Call for Tender

for 3 technical experts

for expertise support to additional activities for European standards with the aim to increase resilience to climate change

in the frame of the 2nd Phase of the EC Mandate C(2014) 3451 "Adaptation to climate change"

Launch: 2020-02-26 Deadline for tenders: 2020-04-01

The EC and CEN have signed a specific agreement on Adaptation to Climate Change (specific agreement no CEN/2019-12). This agreement aims at undertaking additional activities for European standards, with the aim to increase resilience to climate change. Specific points of attention:

- *other infrastructural standards than the 13 standards in revision in Phase II*
- *Linking standards for infrastructures (including Eurocodes) to future climatic conditions, and supporting the alignment of future climate data to the needs of users in the standardization community*
- *Scaling national standardization initiatives for adaptation measures to the European level to the standardization community, with the objective to include the issue of climate change adaptation in standards for infrastructures.*

The activities will be carried out in a period of two years, from 2020 – 2021.
For these tasks, support from three experts is foreseen. This call specifies the tasks and resources allocated.

1. Background

One of Europe's priority areas in dealing with the changing climate is the resilience of key infrastructures in society. From this perspective, the EU mandated a project to CEN/CENELEC in 2014 (M/526) directed at including climate change adaptation in standards for buildings and the energy and transport infrastructures. As part of this project, currently 13 European standards are in revision or development. In parallel, pursuant to the stated objectives of the mandate, guidance tools have been developed which support writers of standards in including CCA in a systematic way in standards, namely CEN-CENELEC Guide 32 (2016) and the current draft tailored guidance (2019*). The mandate arose as it was increasingly recognised that standards play an essential role in establishing the design, performance and maintenance of infrastructures.

As awareness on and knowledge about the impacts of climate change on our society is growing fast, it also becomes clear that European standards can play a vital role in sectors related to the ones identified in the first mandated project. Therefore, the EC and CEN/CENELEC have taken the initiative in the CEN/SABE framework to investigate this further, and where needed to take appropriate actions to come to development of the European standards needed.

Following this initiative, this proposal describes a set of activities additional to the already ongoing mandate. It focuses on three areas:

I. *Linking standards for infrastructures to future climatic conditions;*

From the previous work undertaken under the standardization request, it becomes clear that this kind of information is of critical importance in order to address CCA in standards. In parallel it is clear that knowledge about the future climate is developing fast, especially in the framework of the EC's C3S-programme (Copernicus Climate Change Services). This activity will also link to the Eurocodes, the set of EN standards directed at safety of construction works, which is broadly used both inside and outside of Europe. The proposed activities aim at preparing the ground for a Technical Report (a first stage standards), that provides guidance for systematic use of future climate information in national annexes to the Eurocodes.

II. Scaling adaptation measures to the European level;

Adaptation measures are concrete measures that can be used to prevent or mitigate some of the adverse effects of climate change, such as extreme weather conditions. Examples are swales ('wadi'), green roofs and permeable pavements. A library of more than 100 adaptation measures has been constructed in the framework of the Horizon 2020 RESIN-project, including links to existing standards and technical specifications. This showed that in several cases useful national industry specifications are available, but not on the European level.
The activity proposed focuses on identifying where European standards can help the future market acceptance and implementation of these measures. Where such needs are identified, steps follow to come to development of these standards.

III. Adoption of CCA in other standards for infrastructures;

This third activity is directed at other infrastructural standards that are not yet part of the current set of standards in revision. An important element is that compared to the situation in earlier years when a screening activity was previously undertaken, awareness about CCA has grown substantially across Europe, and tools and information have become more readily available.

The activities will be carried out alongside the on-going revision of the 13 standards. It will be carried out in three subgroups that report to the ACC-CG: the ACC-TC platform continuing activities of the existing work programme and two project-teams. The work will be guided on headlines by the ACC-CG.

Together these activities will help in producing the building stones for a more structural inclusion of CCA in a broad range of infrastructures, installations and buildings across Europe.

2. Objective

The proposed additional activities in the realm of European standardisation to be undertaken, have the overall aim to increase resilience of European infrastructure and related sectors to climate change. Specific goals and points of attention are:

1. Bringing together key stakeholders from the Eurocodes and meteo-sector to support them in aligning future climate data with the needs of users from the standardisation community, and through close cooperation start developing guidance for incorporating future climatic conditions;
2. Identifying and scaling up national standardization initiatives for adaptation measures to the European level;
3. To broaden consideration of climate change in other infrastructural standards alongside the 13 standards currently in revision in Phase II, through consultation with those TCs already identified in the preliminary work programme of Phase I of the project; identifying those standards most in need of revision and providing support in adapting the standards.

3. Execution

3.1 Organisation & relationship

The additional tasks are complex, both regarding the content (innovative, many uncertainties, …) as well as the process (awareness is still limited, not yet covered in existing organizations) and the stakeholders (different fields of work, often not yet connected to standardization). In order to meet these challenges a clear organizational structure will be established.

The work on the three tasks will be divided amongst three groups. These groups will be able to meet more frequently and effectively in dedicated sessions focusing on their specific activities. The ACC-CG plenary meetings will continue to share insights and coordinate between the different groups, and the plenary sessions are open to all members of the subgroups.
One is the original group from Phase II with membership from those TCs undertaken revision of standards alongside other relevant stakeholders. This group (under the name ACC-TC Platform), continues the current work programme with expert support, in addition to extending the work as described in task #3 (i.e. the expert to approach other infrastructure TCs identified in Phase I and support these TCs in considering ACC in the revision of standards, if they are willing). In continuation of existing Phase II arrangements, it will be led by a dedicated convenor in conjunction with an expert, thereby avoiding potential disruption of the already active work programme. Alongside the TC-platform two project teams will be established under the ACC-CG, each headed by a newly appointed project team leader. These groups will be able to operate with a degree of autonomy and report in headlines back to the overarching coordination group. Overall the proposed organization is organized along the following lines:

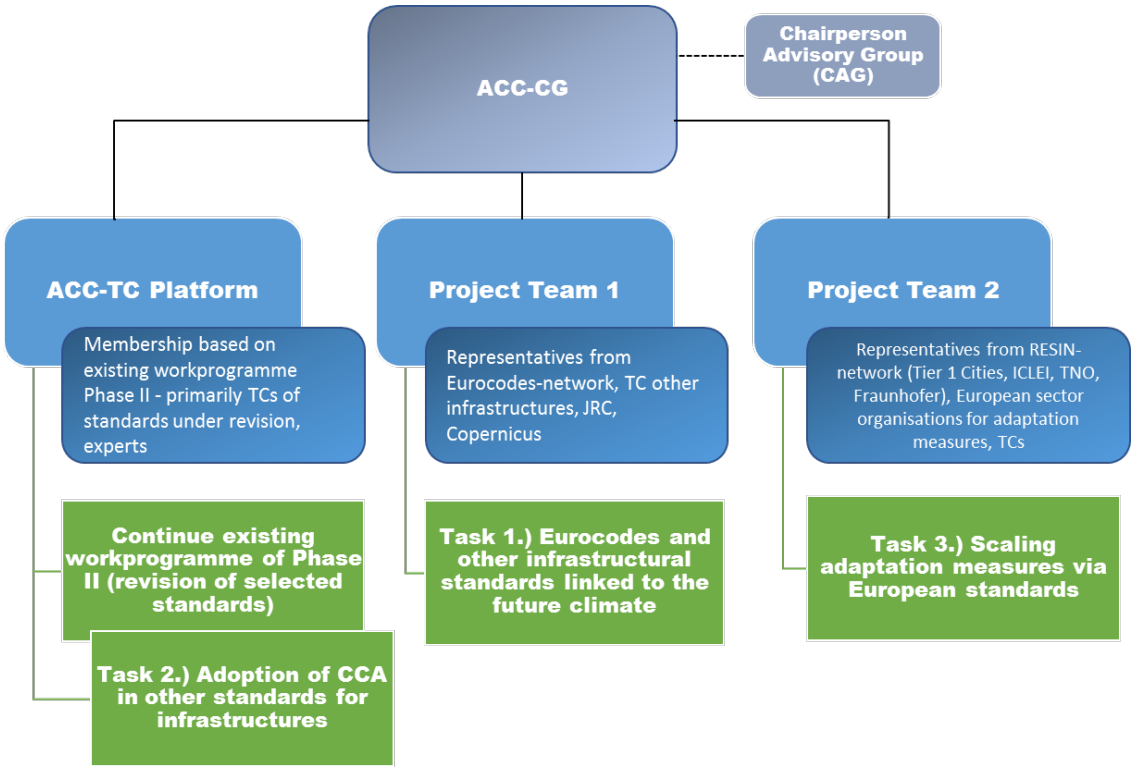

Figure 1. Proposed organization overview

The ACC-TC platform and the two project-teams will work with a sufficient degree of autonomy. Information should be exchanged, as insights and results from the one task might be relevant for the other , but essentially they work in parallel with each other and report back to the ACC-CG. Headlines will be shared in the overarching ACC-CG group, which identifies opportunities for synergy and ensures alignment between the tasks. The ACC-CG is responsible for the overall reporting to the EC.
The different groups will each be supported by a dedicated expert. This expert will essentially carry out the tasks described. This will be carried out in close cooperation with respectively the TC platform and the two project teams, as well as the other TCs and stakeholders involved.
In continuation of the Phase II arrangements, the original group of the TC platform continues to be led by its current convenor, the ACCCG chair, in conjunction with an expert, while the experts of the two new project teams will also act as the convenor for their team. In this role they are responsible for an effective organization and execution of the tasks of the teams.

ACC-TC Platform (extended with task #3). Adoption of CCA in infrastructural standards
The ACC- TC platform remains responsible for the execution of the existing mandate, essentially the revision of the 13 selected standards and dissemination of the tailored guidance. It provides TCs with a platform to coordinate their work for the mandate. In addition, it will be responsible for the expansion of ACC-CG activities to other infrastructural standards (task 3). The team consists primarily of the members of the TCs working at revision of selected standards. As such it will largely be a continuation of the original Coordination Group. In addition to this, representatives from newly identified TCs will join. The group will continue to be chaired by the current chair of ACC-CG, and supported by the secretariat, NEN.

Project-team #1. Linking Eurocodes and other infrastructural standards to the future climate
The prime focus of this project-team will be to carry out task #1, linking Eurocodes and other infrastructural standards to the future climate. The team will be concerned with establishing links and exchange of information with (and between) the identified sectors, i.e. the Eurocodes, alongside the meteorological sectors. As indicated, the activities will focus on preparatory steps. After identifying data needs and organizing a workshop with stakeholders from the standardization and meteo-sector, actions aim at consolidating the use of future climatic information in the national annexes to the Eurocodes. As such the activities will be carried out in close cooperation with stakeholders from the Eurocodes network, especially TC 250 and the JRC. The group will be supported by an external expert, who will also act as chair.

Project-team #2. Scaling adaptation measures via European standards
This project-team will focus on adaptation measures and needs for European standards. The team consists of stakeholders involved in the production, supply and use of adaptation measures, such as (sector organizations of) producing companies and cities. The work builds on the work previously carried out in the framework of RESIN, and the network established in this framework. The group will be supported by an expert, who will also act as chair.

Within the adjusted organizational framework, the three project-teams report to the overarching ACC-CG. This group focuses on the headlines of the mandate, Phase II and the additional tasks. It guides the project-teams, checks whether planning and quality is in line with the objectives, and

corrects project-teams if needed. The coordination group consolidates products from the project-teams and is responsible for the delivery of interim- and final reports to CEN/CENELEC and the Commission. In order to work effectively, the coordination group will be supported by a chairperson advisory group. This group consists of representatives of the EC and CCMC, the chairs of the three teams and a select number of representative stakeholders. The ACC-CG will be chaired by a newly appointed ACC-CG chair.

3.2 Experts

For the execution of this project, 3 experts will be selected. NEN will take care of the procedural work. NEN will sign contracts with the experts (subcontractors) and will administrate the technical process. The tasks of each of these three experts are described below. This is also the case for the funding available.

3.3 Task 1: Linking Eurocodes and other infrastructural standards to the future climate

Context: At present it appears that it is difficult for users of standards to find and use practical and reliable data about future climate conditions. There are a range of suppliers of data, but these are not consistent in terms of parameters, units and presentation, nor aligned to the particular needs of the standardization sector. This task aims to bridge this gap. This work builds on relations that have been developed with JRC, Copernicus Climate Change Services (C3S), and the mandate M/515 (evolution of the Eurocodes).

a. Identification of data needs in Eurocodes and other infrastructural standards *(Deskstudy)*

As a first step infrastructural standards will be screened for needs regarding climatic data. In most cases, especially the extreme events will be relevant (securing that an infrastructure will be capable of withstanding such extreme events). Parameters for these can be expressed in different parameters and units, for instance 98-P, 99,5-P, return-period (for instance one in fifty years) or exceedance percentage. It is key that future data being provided, match with the parameters and units of data needed.

For the Eurocodes valuable work has been carried out by the JRC, and this task builds further on that. Also a connection will be established with the work on Mandate M/515 (evolution of the Eurocodes), and the report prepared in the framework of SC1/T5 will be used. Regarding other infrastructural standards, a broader differentiation of data needed can be foreseen. However relevant standards have already been identified in Phase I of the mandate.

From the side of climate science an important development is that C3S recently launched a project directed at developing sets of future climatic data for extreme events, which the aim that these can be used in standards for infrastructures. It seeks to identify and better align with user requirements and develop climate data sets accordingly (e.g. datasets with the magnitude of the 1/50year return period), in order to provide tailored climate data usable for adapted infrastructures. C3S had indicated that it is looking for ways to engage users for this sector in the developments of these data and would like to work together with activities to be developed in this task, considering that these proposed ACC-CG activities are well suited to contributing to the overall C3S goals. As the Tecnalia-led project includes a dedicated work package for “Stakeholder Engagement: of critical infrastructures to identify requirements and the scope of the service”, care should be taken to align efforts and avoid duplication of work. Therefore close

collaboration is desired and initial contacts with this project, led by the Spanish consultancy company Tecnalia, have been made by NEN, with the proposal (as described under Task 1) having been positively received both by C3S and Tecnalia.

Together the activities result in an overview of the types of future climatic data needed.

b. Organising a workshop [Eurocodes – other infrastructural standards – providers climatic data] *(Engagement)*

Organising a workshop in Brussels with the Eurocodes-organisation (primarily as represented by CEN/TC 250), European Commission (DG Clima and DG Grow), the coordination group of the mandate on CCA and meteo-institutions. The key-question will be: how to come to a situation wherein Eurocodes and national annexes refer to future climatic conditions? Experts from the standardisation sector (Eurocodes CEN/TC 250, SCs and WGs) will be invited as well as key stakeholders from the meteo-sector (national institutions and C3S).

It should be taken into consideration that at present the world of the Eurocodes as well as the related national annexes, and the world of climate change projections are quite distinct from each other. In many cases the building and construction sector works with current practices and standardized procedures, which in the end relate to the use of historical climatic data. On the other hand, the world of climate science projections is developing fast, but has to deal with uncertainties. It is important to link these worlds together more closely. This work will link closely to the C3S-project on developing data for use in infrastructural standards, as well as activities in progress under the mandate M/515.

In order to align the fields of the Eurocodes and future climate science, the preparation (programme, selecting presenters, communication with presenters) will be intensive. The ultimate objective is the workshop evolves to the conclusion that standardized support for TCs has to be developed, probably in the form of a TR or TS, related to maps with future climate information.
The workshop will be prepared in close cooperation with the JRC, Copernicus Climate Change Services and CEN/TC 250.

c. preparatory activities for a Technical Report (TR) *(engagement, building ground for a standard)*

As indicated in task 1b] a gap has to be bridged between the worlds of building and construction (present in the standards) and the meteo-sector. An important step is that the stakeholders in the Eurocodes-organisation will be informed about the tools, examples and insights that have been developed in the mandate for ACC. This includes the tailored guidance document and examples of standards in revision. Also, the ISO standards 14090 (climate change adaptation), 14091 (CCA – risk assessment) and 14092 (inclusion of climate change policies in local organisations) can act as powerful tools for dealing with CCA.

In a personal approach these tools will be shared with the stakeholders of the Eurocodes organisation and other standards for infrastructures. The aim is that this will increase knowledge and engage Eurocodes SCs and WGs and other infrastructural TCs in the subject of CCA.

On the other hand climatic institutions (C3S and national institutions) will be informed about data needs for the infrastructural sector, based on the results of step 1a. Background is that climate

science is developing fast, and new datasets are produced at a fast pace. However these datasets appear to be different, and do at present often not link to the actual needs from users in the standardization sector. Also, data are complex in nature, and difficult to interpret by non-climate experts, as writers and users of infrastructural standards usual are. This makes it of key importance to communicate actively with the climatic institutions, with the aim that future climatic data will align with the actual data needs. Climatic institutions will be selected and approached in close contact with Copernicus Climate Change Services.

These engaging activities for key stakeholders in infrastructural TCs (including key representatives of the buildings and constructions sector) and climatic institutions will build the ground for a TR (Technical Report). The aim of the TR is that it provides support for TCs and NSBs in preparing national annexes based on future climatic data, in a clear and accessible manner. This could logically link to the climatic maps in preparation by the JRC and help TCs and NSBs to deal in a consistent and sound way with the complexities and uncertainties associated with future climatic information.

The expert will provide *the following support*:

- Promote a mutual understanding between the standardization sector and the meteo-sector on the use of future climatic information, including C3S;
- Organise a workshop with key stakeholders on the use of future climatic data in infrastructural standards, including the Eurocodes;
- Set preparatory activities needed to come to a Technical Report;
- Assist the chair and secretary of ACC-CG in developing the progress and final reports;
- Attend meetings of the ACC-CG.

The expert will *in his/her role as chair*:

- Prepare meetings together with secretariat;
- Convene meetings of project-team;
- Ensure communication between all involved parties.

Deliverables:

- Overview of data needs in Eurocodes and other infrastructural standards (including report of workshop)
- A workshop with key stakeholders on the use of future climatic data in infrastructural standards, including the Eurocodes;
- 1st Outline of a TR on inclusion of future climatic data in national annexes to Eurocodes

Estimation of man days:

Task 1a], 1b] and 1c]:	52 man days
Chairing project-team:	12 man days
Total:	64 man days

3.2 Task 2: Scaling adaptation measures via European standards

One element in dealing with a changing climate can be the implementation of adaptation measures: concrete measures that mitigate the negative impacts of climate change.[1]. This activity is directed at identifying needs for European standards for these measures and taking first steps to develop these. The work builds on the results achieved in the Horizon 2020 project RESIN. In the RESIN-project[2], which was set up to come to strategies and tools that can help cities across Europe increase their resilience to climate change, , one of the outcomes of the project was an overview of concrete measures that cities can implement to deal with the adverse effects of climate change. For a set of 30 concrete adaptation measures available standards, guidelines and specifications were identified, at a national and European level, and also to some extent outside Europe. Development of pan-European standards might accelerate market acceptance and implementation of the measures.

a. identification of adaptation measures that need European standards and mapping of stakeholders *(deskstudy)*

As a first step adaptation measures will be identified for which there is an interest to develop formal European standards. Basis for this mapping exercise is the RESIN report, and the measures identified therein[3],[4]. Also specific measures that are not yet included in the RESIN inventory but that come up in the stakeholder consultation will be taken into consideration.

In parallel, stakeholders for the measures will be identified, such as producers, suppliers and users. Focus will be on stakeholders at the European level. For industry, focus will be primarily on sector organisations at the European level. A specific group of stakeholders are cities, who often act as an important potential party in selecting and purchasing measures. For these, the activity builds on the contacts made in the RESIN framework, especially with the cities of Bilbao, Bratislava, Manchester and Paris. Another angle are the cities participating in the Covenant of Majors.

b. consultation of CEN TCs and stakeholders *(engagement)*

The stakeholders identified in step a) will be approached. The focus will be on exploring interest in upgrading available national standards or industry specifications to European standards. Also the 'organisational readiness' for developing European standards will be considered, as a key element for developing an EN-standard is whether an active CEN/TC exists that covers the

[1] Identification of possible measures as well as evaluation of their effectiveness, is part of an integral approach as described in ISO 14090 and ISO 14091

[2] . In the project a range of cities (Bratislava, Bilbao, Paris, Manchester, …) worked together with research-institutes (TNO, Fraunhofer, Tecnalia) and the Netherlands standardization institute NEN.

[3] http://www.resin-cities.eu/fileadmin/user_upload/Papers/RESIN-D5.1_Standardization_in_urban_climate_adaptation_NEN_30102018.pdf

[4] Examples might be:

- the testing, classification and certification of mobile flood protection systems (currently a guideline with the support of experts from Austria, Germany and Switzerland is being developed)
- Testing and classification of constructional resistance of building materials and elements against hail:
- Green infrastructures, such as 'green roofs' were identified as the highest priority area, offering great potential in the field of urban climate resilience but currently only covered in formal standards to a very limited extent. The key opportunity identified concerns the development of formal European standards, for instance using the highly authoritative reference document of the German FLL (2018) on vegetative roof systems for technical guidance.

subject of the standard to be developed. Stakeholders will be approached personally (email, telephone).

The result will be an overview of adaptation measures for which European standardization is preferred. These will be segmented into measures for which an appropriate CEN/TC does exist, and for which this is not yet the case.

c. (guidance in) development of standards *(standardization)*

For the standardization needs identified in step 2a), action will be taken to come to the standards needed. Depending on the stage of 'organisational readiness', actions will be taken to come to different products: if an appropriate CEN/TC does exist, steps will be taken to come to development of an EN-standard. If such a TC does not yet exist, the work will directed towards developing a CWA (CEN Workshop Agreement) or recommendations for future standardization (which may include setting up a new TC, if meeting with BT approval and contingent on NSB support).

At this stage it is difficult to give an indication of the number of standardization deliverables foreseen. An initial estimate is five deliverables. However, this will depend on the responses of the stakeholders.

The expert will provide the following support:

- Promote a mutual understanding between the standardization sector and the stakeholders involved with adaptation measures;
- Identify adaptation measures for which European standards are needed;
- Support TCs in developing (or revising) standards and/ or CWA's or recommendations for future standardization.
- Assist the chair and secretary of ACC-CG in developing the progress and final reports;
- Attend meetings of the ACC-CG.

In his role as chair the expert will:

- Prepare meetings together with secretariat;
- Convene meetings of the project-team #2;
- Ensure communication between all involved parties.

Deliverables:

- Overview of adaptation measures for which European standards might be useful (state of maturity), mapping of relevant stakeholders
- Starting standardization document for adaptation measure #1 (EN-standards/ CWAs or recommendations for future standardization)
- Starting standardization document for adaptation measure #2 (EN-standards/ CWAs or recommendations for future standardization)
- Starting standardization document for adaptation measure #3 EN-standards/ CWAs or recommendations for future standardization)
- Starting standardization document for adaptation measure #4 (EN-standards/ CWAs or recommendations for future standardization)
- Starting standardization document for adaptation measure #5 (EN-standards/ CWAs or recommendations for future standardization)

Estimation of man days:

Task 2a], 2b]	30 man days
Task 2c]	8 man days per standard/ CWA or recommendation for standardization
In case of 5 standardization-deliverables:	40 man days
Chairing project-team:	12 man days
Total:	84 man days[5]

3.3 Task 3: Other infrastructural standards than the 13 standards currently in revision in Phase II

Context: In Phase I, out of a longlist of 84 standards, 12 infrastructural standards were selected for revision and one to be newly developed in Phase II. For the other standards mapped in the Phase I interest for revision appeared to be limited. Contributing to the lower interest was a limited awareness of the impacts of climate change, as well as the impression that tools for dealing with a changing climate (such as access to useful datasets on future climate) were not readily available. This situation may have changed: across Europe awareness about the changing climate is growing fast, and tools, examples and datasets have become far more available, also within the context of Phase II. In this task, TCs from Phase I are engaged again via a personal approach.

a. consultation and exchange of information with TCs identified in Phase I *(engagement)*

The TCs dealing with infrastructures as identified in Phase I are to be approached with recently developed tools and experiences for adoption of CCA into infrastructural standards, such as the tailored guidance document, the ISO standards 14090, 14091 and 14092 and first drafts of revised standards. This will primarily happen via personal contact (email, telephone calls) with the secretaries/ chairs of the respective TCs. In the calls information will be shared and TCs will be asked on their plans for revising standards, estimates of the relevance of CCA in this process and the usefulness of the tools, as well as for specific questions and needs. In communication towards TCs, it will also be underlined that CCA consideration in the standardisation process concerns not only the design parameters for new equipment and material, but can also be worked out through approaches such as asset management and enabling methods for upgrading (climate-proofing) of existing equipment already in operation. As a result the TCs from Phase I will become more engaged with climate change adaptation in relation to their standards.

b. identification of standards in need of revision *(engagement)*

Based in the results of step 3a), an inventory will be made of standards for which adoption of CCA is deemed relevant and for which TCs show an interest to revise the standard accordingly. At this stage it is difficult to estimate how many TCs will be interested in revision of their standards. On the one hand we see that awareness for climate change is growing fast, and we can support the TCs with tailored guidance. On the other hand, the TCs showed limited interest in

[5] in case of 5 standardization-deliverables

the first Phase to revise their standards. Based on the personal approach of step a), addressing the concerns and actual needs of the TCs, we do expect that in about five cases that will bring TCs towards revision of the standards.
In a more negative case, the outcome could be that a lack of interest is discovered from the side of TCs to revise potentially relevant standards. If this is the case, this will be reported in progress-report and possible steps will be discussed in the ACC-CG. This could include advices towards the BT for 'top-down' activities or procedures that might improve TC's awareness for and interest in CCA.

c. guidance in revision of standards *(standardization)*

TCs in charge of standards identified in step 3b), will get support in the revision process. Guideline for this support is the draft tailored guidance document, as well as examples of and experiences from standards in revision in Phase II of the existing mandate.

The expert will provide the following support:

- Provision of TCs with specific expertise and advice on aspects related to climate change adaptation;
- Provision of information on availability of climate projections, based on the continuous dialogue with Copernicus Climate Change Services;
- Monitor quality of standards revised;
- Assist the chair and secretary of ACC-CG in developing the progress and final reports;
- Attend meetings of the ACC-CG.

Deliverables:

- Selection of standards for revision to ACC (indicating relevance and interest from TCs)
- Starting document for revision of infrastructural standard #1 (NWIPs, 1st draft of revised standard)
- Starting document for revision of infrastructural standard #2 (NWIPs, 1st draft of revised standard)
- Starting document for revision of infrastructural standard #3 (NWIPs, 1st draft of revised standard)
- Starting document for revision of infrastructural standard #4 (NWIPs, 1st draft of revised standard)
- Starting document for revision of infrastructural standard #5 (NWIPs, 1st draft of revised standard)

Estimation of man days:
The expert appointed to task #3 will in a first stage investigate interests and needs for revision of standards identified in Phase #1 of the mandate. After that the expert will support TCs with the actual revision process.

Task 3a] and 3b]:	13 man days
Task 3c]:	6 man days per standard starting with revision
In case of 5 standards starting revision	30 man days
Total:	43 man days[6]

[6] In case of 5 standards identified, and starting revision.

3.5 Time frame

The project shall be carried out in the period from April 2020 until 1 November 2021. A detailed time frame is given in Annex A.
The subcontractors shall respect the deadlines of the deliverables. If deadlines are not kept, EC is entitled to withhold payment.

4 Financial support

The European Commission and EFTA have decided to provide financial support to the execution of the mandated tasks (phase 1The financial support from the European Commission and EFTA is based on the Framework Partnership Agreement (FPA) 20. Unless specified otherwise, and on condition of approval by EC and EFTA, costs of external subcontractors such as laboratories are generally funded at 100%, with approx. 95% being borne by EC and 5% by EFTA. Costs have to qualify as eligible as defined in FPA 2014, to be justified and accepted by EC/EFTA. The payment is usually divided into four installments after completion of defined milestones and approval of the interim/final reports and the justification of costs. The subcontractors shall fulfill the conditions of the FPA 2014, including those relating to liability, ownership of results, confidentiality, conflicts of interests, publicity, evaluation, assignment, checks and audits.

The payment of the verification work is divided into four parts:

- Signature of contract (33,3 %)
- Interim progress report (33,3 %)
- Interim report (1st annual report, not financed)
- Final report (33,3 %)

The subcontractor's costs shall be justified with copies of the relevant invoices. All relevant evidence shall be kept in view of future payments (reports, work, drafts and deliverables, contracts and invoices, time sheets, tickets, boarding cards, hotel invoices, attendance lists with signatures, meeting agendas & reports, invoices for any consumables, purchase orders etc…).

Costs incurred before selection procedure is finalized will not be covered by financial support.

5 Selection criteria

The applicants shall comply with the following requirements:

- At least 5 years of experience in relevant infrastructure sector(s), standardisation and climate change adaptation;
- Good network connections in this field;
- Experience in European and/or International standardization would be desirable.
- Adequate academic background;
- English language and communication skills;

6 Eligibility criteria

The following candidates will be excluded:

- Candidates who were the subject of a non-likely judgment of recourse for a professional infringement;
- Candidates who are in an irregular tax situation or in an irregular special taxation situation;
- Candidates who provide incomplete or erroneous information.

7 Replies to tender

Tenders shall be sent by email to Mr. Ab de Buck (ab.debuck@nen.nl) to be received at the latest **2020-04-01.**

The tender shall be in English and contain:

- Curriculum Vitae of each relevant person participating in the project, demonstrating the necessary expertise;
- a planning and description of the execution of the tasks which will be carried out in the project;
- appropriate documentation to prove the economic and financial capacities;
- any further documents to prove the qualification required in the above clauses on selection criteria;
- a signed declaration, by which the candidate(s) certifies not to be subject to one of the exclusion criteria as described in Clause “Eligibility criteria” and the veracity of the adjoining documents.

For the tender, please use the application form. Candidates shall indicate for which of the work packages they intend to apply for.

Please note that, to grant equal treatment of all tenders, it is not possible to modify offers after their submission in relation to the technical and financial proposals. As a consequence, incomplete tender documentation can result in a negative impact for the evaluation of award criteria.

Candidates may apply for more than one work package. In case of multiple applications candidates shall state their priorities. For each application all bidding/application documents required shall be submitted in a separate application for each of the projects.

The selection and appointment of the experts will be conducted by a selection panel composed of the chairman and secretariat of the ACC-CG and a representative from CCMC.

The contracts with the experts will be signed following the approval of the selection by EC.

Additional information can be obtained from Mr. Ab de Buck, phone: +31 15 2690269, email: ab.debuck@nen.nl.

If due to requests or other reasons supplementary information to this call for tender is required, this will be published on the website of NEN, www.nen.nl.

Annex A: Time frame of the project

The table below provides detailed steps for each task and indicates what is expected from which party.

	Q3 2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	2022	2023	2024
				start of additional activities						end of Phase II			
Task 1: Eurocodes and other infrastructural standards linked to the future climate													
a] screening of dataneeds in Eurocodes and other European standards for infrastructures				■									
b] workshop [eurocodes - providers climatic data]					■								
c] preparatory activities for a Technical Report (TR)					■	■	■	■	■	■	■	■	■
Task 2: Scaling adaptation measures via European standards													
a] identification adaptation measures that need European standards and mapping of stakeholders				■									
b] consultation of CEN TCs and stakeholders					■								
c] (guidance in) development of standards and/or, CWAs or standardization-recommendations						■	■	■	■	■	■	■	■
Task 3: Adoption of CCA in other standards for infrastructures													
a] consultation and exchange of information with TCs identified in Phase I (including ISO guidance)				■	■								
b] identification of standards in need of revision					■								
c] (guidance in) revision of standards						■	■	■	■	■	■	■	■