



**EKONERG**

Energy and Environmental Protection Institute

ECRAN – TAIEX Multi-beneficiary workshop on modeling: module 3, ECRAN 60239

## Presentation on preparation of the Low-Carbon Development Strategy for Republic of Croatia

Project for Development of documentation for development of low-carbon strategy for Republic of Croatia by 2030, with a view to 2050

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**Zagreb, 23.09.2015.**



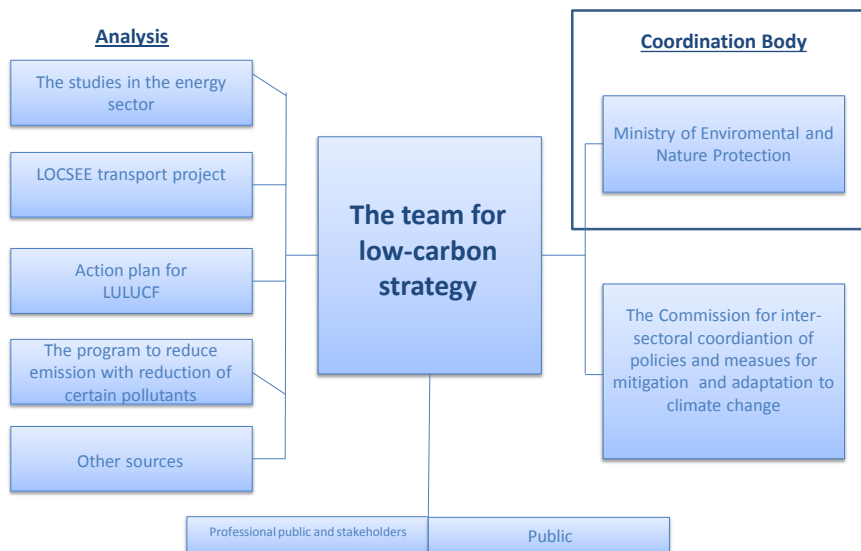
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### Content

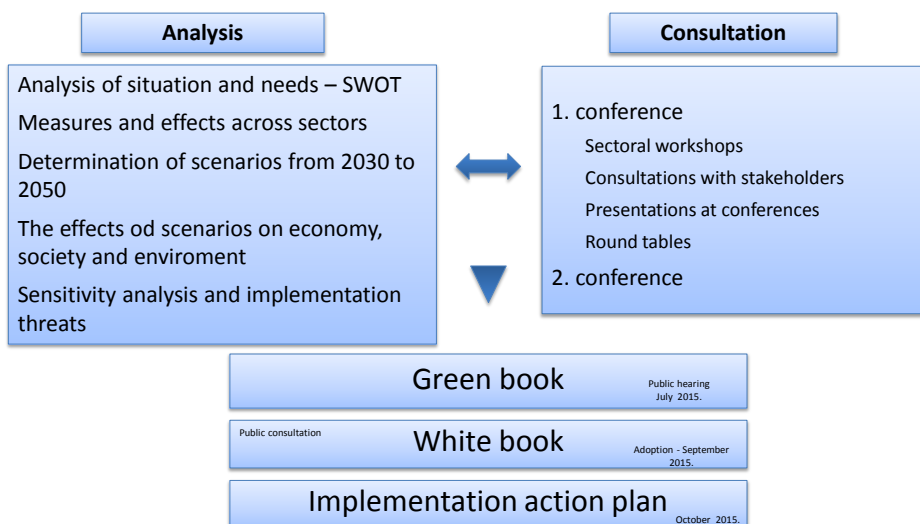
- Project organization and activities
- Goals
- Scenarios
- Effects of measures
- Social Aspects
- Survey
- Conclusion



## Organization development



## Activities





## Principles

- Low-carbon strategy does not forecast what will happen, it determinates what we want in the future



Izvor: web stranica Europske komisije



## Baseline analysis

- Wide consultations and SWOT analysis during the LED project of UNDP, year 2012.-2013.
- Review and update of SWOT analysis through consultation with expert team sectors.
- Extensive SWOT analysis in the framework of partnership agreement
  - Operational program for increasing the competitiveness and cohesion
  - Rural development program for Republic of Croatia
  - Operational program for more effective human resources
  - Operation program for marine and aquaculture





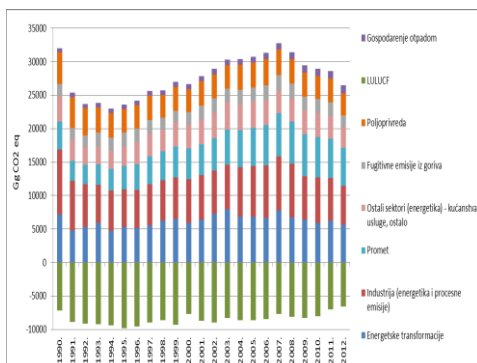
## Uncertainties and threats

- Decrease of oil prices
- Oil and gas shale exploration
- Development of technology for capture and storage of CO<sub>2</sub>
- Geopolitical uncertainty (Ukraine, Middle East, ..)
- Status of nuclear power
- The success of global agreement on reducing emissions

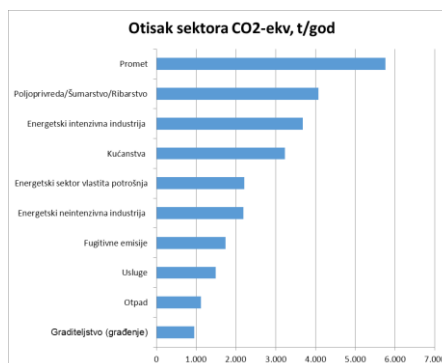


## Emission of greenhouse gases 1990.-2012.

Emissions by sectors

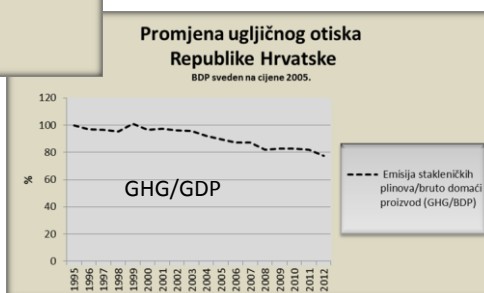
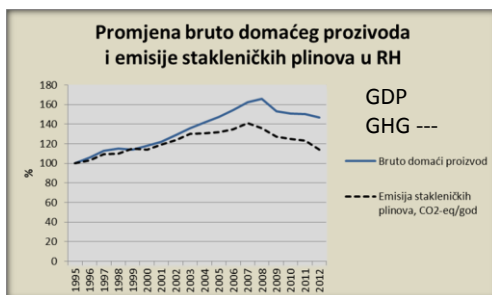


Carbon footprint





## Where is Croatia?

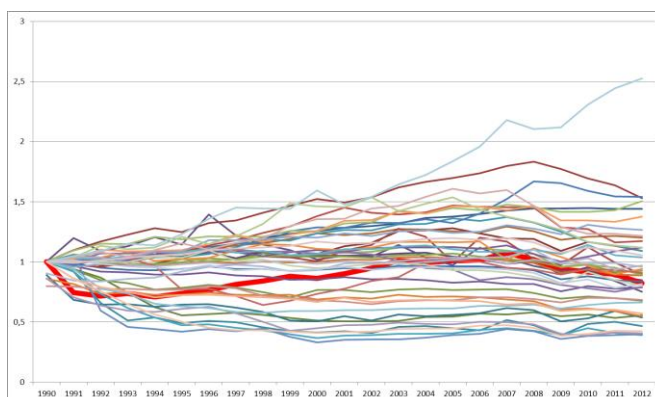


GWP faktori 1996



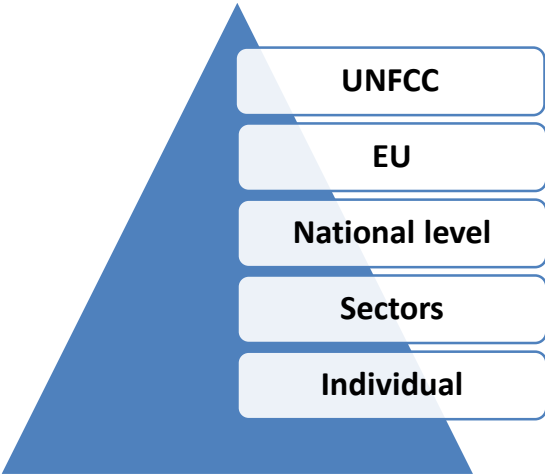
## Where is Croatia?

- Emission 1990.-2020., Annex 1 parties of UNFCCC, Croatia (red)

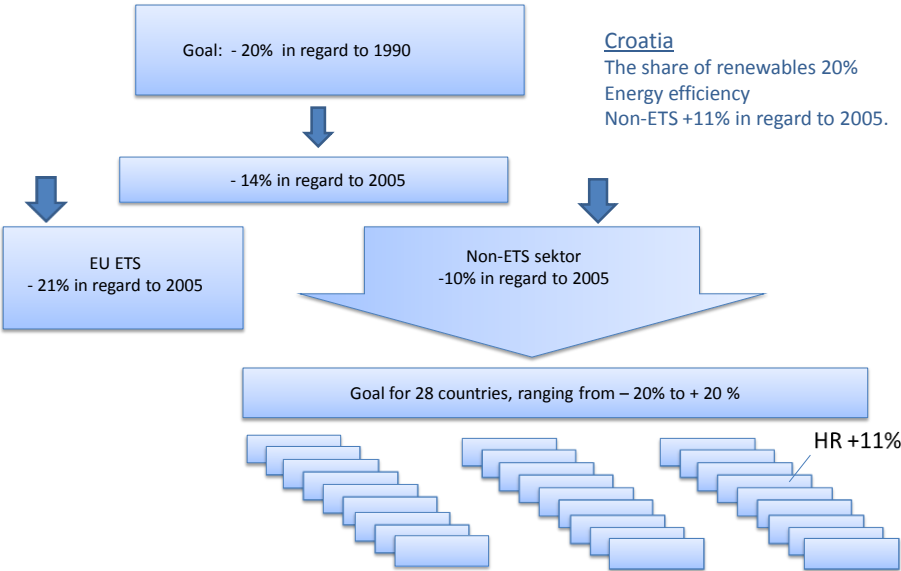




‘COLLECTIVE MARATHON’

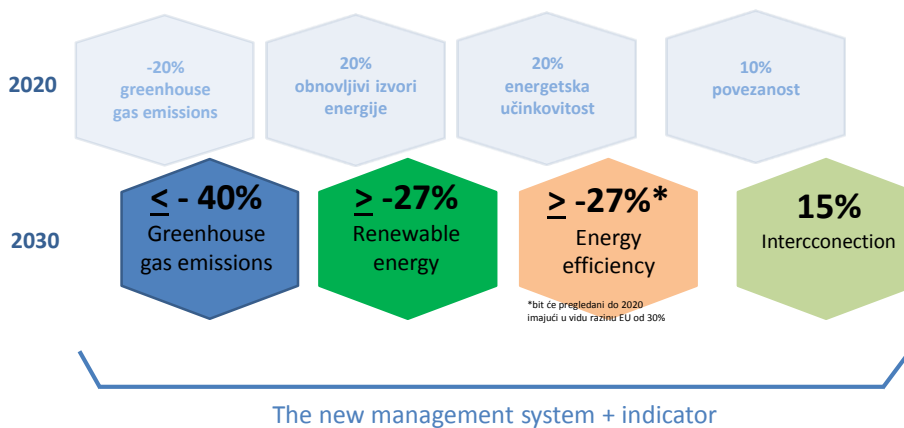


Goal by 2020.

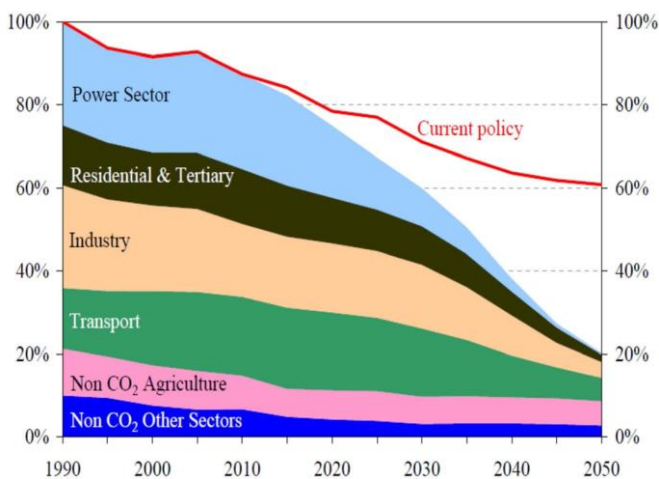




## EU frame for year 2030.



## EU by 2050.



Source: The path for transition to competitive low carbon economy in year 2050. , EK 2011.



## Scenarios

### Reference scenario

- With existing measure

### Low carbon Gradual Transition

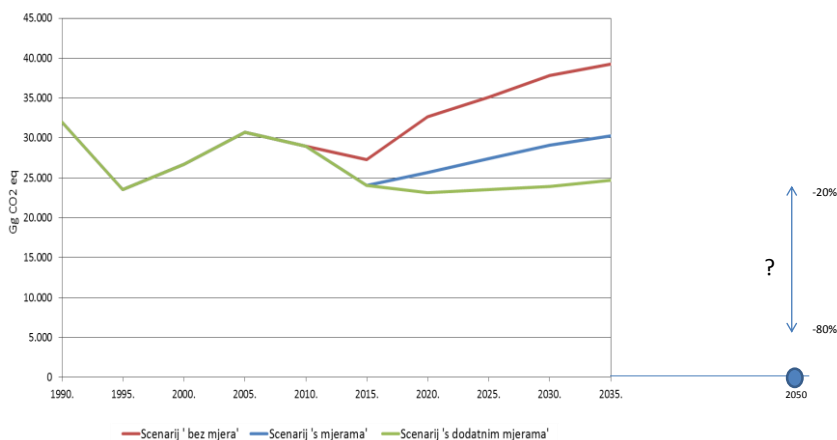
- To reach international obligations and ESD directive reductions till 2030 in non-EST sector
- Cost effective measures

### Low Carbon Fast transition

- High ambition
- To reach target -40% in 2030 and – 80% in 2050



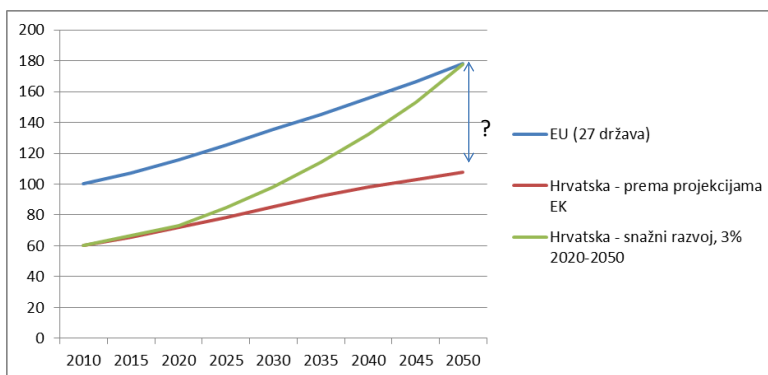
## Croatia, latest projections







## Economic growth, increase of GDP ?



## The effects of the measures

### On Economy

- BDP, productivity, prices, import, security , ...

### On Society

- Employment, health, decrease of , regional development, ...

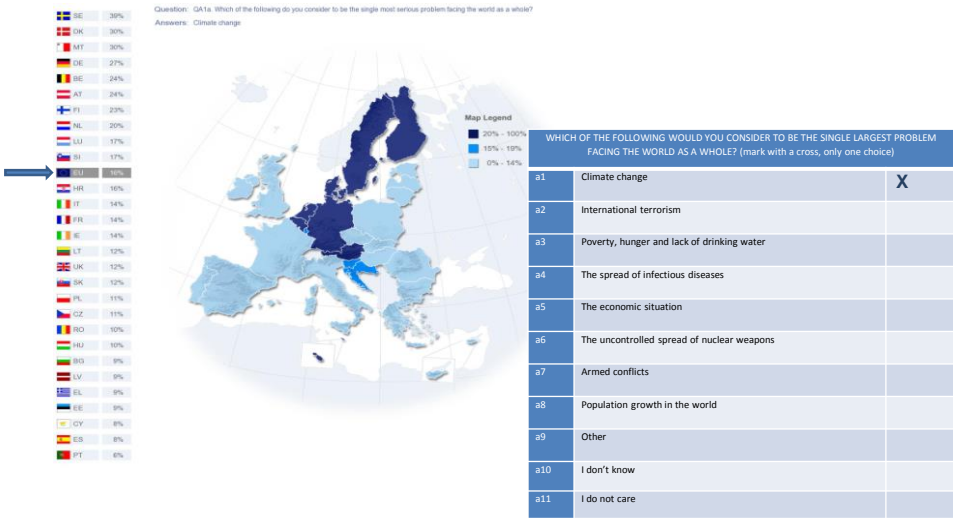
### On Environment

- Air quality, Natura 2000, waste management, impact on land use, landscape, noise, other



Social aspects

Which of the following would you consider to be the single largest problem facing the world as a whole?





Research (public opinion) on climate change:

- Eurobarometar, 2013.
- Project Click – „Increasing the understanding of EU climate and energy policy and its impacts in everyday life”, DOOR – UNDP, Zagreb, 2013.
- The first sociological survey in Croatia - dr. sc. Jelena Puđak, 2012.- 2013., Institute „Ivan Pilar”, Zagreb: „CROATIAN AND CLIMATE CHANGE: SOCIOLOGICAL ANALYSIS OF STATE AND EFFECTIVNES OF POLICIES FOR GREENHOUSE GAS EMISSION”
- Pilot survey on [www.huco2.eu](http://www.huco2.eu), in progress
- Survey of relevant social actors during the project implementation



Questionnaire



Strategija niskougliječnog razvoja RH

	WHAT ARE IN YOUR OPINION THE GREATEST OBSTACLES ON THE ROAD TO THE ECONOMY WITH LOW CARBON IN CROATIA (four answers)	mark with a cross
U1	The lack of funds	
U2	The inertia of politics	
U3	Ignorance	
U4	Weak media interest in the topic	
U5	Unavailability of new technologies	
U6	Unwillingness to change our own behavior	
U7	Insufficient information about the possibilities of action	
U8	Low priority compared to the current economic social issues	
U9	Low social and environmental responsibility	

# Conclusion

- Modeling needs sufficient time, the consultation process is demanding and particularly important
- Engagement of stakeholders and inclusion of thematic experts is essential
- Don't underestimate budget needed for completion of the work, because you have LEAP
- Social component should take place in consideration with adequacy to problem
- Differentiate level of detail and approach according time horizon
- Think that your professional decisions makes future, not only on politicians are 'guilty'



Thank you

