Standard Summary Project Fiche for the Transition Facility

1. Basic Information

1.1 CRIS Number: 2005/017-495-04-01

1.2 Twinning Number: LV/2005-IB/EC/01

1.3 Title: **Implementation of Eurocode in structural design practice in Latvia**

1.4 Sector: Internal Market

1.5 Location: **Latvia**

2. Objectives

2.1 Overall Objective(s):

To implement set of the Eurocode standards in structural design practice

2.2 Project purpose:

To harmonize structural design practice in Latvia with European one by implementation of Eurocode standards in structural design codes and structural design practice, training of design professionals

2.3 Justification:

The Commission Recommendation of 11 December 2003 (2003/887/EC) on the implementation and use of Eurocodes for construction works and structural construction products recommends: "Member states should adopt the Eurocodes as a suitable tool for designing construction works, checking the mechanical resistance of the components, or checking the stability of structures". The Recommendation is addressed to Member states in order to promote implementation and real action of the Construction Products Directive 89/106/EEC and to fasten real free movement of construction products.

According to the Guidance Paper L to the Construction Products Directive 89/106/EEC (CPD) "Application and use of Eurocodes" the Eurocodes provide common design methods, expressed in a set of European standards, which are intended to be used as reference documents for Member States to:

- prove the compliance of building and civil engineering works or parts thereof with Essential Requirement n°1 Mechanical resistance and stability (including such aspects of Essential Requirement n°4 Safety in use, which relate to mechanical resistance and stability) and a part of Essential Requirement n°2 Safety in case of fire, including durability, as defined in Annex 1 of the CPD;
- express in technical terms , these Essential Requirements applicable to the works and parts thereof;
- determine the performance of structural components and kits with regard to mechanical resistance and stability and resistance to fire, insofar as it is part of the information accompanying CE marking (e.g. declared values).

3. Description

3.1 Background and justification:

During the pre-accession process Latvia has aligned almost all the legislation in construction area with *"acquis communautaire"* by adopting the EU directives and implementing appropriate administrative provisions and institutional structure. Further step is harmonization of Eurocode (CEN 1990 series) standards.

The set of Eurocode standards is a harmonized set of the structural design codes. These standards are aligned with the harmonized CEN standards of construction products, issued on the mandate of the EU Commission according to CPD. The Eurocode standards will unify methods of calculation of loads and actions affecting the structures, parameters and requirements, including safety level, to be taken into account in calculation and design of structures, as well as methods of calculation of different types of structures. The set of Eurocode standards consists of ten families of standards – the first one EN 1990 as a general instruction named "Basis of design", and eight families from EN 1991 up to EN 1997 and EN 1999 for different types of structures depending on material (concrete, masonry, steel etc.) and one standard EN 1998 for estimation of seismic actions. The set of Eurocode standards will be a tool to eliminate technical barriers to trade – as there will be unified essential requirements and classes of requirements for main structural products used in EU.

According to the statutes of CEN all the EU member states shall implement all the accepted CEN standards within six months and to withdraw the conflicting national standards, as well as within nine months time period to use in national building regulations only requirements and classes accepted in harmonized CEN standards. Currently the requirements of Latvian Building regulations and Latvian Building codes are not fully corresponding with classes used in Eurocodes and harmonized CEN standards although before accession Latvia has formally adopted all the approved CEN product standards. Discrepancy of technical requirements in standards and building codes is caused by fact that harmonization of current set of CEN standards and building codes take place before Latvia's accession into EU. As a result essential requirements of Latvian building codes were not included in these standards.

There are adopted 27 Eurocode standardization documents (standards) in Latvian National Standardization system ratified by CEN until the end of 2004 from 59 expected. 11 Eurocode standards are yet translated in Latvian. Nevertheless the Eurocode as EN 1990 series or ENV 1990 series standards are used mostly in EU financed projects (ISPA, Structural funds, etc.), but not widely in structural design practice in Latvia, mostly due to shortage of information and lack of experience. The structural design subjects in universities and college are given according to the methods validated by Latvian building codes LBN. Only the main principles and peculiarities are mentioned in lectures, but not used in practical classes.

The issue of harmonization of building codes becomes even more important taking into account that CEN and European Commission plan to complete the elaboration of full set of Eurocode standards until the end of 2007, and according to the statutes of CEN in 2008 the set of Eurocode standards shall be adopted in Member states and substitute the relevant National standards. Formally the National building regulations is competence of Member states, but in practice it could create problems in trade.

Process of adoption of approved Eurocode standards in Latvia is going on since 2002, but it is only the formal side of the problem. It should be mentioned that Latvia has significant capacity problems for harmonization of building codes as there is lack of specific know how in universities in Latvia as well as lack of training methodology and skilled trainers. In order not to create technical barriers to trade in near future and to drop behind in development Latvia needs support in implementation of the Eurocode standards in design practice. Latvia needs further technical support in further implementation of Eurocodes by adoption of effective training methodology, translation of standards to make them available in training process in universities and for all designers. In this aspect the proposed project is of high European related priority.

According to Concept of Latvian Building regulation system approved by the Cabinet of Ministers in September of 1999 the Latvian Building codes are to be developed as "new approach" codes and shall be oriented on reference to CEN standards, in case of codes of structural design – on Eurocode standards.

In order not to be in conflict with requirements of CPD and requirements of conformity attestation of construction products as well as remove the technical barrier in trade with design services among Latvia and "old" member states, the principles of structural design according to Eurocode must be implemented as a requirement in structural building codes.

3.2 Linked activities:

Phare:

Phare 2000 programme project No. LE 00.08.00 "Latvian National Quality Assurance project" service contract LE 0008/0001
(duration September 2002 – October 2003)
As part of the project CEN standards were translated in the construction area, among them 9 standards of EN 1990 series from 4 Eurocode groups.

Netherlands PSO Pre-accession:

PPA01/LV/9/1 "Further development of the conformity attestation system in the construction sector in Latvia"
(duration January 2002 - December 2003)
As a small part of the project there were carried out two meetings of working group and one seminar on matter of relations between Construction products directive 89/106/EEC and the Eurocode standards, particularly the Guidance paper L of the EU Commission "Application and use of Eurocodes" was learned and analyzed.

3.3 Results:

Mandated Twinning results:

1. Revised programs for 4 subjects (concrete and masonry structures, steel structures, timber and plastic structures, soils and foundation) based on Eurocode standards implemented in the training process at the faculties of Civil Engineering of universities and college;
2. Wide implementation of structural design according to the Eurocode standards;
3. Administrative and professional capacity of the staff of the Building department of the Ministry of Economics and other involved institutions increased.

Overall results:

1. Latvian structural design experts (not less than 12) trained in essence of Eurocode standards and their application and having skills to train structural design practicians and students (training of trainers);
2. Trained in application of relevant Eurocode standards Latvian structural design practicians (not less than 55) having skills to perform the structural design process according to Eurocode standards;
3. Latvian Building codes on structural design (LBN 203-97; LBN 205-97; LBN 206-99; LBN 207-01) amended and Eurocode referenced in another Latvian Building Codes;
4. No technical barrier in cooperation (trade with services) in area of structural design among Latvia and "old" member states;
5. Guidelines of the structural design for design professionals are available;

3.4 Activities:

Component 1: Twinning Contract

Contract 1: Twinning Contract

- Detailed analysis of the current situation in structural design practice.
- Elaboration of the recommendations.
- Organization of 8 workshops for each Eurocode standards group for Latvian experts of structural design in the Twinning partners institution- "training of trainers" (each of approx. 6 participants, estimated duration: total 40 m/d).
- Organization of 8 pilot seminars for structural design professionals and lecturers of the universities for each Eurocode standards group (each of approx. 30 participants, estimated duration: total 40 m/d):
- basis of structural design and actions on structures;
- design of concrete structures;
- design of steels structures and design of aluminium alloy structures;
- design of composite steel and concrete structures;
- design of timber structures;
- design of masonry structures;
- geotechnical design;
- design provision for earthquake resistance of structures
- Consultations to the Building department of the Ministry of Economics regarding implementation of the requirements of Eurocode in Latvian Building regulation system;
- 3 study visits for experts of the National Standardization Body and civil servants of the Building department of the Ministry of Economics (estimated duration: each 5 m/d);
- Drafting of amendments to Latvian structural building codes;
- Consultations and development of new versions of structural engineering subjects at the Building faculty, Riga Technical University and Faculty of Rural Engineering, University of Agriculture.
- Drafting of Guidelines on practical implementation of Eurocode standards in structural design practice

Means: Twinning Contract

Long term expert – resident twinning adviser (RTA) in structural design (12 m/m)
The main tasks of the RTA:

- Monitoring and guidance of the whole project including co-ordination and supervision on short-term experts' contribution in particular issues;
- Detailed analysis of the current situation in adoption and implementation of Eurocode standards in all stages of running of the Project and dissemination of information;
- Consultation of the Building department on matter of necessary amendments of the Building regulations and elaboration of the recommendations on implementation;
- Organization of efficient training of the staff of the beneficiary and involved institutions;
- General supervision of organization of 8 training groups of trainers and their visit to the Twinning partner institutions for each of ten sets of Eurocode standards;
- General supervision of organization of 8 pilot seminars for structural design professionals for each of ten sets of Eurocode in Latvia;
- Organization of the study visits for the experts of the National Standardization Body and civil servants of the Building department of the Ministry of Economics**.**

Indicative profile of EU Twinning expert – RTA:

- Comprehensive and practical 5 years experience in structural design;
- Specific knowledge of the standardization policies and regulations;
- Specific knowledge in methodology of training process in technical field;
- Knowledge in Building regulation system;
- Fluency in English, computer literacy

EU short-term expertise in basic principles of structural design (indicative 21 m/m)
The main tasks of the STE:

- Assistance in organization of the workshop for "training of trainers" of Latvian experts to Twinning partners institution on principles of Eurocode standards (144 m/d):
  - EN 1990 "Basis of design";
  - Eurocode 1 – "Actions on structures" (set of standards EN 1991);
  - Eurocode 2 - "Design of concrete structures" (set of standards EN 1992):
  - Eurocode 3 - "Design of steel structures" (set of standards EN 1993);
  - Eurocode 4 - "Design of composite steel and concrete structures" (set of standards EN 1994);
  - Eurocode 5 - "Design of timber structures" (set of standards EN 1995);
  - Eurocode 6 - "Design of masonry structures (set of standards EN 1996);
  - Eurocode 7 - "Geotechnical design timber" (set of standards EN 1997);
  - Eurocode 8 - "Design provisions for earthquake resistance of structures" (set of standards EN 1998)
  - Eurocode 9 - "Design of aluminium alloy structures" (set of standards EN 1999);
- Organization and conducting of a pilot seminar for structural design professionals and lecturers of the universities on principles of Eurocode standards;
- Consultations to the universities on implementation of principles of Eurocode in subjects training of the students in design of the structural engineering;
- Composition and drafting of guidelines on practical implementation of Eurocode standards in structural design practice;
- Consultations for the experts of state institutions of Latvia and National Standardization body on implementation for Eurocode standards in legal system;
- Demonstration of the experience of "old" Member States in implementation of the Eurocode standards in the legal system;
- Consultations in drafting of the amendments to Latvian Building codes of structural design;
- Consultations on implementation of the Eurocode requirements.

Indicative profiles for EU short-term experts:

- Preferably 3-5 years experience in structural design;
- Specific knowledge of the standardization policies and regulations in EU member states;
- Specific knowledge in methodology of training process in technical field;
- Knowledge in Building regulation system in EU member states;
- Good organizational, communication and presentation skills;
- Fluency in English, computer literacy

4. Institutional Framework

The beneficiary of the Project is the Building department of the Ministry of Economics. Building department is responsible for constructions branch in Latvia, the main tasks are:

- drafting of construction policy,
- drafting of legislation in the construction area,
- elaboration of Latvian building codes,
- coordination of standardization activities in the construction area,
- coordination of the conformity attestation of the construction products.

The main ideas and activities of the project proposals are coordinated with relevant governmental institutions and non-governmental organizations. As counterparts of the project will be the following governmental bodies and NGO's:
National Standardization body "Latvijas Standarts"
Building faculty, Riga Technical University
Faculty of Rural Engineering, University of Agriculture
Latvian Association of Civil Engineers
Latvian Association of Contractors
Latvian Association of Producers of Building Materials
Construction design companies

A Steering Committee will be established to oversee the Project implementation. The Steering Committee will meet at least once a quarter and it will include the representatives from the Ministry of Economics. Administrative office of the Ministry of Finance, CFCA will be invited to the Steering Committee as observers.

The Steering Committee will:

- Review, comment and approve all reports and work plans;
- Solve the problems in the project environment;
- Monitor expenditure against the budgets;
- Ensure that project is commensurate with the aims and objectives of the Latvian Government and the requirements of the EU.

5. Detailed Budget

€M	**Transition Facility support**			**Co-financing**			**Total cost (TF plus co-financing)**
	Invest-ment Support	Institu-tion Building	**Total Transition Facility (=I+IB)**	National Public Funds (*)	Other Sources (**)	Total co-financing of the project	
year 2006							
Contract 1		0,5	0,5	0,05*		0,05	0,55
Total		**0,5**	**0,5**	0,05*		0,05	**0,55**

*contributions from National, Regional, Local, Municipal authorities, FIs loans to public entities, funds from public enterprises

**private funds, FIs loans to private entities

6. Implementation Arrangements

6.1 Implementing Agency

The Contractual and Financial Implementation:
PAO – Mrs. Inta Vasaraudze, Deputy State Secretary, Ministry of Finance
Tel.: (+371) 7095420, fax: (+371) 7095421, address: 1, Smilšu street, Riga, LV-1919

Implementing agency – CFCA
Mr. Armands Eberhards, Director
Tel.: (+371) 7357840, fax: (+371) 7357841, address: 1, Smilšu street, Riga, LV-1919

The technical implementation will be the responsibility of the Ministry of Economics:
Contact persons:

SPO – Mr. Andris Liepinš, Deputy State Secretary, Ministry of Economics
Tel.: (+371) 7013167, fax: (+371) 7013177, address: 55, Brivibas street, Riga, LV-1519

6.2 Twinning

Contact person for RTA will be Andris Šteinerts, Head of the Building Regulations Division, Building Department, Ministry of Economics, 55, Brivibas street, Riga, LV 1519
Tel: +(371) 7013235, fax +(371) 7013027, e-mail Andris.Steinerts@em.gov.lv

Administrative Officer for Twinning Projects

Mrs. Ruta Konstante, Director of EU and International Affairs Department, Ministry of Finance
Tel.: (+371) 7095622, fax: (+371) 7083830,
E-mail: Ruta.Konstante@fm.gov.lv, address: 1, Smilšu street, Riga LV-1919

RTA will be located at the Ministry of Economics.

6.3 Non-standard aspects

There will be no non-standard aspects regarding implementation of the project. Twinning manual will be followed under Extended Decentralized Implementation System.
Ratio: if during project implementation the project cost for some reasons will decrease, the Transition Facility financing will also decrease proportionally.

6.4 Contracts

Twinning contract – total- 500 000 EUR (parallel co-financing)

7. Implementation Schedule

7.1 Start of tendering/call for proposals

Contract 1 Twinning contract- IV 2005

7.2 Start of project activity

Contract 1 Twinning contract- I 2006

7.3 Project Completion

Contract 1 Twinning contract- I 2007

8. Sustainability

The equipment provided to the involved institutions will be maintained by their own means, the necessary costs will be envisaged in yearly budget.

9. Conditionality and sequencing

Activities to be carried out before the start of the project are following:

- Necessary resources provided by the state budget before the start of the project.

ANNEXES TO PROJECT FICHE

1. Logical framework matrix in standard format
2. Detailed implementation chart
3. Contracting and disbursement schedule by quarter for full duration of programme (including disbursement period)

Transition Facility logframe

LOGFRAME PLANNING MATRIX FOR Project	Programme name and number	
Implementation of Eurocode in structural design practice in Latvia	Contracting period expires:	Disbursement per expires:
	Total budget: 550 000 EUR	TF budget: 500 000 EUR

Overall objective	**Indicators of Achievement**	**Sources of Information**	
To implement set of the Eurocode standards in structural design practice	• Harmonized with Eurocode design rules implemented in Latvian Building codes of structural design	Guidelines of CEN Eurocode standards for implementation of Eurocode standards Annual report of the Ministry of Economics	
Project purpose	**Indicators of Achievements**	**Sources of Information**	**Assumptions**
To harmonize structural design practice in Latvia with European one by implementation of Eurocode standards in structural design codes and structural design practice, training of design professionals	• Approved Eurocode standards by 2006 adopted in Latvian National Standards system	Catalogue of Latvian National Standardization body	• Ministry of Economi is interested to harmonize Building regulations with EU memberstates • Universities are interested to implem in training process officially approved design methods; • Designers are interes in implementation of harmonized with CE standards design methods
Results	**Indicators of Achievement**	**Sources of Information**	**Assumptions**
Mandated Twinning results: 1. Revised programs for 4 subjects (concrete and masonry structures, steel structures, timber and plastic structures, soils and foundation) based on Eurocode standards implemented in the training process at the faculties of Civil Engineering of universities and college; 2. Structural design process performed according to the Eurocode st andards; 3. Administrative and professional capacity of the staff of the Building department of the Ministr of Economics and other involved institutions increased. **Overall results:** 1. Latvian Building codes (LBN) amended and Eurocode referenced in Latvian Building Code (LBN); 2. No technical barrier in cooperation (trade with services) in area of structural design among Latvia and "old" member states; 3. Guideline of the structural design for design professionals are available.	• Not less than 12 structural design experts trained for application of Eurocode in structural design. in 8 workshops; total number approx. 48 participants for all workshops (experts would like to participate in different training workshops) • Not less than 55 structural design practitioners are trained in 8 pilot seminars for application of Eurocode standards; total number approx. 160 participants for all training seminars (practitioners would like to participate in pilot seminars for different Eurocode standards) • References to Eurocode standards amended to Latvian building codes • Students in structural engineering of the technical faculties of universities trained according to Eurocodes • Guideline for application of Eurocode standards in structural design is available	Protocols of the meeting of the State secretaries of the ministries of the Republic of Latvia Training curricula of the universities	No obstacles for the implementation of Euroc standards of EN 1990 ser

Activities	Means		Assumptions
	Twinning:		• No delays w contracting of Twinning partners
• Detailed analysis of the current situation in structural design practice. • Elaboration of the recommendations. • Organization of 8 workshops for each Eurocode standards group for Latvian experts of structural design in the Twinning partners institution - "training of trainers" (each of approx. 3-6 participants, estimated duration: total 40 m/d). • Organization of 8 pilot seminars for structural design professionals and lecturers of the universities for each Eurocode standards group (each of approx. 30 participants, estimated duration: total 40 m/d): - basis of structural design and actions on structures; - design of concrete structures; - design of steels structures and design of aluminium alloy structures; - design of composite steel and concrete structures; - design of timber structures; - design of masonry structures; - geotechnical design; - design provision for earthquake resistance of structures • Consultations to the Building department of the Ministry of Economics regarding implementation of the requirements of Eurocode in Latvian Building regulation system; • 3 study visits for experts of the National Standardization Body and civil servants of the Building department of the Ministry of Economics (estimated duration: each 5 m/d); • Drafting of amendments to Latvian structural building codes; • Consultations and development of new versions of structural engineering subjects at the Building faculty, Riga Technical University and Faculty of Rural Engineering, University of Agriculture; • Drafting of guideline for application of Eurocode standard in structural design practice.	RTA – 12 m/m 8 workshops, each of approx.3 - 6 participants, estimated duration: total 40 m/d 8 pilot seminars, each of approx. 20-30 participants, estimated duration: total 40 m/d 3 study visits, estimated duration: each 5 m/d short term expertise		

ANNEX 2

DETAILED IMPLEMENTATION CHART*

	2006												2007		
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M
Contract 1 **Twinning contract**															
Overall management of the project			X	X	X	X	X	X	X	X	X	X			
8 workshops for each of Eurocode standards group for Latvian experts of structural design in the Twining partners institution- "training of trainers"					X	X	X								
8 pilot seminar for structural design professionals and lecturers of universities:															
- Basis of structures design and actions on structures (EN 1990 and EN 1991								X	X						
- Design of concrete structures (EN 1992)									X	X					
- Design of steel structures and design of aluminium structures (EN 1993 and EN 1999)										X	X				
- Design of composite steel and concrete structures (EN 1994)											X	X			
- Design of timber structures (EN 1995)											X	X			
- Design of masonry structures (EN 1996)										X	X				
- Geotechnical design (EN 1997)										X	X				
- Design provision for earthquake resistance of structures (EN 1998)												X	X		
Detailed analysis of the current situation in structural design practice				X	X	X	X								
Drafting of amendments to Latvian Building cods (LBN) on structural design								X	X	X	X	X	X		
Consultations to the Building department of the Ministry Economics regarding implementation of requirements of Eurocode in LBNs					X		X		X		X		X		
3 study visits of experts of National Standardization body and civil servants of Building department of the Ministry of Economics							X	X							
Consultations and development of new versions of structural engineering subjects at the Building faculty, Riga Technical University and Faculty of Rural Engineering, University of Agriculture									X	X	X	X			
Implementation of new version of structural design subjects in training process of universities											X	X	X	X	
Composition and drafting of guidelines on practical implementation of Eurocode standards in structural design practice;											X	X	X		

*indicative estimates

ANNEX 3

CUMULATIVE CONTRACTING AND DISBURSEMENT SCHEDULE (MEUR)*
Transition Facility Programme 2005 (EUR)

	2005	2006				2007
	IV	I	II	III	IV	I
Contract 1 **Twinning Contract**						
Contracted total		**0,5**				
TF		0,5				
Disbursed total		**0,4**	**0,45**			**0,5**
TF		0,4	0,45			0,5
National		0,04	0,045			0,05

* indicative estimate