on Biosafety
EU	European Union
GEF	Global Environmental Facility
GMO	Genetically Modified Organism
LMO	Living Modified Organism
NBC	National Biosafety Committee
NBF	National Biosafety Framework
NCC	National Coordinating Committee
NGO	Nongovernmental Organization
SCG	Serbia and Montenegro
RS	Republic of Serbia
UNEP	United Nations Environmental Program

1. Biosafety policy

Modern biotechnology is an area of the strategic importance for the development of a country. Applications of modern biotechnology in agricultural production are of the great interest for Serbia. Serbia recognized the necessity for the establishment of the adequate administrative and legislative system in this sensitive area of agricultural production. Development of the biosafety policy is one part of it.

On 18 August 2005, Strategy of Development of Serbian Agriculture was adopted in Parliament of RS. The Strategy recognizes the importance of modern biotechnology and biosafety in contemporary agriculture and in this regard proposes to: "…develop strategic, legal, administrative and technical instruments to provide adequate level of protection and control in the area of work with GMOs." The importance of GM plants for the development of the agriculture, and many benefits that could be obtained from their use, are also stressed in this document (http://www.minpolj.sr.gov.yu/article.php?sid=215&mode=nested&order=0).

Serbian biosafety policy is based on measures for preventing and reducing possible adverse effects of GMOs on human health and the environment. Generally, only Ministry of Agriculture, Forestry and Water Management (Ministry of Agriculture in further text) is involved in biosafety policy, and at the moment this Ministry covers all the areas of GMO use. Ministry of Science and Environment Protection, as well as Ministry of Health did not get involved in this policy although they were provisioned to be a part of NBF. However, there are plans to include these two Ministries in NBF in the near future and to place under their authority parts of implementation and enforcement of amended Law on GMOs, notably the parts on GM food and pharmaceuticals, and prevention of adverse effects of GMOs on the environment.

Serbia also recognizes the importance of international treaties regarding biosafety and biodiversity. It has ratified the CBD in March 2002 and CPB in February 2006.

According to the survey, there are eight relevant institutions for biosafety in Serbia that currently work with GMOs or are involved in their detection (*Appendix 3*). Five of these institutions are research institutes, one is university faculty, and two are laboratories for GMO detection. There are two research institutes that are conducting field trials with GMO maize, and one GMO product (soybean meal) has been approved for placing on the market.

Serbia has GMO Act in place, the Law on GMO, which was adopted in 2001, and Regulations on contained use, deliberate release and placing on the market of GMOs, adopted in 2002.

The draft of amended Law on GMOs has been finished and the writing of new Regulations, more adjusted to legislation regarding GMOs and biosafety in EU countries, is in progress. Beside this, it is expected that Serbia will take part in UNEP-GEF projects "Implementation of National Biosafety Framework" and Biosafety Clearing House (BCH).

The obligation of all relevant institutions in Serbia to harmonize legislation in the area of agriculture, GMOs included, with EU legislation is clearly stated in the Strategy of Development of Serbian Agriculture (http://www.minpolj.sr.gov.yu/download.php?op=getit&lid=193).

Beside this on 17. 06. 2005 Serbian Parliament adopted National Strategy of Serbia for the Serbia and Montenegro's Accession to the European Union which provisions harmonization of Serbian legislation with EU legislation (http://www.seio.sr.gov.yu/code/navigate.asp?Id=73).

1.1. Future plans and needs

The biggest lack of the existing policy is insufficient or non-existing involvement of other Ministries, beside Ministry of Agriculture, in creation and implementation of biosafety policy. There is also confusion and insufficient knowledge on the distribution of the responsibilities between competent authorities, i.e. who is responsible for what.

There is a need to clearly define and divide competencies and jobs between competent bodies as well as within the competent authorities. The competencies regarding different areas of biosafety policy should be divided between Ministries competent for the environment protection, health, science and education, and agriculture. There are the plans to do so in the future, but this is a long-term process and it will take some capacity building and training that could be realized with the help of external and domestic experts.

It is also necessary to improve communication between and within competent authorities. This could be achieved through training and practice.

2. Legislative system

2.1. Current situation in biosafety legislative system in RS

In 1998, Federal Ministry of Agriculture – Federal Department for Plant and Animal Genetic Resources formed Working Group with the aim to create legislation in the area of GMOs. Basis for creation of legislative framework and biosafety system regarding GMOs was founded on measures for prevention and decrease of potential negative effects of GMOs on human health and the environment, as well as for maintenance and sustainable use of biodiversity.

Law on GMO was adopted by Federal Parliament in May 2001 ("Official Gazette of FR Yugoslavia" No. 21/2001 of 8.05.2001) (http://www.minpolj.sr.gov.yu/images/materiali/zakonogmo.pdf).

After adoption of Law on GMO, the agreement was made between Federal Ministry of Agriculture – Federal Department for Plant and Animal Genetic Resources and Federal Ministry for Labor, Health and Social Care on division of authority. Federal Ministry of Agriculture – Federal Department for Plant and Animal Genetic Resources got authority over contained use, deliberate release and placing on the market of GMOs and products derived from GMOs that are not made for human consumption, i.e. seed and planting material and feed, while Federal Ministry for Labor, Health and Social Care got the authority over GMOs and products derived from GMOs used as food. During the existence of the State Union of Serbia and Montenegro, federal Ministries were gradually disestablished and at the end there were only Ministries of Defense and Foreign Affairs on federal level. When Federal Ministry for Labor, Health and Social Care was disestablished, Ministry of Health of RS did not take authority over the GM food, and Ministry of Agriculture did not get it. It is expected that the new Government will resolve this, as Ministry of Agriculture is willing to take authority over GM food if it is necessary.

Relations in State Union of Serbia and Montenegro were redefined again, and Federal Ministry of Agriculture was disestablished, so on 1. 04. 2003 Ministry of Agriculture, Forestry and Water Management of RS got authority to implement Law on GMO. This was regulated by the Law on Ministries (Official Gazette of RS" No. 35/2003).

In 2004 the new Law on Ministries was adopted ("Official Gazette of RS" No. 19/2004) and Ministry of Agriculture got the authority to manage "… the fulfillment of the requirements of the Law on GMO and Regulations, risk assessment and control measures in connection with the biosafety during contained use, deliberate release, placing on the market and import of GMOs.". Ministry of Agriculture became responsible for the implementation of Cartagena Protocol, as well.

Law on GMO regulates conditions for contained use, deliberate release into the environment and placing on the market of GMOs and products derived from GMOs, as well as measures for prevention and removal of undesired effects during contained use, deliberate release, placing on the market, production and transport of GMOs and products derived from GMOs. This Law is not restrictive towards work and use of GMOs, but places this area under strict state control, i.e.

permission from competent body must be obtained for each type of use of GMOs. Three areas of work with GMOs are provisioned by this Law: contained use (experimental work with GMOs), deliberate release of GMOs into the environment (smaller scale cultivation, e.g. field trials) and placing on the market of GMOs (cultivation, food, feed, and other uses). Law is harmonized with EC Directives 90/220/EC on deliberate release of GMO into the environment as amended by Directive 2001/18/EC and 90/219/EC on contained use of GM microorganisms.

Law represents general framework for work and use of GMOs, while detailed conditions for work and use of GMOs are defined through four Regulations. The Regulations were made in then existing FRY, and when it ceased to exist these Regulations were transferred on Republic level by decree. Here are the excepts from official translations of the Regulations:

1. *Regulations on Contained use of Genetically Modified Organisms* ("Official Gazette of FR Yugoslavia" No. 62/2002 of 15.11.2002) – "These Regulations set forth the **criteria and norms** for meeting the conditions for contained use of genetically modified organisms, which must be met by the creator, user, or their authorized representative in the Federal Republic of Yugoslavia for foreign GMOs, as well as an application form for contained use of a GMO. The criteria and norms regulate every operation by which the organisms are genetically modified, or by which the GMOs are cultivated, stored, used, transported, destroyed, or put away, and by which physical barriers, or a combination of physical and chemical and/or biological barriers serve to limit their contact with any form of life and the environment."(http://www.minpolj.sr.gov.yu/images/materiali/pravilnikoogranicenojupotrebigmo.pdf)

2. *Regulations on Deliberate Release of Genetically Modified Organisms and Products Derived from Genetically Modified Organisms into the Environment* ("Official Gazette of FR Yugoslavia" No. 62/2002 of 15.11.2002) – "These Regulations set forth the **criteria and norms** for meeting the conditions for deliberate release of genetically modified organisms (hereinafter "GMO") and products derived from the genetically modified organisms (hereinafter "GMO products") into the environment, which must be met by the creator, user, or their authorized representative in the Federal Republic of Yugoslavia for foreign GMOs and GMO products (hereinafter the "Applicant"), as well as an application form for release of a GMO and GMO products. The criteria and norms for meeting the conditions for release of GMOs and GMO products regulate the procedure of release of GMOs and GMO products into the environment, without applying specific safety measures to prevent contact with such organisms, nor providing a high level of safety for human health and the environment."(http://www.minpolj.sr.gov.yu/images/materiali/pravilnikouvodjuproizvgmo.pdf)

3. *Regulations on Placing Genetically Modified Organisms and Product Derived from Genetically Modified Organisms on the Market* ("Official Gazette of FR Yugoslavia" No. 62/2002 of 15.11.2002) – "These Regulations set forth the **criteria and norms** for meeting the conditions for placing on the market of genetically modified organisms (hereinafter "GMO") and products derived from the genetically modified organisms (hereinafter "GMO products"), which must be met by the creator, user, or their authorized representative in the

Federal Republic of Yugoslavia for foreign GMOs and GMO products (hereinafter the "Applicant"), as well as an application form for placing on the market of a GMO and GMO products. The criteria and norms for meeting the conditions for placing on the market of GMOs and GMO products regulate the procedure of placing on the market of GMOs and GMO products, by which the GMOs and GMO products are made available to third parties."(http://www.minpolj.sr.gov.yu/images/materiali/pravilnikostavuprometgmo.pdf)

4. *Regulations on the Content and Data of the Register of Genetically Modified Organisms and Products Derived from Genetically Modified Organisms* ("Official Gazette of FR Yugoslavia" No. 66/2002 of 6.12.2002) – "These Regulations set forth the contents and data maintained in the Register of genetically modified organisms (hereinafter "GMO") and products derived from the genetically modified organisms (hereinafter "GMO products"), for which the federal authority competent for matters of contained use, production of and trade in GMOs and GMO products has issued a decision on granting approval for contained use, release into the environment, or placing on the market of a GMO or GMO products." (http://www.minpolj.sr.gov.yu/images/materiali/pravilnikosadrzipodacregistragmo.pdf)

Regulations were done in accordance with Directive 2001/18/EC.

Regulations on Labeling of Agricultural and Food Products Derived from GMOs were published in "Official Gazette of FR Yugoslavia" No. 6/2003. These Regulations were brought based on Law on Standardization and Regulation on the Way of Creating and Passing of Technical Regulations and Management of Registry of those Regulations. Due to technical difficulties, the Regulations have never been applied in the practice. These Regulations are going to be changed and amended.

Beside the Law and Regulations, Ministry of Agriculture has brought *Guidelines for Types of Plant Shipments that are Going to be Sampled in Order to Determine the Presence of Genetic Modification in Plant Material Shipments in Procedure of Obligatory Sanitary Inspection of Plant Shipments during the Import* (in May 2003). According to these Guidelines, there is a mandatory sampling of seed and mercantile corn and soybean and their products for feed transported over the state border. Samples are sent into the authorized laboratories for analysis of presence of genetic modification. In this way border control of import was established. Each shipment of maize and soybean, as well as feed produced from them is analyzed. The analysis is paid by importer, and it is done only on the presence of the genetic modification i.e. only quantitative analysis is done. In the case of the detection of an unauthorized modification in the shipment, it is either returned to the sender or destroyed.

nnex

Ministry of Health of RS does not have legislation in the area of control of health safety of foodstuff that contains GMOs. As there is no adequate legislative system, Ministry of Health follows EU legislation, i.e. it tolerates the presence of genetic modification in up to 0.9% of total mass of product, and that product is considered as non-modified.

2.2. Future plans and needs

In January 2005, Ministry of Agriculture formed Working Group for changes and amendments of existing Law on GMO. The working group made a draft Law, harmonized with the EU Regulations 1829/2003, 1830/2003, 1831/2003, 1946/2003, 65/2004, 641/2004, Directive 2001/18, Cartagena protocol, as well as rules of WTO. The draft Law is currently on the Web site of Ministry of Agriculture and is available for comments and suggestions from the public (http://www.minpolj.sr.gov.yu/images/materiali/Predlogzakonaogmo.pdf). There are plans to re-write the old ones and to write the new Regulations after the adoption of the amended Law on GMOs by Parliament. Some of these Regulations are required by CPB and some are necessary to adjust Serbian biosafety system to the one existing in EU. Here is the list of the Regulations that should follow the new Law:

1. Regulations on contained use of GMOs, that will implement EU Directives 90/219 and 98/81;

2. Regulations on deliberate release of GMOs, that will implement part B of Directive 2001/18;

3. Regulations on placing on the market of GMOs, that will be in accordance with part C of Directive 2001/18 ;

4. Regulations on GMO labeling and traceability, where rules and procedures from Directives 1829/2003 and 1830/2003 will be implemented;

5. Regulations on simplified procedure, in accordance with simplified procedure from 2001/18;

6. Regulations on Register of GMOs, with the detailed description of the content of the Register, the way its contents should be changed, as well as the way the Register will be made available to the public;

7. Regulations on Authorized Laboratories where criteria for obtaining the status of authorized laboratory will be harmonized the criteria given in EU Regulation 882/2004;

8. Rules of Procedure of NBC;

9. Regulations on data delivery and exchange in electronic form, that are one of the requirements for successful functioning of BCH on the national level;

10. Regulations on fees;

11. Regulations on border inspections;

12. Regulations on internal inspections. Regulations on inspections will be done in cooperation with relevant Inspections. Some consultations with the inspectors have already been done, hence two Regulations, as the inspectors suggested that it will facilitate their job;

13. Regulations on confidentiality, that is necessary since RS does not have any legislation regulating intellectual property rights and confidential business information in place. These Regulations will contain the set of rules for dealing with confidential business information and the mechanisms for prevention of abuse of this information.

These new Regulations should improve the functioning of biosafety system in Serbia. However, the assistance from external experts, notably from EU and UNEP-GEF, would be valuable during the drafting process.

1. **Note:** English translations of Law on GMO and Regulations, as well as draft Law are attached to this document as Appendix 5.

3. System to handle notifications or requests for authorizations

3.1. Current system to handle notifications and requests for authorization in RS

Procedure of processing of application for contained use, deliberate release or placing on the market of GMOs or products derived from GMOs starts by submission of application of creator, user or their authorized representative in Serbia and Montenegro for GMOs and products derived from GMOs to the competent authority – Ministry of Agriculture (*Chart 1*). Data that are required in the application are defined in Regulations on Contained use of Genetically Modified Organisms, Regulations on Deliberate Release of Genetically Modified Organisms and Products Derived from Genetically Modified Organisms into the Environment, and Regulations on Placing Genetically Modified Organisms and Product Derived from Genetically Modified Organisms on the Market that are published in Official Gazette of FR Yugoslavia No. 62/2002 of 15. 11. 2002.

During the period of review of application for use GMOs and products derived from GMOs (90 days) competent authority checks if the application is complete from the administrative point of view. At the moment, there is only one person in Ministry of Agriculture that is dealing with applications for use of GMOs and products derived from GMOs.

Complete applications are sent to an independent advisory body, National Biosafety Committee. NBC gives expert opinion on the way the experiments are conducted and on the validity of the obtained results, and it does assessment of risk during the use of GMOs, based both on the data provided and on the latest scientific information.

On the basis of the opinion of NBC and socio-economic demands of the country, competent authority issues the decree with which it approves (with or without conditions) or does not approve use of GMOs and products derived from GMOs. Each application is considered on the basis of case-by-case principle and from the aspect of safety for the environment and human health.

GMO and products derived from GMOs that have permission for contained use, deliberate release or placing on the market are entered into the Register of Genetically Modified Organisms and Products Derived from Genetically Modified Organisms (http://www.minpolj.sr.gov.yu/images/materiali/spisakgmoiproizvgmoresenje.pdf).

Procedure of import of GMOs and products derived from GMOs that are entered into the Register is as follows: importer makes demand for import to the competent authority; phytosanitary or veterinary inspectors take samples from the shipment on the border and send them to one of the two authorized laboratories; authorized laboratory delivers the report with the finding and opinion to the competent authority; if the report from the authorized laboratory shows that it is GM shipment and if GMO or product derived from GMOs are inscribed into the Register i.e. they have permission for placing on the market, competent authority issues decree with which it approves import of given shipment based on the demand of importer and report from the authorized laboratory.

Up to date, three applications for deliberate release and two applications for placing on the market of GMOs or products derived from GMOs have been processed. Based on the opinion of the NBC, two permissions for deliberate release and one permission for placing on the market of GMOs were issued and entered into the Register.

3.1.1. National Biosafety Committee

For objective and competent analysis of facts in connection to GMOs i.e. analysis of applications for work with GMO, National Biosafety Committee was formed. Ministry of Agriculture made a list of areas of expertise according to UNEP International Technical Guidelines for Safety and Biosafety for the bodies performing risk assessment. The list was sent to relevant institutes and faculties, and they were asked to nominate experts for the given areas of expertise. Experts from the area of medicine were nominated by Ministry of Health.

NBC is a working body made of 15-20 representatives of scientific research institutions from different areas (microbiologist, molecular biologist, population geneticists, ecologist, breeders, veterinarians, agronomists, toxicologists, nutritionists, aerologists…)(*Appendix 2*), with the task to do risk assessment and to take care of biosafety during the work with GMO. NBC gives and opinion on proposed work with GMOs based on results of risk assessment and delivers it to the competent authority. The opinions and recommendations of NBC are based on available scientific information, precautionary principle and case-by-case study. The final decision is made by Minister in the competent authority. There are no representatives of state administration in NBC, so the opinion given by NBC is independent. NBC has following tasks:

1. To analyze applications of authors, users or authorized representative for approval of contained use, deliberate release or placing on the market of GMOs or GM products;
2. To make scientifically based risk assessment of contained use, deliberate release and placing on the market of GMOs and GM products;
3. To make expert opinion on the way the experiments with GMOs are conducted and on the biosafety during work with GMOs, based on the reports and monitoring;
4. To analyze the reports of Authorized Laboratories that tested GMOs and GM products;
5. To estimate validity of obtained results based on the available documentation and experience from the other parts of the World;
6. To analyze requests for import of GMOs and GM products.

3.2. Future plans and needs

The Law on GMO does not cover the area of placing of GMOs on the market for the human consumption. This part should be covered by Federal Ministry of Health, but there is no legislation brought so far. There are plans to regulate the GM foodstuff in the near future either by Law or by Regulations.

There is going to be new Regulations on Labeling and Traceability, since the old one is not in the use, as it is not harmonized with the EU Regulations on labeling and traceability. Once these

Regulations are in place it will be necessary to establish the system of control, which does not exist at the moment. So again, there is going to be a need for expertise and training in this area.

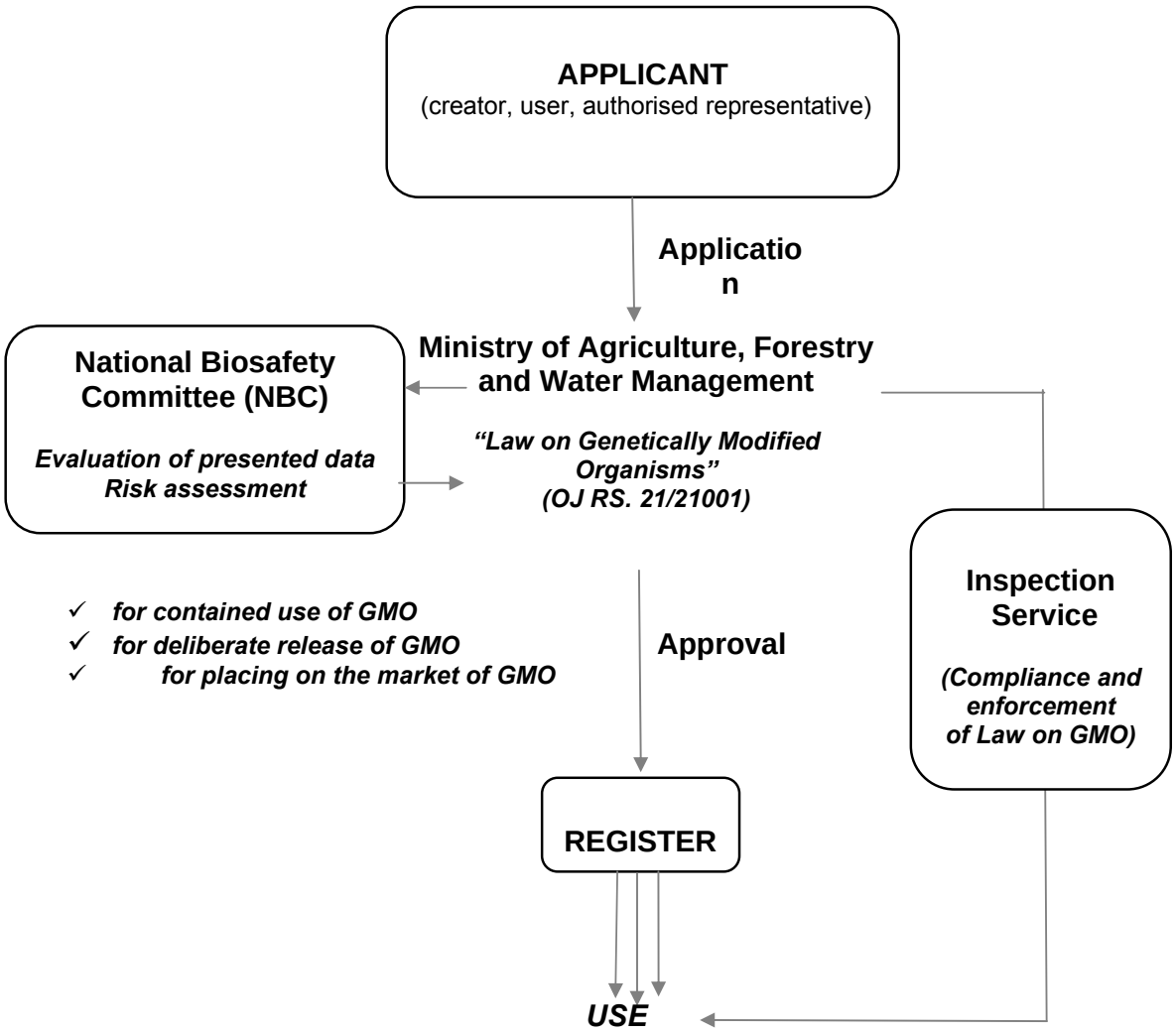
Since there is only one person in the administration trained to deal with the applications for the use of GMOs and products derived from GMOs, it will be necessary to train more people to do this job and in this way make base for efficient functioning of biosafety system. The room to employ more people to process applications if there is a need should be made, as well.

Inspectors should be educated on mechanisms of enforcement and provisions of the Law on GMO, functioning of customs, mechanisms of risk management, mechanisms regarding defining the liability and redress and functioning of the juridical system, as well as trained in procedures of GMO sampling. Workshops and training for the inspectors on the topics interesting for them should be organized on the regular basis. The effort should be made that the information regarding GMOs reaches as many inspectors as possible.

Members of NBC should be regularly informed on the latest developments regarding risk assessment especially of newly developed GMOs and products derived from them.

In order to facilitate the work of administrative personnel clear and precise guidelines for processing of applications for the use of GMOs and products derived from GMOs should be developed. The guidelines for handling GMO shipments and illegal cultivation of GMOs should be developed for the inspectors.

Chart 1 - *System to handle notifications or requests for authorizations*



4. Monitoring and enforcement

4.1. Current system of monitoring and enforcement in RS

4.1.1. Competent authority
Ministry of Agriculture, Forestry and Water Management of Republic of Serbia is competent for enforcement of Law on GMO. Since the Law is under the authority of Ministry of Agriculture, it is related to seed and planting material and feed. Three areas of work with the GMO are defined by the Law: contained use (experimental work), deliberate release into the environment and placing on the market.

4.1.2. Inspection
Inspection and surveillance of the enforcement of Law on GMO is done by inspection of Ministry of Agriculture. Border phytosanitary and veterinary inspections are involved in GMO inspection surveillance, as well as internal agricultural inspection.

Border inspection controls imported shipments – they monitor import documentation and sample plant shipments. Samples taken on the border are sent to authorized laboratories for analysis.

Internal agricultural inspection monitors crops on territory of RS.

During the inspection surveillance over enforcement of Law on GMO, inspectors are authorized to:

- control contained use, deliberate release or placing on the market of GMOs and products derived from GMOs that have permission according to provisions of Law on GMO;
- control if authorized organization fulfils the prescribed requirements for testing GMOs or products derived from GMOs;
- control different methods of testing of GMOs or products derived from GMOs in field trials, farm or in laboratory of authorized organizations;
- control safety measures during the deliberate release of GMOs into the environment;
- take samples of GMOs or products derived from GMOs without charge in order to determine if the provisions of the Law are fulfilled;
- control business records and documents of creator and user in connection with enforcement of rules on contained use, deliberate release, production or commerce of GMOs or products derived from GMOs;
- collect data and information from responsible and other persons and interrogate witnesses and experts;
- ban contained use, deliberate release or placing on the market of GMOs or products derived from GMOs if prescribed conditions are not fulfilled;
- ban work of authorized organization if they find that the organization does not fulfill prescribed conditions for testing of GMOs and products derived from GMOs or it does not test and control of GMOs and products derived from GMOs in accordance with prescribed methods of testing;
- ban deliberate release of GMOs and products derived from GMOs into the environment if they find that safety measures are not enforced;

- enter criminal denouncement, denouncement for economic offences and petitions for motion of criminal trial for violation of provisions of Law on GMO.

Most of the border and internal agricultural inspectors were trained in GMO shipment sampling and to use strip tests for detection of illegal GM crops.

4.1.3. Laboratories for GMO detection – authorized laboratories

In Serbia, two laboratories are authorized by Ministry of Agriculture for detection of presence of GMOs:

1. Institute of Molecular Genetics and Genetic Engineering, Vojvode Stepe br. 444a, Belgrade;
2. SP Laboratory, Industrijska zona bb, Bečej.

These two laboratories fulfill the requirements defined in Regulations on Contained Use of GMOs. They are also involved in ISTA (International Seed Testing Association) Proficiency Test on GMO, which was the additional requirement for obtaining the authorization. ISTA accreditation signify the procedure by which competent international body gives official approval that legal or private entity is competent to accomplish specific tasks. The aim of ISTA accreditation is to verify if the laboratory for seed testing is technically competent to fulfill procedures for seed testing according to “ISTA International Rules for Seed Testing”. SP Laboratory has also ISO 17025 certificate. The list of equipment and contact information about these two authorized laboratories are given in *Appendix 3*.

4.2. Future plans and needs

In order to have more efficient system of monitoring and enforcement of Law on GMOs other Ministries, beside Ministry of Agriculture, should get involved in implementation of biosafety policies. This especially stands for GM food since it is of the greatest public interest that the consumers are able to choose and that they get proper information on the food that they use.

In the amended Law on GMO Institutional Biosafety Committees are introduced for the research institutions dealing with GMOs. There is a room in this area for Ministry of Science and Environment Protection to enforce creation of Institutional Biosafety Committees, since most of research institutes are under authority and financed by Ministry of Science.

New form for field trials monitoring has already been introduced, and since it proved to be very useful there are plans to make similar form for monitoring of contained use of GMOs. The form, in Serbian, used for field trial monitoring is attached to this document.

Authorized laboratories, beside ISTA test, should comply with EU Regulation 882/2004 or at least have ISO 17025 certificate.

Check lists for border and internal inspectors are being prepared, in order to enable more efficient control of trans-boundary movements, as well as illegal trade of GMOs. There is a need for further

training and education of inspectors. Encouraging sign is a great interest and large number of inspectors that took part in Workshop "Risk assessment, risk management and the role of inspections in biosafety" that was organized within this Project.

5. Mechanisms for promoting and facilitating public awareness, education and participation

5.1. Current state

Currently, public participation, although anticipated, did not live in practice and represents the area that should be precisely defined through changes and amendments of Law on GMO. Instruments for public participation of both private and legal entities in decision-making were not clearly determined.

In current Law on GMO, there are no provisions on public informing on applications for work with GMO, but there is a possibility to object the permission issued by the Ministry of Agriculture. The objection should be made within 15 days after the permission had been entered into the Register of Genetically Modified Organisms and Products Derived from Genetically Modified Organisms. The objection could be made if there was no compliance with the Law or Regulations (Article 12 of Law on GMO). Competent Authority is obliged to respond to the objections within 30 days.

In Regulations on Deliberate Release of Genetically Modified Organisms and Products Derived from Genetically Modified Organisms into the Environment and Regulations on Placing Genetically Modified Organisms and Product Derived from Genetically Modified Organisms on the Market, there is an Article (Article 7) on public consultation and informing. It states that Competent Authority will consult the public and certain expert groups on applications for work with GMO, and that consultation will be made within 120 days. However, Regulations do not define instruments and ways in which the consultation should be made.

Some progress in this area has been made, as Ministry of Agriculture made available Law on GMO, Regulations, as well as GMO Register (http://www.minpolj.sr.gov.yu/images/materiali/spisakgmoiproizvgmoresenje.pdf) on its Web site. Draft of amended Law on GMO has also been placed on the Web site in order to promote public awareness and to get reactions to draft Law from relevant stakeholders and public.

Serbia has Law on Free Access to the Information of Public Interest ("Official Gazette of RS" No. 120/04). This Law is a special Law as it is applicable in all cases when the information of public interest is requested. It enables public access to all information of public interest, information on GMOs included, even when procedures provisioned by other Laws are different from the procedure of this Law.

Serbia also has the Law on Consumer Protection ("Official Gazette of RS" No. 79/05) that governs fundamental consumer rights, manner in which such rights may be exercised, protection of consumer rights, and application of ethical principles (http://www.minttu.sr.gov.yu/pdf/law_on_consumer_protection.pdf). Article 10 of this Law provisions that "… products resulting from genetic engineering or containing genetically modified components must be marked as being of such origin.".

Serbia is involved in realization of the project "Preparation of National Profile for Estimation of Capacity for Implementation of Aarhus Convention". With the realization of this Project, Serbia is preparing for the ratification of Aarhus Convention. Ministry of Science and Environment Protection of RS, UNTAR and UNECE are the partners in this Project.

Within the Project, Ministry of Science and Environment Protection of RS prepared draft document "National Profile for Estimation of Capacity for Implementation of Archus Convention", which was placed on the Ministry Web site and opened for comments from public till 21. 04. 2006. In order to promote public participation in document and decision-making processes regarding environment and GMOs, the relevant contributions obtained in this way were included in the final document (http://www.ekoserb.sr.gov.yu/dokumenti/zakon/Nacionalni%20profil%20za%20Arhusku%20konvenciju%20kompletan%20finalni.pdf).

5.2. Future plans and needs

Since it has not been done so far, there is a need to start the BCH project, and within it to create national data base on modern biotechnology. In this way more information regarding this area are going to be made available to the stakeholders. There are plans to create unique biosafety Web site for Serbia.

As Internet is not available to a part of population, information on biosafety should be spread through Workshops, public discussions, and different forms of printed material.

Some attention should be paid to education of teachers and professors in schools and Universities. Education on biosafety should be introduced in curricula of the relevant faculties. Optimal solution would be education on biosafety from the elementary school level onwards.

Workshops on special topics should be organized for the stakeholders. Stakeholders from industry would benefit from more information on regulations on labeling and traceability. Personnel from institutes and Universities should be trained in filling in the applications for contained use of GMOs and establishment of Institutional Biosafety Committees.

There is also a need to train personnel from Ministry of Agriculture as well as members of NBC to communicate in efficient, understandable and objective manner with the stakeholders and general public.

In the draft Law on GMO, special attention has been made to public participation in decision-making process regarding GMO. System for public participation in decision-making process regarding GMOs that is going to be put in place is described in Article 11 of draft Law. After applications have been submitted to Competent Authority, the Authority makes the application available to public during the period prescribed by Regulations. The summary of application will be opened for comments and remarks by the public. The final decision, as well as the summary on the NBC's opinion, are also going to be available to the public.

Amended Law and new Regulations should enable greater public participation and informing on applications for use of GMOs, decision-making process and permissions issued. Beside this, amended Law and especially new Regulations are going to make more room for objections and comments from public in decision-making process. The existing experience showed us that the special attention should be made to defining of the instruments for public participation, since they were lacking in existing legislative system and their absence was one of the main obstacles in greater public participation and informing on issues regarding GMOs. This is one of the areas where Serbia could use experience from UNEP/GEF experts and other countries involved in NBF Project, and where this experience will be more than valuable.

6. UNEP-GEF project "Development of the National Biosafety Framework for Serbia and Montenegro"

Draft of NBF for SCG was prepared during the work on Project "National Biosafety Framework for Serbia and Montenegro" that was the part of UNEP/GEF global project "Development of National Biosafety Frameworks". The goal of this project is to provide the help to the countries in implementation of CPB through creation and implementation of NBF. 123 countries are involved in this project at the moment.

Implementation body: Ministry of Agriculture, Forestry and Water Management of Republic of Serbia

Project duration: 15 months

Project budget:	- value of GEF Trust Fund	US$ -	124 578,68 $
	- co-financing (in-kind/in-cash) State contribution	US$ -	29 958,39 $
Sub-project total value		**US$ -**	**154 537,07 $**

6.1. Main phases of the project

Phase 1: Preparatory activities and information collecting for the Survey of the Current State of the biosafety in SCG

During this Phase, key stakeholders were identified and NCC formed. NCC was formed as advisory and managing body for the creation of NBF. NCC consisted of the representatives of relevant stakeholders (*Appendix 1*). The consultant, who collected the information on the current state of biosafety in SCG and wrote the Survey of the current state of biosafety in SCG, was hired. At the same time, the executive body – Ministry of Agriculture, started the procedure for becoming a member of CPB. During this stage following surveys of the current state were done:

- Survey of the state of the existing NBF (legislation, administrative system, decision making process, mechanisms of public participation);
- Survey of the existing mechanisms for risk assessment and risk management and the role of NBC;
- Survey of the technical assistance in the area of biosafety in SCG (operative programs in biosafety capacity building and international projects in this area);
- Survey of the existing NBF in the neighboring countries;
- List of scientific and research institutions dealing with the modern biotechnology (*Appendix 3*);
- List of experts dealing with the modern biotechnology (*Appendix 4*);

- List of laboratories and laboratory equipment used in research and GMO detection (*Appendix 5*);
- List of NGOs that are interested in modern biotechnology;
- List of media that cover modern biotechnology in SCG.

The result of this Phase of the Project was the document "Survey of the Current State of Biosafety in SCG".

Phase 2: Analyses and consultations

During this Phase several Workshops were organized with the aim to analyze "Survey of the Current State of Biosafety in SCG" and to identify lacks and needs of the present state of biotechnology and to define the priorities of the future NBF in SCG. Several trainings dealing with the specific topics, significant for the area of biosafety (inspection field work – border as well as internal, risk assessment as done by NBC, process of detecting and identification of GMOs in import shipments in authorized laboratory) were organized within these Workshops.

Phase 3: Creation of national project document „National Biosafety Framework for SCG"

The result of Phase 3 is this document that was analyzed by all stakeholders and approved by NCC.

6.2. Stakeholders

At the very beginning of the Project, stakeholders relevant for the area of biosafety were identified, and their representatives were included in the work of NCC. The members of NCC are:

- Representative of Ministry of Agriculture, Forestry and Water Management of RS;
- Representative of Ministry of Health of RS;
- Representative of Ministry of Agriculture, Forestry and Water Management of Republic of Montenegro;
- Representative of Ministry of Environment Protection and Spatial Planning of Republic of Montenegro;
- Representative of "Sojaprotein" ad (company for soybean processing) – industry;
- Representative of Institute for Biological Research;
- Representative of Institute of Field and Vegetable Crops;
- Representative of Consumer Association of Voivodina – NGO;
- Representative of Green Network of Voivodina – NGO;
- Representative of Regional Centre for the Environment for Central and Eastern Europe – NGO;
- Representative of weekly journal "Vreme" - media.

During the Project, it has been realized that some other important stakeholders should be involved in the Project depending on the biosafety topic that is analyzed:

- Representative of Custom Management (Ministry of Finances);
- Representative Juridical System (Ministry of Justice);
- Representative of Ministry of Education and Sport;
- Representatives of the Inspections of different Ministries.

6.3. Inventory

- Inventory of the existing legislation (Law on GMO and Regulations) - attachments + links (http://www.minpolj.sr.gov.yu/images/materiali/zakonogmo.pdf;http://www.minpolj.sr.gov.yu/images/materiali/pravilnikouvodjuproizvgmo.pdf;http://www.minpolj.sr.gov.yu/images/materiali/pravilnikostavuprometgmo.pdf;http://www.minpolj.sr.gov.yu/images/materiali/pravilnikosadrzipodacregistragmo.pdf;http://www.minpolj.sr.gov.yu/images/materiali/pravilnikoogranicenojupotrebigmo.pdf);
- Inventory of the future legislation – attachment + link (http://www.minpolj.sr.gov.yu/images/materiali/Predlogzakonaogmo.pdf);
- Inventory of the competent authorities – link (http://www.minpolj.sr.gov.yu/);
- Review of the experts in the area of the biosafety – list (*Appendix 4*);
- List of scientific and research institutions dealing with modern biotechnology, biotechnology, genetics and molecular biology (Appendix 5);
- List of regional and international conventions regarding biosafety;
- List of media that covered this project;
- List of NGOs having the projects in connection with biosafety.

6.4. Biosafety Clearing House (BCH)

During this Project, we did not manage to create local BCH portal. The main reason for that is the breakdown of State Union of Serbia and Montenegro. The Focal Point for GEF was in Montenegro and after the breakdown of the common state, there was not enough time to finish preparations and get new Focal Point in Serbia during this Project. However, we plan to do it in the future, since the creation of the local BCH portal is one of the obligations of the states that ratified CPB.

6.5. Workshops

- Workshop "CPB and Results of the Survey of the Current State of Biosafety in SCG" was organized at the end of the Phase 1 of this Project (7-8. 11. 2005). Representatives of all identified stakeholders took part in it, as well as the representative of Romania. During three-days workshop the participants were informed about:
- The goals and results of UNEP/GEF Project "NBF for SCG";
- Basic provisions of CBD;
- Basic provisions of CPB;

- State of biosafety in CEE region – the example of Romania.

- All participants had a chance to hear and evaluate the results of Survey of the present state of biosafety in SCG, with the special attention to the state of legislative system as well as administrative system for biosafety in SCG.

Information on the Workshop has been made available to the public via the participants from the media as well as PR service of the Ministry of Agriculture. There are plans to make material and the conclusions from all Workshops available on the Web Page of Ministry of Agriculture.

- Workshop "Public Participation and Decision Making Process regarding Biosafety" was organized 15-16. 12. 2005 for the representatives of relevant state organs, scientific community, NGOs, private sector, media as well as representatives from Austria and Romania. Through presentations: Decision-making process regarding biosafety, Role of NBC in decision making process in Serbia, current state of public participation and informing in decision-making process in Serbia was presented. Participants were introduced to possible mechanisms and models of public participation and informing through provisions of Archus Convention and BCH. Conclusion that public participation and informing in process of decision-making is insufficient and in the future more workshops and training on this subject should be organized, was adopted. The aim of these workshops and training would be to find out the best model of public participation and informing for the local conditions, and this model would be a part of new NBF.

- Workshop "Risk Assessment, Risk Management and the Role of Inspections in Biosafety" was organized 16-17.05.2006. for members of NBC, NCC, NGO, inspectors from different Ministries, representatives of laboratories for GMO detection, as well as representatives of different Ministries. The participants were introduced to current work of NBC regarding risk assessment of notifications. Representatives of border and internal inspection explained procedures of control and sampling of import shipments of seed and planting material, as well as field work on discovering of illegal plantings of GM soybean (use of test strips in the field, sampling and shipment of samples to authorized laboratory, further procedure). Visit to authorized laboratory and the introduction to work methodology for detection and identification of GMOs was organized.

7. Conclusion

The Project Development of National Biosafety Framework for Serbia and Montenegro was realized in very hard times and in unfavorable conditions. State Union of Serbia and Montenegro disintegrated and competences and authorities regarding biosafety were transferred from federal to republic level. This process did not go smoothly and quickly enough in same cases, and created the obstacles for the realization of the project. However, thanks to the efforts and enthusiasm of all parties involved in Project realization, the work plan was fulfilled and all the activities performed within this Project that were described in previous sections correlate with suggested work plan.

The most important output of the project is that stakeholders in NBF now recognize their roles much better. We have defined still many gaps and needs that must be addressed. During the development phase we have established connections and mechanisms among most of the stakeholders in the biosafety area on different levels and the greatest loss now, when we spend huge amount of time, effort and money for that, would be that we would stop with this scope of activities in biosafety area before we achieve the efficient working system.

The need for further capacity building and education of all stakeholders is reason why Serbia will also apply for the Implementation of National Biosafety Framework project. The experience obtained during realization of this Project along with the help of the funds and experts from UNEP/GEF should be enough to fill all the lacks and gaps of the existing NBF, and enable Serbia to have efficient and effective biosafety policy. The existence of the effective biosafety system in Serbia will also have positive effect on the surrounding countries and the West Balkans region since Serbia is important transit area and a big producer and exporter of agricultural products.

ACKNOWLEDGMENTS

The authors would like to thank Ms. Liina Eek for her help during creation of this document.

Appendix 1 - *Members of NCC*

1) MILUTIN PANTOVIĆ	Ministry of Science and Environmental Protection, Belgrade, Nemanjina 22-26;
2) JASMINKA RANDJELOVIĆ	Ministry of Science and Environmental Protection, Belgrade, Nemanjina 22-26;
3) Dr. GORDANA RISTIĆ	Ministry of Health, Faculty of Medicine, Belgrade, Dr Subotića 8;
4) Dr. MILOSAV ANDJELIĆ	Ministry of Agriculture, Forestry and Water Management, Montenegro, Podgorica, Rimski trg;
5) LAZARELA KALEZIĆ	Ministry of Environmental Protection and Spatial Planning, Montenegro, Podgorica, Rimski trg;
6) Dr. ALEKSEJ TARASJEV	Institute for Biological Studies „Sinisa Stankovic“, Belgrade, 29 Novembra 142;
7) Dr. GORAN BEKAVAC	Institute of Field and Vegetable Crops, Novi Sad, Maksima Gorkog 30;
8) SLOBODAN EREMIĆ	Consumers Council of Vojvodina, Zrenjanin, Bosanska 4a;
9) NATAŠA DJEREG	Green Network of Vojovodina, Novi Sad, Pašićeva 24;
10) SRDJAN SUŠIĆ	Regional Center of Environment for Eastern and Central Europe, Belgrade, Primorska 31;
11) NIKOLA DOLINKA	Sojaprotein ad, Bečej, Industrijska zona;
12) ZORAN MAJDIN STOJADINOVIĆ	NIP „Vreme“(journal), Belgrade, Mišarska 12-14;
13) GORAN ŽIVKOV	Ministry of Agriculture, Forestry and Water Management, Belgrade, Nemanjina 22-26;
14) SANDRA DJUKANOVIĆ KOJIĆ	Ministry of Agriculture, Forestry and Water Management, Belgrade, Nemanjina 22-26;

Appendix 2 - *Members of NBC*

1) Dr. ALEKSEJ TARASJEV	Institute for Biological Studies „Sinisa Stankovic“, Belgrade, 29 Novembra 142;
2) Dr. VESNA MAKSIMOVIĆ	Institute for Molecular Genetics and Genetic Engineering, Belgrade, Vojvode Stepe 444a;
3) Dr. DRAGANA MILADINOVIĆ	Institute of Field and Vegetable Crops, Novi Sad, Maksima Gorkog 30;
4) Prof. dr. SLOBODAN JOVANOVIĆ	Veterinary Faculty, Belgrade, Bulevar JNA 18;
5) Prof. dr. VASILIJE ISAJEV	Faculty of Forestry, Belgrade, Kneza Višeslava 1;
6) Dr. SNEŽANA MLADENOVIĆ DRINIĆ	Maize Institute “Zemun Polje”, Zemun, Slobodana Bajića 1;
7) Dr. JELKA CRNOBRNJA ISAILOVIĆ	Institute for Biological Studies „Sinisa Stankovic“, Belgrade, 29 Novembra 142;
8) Prof. dr. MARINA STAMENKOVIĆ RADAK	Faculty of Biology, Belgrade, Studentski trg 16;
9) Prof. dr. SLOBODAN JOVANOVIĆ	Faculty of Biology, Belgrade, Studentski trg 16;
10) Dr. OLIVER STOJKOVIĆ	Faculty of Biology, Belgrade, Studentski trg 16;
11) Dr. PREDRAG SIMONOVIĆ	Faculty of Biology, Belgrade, Studentski trg 16;
12) Dr. ŽELJKO TOMANOVIĆ	Faculty of Biology, Belgrade, Studentski trg 16;
13) Prof. dr. JELENA KNEŽEVIĆ VUKIČEVIĆ	Faculty of Biology, Belgrade, Studentski trg 16;
14) Dr. IVANA GLIKSMAN	Institute for Biological Studies „Sinisa Stankovic“, Belgrade, 29 Novembra 142;
15) Dr. GORDANA RISTIĆ	Ministry of Health, Faculty of Medicine,

	Belgrade, Dr Subotića 8;
16) Doc. dr. SLAVICA VUČINIĆ	Military Medical Academy, Belgrade, Crnotravska 17;
17) Prof. dr. SANVILA RAŠKOVIĆ	Clinical Centre of Serbia, Institute for Alergology, Belgrade, Koste Todorovića 2;

Appendix 3 – *List of institutions that currently work with GMOs or are involved in their detection*

	NAME	Place	Address an Contact	List of Laboratory Equipment
1.	INSTITUTE OF FIELD AND VEGETABLE CROPS	Novi Sad	Maksima Gorkog 30 tel: 021/48-98-100 fax: 021/621-212 e-mail: institut@ifvcns.ns.ac.yu	Not provided
2.	MAIZE INSTITUTE "ZEMUN POLJE"	Zemun Polje, Belgrade	Slobodana Bajića 1 tel: 011/37-56-704 fax: 011/37-54-994 web: www.mrizp.co.yu	PCR machine, table centrifuge with cooling, spectrophotometer, water baths, machines for horizontal and vertical electrophoresis, gel documentation system, shakers, phytotrons, and other minor laboratory equipment
3.	INSTITUTE FOR MOLECULAR GENETICS AND GENETIC ENGINEERING	Belgrade	Vojvode Stepe 444a tel: 011/3976-414 fax: 021/3976-658 e-mail: heljda@sezampro.yu	PCR machines, electrophoresis equipment, automatic pipettes, centrifuges, water baths

4.	INSTITUTE FOR BIOLOGICAL RESEARCH "SINIŠA STANKOVIĆ"	Belgrade	Bulevar Despota Stefana 142 tel: 011/20-78-391 fax: 011/761-433 e-mail: www.ibiss@bg.ac.yu	PCR machine, mini centrifuge, DNA/RNA electrophoresis equipment, protein electrophoresis equipment, Sorvall centrifuge, gel scanner, Storm scanner
5.	SP LABORATORY	Bečej	Industrijska zona bb tel: 021/815-3114 fax: 021/812-545 e-mail: splaboratorija@soyaprotein.com	PCR express, electrophoresis system, water bath, transilluminator, microcentrifuges, shaker, Vortex
6.	NATIONAL LABORATORY FOR SEED TESTING	Novi Sad	Maksima Gorkog 30 tel: 021/421-248 fax: 021/421-249	PCR machine, bacteriological incubator, magnetic stirrer, pH meter, water distiller, balance, microcentrifuge, centrifuge, transilluminator, spectrophotometer, and other minor laboratory equipment
7.	CENTER FOR FRUIT AND VINE PRODUCTION	Čačak	Kralja Petra I, br. 9 tel: 032/221-413 fax: 032/221-391 e-mail: centar-cacak.kg.ac.yu	Not provided
8.	FACULTY OF AGRICULTURE	Novi Sad	Trg Dositeja Obradovica 8 tel: 021/458-137 fax: 021/459-243 web: www.polj.ns.ac.yu e-mail: genetika@polj.ns.ac.yu	Two PCR machines, horizontal and vertical electorphoresis systems, water bath, microcentrifuge, Vortex, pH meter, ballances, transilluminator, gel dryer, water distiller osmoza, magnetna mešalica, sušnica, protočni sistem za termoregulaciju, ledomat i ostala sitnija laboratorijska oprema

Appendix 4 – *List of researchers involved in work with GMOs, GMO detection, or biosafety issues*

1. ***INSTITUTE OF FIELD AND VEGETABLE CROPS, Novi Sad***

	Name	Contact	Area of expertise
1.	Dr. Goran Bekavac	gbekavac@ifvcns.ns.ac.yu Maize Department 021/48-98-251	Maize Breeder, responsible for field trials with GM maize, ex-member of NBC, member of NCC
2.	Dr. Dragana Miladinović	vasicd@ifvcns.ns.ac.yu Oilcrops Department 021/48-98-422	Senior research fellow for Plant Breeding – biotechnology, responsible for oilcrops biotechnology laboratory, member of NBC, consultant for NBF
3.	Dr. Nevena Nagl	nnagl@ifvcns.ns.ac.yu Sugar Beet Department 021/48-98-327	Research fellow for Genetics and Plant Breeding, responsible for sugar beet molecular biology laboratory
4.	Dr. Dejana Panković	dejanapa@ifvcns.ns.ac.yu Oilcrops Department 021/48-98-100	Senior research fellow for Biotechnology and Plant Physiology, responsible for oilcrops molecular biology laboratory
5.	Dr. Ankica Kondić Špika	ankica@ifvcns.ns.ac.yu Small-Grain Crops Deaprtment 021/48-98-225	Research fellow for Genetics and Plant Breeding, responsible for small-grain crops tissue culture laboratory

6.	Dr. Borislav Kobiljski	kobboris@ifvcns.ns.ac.yu Small-Grain Crops Department 021/48-98-215	Wheat breeder, responsible for small-grain crops molecular biology laboratory

2. *MAIZE INSTITUTE "ZEMUN POLJE", Zemun*

	Name	Contact	Area of Expertise
1.	Dr. Snežana Mladenović Drinić	msnezana@mrizp.co.yu 011/37-56-704	Genetic modification of maize by introduction of foreign genes, testing of the effect of foreign gene on host plant, observation and detection of genetic modification, member of NBC
2.	Dr. Jelena Vančetović	Not provided	Introduction of desired traits fro transgenic maize into the commercial maize genotypes, field trials with GM maize
3.	Dr. Mirčeta Vidaković	Not provided	Introduction of desired traits fro transgenic maize into the commercial maize genotypes, field trials with GM maize
4.	Dr. Kosana Konstantinov	Not provided	Creation of GM maize, testing of the effect of foreign gene oh host plant

3. *INSTITUTE FOR MOLECULAR GENETICS AND GENETIC ENGINEERING, Belgrade*

	Name	Contact	Area of Expertise
1.	Dr. Vesna Maksimović	heljda@sezampro.yu 011-3976-414	Plant molecular biology – cloning and structure analysis, as well as expression of chosen genes of buckweat, GMO detection in seed material, feed and foodstuff, member of NBC
2.	Dr. Jovanka Miljuš Djukić	heljda@sezampro.yu 011-3976-414	Plant molecular biology – self incompatibility in bukweat, genetic transformation of tobacco, *Arabidopsis* and buckweat, GMO detection in seed material, feed and foodstuff
3.	Gordana Timotijević, MSci	heljda@sezampro.yu 011-3976-414	Plant molecular biology – cloning and structure analysis, as well as expression of chosen genes of , GMO detection in seed material, feed and foodstuff
4.	Jelena Samardzić, MSci	heljda@sezampro.yu 011-3976-414	Plant molecular biology – cloning and structure analysis, as well as expression of chosen genes of , GMO detection in seed material, feed and foodstuff

4. *INSTITUTE FOR BIOLOGICAL RESEARCH "SINIŠA STANKOVIĆ", Belgrade*

	Name	Contact	Area of Expertise

1.	Dr. Aleksej Tarasjev	tarasjev@ibiss.bg.ac.yu 011-20-78-376	Senior research fellow, ecological genetics and plant evolutionary ecology, UNEP-GEF regional adviser for CPB and biosafety information exchange, president of NBC, member of NCC
2.	Dr. Jelka Crnobrnja Isailović	jelka@ibiss.bg.ac.yu 011-20-78-391	Research fellow, evolutionary and conservation biology, biodiversity preservation, member of NBC
3.	Dr. Ivana Gliksman	ivanag@ibiss.bg.ac.yu 011-20-78-391	Research fellow, evolution of relation between herbivorous insects and plants, member of NBC
4.	Dr. Slavica Ninković	slavica@ibiss.bg.ac.yu 011-20-78-424	Senior research fellow, genetic transformations (alfalfa, cabbage, potato)
5.	Dr. Snežana Zdravković Korać	szk@ibiss.bg.ac.yu 011-20-78-388	Research fellow, genetic transformations (chestnut, spinach)
6.	Dr. Branka Vinterhalter	horvat@ibiss.bg.ac.yu 011-20-78-421	Senior research fellow, genetic transformations (gentian)
7.	Dr. Angelina Subotić	heroina@ibiss.bg.ac.yu 011-20-78-385	Research fellow, genetic transformations
8.	Dr. Nevena Mitić	czpiti@ptt.yu 019-420-222	Senior research fellow, genetic transformations (wheat, starry)

9.	Dr. Ivana Momčilović	vanja@ibiss.bg.ac.yu 011-20-78-385	Senior research fellow, genetic transformations (gentian), molecular biology (maize)
10.	Dr. Dragan Vinterhalter	vinter@ibiss.bg.ac.yu 011-20-78-449	Research fellow, genetic transformations
11.	Dr. Dragan Grubišić	frc@ibiss.bg.ac.yu 011-20-78-385	Research fellow, genetic transformations

5. *SP LABORATORY, Bečej*

	Name	Contact	Area of expertise
1.	Dipl. ing. Aleksandra Bauer	saska@soyaprotein.com 021-815-311/238	Food technology, testing of GMO presence in foodstuff and feed, testing of food and feed chemical composition, liquid chromatography, application of quality management system, HACCP, EMS in laboratory and food industry
2.	Dipl. ing. Gordana Nović	fhlab@soyaprotein.com 021-815-311/238	Food technology, testing of GMO presence in foodstuff and feed, testing of food and feed chemical composition, application of quality management system in laboratory
3.	Milica Plemić, chemical analyst	fhlab@soyaprotein.com 021-815-311/238	Food technology, testing of GMO presence in foodstuff and feed, testing of food and feed chemical composition

6. *NATIONAL LABORATORY FOR SEED TESTING, Novi Sad*

	Name	Contact	Area of Expertisee
1.	Dr. Ksenija Taški	ksenijat@ifvcns.ns.ac.yu 021/48-98-157	ISTA Workshop: Variety Testing, Training: Usage of Bio/Rad iCycler IQ Real-Time PCR detection system for GMO testing, Course on Biotechnology in Agriculture: Plants and Microorganisms, 4th ISTA/FAO Workshop: On electrophoresis and PCR Based Methods for Varietal Verification and GMO Detection, ISTA Workshop on Statistical Aspects of GMO Detection North America, Training course: The Analysis of Food and Feed Samples for the Presence of Genetically Modified Organisms
2.	Dr. Zorica Nikolić	Not provided	PCR school, internal training for GMO tests, specialization for GMO testing, FAO/IAEA Interregional training course on "Mutant Germplasm Characterization using Molecular Markers"
3.	Dipl.ing. Dragana Marinković	Not provided	Not provided
4.	Dipl.ing, Aranka Jevtić	Not provided	Not provided

7. *CENTRE FOR FRUIT AND VINE PRODUCTION, Čačak*

	Name	Contact	Area of Expertise

1.	Dr. Slobodan Milenković	sloboento@yahoo.com 032/221-310	Research fellow, plant resistance to insects and diseases
2.	Dr. Milisav Mitrović	centarca@eunet.yu 032/222-917	Senior research fellow, nut fruit selection and breeding
3.	Dr.Đurđina Ružić	jugvocca@yu1.net 032/221-067	Senior research fellow, fruit tree physiology, *in vitro* tissue culture
4.	Dr. Svetlana Paunović	centarca@eunet.yu 032/371-136	Senior research fellow, study and diagnostics of fruit viruses, phytoplasma and viroides
5.	Dr. Milan Rakićević	centarca@eunet.yu 032/233-567	Research fellow, cultivation, fertirrigation
6.	Radunka Plazinić, MSci	centarca@eunet.yu 032/311-070	Research associate, selection and breeding of peaches and apricots
7.	Sladjana Marić, MSci	centarca@eunet.yu 032/341-877	Research associate, apple genetics and breeding, application of molecular markers

8.	Tatjana Lazić, MSci	jugvocca@yu1.net 032/331-116	Research associate, fruit physiology, *in vitro* tissue culture
9.	Dipl.ing Milan Lukić	centarca@eunet.yu 032/355-851	Research apprentice, selection and breeding of apple-like fruits
10.	Dipl.ing Miladin Blagojević	centarca@eunet.yu 032/391-103	Research apprentice, cultivation, application of new methods in fruit tree fertilization
11.	Dipl.ing Sanja Radičević	centarca@eunet.yu 032/331-285	Research apprentice, cherry selection and breeding
12.	Dipl.ing Darko Jevremović	centarca@eunet.yu 032/346-568	Research apprentice, study and diagnostics of fruit viruses, phytoplasma and viroides
13.	Dipl.ing Aleksandar Leposavić	centarca@eunet.yu 032/342-013	Research apprentice, selection and breeding of berry fruits
14.	Dipl.ing Vladan Milinković	centarca@eunet.yu 032/374-824	Research apprentice, plum selection and breeding

15.	Dipl.ing Branko Popović	centarca@eunet.yu 032/344-933	Research apprentice, technology of production of fruit brandy
16.	Dipl.hem. Jelica Gavrilović Damnjanović	centarca@eunet.yu 032/342-045	Researcher, chemical analyses of short drinks, testing of soil fertility
17.	Dipl.tehn. Olga Mitrović	centarca@eunet.yu 032/263-156	Researcher, technology of fruit drying
18.	Dipl.ing. Milan Srećković	centarca@eunet.yu 032/726-652	Researcher, selection and breeding of apple-like fruits
19.	Dr. Dobrivoje Ogašanović	centarca@eunet.yu 032/346-328	Retired scientific adviser, involved in projects of Ministry of Science and Environment Protection, plum selection and breeding
20.	Dr. Žarko Tešović	centarca@eunet.yu 032/341-031	Retired scientific adviser, , involved in projects of Ministry of Science and Environment Protection, apple selection and breeding

8. *FACULTY OF AGRICULTURE, Novi Sad*

	Name	Contact	Area of Expertise
1.	Prof. dr. Miodrag Dimitrijević	mishad@polj.ns.ac.yu Tel.: 021/458-137 Tel./Fax: 021/459-243 Mob.: 063/85-35-611	As a member of Voivodina Province Council for Science and Technological Development, was in charge of biotechnology development in Voivodina, worked as a member of Working Group for Development of Biotechnology of Serbian Academy of Sciences, Novi Sad Department, works on general public education on GMOs and biodiversity preservation in Voivodina, author of publication „GMO – Questions and Dilemmas“, works on collecting, inventory and biodiversity preservation of small-grain crops
2.	Prof. dr. Sofija Petrović	sonjap@polj.ns.ac.yu Tel.: 021/458-137 Tel./Fax: 021/459-243 Mob.: 063/860-52-83	Worked as a member of Working Group for Development of Biotechnology of Serbian Academy of Sciences, Novi Sad Department, works on general public education on GMOs and biodiversity preservation in Voivodina, author of publication „GMO – Questions and Dilemmas“, works on collecting, inventory and biodiversity preservation of small-grain crops