

SUBCOMMISSION ON NEOGENE STRATIGRAPHY

ANNUAL REPORT 2016

1. TITLE OF CONSTITUENT BODY and NAME OF REPORTER

Subcommission on Neogene Stratigraphy (SNS)

Isabella RAFFI, chair SNS (from 2012)

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2. OVERALL OBJECTIVES, AND FIT WITHIN IUGS SCIENCE POLICY

The SNS is the primary body responsible for providing optimum clarity and stability in the Neogene Chronostratigraphic Scale by selecting and defining Global Stratotype Sections and Points (GSSPs) for Series and Stages.

3. ORGANISATION - interface with other international projects / groups

The SNS is a subcommission of the ICS, founded in 1971. Reference is made to the annual report of 1995 for a brief historical resume of the SNS. The subcommission has four regional committees (Mediterranean, Pacific, Atlantic and Nordic) and keeps close contacts with the Russian Neogene Commission chaired by Prof. Yuri B. Gladenkov. Apart from the executive bureau, the SNS has 22 voting members and 24 corresponding members (*see Appendix for full list of officers and voting and corresponding members*). The SNS has presently one active working group for defining the GSSP remaining for the Langhian and Burdigalian chaired by Frits Hilgen, with 11 active members (listed in the *Appendix*). The SNS web site (www.sns.unipr.it) is used for news release and contains the following sections: Home, News, Board, Members, Newsletters, GSSP’s, and Links.

3a. Nominated Officers for 2016-2020

Chair: Isabella Raffi, Dipartimento di Ingegneria e Geologia, Università degli Studi “G. d’Annunzio” di Chieti-Pescara, Campus Universitario, Via dei Vestini 31, 66013 Chieti Scalo, Italy. E-mail: isabella.raffi@unich.it, **Vice Chair:** Kenneth Miller. Department of Earth and Planetary Sciences, Rutgers University, State University of New Jersey, 610 Taylor Rd., Piscataway, NY 08854-8066, USA. E-mail: kgm@rci.rutgers.edu

Secretary: Elena Turco, Dipartimento di Fisica e Scienze della Terra “Macedonio Melloni”, Università degli Studi di Parma, Parco Area delle Scienze 157A, 43124, Parma, Italia. Email: elena.turco@unipr.it

4. EXTENT OF NATIONAL/REGIONAL/GLOBAL SUPPORT FROM SOURCES OTHER THAN IUGS

Support for the SNS comes from the Chair's Institution in Italy (Università degli Studi "G. d'Annunzio di Chieti-Pescara). The Secretary's Institution in Parma (Università degli Studi di Parma) hosts the SNS web-site.

5. CHIEF ACCOMPLISHMENTS AND PRODUCTS in 2016

- During 2016, the debate about "formal and informal stratigraphic units, sub-epoch/sub-series" (arisen during the ICS open assembly held in the STRATI 2015 Congress in Graz) developed between a group supporting formalization and a group favoring informal status, both including members of the Subcommissions on Quaternary, Neogene and Paleogene Stratigraphy (SQS, SNS, ISPS respectively). Discussion and exchange of opinions led to a vote within SQS, SNS and ISPS, and resulted in documents that, together with a summary document by the ICS Officers, will be published on Episodes in near future.
- A paper dealing with the astronomical tuning of the La Vedova section, one of the Mediterranean candidate sections for the definition of the Langhian GSSP, has been published: "Astronomical tuning of the La Vedova section between 16.3 and 15.0 Ma. Implications for the origin of megabeds and the Langhian GSSP" by Turco E. Hüsing S., Hilgen F., Cascella A. Gennari R. Iaccarino S.M., Sagnotti L. published online September 2016, Newsletters on Stratigraphy.
- 6. SUMMARY OF EXPENDITURE IN 2016:

Credit on Nov 2015	Euro	3894,74
No expenses in 2016		
Credit on Nov 2016	Euro	3894,74

7. SUMMARY OF INCOME IN 2016:

No income

8. BUDGET FROM ICS IN 2016: Euro 0,0

9. WORK PLAN, CRITICAL MILESTONES, ANTICIPATED RESULTS AND COMMUNICATIONS TO BE ACHIEVED NEXT YEAR:

The activity of the working group for the definition of Langhian and Budigalian GSSPs (BurLan WG - chaired by Frits Hilgen) was focused on a program to reach an agreement for a Langhian GSSP proposal. Two good candidate stratigraphic sections are available, La Vedova (Central Italy) and St. Peter's Pool (Malta Island), studied by two different research groups that have been asked to complete their studies and submit a proposal. The study of La Vedova section has been completed, with the publication of the astronomical tuning of the section (Turco et al., 2016). In the next months the WG should propose a reliable/reproducible guiding criterium,

complemented by additional criteria useful for correlation, and reach a decision on the GSSP section.

10. OBJECTIVES AND WORK PLAN FOR NEXT 4 YEARS (2016-2020)

- Proposal(s) for the Langhian GSSP will be submitted and published, with the purpose of reaching a final decision within the WG and subsequently within the SNS Subcommission.
- The definition of Burdigalian GSSP is a recurrent problem. The option to have the Burdigalian GSSP defined in an astronomically tuned deep marine section, possibly in the Mediterranean, seems to make this problem very difficult to be solved. A section in the Mediterranean guarantees the stratigraphic contiguity with the other GSSP sections, but till now no good candidate section is available. Therefore, search for suitable sections and/or cores for defining the Burdigalian GSSP will continue. In absence of suitable Mediterranean sections for defining the Burdigalian GSSP, the option to formally designate this boundary in an (I)ODP core will be seriously considered within SNS and discussion within the WG will involve voting and corresponding members.
- I.Raffi has been asked by Felix Gradstein to take care of the Neogene chapter for the next GTS2020.

APPENDIX

Nominated Officers

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