

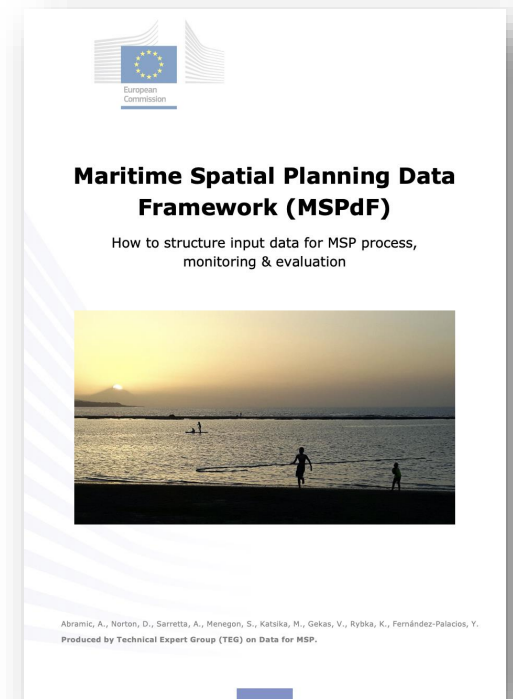
Maritime Spatial Planning data Framework

Technical Expert Group (TEG) on Data for MSP

Supported by MSP Assistance Mechanism, DG MARE and CINEA

MSP Data Tools and Guidance Workshop, 13th of March

European Climate, Infrastructure and Environment Executive Agency, European Commission





Session on MSP data Framework

- **Maritime Spatial data Framework (MSPdF);**
- **ReMAP project: MSP Input data module** based on the MSPdF;
- **MSP OR project:** Promoting and **structuring dialogue on Data Knowledge** in the European ORs through the MSP data Framework;
- **ReMAP project: Thesaurus MSPdF;**
- Questions & Answers.

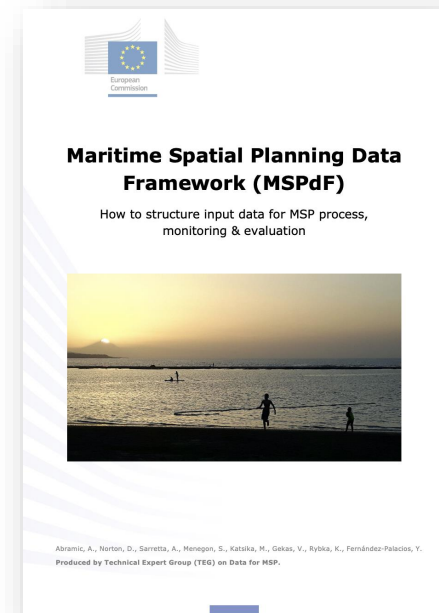
Maritime Spatial Planning data Framework (MSPdF)

How to structure MSP input data for process, monitoring and evaluation

Abramic, A., Norton, D., Sarretta, A., Menegon, S., Katsika, M., Gekas, V., Rybka, K., Fernández-Palacios, Y.
Produced by Technical Expert Group (TEG) on Data for MSP

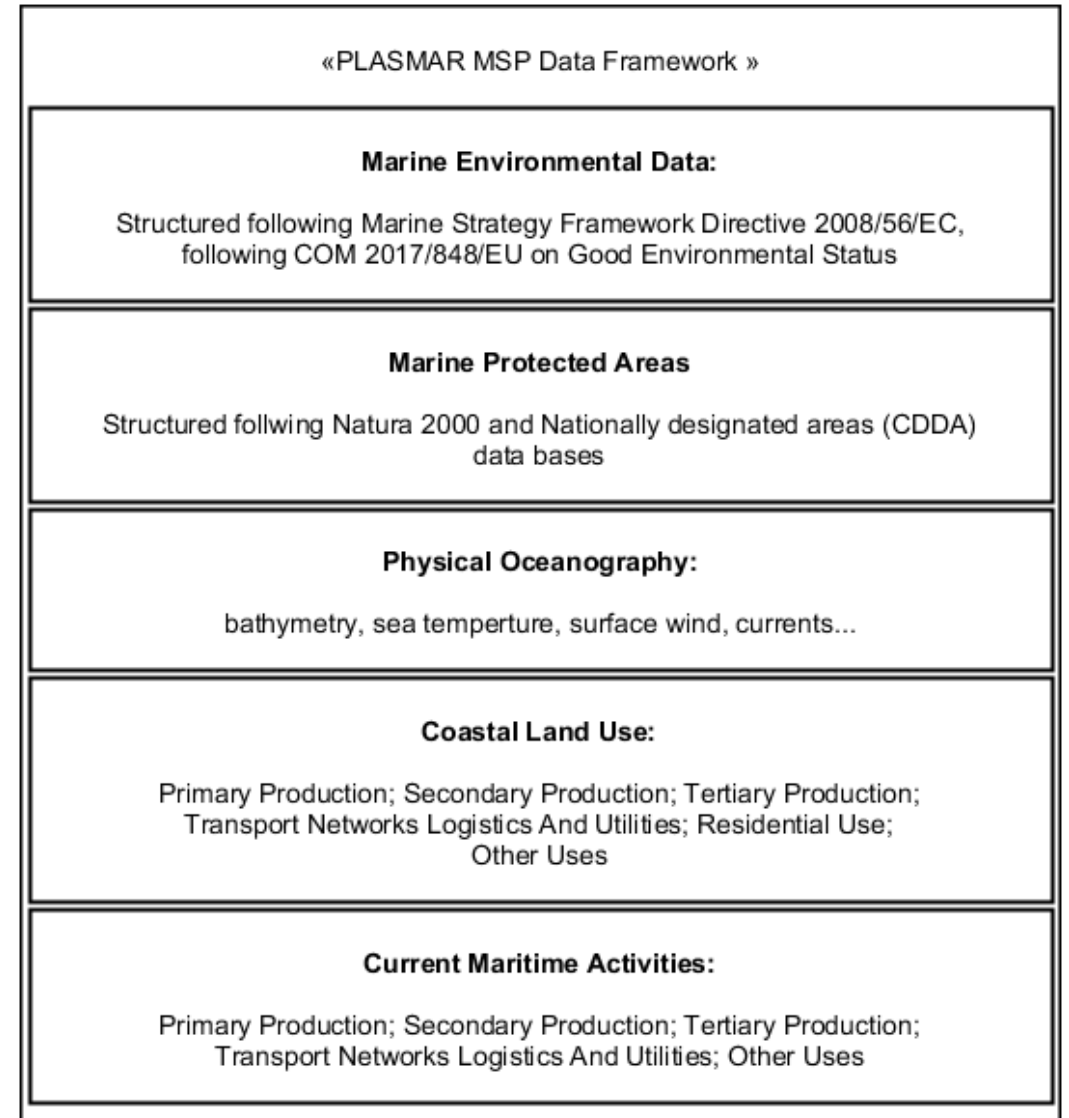
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Why Maritime Spatial Planning data Framework (MSPdF)

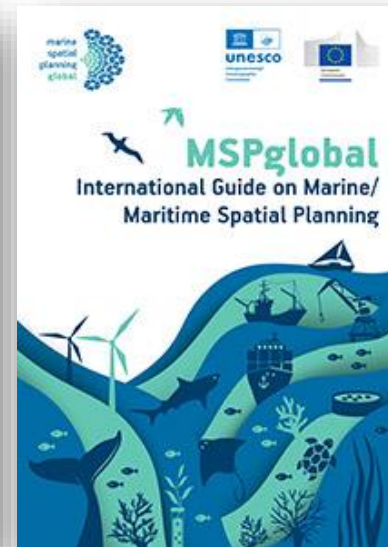
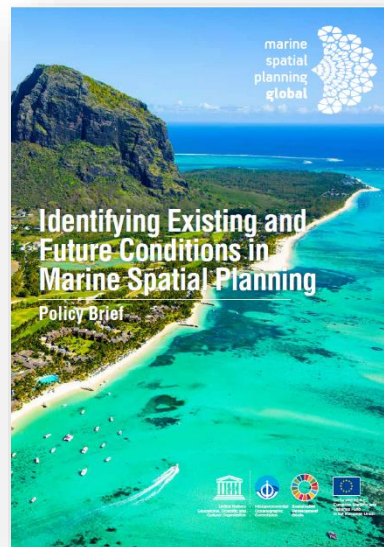
- **To structure and organize input spatial information** and data for the MSP process;
- To structure data and facilitate the **monitoring & evaluation of operational plans**;
- Initiative started in 2017, to facilitate and structure MSP data collection within the **PLASMAR cross-border project** (Portugal Spain, INTERREG MAC 2017-2020)
- **Successfully tested:**
 - Cross-border data collection process between the 3 archipelagos;
 - Suitability zoning (offshore wind energy, aquaculture and mineral extraction);
 - Applied for assessment of the results – idea of the monitoring



MSPdF First extension included in the MSPglobal Policy Brief

Abramić Andrej, Khalil Karima, Woolley Tom, Teng Xin

- **Identifying Existing and Future Conditions in Marine Spatial Planning** and final deliverable **International Guide on Marine/Maritime Spatial Planning**
- Published idea of the **structured data collection for MSP**
- Included **Socio-economic information & Governance information clusters**



MSP Input Data
required for analysing initial conditions

• **Oceanographic spatial information**
(ocean temperature, waves, currents...)

• **Data on marine environment**
(eutrophication level, benthic habitat status...)

• **Marine conservation**
(extension and objectives of Marine Protected Areas...)

• **Information on coastal and maritime activities**
(aquaculture, ocean energy facilities, coastal tourism, ports and harbours...)

• **Socio-economic information**
(coastal population, unemployment, income by sector...)

• **Governance information**
(administrative units, prospecting permits...)

TEG development of the MSPdF

- TEG established sub-group for development - **iterative testing** – of MSPdF;
- Work started in **2021, 2nd cycle** of the TEG;
- Analyzed data collections within:
 - national processes: input from **Poland, Greece, Italy, Sweden, France**;
 - cross-border EU projects: **MSP MED, SIMCelt, SIMNORAT, SIMWESTMED, SEAnse, SIMAtlantic, MED OSMoSIS, MSP OR, MarSP, eMSP NBSR, PLASMAR, PLASMAR+**
- Current version: **7 clusters and related check-lists**

«MSP Input Data» required for analysing initial conditions
Oceanographic spatial information (ocean temperature, waves, currents...)
Data on marine environment (eutrophication level, benthic habitat status...)
Marine conservation (extension and objectives of Marine Protected Areas...)
Coastal Land use (Urban areas, industrial zone, coastal tourism...)
Information on maritime activities (aquaculture, ocean energy facilities, coastal tourism...)
Socio-economic information (coastal population, unemployment, income by sector...)
Governance information (administrative units...)

MSP Input Data required for analysing initial conditions
• Oceanographic spatial information (ocean temperature, waves, currents...)
• Data on marine environment (eutrophication level, benthic habitat status...)
• Marine conservation (extension and objectives of Marine Protected Areas...)
• Information on coastal and maritime activities (aquaculture, ocean energy facilities, coastal tourism...)
• Socio-economic information (coastal population, unemployment, income by sector...)
• Governance information (administrative units, prospecting permits...)

«MSP Data Framework» Input data for MSP process and continuous evaluation and monitoring
Oceanographic characteristics and coastal climate (ocean temperature, waves, currents, rainfall, wind on the sea & land...)
Marine & coastal environment (eutrophication level, benthic habitat status...)
Marine conservation & Designated sites (MPAs, designated sites...extension & objectives)
Coastal Land use, Land cover & Planning (Land activities, cover & planning)
Operative maritime uses and Planning (aquaculture, ocean energy facilities, coastal tourism, sectorial plans ...)
Socio-economic information (coastal population, unemployment, income by sector...)
Governance information (administrative units...)

«MSP Data Framework» Input data for MSP process and continuous evaluation
Marine & coastal environment (benthic habitat distribution, eutrophication level...) MSFD GES - 11 Quality Descriptors & 39 criteria WFD GECS - 4 Quality Elements (Biological, Physico-chemical, Hydro-morphology)
Marine/Coastal conservation & Designated sites (extension & type of MPAs, maritime accident area, OECM...) Natura 2000, CDDA (IUCN class): INSPIRE model on Protected site - Designation code list INSPIRE code lists Management, Restriction or Regulation Zone
Oceanographic characteristics, coastal climate and hydrography (waves, currents, temperature, rainfall, wind, river basin network...) BODC, SeaDataNet voc., Essential Ocean Variables; INSPIRE Hydrography team classifications
Coastal Land use, Land cover & Planning (Land use as "urban areas", cover & land planning) Hierarchical INSPIRE Land Use classification (HILUCS Extended register, CORNE)
Operative maritime uses and Maritime Planning (aquaculture, ocean energy facilities, coastal tourism, sectorial plans ...) Hierarchical INSPIRE Land Use classification extended from MSP (HILUCS Extended register)
Socio-economic information (coastal population, unemployment, income by sector...) INSPIRE statistical units theme
Governance information (competences, international convention, supplementary regulation...) INSPIRE theme administrative units, Maritime Units

MSP Data Framework Input data for MSP process and continuous evaluation	Data cluster 1
Marine & Coastal Environment MSFD Good Environmental Status WFD Good Ecological Status	
Marine & Coastal Conservation and Designated sites Management, Restriction and Regulation	Data cluster 2
Oceanographic characteristics and Climate Ocean variables, physical & chemical parameters	Data cluster 3
Coastal Land use and Planning Coastal current activities & Land planning	Data cluster 4
Operative maritime activities and Planning Maritime current uses and maritime Spatial Planning	Data cluster 5
Socio-economic information Socio-demographic and Economic data	Data cluster 6
Governance information Competence & Legislation	Data cluster 7

Clusters and Check lists

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Coastal current activities & Land planning	
	<u>Data cluster 5</u>
Operative maritime activities and Planning	
Maritime current uses and maritime Spatial Planning	
	<u>Data cluster 6</u>
Socio-economic information	
Socio-demographic and Economic data	
	<u>Data cluster 7</u>
Governance information	
Competence & Legislation	

<u>Data cluster 1</u>
Marine Strategy Framework Directive 2008/56/EC, Good Environmental Status COM 2017/848/EU
Descriptor 1: Biodiversity
– Species groups of seabirds, marine mammals, fish and cephalopods
– Pelagic habitats
– Benthic habitats
Descriptor 2: Non-indigenous species
Descriptor 3: Commercial species
Descriptor 4: Marine food webs
Descriptor 5: Human-induced eutrophication
Descriptor 6: Sea floor integrity
Descriptor 7: Hydrographical conditions
Descriptor 8: Contaminants
Descriptor 9: Contamination of fish and seafoods
Descriptor 10: Marine litter
Descriptor 11: Energy and noise

<u>Data cluster 1</u>
Water Framework Directive 2000/60/EC
Good Ecological Status
Biological Quality Elements:
– Phytoplankton
– Phytobentos
– Benthic Invertebrates
– Fish
– Macrophytes
Physico-chemical elements:
– Nutrients
– Organic pollutions
– Acidification
– Specific pollution
Hydromorphology elements:
– Hydrology
– Morphology

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Data cluster 2
Marine & Coastal Conservation and Designated sites
Data cluster 3
Oceanographic characteristics and Climate
EMODnet Physics:
– Waves
– Water Temperature
– Water Salinity
– Currents
– Optical Properties
– Sea Level
– Atmospheric Pressure
– Winds
– Water conductivity / BioGeoChemical
Bathymetry

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Data cluster 2
Marine & Coastal Conservation and Designated sites
Data cluster 3
Oceanographic characteristics and Climate
Data cluster 4
Coastal Land use & Planning
Coastal current and planned Land use following
Hierarchical INSPIRE Land Use Classification System*:
– Primary production
– Secondary production
– Tertiary production
– Transport networks logistics and utilities
– Residential use
– Other uses
* https://inspire.ec.europa.eu/codelist/HILUCSValue

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Maritime current & planned uses following	
Extended Classification System	Hierarchical INSPIRE Land Use
for maritime activities & MSP*:	
<ul style="list-style-type: none"> – Primary production – Secondary production – Tertiary production – Transport networks logistics and utilities – Other uses 	
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Socio-economic information
Socio-demographic:
– Population characteristics
Economic information:
– Coastal & Ocean economy
– Coastal & Maritime sectors jobs & income

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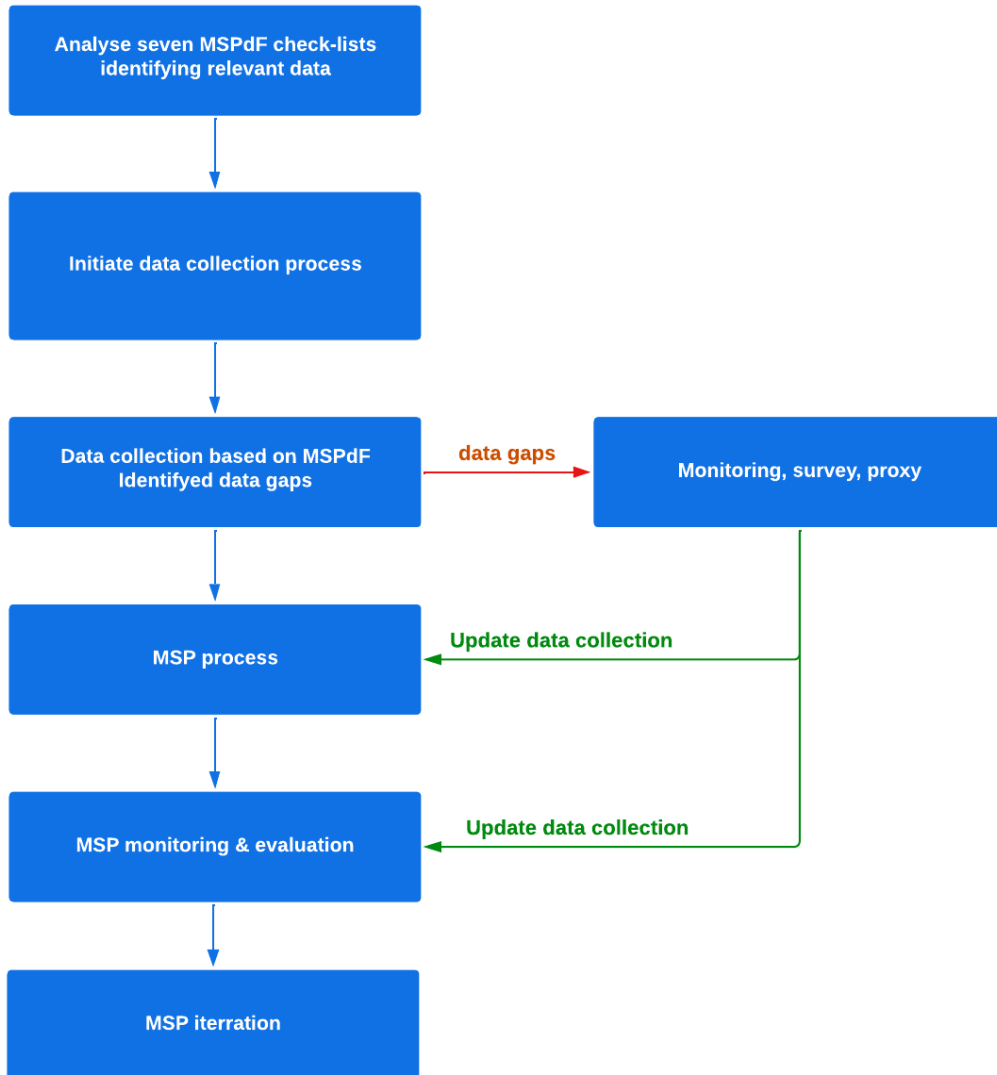
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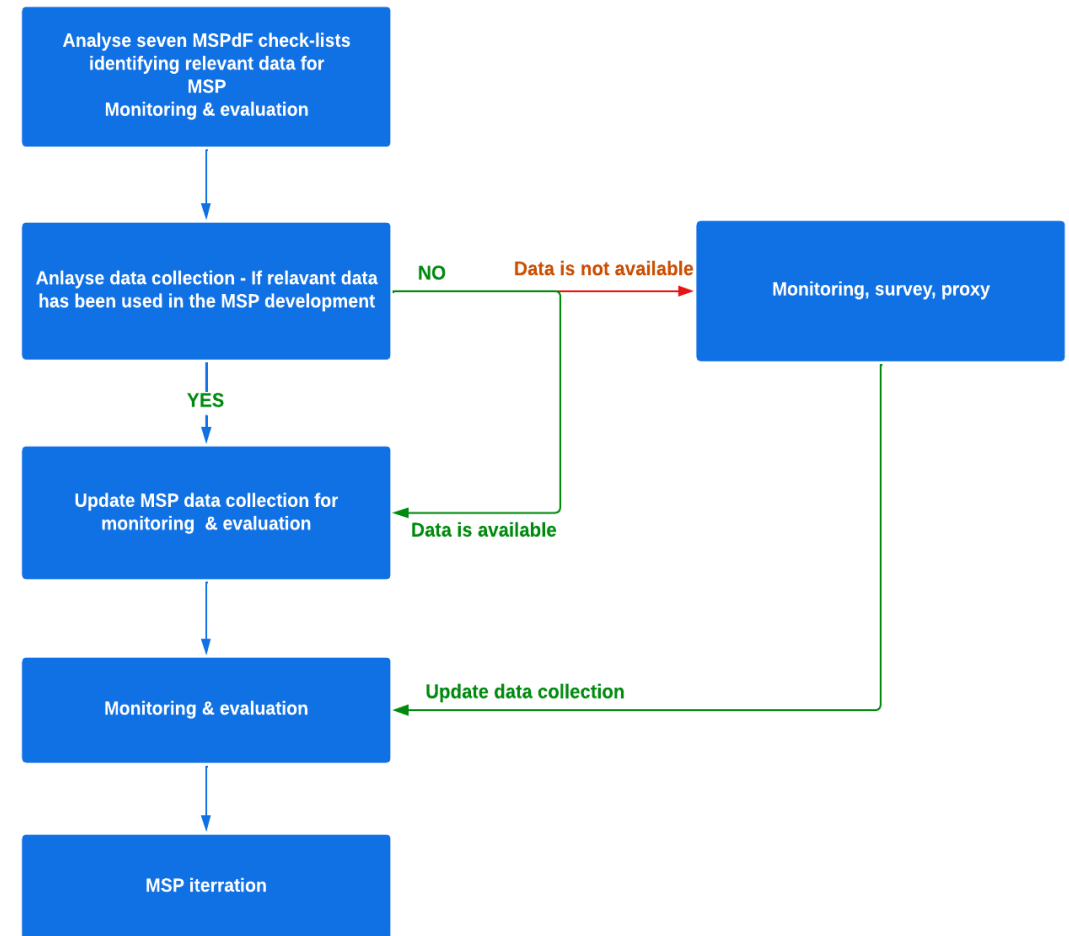
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Governance information	
Administrative competence:	
– Area of planning	
– Maritime activities	
– Coastal Activities	
(Inter)national regulations:	
– Conventions	
– Legislation	
– Policies	

Application of the MSPdF

Data collection



Monitoring & Evaluation



European Commission/CINEA publication:

Maritime Spatial Planning Data Framework (MSPdF)

How to structure input data for MSP process, monitoring & evaluation

https://cinea.ec.europa.eu/publications/maritime-spatial-planning-data-framework-mspdf_en

<https://maritime-spatial-planning.ec.europa.eu/msp-resources/technical-expert-group-teg-data-msp>

The use of the selected data clusters and checklists in the MSP process provides the following interests and benefits:

- **Guides data collection**
- **Structures Input spatial information and data**
- **Facilitates identification of data gaps**
- **Identifies relevant information not previously included in MSP process**
- **First milestone for MSP input data harmonisation - improves interoperability (structure and proposed harmonisation data models and semantic code lists)**
- **Improves comparability of applied data collections**
- **Improves the analyses potential and results comparability**
- **Supports design for monitoring and evaluation**



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