TWINNING FINAL REPORT

EUROPEAN COMMISSION

TWINNING PROJECTS

FINAL REPORT

Project Title: Strengthening the Surveillance and Control of Communicable Diseases

Partners: Ministry of Health, Welfare and Sport (NL) and Ministry of Health (SR)

Date: 31st October 2006

Twinning Contract number: *SK03/IB/SO/01*

Section 1: Project data

Twinning Contract Number	*SK03/IB/SO/01*
Project Title:	Strengthening the Surveillance and Control of Communicable Diseases
Twinning Partners (MS and BC)	MS: The Netherlands Ministry of Health, Welfare and Sport Netherlands School of Public and Occupational Health BC: Ministry of Health of the Slovak Republic
Duration of the project:	21 months
MS Project leader:	Mr. G.M. van Etten
BC Project leader:	Ms. Zuzana Škublová

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2A - EXECUTIVE SUMMARY

This paragraph summarizes the purpose, the achievements and the impact of the project

The project purpose was to complete the implementation of the Acquis concerning the surveillance and control of communicable diseases in the Slovak Republic. The legal implementation was achieved with the adoption of the new Act on Public Health by the National Council of the SR in January 2006 and of the Decree of Government of May 2006 regulating the prevention and control of communicable diseases.

The project consisted of three Components:

I. Slovak monitoring system of communicable diseases harmonised with EU standards, Early Warning System upgraded and staff trained
II. Reference Centres network extended, existing National Reference Centres strengthened, and Laboratory Assurance Quality System in National Reference Centres implemented
III. Operating Procedures in selected clinical microbiology laboratories implemented based on the new implemented quality

For each Component a coordinator was in charge.

The Twinning project was joined by three additional contracts, for software, hardware and laboratory equipment. The successful implementation of these contracts was of great importance to the success of this project as well.

The overall conclusion is that all the activities for the three Components have been successfully implemented and even some additional activities took place, despite some constraints with regard to project management, coordination and communication. The mandatory results and related benchmarks have been achieved, except for the accreditation of the six National Reference Centres at the Public Health Authority of the Slovak Republic in Bratislava (envisaged for December 2006). The overall Objective and Purpose of the project have also been reached within the set time frame.

The project has “opened the door” to the EU structures for Slovak epidemiologists and microbiologists, thus ensuring the control and surveillance of communicable diseases in the SR within the EU structures. The improvement of the technical capacities of the epidemiological and laboratory workplaces of the Public Health Authority in Bratislava with modern IT equipment and the National Reference Centres with specialised laboratory equipment was very useful for strengthening the surveillance of communicable diseases in the Slovak Republic.

An Inherent part of this project was the training of staff, epidemiologists, microbiologists from National Reference Centres and IT specialists, to be able to use the newly developed software. Next to this, the employees of National Reference Centres were trained in the use of new methods and in working with the new laboratory equipment. Finally, joined meetings of Slovak and Dutch experts during study trips and during the missions of the experts in the Slovak Republic were very helpful for the harmonisation of the surveillance of communicable diseases in the Slovak Republic with EU standards.

2B – BACKGROUND

In this section the original situation in the relevant area of the Beneficiary Country (BC) administration is summarized. The gaps that the project had to address are indicated in bold black. The objective, purpose and mandatory results are described in the last paragraph.

Starting Point of the project

Surveillance of communicable diseases (CDs) (epidemiological vigilance) has been introduced gradually since the 1960s in the Slovak Republic (SR), and the duty to control infectious diseases with subsequent anti-epidemic precautions has been supported in the respective legislation. The surveillance principles introduced have remained largely unchanged, **although it is obvious today that CDs could be controlled more effectively and perhaps at lower costs. Also, the growing mobility of the Slovak population and other changes make a reassessment of the control of infectious diseases in SR unavoidable. Harmony in working methods and in definitions of diseases has to be reached. Any occurrence of serious and uncommon CDs has to be monitored, and the surveillance has to be based on clear priorities and the pooling of highly effective data.**

The system of collection and evaluation of data on CDs changed from manual tabulation of individual notification cards to a data collection system working on the computer in 1991. Since then, the same computer platform has been used. Maintenance, support, further development of this system was not effective anymore, because the system was designed for the MS DOS environment. It was unable to run under Windows environment, and it had limited support for networking. The existing central register did not allow the continuous analyses of reported data but only monthly and yearly analyses of epidemiological data on occurrence of infectious diseases in the SR.
The manner of reporting and processing of data on influenza has been computerised since 1996, but the surveillance is not compliant with the requirements of the European working group for influenza EISS, of which the SR has been an associated member since 2001.

In the SR, the early warning system (EWS) was mainly based on fax messages that were exchanged regularly every Friday. They informed about an outbreak (diagnosis, locality of occurrence, number of cases, number of exposed persons, suspected transmission factor, anti-epidemic measures) and on sporadic diseases occurrence of highly contagious, clinically serious infections, selected neuro-infections including polio-like diseases, occurrence of diseases included in the Immunisation Programme, etc. The data in the Slovak EWS flows from district to regional and then to national level to the PHA where they are manually summarized.
The SR lacks an operating electronic EWS compatible with the existing networks in the EU.

National Reference Centres (NRCs) are highly specialised sites providing complete epidemiological and laboratory surveillance of selected infectious diseases at the national level. They usually consist of epidemiological and laboratory parts. The epidemiological part of NRCs tightly cooperates with the National Register of CDs. NRCs acquire, process, analyse and evaluate epidemiological data about monitored infectious diseases. NRCs also process clinical material, carry out confirmative examination for microbiological laboratories. In addition to these activities, NRCs methodically coordinate these laboratories. Other duties of NRCs include proposing of measures to be taken in order to decrease the incidence of infections, as well as monitoring and evaluation of their effectiveness. They are established by the Ministry of Health (MoH) as a compact part of the Public Health Authority of the Slovak Republic (PHA SR) in Bratislava and in the Regional Public Health Authority (RPHA) in Banská Bystrica and the

RPHA in Košice, which are funded by the state budget. However, all still have to introduce modern fast diagnostic procedures and methodologies for detailed identification of micro-organisms.
In the interests of exact and prompt diagnostics of infections and harmonisation of their working methods with the European methods, it is urgent to expand their instrumentation, material supplies, and personnel resources and to achieve a standard level via accreditation. The external and internal quality control system of the laboratories has to be upgraded as well.

Objectives, purpose and mandatory results

Overall objective
Strengthening the surveillance and control of CDs

Project purpose
Completing the implementation of the Acquis concerning the surveillance and control of CDs

Mandatory Results for each Component

Component I: Slovak monitoring system of CD harmonised with EU standards, Early Warning System upgraded and staff trained

In order to reach this result and to address the gaps mentioned above (accentuated in bold black), the following benchmarks had to be fulfilled:
- Definition of the conditions, outputs, inputs, and functionality of the special software for three target applications: EWS, Infectious Diseases National Register, and Influenza Surveillance
- Website with selective parts for experts and the public at large
- PHA staff trained in EU Member State (MS) on surveillance & control of CDs and EWS
- Regional staff trained on outbreak management
- Implementation and testing of new systems in five selected pilot regions.
- Integration of new systems into the European EWS
- Increased number of memberships in EU networks compared with the situation at the start of the project

Component II: NRCs network extended, existing NRCs strengthened and Laboratory Assurance Quality System in NRCs implemented

In order to reach this result and to address the gaps mentioned above the following benchmark had to be fulfilled:
- Increased knowledge and experience on quality control systems and progressive detection methods of NRC staff through training in MS and BC
- Granting of an accreditation for the nine NRCs by the SNAS (Slovak National Accreditation System)

Component III: Standard Operating Procedures in selected clinical microbiology laboratories implemented based on the new implemented quality

In order to reach this result and to address the gaps mentioned above the following benchmark had to be fulfilled:
- Developed Standard Operating Procedures (SOPs) for external quality assurance and implemented and tested through testing panels at five selected pilot workplaces

2C - IMPLEMENTATION PROCESS

This section deals with the developments outside and inside the project and also with the visibility of the project and of the EU.

Developments outside the project

Key developments in the relevant policy area of the BC during the implementation of the project and fulfilment of assumptions

Policy development
The new Act No. 126/2006 on Public Health, including a list of mandatory reported infectious diseases, was adopted by the National Council of the SR in January 2006 with validity as of the 1st of June 2006. With acceptance of this act, the number of RPHAs stayed the same. Based on the recommendations of the MS, the new act contains improvements for harmonizing the surveillance system of CDs in the SR with EU standards.
The new Decree of the Government of the SR no. 337 with further details on prevention and control of CDs from 10th of May 2006 has been approved by the Slovak government. This decree replaced the Regulation of the MoH of the SR no. 54/2000 which changed and supplemented the Regulation of the MoH of the SR no. 79/1997 on measurements for the prevention of CDs. The major changes are that the diseases are grouped and a timeframe has been set according to the importance of the measures that have to be taken for each of these groups.

The assumptions as formulated in article 3 of the Work plan were:
1. The structure of public health service will remain stable
2. Access to database of relevant information of CDs
3. Co-operation with other stakeholders, providing relevant information about CDs
4. Positive approach of institutions, representing relevant EU networks, towards Slovak integration ambitions
5. The accreditation process takes less than three months (if it takes more than three months it will lead to delay in the accreditation of the NRCs)
6. EU networks are willing to register BC experts into their networks
7. Dutch or German institutes are prepared to receive interns for two weeks

Of the above mentioned assumptions, only one has not been fulfilled as yet:
5. The accreditation process takes less than three months:
   this has only partially been fulfilled. Banská Bystrica and Košice have been accredited in 2006. The six NRCs at the PHA SR in Bratislava have not been accreditated yet, due to the delay of the reconstruction of the PHA building. Therefore the accreditation of the PHA SR will not take place before the end of the project but is envisaged for December 2006.

Problems outside the project

Duration of project
In view of the fact that within the terms of reference of the Twinning Contract the project had to be finalised by the end of October 2006 and because the project had started later than anticipated, the duration of the project had to be reduced from 24 to 21 months. This implied that all planned activities had to be carried out in a shorter period.

Reconstruction of the building of the PHA SR Bratislava
Because the finances for the reconstruction (not a part of this project) of the NRCs in the building of the PHA SR took very long to be guaranteed, the reconstruction itself was delayed

and only started in July 2006. The implementation of the last activities in Component II was to some extent dependent on this reconstruction. In spite of this, all activities in this component were completed on time, except for the accreditation of the six NRCs at the PHA SR Bratislava (December 2006).

Additional contracts
During this project, three other contracts were also tendered for: one for a new software system, one for new hardware, and one for new laboratory equipment, all essential for the success of the overall project and complementary to this Twinning project. The implementation of these contracts took a large amount of working hours of the coordinators in charge of the three Components (CCs). Consequences of this were that sometimes the CCs were not able to participate in activities or to finish the work for the Twinning project within the required deadlines. In spite of this, all activities were finalized on time.

Parliamentary elections in SR in June 2006
During the project parliamentary elections took place in the SR. On the basis of the results, a new Minister of Health was appointed in July 2006. Because of this, internal changes took place that caused the cancellation of the recently established Section of the Public Health within the MoH.

Change of directors at PHA SR.
During the project there have been several changes in the top management of the PHA SR Bratislava. Four directors have been in charge of the PHA SR since the start of the project in February 2005 with the last change after the election of June 2006. This meant that every time meetings had to be organised with these new managers to explain the purpose and the progress of the project. It also involved making sure that agreements made under the regime of one director were met by the new director as well. This made work for the people involved in the project not easy, more specifically because there were problems with one of the former directors concerning the set up and organizational structure of the project. Despite these difficulties, they still managed to continue with their work.

Developments inside the project

Key developments within the project

Resident Twinning Advisor
Concerning the Resident Twinning Advisor (RTA) for this project, there have been some problems. The originally appointed RTA unfortunately died before he could start working in the SR. Because of time pressure, the Dutch partner was only able to submit to the Slovak side a CV of one candidate. He already worked as RTA two times before and was only accepted for half a year. Because of this and of major problems between the Slovak Project leader (PL) and the RTA, the Slovak side did not want the prolongation of his contract which expired at the beginning of August 2006. The current RTA was appointed in December 2005 and started her work at the 6th of January 2006.

New Project Managers in Beneficiary Country and in Member State country
The upgraded version of the General Coordinating Directive for Foreign Assistance was approved in April by the Slovak Government. Because of this, a Senior Programme Officer was appointed as the project manager (PM) on behalf of the Beneficiary institution instead of the former PM.

The PM at the mandated institute (The Netherlands School of Public Health (NSPOH)) in the MS, left his job in June 2006 and was replaced in July 2006. This caused some delays but these were solved on time.

Resignation of coordinator Component II
At the beginning of September 2006 the coordinator for Component II left the PHA SR Bratislava. She was replaced by the Head of the Microbiology department in Banská Bystrica. Her leaving had no impact on the finalization of Component II.

Completion of an important package of activities
Concerning Component I: all 15 activities have been implemented. As a result, the software is developed and staff is trained for the EWS, Infectious Diseases National Register and Influenza Surveillance.

For component II: all seven activities have been implemented and because of this the technical facilities in the laboratories were improved and a unit for molecular diagnostics was set up. However, the accreditation of six of the NRCs could not be achieved before the end of the project.

For component III: all four activities have been implemented and thus the external quality assurance system is in place.

Problems within the project

Involvement MoH and PHA SR
The active support and interest from the top management of both the MoH and the PHA SR have been lacking, also because at the MoH there is no department concerned with Public Health. Moreover, there were often disagreements between the MoH and the PHA SR on who was the beneficiary institute for this project and also on financial issues concerning the co-financing part of the project's budget. Next to this, the CCs were not relieved of some of their routine duties by the management of the (R)PHAs in order to ensure intensive involvement in the project's activities. Because of the issues mentioned above, it took quite some effort for the BC PL, PM, CCs and for the RTA office to finish this project on time and in a successful way**.**

Project management, coordination and communication
During the project there have been quite a few problems concerning communication and cooperation between the MS (RTA office) and relevant people concerned with the project.
First of all, the cooperation and communication between the BC PL and former RTA was very complicated. The problems became so large that his contract could not be extended *(see above).* With the current RTA communication and cooperation is much better. However, a problem has been this year that the BC PL either was very busy with her other work and/or was absent twice for quite a long period of time. This sometimes caused delays in the work for the project. However, all documents were signed and important decisions were made before the end of the project.
Secondly, during the project there has been a problem with availability for the project of the CCs. In addition to their daily work, they also had to coordinate the work for the Twinning project. And because they were often very busy with their daily tasks or worked on parallel activities (the three additional contracts mentioned before) and the lack of support from the management and because of sometimes changing points of views of the new managers (after yet another change of management at the PHA SR), the CCs have often not been able to really do on time what they were supposed to do for the project.
Next to this, it should also be mentioned here that the role of the PM in this project was not very well defined. Consequence of this was that the PM was most of the time mainly involved with

the Software development for Component I and with the working group related to this issue and there was not much time left for her to coordinate the other two Components.

Long absence of RTA
On the 14th of September 2005 the selection of the new RTA was announced to all relevant institutions by the BC PL. The notification of the Addendum concerning the inclusion of a new RTA to the project was, with a lot of unnecessary delays in the BC, finally agreed upon on the 5th of December 2005. The new RTA started her work in Bratislava on the 6th of January 2006.
During the absence of an RTA for four and half months, the RTA assistant continued the work for the project, mainly on her own. Because of this, some of the activities had to be postponed to a later stage. However, they were all finalized before the end of the project.

Short term experts
Due to work in their home countries or because of personal reasons, quite a few short term STEs (four in total) were not able to continue with missions or had to cancel them completely. Because new STEs had to be contracted, this caused some delays in all three Components. However, all activities were completed before the end of the project.
Next to this, some of the CC's have mentioned that not all the STEs (three in total) had the relevant background or required experience. This has been discussed and acknowledged and in two cases the STEs could be replaced by other STEs who were better equipped for the tasks put before them.

Project visibility

The following extra activities ensured project and EU visibility

Kick-off meeting
On 30 March 2005, the Kick-off Meeting for the project took place. Guests of honour were the then deputy Minister of Health of the SR and the then Ambassador of the Netherlands. In addition to the speeches by the guests of honour, a representative of the Dutch Ministry of Health and the then Director of the PHA SR Bratislava addressed the audience. After the official opening, speakers from the SR, The Netherlands, Czech Republic and Latvia informed the audience about "surveillance and control of CDs" in their respective countries. After the Kick off meeting the MoH invited the special guests for a dinner.

Closing ceremony
On the 5th of October 2006 the Closing Ceremony took place. Special guests were the Slovak State Secretary of Health and the Ambassador of the Netherlands who both held a speech. The Director of the PHA SR Bratislava and a representative of the Dutch Ministry of Health were the next persons to address the audience. These were followed by speeches from the two PLs and the RTA. The PM, the three CCs and two STEs gave presentations on the impact of and progress made during the project. After this, the PHA SR Bratislava organised a reception at the MoH for all people present at the conference.

Furthermore, the following regular Twinning project activities were used as a means to ensure project and EU visibility

Study visits of 11 Slovak experts to the Netherlands and Germany
By meeting professionals in the Netherlands and Germany, the Slovak experts also contributed to making this EU Twinning project visible and known abroad.

Workshops and trainings
The following workshops and trainings were given for a wider audience. In this way the project also became more visible in the SR as a whole and also for people from different (medical) professional backgrounds.

- A one day seminar on software development. A German STE also participated and gave a presentation. Around 50 participants of all (R)PHAs from the SR participated.

- A one day workshop on outbreak management with exercises on cohort studies, given by a Dutch STE. About 60 participants of all PHAs from the SR participated in this workshop.

- Four day training on basic and advanced epidemiological principles, risk assessment and exercises on case studies given by three Dutch STEs in total, concluded by a final conference.
  Around 15 epidemiologists from the SR took part in these trainings. Next to this, on the last day, the final conference, some of the participants gave a presentation for a wider audience (approx. 50 epidemiologists from the SR).

- Participation and a presentation at the “Consultation Day”, a yearly meeting of microbiologists and epidemiologists (approx. 100) from the whole SR. One Dutch STE participated and also gave a presentation.

- Training of staff of nine National Reference Centres. As part of the training programme, around 36 employees from PHA of the SR and NRCs participated in a one day seminar on progressive detection methods and quality control systems. Two Dutch STEs participated and gave presentations.

- ENTERNET workshop. 152 people took part in a one-day workshop given by two Dutch STEs. The participants had the following backgrounds: epidemiology, nutritional hygiene, clinical microbiology labs (private & hospitals), environmental microbiology. Furthermore, participants from Veterinary institutions, laboratories and food hygiene were present.

The influence of the events mentioned above on the implementation of the project was positive. People involved in the project felt stimulated by such trainings and meetings, also because of the enthusiastic and positive remarks of the participants at such gatherings. Next to this, the study visits enhanced the networks of the professionals involved.

2D - ACHIEVEMENT OF MANDATORY RESULTS

In this section the extent to which each of the mandatory results is achieved is described.

Component I: Mandatory result:
Everything is achieved.

Component II: Mandatory result:
National Reference Centres (NRC) network extended, existing NRC strengthened, and *Laboratory Assurance Quality System* in NRC implemented

The following benchmark for Component II can only be partially fulfilled:
- Granting of an accreditation for the nine NRCs by the SNAS (Slovak National Accreditation System)

Instead of the nine NRCs mentioned only eight were included in the project and one new NRC was planned to be established. Due to lack of competent staff this only has been set up as a separate workplace for the moment, already functioning on laboratory level however.
Furthermore, the accreditation of all eight NRCs will not be completed before the end of the project, due to the delays in the reconstruction of the NRCs at the PHA SR (outside the project's scope). The six NRCs at the PHA SR Bratislava are envisaged to be accredited by the end of 2006.

Component III: Mandatory result:
Standard Operating Procedures in selected clinical microbiology laboratories implemented based on the new implemented quality assurance system

The following benchmark for Component III can only be partially fulfilled:
- Developed SOPs for external quality assurance and implemented and tested through testing panels at five selected pilot workplaces

Because of organisational changes of the laboratories at the RPHAs during the project, the Component III work plan had to be rearranged and the former idea of a standard External Quality Assurance System (EQAS) was retained only for salmonella NRC and NRC for resistance to antibiotics (ATB), serving the remaining (about 60) participating clinical microbiology laboratories. Due to lack of a target EQAS, the participating laboratories for influenza NRC were excluded from EQAS PHA SR. For Polio NRC and NRC for measles, mumps and rubella (MMR) a relevant simplified system with just two participating laboratories at RPHAs was adopted.
In a later stage of the project three EQAS PHA SR test runs (ATB, salmonella, MMR and polio) were realised and evaluated. All of them passed successfully and have confirmed the usefulness and necessity for a national EQA system organisation in the SR.

Overview mandatory results achieved
See Annex 1

2E – IMPACT

This section specifies to what extent the achievement of the results led tot the achievement of the purpose and overall objective of the project, measured against the benchmarks. Unexpected results of this project are also listed.

Benchmarks Overall Objective

The CD detection and response rate increased:
The conditions for this benchmark are fulfilled but it can only be evaluated after the new information system will be completely functional. The new information system makes it possible to give information on CDs via internet connection directly to the central database for all authorized experts on CDs, not only for epidemiologist from (R)PHAs, but also for general practitioners, paediatricians and microbiologists from hospitals and private laboratories. The information transfer and feedback will be much quicker, easier and cheaper.

Administrative and implementing structures concerning the epidemiological and laboratory control of CD upgraded and integrated into EU networks:
This is achieved. Epidemiological and laboratory workplaces of the (R)PHAs were equipped with modern IT- and laboratory equipment. The new information system was developed, the new laboratory methods and EQAS were introduced, staff was trained and the CD surveillance system was strengthened and integrated into the EU networks. In 2003 the SR participated in three EU networks for surveillance of CDs, in 2006 in 12 EU networks.

Benchmark project purpose

Implementation of EC legislation standards: Decision of 24 September 1998 setting up at network for the epidemiological surveillance and control of communicable diseases in the Community 19 March 2002 laying down case definitions for reporting communicable diseases to the Community network under Decision No 2119/98/EC of the European Parliament and of the Council and Commission Decision of 22 December 1999 on the early warning and response system for the prevention and control of communicable diseases under Decision No 2119/98/EC of the European Parliament and of the Council:
This is achieved. Four Directives were adopted concerning the setting up of a network for the epidemiological surveillance and control of communicable diseases in the Community and in the SR. Case definitions for reporting CDs to the Community network and EWS completed the implementation of the Acquis concerned with the surveillance and control of CDs. These four Directives were published in the Bulletin of the MoH SR and will be available on the new information system web portal.

Unexpected results from the Project

- The system of data collection and rapid distribution of the NRC results for CD surveillance was developed. This was not planned, but in the process of strengthening of surveillance it proved to be necessary to develop this as well.
- The new information system includes the possibility to report CD’s for other stakeholders (general practitioners, hospitals, microbiological laboratories) via Internet or defined interface, which technically supports the new law. This was not originally an aim of the project, but it was possible to include this in the project.
- The new information system improves the availability of historical and current CD data of the whole country for all epidemiologists in the SR.

2F - FOLLOW-UP AND SUSTAINABILITY

In the first two paragraphs of this section, the BC clarifies in what way they are going to finalize the unsolved, mainly long-term, recommendations that are listed in section 2H (p.17). In a so-called Action Plan recommendations given by the STEs during their missions were written down (see Annex 2). This plan consists of short-, medium- and long-term recommendations and concerns different levels of decision making, addressing the MoH, the PHA or the work floor. Most of the short- and medium term recommendations have already been fulfilled during the project.
In the last paragraph of this section the BC ensures the fulfilment of all the mandatory results.

Use of results and recommendations by the BC

This Twinning project is the largest project (in terms of duration and financial consequences) that the MoH has implemented since the establishment of the special Phare Unit at the MoH.
Almost all specific recommendations on all components, proposed by the Twinning partner are accepted by the beneficiary institutions. Some of them have been already partially incorporated, or preliminary some steps have been taken.

- On the basis of the recommendations on management by the Twinning partner, the internal procedures of the MoH and beneficiary institution need to be improved. Therefore, the lessons learned will be incorporated into an internal manual of the Phare Unit of the MoH, which will cover the whole system of implementation.
- The MoH will support the further development of international cooperation, including informal cooperation based on personal contacts of experts or internships that have been initiated by this project.
- Furthermore, the improvement of English language skills of Slovak experts and other staff involved will be supported to ensure the smooth project implementation (including future projects).
- Professional microbiological and epidemiological organisations organise regular common conferences, workshops and seminars on the regional and national level, which is a good occasion to introduce the new software and to advertise the new approaches and methods.
- The recommendation on strengthening the knowledge on outbreak investigations was accepted, the courses for epidemiologists were included to the educational plan of the Public Health Faculty of Slovak Health University.
- The idea regarding the establishment of the specialized working groups for particular diseases will be established in the SR. Lists with members have already been prepared and they will be officially nominated by PHA SR director. Activities of the working groups will be managed by the department of Epidemiology, PHA SR.
- The sustainability of the new IT system is one of the main interests of the beneficiary institution. The tools of advertising the new information system were discussed several times within the Component I working group. A press conference is planned to be held and some articles in a „Health Newspaper“ will be published to inform health professionals as well as wider public on the regional and national level.
- A Laboratory manager system (LIS) has been partially developed as a part of the informational system of monitoring infectious diseases, but the new LIS should be developed or bought. To ensure the mutual understanding and close collaboration between the fields of epidemiology and microbiology, the heads of NRCs (Epidemiologists and microbiologists) will organize weekly short meetings to discuss at the PHA SR in Bratislava, the RPHA in Banská Bystrica and the RPHA in Košice bottle-necks in the control of CDs, actual problems, signals from surveillance and signals from abroad.

Continuation of the work by the BC started during the project

This Twinning project ensured the upgrading of technical and human capacities of PHAs in the SR and enabled them to provide services on a qualitatively higher level. All gained knowledge acquired during missions of STEs or at study visits as well as the new technologies learned will be used daily.

Future actions by the BC to ensure all mandatory results will be fulfilled

The BC ensures that also the one mandatory result that has not been fulfilled yet: 'the granting of the accreditation for the nine (eight) NRCs by the SNAS' (Component II), will be finalized as soon as possible (December 2006).

2G - CONCLUSIONS

In this section the overall progress and impact with regard to the three components is presented.

All activities for all three Components have been implemented and even some additional activities took place. The mandatory results and connected benchmarks are therefore met. The overall Objective and Purpose of the project have been reached.

Component I
The output of the project is the increased detection of CDs, quality of laboratory diagnostics and reporting service of CDs by physicians. The new system will provide information for a lay public in an accessible way and professional information for a group of experts.
The new analytical tools for registration of CDs, the EWS and the new reporting system of influenza will allow to more quickly detect an increased occurrence or epidemic occurrence of influenza on regional or national level (in about one week).
The new system of monitoring CDs makes it possible to include all variables that are necessary for reporting to EU networks.

Component II
The implementation of the new methods and the quality system ensures standardization of laboratory methods and upgraded laboratory workplaces overall.

Component III
A unit for EQAS at the PHA SR in Bratislava was set up. The EQAS for the PHA SR was created as a standard EQA system with stressed educational functions that might also help to get a general impression of the standard of laboratory practice and to achieve an inter-laboratory comparability in the SR.

The overall conclusion is that, despite some constraints with regard to project management, coordination and communication substantial improvements in the system of surveillance and control of CD’s in the SR are made during the project. The system now meets the requirements of the EU in this regard.

2H – RECOMMENDATIONS: lessons learned

In this section some of the unsolved recommendations, given by the STEs during their missions and written down in an Action Plan (See Annex 2), for each component separately but also for general use are being listed.
In section 2F (p. 14) it is stated how the BC will give a follow up to these recommendations.

Recommendations for Component I

- The problem of underreporting can be accessed via laboratory reporting, which was also part of the software development. However it will need some more organizational efforts to contact all laboratories.
- The recommendations to strengthen the knowledge on outbreak investigations were fulfilled in the activities. More time is needed to implement this knowledge in the field, however.
- The recommendations to keep specialized working groups for groups of diseases (virus hepatitis, food borne diseases, nosocomial infections, STD, zoonoses, diseases preventable by vaccination) is in the phase of preparation for official approval. It is expected that these working groups will manage the quality of the work for specific problems of groups of diseases. Collaboration between experts from the PHAs and veterinary and food authorities should be further stimulated and facilitated. Also, collaboration between the national public health and the veterinary national reference laboratory should be realised.
- Concerning sustainability of the new software system:
  - Advertise the project in all media aimed at health professionals including the Public Health service and call the attention of the general public to this new and reliable source of information
  - Actively build a „spirit of community“ among the professional users (Public Health specialists & physicians etc)
  - Care for feedbacks and regular evaluation by users
  - Actively & regularly communicate on the achievements of the new EPIS System
  - Continue in training activities both for Public Health specialists *and* physicians; train-the-trainer approach using e.g. also *e-learning modules*

Recommendations for Component II

- The establishment of a BSL-3 facility which in principle was accepted by the PHA SR. At the present time the outline study is under preparation and its realization is estimated in 2007.
- The realization of an electronic LIS is in the phase of pilot testing on the level of data entering and printing of result protocols in connection to the implementation of the epidemiological information system. In the future it is needed to solve LIS by delivery of software for complex processing of laboratory.
- The need is recognized to increase mutual understanding and close collaboration between the fields of epidemiology and microbiology.
- Concerning Virology:
  - Increase the number of clinically relevant diagnoses, so that it will improve sight on the prevalence and incidence of viral infections; provide training of medical professionals how to apply viral diagnostics; increase attention for clinical virology in and integrate virology in the clinical diagnostic process by introduction of viral diagnostic units in the Microbiology Departments.
- Concerning the Quality System (QS):
  - To make it sustainable, the QS still has to become an integral part of the whole work process, by revising documents systematically, audits done periodically, avoid bureaucracy, be practical and use common sense.
  - Extending EQAS will have a major impact on upgrading knowledge and in that way the quality of the performed tests throughout the country.

- Concerning the NRCs:
  - To improve the quality of the work of the NRCs themselves it is important to implement a LIS and encourage further exchange and networking of personnel and also to develop a vision for the role of the NRCs within the Surveillance and Control of Communicable Diseases in the SR.

Component III

The evaluation of EQAS PHA-SK test runs have documented the need for an efficient national EQA system, at the beginning oriented especially on educational functions. Such a system might also help to detect and to solve practical laboratory diagnostic problems in microbiology laboratories in the SR. In the future the system also could allow to get a general impression of the standard of laboratory practice and to achieve an inter-laboratory comparability.
Such a system is a necessary prerequisite because the new modern national database for CDs was established in the SR. The SR has joined the EU networks for surveillance of CD's and is currently already reporting to the central EU databases.

Other recommendations

Management

For the sustainability of a project such as this it is better if there is high level policy involvement and professional expertise available from the MoH and also from the PHA SR with regard to communicable diseases. Next to this, a strong support and interest is needed from the top management (PHA SR and MoH) and also agreement on who is responsible and an understanding of the importance of projects such as these for the SR as a whole.
All the changes in the MoH and the PHA SR during this project have not been too good for the continuity of the project and the commitment of the people involved. It requires a very flexible attitude of everybody connected to the project, which is not always easy.
As a whole, for projects such as these, it is of the utmost importance that there is a full commitment and involvement possible from the key-staff concerned. First of all, the management has to make this possible for the key-staff by means of giving them more working hours for the project. But the key-staff itself should also be really committed to the project as a whole.
Furthermore, the PM should be more involved in the project and in all parts of it. The PM should really act as manager for the whole project and work closely together with the RTA office to make the project successful.
Job descriptions for all key staff involved in the project are advisable. In this way miscommunications can be avoided.

Training

The STEs have willingly given their contact addresses to the CCs and other people involved in the project, with the purpose of keeping contact on a professional level and also with the aim that the Slovak side could extend their network. It is strongly advised that Slovak professionals involved in this project make use of these contacts because this will help them in their future work.
Next to this, the level of English of the Slovak professional involved in the project should be improved by providing trainings in the English language. This will make it easier to make contacts with other professionals in their field in the rest of Europe and other parts of the world. It will also enable them to read literature, written in English, connected to their work.
Also, during the project quite a few trainings and workshops were held. This has proven to be very useful to the Slovak participants. It has shown that the need for further trainings is essential, also in terms of sustainability of what has been learned during the project. Training of trainers is preferable in order to achieve long lasting results.
Furthermore, one of the STE's offered a place for an internship to a staff member of the PHA SR Bratislava.

2I – ANNEXES

Annex 1: *Overview mandatory results achieved*

Annex 2: *Action Plan*

Annex 1: *Overview mandatory results achieved*

Component	Activity	Expected **MANDATORY RESULTS (Components)**	Deadline	Delay + / - [months]	Expected **BENCHMARKS (Activities)**	**ASSESSMENT** to date	Self-assessment Rate HS (Highly satisfactory), S (Satisfactory), U (Unsatisfactory)
1)		Slovak monitoring system of CD harmonised with EU standards, Early Warning System (EWS) upgraded and staff trained					
	1.1 Establishment of an expert group on data collection system and Early Warning & Rapid Response system for Communicable Diseases		13 April 2005	0	Members of expert group from the PHA have been selected and have participated in discussions with NSPOH expert on the assessment and development of the monitoring system of CD harmonised with EU standards.	Achieved	HS
	1.2 One week study visit of 6 BC experts to the Netherlands and Germany		13 April 2005	0	Within the framework of a training programme 6 BC specialists have visited institutions in the Netherlands and Germany to study the surveillance and control system.	Achieved	HS
	1.3 Brainstorm session concerning the user requirements of the surveillance and control system of communicable diseases		13 May 2005	0	Provisional definitions of conditions, outputs, inputs, and functionality of the software for target applications: early warning system, infectious diseases national register, and influenza surveillance.	Achieved	HS
	1.4 Evaluation of data protection regulations and it's implementation		13 May 2005	0	Overview of data protection regulations in Slovakia in comparison with EU requirements and practices.	Achieved	HS

Component	Activity	Expected **MANDATORY RESULTS (Components)**	Deadline	Delay + / - [months]	Expected **BENCHMARKS (Activities)**	**ASSESSMENT** to date	Self-assessment Rate HS (Highly satisfactory), S (Satisfactory), U (Unsatisfactory)
	1.5 Evaluation and recommendations on the: - quality and range of the data collected according to the EU network needs - links between NRC data and CD database - output and feedback of the system - memberships in EU networks		13 June 2005	0	Assessment of the reporting system of CD in relation with the Acquis and existing systems in the EU including data protection. Assessment on current membership of BC experts in EU networks and informing on pathways for memberships in EU networks.	Achieved	HS
	1.6 Second brainstorm session concerning the user requirements of the surveillance and control system of communicable diseases		13 July 2005	0	Final definitions of conditions, outputs, inputs, and functionality of the software for the three target groups mentioned under 1.3.	Achieved	HS
	1.7 Development of a communication architecture which will be the conceptual framework of the new information system		13 Aug 2005	1	Document on the communication architecture for the information system concerning surveillance and control of CD.	Achieved	HS

Component	Activity	Expected **MANDATORY RESULTS (Components)**	Deadline	Delay + / - [months]	Expected **BENCHMARKS (Activities)**	**ASSESSMENT** to date	Self-assessment Rate HS (Highly satisfactory), S (Satisfactory), U (Unsatisfactory)
	1.8 Development of a specification of the information system(s), including the mechanisms for generating, distributing, updating and evaluating information within the identified areas and taking SOP, QA/QC principles into account. Defining the links between laboratory data from NRC's and CD database. Preparation of ToR for TA & training (Service contract)		13 Sept 2005	3	Document on the specification of the information system for the surveillance and control of CD. ToR for TA as a service contract.	Achieved	HS
	1.9 Development of a technical framework, including recommendations on hardware (Technical specifications for Supply contract), software, data-format, issues of security, accessibility, access control, availability and technical management		13 Oct 2005	4	Document on the technical framework for the information system concerning surveillance and control of CD. Technical specification developed	Achieved	HS
	1.10 Formulation of Slovak specific, general guidelines for outbreak management		13 Jan 2006	2	Document containing the guidelines for outbreak management.	Achieved	HS

Component	Activity	Expected **MANDATORY RESULTS (Components)**	Deadline	Delay + / - [months]	Expected **BENCHMARKS (Activities)**	**ASSESSMENT** to date	Self-assessment Rate HS (Highly satisfactory), S (Satisfactory), U (Unsatisfactory)
	1.11 Two days workshop on outbreak management for regional staff with exercise on case control study and cohort study		13 March 2006	1st part 0 2nd part 4	As part of the training programme, 74 staff from Regional PHA have participated in a two days workshop on outbreak management.	Achieved	HS
	1.12 Registration for new memberships of EU networks		13 April 2006	5	Overview of relevant EU networks and the actual participation of BC experts in these networks.	Achieved	HS
	1.13 Implementation, testing and evaluation of the new systems on data collection in 5 selected pilot regions		13 July 2006	1st 0 2nd 2	The new system of data collection is operational in 5 pilot regions.	Achieved	HS
	1.14 Full systems roll-out in all 36 Regional PHA's		13 Aug 2006	2	The new system of data collection is operational in 36 regional PHA's.	Achieved	HS
	1.15 Organization of a one day conference on Intervention epidemiology for surveillance and control of communicable at the national and local level		13 Oct 2006	0	As part of the training programme, about 50 officials from MoH and PHA have participated in a one day conference on intervention epidemiology.	Achieved	HS

Component	Activity	Expected **MANDATORY RESULTS (Components)**	Deadline	Delay + / - [months]	Expected **BENCHMARKS (Activities)**	**ASSESSMENT** to date	Self-assessment Rate HS (Highly satisfactory), S (Satisfactory), U (Unsatisfactory)
2)		National Reference Centres (NRC) network extended, existing NRC strengthened, and Laboratory Assurance Quality System in NRC implemented					
	2.1 Establishment of an expert group on internal (comp. 2) and external quality assurance (comp. 3) within National Reference Centres (parallel to activity 3.1)		13 April 2005	0	Members of expert group from PHA and NRC's have been selected and have participated in discussions with the NSPOH expert on the assessment and improvement of the internal quality assurance system.	Achieved	HS
	2.2 Evaluation of existing knowledge and experience on quality control systems and progressive detection methods of NRC staff and analysis of available equipment and material at the different NRC's. Development of technical specifications for supply contract.		13 June 2005	0	Recommendations on training needs and equipment, technical specifications on the supply contract developed.	Achieved	HS
	2.3 Two weeks internships in corresponding institutes in the Netherlands or Germany of 4 selected Slovak employees of NRC's including for one employee an additional training of one week in quality assurance, EQAS		13 July 2005	1st 0 2nd 0 3rd 5 4th 9	As part of the training programme, 4 specialists of NRC's have undertaken a two weeks internship in Dutch or German institutes with focus on quality control systems and one employee undertakes one week training more.	Achieved	S

Component	Activity	Expected **MANDATORY RESULTS (Components)**	Deadline	Delay + / - [months]	Expected **BENCHMARKS (Activities)**	**ASSESSMENT** to date	Self-assessment Rate HS (Highly satisfactory), S (Satisfactory), U (Unsatisfactory)
	2.4 Set up of a unit for Quality Assurance / Quality Control within the Public Health Authority		13 Sept 2005	1	A unit for quality assurance within the PHA is operational.	Achieved	HS
	2.5 Training of staff of 9 selected NRC's in quality control systems and progressive detection methods		13 Dec 2005	1 STE 3 2 STEs 5	As part of the training programme, 40 employees from PHA and NRC's have participated in a two days seminar on quality control systems and progressive detection methods.	Achieved	HS
	2.6 Development and implementation of the quality control systems and progressive detection methods		13 Feb 2006	4-5	The generally accepted standards on quality assurance for granting accreditation by the SNAS have been implemented.	Achieved	HS
	2.7 Final assessment of the implementation of the new quality control system		13 Feb 2006	7	Recommendations on how to proceed for the PHA to pass the accreditation.	Achieved	HS
	2.8 Passing the accreditation process		13 Oct 2006	3 (Dec. 2006)	Formal accreditation by the SNAS.	Partly achieved	S
3)		Standard Operating Procedures (SOP) in selected clinical microbiology laboratories implemented based on the new implemented quality assurance system					

Component	Activity	Expected **MANDATORY RESULTS (Components)**	Deadline	Delay + / - [months]	Expected **BENCHMARKS (Activities)**	**ASSESSMENT** to date	Self-assessment Rate HS (Highly satisfactory), S (Satisfactory), U (Unsatisfactory)
	3.1 Establishment of an expert group on internal (comp. 2) and external quality assurance (comp. 3) within National Reference Centres (parallel to activity 2.1)		13 April 2005	0	Members of expert group from PHA and NRC's have been selected and have participated in discussions with NSPOH expert on the assessment and improvement of the external quality control system.	Achieved	HS
	3.2 Analysis of current Standard Operating Procedures for external quality assurance		13 June 2005	0	Assessment of current Standard Operating Procedures.	Achieved	HS
	3.3 Development of Standard Operational Procedures based on the new implemented quality assurance system		13 Sept 2005	9	Document on the revised Standard Operating Procedures.	Achieved	HS
	3.4 Implementation and testing in 5 selected pilot workplaces of Standard Operating Procedures for external quality assurance		13 Oct 2006	0	New Standard Operating Procedures for external quality control are operational in 5 pilot regions.	Achieved	HS

Annex 2: ***Action Plan***

Section 3: Expenditure

Twinning Contract number: *SK03/IB/SO/01*

Actions to be undertaken under the Twinning project	Original budget			Budget after side letters / addenda	Amount paid in Euros					Total amount paid
	Unit cost	No of units	Total MS cost		Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 5	Final report
1. Resident Twinning Advisor Remuneration Mr./Ms. First Name SURNAME (XXX months)										
Basic salary and non wage labour costs										0,00
6% of salary and non-wage labour costs										0,00
Total RTA remuneration			**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**
2. Resident Twinning Advisor Allowances										
Daily allowances (50%)										0,00
Allowances for RTA for first 30 days										0,00
Allowances for spouse and children for first 30 days at 50%										0,00
Health and accident insurance for RTA										0,00
Health and accident insurance for spouse										0,00
Health and accident insurance for children										0,00
Accommodation (see appropriate ceiling for each BC)										0,00
Estate Agent's Fee										0,00
Removal Costs (up to 780kg for RTA, 390kg for spouse and 195kg per child)										0,00
Storage Costs										0,00
Vehicle transport										0,00
Excess Luggage (up to 50kg)										0,00
Travel to and from place of duty – RTA										0,00
Travel to and from place of duty – spouse										0,00
Annual return trip – RTA										0,00
Annual return trip – spouse										0,00
Monthly allowance for special economically priced return trips										0,00
School fees (X children X years)										0,00
Total RTA Allowances			**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**

3. RTA Training										
Return fare Brussels										0,00
3 per diems BE	201									0,00
Total RTA Training			**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**

4. RTA Assistant

5. Project Preparation										
RTA/PL Leader fees										0,00
(XX trips x XX days)										0,00
'Project Management Costs'										0,00
Per diems										0,00
Airfares										0,00
Total Preparation Costs			**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**

6. Project Co-ordination Costs										
Participation of PL in PSC meetings										0,00
Fees (XX missions of XX days)										0,00
'Project Management Costs'										0,00
Per diems										0,00
Airfare										0,00
Visibility costs										0,00
Audit certificate costs										0,00
Office equipment										0,00
Office furniture										0,00
Telephone costs										0,00
Stationeries										0,00
Total Project Co-ordination Costs			**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**

PROJECT ACTIVITIES

7. COMPONENT 1: TITLE										
1.1 Activity Title										0,00
Five-day seminar in BC										0,00
XX MS experts (names), XX days										0,00
Expert fees										0,00
'Project Management Costs'										0,00

Per diems										0,00
Air tickets										0,00
Interpretation (XX interpreters x XX days)										0,00
Translation of XXXX (XX pages)										0,00
Seminar venue										0,00
Coffee Breaks										0,00
Training materials										0,00
BS staff costs(per dim, travel, hotel)										0,00
										0,00
1.2 Activity Title										0,00
										0,00
										0,00
1.3 Activity Title										0,00
		Total Component 1	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**
8. COMPONENT 2: TITLE										
2.1 Activity Title										0,00
Two-week study trip to MS for XX BC staff to the Ministry of … in …										0,00
Per diems for BC participants (XX x XX days)										0,00
Air tickets for BC participants										0,00
Incidental costs (at 10 per participant/day)										0,00
Interpreter fees										0,00
Air tickets for interpreter										0,00
Per diems for interpreter										0,00
										0,00
2.2 – 2.9 ActivityTitle										0,00
		Total Component 2	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**
		SUB-TOTAL			**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**
		Amount charded to contingency								
		TOTAL			**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**

For the administration of the Member State

Name: Mr. G.M. van Etten

Title: Senior Advisor of the Netherlands School of Public and Occupational Health

Signature:

Date:

For the administration of the BC

Name: Ms. Zuzana Škublová

Title: Sector Aid Coordinator of the Ministry of Health of the Slovak Republic

Signature:

Date: