



Ministry of Nature Protection of  
Republic of Armenia

# Second National Communication of Armenia: Key Findings



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*June 6, Bonn*

# Republic of Armenia

❑ **Territory:** 29,743 sq. km

❑ **Population:** 3,222,900

❑ **Geographic position:** landlocked mountainous country, 76.5% of the territory is 1000-2500m above the sea level.

❑ **Climate:** from sub-tropical to continental (-41°C to +42°C).

In the southern plain regions the climate is arid and extremely continental. In the northern mountainous regions the climate is milder and damper.

❑ **Average annual precipitation:** about 592 mm, ranging from 114 mm in the semi-desert zone to about 1000 mm in the high mountains.

# Armenia towards implementation of UNFCCC

- ❑ Armenia ratified the UN Framework Convention on Climate Change (UNFCCC) in May, 1993.
- ❑ Armenia ratified the Kyoto Protocol in Dec, 2002.
- ❑ As a non-Annex I Party to the Convention Armenia according to Article 12 has to communicate information related to the implementation of the Convention
- ❑ First National Communication, 1998
- ❑ Second National Communication, Sep 2010
- ❑ SNC draft is consulted with national stakeholders during 2010
- ❑ Main outcomes of SNC are reported to Sustainable Council of Armenia, Chaired by Primer Minister – Apr. 22, 2011



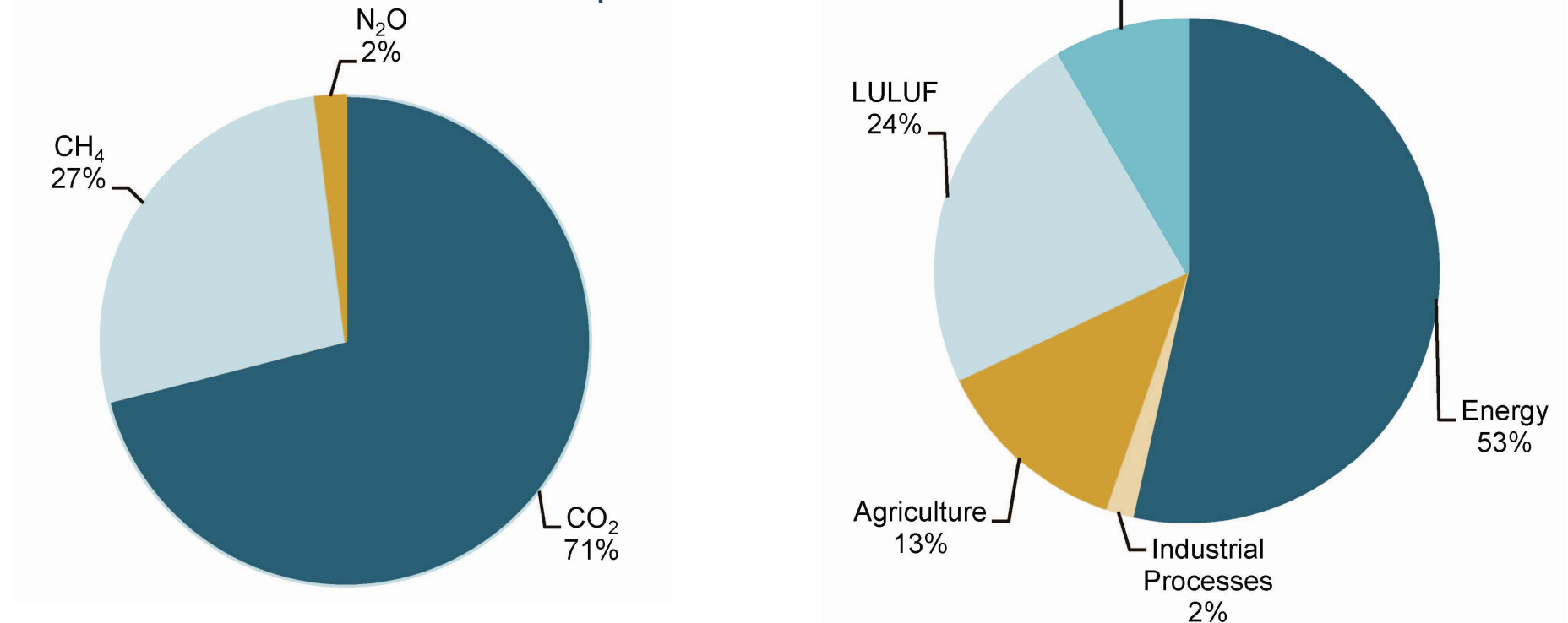
# **Preparation of Armenia's Second National Communication to the UNFCCC**

Preparation:	<b>2007-2010</b>
Responsible national authority:	<b>Ministry of Nature Protection</b>
Project implementing agency:	<b>UNDP</b>
Funded:	<b>GEF (405,000USD)</b>

***Prepared according to the Guidelines adopted by 17/CP.8 decision***

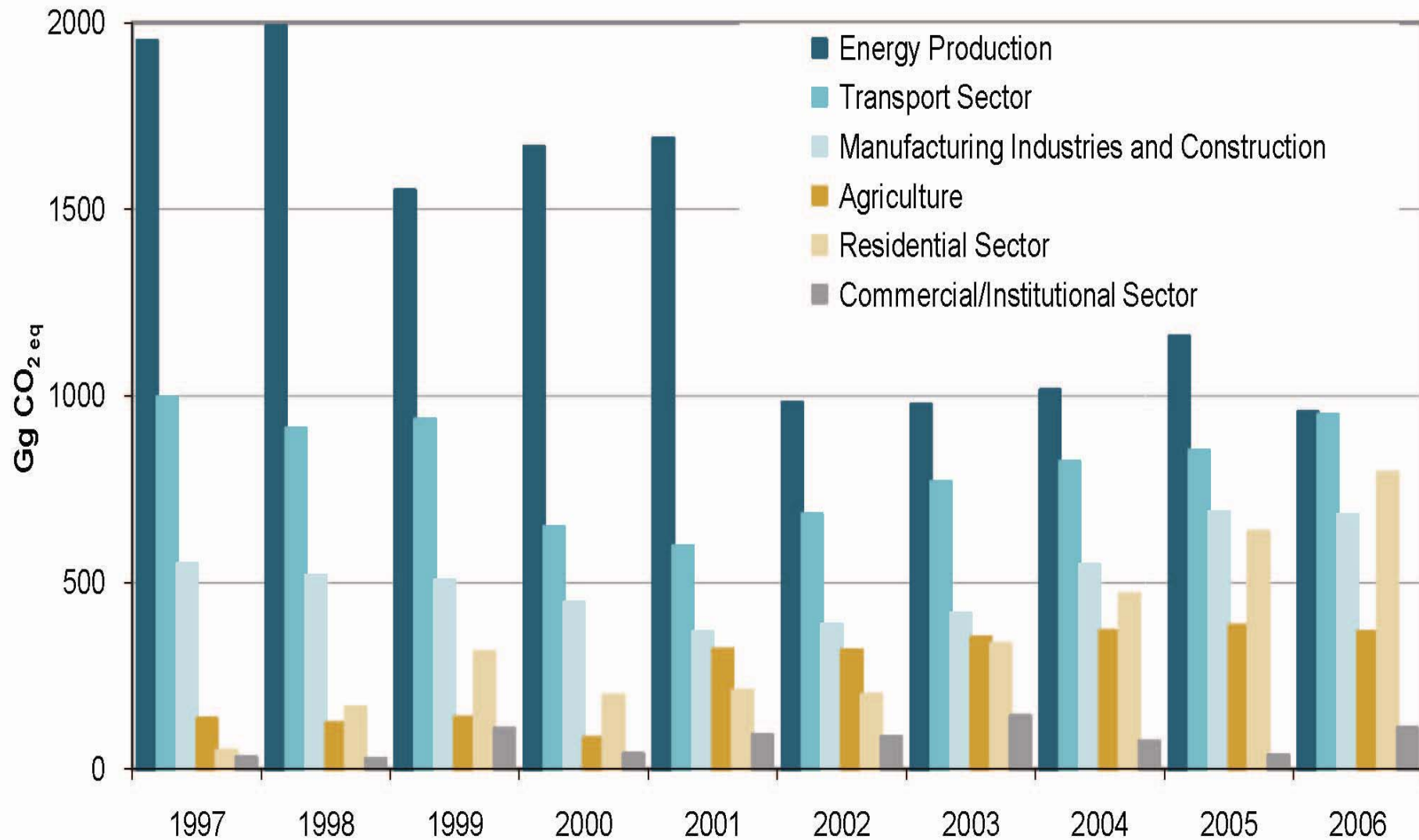
# GHG Inventory , 2000

- First National GHG Inventory prepared in 1996-1998. Baseline: 1990.
- Second National GHG Inventory, 2000.
- Under the Second GHG inventory the data series for the timeline 1990-2006 were completed.

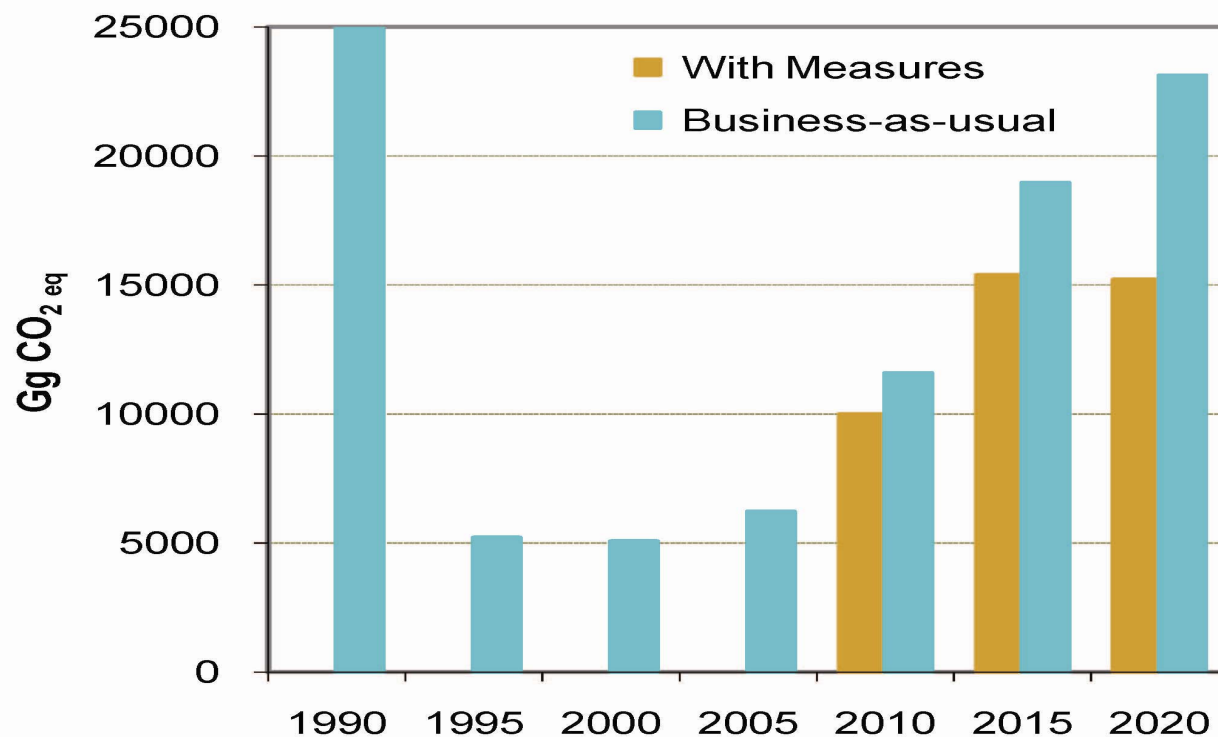


	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> eq.
Emissions, Gg	4723.55	853.83	0.49	6634.89

# GHG Emissions in Energy Sector, 1997-2006



# GHG Emissions and Projections



*Gg CO<sub>2</sub> eq.*

	1990	1995	2000	2005	2020	2015	
Business as usual	24954	5200	5071	6223	11591	18964	23125
With measures	24954	5200	5071	6223	9995	15383	15216
Reduction Potential					1595	3581	7908

# Priority Mitigation Measures Communicated to UNFCCC – *Association with Copenhagen Accords*

❑ Implementation of the National plan on Energy Efficiency and Renewable Energy (2007):

- Increase the share of energy generation from RE sources
- Modernization of Thermal Power Plants
- Increase energy efficiency in all sectors
- Increase energy saving in building sector
- Reduce fugitive emissions of methane from gas distribution and gas supply systems

❑ Transport Sector – development of electrical transport and increase the share of natural gas use as engine fuel;

❑ Reduction of the methane emissions from solid municipal waste and wastewaters;

❑ Restoration of degraded forests, reforestation and decrease of the volume of logging, conservation and increase of soil carbon



# Climate Change Projections for Armenia

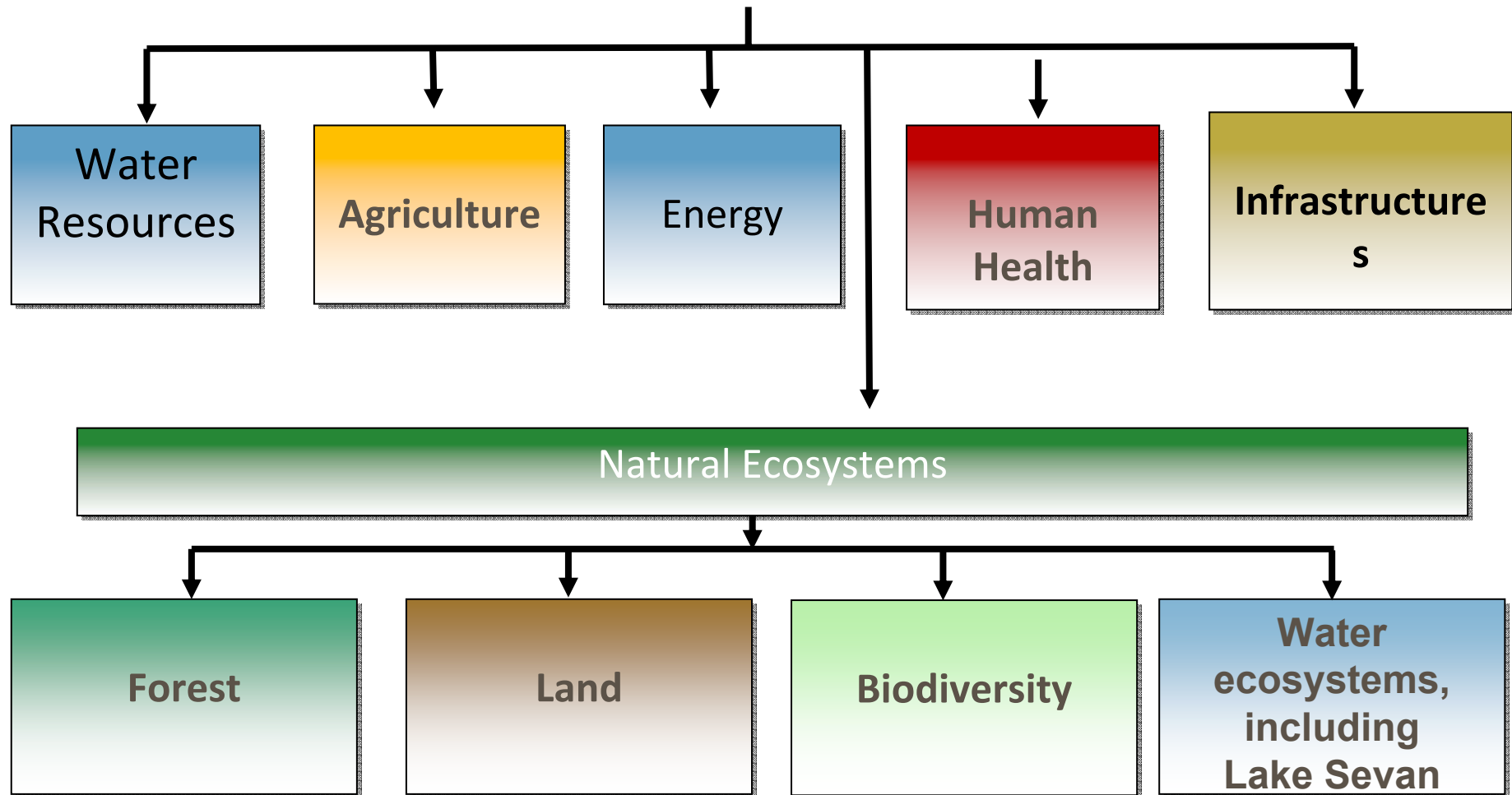
Forecasted changes according to MAGICC/SCHENGEN and PRECIS Models

Temperature, °C		Precipitation, %	
A2	B2	A2	B2
<b>2030</b>			
<b>1.1-1.2</b>	<b>1.0-1.1</b>	<b>-2 -6</b>	<b>-2 -6</b>
<b>2070</b>			
<b>3.2-3.4</b>	<b>2.9-3.0</b>	<b>-6 -17</b>	<b>-3 -15</b>
<b>2100</b>			
<b>5.3-5.7</b>	<b>4.8-5.1</b>	<b>-10 -27</b>	<b>-8 -24</b>

## Climate change consequences in Armenia, 2100

- ❑ Shift of landscape zone borders up the mountain for 200-400 m
- ❑ Increase of climate aridity and intensification of desertification processes
- ❑ Increase frequency and amplitude of extreme hydro-meteorological events
- ❑ Reduction of annual river flow by 24%
- ❑ Reduction of productivity of arable lands by 15-34%
- ❑ Increase of socio-economic losses

# Vulnerable Sectors to Climate Change



## Main outcomes of SNC process

- ❑ CC concerns are reflected in National Security Strategy, Forest, Agriculture, Energy Sector policy documents and Sustainable Development Program (2008), Food Security Action Plan (2011)
- ❑ 4 year National Action Plan for implementation of countries commitments under the UNFCCC is adopted by the Governmental Decree and to be renewed periodically
- ❑ Climate Change Information Center is established under the auspices of the Ministry of Nature Protection
- ❑ Awareness on CC issues is raised in sectorial ministries and decision makers - Steering Committee
- ❑ Climate Change division is established in Hydromet Service, cooperation is enhanced with World Meteorological Organization, MeteoFrance and other international centers for climate data exchange and CC study

# Main outcomes of SNC

## The SNC allowed to:

- ❑ Improve and expand the database of the national greenhouse gas inventory and analyze the emission trends for 1990-2006;
- ❑ Assess the potential for reducing greenhouse gas emissions in various sectors of the economy and develop mitigation projects;
- ❑ Develop climate change scenarios for Armenia and assess the vulnerability of ecosystems and climate-dependent sectors of economy and define priority adaptation actions and develop adaptation projects;
- ❑ Assess the impact of the expected intensification of dangerous hydro-meteorological phenomena and the related early warning needs;
- ❑ Assess the improvement needs of national system for systematic observation and climate monitoring;
- ❑ Enhance knowledge and public awareness on climate change issues.

# Main Lessons

- ❑ Transparency of the process, information sharing and creating proper partnership with all national counterparts is prerequisite for success
- ❑ Best available national expertise is absorbed during the preparation of NC
- ❑ Adoption of multiyear Action Plan ensures the national ownership
- ❑ Creation of conditions for stakeholders continuous dialogue through:
  - ❑ Seminars and round table discussions , including in the regions
  - ❑ Sharing of analytical reports
  - ❑ Web-site establishment
  - ❑ Development of publications on national language
  - ❑ Involvement of media and NGOs
- ❑ Maintenance of national human capacity ensures cost effectiveness and continuity of convention implementation

## Follow-up Actions Based on SNC Results

- ❑ Need for expedited development of the National Adaptation Plan of Actions (NAPA) using ecosystem approach
- ❑ Development of Nationally Appropriate Mitigation Action Plan and mainstreaming of Green Economy concept in the countries Sustainable Development Strategy (2011)
- ❑ Continuation of cooperation under Kyoto Protocol - CDM projects development and implementation
- ❑ Enhance regional cooperation in CC studies, CC forecast scenarios and assessment of impacts and risks

# Climate Change Information Center

## www.nature-ic.am



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### Climate Change Information Center

WELCOME TO THE UPGRADED WEBSITE OF THE CLIMATE CHANGE INFORMATION CENTER OF ARMENIA! YOU WILL FIND THIS WEBSITE MORE USER FRIENDLY, PROJECT ORIENTED AND WITH NEW ADDITIONAL FEATURES. WE LOOK FORWARD TO YOUR FREQUENT VISITS TO OUR WEBSITE.

Climate Change Information Center was established in 1997 in the frames of ARM/95/G31/A/1G/99 UNDP/GEF Project "Armenia - Country Study on Climate Change" with a main goal to strengthen the Information Center of the Ministry of Nature Protection.

The aim of the project was to identify and create connections to both national and international sources of information which would lead to knowledge sharing and prevention of duplication in similar kind of efforts. The main goal of this activity is to find potential international partners to cooperate with either on this project or on the following possible projects dealing with Climate Change problems.

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**Second National Communication**

The Second National Communication of the Republic of Armenia to the UNFCCC has been developed by the Ministry of Nature Protection of the Republic of Armenia in the frames of the "Enabling Activities for the Preparation of Armenia's Second National Communication to the UNFCCC" UNDP/GEF Project

[Download in English 3.3MB pdf](#)

### CURRENT PROJECTS

- Municipal Heating
- Second National Communication
- Forest Adaptation
- Improving EE in Buildings

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### COMPLETED PROJECTS

#### Weather in YEREVAN

Radiation:	16
Humidity:	60%
Barometer:	668
Geomagnetism:	NORMAL
Day:	+15
Night:	+8