Environment and Climate Regional Accession Network ECRAN

Environment and Climate Regional Accession Network (ECRAN)

Activity 1.Capacity Building on Modelling, Scenarios and Tools

March 2014

ENVIRONMENTAL AND CLIMA REGIONAL NETWORK FOR ACCESSION - ECRAN

CAPACITY BUILDING ON MODELLING, SCENARIOS AND TOOLS

Activity No 1.1

REGIONAL ASSESSMENT OF CAPACITIES FOR MODELLING AND SCENARIO WORK INCLUDING STAKEHOLDERS ASSESSMENT

and PROPOSED TRAINING PROGRAMME

March /2014

revision August 2014

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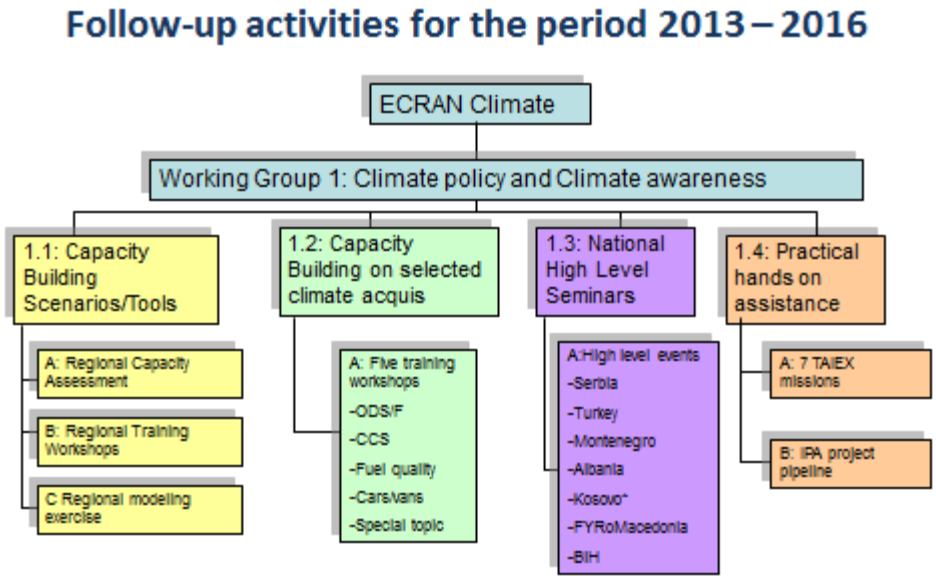
I. Background/Rationale

ECRAN AND ITS BENEFICIARIES

ECRAN (Environment and Climate Regional Accession Network), is a project financed by EU and managed by the European Commission, which aims to assist the beneficiaries in exchange of information and experience related to preparation for accession. It also aims to strengthen regional cooperation between the EU candidate countries and potential candidates in the fields of environment and climate action and assists their progress in the transposition and implementation of the EU environmental and climate acquis. ECRAN builds on experience gained and results achieved by the RENA (Regional Environmental Network for Accession) in particular those related to environmental and climate investments, transposition and implementation of environmental and climate law, compliance and enforcement, local and regional initiatives, climate action, water management, waste management, air quality, industrial emissions, nature protection, EIA/SEA, NGO support and public participation. ECRAN includes an environment component, a climate action component as well as the NGOs Environment Forum. The activities under each component are implemented through a system of Working Groups (WGs) as follows:



Within the climate action component there are four Working Groups:

1. Climate Policy Development and Building Climate Awareness
2. GHG Inventory Systems and the EU Monitoring Mechanism Regulation
3. Emissions Trading
4. Adaptation

The ECRAN beneficiaries include the Ministries of Environment of Albania, Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Kosovo*[1], Montenegro, Serbia and Turkey. In

[1] This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ opinion on the Kosovo declaration of independence.

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addition the other ministries and other bodies and institutions will be actively engaged in so far as their work is relevant for the scope of ECRAN-CLIMA (such as in the fields of energy, transport, agriculture, economy, health, finance), environment and other agencies, statistical institutions, inspectorates, and other relevant central, regional and local public authorities working on climate issues in the beneficiary countries, environmental NGOs. Other stakeholders will be involved as appropriate.

WG1 Climate Policy Development and Building Climate Awareness

There is a need to start developing concrete climate policies based on full alignment with the EU Climate *acquis* and GHG emission reduction target setting in the ECRAN beneficiaries and provide capacity building in order to realize this. At present the absence of national or regional targets and roadmaps towards implementation of these targets hamper the development of robust climate policies in the SEE region and thus low emission development along with the integration of climate policy goals into sectoral policies. ECRAN aims to provide the platform to start a regional work on transition towards low emission economy via enhancement of analytic and planning capabilities of beneficiaries and sharing examples of good practices of practical details of such analytic work.

Mainstreaming of climate action into national policies is an important element of building capacity towards low emission economy as this transition requires coherent approach across sectors where government institutions are using the same set of tools for various policy developments relevant to low emission development. The working group aims to support these aims with the following results:

- Enhanced capacity within the Environment Ministries and other relevant institutions to implement specific policies and measures to converge with the EU climate change policy and selected EU legislation
- Group of trained professionals on convergence with the EU climate change policy and legislation
- Climate change policies feature more prominently on the political agendas in the beneficiaries
- Strengthened regional network of experts

Particular emphasis is put on harmonising approaches to data collection and processing, including building on existing processes such as national communications. Assessment of policies and measures and modelling of emission scenarios is prerequisite of the development of concrete climate policies with GHG emission reduction targets in the context of EU 2020 Climate and Energy Package, the expected EU 2030 climate and energy framework and the need to feed into the 2015 international climate agreement.

In order to strengthen the capacities of beneficiaries ECRAN provides regional training workshops on the application of modelling, scenarios and tools for development of climate policies. in a parallel exercise there will be also a practical training on quantitative models and scenario development to be used to assess climate and energy policy options and to set emission targets.

In order to have an appropriate and targeted design of the practical training a regional assessment has been carried out in the framework of ECRAN-CLIMA Working Group 1: Climate Policy

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Development and Building Climate Awareness, under its Task 1.1 (Capacity Building on modelling, scenarios and tools).

Based on the results of the TNA an On-The-Job Training Programme is proposed in the later part of this document. It defines a detailed training proposal, the target groups and the expected indicators of achievement against training results can be evaluated.

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II. Findings of the Training Needs Assessment

Specific objectives

The **specific objective** of the training needs assessment was to identify the "key players", stakeholders, knowledge institutions, etc. which have or could have a role in the development of emission projections in their countries; and (b) the level of the beneficiaries' capacities for development of their national emission projections … Based on this assessment a training program is proposed to the ECRAN beneficiaries.

The TNA has been conducted using interviews and questionnaires and has assessed the relevant technical and human resources capacity aspects in relation to:

- Policies and measures, including those in accordance with Article 2 of the Kyoto Protocol, and domestic and regional programmes and/or legislative arrangements and enforcement and administrative procedures.
- Projections and the total effect of policies and measures; sensitivity analysis, and methodologies, models and assumptions.
- Identification, documentation and analysis of policies and measures in line with reporting obligations under the Monitoring Mechanism Regulation.
- Projections and pathway development in connection with long-term decarbonisation goals.

In addition the exercise considered regarding the modelling capacity:

- the current use and application of data,
- methods and models applied,
- the implementation of quality assurance and
- quality control activities and sensitivity analysis

The training needs assessment consisted of four stages:

Establishing aims of the TNA

1. Identifying key actors in connection to climate policy, PaM analysis and mitigation scenario modelling in beneficiary countries
2. Gathering data about current activities, capacities and needs in connection to EU and UNFCCC reporting requirements
3. Deriving conclusions

The target group for the assessment were:

- ECRAN Climate focal points and government officials responsible for climate policy;

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- Government officials from the ECRAN beneficiaries responsible for strategy development, planning and modelling for those in key emission sectors (e.g. ministries of economy, development, transport, energy, environment; PM's office, etc.);
- Modelling practitioners who are or were involved with modelling for mitigation scenarios and key sectoral scenarios.

The questionnaire and the background note on UNFCCC and EU requirements for PaMs and modelling (see Annex I) served as the basis of the needs assessment specified as Step 3 of the above described process. As different stakeholders have different role in connection with the assessed capacities, the focus of the interviews had different emphasis on details of questions from different type of stakeholders. Responses to the questionnaire were collected during interviews and in written format. The ECRAN team also assessed available documents for the support of the training needs assessment.

Meetings in the framework of the assessment process were held in ECRAN beneficiaries:

- 10-11 February 2014, Beograd, Serbia
- 25-26 February 2014, Ankara, Turkey
- 27-28 February 2014, Tirana, Albania
- 6 March, Skopje 2014, the former Yugoslav Republic of Macedonia
- 7 March, Pristina 2014, Kosovo*
- 25 March, Podgorica 2014, Montenegro

Results of the Needs Assessment and conclusions and recommendations

Findings per country

This part of the report briefly summarizes the findings of the assessment regarding the needs for capacity increase in emission reduction scenario modelling and methodological capacity for assessment of policies and measures. A specific issue was for the TNA to find a way that the planned capacity building will bring sustained results for the public administration.

Albania

Climate policy has very limited capacity in the public administration in Albania. Assessment of policies and measures might benefit from capacity building regarding methodological issues.

There is modelling experience as a result of various projects and trainings on use of LEAP by UNDP and the Energy Community secretariat. Trainings focused on attendance from universities and the public administration – however, there is an indication of demand for further training, especially in connection with LEAP. Modelling work was conducted by foreign and Albanian consultants for past reports and the work was financed by UNDP.

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Training should focus on public administration staff and there was an emphasis on improvement of the quality for data collection.

*Kosovo**

Kosovo* has limited capacity in the public administration to deal with climate policy related analytic work and there was no PaM impact quantification related work done. Similarly, there was no domestic modelling for emission scenario related purposes conducted in Kosovo*. Some modelling for emission reduction scenarios was done by UCLA Berkley in 2012, but it does not fit with the current policy framework of Kosovo*. There are no financial resources in the public administration to run projection related work.

There is a high interest in participating in ECRAN organized training with the participation of public administration representatives (various ministries and the Environmental Agency).

The former Yugoslav Republic of Macedonia

The former Yugoslav Republic of Macedonia has significant achievements on climate policy area with the support of donors, especially UNDP. Future reporting envisions detailed assessment of PaMs – human resource capacity need for such exercises is highlighted.

On the modelling field the former Yugoslav Republic of Macedonia is an advanced stage compared to other beneficiaries. Currently the MARKAL model is in use for emission projection modelling and government officials see merit in further work with MARKAL and there is limited demand expressed for capacity building. There is no domestic government finance for modelling or wider-scale climate policy activities.

Currently modelling is done by external experts for the public administration and there was an indication that mixed group of external experts and public administration staff would be optimal for the capacity building exercise.

Montenegro

In Montenegro there is a limited capacity in the public administration to deal with climate policy matters. While analysis of potential technical measures exists, assessment of the impacts of Policies and Measures was not performed in the past. The public administration has no experience in PaM analysis.

For National Communication (UNFCCC) preparations modelling work is conducted by external experts. The modelling is done with the use of LEAP but significant part of the modelling is built on data from another modelling exercise performed for energy strategy development. Preparation of the 2nd National Communication is financed by UNDP.

Further training and capacity building regarding the use of LEAP for emission scenario modelling is welcome; however, there is a concern about capacity to participate in the exercise.

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Serbia

In Serbia there is no institutional structure for PaM assessment and project preparation, while such capacity is envisioned to be established in background institutions of the lead ministry. In reporting technical measures as well as potential future Policies and Measures were identified as optional ones.

For modelling, external experts provided support to the public administration with the use of LEAP for both energy and climate related modelling in the framework of preparations of the Energy Sector Development Strategy. GEF/UNEP was funding the preparations of the 2nd National Communication as well as the first Biennial Update report towards UNFCCC. There is no domestically financed public structure for modelling but for the future it might be possible. In the view of government officials the capacity for modelling should be built at the beneficiary institutions and not with external experts.

Turkey

Turkey has sufficient administrative capacity to deal with PaM assessment and emission scenario modelling within the framework of existing inter-ministerial cooperation. In the past there was no PaM assessment conducted with the quantification of the impact of PaMs. While in the past there was modelling for emission reduction scenarios, that work was discontinued. Currently there is energy related modelling with the use of LEAP, financed from government resources and there is a significant interest from the side of various government agencies to improve or establish their skills in emission scenario modelling. Capacity building activities are envisioned to target public administration.

Conclusions

The ECRAN beneficiary region is diverse and thus the capacities approaches as well as advancement regarding PaM analysis and modelling of emission scenarios has an evident variety. Noting the diversity there are common trends which can be seen in most if not in all cases of beneficiaries.

Regarding the wider policy framework, preparation of Low Emission Development Strategies and contributions to the 2015 Agreement there was awareness within lead ministries of the tasks. In few countries LEDs are prepared or are in preparation with donor assistance (mostly via UNDP). Consideration of national contributions to the 2015 agreement, based on the request of the Warsaw COP, is in an early stage for beneficiaries, if considered at all. Differences between climate strategies and low emission development strategies are not clear in some cases for the public administration.

General

The main obstacles/challenges that have been highlighted by the ECRAN beneficiaries during the training needs assessment are:

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- Weak or absent regulatory and institutional structures to allow modelling aided scenario building on a recurring basis (i.e. lack of national systems) and weak coordination and communication between existing structures;
- Lack of available and reliable data that hampers reliable results from modelling aided scenario building;
- Lack of awareness of national policy-makers from different sectors of the 2015 international GHG emission reduction endeavours and of EU climate policy.

PaM assessment:

Availability of tools to monitor emission reductions and to actively promote policies and measures to reduce GHG emissions are only viable if the impact of planned and implemented policies can be assessed for their impacts. PaM assessment skills would support skill development and better understanding of the logic of modelling in quantifying the emission trends in relationship with specific sets of policies in place.

Ex-post and ex-ante PaM assessment according to UNFCCC and MMR requirements has a specific meaning with methodologies which are not applied as such in the case of ECRAN beneficiaries and the awareness regarding such assessment is low in general. In most of the cases under the title of PaM assessment specific technologies were assessed for their potential impacts. It is visible that both data needs and methodologies for PaM assessment are challenging in most countries. Assessments, if they were conducted, were done by external consultants. The Prometheas4 project touched on some of the PaM assessment capacity building, but did not focus on public administration. There is no dedicated capacity in the public administration of any of the ECRAN beneficiaries for the assessment of PaMs. Both methodological skills and proper data collection for the necessary analyses is needed to be put in place before the relevant MMR requirements as well as UNFCCC Annex I reporting requirements could be fulfilled by ECRAN beneficiaries.

Modelling:

It is notable that in most cases there was some familiarity with modelling approaches and the use of them in public administration in ECRAN beneficiaries, however, the full scale of potential utilization of modelling tools was not prevalent in most of the public administrations. This lack of use of modelling tools might be connected in some case to data availability issues, capacity issues but also to general practices of policy assessment and strategic planning process. In cases when modelling was conducted these exercises were connected to modelling for energy planning purposes. Scenario development in such modelling work did not follow the definition required for Without Measures, With Measures, With Additional Measures scenario classification of the UNFCCC (See Annex I, paragraph on “Projections and the total effect of Policies and Measures”).

From the modelling tools available the use and some familiarity with the LEAP modelling tool was dominant, while only the former Yugoslav Republic of Macedonia was using MARKAL – which is more data demanding and data input sensitive. In few countries there is already use of LEAP as an integrated modelling tool, but in all cases there is a limitation of this use and those conducting the work with the

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use of LEAP acknowledge that further development of their skills and their model is needed – thus they would welcome opportunities for further development of their skills. Most of the available modelling work focused on the energy sector and data availability was deemed acceptable by the interviewed experts with the notable exception of few countries. However, the TNA found data availability problems to different extent in other sectors. Quality Assurance/Quality Control was not taken up anywhere regarding modelling, except the former Yugoslav Republic of Macedonia.

The TNA mission has seen in house modelling capacity within the public administration in Turkey, where modelling for energy policy purposes is in development with domestic resources. In all other cases where modelling was done in any relationship with emission scenario modelling, it was done on project base and within donor financed projects, primarily supported by UNDP offices.

A basic question was for the TNA how to develop sustained capacity in public administration for emission reduction scenarios in contrast with an ad hoc contract based work, where the public administration has little or no control over the work nor quality assurance. The TNA found that this sustainability challenge is a real one and coupled with another challenge – with the exception of Turkey and Serbia staff available for climate policy work is limited. During the interviews the dominant opinion was that capacity building should focus on public servants from the institutions involved in climate and energy policy matters, not only from the lead ministry. Some suggested that cooperation with researchers outside the public administration should be also enforced, while most were not keen on such cooperation within the frame of capacity building.

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III. Proposal for Training Programme

Recommendations on the basis of TNA

In most ECRAN beneficiaries there is experience in modelling aided scenario work, especially in the framework of the preparations of National Communications. However, in many cases this work has been designed and outsourced by international organisations or other external organisations without adequate involvement or ownership of the results by the countries. As such, the knowledge base within the administrations on modelling aided scenario work is limited.

In addition to the lack of technical skills, the main obstacles/challenges that have been highlighted by the ECRAN beneficiaries during the training needs assessment are:

- There is a capacity need to increase understanding of the basic concepts of modelling and modelling processes for all the ECRAN beneficiaries. Actual modelling work is only done within the public administration in Turkey (energy related modelling), but they also indicated a demand for further training on modelling for emission scenario development
- Weak or absent regulatory and institutional structures to allow modelling aided scenario building on a recurring basis (i.e. lack of national systems) and weak coordination and communication between existing structures;
- Lack of available and reliable data that hampers reliable results from modelling aided scenario building;
- Lack of awareness of national policy-makers from different sectors of the 2015 international GHG emission reduction endeavours and of EU climate policy.
- There is a capacity need for public servants to increase their knowledge on PaM assessment in all the ECRAN beneficiaries

The points above provide a generalised picture of gaps and needs, but capacities in beneficiaries are heterogeneous. The aim is to *design a programme which will be suited to the needs of all beneficiaries, ensuring that a minimum threshold level of capacity is built in beneficiaries with the lowest starting points, but at the same time is also able to accommodate the needs of beneficiaries which are already at a more advanced lev*el. The approach also has to be able to take into account the fact that different beneficiaries have different institutional arrangements for carrying out modelling work.

In terms of technical requirements, *it is recommended that the focus will be on one specific modelling platform, the Long-range Energy Alternatives Planning System (LEAP)* which has been developed by the Stockholm Environment Institute. Of the 8 beneficiaries 6 are already using LEAP, and one (Kosovo*) has expressed interest in using it. The advantages of the modelling platform are that it is free of charge to users in countries which are not on the World Bank's list of high income countries, it can flexibly accommodate different levels of data availability, and it is one of the models included on the UNFCCC website in the non-Annex I country Training Package for mitigation assessment.
Further recommendations for the training program based on the TNA:

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- The modelling exercise should focus on training public servants who are working in the climate policy field, with the aim of having a basic understanding of modelling logic, possibilities and limitations of models, data needs and sensitivity of models as well as specification of modelling needs for policy scenarios
- While the modelling exercise should focus on training public servants, for the sake of the efficiency of the exercise limited support from domestic experts might be beneficial in some countries to aid the data collection and learning process. These countries are the Former Yugoslav Republic of Macedonia and Montenegro due to specific requests of the beneficiaries to work in cooperation with specific experts.
- A program of capacity building is recommended with modules where short training sessions and self-teaching periods with tutorial support are included.
- Because of the time demand of the training course on the limited capacities of public servants dealing with climate policy area in ECRAN beneficiaries, it is recommended that high level event(s) underline the importance of the capacity building exercise to high level representatives of lead ministries – in order to get their support for the process
- The capacity building process should focus on a clearly selected area of emitting sectors for the sake of simplicity but also for the sake of realistic nature of the training process. In order to achieve that we recommend that the CRF sector 1 (energy sector) be the focus sector of the modelling exercise. As shown in the relevant RENA exercise on the CRF sector 1A (fuel combustion) this is a sector with relatively good data availability. National teams will select the appropriate (sub)-sector(s) at the start of the exercise.
- It should be emphasized that the training process is not to result in scenarios to be used for official or other professional purposes, but limited ones which are not intended for the use of strategy development, only for training.

Details of the proposed training program

The tasks will implement the following sub-tasks of 'Activity 3.1: Climate policy development and building climate awareness' of the ECRAN work plan:

- *Task 3.1.1: Capacity building on modelling, scenarios and tools*
  - Sub-Task 3.1.1 – C: Practical training on quantitative models to be used to assess climate and energy policy options and to set emission targets (referred to below as "Regional Training Exercise)

The aim of the exercise is to design and implement a programme which will enhance technical and policy making capacities for modelling and scenario assessment, with the aim of contributing to work at EU level in the framework of the 2020 targets, the 2050 roadmap and the 2030 Framework, as well as to facilitate commitment and work in the countries to submit their intended nationally determined contributions to the 2015 Climate Agreement consistent with the call from Warsaw COP 19. The regional exercise therefore needs to address the gaps and capacity building needs which have been identified during the Training Needs Assessment.

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Beneficiary - participants

The beneficiaries are the Ministries of Environment of the beneficiary countries (Albania, Bosnia and Herzegovina, Croatia, the Former Yugoslav Republic of Macedonia, Iceland, Kosovo*, Montenegro, Serbia and Turkey).

As the aim of the exercise is to increase capacity in public administrations, the tasks will as a general rule, target staff working at the public administration. In particular, the involvement of staff working on the climate, energy and transport policy in ministries, in providing technical support at government agencies and bodies, as well as staff, working at national statistical offices, is desirable. However, the heterogeneity of institutional arrangements for modelling among the ECRAN beneficiaries warrants a flexible approach in selecting the target audience of the trainings and follow-up activities. In some cases the national public administrations are working together closely with academia and prefer the continuation of existing working arrangements. In addition, although a general focus of capacity building activities on the public administrations seems to be the preferred option, low levels of capacity and overburdened staff may be an obstacle to active participation in trainings and follow-up activities. In such cases targeting academia in addition to staff of public administrations may be a better solution than inadequate participation on behalf of some of the beneficiaries.

To ensure active participation, ECRAN beneficiaries will be asked to commit that the experts nominated for the bottom-up exercise are allowed sufficient time for carrying out the work required under the different tasks, including attending seminars and conducting the follow-up activities. Experts from the beneficiaries are expected to spend 12 days participating in workshops, and a minimum of 15 days in follow-up activities implementing the regional pilot modelling exercise. The ECRAN team will be monitoring work progress to ensure that the exercise, which requires a significant commitment, is advancing as foreseen.

Objectives The specific objective of the training program is to increase the capacity of beneficiaries to understand the emissions modelling process and to enable them to more actively engage in emissions modelling activities.

The modelling aided scenario work will benefit countries by helping them meet their future EU and UNFCCC reporting requirements, and to form a rational position on national efforts contributing to the EU 2050 roadmap and the 2030 Framework, as well as to facilitate commitment and work in the countries to submit their intended 2030 GHG reduction commitments consistent with the call from Warsaw COP 19. It may also assist them by promoting evidence based planning in energy policy, including in the development of an energy strategy, energy efficiency action plan and renewable energy action plan.

Depending on the circumstances of the national public administration and future plans of the public administrations to build modelling capacity inside or outside the public administration, the technical modelling skills can be used in one of two ways. If the chosen option is to carry out modelling work within the public administration the exercise will help to build technical capacity and provide a basis

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for future work. If the chosen option is to outsource modelling work, the exercise can help beneficiaries gain a better understanding of modelling work which will enable better communication with consultants, thereby ensuring that modelling is relevant to policymakers and that policymakers understand the limits of the work and are able to better interpret the results.

Results

The following results are expected from the regional exercise:

- Enhanced technical capacity within the relevant ministries and institutions (in particular ministries responsible for climate, energy, transport, as well as national statistical offices) to more actively engage in emission modelling activities;
- Strengthened regional network of experts.

Objectively verifiable indicators

- At the end of 2015 trained civil servants (approximately 2-5 per ECRAN beneficiary) will be able to carry out a modelling practice exercise for a chosen fuel combustion sub-sector, to develop with measures and with additional measures scenarios, to enter data in the model, to conduct sensitivity analysis and to interpret model results.
  At the end of 2015 the exercise will results in an improved assessment of data availability and associated institutional, legal and procedural weaknesses –based on short assessment papers by the participants.

Tasks

In order to carry out the Regional Training Exercise a series of 4 modules will be implemented. These are the following:

- Module 1 – Introduction to modelling techniques and assessing data needs for the base year;
- Module 2 – Development of a baseline (without measures) scenario;
- Module 3 – Development of with measures and with additional measures scenarios and sensitivity analysis;
- Module 4 – Gap analysis and identification of further technical capacity building needs

The modules 1 and 4 will be organized back to back with Regional Training Workshops to ensure that capacity building of technical skills is delivered in combination with capacity building related to the selected EU Climate Acquis. This integrated delivery of capacity building related to policy and technical skills will increase the understanding of modelling as a policy tool which can promote policy-making based on evidence and analysis.

All 4 modules will combine the following three stages:

- **Stage 1: Hands-on training workshop exercises (4 days)**:
  When preparing scenarios and projecting greenhouse gas emissions and removals and estimating the total effects of policies and measures on emissions and removals, parties under the UNFCCC may use any models and/or approaches they choose. In the framework of ECRAN

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the beneficiaries will be familiarised with the modelling applied in the EU for climate, energy and transport policy development. The hands-on training exercises will deliver technical modelling skills for low carbon emission development scenarios and clarify basic concepts and definitions related to modelling emission projections.

- **Stage 2: A follow-up period of work by experts:**
  The follow-up work will focus on implementing what has been learned during the hands-on training exercise by implementing a regional pilot modelling exercise for emission reduction scenarios until 2030. The work will focus on the fuel combustion sector. Experts will be free to choose which energy end-use sub-sector (e.g. buildings, industry, transport) they would like to explore in more detail, which will be the subject of the pilot modelling exercise. In addition to modelling one sub-sector, data availability will be explored for all subsectors of the fuel combustion sector. The aim of the exercise will be to (a) enhance skills through practice, (b) to build capacity by promoting joint work of different parts of national public administrations and (c) to identify gaps in data and institutional and legislative arrangements. The ECRAN team will support the work of the national experts by offering on-line help on specific questions and (if required though) ad-hoc missions and through the use of web conference tools. A set of regular consultations (e.g. 2-hour sessions every 2 weeks) is also proposed between all the beneficiaries and the training experts with the use of web-conference tools, to ensure that the experts are making progress with their follow-up tasks and to assist them as necessary.
- **Stage 3: A stocktaking of progress made and reporting of issues encountered and gaps identified:**
  Stocktaking will serve to ensure that (a) experience gained during the follow-up period is documented to enable appropriate conclusions to be drawn by national public administrations and serve as a first step in setting up their systems for emission projections and policies and measures, and (b) to provide feedback to ECRAN to ensure that trainings are fine-tuned to meet needs of the beneficiaries. Stocktaking will feed into the Regional Workshops. As part of the stocktaking participants provide written feedback of 3-5 pages.

To carry out the work, a number of short-term technical experts will need to be contracted for supporting the core ECRAN team. Technical experts will include experts on the LEAP model, and modelling experts from the EU with experience in bottom-up modelling of the power sector and end-use sectors (industry, buildings and transport).

Experts will be used to conduct trainings as well as to be on stand-by to provide support to the beneficiaries during the follow-up phase of each module consisting of the regional pilot modelling exercise. Beneficiaries will be in touch with a Contact Point from the core ECRAN team for the ECRAN Modelling Support Platform who will forward requests to the technical experts on stand-by as appropriate.

Module 1: Introduction to modelling techniques and assessing data needs for the base year

Module 1 will aim to provide an introduction to reporting requirements and the use of emission scenario analysis in policymaking: The workshops will deliver a general information and experience of

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the necessary financial, institutional and legal background for preparing emission projections and complying with EU and international reporting requirements. These training exercises will provide participants with a thorough knowledge of the relevant EU Acquis. Hands on technical training in modelling will also be provided, focusing on assessing data needs.

The following tasks will be implemented in the framework of Module 1:

Preparation and delivery of the following presentations for the training exercise:

1.1. Policy training:
- 1.1.1. Introduction to the use of models for climate and energy policy planning in the EU

1.2. Technical training:
- 1.2.1. General overview of models used for emission projections in the EU and for UNFCCC reporting
- 1.2.2. Introduction to good practice examples for projecting emissions from the power sector, industry, transport and buildings sector
- 1.2.3. Introduction to the structure of LEAP
- 1.2.4. Assessing data availability and designing a data structure in LEAP
- 1.2.5. Entering base year macroeconomic data and data for energy use, production and other activities, types and stocks of technologies and other relevant variables and parameters into LEAP

Providing technical in person and online support to the follow-up exercise:

1.3. For a chosen sub-sector of the fuel combustion sector designing data structure and entering data for base year macroeconomic data and data for energy use, production and other activities, types and stocks of technologies and other relevant variables and parameters into LEAP

1.4. Data availability check for other end use sectors and energy production and transformation sectors

Stocktaking of progress made and reporting of gaps and issues identified:

1.5. Lack of available and reliable data as an obstacle to modelling

1.6. Associated institutional, legal and procedural weaknesses

Module 2: Development of a baseline (without measures) scenario

The following tasks will be implemented in the framework of Module 2:

Preparation and delivery of the following presentations for the training Exercise

1.1. Policy training:
- 1.1.1. Definition of scenario types (without measures, with measures and with additional measures scenarios) and EU reporting practice
- 1.1.2. Definition and reporting of Policies and Measures (objective, type, status of implementation, monitoring and evaluating progress, estimation of effect, cost)

1.2. Technical training:
- 1.2.1. Defining and entering data into LEAP on projections of drivers of future emissions
- 1.2.2. Entering data into LEAP on costs and technologies
- 1.2.3. Defining values of relevant variables and parameters such as change in stocks, share and penetration values, autonomous efficiency improvement

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Providing technical in person and online support to the follow-up exercise 1.3. For a chosen sub-sector of the fuel combustion sector identifying drivers of emissions, defining variables and parameters such as change in stocks, share and penetration values, autonomous efficiency improvement 1.4. Data availability check for other end use sectors and energy production and transformation sectors
Stocktaking of progress made and reporting of gaps and issues identified: 1.5. Lack of available and reliable data as an obstacle to modelling 1.6. Associated institutional, legal and procedural weaknesses

Module 3: Development of with measures and with additional measures scenarios and sensitivity analysis

The following tasks will be implemented in the framework of Module 3:

Preparation and delivery of the following presentations for the training exercise: 1.1. Policy training: 1.1.1. Sensitivity analysis 1.1.2. Reporting on indicators for projections 1.2. Technical training: 1.2.1. Costing and availability of generic information on projected fuel and technology costs 1.2.2. Translating policies and measures into LEAP 1.2.3. Simulation and optimization using LEAP 1.2.4. Sensitivity analysis in LEAP 1.2.5. Interpreting model results in LEAP
Providing technical in person and online support to the follow-up exercise: 1.3. For a chosen sub-sector of the fuel combustion sector costing of technologies and fuels, translating policies and measures into modelling, simulation and optimization, sensitivity analysis and interpreting model results. 1.4. Data availability check for other end use sectors and energy production and transformation sectors
Stocktaking of progress made and reporting of gaps and issues identified: 1.5. Lack of available and reliable data as an obstacle to modelling 1.6. Associated institutional, legal and procedural weaknesses

Module 4: Gap analysis and further capacity building needs

The training will focus on summarizing specific weaknesses in the region and action to be taken to ensure sufficient technical, human resources, financial and institutional capacities in the region. The stocktaking will rely on information from the work of the ECRAN core team on the TNA exercise, from other projects implemented in the beneficiary countries, and in particular experience gained during the Regional Training Exercise by beneficiaries. This will serve as a first step in setting up their systems for emission projections and policies and measures.

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The following tasks will be implemented in the framework of Module 4:

Stocktaking of progress made and reporting of gaps and issues identified:

1.1. Data availability as an obstacle to modelling

1.2. Associated institutional, legal and procedural weaknesses

Timing of activities

Activity	Timing
Preparatory activities	
Finalization of proposals for training	May 2014-October 2014
Module 1 - Introduction to modelling techniques and assessing data needs for the base year	
Training exercise	November 2014
Follow-up exercise	November 2014 - March 2015
Stocktaking of progress made and gaps identified	March 2015
Module 2 – Development of a baseline (without measures) scenario	
Training exercise	March 2015
Follow-up exercise	March - June 2015
Stocktaking of progress made and gaps identified	June 2015
Module 3 – Development of with measures and with additional measures scenarios and sensitivity analysis	
Training exercise	June 2015
Follow-up exercise	June - November 2015
Stocktaking of progress made and gaps identified	November 2015
Module 4 – Gap analysis and identification of further capacity building needs	
Training exercise	November 2015

Required services

In addition to the core ECRAN team, the following experts are foreseen to carry out the tasks:

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- Expert 1: Expert in EU MMR and UNFCCC reporting requirements
- Expert 2: Expert(s) in technical training in the use of LEAP
- Expert 3: Experts in emission projection for the power sector, industry, transport and buildings sectors
- Expert 4: Experts in use of LEAP and emission projection for the power sector, industry, transport and buildings sectors

Summary of number of days foreseen for experts

	Senior Expert 1	Senior Expert 2	Senior Expert 3	Junior Expert 4	Junior Expert 4
Module 1					
Module 2					
Module 3					
Module 4					
Total					

Experts 1-3 are senior experts, Experts 4 are junior experts all to be numerated from the ECRAN budget. Additional senior experts will be remunerated from TAIEX.

Location of the assignment

ECRAN beneficiary countries (Albania, Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Kosovo*, Montenegro, Serbia and Turkey) and expert home Office.

Duration of the assignment

- *Expected Start date of the assignment: November 2014*
- *Expected Finishing date of the assignment: November 2015*
- The work of the Experts will be supervised by Imre Csikós (Key Expert) and József Feiler (Senior Short Term Expert)

Deliverables

The following deliverables and outputs are foreseen for all experts:

1. Participation in trainings and 2 presentations, one for use during trainings, and a more detailed presentation to serve to remind participants of all relevant information and as a reference, including detailed information on the presentation delivered during the training exercise and sources of information and data;

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For Expert 2 (Expert in technical training in the use of LEAP) and Expert 4 (Experts in use of LEAP and emission projection for the power sector, industry, and transport and buildings sectors) the following deliverables are also foreseen:

2. Being on stand-by to provide online or in person technical assistance related to the use of LEAP or to modelling of emission reductions in the power sector, industry, transport or buildings sector to beneficiaries when requested by the ECRAN Modelling Support Platform;

For Expert 2 (Expert in technical training in the use of LEAP) the following deliverables are also foreseen:

3. A 3-4 page report providing feed-in to Module 4 by presenting observations regarding gaps in data availability and reliability and technical capacity issues as well as the institutional, legislative and procedural issues behind these problems.

No.	Date(s)	Key outputs/deliverables	Observations
1	November 2014 March 2015 June 2015 November 2015	Participation in trainings and delivery of 2 presentations	NA
2	September 2014-November 2015 continuous	Technical assistance to beneficiaries	NA
2	November 2015	Report on gaps	NA

The **Expert 1 (Senior Expert(s) in EU MMR and UNFCCC reporting requirements)** will carry out the following specific activities

Location	Activity	Number of man/days allocated	Dates (indicative)
ECRAN beneficiary countries and home office	**Module 1** **Preparation for and participation in training:** • Introduction to the use of models for climate and energy policy planning in the EU • Introduction to reporting requirements of the EU MMR including content and deadlines with a focus on PaMs and emission projections • Enhanced UNFCCC reporting requirements for Annex I countries compared with non-Annex I countries		November 2014

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Location	Activity	Number of man/days allocated	Dates (indicative)
	• General overview of models used for emission projections in the EU and for UNFCCC reporting		
ECRAN beneficiary countries and home office	**Module 2** **Preparation for and participation in training:** • Definition of scenario types (without measures, with measures and with additional measures scenarios) and EU practice • Definition and reporting of Policies and Measures (objective, type, status of implementation, monitoring and evaluating progress, estimation of effect, cost)		March 2015
ECRAN beneficiary countries and home office	**Module 3** **Preparation for and participation in training:** • Definition of sensitivity analysis and EU practice		June 2015
ECRAN beneficiary countries and home office	**Module 4** **Preparation for and participation in training:** • Definition of a system for policies and measures and projections and EU practice		November 2015
Total			

The **Expert 2 (Senior Expert(s) in technical training for LEAP)** will carry out the following specific activities

Location	Activity	Number of man/days allocated	Dates (indicative)
ECRAN beneficiary countries and home office	**Module 1** **Preparation for and participation in training and assistance to beneficiaries provided through the Modelling Support Platform:**		September 2014 – March 2015

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Location	Activity	Number of man/days allocated	Dates (indicative)
	• Introduction to the structure of LEAP • Data availability and designing data structure in LEAP • Designing data structure and entering macroeconomic data and data on energy use, production and other activities, types and stocks of technologies and other relevant variables and parameters into LEAP for one end use sectors • Data availability check for other end use sectors and energy production and transformation sectors		
ECRAN beneficiary countries and home office	**Module 2** **Preparation for and participation in training and assistance to beneficiaries provided through the Modelling Support Platform** • Defining and entering data into LEAP on projections of drivers of future emissions • Entering data into LEAP on costs and technologies • Defining values of relevant variables and parameters such as change in stocks, share and penetration values, autonomous efficiency improvement • Data availability check for other end use sectors and energy production and transformation sectors		March 2015 – June 2015
ECRAN beneficiary countries and home office	**Module 3** **Preparation for and participation in training and assistance to beneficiaries provided through the Modelling Support Platform:** • Costing and availability of generic information on projected fuel and technology costs • Translating policies and measures into LEAP • Simulation and optimization using LEAP • Sensitivity analysis in LEAP • Interpreting model results in LEAP		June 2015 – November 2015

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Location	Activity	Number of man/days allocated	Dates (indicative)
ECRAN beneficiary countries and home office	**Module 4** **Preparation for and participation in training and preparation of a report**: • gaps in data availability and reliability and technical capacity issues as well as the institutional, legislative and procedural issues behind these problems		November 2015
Total			

The **Expert 3 (4 Senior Experts in emission projection for the power sector, industry, transport and buildings sectors respectively)** will carry out the following specific activities:

Location	Activity	Number of man/days allocated	Dates (indicative)
ECRAN beneficiary countries and home office	**Module 2** Introduction to good practice examples for projecting emissions from the power sector, industry, transport and buildings sector		March 2015
ECRAN beneficiary countries and home office	**Module 3** Costing and availability of generic information on projected fuel and technology costs for the power sector, industry, transport and buildings sector		June 2015
Total			

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The **Expert 4 (5-8 Junior Experts in technical training for LEAP and in modelling emission reduction in the power sector, industry, transport and buildings sectors)** will carry out the following specific activities

Location	Activity	Number of man/days allocated	Dates (indicative)
ECRAN beneficiary countries and home office	**Module 1** **Coordination and assistance to beneficiaries provided through the Modelling Support Platform** • Designing data structure and entering data for current accounts (energy use, drivers , technologies, costs, emissions) into LEAP for one end use sectors • Data availability check for other end use sectors and energy production and transformation sectors		November 2014 – March 2015
ECRAN beneficiary countries and home office	**Module 2** **Coordination and assistance to beneficiaries provided through the Modelling Support Platform:** • Defining and entering data into LEAP on projections of drivers of future emissions • Entering data into LEAP on costs and technologies • Defining autonomous energy efficiency improvement and other relevant parameters • Data availability check for other end use sectors and energy production and transformation sectors		March 2015 – June 2015
ECRAN beneficiary countries and home office	**Module 3** **Coordination and assistance to beneficiaries provided through the Modelling Support Platform:** • Costing and availability of generic information on projected fuel and technology costs • Translating policies and measures into LEAP		June 2015 – November 2015

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Location	Activity	Number of man/days allocated	Dates (indicative)
	• Simulation and optimization using LEAP • Sensitivity analysis in LEAP • Interpreting model results in LEAP		
Total			

In addition to the above experts, the core ECRAN team will carry out the coordination and organization of experts and training events, oversee progress made by beneficiaries and take necessary action if needed (contacts with high level officials, coordinate the provision of technical assistance), and participate in and chair and present at training exercises.

The TAIEX Experts (Experts for general support for exchanging experience on emission projections and policies and measures) will carry out the following specific activities:

Location	Activity	Number of man/days allocated	Dates (indicative)
ECRAN beneficiary countries and home office	**Module 1** **Support to beneficiaries:** • Experience with the use of models for climate and energy policy planning in the EU and reporting of PaMs		October 2014
ECRAN beneficiary countries and home office	**Module 2** **Support to beneficiaries:** • Experience with data collection for modelling		February 2015
ECRAN beneficiary countries and home office	**Module 2** **Support to beneficiaries:** • Experience with defining policy scenarios		June 2015
Total			

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ANNEX I – Background Note and Questionnaire

Background document on UNFCCC (AI) and EU reporting rules regarding PaMs and projections

Contents

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UNFCCC reporting requirements regarding PaMs and modelling

In preparing their NCs, Annex I Parties should follow the UNFCCC guidelines for reporting and review. These guidelines have been revised twice, at COP 2 (Geneva, July 1996) for the preparation of the second round of communications, and again at COP 5 (Bonn, Oct./Nov. 1999), where revised reporting guidelines (FCCC FCCC/CP/1999/7) were adopted for the preparation of third NCs and continued to be applied. In the following an extract from the guidelines is provided according to relevance to PaMs and projections.

Reporting in relation to Policies and Measures

A. Selection of policies and measures for the national communication

13. In accordance with Article 12.2, Annex I Parties shall communicate information on policies and measures adopted to implement commitments under Article 4.2(a) and (b). These need not have the limitation and reduction of GHG emissions and removals as a primary objective.

14. In reporting, Parties should give priority to policies and measures, or combinations of policies and measures, which have the most significant impact in affecting GHG emissions and removals and may also indicate those which are innovative and/or effectively replicable by other Parties. Parties may report on adopted policies and measures and those in the planning stage, but should clearly distinguish these from implemented policies and measures throughout. The national communication does not have to report every policy and measure which affects GHG emissions.

15. Policies and measures reported on should be those planned, adopted and/or implemented by governments at national, state, provincial, regional and local level. Furthermore, policies and measures reported may also include those adopted in the context of regional or international efforts. Policies and measures influencing international transport GHG emissions should be reported in the transport sector.

16. Parties should report on action taken to implement commitments under Article 4.2(e)(ii) of the Convention, which requires that Parties identify and periodically update their own policies and practices which encourage activities that lead to greater levels of anthropogenic GHG emissions than would otherwise occur. Parties should also provide the rationale for such actions in the context of their national communications.

B. Structure of the policies and measures section of the national communication

17. Parties shall organize the reporting of policies and measures by sectors, subdivided by greenhouse gas (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride). To the extent appropriate, the following sectors should be considered:

-energy, transport, industry, agriculture, forestry and waste management. Each sector shall have its own textual description of the principal policies and measures, as set out in section D below, supplemented by table 1. Parties may include separate text and a table describing cross-sectoral policies and measures.

18. In cases where a policy or measure has been maintained over time and is thoroughly described in the Party's previous national communication, reference should be made to this and only a brief

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description contained in the latest national communication, focusing on any alterations to the policy or measure or effects achieved.

19. Some information such as the effect of policies and measures may be presented in aggregate for several complementary measures in a particular sector or affecting a particular gas.

C. Policy-making process

20. The national communication should describe the overall policy context, including any national targets for greenhouse gas mitigation. Strategies for sustainable development or other relevant policy objectives may also be covered. Relevant inter-ministerial decision-making processes or bodies may be noted.

21. The national communication should provide a description of the way in which progress with policies and measures to mitigate GHG emissions is monitored and evaluated over time.

Institutional arrangements for monitoring of GHG mitigation policy should also be reported in this context.

D. Policies and measures and their effects

22. The presentation of each policy and measure shall include information on each of the subject headings listed below. The presentation should be concise and should include information on the detail suggested after each subject heading:

(a) Name and short description of the policy or measure;

(b) Objectives of the policy or measure. The description of the objectives should focus on the key purposes and benefits of the policies and measures, including a description of activities and/or source and sink categories affected. Objectives should be described in quantitative terms, to the extent possible;

(c) The greenhouse gas or gases affected;

(d) Type or types of policy or measure. Use, to the extent possible, the following terms: economic, fiscal, voluntary/negotiated agreements, regulatory, information, education, research, other;

(e) Status of implementation. It should be noted whether the policy or measure is in the planning stage or is adopted or whether it is under implementation. For adopted and implemented measures, additional information may include the funds already provided, future budget allocated and the time-frame for implementation;

(f) Implementing entity or entities. This should describe the role of national, state, provincial, regional and local government and the involvement of any other entities.

23. In addition, the description of each policy and measure reported should include, as appropriate, a quantitative estimate of the impacts of individual policies and measures or collections of policies and measures. Such information includes estimated changes in activity levels and/or emissions and removals due to adopted and implemented policies and measures reported and a brief description of

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estimation methods. Information should be presented as an estimate for a particular year such as 1995, 2000 and 2005, not for a period of years.

24. Parties may also provide information under the headings below for each policy and measure reported:

(a) Information about the costs of policies and measures. Such information should be accompanied by a brief definition of the term 'cost' in this context;

(b) Information about non-GHG mitigation benefits of policies and measures. Such benefits may include, for example, reduced emissions of other pollutants or health benefits;

(c) How the policy or measure interacts with other policies and measures at the national level. This may include a description of how policies complement each other in order to enhance overall greenhouse gas mitigation.

25. Parties shall provide information on how they believe their policies and measures are modifying longer-term trends in anthropogenic GHG emissions and removals consistent with the objective of the Convention.

E. Policies and measures no longer in place

26. When policies and measures listed in previous national communications are no longer in place, Parties may explain why this is so.

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Projections and the total effect of policies and measures

A. Purpose

27. The primary objective of the projections section of the national communication is to give an indication of future trends in GHG emissions and removals, given current national circumstances and implemented and adopted policies and measures, and to give an indication of the path of emissions and removals without such policies and measures.

B. Projections

28. At a minimum, Parties shall report a 'with measures' projection, in accordance with paragraph 29 and may report 'without measures' and 'with additional measures' projections.

29. A 'with measures' projection shall encompass currently implemented and adopted policies and measures. If provided, a 'with additional measures' projection also encompasses planned policies and measures. If provided, a 'without measures' projection excludes all policies and measures implemented, adopted or planned after the year chosen as the starting point for this projection. In reporting, Parties may entitle their 'without measures' projection as a 'baseline' or 'reference' projection, for example, if preferred, but should explain the nature of this projection.

30. Parties may report sensitivity analysis for any of the projections, but should aim to limit the number of scenarios presented.

C. Presentation of projections relative to actual data

31. Emission projections shall be presented relative to actual inventory data for the preceding years.

32. For the 'with measures' and 'with additional measures' projections, the starting point should generally be the latest year for which inventory data are available in the national communication. For the 'without measures' projection, the starting point may be 1995, or Parties may provide a 'without measures' projection starting from an earlier year such as 1990 or another base year, as appropriate.

33. Parties may use 'normalized' data in making their projections. However, Parties should present their projections relative to unadjusted inventory data for the preceding years. In addition, Parties may present their projections relative to adjusted inventory data. In this case, Parties shall explain the nature of the adjustments.

D. Coverage and presentation

34. Projections shall be presented on a sectoral basis, to the extent possible, using the same sectoral categories used in the policies and measures section.

35. Projections shall be presented on a gas-by-gas basis for the following greenhouse gases:

CO2, CH4, N2O, PFCs, HFCs and SF6 (treating PFCs and HFCs collectively in each case). Parties may also provide projections of the indirect greenhouse gases carbon monoxide, nitrogen oxides and non-methane volatile organic compounds, as well as sulphur oxides. In addition, projections shall be provided in an aggregated format for each sector as well as for a national total, using global warming potential (GWP) values agreed upon by the Conference of the Parties.

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36. To ensure consistency with inventory reporting, emissions projections related to fuel sold to ships and aircraft engaged in international transport shall, to the extent possible, be reported separately and not included in the totals.

37. In view of the objective of the Convention and the intent to modify longer-term trends in emissions and removals, Parties should include projections on a quantitative basis for the years 2005, 2010, 2015 and 2020. Projections should be presented in a tabular format by sector and gas for each of these years, together with actual data for the period 1990 to 2000 or the latest year available. For Parties using a base year different from 1990 for their inventories, in accordance with Article 4.6 of the Convention, actual data for that year shall be given.

38. Diagrams illustrating the information in paragraphs 34 to 37 should be presented showing unadjusted inventory data and a 'with measures' projection, for the period 1990 (or another base year, as appropriate) to 2020. Additional diagrams may also be presented. Figure 1 illustrates the presentation of a hypothetical Party's projection for a single gas. It shows unadjusted inventory data for the period 1990 to 2000. It shows 'with measures' and 'with additional measures' scenarios starting from 2000, and a 'without measures' scenario starting from 1995.

E. Assessment of aggregate effects of policies and measures

39. The estimated and expected effects of individual policies are addressed in the policies and measures section of the national communication. In the projections section of the national communication, Parties shall present the estimated and expected total effect of implemented and adopted policies and measures. Parties may also present the total expected effect of planned policies and measures.

40. Parties shall provide an estimate of the total effect of their policies and measures, in accordance with the 'with measures' definition, compared to a situation without such policies and measures. This effect shall be presented in terms of GHG emissions avoided or sequestered, by gas (on a CO2 equivalent basis), in 1995 and 2000, and should also be presented for 2005, 2010, 2015 and 2020 (not cumulative savings). This information may be presented in tabular format.

41. Parties may calculate the total effect of their measures by taking the difference between a 'with measures' and 'without measures' projection. Alternatively, Parties may use another approach, for example individually assessing the effect of each significant policy and measure, and aggregating the individual effects to arrive at a total. In either case, when reporting, it should be clear from what year onward it is assumed that policies are implemented or not implemented in making the calculations.

F. Methodology

42. When projecting greenhouse gas emissions and removals and estimating the total effects of policies and measures on emissions and removals, Parties may use any models and/or approaches they choose. Sufficient information should be reported in the national communication to allow a reader to obtain a basic understanding of such models and/or approaches.

43. In the interests of transparency, for each model or approach used, Parties should briefly:

(a) Explain for which gases and/or sectors the model or approach was used;

(b) Describe the type of model or approach used and its characteristics (for example,

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top-down model, bottom-up model, accounting model, expert judgment);

(c) Describe the original purpose the model or approach was designed for and, if applicable, how it has been modified for climate change purposes;

(d) Summarize the strengths and weaknesses of the model or approach used;

(e) Explain how the model or approach used accounts for any overlap or synergies that may exist between different policies and measures.

44. Parties should provide references for more detailed information related to (a) to (e) above.

45. Parties should report the main differences in the assumptions, methods employed, and results between projections in the current national communication and those in earlier national communications.

46. The sensitivity of the projections to underlying assumptions should be discussed qualitatively and, where possible, quantitatively.

47. To ensure transparency, Parties should report information about key underlying assumptions and values of variables such as GDP growth, population growth, tax levels and international fuel prices, using table 2. This information should be limited to that which is not covered under paragraph 48, i.e. it should not include sector-specific data.

48. To provide the reader with an understanding of emission trends in the years 1990 to 2020, Parties shall present relevant information on factors and activities for each sector. This information on factors and activities may be presented in tabular format.

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EU reporting requirements for PaMs and modelling

The Member States' reporting on projections is crucial in the process of:

- tracking of progress by MS and EU towards UNFCCC based targets (annual report by the Commission, biennial projections submissions by MS)
- tracking progress towards headline targets under the Europe 2020 strategy (especially the Effort Sharing Decision (406/2009/EC) targets)

The Effort Sharing Decision (ESD) sets annual emission reduction and limitation targets for the Member States in the Non-ETS sector for the period 2013 – 2020. Its implementation requires an enhanced quality and transparency of Member States' actual emission reports for the compliance assessment at the end of each year. Projections and their quality are important in the compliance action plan to be developed in cases of non-compliance with the targets. The overall organisation of the GHG reduction commitments in the recent EU legislation requires a split of total GHG emissions between the ETS emissions and non-ETS emissions in terms of projections due to the scope of the decision.

The EU's current and future mitigation actions will be facilitated through the enhanced monitoring and reporting system being put in place. The system supersedes the system which was established in 1993 and revamped in 2004.

Enhanced reporting is essential for the recognition of the Union's and the Member States' efforts in fulfilling their commitments on the provision of financial, technological and capacity-building support to developing country Parties as agreed at the 2009 and 2010 UNFCCC conferences. In this context the particularity of the EU reporting system must also be taken into consideration which necessitates ensuring quality reporting at both the EU and the Member State level, and consistency of reporting between the EU and the Member States. This need necessitated the elaboration of the new Monitoring Mechanism Regulation, which came into force in 2013.

The overall objectives of the new Monitoring Mechanism Regulation are:

- to assist the Union and its Member States to meet their mitigation commitments and to implement the climate and energy package;
- to improve the timeliness, transparency, accuracy, completeness, comparability and comprehensiveness of the data reported by the Union and its Member States;
- to ensure that the Union and its Member States comply with international monitoring and reporting obligations and commitments, including the reporting on financial and technical support provided to developing countries;
- to facilitate the development of new Union climate change mitigation and adaptation instruments;
- to provide a legal basis for the implementation of future reporting requirements and guidelines pursuant to Union legislation or international agreements and decisions.

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It covers emissions of six greenhouse gases from all sectors (energy, industrial processes, land use, land use change and forestry (LULUCF), waste, agriculture, etc). It is based on methodologies established under the Intergovernmental Panel on Climate Change (IPCC) and existing aggregated statistical data at the national level.

The new Regulation implements the monitoring and reporting requirements of the Effort Sharing Decision and the revised EU ETS Directive through:

- establishing a review and compliance cycle under the Effort Sharing Decision;
- incorporating the reporting requirements for the use of revenues from auctioning carbon allowances, as stipulated in the revised ETS Directive;
- enhances the current monitoring and reporting framework so as to meet the needs of future EU and international legislation through establishing a basis for monitoring and reporting emissions from maritime transport, non-CO2 climate impacts from aviation, LULUCF, and adaptation;
- enhances EU and Member State reporting on financial and technology support provided to developing countries, thereby ensuring adherence to international commitments under the UNFCCC;
- enhances consistency of reporting under this Decision with reporting under other EU legal instruments that address air pollutants;
- enhances reporting of actual emissions, projections, policies and measures taking into account lessons learned from past implementation.

Low-carbon development strategies

Member States, and the Commission on behalf of the Union, shall prepare their low-carbon development strategies in accordance with any reporting provisions agreed internationally in the context of the UNFCCC process

Member States shall report to the Commission on the status of implementation of their low-carbon development strategy by 9 January 2015 or in accordance with any timetable agreed internationally in the context of the UNFCCC process.

Reporting on PaMs and on projection of GHGs

By 9 July 2015, Member States and the Commission shall set up, operate and seek to continuously improve national and Union systems respectively, for reporting on policies and measures and for reporting on projections of anthropogenic greenhouse gas emissions by sources and removals by sinks. Those systems shall include the relevant institutional, legal and procedural arrangements established within a Member State and the Union for evaluating policy and making projections of anthropogenic greenhouse gas emissions by sources and removals by sinks.

Member States and the Commission shall aim to ensure the timeliness, transparency, accuracy, consistency, comparability and completeness of the information reported on policies and measures and projections of anthropogenic greenhouse gas emissions by sources and removals by sinks,

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By 15 March 2015, and every two years thereafter, Member States shall provide the Commission with the following:

a) a description of their national system for reporting on policies and measures, or groups of measures, and for reporting on projections of anthropogenic greenhouse gas emissions by sources and removals by sinks pursuant to Article 12(1), where such description has not already been provided, or information on any changes made to that system where such a description has already been provided;

b) updates relevant to their low-carbon development strategies referred to in Article 4 and progress in implementing those strategies;

c) information on national policies and measures, or groups of measures, and on implementation of Union policies and measures, or groups of measures, that limit or reduce greenhouse gas emissions by sources or enhance removals by sinks, presented on a sectoral basis and organised by gas or group of gases (HFCs and PFCs) listed in Annex I. That information shall refer to applicable and relevant national or Union policies and shall include

(i) the objective of the policy or measure and a short description of the policy or measure;

(ii) the type of policy instrument;

(iii) the status of implementation of the policy or measure or group of measures;

(iv) where used, indicators to monitor and evaluate progress over time;

(v) where available, quantitative estimates of the effects on emissions by sources and removals by sinks of greenhouse gases broken down into:

— the results of *ex ante* assessments of the effects of individual or groups of policies and measures on the mitigation of climate change. Estimates shall be provided for a sequence of four future years ending with 0 or 5 immediately following the reporting year, with a distinction between greenhouse gas emissions covered by Directive 2003/87/EC and those covered by Decision No 406/2009/EC;

— the results of *ex post* assessments of the effects of individual or groups of policies and measures on the mitigation of climate change, with a distinction between greenhouse gas emissions covered by Directive 2003/87/EC and those covered by Decision No 406/2009/EC;

(vi) where available, estimates of the projected costs and benefits of policies and measures, as well as estimates, as appropriate, of the realised costs and benefits of policies and measures;

(vii) where available, all references to the assessments and the underpinning technical reports referred to in paragraph 3;

d) the information referred to in point (d) of Article 6(1) of Decision No 406/2009/EC;

e) information on the extent to which the Member State's action constitutes a significant element of the efforts undertaken at national level as well as the extent to which the projected use of joint

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implementation, of the CDM and of international emissions trading is supplemental to domestic action in accordance with the relevant provisions of the Kyoto Protocol and the decisions adopted there under.

A Member State shall communicate to the Commission any substantial changes to the information reported pursuant to this Article during the first year of the reporting period, by 15 March of the year following the previous report.

Member States shall make available to the public, in electronic form, any relevant assessment of the costs and effects of national policies and measures, where available, and any relevant information on the implementation of Union policies and measures that limit or reduce greenhouse gas emissions by sources or enhance removals by sinks along with any existing technical reports that underpin those assessments. Those assessments should include descriptions of the models and methodological approaches used, definitions and underlying assumptions.

Projections

1.By 15 March 2015, and every two years thereafter, Member States shall report to the Commission national projections of anthropogenic greenhouse gas emissions by sources and removals by sinks, organised by gas or group of gases (HFCs and PFCs) listed in Annex I and by sector. Those projections shall include quantitative estimates for a sequence of four future years ending with 0 or 5 immediately following the reporting year. National projections shall take into consideration any policies and measures adopted at Union level and shall include:

(a) projections without measures where available, projections with measures, and, where available, projections with additional measures;

(b) total greenhouse gas projections and separate estimates for the projected greenhouse gas emissions for the emission sources covered by Directive 2003/87/EC and by Decision No 406/2009/EC;

(c) the impact of policies and measures identified pursuant to Article 13. Where such policies and measures are not included, this shall be clearly stated and explained;

(d) results of the sensitivity analysis performed for the projections;

(e) all relevant references to the assessment and the technical reports that underpin the projections referred to in paragraph 4.

2. Member States shall communicate to the Commission any substantial changes to the information reported pursuant to this Article during the first year of the reporting period,

3. Member States shall report the most up-to-date projections available. Where a Member State does not submit complete projection estimates by 15 March every second year, and the Commission has established that gaps in the estimates cannot be filled by that Member State once identified through the Commission's QA or QC procedures, the Commission may prepare estimates as required to compile Union projections, in consultation with the Member State concerned.

4. Member States shall make available to the public, in electronic form, their national projections of greenhouse gas emissions by sources and removals by sinks along with relevant technical reports that

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underpin those projections. Those projections should include descriptions of the models and methodological approaches used, definitions and underlying assumptions.

Biennial report and national communications

The Union and the Member States shall submit biennial reports in accordance with Decision 2/CP.17 of the Conference of the Parties to the UNFCCC (Decision 2/CP.17), or subsequent relevant decisions adopted by the bodies of the UNFCCC, and national communications in accordance with Article 12 of the UNFCCC to the UNFCCC Secretariat.

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TNA Questionnaire

Nationally determined contributions for the 2015 Agreement

At the Warsaw COP Parties were asked to "to initiate or intensify domestic preparations for their intended nationally determined contributions, without prejudice to the legal nature of the contributions, in the context of adopting a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties towards achieving the objective of the Convention as set out in its Article 2 and to communicate them well in advance of the twenty-first session of the Conference of the Parties (by the first quarter of 2015 by those Parties ready to do so) in a manner that facilitates the clarity, transparency and understanding of the intended contributions, without prejudice to the legal nature of the contributions"

Q1.1) Is there a process planned or initiated in your country for the preparation of the "intended nationally determined contribution" to the 2015 Agreement to be communicated well in advance of the UNFCCC COP in 2015?

Q1.2) Is there an assessment work in planning or execution to assess the potential range of mitigation targets as contribution to the 2015 regime?

Q1.3) If there is an assessment work is it a result of a horizontal governmental agency cooperation or only being developed by the ministry in charge of climate policy? What is the timeline and content of the assessment work? Does the assessment work involve sectorial level work?

Q1.4) Is the preparation of the contribution to the 2015 agreement is in line/in harmonization with sectoral targets in main emission source sectors?

Q1.5) Type of contributions?

Preparation of low emission/low carbon strategy – mitigation strategy with 2030 time horizon

Low-Emission Development Strategies and Plans give UNFCCC Parties the possibility to formulate integrated, consistent strategies on climate change mitigation and provide long-sighted guidance for daily policy decisions. Based on the broad obligations of Art. 4.1.b UNFCCC for all countries to formulate programmes on climate change mitigation, the notion of low emission development strategies (LEDs) has been mentioned by the Parties in Copenhagen and Cancún.

The Copenhagen Accords:

http://mitigationpartnership.net/sites/all/modules/contributed/pubdlcnt/pubdlcnt.php?file=http://unfccc.int/resource/docs/2009/cop15/eng/l07.pdf&nid=451refers to "a low-emission development strategy" (Draft Decision -/CP.15, Para. 2). The 2010 Cancún Agreements recognised that „a low-carbon development strategy is indispensable to sustainable development" (Decision 1/CP.16, Para. 6). In more detail, the Cancún Agreements stipulate that developed countries should draft LEDS and developing countries are encouraged to do the same (Decision 1/CP.16, Para.s 45 and 65).

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The EU Monitoring Mechanisms Regulation also reinforces, that Member States, and the Commission on behalf of the Union, shall prepare their low-carbon development strategies in accordance with any reporting provisions agreed internationally in the context of the UNFCCC process.

Q2.1) Is there a low emission development strategy adopted, planned or developed in your country?

Q2.2) If there is a low emission development strategy adopted or developed, what kind of background assessment work has been executed on sectorial level for the development?

Q2.3) How long is the time horizon of the low emission development strategy?

Q2.4) Which body mandated the development of the strategy, what is its status and which body endorses it?

Q2.5) If there is a low emission development strategy adopted or developed, how many experts worked on the document and how many experts were from government organisations, state institutions or from the private sector.

Q2.6) Was there a public consultation on sectorial level or on general level about the sectorial targets in the strategy? Are there sectorial targets in the low emission development strategy?

Q2.7) If there is a low emission development strategy adopted, are there action plans, measures, financial means to its implementation? What has been done so far? Are the targets of the low emission development strategy integrated into other sectoral plans?

Q2.8) How many people deals with the topic of low emission development strategy planning in the government administration? What kind of resources are allocated for the development of low emission development strategies? What is, what can be the legal status of a low emission development strategy?

Q2.9) Are there domestic (not donor financed) experts, institutions available for the development of low emission development strategies?

Q2.10) In your view what legal and institutional issues are to be considered in order to improve the quality of the low emission development strategies and to avoid that the produced documents are "book shelved" (and thus not considered in further policy development).

Capacity for assessing the impact of policies and measures

Both UNFCCC guidelines for national communication and the EU Monitoring Mechanisms Regulation requires substantial reporting on Policies and Measures (see Background Document).

Q3.1) Are there activities assessing the impacts of mitigation policies and measures planned and implemented? If so, when, with what scope (sector, time) and what methodology? Who financed the activities (govt. vs. donor)

Q3.2) Was the quantitative estimate of the impacts of individual policies and measures or collections of policies and measures conducted by lead ministry, government agency, other state institution or by external consultants?

Q3.3) Is there a capacity for PaM assessment in the lead ministry and its background institutions?

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Q3.4) Is there a horizontal cooperation forum among ministries responsible for various emitting sector which cooperation would make identification and quantitative estimates of the impacts of individual policies and measures or collections of policies and measures easier?

Q3.5) In your view what legal and institutional issues are to be considered in order to improve the quality of the PaM assessment

Modelling capacity for fulfilment of reporting needs

Modelling capacity assessment is conducted in order to have a picture about existing modelling knowledge, capacity and gaps where trainings or other type of capacity building can assist filling the gap. The benchmark used for the capacity assessment is derived from the UNFCCC Annex I reporting requirements and reporting requirements enshrined in the EU *acquis*.

Q4) Data and modelling

a) inventory/emissions data

Reference is made to the RENA MMD exercise, where an assessment has been made of the national systems. The following issues will be addressed from these assessments

- Data availability and reliability (energy (including power, heat, industry, transport, agriculture, etc.), non-energy (industry), LULUCF, emissions, socio-economic data, data including activity and emission factors)
- Accuracy of estimation - which IPCC tier was used in inventory for calculation of 5 most important contributors to GHG emissions?
- What is the source of data is it in line with IPCC and EU requirements?
- Is there a perceived need to improve data collection; are there any specific plans to do so in the future?
- Is there a permanent national inventory team established within state institutions? Are there sectorial inventory experts available for all sectors?

b) emission forecast

- What projection method was used for which sector? For which sectors has modelling been used or is planned to use? Name of specific model(s) used? Which sectors have modelling coverage for emission trends? Have different models been used for the same sector over time?
- What is the experience with the modelling methodology? Are there differences in terms of depth in the forecasting for different sectors?
- Are the model(s) ready-made models, calibrated and adapted to reflect country specificities, or built from scratch?
- If no modelling has been used until now, what have been the main reasons?
- Is there any area where modelling would need to be improved? Are there any specific plans to do so in future?

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- Is the modelling appropriate for UNFCCC and EU reporting requirements?
- Which type of modelling has been used for the energy sector? Top-down macroeconomic energy-economy models, bottom up models of different energy sectors or hybrid energy system models used for emission scenario modelling?
- What is the aim of modelling? Is it to fulfil reporting requirements, or does it provide support for climate/energy policy? Have the results already been used to support policymaking?
- Is sensitivity analysis performed? If yes, for which parameters and variables?
- Is there a Q/A and Q/C system available for modelling (general, sectorial)?
- Were there three or two scenarios modelled (WOM, WM, WAM)?
- Which sectors were covered in the projections?
- Which years are covered in the projections? Which is the base year? Are there sectorial or cumulative projections till 2030?
- Is the list on mandatory parameters on projection in Annex IV of Commission Decision 2005/166/EC used in modelling?

Model Factsheet is currently foreseen in IA for new MMR

Model name	
Full model name	
Model version and status	
Latest date of revision	
URL to model description	
Model type	
Model description	
Summary	
Intended field of application	
Description of main input data categories and data sources	
Validation and evaluation	
Output quantities	

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GHG covered	
Sectoral coverage	
Geographical coverage	
Temporal coverage,(eg time steps, time span)	
Interface with other models	
Input from other models	
Model structure(if diagram please add to the template)	

Q5) Institutional capacity (current and expected)

- Was modelling done in house or was it outsourced?
- What is the general institutional capacity in-house for energy and climate policy (number of staff in ministry and relevant government agencies dealing with energy and climate policy, staff turnover, level of experience on climate and energy of staff)
- What is the specific institutional capacity in-house (if applicable) (number of staff in ministry and relevant government agencies with modelling experience and experience in MRV, level of experience, staff turnover)
- What is the vision for institutional arrangements for the future? (in-house or external expertise, details on in-house plans)
- In-house knowledge of UNFCCC and EU requirements, participation in relevant events (EU working groups, UNFCCC, etc.)
- Has the government made use of externally funded possibilities for capacity building?
- Is there a horizontal cooperation within the state administration regarding harmonizing strategies and plans which includes climate policy integration?
- On what level are modelling results assessed in the state administration for emission scenario modelling?
- Is there a continuously employed team, national system for modelling established? If so, what are the parameters of the system?

Q6) Financial resources (current and expected)

- What are the sources and size of funding available for staff and external studies for energy and climate policy as a whole? For modelling? For monitoring, reporting and verification?

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ANNEX II – Inventory of recent initiatives with relevance to the TNA

Project	Contact	Regional partners	Short description of the project activities in the country	Economy wide/Sector	Models applied	Reference Scenario developed	Policy scenarios considered (which ones?)/	Outputs / Deliverables and date	Targets definition (GHG emission reduction, energy efficiency, RES)	Web links to the projects
Public dialogue on the Sustainable Use of Energy in SEE Europe (PDI)	DOOR (Society for Sustainable Development, NGO): slavica.robic@door.hr	Belgrade Fund for Political Excellence (BFPE); Academy for Political Development; Democratic Leadership School; Center for Research and Policy Making; Academy of Political Studies (APS)	Project aims to strengthen the role of NGOs in the Public Dialogue on Climate Protection in South East Europe through various workshops and events.	Energy and Climate – all sectors, in this phase focus on NGOs	None	Situation analyses from 2010	n.a.	Reports	none	www.publicdialogue-energy.com
SEE Sustainable Energy Policy (SEE SEP) - IEE project	DOOR (Society for Sustainable Development, NGO): ivana.rogulj@door.hr	SEE Change Net, are they the project lead?	1. Development of Low Carbon Energy Strategy for SEE based on a selected energy model, which produces material for policy options based on various scenarios; 2. Public Advocacy and Campaigning; 3. Monitoring	Energy	OPERA	Partially (for demand –side) for SEE	Yes	Modelling scenarios (May 2014)	GHG emission reduction (2050.)	http://www.seechangenetwork.org/index.php/newsfeed/1-latest-news/70-see-sustainable-energy-policy.html
Green jobs calculator	UNDP CROATIA: robert.pasicko@undp.org	/	Calculation of expected new green jobs in energy sector - links energy scenarios, GHG emissions and jobs potentials - good tool for policy makers	Energy	PACE TOOL	Yes, for Croatia	Yes, for Croatia - Energy Strategy.	n/a	No specific targets.	http://www.slideshare.net/UNDPhr/17-lin-herencic-green-jobs-calculator-se4all-9122013

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Project	Contact	Regional partners	Short description of the project activities in the country	Economy wide/Sector	Models applied	Reference Scenario developed	Policy scenarios considered (which ones?)/	Outputs / Deliverables and date	Targets definition (GHG emission reduction, energy efficiency, RES)	Web links to the projects
Post carbon cities of tomorrow (POCACITO) - FP7 project	UNDP CROATIA: zoran.kordic@undp.org	/	The project POst-CArbon CIties of TOmorrow (FP7 project) – foresight for sustainable pathways towards liveable, affordable and prospering cities in a world context (POCACITO) will develop an evidence-based 2050 roadmap for EU post-carbon cities. Case study cities include Barcelona, Copenhagen/Malmö, Istanbul, Lisbon, Litomerice, Milan/Turin, Offenburg and Zagreb.	Urban development planning/management	n/a	no	no	Integrated case study assessment report (September 2014) and modelling scenarios for long term low carbon development (2015), Zagreb as one of the case studies	TBD	http://pocacito.eu/
Bringing EU and Third countries together through renewable energy (BETTER) - IEE project	JR: andreas.tuerk@joanneum.at	UNDP Croatia	BETTER intends to address RES cooperation between the EU and third countries in several dimensions. The starting point is given through the cooperation mechanisms provided by the RES Directive, allowing Member States to achieve their 2020 RES targets in a more cost efficient way, and thereby including the possibility to cooperate with third countries.	Energy	Green-X energy model, HIREPS grid model	Yes	Yes	Roadmap for cooperation on renewables among EU and Third countries	evaluation of 2020 RES targets, therefor a basis for 2030 RES target setting	http://www.better-project.net/
SLED	Regional Environmental Center for CEE jfeiler@rec.org	UNDP Kosovo*	Low emission scenario development in the residential building and electricity sector in Serbia, Montenegro, former Yugoslav Republic of Macedonia and Albania. Low emission development	Electricity, Buildings, general low emission	own model development, tbd	Yes	Yes	country studies, regional study	policy scenario assessment – GHG target	

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Project	Contact	Regional partners	Short description of the project activities in the country	Economy wide/Sector	Models applied	Reference Scenario developed	Policy scenarios considered (which ones?)/	Outputs / Deliverables and date	Targets definition (GHG emission reduction, energy efficiency, RES)	Web links to the projects
			strategy preparation in Kosovo*							
LOCSEE	JR	Governments of the former Yugoslav Republic of Macedonia, Albania, Croatia, Serbia		buildings, transport, waste	bottom up techno-economic model	yes	tbd	Model results for buildings in ME and former Yugoslav Republic of Macedonia , for transport in AL and HR by summer 2014; poilcy papers as basis for Climate Strategy development by end of 2014	none	http://www.locsee.eu/
Promitheas - 4 project	Prof. Dimitrios Mavrakis, promitheas@kepa.uoa.gr, nergy Policy and Development Centre of the National and Kapodistrian University of Athens	TUBITAK – Marmara Research Centre (TR), University of Belgrade-Faculty of Mining and Geology (SRB), Polytechnic University of Tirana (AL)	The project aims are the development and evaluation of mitigation/adaptation (M/A) policy portfolios and the prioritization of research needs and gaps for twelve countries (Albania, Armenia, Azerbaijan, Bulgaria, Estonia, Kazakhstan, Moldova, Romania, Russian Federation, Serbia, Turkey and Ukraine)	economy wide	LEAP	n.a.	n.a.	PaM analyses on country level, description of various models, data availability collection	n.a..	http://www.promitheasnet.kepa.uoa.gr/Promitheas4/index.php/overview
Albania Third National Communication to the UNFCCC	UNDP Albania, Mirela Kamberi	UNDP Albania	The objectives of the TNC are to enable Albania to enhance available GHG emission data, perform targeted research, and strengthen technical capacity and institutions to address GHG inventory, GHG mitigation and adaptation to climate change.	economy wide	LEAP	yes	Scenario until 2050	NC3		

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Project	Contact	Regional partners	Short description of the project activities in the country	Economy wide/Sector	Models applied	Reference Scenario developed	Policy scenarios considered (which ones?)/	Outputs / Deliverables and date	Targets definition (GHG emission reduction, energy efficiency, RES)	Web links to the projects
LEDS Kosovo*	UNDP Kosovo*	UNDP Kosovo*	The main purpose of the project is to support the Government of Kosovo* to mainstream climate change concerns into sectoral and overall Kosovo's* development priorities,. It will increase the capacity for low emission climate resilient development strengthened at national and local level; enable development of low emission climate resilient strategy.	economy wide	none	no	no	Strategy is available 2014		
Sustainable Energy Options for Kosovo*	UCLA, Berkeley, Daniel M. Kammen, Maryam Mozafari, Daniel Prull	UCLA, Berkeley	An analytic treatment of the energy options that exist today and that can be created through investigation of new energy efficiency, renewable energy, and the wise use of fossil fuel resources.	electricity	HOMER	yes	yes	study 2012	RES, energy efficiency	http://coolclimate.berkeley.edu/sites/all/files/Kosovo*20May2012.pdf
3rd NC former Yugoslav Republic of Macedonia	UNDP former Yugoslav Republic of Macedonia, Pavlina Zdraveva	UNDP former Yugoslav Republic of Macedonia	Providing financial and technical support to prepare its Third National Communication (TNC) to the United Nations Framework Convention on Climate Change (UNFCCC)		MARKAL	yes	yes, partial	NC3 March 2014		http://unfccc.org.mk/content/Documents/TNP_ANG_FINAL.web.pdf
1st Biannial Update report former Yugoslav Republic of Macedonia	UNDP former Yugoslav Republic of Macedonia, Pavlina Zdraveva	UNDP former Yugoslav Republic of Macedonia	The immediate objective of the project is to assist the country in the preparation and submission of its First Biennial Update Report to the UNFCCC		MARKAL	n.a.	n.a.	draft report		
NC2 Republic of Serbia	UNDP Serbia, Milena Kozomara, milena.kozomara@undp.org	UNDP Serbia	To enable the Republic of Serbia to prepare, produce and disseminate its Second National Communication (SNC) to the UNFCCC according to Decision 17/CP8 and other guidance provided.	economy wide	na			NC2 draf		

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Project	Contact	Regional partners	Short description of the project activities in the country	Economy wide/Sector	Models applied	Reference Scenario developed	Policy scenarios considered (which ones?)/	Outputs / Deliverables and date	Targets definition (GHG emission reduction, energy efficiency, RES)	Web links to the projects
Climate change adaptation and low emission development strategy for Bosnia and Herzegovina	UNDP Bosnia and Herzegovina, Goran Vukmir	UNDP	Climate change adaptation and low emission development strategy for Bosnia and Herzegovina	economy wide	International Futures?	n.a.	n.a.	draft strategy	October 2013 strategy paper	http://www.ba.undp.org/content/dam/bosnia_and_herzegovina/docs/Research&Publications/Energy%20and%20Environment/CC%20Adoption%20and%20Low-Emission%20Strategy%20BiH/CC%20ENG%20published%20on%20WEB.pdf
2nd NC Bosnia and Herzegovina		UNDP	To enable Bosnia and Herzegovina to prepare, produce and disseminate its Second National Communication (SNC) to the UNFCCC					NC2 draft		
1st Biennual Update Report Bosnia and Herzegovina		UNDP	To assist Bosnia and Herzegovina in the preparation of its First Biennial Update Report (FBUR) for the fulfillment of the obligations under the United Nations Framework Convention on Climate Change (UNFCCC)					draft report		
Climate strategy Montenegro		EC (IPA)	Preparation of a comprehensive climate strategy	economy-wide	n.a.	n.a.	n.a.	Climate strategy draft, November 2014	Emission trends till 2025 with the outlook till 2030	
2nd NC Montenegro	UNDP Montenegro, Snezana Marstijepovic, snezana.marstijepovic@undp.org	UNDP Montenegro	This Second National Communication project aims to enable Montenegro to prepare, produce and disseminate its Second National Communication (SNC) to the UNFCCC. The	energy sector	LEAP			NC2 draft		

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Project	Contact	Regional partners	Short description of the project activities in the country	Economy wide/Sector	Models applied	Reference Scenario developed	Policy scenarios considered (which ones?)/	Outputs / Deliverables and date	Targets definition (GHG emission reduction, energy efficiency, RES)	Web links to the projects
			SNC will update and strengthen information provided regarding national circumstances, greenhouse gas inventories, climate change mitigation, vulnerability to climate change and steps taken to adapt to climate change, and information on public awareness, education, training, systematic research and observation, and technology transfer.							
Low emission transport strategy for Turkey?	UNDP?		Low emission transport strategy for Turkey?					n.a.		Only indication of the project is in the interview

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