

SPANISH NATIONAL COMMITTEE

IGCP REPORT 2017



February 2018

SPANISH NATIONAL COMMITTEE REPORT 2017

1.- Chairman and Secretary of the Spanish National Committee

Chairman:

Prof. Dr. José Ignacio Valenzuela Ríos

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2.- Members of the Spanish National Committee

Dr. Javier Lario (639); Dra. Jau-Chyn Liao (652), Dr. Juan Ignacio Santisteban (618); Dr. Matías Reolid (655); Dra. María Dolores Pereira (637) Dr. Pablo G. Silva (past member of International Board); Juan José Durán (Geological Survey of Spain) and Santiago Martín Alfageme (Geological Survey of Spain).

3.- IGCP Projects with participation of Spanish Working Groups

3.1.- IGCP Projects with Spanish leaders

IGCP-637: Heritage Stone Designation

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Abstract: The IUGS Heritage Stone Subcommittee has approved six Global Heritage Stone Resources. Geoheritage journal has published a special issue on heritage stone coordinated by the Spanish leader, Dra. Pereira. During the EGU 2017, presentations on the project background and plans for the future were discussed. As consequence of the project development the leader has been asked to contribute to the 2017 Global Journal of Archaeology and Anthropology and to be a participant on a book dedicated to the heritage stones in Salamanca. The Spanish participants Dr. Francisco Javier Fernández Cortés and Dra. María Dolores Pereira Gómez have been selected as guest speakers for the next-year International Global Stone Congress to be held in Brazil. Dra. Pereira has been very active in training, mentoring and helping participants from low-income countries and young researchers. Noteworthy the increasing participation of African researchers.

Publications:

Peer-review papers

Pereira, D. (2017) Should geoscientists, employers, funding agencies and publishers be slaves to impact factors? Episodes 40-4. 333-341.

Navarro, R., Pereira, D., Cruz, A.S. and Carrillo, G. (2017) The significance of “White Macael” marble since ancient times. Characteristics of a candidate as Global Heritage Stone Resource. Geoh heritage. DOI: 10.1007/s12371-017-0265-9.

Pereira, D., Pérez Castro, P. (2017) Art Museums: a good context for outreach activities on natural stones and heritage. Geoh heritage. DOI: 10.1007/s12371-017-0265-9.

González, C., Pereira, D. y Baltuille, J.M. (2017) Granitos de Salamanca. Un ejemplo perfecto para el reconocimiento de la piedra natural como recurso patrimonial y su uso en restauración. Boletín Geológico y Minero, 128 (2): 677-688.

De Wever, P., Baudin, F., Pereira, D., Cornee, A., Egoroff, G., Page, K. (2017) The importance of Geosites and Heritage Stones in Cities. A review. Geoh heritage, 9-4, 561-575.

Byerly, D. W., Susan W. Knowles (2017) Tennessee “Marble”: a potential “Global Heritage Stone, Episodes 40-4, 325-331

Cassar, J., Alex Torpiano, Tano Zammit, Aaron Micallef Proposal for the nomination of Lower Globigerina Limestone of the Maltese Islands as a “Global Heritage Stone Resource”. Episodes, 40-3, 221-231

Rose, W.I., Erika C. Vye, Carol A. Stein, David H. Malone, John P. Craddock, Seth A. Stein (2017) Jacobsville Sandstone: a candidate for nomination for “Global Heritage Stone Resource” from Michigan, USA, Episodes 40-3, 213- 219.

Special issue in Geoh heritage Special Issue: Natural Stones and Geoh heritage

Cárdenes, V., M. Ponce de León, X. A. Rodríguez, A. Rubio-Ordoñez (2017) Roofing Slate Industry in Spain: History, Geology, and Geoh heritage

Careddu, Nicola (2017) Sardinian basalt. An ancient georesource still en vogue.

Costa, Emanuele, Giovanna Antonella Dino, Piera Benna, Piergiorgio Rossetti (2017) The Traversella Mining Site as Piemonte Geosite

Gambino, Francesca, Alessandro Borghi, Anna d’Atri, Lorenzo Mariano Gallo (2017) TOURinSTONES: a Free Mobile Application for Promoting Geological Heritage in the City of Torino (NW Italy)

Kullberg, José Carlos, António Prego (2017) The Historical Importance and Architectonic Relevance of the “Extinct” Arrábida Breccia

Navarro, R., D. Pereira, A. S. Cruz, G. Carrillo (2017) The Significance of “White Macael” Marble Since Ancient Times: Characteristics of a Candidate as Global Heritage Stone Resource

Pereira, D., P. Perez-Castro (2017) Art Museums: a Good Context for Outreach Activities on Natural Stones and Heritage

Semeniuk, V., Margaret Brocx (2017) Building stones can be of geoh heritage significance

Silva, Zenaide C. G. (2017) Lioz—a Royal Stone in Portugal and a Monumental Stone in Colonial Brazil.

Meetings

European Geoscience Union EGU 2017, Viena (Austria). One oral session, one poster and two business meetings.



Scientific session in the EGU meeting, Viena (Austria, April 2017)



EGU Splinter meeting in Viena (Austria, April 2017)

Planned activities 2018.

European Geoscience Union (EGU) 2018, Viena, Austria (April 8-13). 6th edition of the special session on Natural research and Heritage Stone designation.

The Global Stone Congress, Brazil (April, 26-29).

Resources for Future Generation (RFG) 2018, Vancouver Canada (June).

I Workshop on Heritage Stone, Salamanca, Spain (October 2-4).

GSA Meeting; Post-conference Fieldtrip to the Indiana Limestone quarries (November).

Outreach activities

Video produced by the University of Salamanca.

Interviews at local newspapers

Financial sources: University of Salamanca, IUGS and IGCP.

GCP-655: Toarcian Oceanic Anoxic Event: Impact on marine carbon cycle and ecosystems

Leader: Dr. Matías Reolid
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Secretary: Isabel Abad Martínez
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Abstract: Increase of knowledge during the first year has been focused in three major topics: 1) sedimentology and stratigraphy, 2) the impact of the Toarcian Oceanic Anoxic Event (T-OAE) on marine communities and, 3) Geochemistry, environmental conditions and palaeoclimatology. The numerous papers published during 2017 prove the relevance of studying the sedimentary successions of the Pliensbachian-Toarcian in interpreting environmental conditions and eustatic changes. The palaeontological analysis demonstrates low oxygen conditions as well as step-wise extinction where neither black shales nor mass extinction are recorded. Attempts to reconstruct seawater composition and understand better the weathering during the T-OAE as a response to climatic warming are main results of the Geochemistry analysis. Two meetings and four training courses were organised. The main benefit for the society and science is a better understanding of how the living communities have overcome past critical event, such as hyperthermals, can improve our knowledge and modelling of ongoing ocean warming and acidification. Educational activities with High-School teachers from Morocco and in the GSSP of the Pliensbachian-Toarcian boundary at the Peniche section were organised.

Publications:

Peer-review papers

Ait-Itto, F.Z., Price, G.D., Addi, A.A., Chafiki, D., Mannani, I., 2017. Bulk-carbonate and belemnite carbon-isotope records across the Pliensbachian-Toarcian boundary on the northern margin of Gondwana (Issouka, Middle Atlas, Morocco). *Palaeogeography, Palaeoclimatology, Palaeoecology* 466, 128-136.

Baeza-Carratalá, J.F., Reolid, M., García Joral, F., 2017. New deep-water brachiopod resilient assemblage from the South-Iberian Palaeomargin (western Tethys) and its significance for the brachiopod adaptive strategies around the Early Toarcian Mass Extinction Event. *Bulletin of Geosciences* 92, 233-256.

Baker, S.J., Hesselbo, S.P., Lenton, T.M., Duarte, L.V., Belcher, C.M., 2017. Charcoal evidence that rising atmospheric oxygen terminated Early Jurassic ocean anoxia. *Nature Communications* 8, 15018. DOI: 10.1038/ncomms15018

Bougeault, C., Pellenard, P., Deconinck, J.F., Hesselbo, S.P., Dommergues, J.L., Bruneau, L., Cocquerez, T., Laffont, R., Huret, E., Thibault, N., 2017. Climatic and palaeoceanographic changes during the Pliensbachian (Early Jurassic) inferred from clay mineralogy and stable isotope (C-O) geochemistry (NW Europe). *Global and Planetary Change* 149, 139-152.

Bruneau, B., Chauveau, B., Baudin, F., Moretti, I., 2017. 3D stratigraphic forward numerical modelling approach for prediction of organic-rich deposits and their heterogeneities. *Marine and*

Petroleum Geology 82, 1-20.

Caswell, B.A., Frid, C.L.J., 2017, Marine ecosystem resilience during extreme deoxygenation: the Early Jurassic oceanic anoxic event. *Oecologia*, 183, 275-290.

Correia, V.F., Riding, J.B., Duarte, L.V., Fernandes, P., Pereira, Z., 2017. The palynological response to the Toarcian Oceanic Anoxic Event (Early Jurassic) at Peniche, Lusitanian Basin, western Portugal. *Marine Micropaleontology* 137, 46-63.

Correia, V.F., Riding, J.B., Fernandes, P., Duarte, L.V., Pereira, Z., 2017. The palynology of the lower and middle Toarcian (Lower Jurassic) in the northern Lusitanian Basin, western Portugal. *Review of Palaeobotany and Palynology* 237 75-95.

Dickson, A.J., Gill, B.C., Ruhl, M., Jenkyns, H.C., Porcelli, D., Idiz, E., Lyons, T.W., van den Boorn, S.H.J.M., 2017. Molybdenum-isotope chemostratigraphy and paleoceanography of the Toarcian Oceanic Anoxic Event (Early Jurassic). *Paleoceanography* 32, 813-829. DOI: 10.1002/2016PA003048

Duarte, L.V., Silva, R., Felix, F., Comas-Rengifo, M.J., da Rocha, R.B., Mattioli, E., Paredes, R., Mendonça Filho, J.G., Cabral, M.C., 2017. The Jurassic of the Peniche Peninsula (Portugal): scientific, education and science popularization relevance. *Revistas de la Sociedad Geológica de España* 30, 55-70.

Ferreira, J., Mattioli, E., van de Schootbrugge, B., 2017. Palaeoenvironmental vs. evolutionary control on size variation of coccoliths across the Lower-Middle Jurassic. *Palaeogeography, Palaeoclimatology, Palaeoecology* 465, 177-192.

Konwert, M., Stumpf, S., 2017. Exceptionally preserved Leptolepidae (Actinopterygii, Teleostei) from the late Early Jurassic Fossil-Lagerstätten of Grimmen and Dobbertin (Mecklenburg-Western Pomerania, Germany). *Zootaxa* 4243, 249-296.

Martindale, R.C., Them, T.R., Gill, B.C., Marroquin, S.M., Knoll, A.H., 2017. A new Early Jurassic (ca. 183 Ma) fossil Lagerstätte from Ya Ha Tinda, Alberta, Canada. *Geology* 45, 255- 258.

Martindale, R.C., Aberhan, M., 2017. Response of macrobenthic communities to the Toarcian Oceanic Anoxic Event in northeastern Panthalassa (Ya Ha Tinda, Alberta, Canada). *Palaeogeography, Palaeoclimatology, Palaeoecology* 478, 103-120.

Martinez, M., Krencker, F.N., Mattioli, E., Bodin, S., 2017. Orbital chronology of the Pliensbachian - Toarcian transition from the Central High Atlas Basin (Morocco). *Newsletters on Stratigraphy* 50, 47-69.

Maxwell, E.E., Martindale, R.C., 2017. New *Saurorhynchus* (Actinopterygii: Saurichthyidae) material from the Early Jurassic of Alberta, Canada. *Canadian Journal of Earth Sciences* 54, 714-719.

Maxwell, E.E., Stumpf, S., 2017. Revision of *Saurorhynchus* (Actinopterygii: Saurichthyidae) from the Early Jurassic of England and Germany. *European Journal of Taxonomy* 321, 1-29.

Miguez-Salas, O., Rodríguez-Tovar, F.J., Duarte, L.V., 2017. Selective incidence of the Toarcian oceanic anoxic event on macroinvertebrate marine communities: a case from the Lusitanian basin, Portugal. *Lethaia* 50, 548-560.

Molnar, Z., Polgari, M., Hein, J.R., Jozsa, S., Fekete, J., Gyollai, I., Fintor, K., Biro, L., Szabo, M., Rapi, S., Forgo, P., Vigh, T., 2017. Fe-Mn oxide indications in the feeder and mound zone of the Jurassic Mn-carbonate ore deposit, Urkut, Hungary. *Ore Geology Reviews* 86, 839-855.

Monarrez, P.M., Aberhan, M., Holland, S.M., 2017. Regional and environmental variation in escalatory ecological trends during the Jurassic: a western Tethys hotspot for escalation? *Paleobiology* 43, 569-586.

Philippe, M., Puijalon, S., Suan, G., Mousset, S., Thevenard, F., Mattioli, E., 2017. The palaeolatitudinal distribution of fossil wood genera as a proxy for European Jurassic terrestrial climate. *Palaeogeography, Palaeoclimatology, Palaeoecology* 466, 373-381.

Plet, C., Grice, K., Pages, A., Verrall, M., Coolen, M.J.L., Ruebsam, W., Rickard, W.D.A., Schwark, L., 2017. Palaeobiology of red and white blood cell-like structures, collagen and cholesterol in an

ichthyosaur bone. *Scientific Reports* 7, Article Number: 13776

Posenato, R., Bassi, D., Trecalli, A., Parente, M., 2017. Taphonomy and evolution of Lower Jurassic lithiotid bivalve accumulations in the Apennine Carbonate Platform (southern Italy). *Palaeogeography, Palaeoclimatology, Palaeoecology*

<http://dx.doi.org/10.1016/j.palaeo.2017.10.017>.

Reolid, M., (editor), 2017. Abstract Book, International Workshop on the Toarcian Oceanic Anoxic Event. 128 pp (ISBN: 978-84-6975-858-8)

Reolid, M., Molina, J.M., Nieto, L.M., Rodríguez-Tovar, F.J., 2018. The Toarcian Oceanic Anoxic Event in the South Iberian Palaeomargin. *SpringerBriefs in Earth Sciences* 122 pp.

Rodríguez-Tovar, F.J., Miguez-Salas, O., Duarte, L.V., 2017. Toarcian Oceanic Anoxic Event induced unusual behaviour and palaeobiological changes in *Thalassinoides* tracemakers- *Palaeogeography, Palaeoclimatology, Palaeoecology* doi: 10.1016/j.palaeo.2017.06.002

Silva, R.L., Carlisle, C.A.M., Wach, G., 2017. A new TOC, rock-eval, and carbon isotope record of Lower Jurassic source rocks from the Slyne Basin, offshore Ireland. *Marine and Petroleum Geology* 86, 499-511.

Soulimane, C., Reolid, M., Marok, A., 2017. Ostracod assemblages from the uppermost Pliensbachian and Lower Toarcian of the Traras Mountains (Tlemcen Domain, north Algeria). *Arabian Journal of Geosciences* doi:10.1007/s12517-017-3180-0

Soulimane, C., Reolid, M., Rita, P., Marok, A., Duarte, L.V., 2017. Uppermost Pliensbachian-Lowermost Toarcian ostracod assemblages from the Western Tethys: Comparison between Traras Mountains (Algeria), Subbetic (Spain), and Algarve (Portugal). *Annales de Paléontologie* <https://doi.org/10.1016/j.annpal.2017.10.002>

Them, T.R., Gill, B.C., Caruthers, A.H., Grocke, D.R., Tulsy, E.T., Martindale, R.C., Poulton, T.P., Smith, P.L., 2017. High-resolution carbon isotope records of the Toarcian Oceanic Anoxic Event (Early Jurassic) from North America and implications for the global drivers of the Toarcian carbon cycle. *Earth and Planetary Science Letters* 459, 118-126.

Them, T.R., Gill, B.C., Selby, D., Grocke, D.R., Friedman, R.M., Owens, J.D., 2017. Evidence for rapid weathering response to climatic warming during the Toarcian Oceanic Anoxic Event. *Scientific Reports* 7, 5003. DOI: 10.1038/s41598-017-05307-y

Val, J., Badenas, B., Aurell, M., Rosales, I., 2017. Cyclostratigraphy and chemostratigraphy of a bioclastic storm -dominated carbonate ramp (late Pliensbachian, Iberian Basin). *Sedimentary Geology* 355, 93-113.

Vincent, P., Allemand, R., Taylor, P.D., Suan, G., Maxwell, E.E., 2017. New insights on the systematics, palaeoecology and palaeobiology of a plesiosaurian with soft tissue preservation from the Toarcian of Holzmaden, Germany. *Science of Nature* 104, 5-6.

Xu, W., Ruhl, M., Jenkyns, H.C., Hesselbo, S.P., Riding, J.B., Selby, D., Naafs, B.D.A., Weijers, J.W.H., Pancost, R.D., Tegelaar, E., Idiz, E., 2017. Carbon sequestration in an expanded lake system during the Toarcian oceanic anoxic event. *Nature Geoscience* 10, 129-+. DOI: 10.1038/NGEO2871

Xu, W.M., Ruhl, M., Hesselbo, S.P., Riding, J.B., Jenkyns, H.C., 2017. Orbital pacing of the Early Jurassic carbon cycle, black-shale formation and seabed methane seepage. *Sedimentology* 64, 127-149.

Books

Reolid, M., Molina, J.M., Nieto, L.M., Rodríguez-Tovar, F.J., 2018. The Toarcian Oceanic Anoxic Event in the South Iberian Palaeomargin. *SpringerBriefs in Earth Sciences* 122 pp.

Meetings

1st International Workshop on the Toarcian Oceanic Anoxic Event (IW-TOAE) October 4-7th, Jaén, Spain. 37 researchers from 14 countries (Algeria, Australia, China, Denmark, France,

Germany, Iran, Italy, Morocco, Portugal, Russia, Slovakia, Spain and United Kingdom).



First International Workshop-TOAE Social Dinner; October 4-7th, 2017, Jaén (Spain).

Special session of the IGCP 655 in the 33 Jornadas de Sociedad Española de Paleontología, September 27-30th, Cádiz, Spain. 7 researchers from Spain



Fuente Vidriera outcrop. External Subbetic (Betic Cordillera, South of Spain).



Arroyo Mongarrón section. Median Subbetic (Betic Cordillera, South of Spain).



Ph. D. student Iben Winter Hougaard (University of Copenhagen, Denmark); oral presentation First IW-TOAE meeting.

Workshops and other capacity building activities

“Geological heritage and landscapes from Palaeozoic and Mesozoic of Morocco”, Portuguese High-School teachers training course organised by Portuguese Association of Biology and Geology Teachers (APPBG). Coordination: Luís V. Duarte and Driss Sadki (March 2017).

Short Training Course on Ichnology titled: The ichnological record as a tool to assess different order bio-events. By prof. Francisco J. Rodríguez-Tovar and Javier Dorador

Fieldtrip “The geological record in the Peniche Peninsula. Local and global events”, organised by APPBG and coordinated by Luís V. Duarte (April 2017).

Fieldtrip “From the rocks to the ancient oceans. A visit to the cliffs of Peniche”, included in the 4th International Meeting of *Casa das Ciências*, coordinated by Luís V. Duarte (July 2017).

Planned activities 2018.

2nd International Workshop and Field Trip on the Toarcian Oceanic Anoxic Event, Coimbra and Peniche (Portugal, September 2018). This meeting will include the course “Organic matter characterization in anoxic marine facies: palynofacies and organic geochemistry approaches, coordinated by João Graciano Mendonça Filho (Federal University of Rio de Janeiro, Brazil).

26^{ème} Réunion des Sciences de la Terre, Lille (France, October 2018).

34th International Association of Sedimentologists Meeting of Sedimentology

11th North American Paleontological Convention, Riverside (California, June 2019).

3.2.- IGCP Projects with participation of Spanish Working Groups

IGCP-618: Paleoclimate information obtained from past recharged groundwater

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Spanish Working Group activities during 2016 focused on the understanding of the relationships at short scale among groundwaters, climate and humans and the analysis of the environmental changes due to long-term groundwater oscillations and their influence on human settlements.

In these papers, members of the Spanish Working Group (SWG) interpret that environmental changes recorded in wetland/lake deposits are not only due to fluctuations on the surface water supply/evaporation but the water table depth controls the base level of the sedimentary systems being possible to reconstruct the changes in such position from the sedimentary record.

Published papers in 2017 deal with water-human beings interactions during historical times (Celis et al., 2017) and the subsurface structure of the Las Tablas de Daimiel wetland (Rey et al., 2017). Besides, members of the IGCP-618 SWG collaborate in general interest special volumes (Santisteban & Mediavilla, 2017a; Santisteban et al., 2017; Mediavilla et al., 2017). SWG members continue cooperating with researchers of German Universities about the hydrological changes and their relation to groundwater during the Quaternary in South Spain (Projects 1 and 3 below). Preliminary results were presented in the EGU meeting in May 2017 (Höbig et al., 2017). Also, the longer-scale studies about the paleohydrological evolution of central Spain were presented in the

PAGES OSM meeting in May 2017 (Santisteban et al., 2017; Mediato et al., 2017). Finally, we were invited to communicate our results in one talk in the Indo-German Center for Sustainability (October 2017; Santisteban & Mediavilla, 2017b)

Publications

Celis, A., Mediavilla, R., Santisteban, J.I., Castaño, S., De la Losa, A. (2017) La desecación de Las Tablas de Daimiel (1750-1987). Cambios agrarios e impactos medioambientales a partir de la interpretación del registro sedimentario. *Historia Agraria*, 71, 79–109.

Mediavilla, R., Santisteban, J.I., Castaño, S., De la Losa, A., García-Crespo, J. (2017). Tablas de Daimiel. In: Durán Valsero, J.J.; Martín-Serrano, A; Robador Moreno, A.; Rodríguez Fernández, L. R. (Eds.) *La Geología de los Parques Nacionales Españoles*. IGME – OAPN, Madrid, pp. 336-357

Rey, J., Martínez, J., Mediavilla, R., Santisteban, J.I., Castaño, S., De la Losa, A. (2017) Structure and sediment fill obtained from electrical resistivity imaging and ground penetrating radar: the Holocene of Las Tablas de Daimiel (Southern-Central Spain). *Journal of Applied Geophysics*, 136, 387-399.

Santisteban J.I., Mediavilla, R. (2017). Los sistemas fluviales cuaternarios de la Península Ibérica: conceptos y preguntas sin resolver. *Revista de la Asociación Española para la Enseñanza de las Ciencias de la Tierra* 25 (1), 28-34.

Santisteban, J.I., Cendón, D.I., Mediavilla, R., Castaño, S. (2017). Contribución española a los estudios paleoclimáticos desarrollados en el marco del proyecto 618 del PIGC: Información paleoclimática obtenida a partir de acuíferos recargados en el pasado. In: Valenzuela Ríos, J.I., Mediavilla López, R. (Eds.), *El Programa Internacional de Geociencias en España, Serie: Cuadernos del Museo Geominero* 25, Instituto Geológico y Minero de España, Madrid, pp. 145-155.

Contributions to Professional Meetings

Santisteban, J.I., Mediavilla, R. (2017). The past helping the present and future: sedimentological studies in water management in the Spanish Mediterranean coast. *Indo-German Centre for Sustainability Workshop on Urban Resilience: Coastal Hazards and Coastal Water Management, Vulnerability and Sustainability*. Comunicación oral. IIT Madras, Chennai (India), 23-26 Octubre.

Santisteban, J.I., Mediavilla, R., Galán, L., Mediato, J.F., Del Moral, B. (2017). Palaeohydrological fluctuations for the last 25000 years as recorded in fluvial sediments of the Guadiana River (central Spain). *PAGES 5th Open Science Meeting. Global Challenges for our Common Future: a paleoscience perspective. Abstracts*, 01612, 14. Poster. Zaragoza (España)

Höbig, N., Santisteban, J.I., Mediavilla, R., May, M., Klasen, N., Brückner, H., Van't Hoff, J.S., Melles, M.S., Reicherter, K. (2017). Late Quaternary stratigraphy of the La Janda Basin (SW Spain) - first results and palaeoclimatic significance. *Geophysical Research, Abstracts* 19, EGU2017-14690. Comunicación oral. EGU General Assembly, Viena (Austria).

Mediato, J.F., Mediavilla, R., Santisteban J.I., Del Moral, B., Dabrio, C.J. (2017). Influence of Holocene relative sea level variations in the evolution of the Almenara marsh (Castellón, Spain). *PAGES 5th Open Science Meeting. Global Challenges for our Common Future: a paleoscience perspective. Abstracts*, 01848, 10. Poster. Zaragoza (España).

Granted Projects related to the IGCP

1.- Project C3 "Climatic and Environmental Changes in the Upper Pleistocene – Middle Holocene of the Iberian Peninsula". Collaborative Research Center 806: "Our Way to Europe: Culture-Environment Interaction and Human Mobility in the Late Quaternary". Deutsche Forschungsgemeinschaft (CRC-806). IPs: Martin Melles (U Köln), Helmut Brückner (U. Köln), Klaus Reicherter (RWTH Aachen). Spanish participants: Rosa Mediavilla, Juan I. Santisteban, Silvino Castaño.

2.- Encomienda de Gestión para la realización de material divulgativo de contenido geológico relacionado con la red de Parques Nacionales. Organismo Autónomo de Parques Nacionales (Ministerio de Medio Ambiente y Medio Rural y Marino). IP: Luis Roberto Rodríguez Fernández (IGME). Participants from the IGCP 618: Rosa Mediavilla, Juan I. Santisteban.

3.- Análisis geoarqueológico y estudios topográficos en la Motilla del Azuer (Ciarniel, Ciudad Real). Viceconsejería de Cultura Castilla-La Mancha. IP: Miguel Torres Mas (Ayuntamiento Daimiel). Participants from the IGCP 618: Rosa Mediavilla, Juan I. Santisteban, Silvino Castaño, Alberto Celis.

IGCP 632 Continental Crises of the Jurassic

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Museo Geominero IGME, Madrid (Spain)

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Secretary: Rafael Royo-Torres,

Fundación Conjunto Paleontológico de Teruel-Dinópolis, Teruel (Spain)

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Abstracts: The “Spanish Working Group”, within the framework of the IGCP632 project, was established the 22nd of September of 2016. During the year 2017, the reported activity has been limited to the works listed below. This fact has prompted the leader and secretary of the group the possibility of stepping down. However, they have been asked to continue at least as reporters of the Spanish activities within the group.

Publications and contributions to congresses

Mocho, P., Royo-Torres, R., Malafaia, E., Escaso, F., Ortega, F. (2017). Sauropod tooth morphotypes from the Upper Jurassic of the Lusitanian basin (Portugal). *Papers in Palaeontology*, 3 (2), 259-295. doi:10.1002/spp2.1075.

Royo-Torres, R., Upchurch, P., Kirkland, J.I., DeBlieux, D.D., Foster, J. R., Cobos, A. & Alcalá, L. (2017). Descendants of the Jurassic turiasaurs from Iberia found refuge in the Early Cretaceous of western USA. *Scientific Report* 7, 14311. doi: 10.1038/s41598-017-14677-2.

IGCP-639: Sea Level Change from Minutes to Millenia

Leader: Dr. Javier Lario

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Abstract: The IGCP 639 started in 2016. As it represents a continuation of previous projects related to “Sea Level Changes”, the leader contacted with the Spanish National Committee and manifested the interest in maintaining the Spanish Working Group (SWG) in this new project. Most of the researchers of the previous IGCP-588 confirmed their participation in the new SWG. In 2016 the SWG did not meet, consequently the first official meeting with SWG formal constitution took place in the IX Meeting of Coastal Geomorphology (Menorca, 13-15 September, 2017).



Tsunami deposits, IX Jornadas de Geomorfología Litoral, Menorca, September 2017



Son Bou, IX Jornadas de Geomorfología Litoral, Menorca, September 2017

Publications:

Peer review papers.

LARIO, J.; SPENCER, C.; BARDAJI, T.; MARCHANTE, A. (2017). Eventos de oleaje extremo en la costa del sureste peninsular: bloques y megabloques como indicadores de tsunamis o tormentas extremas. *Geo-Temas*, 17: 227-230.

LARIO, J.; BARDAJI, T.; SILVA, P.G.; ZAZO, C.; GOY, J.L. (2016). Improving the coastal record of tsunamis in the ESI-07 scale: Tsunami Environmental Effects Scale (TEE-16 scale). *Geologica Acta*, 14 (2): 179-193.

Proceedings and Conference papers

LARIO, J.; SPENCER, C.; BARDAJÍ, T.; MARCHANTE, A.; GARDUÑO-MONROY, V.H.; MACIAS, J.; ORTEGA, S. (2017). An Extreme Wave Event in eastern Yucatán, Mexico: evidence of a paleotsunami event during the Mayan times. Proceedings of the 8th International INQUA Meeting on Paleoseismology, Active Tectonics and Archeoseismology. Lower Hutt (NZ): GNS Science (GNS Science miscellaneous series 110): 38-41.

CASCALHO, J.; COSTA, P.; LARIO, J. (2017). Sediment transport mechanisms inferred from heavy mineral assemblages on the 2010 Chilean tsunami deposit. Geophysical Research Abstracts, 19: 3198.

COSTA, P.; SILVA, D.; FIGUEIRINHAS, L.; LARIO, J. (2017). 2010 Maule (Chile) and AD 1755 (Portugal) tsunami sediment samples: limitations of microtextural analysis. Geophysical Research Abstracts, 19: 3195.

LARIO, J.; BARDAJÍ, T.; SPENCER, C.; MARCHANTE, A.; GARDUÑO-MONROY, V.H. (2017). Pre-classic Mayan Extreme Wave Event in eastern Yucatán, Mexico. 5th International Tsunami Field Symposium, Lisbon: 72-73.

LARIO, J.; SPENCER, C.; BARDAJÍ, T.; MARCHANTE, A. (2017). Holocene Extreme Wave Event in Cope Basin, Spain, Western Mediterranean. 5th International Tsunami Field Symposium, Lisbon: 74-75.

Activities in 2017:

European Geosciences Union General Assembly 23-28 April 2017 Vienna, Austria Geological records of extreme wave events (co-organized IGCP 639). Two abstracts submitted.

Planned activities for 2018

European Geosciences Union General Assembly 2018, Viena, 18-23 April 2018

Co-sponsored sessions:

Sea-level changes from minutes to millennia:

<http://meetingorganizer.copernicus.org/EGU2018/session/28789>

Coastal morphodynamics: nearshore, beach and dunes:

<http://meetingorganizer.copernicus.org/EGU2018/session/27448>

Geological records of extreme wave events:

<http://meetingorganizer.copernicus.org/EGU2018/session/26704>

Third Annual Meeting: IGCP Project 639 – Sea Level Change from Minutes to Millennia: Crossing Southern Italy: a travelling meeting from Taranto to Siracusa. September 16th-23rd 2018.

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IGCP-652 Reading geologic time in Paleozoic sedimentary rocks: the need for an integrated stratigraphy

Leader: Dra. Jau-Chyn Liao

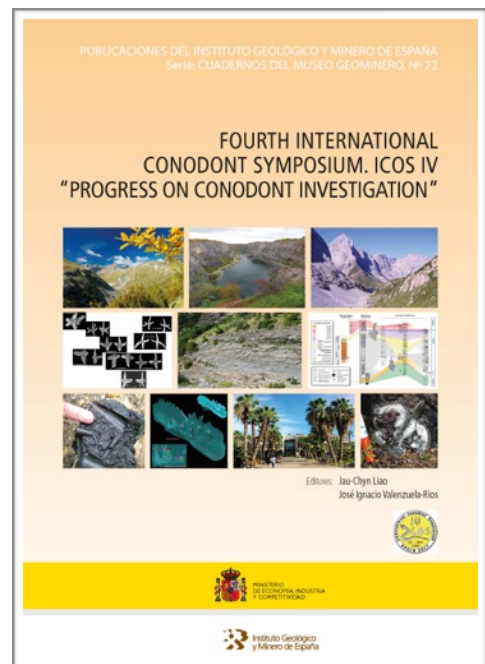
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Abstract: The International Board supported the IGCP 652 during its annual meeting in 2017. As Spain has been very active in preceding projects related to this one (499, 596) and as the National Committee supported this project, a group started to work according to the main goals of the project and coordinated international actions. The more relevant action was to organised 652 related actions within the more important International Conference held in Spain in 2017. The Fourth International Conodont Symposium and joint meetings of the International Subcommittee on Devonian Stratigraphy and of the International Subcommittee on Silurian Stratigraphy. The joint organisation of the three conferences represented a unique opportunity for stimulating international and multidisciplinary discussions and fostering joint collaborations combining and exchanging data from various fields (palaeontology, stratigraphy, geochemistry, geophysics, sedimentology, tectonics,...) Therefore, the conference was able to bring together three important scientific meetings for the Earth Sciences at the highest international level for the first time. This meeting specially explored the value of conodonts for solving global bio- and chronostratigraphic problems and in integrating these data for supporting the calibration of the Timescale.

The congress was open to all topics in conodonts, Silurian and Devonian matters. The scientific program ranged from Cambrian to Triassic, with special emphasis on Silurian and Devonian. Global stratigraphic resolution, cyclostratigraphy and astronomical methods need a high-resolution biostratigraphy, like the one provided by conodonts in Silurian and Devonian times. Similarly, all Devonian GSSP, but the base of that Period, are defined on the basis of a conodont index.



This conference played an important role in understanding the evolution of life in a long period of time and specially to improve our understanding of the Earth History for the Silurian and Devonian.

The nature of the meeting facilitated the public outreach of results as the multidisciplinary program attracted local people and policy-makers both in the Pyrenean fieldwork and in the scientific sessions.



ICOS IV participants during the scientific sessions in front of the main library “Eduard Boschà”, Sciences Campus of Burjasot (University of Valencia).



José I. Valenzuela, leader of the Spanish Pyrenees field trip explaining the Devonian-Carboniferous outcrop near the Cadí-Moixeró National Park

As result of collaboration with Geoparks, Scientifics from 12 countries paid a visit to the scientific Headquarters of the Conca de Tremp-Montsec Project Geopark, which is a candidate to become integrate in the Global UNESCO Geoparks. Participants were explained about the basics of a Geopark and then, touring the “Soil collection” stored at the Catalanian Geological Survey in Tremp.

Gonzalo Rivas, coordinator of the scientific Headquarters of the Conca de Temp-Montsec Project Geopark explaining the characteristics of the "Soil collection".



A warm reception to the participants by Luis Bellerá and Assumpció Civis, majors of the Pobla de Segur City Hall (Lérida, Spain).



A charm welcome to the participants by Juan I. Espot, major and councillors of Laspaules (Aragón, Spain)

Jau-Chyn Liao and José Ignacio Valenzuela-Ríos have submitted a proposal to the German Academic Exchange (DAAD) within the RISE program to train German graduate students in matters directly related to the IGCP-652.

Similarly collaboration with the University of Lisbon will bring a student to Valencia, who will be train in Devonian conodont studies applied to IGCP-652 matters.

Finally, 6 Master students of the Master in Applied Palaeontology of the University of Valencia in the frame of Innovative teaching took part in a multidisciplinary training field workshop that took place in the Devonian rocks of the Spanish Central Pyrenees.

Master students examining the Devonian outcrop near Segre river (Lérida, Spain).



Partial support for attending and organising the different activities outlined above has been obtained from the Conca de Tremp-Montsec Project Geopark and the University of Valencia.

Publications and contributions to congresses

Peer Review Papers

Valenzuela-Ríos, J.I., Martínez-Pérez, C. & Liao, J.-C. (2017): Pragian-Emsian in the Baliera 6 section. *Berichte des Institutes für Erdwissenschaften, Karls-Franzes-Universität Graz*, **23**:43-50.

Valenzuela-Ríos, J.I., Liao, J.-C. & Martínez-Pérez, C. (2017): Lochkovian and Pragian (Lower Devonian) at Segre 1-2 sections. *Berichte des Institutes für Erdwissenschaften, Karls-Franzes-Universität Graz*, **23**:53-60.

Valenzuela-Ríos, J.I., Liao, J.-C. & Calvo, H. (2017): Middle and upper Lochkovian (Lower Devonian) at Segre 4 section. *Berichte des Institutes für Erdwissenschaften, Karls-Franzes-Universität Graz*, **23**:61-64.

Valenzuela-Ríos, J.I., & Liao, J.-C. (2017): Middle and upper Lochkovian (Lower Devonian) at Segre 5 section. *Berichte des Institutes für Erdwissenschaften, Karls-Franzes-Universität Graz*, **23**:65-67.

Valenzuela-Ríos, J.I., Liao, J.-C. & Martínez-Pérez, C. (2017): Famennian to Lower Carboniferous? in the Pi section. *Berichte des Institutes für Erdwissenschaften, Karls-Franzes-Universität Graz*, **23**:68-72.

Martínez-Pérez, C., Valenzuela-Ríos, J.I. & Liao, J.-C. (2017): Pragian-Emsian conodont succession in the Villech IA and IB sections. *Berichte des Institutes für Erdwissenschaften, Karls-Franzes-Universität Graz*, **23**:75-81.

Gouwy, S., Liao, J.-C., Valenzuela-Ríos, J.I. & Martínez-Pérez, C.. (2017): Eifelian-Famennian Conodont succession in the Villech sections. *Berichte des Institutes für Erdwissenschaften, Karls-Franzes-Universität Graz*, **23**:82-88.

Valenzuela-Ríos, J.I., Liao, J.-C. & Martínez-Pérez, C. (2017): The Devonian in the Comte sections. *Berichte des Institutes für Erdwissenschaften, Karls-Franzes-Universität Graz*, **23**:89-91.

Valenzuela-Ríos, J.I., Liao, J.-C. & Martínez-Pérez, C. (2017): Lochkovian to Emsian conodonts (Lower Devonian) at CP-I section. *Berichte des Institutes für Erdwissenschaften, Karls-Franzes-Universität Graz*, **23**:92-98.

Liao, J.-C. & Valenzuela-Ríos, J.I. (2017): Givetian to Famennian conodonts (Middle-Upper Devonian) at CP section. *Berichte des Institutes für Erdwissenschaften, Karls-Franzes-Universität Graz*, **23**:99-105.

Books:

Liao, J.-C. & Valenzuela-Ríos, J.I. (Eds.) 2017. *Fourth International Conodont Symposium. ICOS IV: "Progress on Conodont Investigation"*. Cuadernos del Museo Geominero, 22. IGME, Madrid, 337 pp. ISBN: 978-84-9138-031-3

Book-Chapters

Liao, J.-C. & Valenzuela-Ríos, J.I. (2017): The role of Conodonts in building standards of reference for expressing the history of Earth: the Givetian (Middle Devonian) example. In: Liao, J.-C. & Valenzuela-Ríos, J. I. (Eds.), *Fourth International Conodont Symposium ICOS IV "Progress on Conodont Investigation"*. Cuadernos del Museo Geominero, **22**: 133-135. IGME, Madrid.

Liao, J.-C. & Valenzuela-Ríos, J.I. (2017): Conodont biodiversity analysis from the Middle and Upper Devonian of the Spanish Central Pyrenees. In: Liao, J.-C. & Valenzuela-Ríos, J. I. (Eds.), *Fourth International Conodont Symposium ICOS IV "Progress on Conodont Investigation"*. Cuadernos del Museo Geominero, **22**: 157-159. IGME, Madrid.

Lu, J.F., Valenzuela-Ríos, J.I., Wang, Y, Liao, J.-C. & Chen, X.Q. (2017): Preliminary morphological analysis of *Polygnathus pirenae* (Lower Devonian) from South China. In: Liao, J.-C. & Valenzuela-Ríos, J. I. (Eds.), *Fourth International Conodont Symposium ICOS IV "Progress on Conodont Investigation"*. Cuadernos del Museo Geominero, **22**: 129-132. IGME, Madrid.

Valenzuela-Ríos, J.I., Liao, J.-C., Rivas G. & Puras, G. (2017): Lochkovian (Lower Devonian) Conodonts from the Conca de Tremp-Montsec Geopark Project; a unique character of global relevance. In: Liao, J.-C. & Valenzuela-Ríos, J. I. (Eds.), *Fourth International Conodont Symposium ICOS IV "Progress on Conodont Investigation"*. Cuadernos del Museo Geominero, **22**: 123-127. IGME, Madrid.

Journal Special Volume Publication

Suttner, T. J., Valenzuela-Ríos, J.I., Liao, J.-C., Corradini, C. & Slavík, L. (Eds.) 2017: *International Conodont Symposium 4 Progress on Conodont Investigation (Valencia, 25-30th June 2017). Field Guide Book*. Berichte des Institutes für Erdwissenschaften, Karls-Franzes-Universität Graz, 23, 286 pp. ISSN: 1608-8166.

Meeting organisation

The Spanish Working Group (SWG) has organised The Fourth International Conodont Symposium and joint meetings of the International Subcommittee on Devonian Stratigraphy and of the International Subcommittee on Silurian Stratigraphy

Name of organisers: José Ignacio Valenzuela-Ríos and Jau-Chyn Liao.

Date and location: Pyrenees fieldtrip (20-25 June) and Burjasot, Spain, (25-30 June 2017).

Number of participants: about 100 participants from 25 countries.

Funding: Conca de Tremp-Montsec Projecte Geoparc, Local City Halls of Laspaules, Tabuenca, La

Pobla de Segur, Seo d'Urgell, Montellà I Martinet, Tremp, Burjasot, Consell Comarcal de l'Alt Urgell, Generalitat de Catalunya Departament de Territori I Sostenibilitat, University of Valencia, Geological Survey of Spain, Geological Survey of Catalonia, public and private enterprises: Correos Burjasot, Transportes Baeza (Burjasot), Farmacia Maldonado (Valencia) and Fonda Farré (Baro).

Other IGCP-related activities

Graduate Training: Field workshop on Devonian (Bio and Chronostratigraphy), field techniques, Organiser: José Ignacio Valenzuela-Ríos. December 2017-February 2018.

The University of Valencia partially supported participation and organisation of these activities.

Planned activities for 2018

Attending the International meeting in Paris (IPC-5, July 2018).

Attending the International workshop in Bremen (September, 2018)

Organizing a Spanish Special Symposium within the frame of the Spanish Palaeontological Society Annual Meeting (Vila-Real, Portugal, September, 2018).

Submitted proposal for funding a young German Student under the DAAD RISE-Worldwide Program.

4. National Committee activities

The President has participated in the Spanish Conference of Deans of Geology, which included in the agenda the IGCP program in Spain. The President of the Ilustre Colegio Oficial de Geólogos (ICOG, Spanish National Geological Association) also attended the Conference. The Chairman informed on the five main themes of the program and the current projects under each theme, and outlined the YES program as well. He also explained those projects with Spanish participation and the Spanish Universities and Research Institutions participating in the program.

He explained that the intention to visit each University in Spain with Geological studies to lecture on the Program keeps alive, but he could not render any visit because no a single euro was released last year, and the National Committee had a 0€ budget for the year 2017, and even the President has to paid by himself all the expenses of the Committee related-activities, including the trip to the International Meeting in Paris. This year, the Chairman will try again to visit some of the universities and the Deans would like to receive such a visit; especially interested were the Universities of Madrid, Salamanca and Zaragoza.

The President attended the Annual Session of the new joint IGGP in Paris. He paid a visit to the Spanish Permanent UNESCO delegation and explained the actions of the Committee during the past year, informed on the relevance and need of the Spanish Government in supporting the program, which is not the case yet, and reported on the commemorative Book celebrating the 40th anniversary of the Spanish National Committee.

The SNC "turned" 40 years old in 2015. On occasion of this "Event" we organized a special meeting in one of the Spanish UNESCO Global Geoparks, Sierras Subbéticas in April 2016.

Subsequently The President and the Secretary (Dra. Rosa Mediavilla) were involved in the publication of a special Commemorative Book of the Spanish National Committee, which was

released in December 2017. This Book shows practical examples for four of the main themes (Global Change, Geohazards, Hydrogeology and Geodynamic) of how a IGCP-Project works. At the same time, the authors explain the great contribution these projects had made to the development and progress of the Geological studies and international cooperation in Spain. In brief, it is a practical guide for those who are curious to understand the IGCP and to see the outcome of specific projects in some fields. Additionally, a contribution by the former IUGS-Secretary on the IUGS presents IUGS main activities and organization and stresses the close relations between the IUGS and UNESCO in the development of IGCP. The close connection between the IGCP and the sister Geopark program is underlined with the invitation to the former President of the Spanish Committee of Geoparks who reported in the five Spanish GSSPs Stratotypes. Finally one of the most influential workers in developing the Geoparks System in Spain reported on the 15 years of history of the Spanish Geoparks. Thus, this book also shows the conviction and determination of the Spanish National IGCP Committee in “working and walking” together in the new IGCP-UNESCO Program.



One member of the SNC (Dr. Matías Reolid) organized a special Symposium of IGCP 655 in Cadiz concurrently with the Annual Meeting of the Spanish Palaeontological Society (September 2017).

The President of the SNC gave a supporting letter to the following project: 1) *“Incorporating Faults into Seismic Hazard Assessment: linking Mexico and Europe (FAULT2SHA-ME)”* presented by María Ortuño and collaborators.

This year a total of six working groups are active in Spain: 618, 632, 637, 639, 652 and 655. Besides, we have references (from the web) that other Spanish researchers are participating in other projects but they never reported nor contacted to the Committee.

As a result of the activity the numerous papers and contributions to meetings aforementioned were published.

IGCP Spanish National Committee Web page: <http://www.igme.es/CNG/subcomisiones/PICG.htm>

5. IGCP Meetings held during the year 2017 in Spain

1st International Workshop on the Toarcian Oceanic Anoxic Event (IW-TOAE) October 4-7th, Jaén, Spain.

Special session of the IGCP 655 in the 33 Jornadas de Paleontología (Sociedad Española de Paleontología), September 27-30th, Cádiz, Spain.

Short Training Course on Ichnology titled: The ichnological record as a tool to assess different order bio-events. By prof. Francisco J. Rodríguez-Tovar and Javier Dorador.

The Fourth International Conodont Symposium and joint meetings of the International Subcommission on Devonian Stratigraphy and of the International Subcommission on Silurian Stratigraphy. Valencia, Spain, June 2017. Organizers José Ignacio Valenzuela Ríos and Jau-Chyn Liao.

6. IGCP meetings planned for the next year (2018)

- Annual Meeting of the Spanish National Committee.
- Spanish Special IGCP Symposium within the frame of the Spanish Palaeontological Society Annual Meeting (Vila-Real, Portugal, September, 2018).
- European Geoscience Union (EGU) 2018, Viena, Austria (April 8-13). 6th edition of the special session on Natural research and Heritage Stone designation.
- The Global Stone Congress, Brazil (April, 26-29).
- Resources for Future Generation (RFG) 2018, Vancouver Canada (June).
- I Workshop on Heritage Stone, Salamanca, Spain (October 2-4).
- 2nd International Workshop and Field Trip on the Toarcian Oceanic Anoxic Event, Coimbra and Peniche (Portugal, September 2018).
- 5th International Paleontological Meeting, Paris, France (IPC-5, July 2018).
- International workshop IGCP 652, Bremen, Germany (September, 2018)

7. Forthcoming events in connection with IGCPs

- European Geoscience Union (EGU) 2018, Viena, Austria (April 8-13). 6th edition of the special session on Natural research and Heritage Stone designation.
- European Geosciences Union General Assembly 2018, Viena, 18-23 april 2018: Co-sponsored sessions: Sea-level changes from minutes to millennia: <http://meetingorganizer.copernicus.org/EGU2018/session/28789>; Coastal morphodynamics: nearshore, beach and dunes: <http://meetingorganizer.copernicus.org/EGU2018/session/27448>; Geological records of extreme wave events: <http://meetingorganizer.copernicus.org/EGU2018/session/26704>.
- Third Annual Meeting: IGCP Project 639 – Sea Level Change from Minutes to Millennia. Crossing Southern Italy: a travelling meeting from Taranto to Siracusa. September 16th-23rd 2018
- GSA Meeting; Post-conference Fieldtrip to the Indiana Limestone quarries (November)
- XXXIV Meeting of the Spanish Paleontological Society, September 2018, Vila-Real, Portugal.
- Course “Organic matter characterization in anoxic marine facies: palynofacies and organic geochemistry approaches. Coimbra and Peniche (Portugal, September 2018).
- 26^{ème} Réunion des Sciences de la Terre, Lille (France, October 2018).
- 34th International Association of Sedimentologists Meeting of Sedimentology.
- Graduate Training: Field workshop on Devonian (Bio and Chronostratigraphy), field techniques, Organiser: José Ignacio Valenzuela-Ríos. December 2017-February 2018. Pyrenees, Spain.

8. Suggestions relating to conduct and improvement of the Program.

In spite of the good intentions of the Board, it seems that, for some reasons that are not clear to us, the International Board could not pay any attention to some of the feed-back that National Committees provided each year and this is a serious limitation for improving communication

between the National Committees and the International Board. Some of the following paragraphs are just an exact duplication of last year suggestions. As nothing has changed, these suggestions are still valid.

The President of the Spanish National Committee acknowledges the “good feeling” and intentions regarding further cooperation of the Board with the National Committees. However, it is strange that again no information on the new projects, their founding, current status, numerical reference, title, web page, coordinators,... was provided. This lack of transparency and effective communication of the Board is a major handicap towards an active cooperation and fluid transference of ideas and information that is needed in improving the program.

By surveying the web page of the Program, the President of the Spanish National Committee became aware of some projects that could be of interest to potential Spanish participants, and in some projects Spanish scientists were involved. After contacting some of them, the President realized that they didn't know the existence of a National Committee, neither the need (and possibility) of forming a National Working Group.

On the other side, we congratulate the International Board for implementing some of the actions we have suggested in the past, as e.g. the need of the leaders to contact and inform the respective National Committees of the countries involved in the project. Thank you for implementing this action. However, it seems that in projects with foreign leaders, either the leaders don't inform potential participants to contact their respective National Committees or the participants don't care to contact they National Committees.

After contacting with some previous participants in IGCP projects, even former leaders, we realized that many workers don't see the need of creating a National Working Group that form part of the National Committee, and they think there is no need to create such working groups. Obviously, National Working Groups are an important part of the National Committees and therefore, I suggest that International Board and National Committees shall work together in promoting the constitution of such groups.

An additional problem is the lack of control (which is impossible, of course) on the information provided by the different IGCP-projects web pages. Recently, I learn about a long list of Spanish participants in an IGCP project. The National Committee never was informed of such huge amount of participants, nobody contacted the National Committee to inform or report on this project, and the last by no least surprising fact is that people who are listed as participant never were contacted neither informed of his/her wish or enrollment in such project. We have to find ways of dealing with effective communication and transference of ideas and proposals between National Committees and International Board. The lack of such adequate National Committee-International Board correspondence creates a feeling of desperation and frustration that does not benefit the needed cooperation. We hope that the International Board acknowledges this situation and seeks for a joint solution. I want to remember here the Spanish National Committee loyalty to the Program; the National Committee has always supported the IGCP by participating, sending reports and making comments for improving collaboration and we will continue this way.

I have approached several Spanish participants listed in international projects who never contacted the Committee, neither the leaders of the Project contacted the Committee. After conversations with some of the participants, we were astonished of two relevant facts. 1) The way they were recruited!, 2) The lack of knowledge on the existence of a National Committee and by extension the meaning of participating in an IGCP project. Regarding the point 2, I have already commented. Regarding the point 1, I believe that we shall strive for excellence and we must take responsibility for ensuring and promoting the main objectives of the Program and work together towards their implementation. In other words, we need “quality” rather than “quantity”. The nice numbers we are getting year after year and plotted in graphs, must be evaluated carefully. Numbers have not a value for themselves although they help to visualize some results and progress. I believe we shall also transmit leaders and participants the essence of the program, the altruistic collaborative spirit, ...

I offer my time and energy to collaborate with the International Board and with all the National Committees and persons who wish to collaborate in designing a strategic plan to improve visibility in all National Geological Organizations and to show participants and potential participants the essence of the program, the added value to the international promotion of Geology through the IGCP, the important role IGCP has played in the development of Geology in many countries and the important role still has to play. I deeply believe we still need to reach further participants, especially young students and young researchers and show them the program, specially the values behind this program, the possibilities of cooperation and clearly explain what we expect for program members.

Due to the double partnership of this successful program, the IUGS could contact the national Commissions of Geology, or whatever organization is the responsible for IUGS matters in different countries and explain the need of supporting the program. We can also elaborate a document to be handle to IUGS.

On the other side, I'm not sure the National UNESCO Delegations understand the role and responsibilities they have for IGCP. It seems to me an apparent lack of real interest in the Program. I'm not convinced they believe or understand that IGCP is in connection with the aims and goals of UNESCO, or at best, we have not been able to explain these officials our contribution to improve the world and serve the society (as our *motto* states). I think this is another aspect National Committees and International Board shall address soon.


I have the impression that some UNESCO Delegations and National Agencies for Cooperation with UNESCO see IGCP-National Committees only as "one mark more in the check list of Committees for the annual reports", but they don't care much about the particularities of this Program and, consequently, they don't see the need of effectively supporting the program neither the demand of exploring new ways of opening a special funding program to which National Committees can apply and submit proposals. This is another issue that National Committees and International Board can work together for improving the visibility of the program and augmenting financial sources.

As a last suggestion, I believe that having a special session with enough time for National Committees to exchange ideas, experiences, intentions and difficulties will help to strength relations between committees and foster further inter-committees cooperation.

9. Financial support received for the activities of this National Committee and given to IGCP projects and their activities.

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José I. Valenzuela Ríos.

Valencia, February 19th, 2018

President , Spanish National Committee, IGCP