

THE ALADIN EXTRAORDINARY GENERAL ASSEMBLY OF 23-24/2/06, BRUSSELS

**HYDROMETEOROLOGICAL SERVICE
REPUBLIC OF MACEDONIA
“Skupi” bb 1000 Skopje**



Presenter: Vlado Spiridonov-Ph.D
Director and PR for R.Macedonia
with WMO

THE PRESENT STRUCTURE OF HYDROMETEOROLOGICAL SERVICE

- LEGAL INSTRUMENTS
 - a) The Law on Hydrometeorological Matters
 - b) Law on waters
 - c) Law on protection on pollution
 - d) Law on environment
- LEVEL AND PLACE OF THE SERVICE WITHIN GOVERNMENTAL STRUCTURE
 - Self-contained department of the Ministry of Agriculture, forestry and water economy

BUDGET STRUCTURE

Annual budget: 1 384 000 Euros

Expenditure on staff: 819 000

Expenditure on materials: 559 000

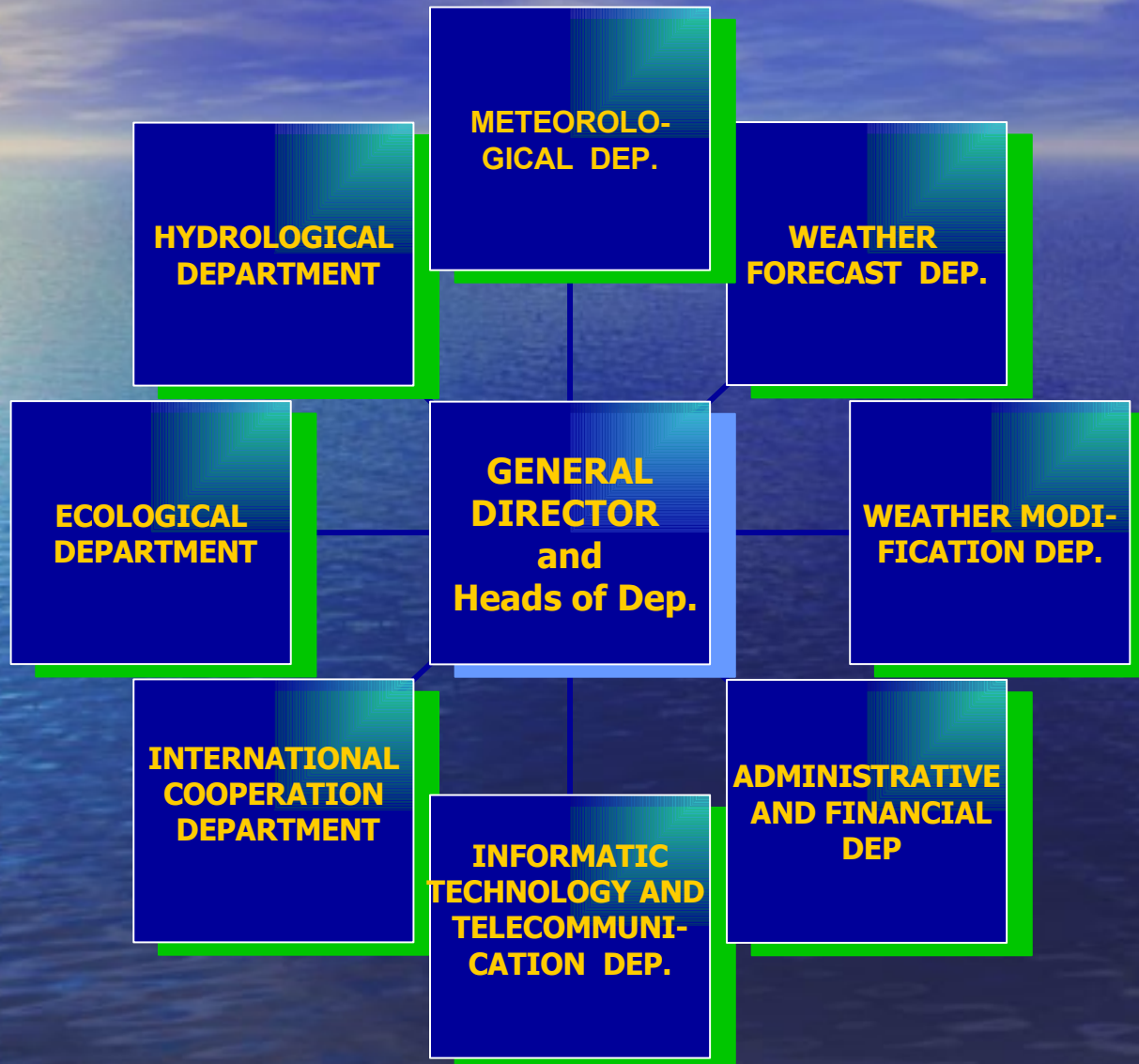
Appropriations: 90 000

Investments: 6 000

Revenue from Services: 70 000

Projects: 90 000

NEW ORGANIZATION OF HYDROMET SERVICE



THE PRESENT STATUS OF PERSONNEL:

- Meteorological personnel: 21
- Meteorological Technicians: 45
- Hydrological personnel: 6
- Hydrological Technicians: 21
- Other specialists: 85
- Administrative personnel: 33
- Total: 211

INTERNATIONAL COOPERATION

REGIONAL COOPERATION

METEO-FRANCE **France**

Deutscher Wetterdienst DWD **Germany**

European Meteorological Satellite Association EUMETSAT Associated Member

Institute of Development and Research of **France**

Sub-regional cooperation

State Hydrometeorological Institute of **Croatia**

Hydrometeorological Institute of **Albania**

National Institute for Meteorology and Hydrology of **Bulgaria**

Republic Hydrometeorological Service of **Serbia and Montenegro**

IN PROCEDURE:

European Center for Medium-Range Weather Forecast ECMWF

Associate Member

Republic of Slovenia –memorandum of understanding

TELECOMMUNICATION AND INFORMATICS DEPARTMENT

SATELLITE TECHNIQUES

- EUMETSAT
- DWDSAT

OTHER RESOURCES

- RMDCM network
- Internet (speed 128kbps)
- INTRANET
- Own web site
- Host mail
- Local servers for special applications
- MAIL SWITCHING SYSTEM
- **Data processing and archiving**
- CLIDATA (Climate data management system)

WEATHER ANALYSIS AND FORECAST DEPARTMENT

Staff involved in forecast division and aerological observatory:

6-meteorologists

2-physicists

10-technicians

NUMERICAL MODELLING AND NOWCASTING SECTION (IN DEVELOPMENT)

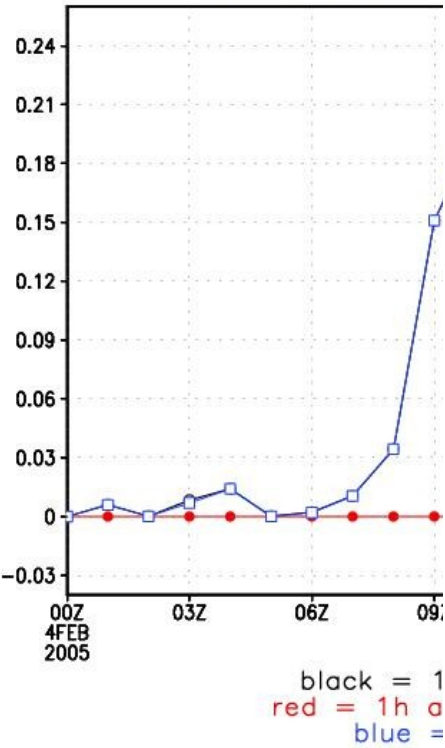
Daily routine forecast are based on:

- operational forecast system using NMM-WRF-model
- DWD products
- ECMWF-products
- RETIM 2000- MFI
- Other available products from INTERNET

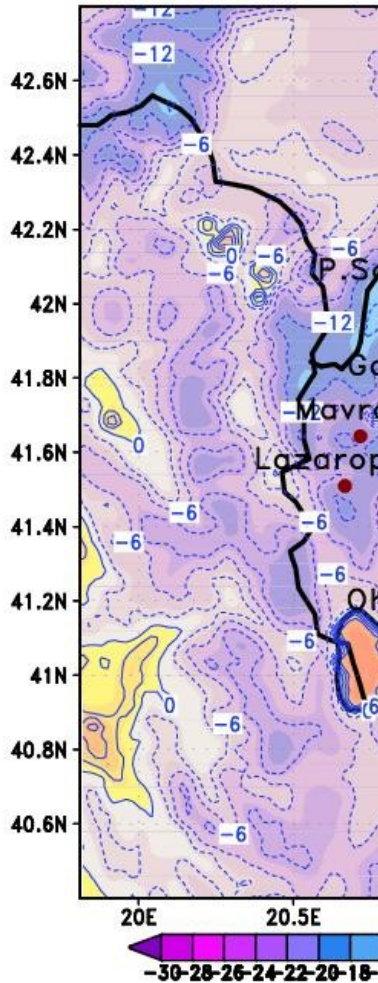
INSTALLATION OF OPERATIONAL PROGNOSTIC SYSTEM BASED ON NMM MODEL (PHARE)

FReSH-2/SENES 24h forecast in UTC

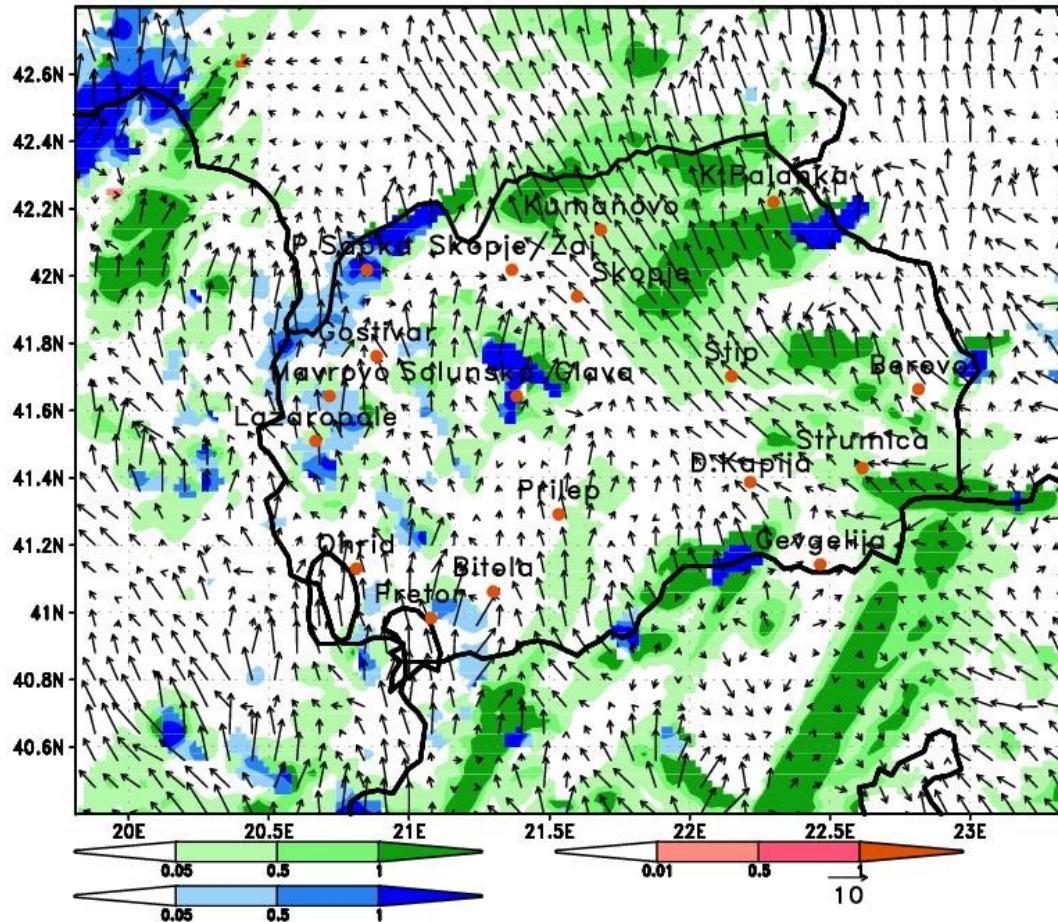
1h acc. tot.; conv.



FReSH-4/SENES forecast valid at 03-FEB-05 00:00 UTC
Temperature at 2m height in [deg C]



FReSH-2/SENES forecast valid at 22-FEB-05 17:00 UTC
Wind [m/s] & 1h acc. prec. [mm]: Rain, Freez. rain, Snow [cm/h]



MOTIVATION TO JOIN ALADIN

- Philosophy of ALADIN project;
- Following of long-term ALADIN Strategy
- Promotion of R&D by involvement of young scientists;
- Strengthening the capacity of HMS in numerical weather prediction;
- Macedonia as a candidate-country for membership

BACKGROUND AND JUSTIFICATION

- Lack of experience and knowledge;
- No serious systematic approach to numerical weather prediction in HMS;
- Operational forecast system based on NMM-WRF model started from February, 2005 is maintained by external experts

IMEDIATE OBJECTIVE

- TO FULFILL THE CONDITIONS BEFORE JOINING ALADIN CONSORCIUM

OTHER OBJECTIVES:

- ADJUSTEMENT AND ADAPTATION TO BASIC CRITERIA DEFINED IN MoU
- CAPACITY BUILDING ESPECIALLY SYSTEMATIC INTRODUCING OF ALADIN PROJECT PROCEDURE
- CONTINUOUSLY EDUCATION
- PROMOTION OF R&D IN ALADIN PROJECT

INPUTS

- UNEMPLOYED SCIENTISTS IN THE FIRST PHASE COULD BE INVOLVED IN HMS UNTIL REDEFINITION OF THEIR STATUS
- NEW PROPOSALS OF EMPLOYED EXPERTS:
 - METEOROLOGIST
 - ENGINEER OF INFORMATICS
- AVAILABLE COMPUTER FACILITIES
- INTERNET COMMUNICATION
- OTHER REQUIRED RESOURCES

NEW EMPLOYED CANDIDATES (CVs)



- **CURRICULUM VITAE**

- **NAME:** Boris Tomislav Sekirarski

- (Picture at: http://medhycos.mpl.ird.fr/en/project/who/iun_boris.jpg)

- **PERMANENT ADDRESS:** Ivo L. Ribar 20, 1300 Kumanovo, Macedonia

- **TELEPHONE:** Home: 389 31 28118 / Office: 389 2 3097004 ext. 15

- **E-MAIL:** bsekirarski@meteo.gov.mk (bsekirarski@yahoo.com)

- **DATE AND PLACE OF BIRTH:** May 20, 1961, Skopje, Macedonia

- **MARITAL STATUS:** married, two children

- **EDUCATION:**

- BSc in Meteorology, 1979-1985. .

- (<http://iunona.pmf.ukim.edu.mk/fizika/80-90.htm>)

- Primary and secondary school in Kumanovo, 1967-1978

- **COMPUTER SKILLS:**

- Advanced user of the following PC program packages:
- Visual Basic Ver.5.0/6.0
- Surfer 4.0/8.0
- DataEase RDBMS
 - Administering CLIDATA- Climatological RDBMS (Oracle-Gis application)
- Internet, HTML
- Basics: XML, RSS, VRML, Flash Macromedia Ver.5-8
- 3D animations with PovRay3.6
- RealBasic (multiplatform basic language)

- **LANGUAGES:**

- English
- Serbo-Croatian
- French (basics)

- Other details could be found in complete CV

CURRICULUM VITAE



- **Proposed role in the Project** :
- **1. Family name** : **Frangovski**
- **2. First names** : **Zoran**
- **3. Date of birth** : **13 Avgust 1961**
- **4. Nationality** : **Macedonian**
- **5. Civil status** : **married, 1 children**
- **Education**
- *Institution* "Georgi Dimitrov " High School- Skopje *Date: From* September 1976 to June 1980
- *Degree(s) or Diploma(s) Obtained:* Certificate for completed secondary education
- *Institution* Faculty of Civil Engineering– STT CYRIL AND METHODIUS University – Skopje
- *Degree(s) or Diploma(s) Obtained:* Graduated Civil Engineer.- Diploma 1990

- **Language skills:**
- English, Russian and Serbian

- **8. Membership of professional body:**
- Macedonian Association of Construction Engineers
- **9. Other skills:** - Experienced user of MS Office, Internet, Acces; Windows Server, Windows XP, Linux
- - Contracting
- - Training skills (trainer procurement).
- **10. Present position:**
- - **Net Administrator**
- - **Project Manager**
- - **Administrator for OS**
- **11. Years within the firm: (5)**
- **Key qualifications:**
- - **Net Project Management**
- **13. Other relevant information: (e.g., Publications)**
- **14. Employers References (with accurate English translation) for the last 7 years**
- **15. Diplomas (with accurate English translation)**

- * **Currently National Climatological DataBase Manager**
- Turbulence measurements for urban boundary layer (August 2001 Basel CH - Urban meteorology project)
- (http://www.snf.ch/downloads/rep_int_sco_ip_II.pdf)
- Two month education in a frame of MEDHYCOS project (Montpellier – France) during September and October 2001
- (<http://medhycos.mpl.ird.fr/en/t1.php?ime=project/tp.inc&gr=project/who/&gn=who.inc&menu=project/mp.inc>)
- Two weeks course “Doppler radar and satellite meteorology for nowcasting” December 2004 Romania (<http://www.inmh.ro>)
- **COMPUTER SKILLS:**
- Advanced user of the following PC program packages:
- Visual Basic Ver.5.0/6.0
- Surfer 4.0/8.0
- DataEase RDBMS
- Administering CLIDATA- Climatological RDBMS (Oracle-Gis application)
- Internet, HTML
- Basics: XML, RSS, VRML, Flash Macromedia Ver.5-8
- 3D animations with PovRay3.6
- RealBasic (multiplatform basic language)

HMS REQUEST

- DUE TO REORGANIZATION AND TRANSFORMATION OF PUBLIC ADMINISTRATION IN MACEDONIA
- REDUCED AND LIMITED BUDGET FOR HMS FOR 2006
30-60% LOWER FINANCIAL RESOURCES
- LOW ANNUAL GROSS NATIONAL INCOME OF 2100 EUROS
- DEVELOPING CONTRY
- OUR REQUEST IS TO FIND SOME POSSIBLE SOLUTION IN ACCEDING PROCEDURE

EXPECTED RESULTS

- STRENGTHENING THE COLLABORATION AT SUB-REGIONAL AND REGIONAL LEVEL
- IMPROVEMENT OF WEATHER FORECAST ACCURACY
- CONTRIBUTION TO RESEARCH AND DEVELOPMENT OF ALADIN PROJECT
- STRENGTHENING OF THE NUMERICAL WEATHER PREDICTION CAPACITY

OTHER OUTPUTS

- INVOLVEMENT OF YOUNG UNEMPLOYED SCIENTISTS IN THE PROJECT
- PARTICIPATION IN WORKSHOPS
- GAINING OF THEORETICAL AND OPERATIONAL KNOWLEDGE AND EXPERIENCE
- IMPROVEMENT OF THE EARLY WARNING SYSTEM STATUS AT NATIONAL LEVEL
- IMPROVEMENT OF THE PUBLIC WEATHER SERVICES

FUTURE PLANS AND ACTIVITIES

1. LEGAL STATUS AND STRATEGIC PLAN

- Reorganization and redefinition of the status
- Strategic plan should be prepared according to 6th Long Term Plan of WMO
- Quality management system (ISO 9001)

2. OPERATIONAL ACTIVITIES AND TECHNICAL ASSISTANCE

- Regular calibration of instruments
- Maintenance and modernization of the observing system (revitalization and reconstruction of met. stations buildings) to meet the requirements of WWW
- SEERAD PROJECT (radar network establishment)
- EUMETNET –OPERA programme
- DARE (Data Rescue Project of WMO through VCP project)
- Agro meteorological services

3. TRAINING OF PERSONNEL

4. ENHANCEMENT OF SERVICES AND RESEARCH

- Public Weather Services (PWS)
- COST recovery actions according ECOMET rules

5. CO-OPERATION AT THE NATIONAL LEVEL

- An agreement between Service and Authority for aviation meteorology in accordance with ICAO/WMO guidelines
- Framework Water Directive EU approach for Hydrological activities
- Establishment of sub-regional center for training and research in meteorology, hydrology and environment in Ohrid

ACKNOWLEDGEMENT

- General Assembly for considering Macedonia as acceding member
- Dr. Henry Malcorps, Chairperson of GA for his invitation and support
- METEO-FRANCE support
- Hydromet Service of Croatia for support
- Dr. Jean Francois Geleyn, Program Manager
- Mr. Christian Blondin (METEO-FRANCE)