



REPUBLIKA HRVATSKA

MINISTARSTVO ZAŠTITE
OKOLIŠA I PRIRODE

PRILAGODBA KLIMATSKIM PROMJENAMA

Aktivnosti na europskoj i nacionalnoj razini

Ministarstvo zaštite okoliša i prirode
Žana Počuča

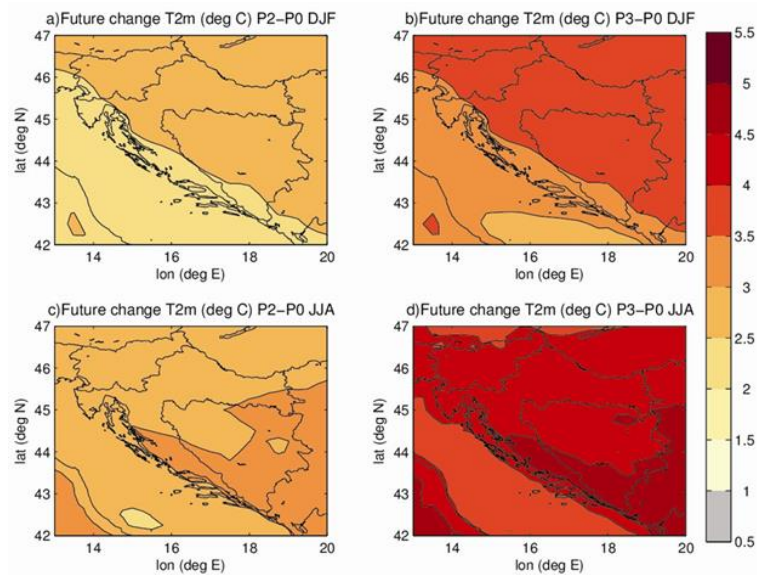
Međunarodni skup:
Klima se mijenja. Hrana i poljoprivreda moraju također.
Osijek, 14. listopada 2016.

Do kraja 21. stoljeća:

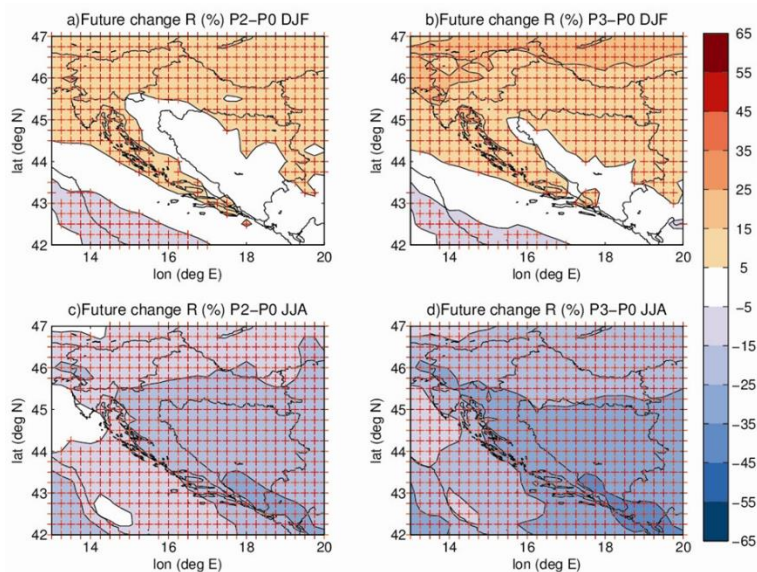
- analiza je pokazala **značajan porast temperature** u Hrvatskoj
- veći dijelovi Hrvatske bit će izloženi promjeni u količinama oborina - umjerena do visoka mogućnost **povećanja padalina u zimskim i smanjenje ukupne količine padalina u ljetnim mjesecima**

Izvor: DHMZ i 6. Nacionalno izvješće Republike Hrvatske prema UNFCCC (2014)

- dodatna analiza u okviru projekta izrade Strategije prilagodbe klimatskim promjenama



DJF – winter, JJA – summer



Pariški sporazum (2015.)



United Nations
Framework Convention on
Climate Change

- zadržati porast globalne temperature ispod 2°C (i „nastojati” postići najviše 1.5°C)
- što je prije moguće poduzeti brzo smanjenje emisija
- ojačati sposobnost društva za nošenje s utjecajima klimatskih promjena i osigurati podršku državama u razvoju



75 Parties have ratified of 197 Parties to the Convention

On 5 October 2016, the threshold for entry into force of the Paris Agreement was achieved. The Paris Agreement will enter into force on 4 November 2016. The first session of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement (CMA1) will take place in Marrakech in conjunction with COP 22 and CMP 12. More information available soon.

1. Promicanje aktivnosti država članica

- Poticanje država da usvoje nacionalne strategije prilagodbe
- Osiguravanje financiranja prilagodbe klimatskim promjenama
- Proračun EU 2014.-2020. – 20% za klimatske aktivnosti kroz sve financijske programe EU za 2014.-2020.
 - Europski strukturni i investicijski fondovi (ESI)
 - Obzor 2020
 - LIFE program, tj. LIFE Climate Action
- Europska investicijska banka i Europska banka za obnovu i razvoj
- Ostali posebni fondovi (npr. za poplave, suše)
- **Podrška aktivnostima na lokalnoj razini**
 - poticanje gradova na aktivnosti prilagodbe – ranije Mayors Adapt, sada Covenant of Mayors for Climate and Energy

EU Strategija prilagodbe klimatskim promjenama (2013.)

2. Donošenje odluka potkrijepljeno činjenicama

- Premostiti „rupe” u znanju i informacijama
- Daljnji razvoj internetske platforme Climate-ADAPT



http://ec.europa.eu/clima/policies/adaptation/documentation_en.htm

<http://climate-adapt.eea.europa.eu/>

You are here: Home / EU adaptation policy / EU sector policies / Agriculture



Agriculture

Climate change has complex effects on the bio-physical processes that underpin agricultural systems, with both negative and positive consequences in different EU regions. Rising atmospheric CO2 concentration, higher temperatures, changes in precipitation patterns and in frequency of extreme events both affect the natural environment as well as the quantity, quality and stability of food production. Climatic variations impact on water resources, soils, pests and diseases, leading to significant changes in agriculture and livestock production.

[Read more](#)

Search results

- Publications and reports (238)
- Information portals (61)
- Indicators (10)
- Guidance (49)
- Tools (14)
- Research and knowledge projects (154)
- Adaptation options (17)
- Case studies (7)
- Organisations (20)

Share your information

Indicators

- Irrigation water requirement
- Water-limited crop productivity
- Soil organic carbon
- Soil moisture
- Growing season for agricultural crops

Resources

- Assessing Agriculture Vulnerabilities for the design of Effective Measures for Adaption to Climate Change (AVEMAC Project)
- The economics of climate change adaptation
- Rural development Programme(s) 2014-2020
- Delegated acts on the CAP Reform – an explanation of the main elements
- Policy overview 2014-2020 –EU rural development Programme(s)
- IPCC Fifth Assessment Report, WGII Chapter 7: Food security and food production systems

Multimedia

- Carbon farmers: Environmental Atlas of Europe - Italy
- Cross boarder nature: Environmental Atlas of Europe - Germany France
- Rain on snow: Environmental Atlas of Europe – Sweden
- Food - adapting to change by sharing information
- Adapting Agriculture to Climate Change – A Role for Public Policies (OECD Food, Agriculture and Fisheries Papers No. 85)

Food – adapting to change by sharing information

File
 Topics: Agriculture Biodiversity Climate change

Food. We all need it. But most of us take it for granted. A changing climate brings with it a destabilizing effect on food crop production. With the pressure on food resources, we need to look at new solutions. We need to bring people, their stories and data together.



Time: 02:30
 Author: EEA / Ace5Ace
 Published: 2011-12-13

Related content

You are here: Home / ECDC Climate Change Decision-Making Tool for Food and Waterborne Diseases

ECDC Climate Change Decision-Making Tool for Food and Waterborne Diseases

Food- and Water-Borne Diseases (FWBD) are of high interest because both growing and exposure for these pathogens agents are linked with environmental determinants under direct influence of climatic factors. Food- and Water-borne diseases are caused by pathogens that are transported through food, water and surface soil: the change of occurrence of food in frequency could thus lead to a modification of disease epidemiology. This is particularly true for FWBD that may be affected by climatic parameters: growth, survival and/or inactivation of pathogens vary in function of temperature, humidity and sunlight. The run-off of water-borne pathogens by extreme rainy events is potential hazard to assess too.

Due to the complexity of microbiological processes under environmental influences, assessing relative risks of climate change-associated Food- and Water-borne diseases must be based on multivariate strategies. Among these approaches, quantitative microbial risk assessment describes each hazard in a compartmental framework. The combination of these compartments, such as foodstuffs, aims to quantify the microbial risk. FWRMA reviews knowledge of the relationships between microbiology and environmental assessment that in order to supply framework of EU Strategy, which Member States surveillance and you are here: Home / Knowledge / Adaptation information / Observations and scenarios

Background info:
 In order to run it
 Your CDF plug
 Please make us supported browser restarting your PC
 If that doesn't work, reinstall CDF plug



Observations and scenarios

For the assessment of climate change and its impacts, both observations of past and present conditions, and scenarios for future developments are required. This section provides access to information on observations and scenarios for the atmosphere, the cryosphere, water systems, oceans, the terrestrial biosphere and urban areas and health.

[Read more](#)

Search results

- Publications and reports (176)
- Information portals (72)
- Indicators (44)
- Guidance (15)
- Tools (23)
- Research and knowledge projects (134)
- Organisations (11)

Share your information

Interactive maps



Knowledge / Adaptation information / Adaptation options



Adaptation options

Adaptation aims to manage climate risk to an acceptable level, taking advantage of any positive opportunities that may arise. Potential adaptation options can be explored below by selecting a specific climate impact and / or adaptation sector of interest. Case studies of adaptation measures implemented in specific regions can be investigated here:

[Read more](#)

Search results

- Adaptation options (40)
- Water recycling
- Improved water retention in agricultural areas
- Awareness campaigns for behavioural change
- Water sensitive urban and building design
- Adaptation or improvement of dikes and dams
- Groynes, breakwaters and artificial reefs
- Improvement of irrigation efficiency
- Adaptation of urban planning, water and energy
- Financial tools for risk management plans

Share your information

Explore adaptation options

Climate impact: All climate impacts
 Sector: All adaptation sectors

Adaptation options:

- Water recycling
- Improved water retention in agricultural areas
- Awareness campaigns for behavioural change
- Water sensitive urban and building design
- Adaptation or improvement of dikes and dams
- Groynes, breakwaters and artificial reefs
- Improvement of irrigation efficiency
- Adaptation of urban planning, water and energy
- Financial tools for risk management

View all



Vulnerabilities and risks

Vulnerability assessment is the analysis of the expected impacts, risks and the adaptive capacity of a region or sector to the effects of climate change. Vulnerability assessment encompasses more than simple measurement of the potential harm caused by events resulting from climate change. It includes an assessment of the region's or sector's ability to adapt. The term vulnerability is used differently in the climate change context. The Glossary of the IPCC Fifth Assessment Report defines vulnerability to climate change broadly as follows: "The propensity or...
 tion to be adversely affected. Vulnerability encompasses a variety of concepts including sensitivity or ability to harm and lack of capacity to cope and adapt." It notes explicitly: "Reflecting progress in science, this entry differs in breadth and focus from the entry used in the Fourth Assessment Report and other IPCC..."

[Read more](#)

Selected indicators: IPCC Fifth Assessment Report, Synthesis Report

Publications & reports: European Drought Observatory (EDO)

Information portals: Regional Climate Model (RCM) data portal of the FP7 ENSEMBLES project, European Floods Portal - YEAR of LAUNCH

Search results:

- Publications and reports (297)
- Information portals (57)
- Indicators (52)
- Guidance (22)
- Tools (34)
- Research and knowledge projects (260)
- Organisations (33)

Share your information

Interactive maps: Explore pan european maps

3. Promicanje prilagodbe u ključnim ranjivim sektorima

- Integracija prilagodbe klimatskim promjenama sve sektore (npr. zajednička poljoprivredna politika, zdravlje, zgradarstvo/infrastruktura...)
- Korištenje zelene infrastrukture (prirodna rješenja, zeleni prostori,...)
- Promicanje korištenja osiguranja od prirodnih katastrofa i onih koje je uzrokovao čovjek

Druga polovica 2017. godine

Izvješće Europske komisije prema Europskom parlamentu i
Vijeću o statusu provedbe Strategije EU za prilagodbu
klimatskim promjenama

Fokus na:

- procjenu napretka DČ
- uključivanju prilagodbe u ključne politike i EU fondove
- informiranom odlučivanju (procjena dostupnog znanja i podataka, Climate-ADAPT)
- osvrt na nove zahtjeve (IPCC, UNFCCC, DRR)

Ako se procijeni da provedba nije zadovoljavajuća, moguć je prijedlog usvajanja obavezujućih propisa.

Strategija održivog razvitka Republike Hrvatske (2008)

- prilagodba klimatskim promjenama – jedan od glavnih **preduvjeta** za budući razvoj
- „...potrebno poduzeti značajne mjere kako bi se ublažio njihov učinak i razmjeri tih promjena”

Zakon o zaštiti zraka (NN 130/11, 47/14) propisuje obavezu izrade:

Strategije prilagodbe klimatskim promjenama za razdoblje do 2040. s pogledom na 2070. godinu s akcijskim planom

- usvajanje dokumenata do kraja 2017. godine

Zakon o zaštiti zraka – prepoznaje ranjive sektore i propisuje obavezu poduzimanja mjera prilagodbe u njima:

hidrologija i vodni resursi

poljoprivreda i ribarstvo

šumarstvo

biološka raznolikost i prirodni ekosustavi




biološka raznolikost i morski ekosustavi

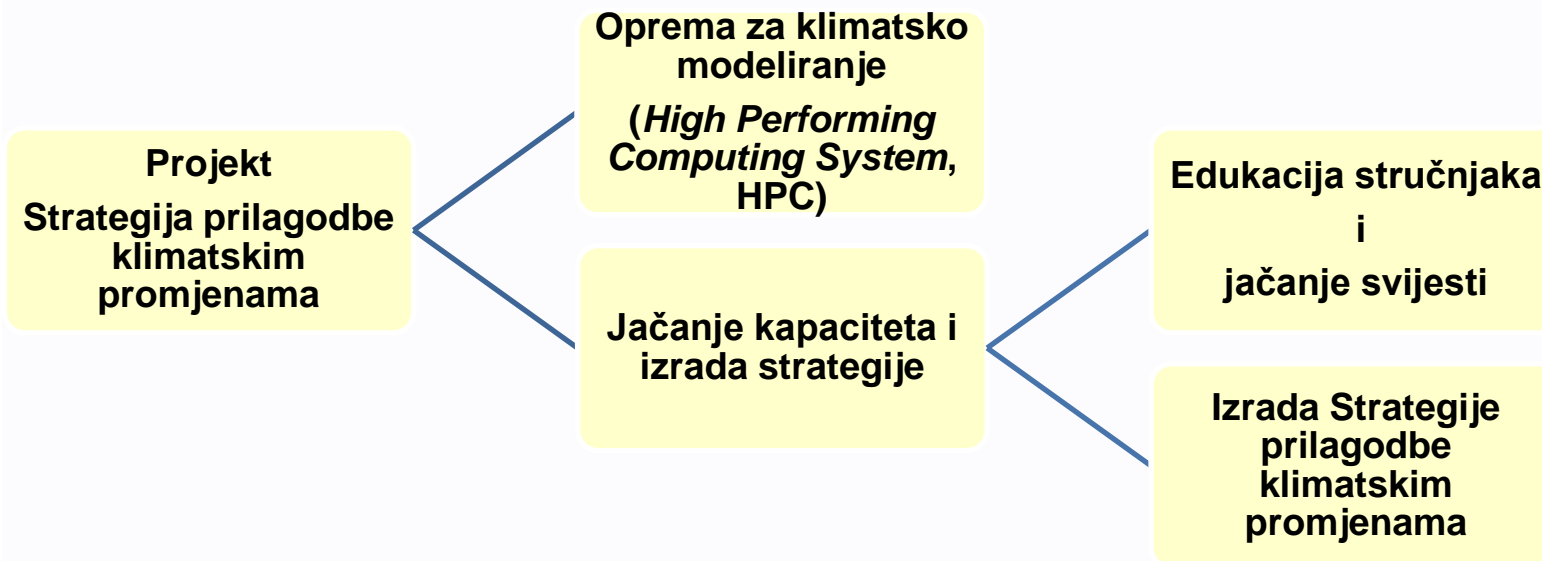
obala i obalno područje

turizam

ljudsko zdravlje

Strategija prilagodbe klimatskim promjenama

Puni naziv projekta	Jačanje kapaciteta Ministarstva zaštite okoliša i prirode za prilagodbu klimatskim promjenama te izrada nacrtu Strategije prilagodbe klimatskim promjenama
Radni naziv projekta	Strategija prilagodbe klimatskim promjenama
Trajanje projekta	17. svibnja 2016. – 17. studenoga 2017.
Financiranje	Prijelazni instrument 
Korisnik	 Ugovaratelj  REGIONAL OFFICE FOR SEE



Strategija prilagodbe klimatskim promjenama

Komponenta 1:

Edukacija stručnjaka i podizanje razine svijesti javnosti o prilagodbi klimatskim promjenama



Aktivnost I – Jačanje kapaciteta stručnjaka

- Studija procjene potreba za jačanje kapaciteta stručnjaka u području prilagodbe klimatskim promjenama
- radionica za prijenos iskustava država članica EU koje su razvile i provode strategije prilagodbe klimatskim promjenama
- 10 radionica za trening stručnjaka - o klimatskom modeliranju, scenarijima, procjeni utjecaja i mjerama, itd.

IN PROGRESS



IN PROGRESS



Aktivnost II – Edukacija o utjecajima klimatskih promjena i o mjerama prilagodbe

- izrada Komunikacijskog plana
- Radionice za službenike na lokalnoj i regionalnoj razini te zainteresiranu javnost
- Informativna brošura
- Internetska stranica projekta (projektne aktivnosti, opće informacije)

IN PROGRESS

IN PROGRESS

Strategija prilagodbe klimatskim promjenama

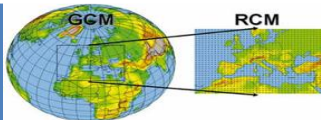
Komponenta 2:

Izrada nacrtu Strategije prilagodbe klimatskim promjenama i Akcijskog plana



Aktivnost I – Identificiranje ranjivih sektora

IN PROGRESS



Aktivnost II – Klimatsko modeliranje

IN PROGRESS



Aktivnost III – Procjena ranjivost i mogućih mjera prilagodbe



Aktivnost IV – Procjena opcija prilagodbe i pregled mjera po sektorima



Aktivnost V – Analiza troškova i koristi



Aktivnost VI – **Izrada Strategije prilagodbe klimatskim promjenama u Republici Hrvatskoj za razdoblje do 2040. s pogledom na 2070. te nacrtu Akcijskog plana**

Strategija prilagodbe klimatskim promjenama

„VELEbit“

HPC sustav za klimatsko modeliranje



- High Performing Computer System (HPC), nazvan „VELEbit“, smješten u Sveučilišni računski centar (SRCE)
- u suradnji s Državnim hidrometeorološkim zavodom (DHMZ)
- RegCM model, RCP4.5 scenarij
 - Projekcije do 2040. i 2070. godine
 - Rezolucija - 50 km i 12.5 km
- Osvrnut će se i na „najgori“ scenarij RCP8.5
- Rezultati:
 - bit će dostupni hrvatskoj i europskoj znanstvenoj i istraživačkoj zajednici
 - izradit će se Izvješće o provedenom modeliranju i koristiti za procjenu utjecaja i ranjivosti, procjenu mjera

Program poticanja istraživačkih i razvojnih aktivnosti u području klimatskih promjena za razdoblje od 2015. do 2016. godine

- dio prikupljenih financijskih sredstva od prodaje emisijskih jedinica dodijelit će se **za primijenjena istraživanja i razvoj** vezano uz prilagodbu klimatskim promjenama

Operativni program *Konkurentnost i kohezija* 2014. – 2020.

- korištenje sredstava iz EU fondova u skladu s prioritetima utvrđenima u okviru buduće Nacionalne strategije prilagodbe; do tada, okvir i preduvjeti za aktivnosti prilagodbe klimatskim promjenama prema 6. Nacionalnom izvješću RH prema UNFCCC (2014.)

Ministarstvo zahtijeva da se prilagodba klimatskim promjenama uključuje u Strateške procjene utjecaja na okoliš, Procjene utjecaja na okoliš, Elaborate zaštite okoliša i druge dokumente

Prijevod smjernica EU

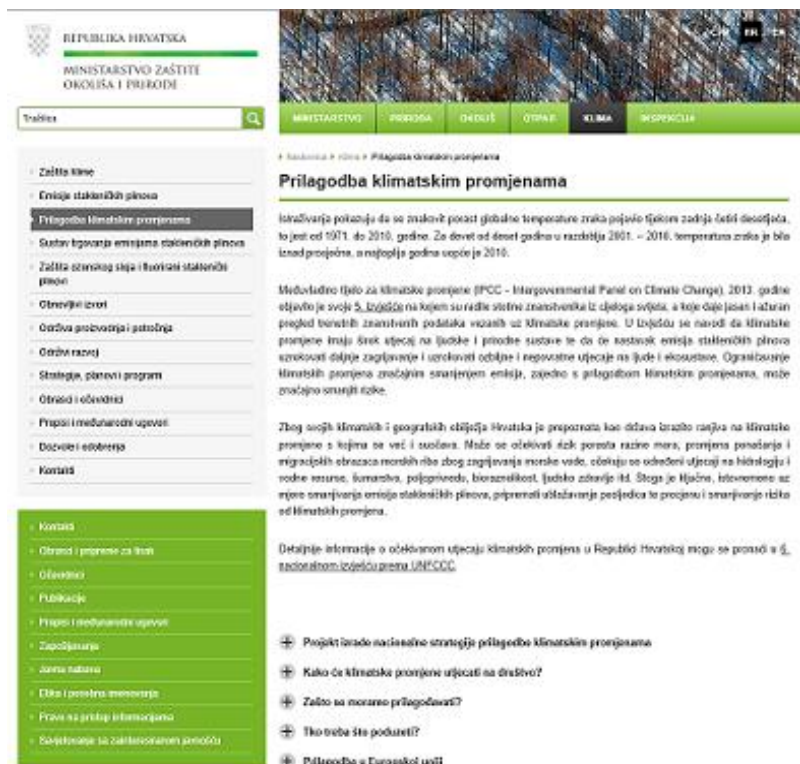
- Smjernice za voditelje projekata - Kako povećati otpornost ranjivih ulaganja na klimatske promjene (**prevedeno**), http://www.mzoip.hr/doc/smjernice_za_voditelje_projekta.pdf
- Smjernice za uključivanje klimatskih promjena i bioraznolikosti u SPUO, Smjernice za uključivanje klimatskih promjena i bioraznolikosti u PUO

- Ministarstvo zaštite okoliša i prirode

<http://www.mzoip.hr/hr/klima/prilagodba-klimatskim-promjenama.html>

- Strategija prilagodbe klimatskim promjenama - Projekt

<http://prilagodba-klimi.hr/>





Hvala na pažnji!