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打造过硬品牌 以彰显地质公园在 UNESCO 世界级名录中的特殊地位

——PPF 理念(“过去一现在一将来”理念)

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摘　要：目前世界地质公园网络(GGN)共有 90 个成员，分布在 27 个国家和地区，尽管在这个网络建立过程中，联合国教科文组织起着关键作用，但在过去十多年里，其与地质公园的关系只能被定义为“特别支持”，眼下两者的关系应该在一个国际倡议或计划下被正式化，这将有利于进一步提高地质公园的管理、交流合作和资源利用。实现该目标，就要清晰地阐明地质公园核心的独有特色，使地质公园与联合国教科文组织已实施的计划形成互补，不会产生冲突或重叠。本文介绍的 PPF 理念将会是一个有效的方法，以此创建一个过硬的品牌，彰显地质公园在 UNESCO 世界级名录中的特殊地位。

关键词：联合国教科文组织；地质公园；特色; PPF 理念

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虽然自第一批世界地质公园的建立已有 10 余年的历史，但对于一些科学家、利益相关者、政治家以及地方与国家级主管机构，仍存在将地质公园与联合国教科文组织发起的其它世界级名录混为一谈的现象，有关地质公园(G)、世界遗产名录(WHS)、生物圈保护区(BR)或自然区域公园(NRP)差异的讨论至今仍十分活跃。这一尴尬的现状将可能影响地质公园在全球范围内的发展，亟需对此进行清晰的分析，并提出明确且切实的解决方案。

仅从地质公园与生物圈保护区“原始”定义来看，二者之间的差异着实难辨。虽然地质公园涉及的实际领域与生物圈保护区存在明显不同，但从理论和概念上，人们可能将地质公园视为专注于地质遗产价值的生物圈保护区。

尽管自 2004 年以来，世界地质公园网络在运行和管理上取得重要成就，如地质公园独特且基本的网络关系、真正的国际间合作、经验与人员的交流、四年一次评估机制的建立等，但“世界地质公园仍类似于一个生物圈保护区的子类”。

除地质公园拥有四年一次评估机制这一差别外，地质公园与法国自然区域公园间的比较也存在类似上述混淆不清的状况。

地质公园的建设与发展应使其截然有别于联合国教科文组织其它世界级名录，使到访游客感受其独特魅力。但是，由于各种原因，地质公园在凸显其独特身份方面着实面临诸多困难。

在诸多世界级名录并驾齐驱发展的背景下，地质公园作为具有实验性和开拓性的区域，应在园区建设及管理技术方面宣传其独特之处。如无法向公众展现自身与其它世界级名录在本质上的概念差异

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及其创新型管理技术，地质公园与各类既有名录下“自然”区域的相似性将阻碍地质公园的进一步发展。

例如，在多数情况下，地质公园仍向游客提供任意一种保护区和管理区同样使用的解说和交流载体。地质公园仍局限于 1872 年第一家美国国家公园创立的“自然装备三部曲”——教育线路、博物馆和解说牌。从设计的某些角度来看，“三部曲”自 150 年前创立以来未见任何观念革新。

地质公园明显的独特性应在于使游客在地质公园中见到更多有关地质遗迹的解说牌。因此，自地质公园概念创立伊始，其核心理念便在于地质公园无可争辩的独特性，这目前似乎已被人们遗忘。地质公园这种无与伦比的独特性是其存在并发挥作用的基础，该独特性应体现在真正挖掘地质遗迹的价值上。

地质学是关于“地球记忆”的科学，总体上来说，是就时间展开的研究。

地质公园专注于地质学研究。地质公园这一独特地区为我们提出了关于时间的新问题，探讨地质公园这一真实的环境，并将人类的时间尺度当作一种独特的时间标尺，研究人类社会与地球之间真实存在的内在关联和人们对地球的认知之间的必要关系。

再回到地质公园这一概念上来。建立地质公园的根本目标并不仅是“教地质”，而是引导、激发人们用新的眼光去认识时间，分享新的看待时间的角度，让人们去认识地球 45 亿年的历史、古环境的演变和地球过去的“面貌”。地质公园为我们提供了时间这一第四维度，让我们转换了认识地球的常规视角。

和其它自然保护区一样，地质公园试着打开一扇“时间之窗”。但是这种尝试仅停留在“现在—过去—现在”的循环过程中。例如，对某一景观或景点及其地质起源进行直观的解释。

即使这类教学方式有提供第四维度这一步骤，但从概念上考虑，这一方式并不尽如人意。时间是连续的，不能停止于现在，并让人们感觉“过去—现在”是一对双行线。

地质公园必须提供第四维度——时间，并尝试更好地让人们理解“今天”，并通过预见未来达成这一尝试。只有地质学家能够实现对于过去的再现。

基于时间这一概念的必要性，“过去(Past)—现在(Present)—将来(Future)”的理念(即 PPF 理念)可阐明地质公园与联合国教科文组织其他名录成员相比所具有的绝对独特性和无可置疑的差别。2000 年 PPF 概念的提出基于公园解说的系统性应用(Zouros et al., 2003; Martini, 2003, 2006, 2010; Martini et al., 2008, 2010)，使每一个向游客开放的地质遗迹点都拥有三个相互重叠的画面，三者与该遗迹点的现状、起源和未来演化相呼应。

时间尺度可用来预见未来，但未来的画面并不停滞在一个时间点上，而是一段必要的时间，这段未来时间也会很大程度上地改变我们对现状的认识。

为实现 PPF 理念，地质公园中可使用三种解说方式：传统的由“过去—现在—将来”三个时间段组成的静态解说牌、动态解说牌以及虚拟交互解说牌，虚拟交互解说牌是让游客感受连贯的时间维度的最佳解决方案，可通过简单的时间旅行游戏和体验来实现。

通过应用完整且连贯的 PPF 理念，地质公园将在联合国教科文组织各类名录中独树一帜，并彰显其功能和独到之处。

地质公园给人们提供了一个感知地球的全新方式，让人们经历真正的时间之旅，与其它地方不同，地质公园让游客重新理解和感受时间。在这里，游客行走在时间的维度里。

Creating a New Strong Geopark Identity in front of Other World UNESCO Territories: The PPF Concept

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Abstract: There are currently 90 Geoparks across 27 countries and regions, organized through the Global Geoparks Network (GGN). Despite UNESCO's central role in establishing this network, its support to Geoparks has been defined as "ad hoc" for over a decade. And now GGN should be formalized as an international initiative

or programme. This formalization would benefit Geoparks through improved governance, enforced network and better utilization of resources. To achieve that, with the unique core features, Geoparks should not duplicate or conflict with other UNESCO territories, but complement other UNESCO programmes. The PPF concept presented in this paper is an effective method to realize this complement, creating a new and strong Geopark identity in front of other world UNESCO territories.

Key words: UNESCO; Geopark; features; PPF concept

More than 10 years after the creation of the first Geoparks, for some scientists, stakeholders, politicians as well as for local and National authorities, a confusion between Geopark and others territories promoted by UNESCO still exists.

The question concerning the real difference existing between Geoparks(G), World Heritages Sites(WHS), Biospheres Reserves(BR) or Natural Regional Parks(NRP) is still active.

This embarrassing situation, which could be problematic for the Geoparks development worldwide, needs a clear analysis with evident and pertinent solutions.

The difference between these territories is much more difficult to established between G and BR, by reference to their “founding” definitions.

Even if the field reality of Geoparks differs significantly with BR, it could be theoretically considered that, in the concept, Geoparks should be considered like a BR specialized on Geological Heritage values.

In spite of the important achievements of the Global Geoparks Network operation and management since 2004, the Geopark’s unique and fundamental networking, the true transnational cooperation, the exchange of experience and staff, the establishment of a territory revalidation each four years, the “Geoparks are like a BR sub-category”.

This situation is relatively the same within a comparison between Geoparks and French NRP if we don’t take in consideration the topic of revalidation 4 years period.

Geoparks should appear to their visitors totally different with the other categories of territories. But, for several reasons, they have real difficulties to make it evident.

In this territorial juxtaposition, the Geoparks, as experimental territories, need to promote their singularity both on the field and on their techniques to manage their territories. If Geoparks avoid demonstrating to the public fundamental conceptual differences from others territories and innovative territorial management techniques their similarity with all classic “natural” territories will work against Geopark.

For example, Geoparks are offering to visitors, in many cases, the same interpretation and communication tools used by any kind of protected and managed territory. Following the supports created by the first American National Parks in 1872, they are still limited in a vision of “nature equipment trilogy” based on pedagogic trails, museum, pedagogical panels. Trilogy, which has no conceptually evolution — a part on a design point of view — from 150 years.

The unique clear particularity is that a visitor will meet in Geoparks “more” panels on geological heritage!

Therefore in the core of their concept, from their first origin, the Geopark embody an indisputable uniqueness, which seems nowadays forgotten. This unequalled Geopark feature, base of their utility, necessity and function has to be founded in the real semantic significance of the Geological Heritage.

Speaking on geology, on the “Memory of the Earth” is, overall, speaking about time.

Because of its focus on Geology, a Geopark is the unique territory able to provide new questions about time, about that it’s considered like the surrounding reality, about the necessary relativity that it has to be given to the actual interrelation and vision that the human society is developing with the planet, using the human time scale like unique temporal referent.

Coming back to the Geopark concept, the constitutive aim of a Geopark is not simply to “teach geology”, but to educate, share and to inspire thoughts on another vision of time, the vision of the 4.5 billion years of the earths, its millions of paleo-environments, past “faces” of the planet. It’s providing a fourth dimension to the daily vision of the planet.

Geoparks, like others natural territories, are trying to open a kind of “time window”. But this attempt is limited on an elementary round trip Present-Past-Present. For example, a landscape or a site, like it’s directly seen, is explained and its genesis, its geological origin is interpreted.

Even if this type of pedagogy constitutes a step for including a fourth dimension vision, it can’t be considered conceptually satisfactory. Time is a continuum which can’t be stop in a “present” and getting sense in a two-way vision “Past-Present”.

Geoparks have to offer a time fourth dimension, in an attempt of a better comprehension and thoughts of a “today”, needs to be completed necessarily by a vision of a future. A vision, as for a past vision, should only be given by Geosciences.

With this time conceptual necessity,

the-Past-Present-Future concept—(PPF concept) should afford the complete specificity and unquestionable difference between the Geoparks and the other territories. PPF concept, on development from 2000(Zouros et al., 2003; Martini, 2003, 2006, 2010; Martini et al., 2008, 2010), is based on the systematic use, in Geoparks, of interpretative supports which could present, on each site open to visitors, three superimposed images of the locality corresponding to its present situation, its origin and genesis and its future evolutions.

The time scale used for the determination of the image for "Future" could be different from a site and based on the necessary time, which will produce significant changes to the present situation.

To materialize PPF concept, in Geopark, three categories of interpretative supports can be defined: classic interpretative static panels composed by a three time segmentation; dynamic interpretative panels; virtual interactive panels which constitute the best solution to provide to visitors the sensation of temporal continuum through an easy time travel play and experience.

With a complete and coherent PPF concept equipment in their territory, Geoparks will be matchless with any kind of existing territory and will demonstrate clearly its uniqueness and function.

A territory is offering another experience with the planet, a true travel in the time, a different place where visitor are invited to develop new thoughts and experiences around the time.

A territory is where visitors are walking in a fourth dimension.

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中国地质科学院水文地质环境地质研究所研制的氢氧同位素水标准物质获批国家一级标准物质

由中国地质科学院水文地质环境地质研究所研制的氢氧同位素水标准物质，近日通过全国标准物质管理委员会组织的“2012 年度国家一级标准物质终审会”评审和现场考核，获批国家一级标准物质。此次氢氧同位素一级水标准物质的获批，为开展水文、地质、环境学研究以及科学考察等提供了技术支撑，实现了中国地质科学院水文地质环境地质研究所在化学计量、标准物质、同位素分析领域的新突破，为后续同位素标准物质研制积累了经验。

氢氧稳定同位素技术在水循环和环境研究中得到广泛应用，特别是在地球科学领域逐渐成为一种新的研究技术手段，在当前地质调查工作中起到技术支撑作用。标准物质是高精度分析数据的基础，也是成功应用同位素技术解决相关水文、环境、地学等问题的前提和保证。

随着近 20 年我国科技水平的发展，急需研发适应当今技术水平的氢氧同位素标准物质，以满足新技术、新仪器的需求。为此，国土资源部地下水科学与工程重点实验室经过 3 年努力，成功研制了系列氢氧同位素水国家一级标准物质。

系列标准物质由 4 个呈梯度分布的同位素比值的标准水样组成，涵盖了我国大气降水同位素组成范围。本次定值采用国际间协同定值，美国 USGC、德国 UFZ、澳大利亚 CSIRO、新西兰 GNS 实验室及国内共 12 家实验室参加了该项目。

本刊编辑部 采编