



Trans Adriatic
Pipeline

TAP AG Project Title / Facility Name:
Trans Adriatic Pipeline Project

Document Title:

TAP Italia

**Environmental Statement 2022 – 2024
2024 Update (data as of 31/12/2023)**

0	29-05-2024	Issued for Implementation	IFP	R. Roberto	S. Candio S. Onidi	L. Volpi
Rev.	Revision Date (dd-mm-yyyy)	Reason for issue and Abbreviation for it, e.g IFR		Prepared by	Checked by	Approved by

	Contractor Name:	RINA Consulting S.p.A.
	Contractor Project No.:	P0023334
	Contractor Doc. No.:	P0023334-1-H54
	Tag No's.:	—

TAP AG Contract No.: C37050	Project No.: —	
PO No.: —	RD Code: —	Page 1 of 143

TAP AG Document No.:	IAL00-C37050-000-S-TRY-0002
----------------------	------------------------------------

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	2 of 143

ENVIRONMENTAL STATEMENT INFORMATION

This document constitutes the 2024 update of the Environmental Statement of the Italian Branch of Trans Adriatic Pipeline AG (“TAP Italia”), with data and information reported updated to 31/12/2023.

The present Environmental Statement has been verified and validated by the Accredited Environmental Verifier SGS Italy S.p.A. (Address: Via Caldera 21, 20153 Milano (MI), Italy – Accreditation: I-V-0007).

The Italian version of the Environmental Statement is distributed and is made available to anyone who requests a copy.

The Environmental Statement (first issue and following yearly updates) is also made public on the company website:

<https://www.tap-ag.it/la-sostenibilita/la-tutela-ambientale>

Any requests and reports must be addressed to the Operations and Maintenance Country Manager in Italy, Angelo Eligio Lo Cascio, via e-mail to box tapitalia@tap-ag.com.

This Environmental Statement has been prepared by the following working group:

-  Alessandro Monastero (TAP AG QHSE Officer)
-  Linda Volpi (Project Manager, Coordinator of the Advisory Group and Focal Point, Rina Consulting S.p.A.)
-  Riccardo Roberto (Senior Environmental Engineer and EMS Consultant, Rina Consulting S.p.A.)
-  Stefano Candio (Lead Auditor EMAS/14001/9001/45001/50001/14064/14067/EU-ETS for international certification since 2005, on behalf of RINA Consulting S.p.A.)
-  Silvia Onidi (Lead Auditor 14001/Senior Environmental Compliance and EMS Consultant, on behalf of RINA Consulting S.p.A.)

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	3 of 143

TABLE OF CONTENTS

1. INTRODUCTION.....	9
1.1 SCOPE	9
1.2 PURPOSE	9
1.3 ABBREVIATIONS AND DEFINITIONS	10
2. ORGANIZATION ACTIVITIES.....	12
2.1 COMPANY REGISTRY	12
2.2 TAP FACILITIES IN ITALY	16
2.2.1 Offshore pipeline	18
2.2.2 Onshore pipeline	18
2.2.3 Pipeline Receiving Terminal (PRT)	18
2.2.4 Brindisi facilities.....	27
3. COMPANY ORGANIZATION	29
3.1. ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM.....	29
3.2. ROLES AND RESPONSIBILITIES	31
3.2.1. Operations and Maintenance Country Manager(s)	32
3.2.2. Corporate QHSE Manager.....	33
3.2.3. QHSE Officers	34
3.3. QHSE POLICY	34
3.4. DETERMINATION OF ORGANIZATIONAL CONTEXT AND RISK AND OPPORTUNITIES ASSESSMENT (Ref. 5)	37
3.5. QHSE INTERNAL AND EXTERNAL COMMUNICATION	37
3.6. PERSONELL TRAINING.....	38
4. ENVIRONMENTAL ASPECTS.....	39
4.1 CRITERIA FOR SIGNIFICANCE ASSESSMENT OF ENVIRONMENTAL ASPECTS	39

	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	4 of 143

4.2	SIGNIFICANT ENVIRONMENTAL ASPECTS	41
5.	LEGAL/COMPLIANCE FRAMEWORK	44
5.1	LEGAL REGISTER (REF. 5).....	44
5.2	ESIA AND EIA DECREES (REF. 5).....	45
5.2.1	Compliance framework of Melendugno site (PRT, onshore and offshore section of the pipeline).....	45
5.2.2	Compliance framework of Brindisi site	46
5.3	ENVIRONMENTAL PERFORMANCE STANDARDS.....	47
5.4	ENVIRONMENTAL MONITORING PLAN	47
6.	ENVIRONMENTAL INDICATORS	48
6.1	NATURAL GAS DISPATCHED	48
6.2	ENERGY.....	49
6.3	MATERIAL	57
6.4	WATER.....	72
6.5	WASTE.....	75
6.6	WASTEWATER	84
6.7	LAND USE IN RELATION TO BIODIVERSITY	88
6.8	EMISSIONS.....	98
6.9	SPECIFIC ENVIRONMENTAL PERFORMANCE INDICATORS.....	102
6.9.1.	Water and sediments monitoring	103
6.9.2.	Biocenosis monitoring.....	103
6.9.3.	Bioconstructions monitoring.....	104
6.9.4.	Fish fauna monitoring.....	106
6.9.5.	Surface waters and water level of the Cassano swamp	107
6.9.6.	Underground waters	108
6.9.7.	Avifauna	110
6.9.8.	Herpetofauna and amphibians.....	111
6.9.9.	Olive trees, flora and spontaneous vegetation	112
6.9.10.	Landscape and soil quality.....	113
6.9.11.	Atmosphere and air quality.....	115
6.9.12.	Noise.....	122

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	5 of 143

7. ENVIRONMENTAL OBJECTIVES..... 126

7.1 GHG EMISSIONS REDUCTION 126

7.2 ENERGY CONSUMPTION REDUCTION..... 130

7.3 WATER CONSUMPTION REDUCTION..... 132

7.4 WASTE REDUCTION..... 136

7.5 OTHER MEASURES FOR REDUCING AIR EMISSIONS..... 140

7.6 CONTROL OF MATERIAL CONSUMPTION..... 140

8. REFERENCES..... 142

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	6 of 143

LIST OF FIGURES

Figure 2.1:	TAP Shareholders	14
Figure 2.2:	TAP's overall route (from Greek-Turkish border to Italy).....	15
Figure 2.3:	TAP Pipeline Diagram (Offshore Pipeline and Onshore Pipeline Italy).....	17
Figure 2.4:	Pipeline Receiving Terminal (PRT) Layout	19
Figure 2.5:	Pipeline Receiving Terminal (PRT).....	21
Figure 2.6:	Simplified PRT Process Scheme.....	21
Figure 2.7:	Location and detail of the Brindisi Facility (BSCC).....	28
Figure 3.1:	TAP's QHSE Management System	30
Figure 3.2:	TAP's exchange of information and decision-making process across the HQs, Hubs and Countries	31
Figure 3.3:	TAP's organizational structure	32
Figure 3.4:	TAP AG QHSE Policy	36
Figure 6.1:	Total natural gas processed at the PRT per year.....	49
Figure 6.2:	Total direct energy consumption.....	55
Figure 6.3:	Total energy consumption and renewable energy generated/auto-consumed per year	55
Figure 6.4:	Environmental indicators for Energy Consumption / Generation	55
Figure 6.5:	Environmental indicator for Water Consumption.....	74
Figure 6.6:	Environmental indicator for consumption of water from irrigation wells for mitigation works.....	74
Figure 6.7:	Environmental indicators for waste produced by TAP Italia	78
Figure 6.8:	Environmental indicators for waste produced by TAP Italia's contractors.....	80
Figure 6.9:	Type of wastes produced by TAP Italia in the three-year period 2021-2023.....	82
Figure 6.10:	Type of wastes produced by TAP Italia's contractors in the three-year period 2021-2023	83
Figure 6.11:	Wastewater sampling activities performed at the PRT	85
Figure 6.12:	Mapping of land use in the PRT area (Source TAP Archive)	88
Figure 6.13:	Mapping of land use in the BSCC area (Source TAP Archive)	90
Figure 6.14:	Mapping of land use in the BVS area (Source TAP Archive).....	91
Figure 6.15:	Location of the new AQ9new air quality monitoring station (replacing AQ8n monitoring point from 2024)	93
Figure 6.16:	Environmental indicators for Land Use	96
Figure 6.17:	Repartition of Land Use between nature-oriented and non-nature oriented (permeable / non-permeable) areas as of 31/12/2023.....	96
Figure 6.18:	Classification of land use types (total internal areas, total sealed areas and total nature-oriented areas) as of 31/12/2023	97
Figure 6.19:	Environmental indicator on GHG emissions	100
Figure 6.20:	GHG emissions (expressed in CO2eq) associated with TAP Italia activities (year 2023).....	101
Figure 6.21:	Posidonia O. transplant.....	104
Figure 6.22:	Off-shore bioconstructions monitoring	105
Figure 6.23:	Off-shore fish fauna monitoring	107
Figure 6.24:	On-shore surface water monitoring.....	108
Figure 6.25:	On-shore underground water monitoring points.....	110
Figure 6.26:	On-shore avifauna monitoring	111
Figure 6.27:	On-shore herpetofauna monitoring	112

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	7 of 143

Figure 6.28:	On-shore olive trees, flora and spontaneous vegetation monitoring.....	113
Figure 6.29:	On-shore soil quality monitoring	115
Figure 6.30:	On-shore continuous air quality monitoring sites (Ref. 21).....	116
Figure 6.31:	On-shore discontinuous air quality monitoring sites (Ref. 21).....	118
Figure 6.32:	Results of the discontinuous monitoring campaigns of Nitrogen Dioxide carried out from 2021.....	119
Figure 6.33:	Results of the discontinuous monitoring campaigns of deposited atmospheric dust carried out from 2021	120
Figure 6.34:	Location of mobile stations (MS, AQ8) for ante-operam continuous air quality monitoring activities (Ref. 22)	121
Figure 6.35:	Comparison between PM10 Ante Operam (AO) and Post Operam (PO) monitoring at continuous monitoring points	121
Figure 6.36:	Comparison between PM2.5 Ante Operam (AO) and Post Operam (PO) monitoring at continuous monitoring points.....	122
Figure 6.37:	Comparison between NO2 Ante Operam (AO) and Post Operam (PO) monitoring at continuous monitoring points	122
Figure 6.38:	Location of continuous (left) and discontinuous (right) noise monitoring points ...	123
Figure 6.39:	Noise monitoring station	125
Figure 7.1:	Emissions Management Strategy	126

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	8 of 143

LIST OF TABLES

Table 4-1:	Significance Criteria.....	40
Table 4-2:	TAP significant direct and indirect environmental aspects	41
Table 6-1:	Total natural gas processed at the PRT per year	49
Table 6-2:	Energy consumed / generated by TAP facilities in Italy per year with environmental indicators.....	52
Table 6-3:	Direct energy consumption of TAP facilities in Italy on yearly basis	53
Table 6-4:	Production and auto-consumption of renewable energy of TAP facilities in Italy on yearly basis	54
Table 6-5:	Main material consumed on yearly basis	57
Table 6-6:	Indicators related to materials consumption	71
Table 6-7:	Water consumption data per year with environmental indicator	73
Table 6-8:	Waste produced by TAP AG Italy, Branch	77
Table 6-9:	Waste produced by TAP Italia's contractors	79
Table 6-10:	Quantities of wastewater discharge.....	87
Table 6-11:	Land use type of areas at PRT site, including green external environmental mitigation areas and external agricultural areas managed by TAP	89
Table 6-12:	Land use type of areas at BSCC site	91
Table 6-13:	Land use type of areas at BVS site, including green external environmental mitigation areas.....	92
Table 6-14:	Total land use per year (in terms of soil occupation) associated with TAP AG Italy, Branch.....	94
Table 6-15:	Type of emissions associated to TAP AG Italy, Branch facilities.....	98
Table 6-16:	Yearly Green House Gases (GHG) emissions associated to TAP Italia facilities.....	99
Table 6-17:	Results of continuous air quality monitoring campaigns carried out from 2021.....	116
Table 6-18:	Results of discontinuous air quality monitoring campaigns carried out from 2021	119
Table 6-19:	Results of Ante-Operam continuous air quality monitoring performed in 2017	120
Table 6-20:	Results of continuous noise monitoring (point N3n) carried out from 2021.....	124
Table 6-21:	Results of discontinuous noise monitoring carried out from 2021	125
Table 7-1:	TAP Italia's improvement objectives to reduce greenhouse gas emissions (three-year period 2022-2024).....	128
Table 7-2:	TAP Italia's improvement objectives to contain energy consumption (three-year period 2022-2024).....	131
Table 7-3:	TAP Italia's improvement objective to contain water consumption (three-year period 2022-2024).....	134
Table 7-4:	Trend of the total amount of waste produced directly by TAP (2021-2023)	136
Table 7-5:	Trend of the total amount of waste produced by TAP suppliers (2021-2023)	138
Table 7-6:	TAP Italia's improvement objective to contain waste production (three-year period 2022-2024).....	139

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	9 of 143

1. INTRODUCTION

1.1 SCOPE

The present document applies to the **corporate services, commercial services, natural gas transportation (metering and dispatching) and maintenance activities** (NACE 49.50) related to TAP AG owned and operated facilities in Italy and in particular:

-  Italian section of the pipeline crossing the Adriatic Sea to the Italian coast, i.e. approximately 45 km from the median line of the Adriatic Sea to the Italian landfall;
-  Micro-tunnel site near the town of San Foca in the municipality of Melendugno (Lecce);
-  Pipeline right of way (8.2 km) and related buffer zone in the municipality of Melendugno;
-  Pipeline Receiving Terminal (PRT) in the municipality of Melendugno and back-up control centre located in Brindisi.

1.2 PURPOSE

The present document represents the 2024 update of the Environmental Statement 2022-2024 for the Italian Branch of TAP AG (hereinafter in the document indicated as TAP Italia)¹.

The update of the Environmental Statement has been prepared in accordance with the requirements listed in Annex IV of EMAS Regulation (EC) No. 1221/2009 as modified by Regulation (EC) No. 1505/2017 and by Commission Regulation (EU) 2018/2026 of 19 December 2018 and it updates the information related to the environmental performance achieved by the facilities managed by TAP AG in Italy as of 12/31/2023.

¹ The indication of period 2022-2025, used as a reference in the first issue of the Environmental Statement of TAP Italia (Rev. 0 dated 30 September 2022), is to be considered a typo. The correct period 2022-2024 is therefore indicated in the present update.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	10 of 143

1.3 ABBREVIATIONS AND DEFINITIONS

ARERA	Autorità di Regolazione per Energia Reti e Ambiente
AUA	Autorizzazione Unica Ambientale (Single Environmental Authorization)
BCMA	Billion Cubic Meter Annually
BSCC	Back-up Supervisory Control Centre
BVS	Block Valve Station
CTA	Common Terms Agreement
EA	EA – European co-operation for Accreditation
EBRD	European Bank for Reconstruction and Development
EC	European Council
EHS	Environmental, Health and Safety
EMAS	Eco-Management and Audit Scheme
ESCH	Environment, Social and Cultural Heritage
ESD	Emergency and Shut Down
ESDD	Emergency Shut Down and Depressurize
ESIA	Environmental and Social Impact Assessment
ESMM	Environmental and Social Management Manual
EU	European Union
F-GAS	Fluorinated Gas
HM	Hazardous Materials
HQ	Headquarter
HR	Human Resources
HVAC	Heating, Ventilation, and Air Conditioning
IAF	International Accreditation Forum
IFC	International Finance Corporation

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	11 of 143

ICT	Information and Communication Technologies
ISO	International Standards Organization
ITO	Independent Transmission Operator
MASE	Ministero dell’Ambiente e della Sicurezza Energetica
MUD	Modello Unico di Dichiarazione ambientale (Single model of environmental declaration)
NACE	Nomenclatura delle Attività economiche della Comunità Europea
OECD	Organization for Economic Co-operation and Development
PMA	Piano di Monitoraggio Ambientale (Environmental Monitoring Plan)
PRT	Pipeline Receiving Terminal
QHSE	Quality, Health, Safety and Environment
RCP	Regulatory Compliance Program
ROL	Red-On-Line
SAP	Systems, Applications and Products in data processing
SCADA	Supervisory Control And Data Acquisition
SCC	Supervisory Control Centre
SRG	SNAM Rete Gas
SUAP	Sportello Unico Attività Produttive
TANAP	Trans Anatolian Pipeline
TAP/TAP AG	Trans Adriatic Pipeline AG
TAP Italia	Italian Branch of Trans Adriatic Pipeline AG
TSO	Transmission System Operator
VoC	Verification of Compliance

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	12 of 143

2. ORGANIZATION ACTIVITIES

2.1 COMPANY REGISTRY

Trans Adriatic Pipeline AG

Registered Office	Lindenstrasse 2, 6340 Baar, Switzerland
Direct Employees	> 100
Director (Managing Director)	Luca Schieppati
Director of Corporate Services	Jonathan Collingwood
Operations Director	Ricardo Ruiz Nuñez
Corporate QHSE Manager	Jose de la Torre Gallegos
Website	https://www.tap-ag.com/
Phone Number	+41 41 747 3400
Fax	+41 41 747 3401
E-mail	enquiries@tap-ag.com

Trans Adriatic Pipeline AG – Italian Branch, to which the EMAS registration applies

Address of Italian Branch head office	Via Vecchia Vernole s.n.c (traversa Trans Adriatic Pipeline), 73026 Melendugno (LE), Italy
Address of the Operational site	Via Carlo Urbani 3, 72100 Brindisi, Italy
Country Representative Manager Italy	Luca Schieppati
Operations & Maintenance Country Manager - Italy	Angelo Eligio Lo Cascio
Direct Employees	35
EA/IAF Code	31

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	13 of 143

NACE Code

49.50 (Transport via pipeline)

ATECO Code

49.50.10 (Transport via gas pipeline)

Operating Hours

Operation & Maintenance: 8-hour workdays, 5 workdays a week + on-call availability

Dispatcher Workers: 24-7 service, distributed on 3 shifts of 8-hour each

Production Capacity

10 billion cubic metres annually (bcm/a) expandable up to 20 bcm/a

Phone Number

+39 0831 579611

Fax

+39 0831 609877

E-mail
tapitalia@tap-ag.com

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	14 of 143

Trans Adriatic Pipeline AG (TAP) is a Company established under Swiss law (art. 620 et seq. of the Swiss Code of Obligations), with its head office in Baar, Switzerland and branch offices in Greece, Albania and Italy.

TAP is currently owned by the following shareholders (Ref. 1):

-  20% by BP Pipelines TAP Limited (a wholly owned indirect subsidiary of BP plc);
-  20% by AzTAP GmbH (a wholly owned subsidiary of Southern Gas Corridor CJSC, a company owned jointly by SOCAR and the Ministry of Economy and Industry of Azerbaijan);
-  20% by Snam S.p.A.;
-  20% by Fluxys Europe B.V. (a wholly owned subsidiary of Fluxys SA);
-  20% by Enagás Internacional S.L.U. (a wholly owned subsidiary of Enagás SA); and



Figure 2.1: TAP Shareholders

TAP pipeline is the European section of the Southern Gas Corridor, a 3,500 Km gas value chain stretching from the Caspian Sea to Europe.

Working to national and international safety and operational standards, TAP acts as a Transmission System Operator (TSO) and Independent Transmission Operator (ITO), providing capacity to shippers interested in transporting gas in a safe, reliable and efficient manner.

The pipeline starts near the Evros area of Kipoi at the Greek-Turkish border, where it is connected to the Trans Anatolian Pipeline (TANAP). It traverses northern Greece westwards to Ieropigi, Kastoria at the Greek-Albanian border. Crossing Albania and the Adriatic Sea, the pipeline comes ashore in Southern Italy to connect to the Italian gas network.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	15 of 143

TAP's routing facilitates gas supply to several South-East European countries and its landfall in Italy provides multiple opportunities for further transportation of Caspian gas to the wider European markets (Ref. 2).

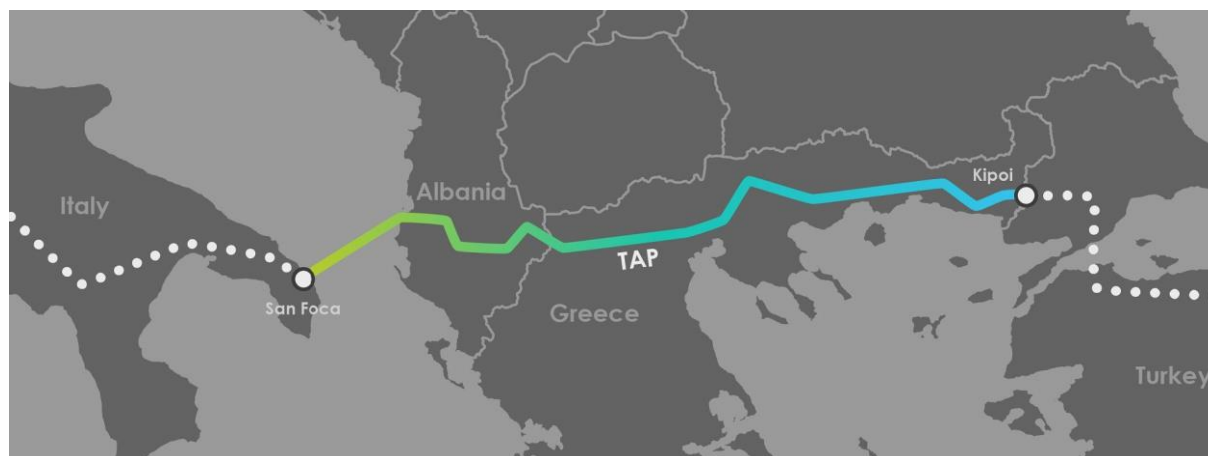


Figure 2.2: TAP's overall route (from Greek-Turkish border to Italy)

TAP's current operational capacity is 10 billion cubic meters annually (*bcm/a*). However, with the addition of two compressor stations and modification to the existing compressor stations, the existing pipeline capacity can be increased to a throughput of up to 20 *bcm/a* (Ref. 3). TAP is currently preparing the engineering for the expansion of the throughput of the PRT in order to begin the authorization procedures starting from the second half of 2024.

In Italy, TAP operates through its Italian branch registered at the competent Chamber of Commerce, Industry and Crafts (Camera di Commercio Industria e Artigianato) and its activities in Italy can be currently divided in two main areas (Ref.1):

-  Operations management activities, which include the activities required to operate and maintain the local on- and offshore infrastructure (with subcontractors), local QHSE support, the commercial and operations system control & dispatching as well as the ICT;
-  Country office activities, which include local support in finance, ICT, procurement, legal, HR, stakeholder relations, etc.

In 2023, TAP Italia moved the registered office of the Italian branch to Melendugno (at the Pipeline Receiving Terminal "PRT") while the current operational headquarters is in Brindisi (where the Backup Supervisory Control Centre "BSCC" is located).

Currently, TAP employs over 100 Oil and Gas specialists from 24 countries and over 200 experts from contracted service companies who cooperate for various reasons with the company.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	16 of 143

As of 31/12/2023, there are 35 direct employees in TAP AG facilities in Italy, at the time being all in force at the PRT. In addition to these there is also 1 worker administered by Adecco Italia S.p.A. It should be noted that in September 2023 TAP personnel previously employed at the BSCC has been transferred to the PRT.

In addition to the above-mentioned staff, as external collaborators, there are 4 employees of Snam Rete Gas S.p.A., which is in charge of carrying out the maintenance activities of the PRT, 13 employees of Alma Roma S.r.l. (4 at the BSCC and 9 at the PRT for each shift), which is in charge of the guard service, divided into three daily shifts, 5 employees of Honeywell operating both at the PRT and the BSCC and 1 employee of Brunel at the BSCC (ICT activities) and, finally, 4 employees of BioCity (2 at BSCC, 2 at PRT) for cleaning and sanitizing activities in the workplace (operating in 4 hour shifts 6 days a week).

TAP's corporate structure ensures that day-to-day activities as a TSO are undertaken independently from the production or supply related activities and interests of its shareholders. TAP updated its Regulatory Compliance Programme (November 2020) following certification as independent transmission system operator (*ITO*) and prior to the start of commercial activities. This *RCP* has been approved by the national regulatory authorities in TAP's *host countries*, including Italian *ARERA* for Italy (Ref. 4). The RCP aims to:

-  ensure that TAP's operations are performed on an independent basis;
-  prevent any influence from TAP's shareholders active in supply and production of natural gas;
-  ensure that discriminatory conduct vis-à-vis third parties is prevented;
-  restrict the communication of commercially sensitive information towards TAP shareholders.

2.2 TAP FACILITIES IN ITALY

An overview of TAP's pipeline route (Offshore Pipeline and Onshore Pipeline Italy) is provided in Figure 2.3 below (Ref. 5). TAP's facilities in Italy are then described in the following sections.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	17 of 143

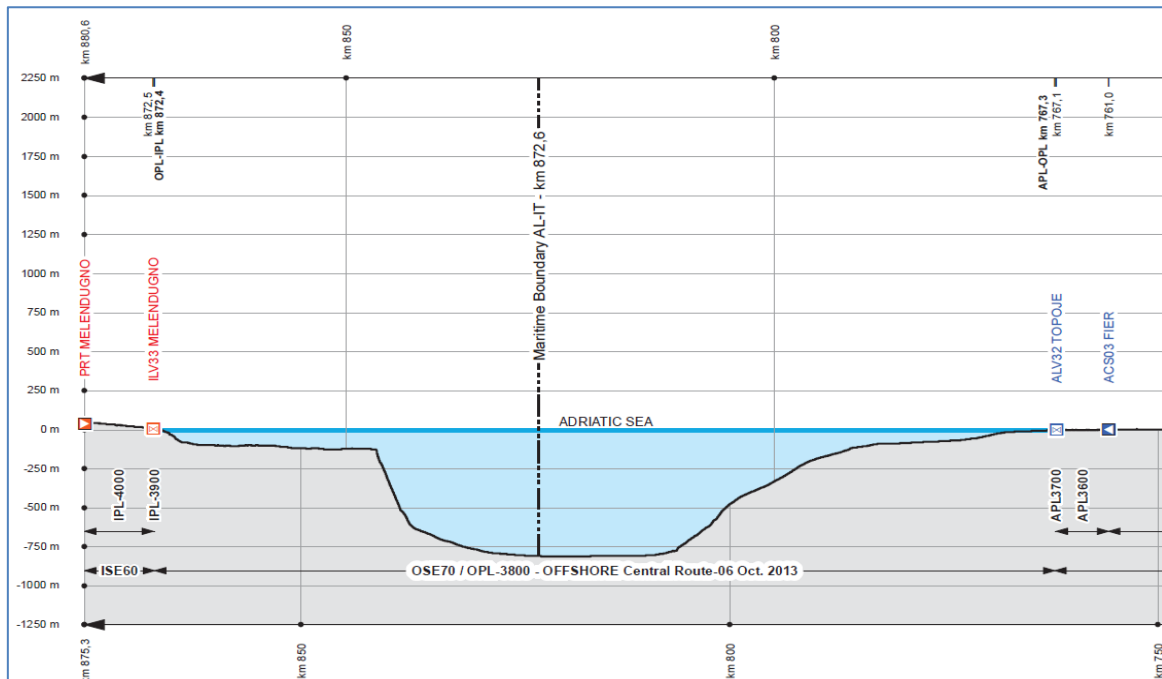
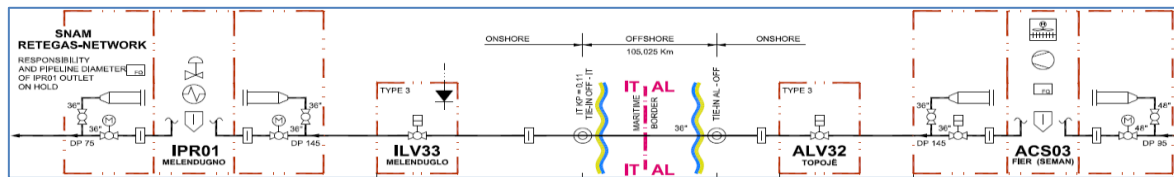
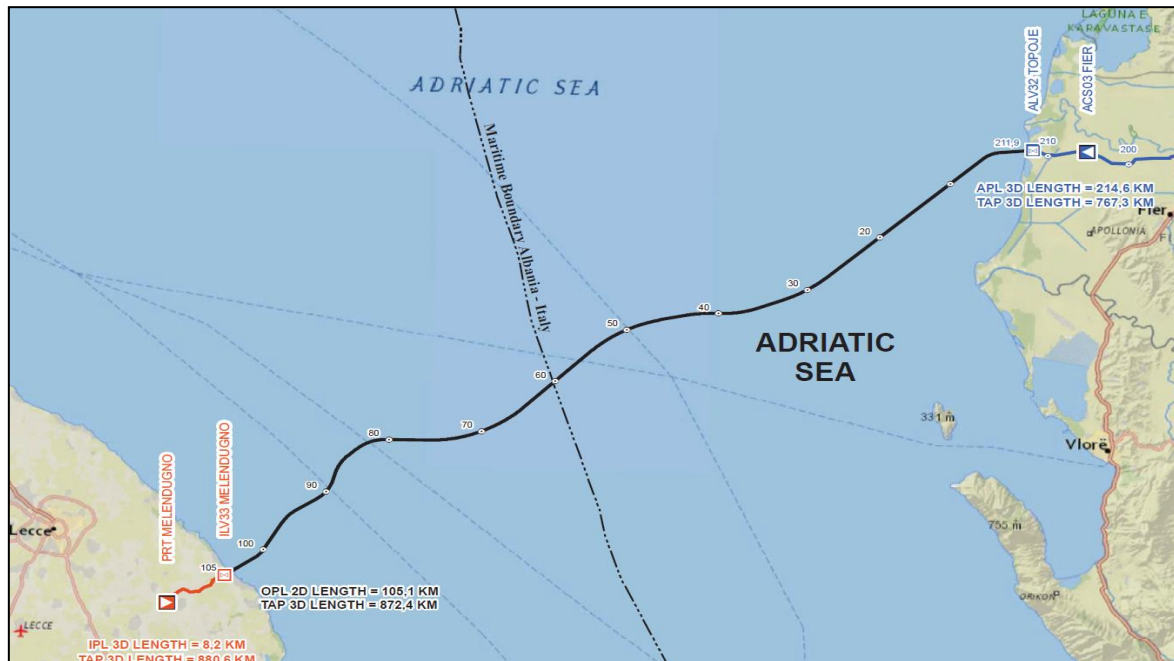


Figure 2.3: TAP Pipeline Diagram (Offshore Pipeline and Onshore Pipeline Italy)

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	18 of 143

2.2.1 Offshore pipeline

The Offshore Pipeline is approximately 105 km long from Albania landfall to Italy landfall, of which 57 included in the Albanian side and 48 km in the Italian side (see Figure 2.3 above).

Near the Albanian landfall, in Topoje (municipality of Fier), a Block Valve Station (BVS) is located. The BVS is equipped with a motor actuated ball valve in the main line, gate valves and ball valves in the bypass line, instrumentation and a vent line with an above ground vent stack (Ref. 5).

The last section of the Offshore Pipeline (about 1.5 km long) has been accomplished with a micro-tunnel, which enabled to avoid digging trenches through the coastline and interfering with sensitive marine habitats (seagrass) and, in the on-shore section, interfering with the Mediterranean Maquis area, with the coastal dune ridge and the beach.

2.2.2 Onshore pipeline

The Onshore Pipeline in Italy is approximately 8 km long, from the Italian landfall point to the Pipeline Receiving Terminal (PRT).

The Onshore Pipeline in Italy includes a Block Valve Station (BVS) installed in the proximity of the micro-tunnel and a scraper receiver station (receiving trap station) is located inside the PRT. The BVS is equipped with an electro-hydraulic isolation valve, provided with bypass around the valve to allow pressurization and re-pressurization, and is equipped with pressure monitoring system upstream and downstream of the isolation valve.

All BVS are unmanned and operated remotely by TAP Supervisory and Control Centre (SCC) in Italy located at the PRT.

A dual fibre-optic cable is installed along the entire pipeline route (both onshore and offshore) providing redundant communication between the BVS, the Compressor Stations (located in Albania and Greece), the Italy PRT and TAP's Control Centres. Back-up communication lines are also installed (Ref. 5).

2.2.3 Pipeline Receiving Terminal (PRT)

Purpose of the Italian Pipeline Receiving Terminal (PRT) is to meter and condition the gas from TAP before it ties-in to the Snam Rete Gas (SRG) network (Ref. 5).

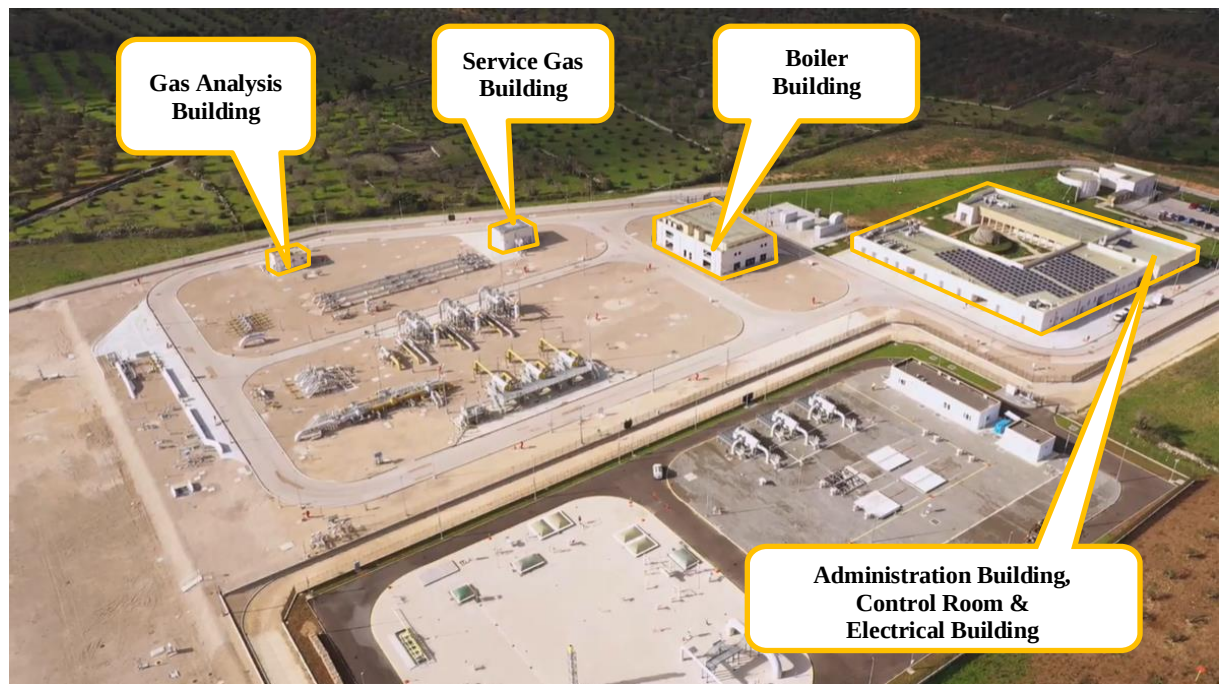
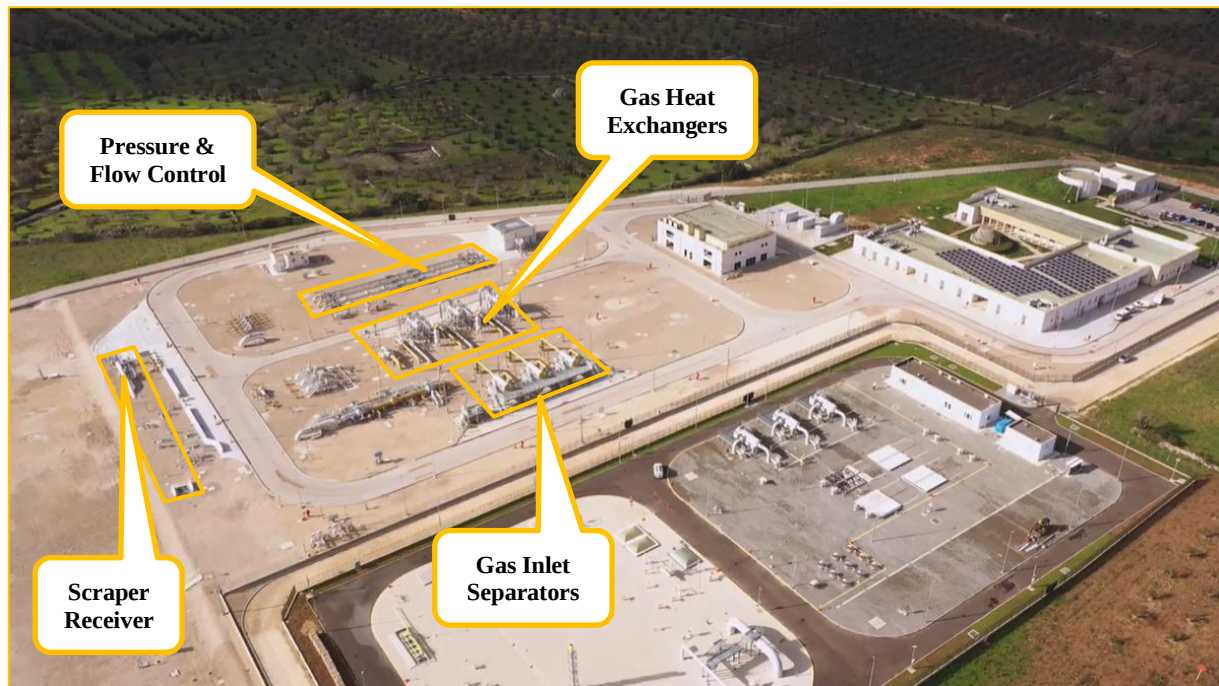
The overall PRT layout and identification of PRT units is provided in the Figures below, followed by a description of PRT main characteristics.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	19 of 143



Figure 2.4: Pipeline Receiving Terminal (PRT) Layout

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	20 of 143



 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	21 of 143

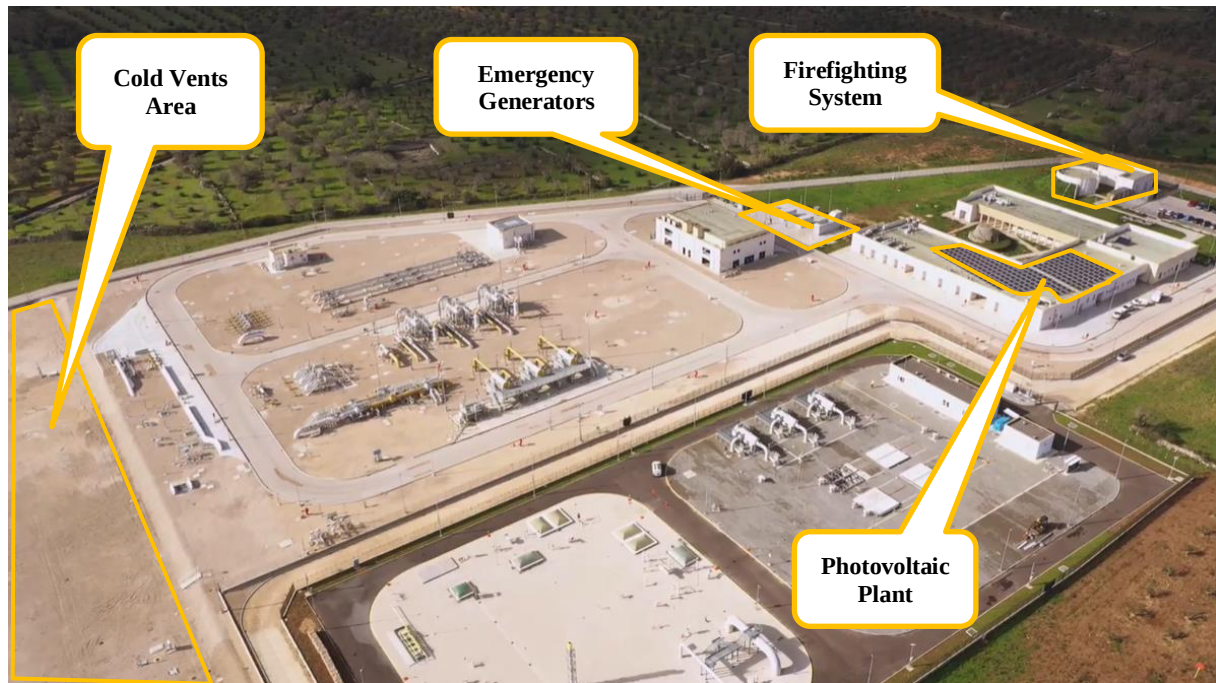


Figure 2.5: Pipeline Receiving Terminal (PRT)

Simplified Process Overview (Ref. 5)

The TAP pipeline system upstream of the terminal is rated for a design pressure of 145 barg, whereas the Snam Rete Gas (SRG) pipeline system downstream of the terminal has a design pressure of 75 barg. Pressure reduction facilities are included in the terminal to guarantee the downstream system is protected from the high-pressure upstream facility.

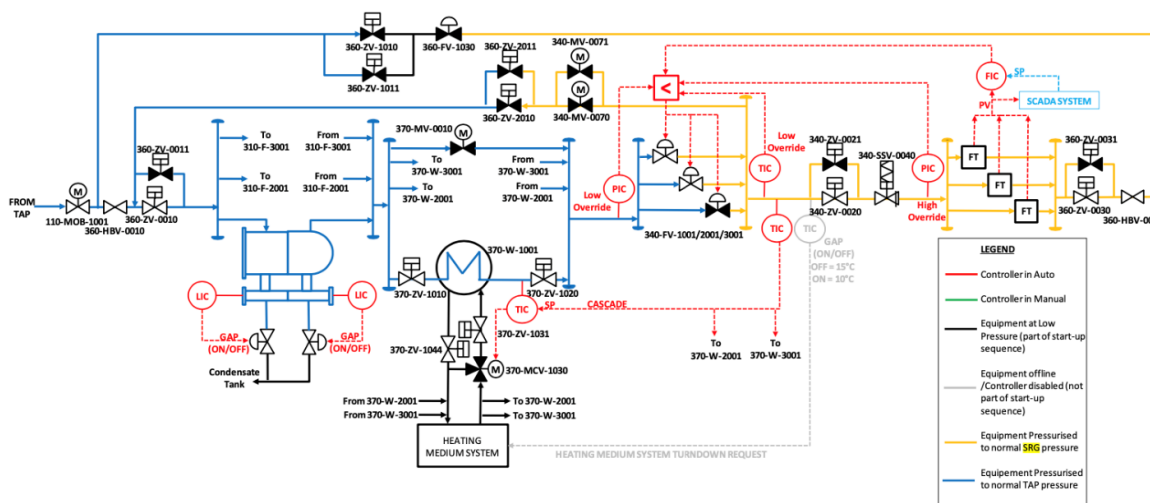


Figure 2.6: Simplified PRT Process Scheme

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	22 of 143

Site Access (Ref. 5)

There are two access roads to the site:

 Southern access;

 Northern access.

Process Area (Ref. 5)

Process units at PRT are:

-  **Scraper Receiver**: this is the operational interface between the pipeline and the Pipeline Receiving Terminal.
-  **Inlet-Separator**: this is to separate any solid particles and free water from the gas stream (2+1 for 10 bcm/a, 4+1 for 20 bcm/a). Separation is facilitated by two separation stages. The first stage separation uses cartridges to remove any solid particles and give coalescing effects and thereby generate liquid droplets with a greater size. Finally, the gas stream enters a demisting/vane stage where these larger droplets are removed. Drainage of collected liquids is automatic.
-  **Gas Heat Exchanger**: as the pressure reduction causes temperature reduction (Joule-Thompson effect), the gas may require heating to maintain the temperature above the minimum (3°C). Heating is done upstream of the pressure reduction to avoid potential drop out of liquids (water or condensate). The gas heat exchanger is engineered in a 2+1 design for 10 bcm/a, (4+1 for 20 bcm/a). Preheating is achieved by warm water on the shell side of a two passes shell and tube heat exchanger. Gas may be routed through a bypass if heating is not required.
-  **Pressure and Flow Control Unit**: this is designed to control the flow and control the delivery pressure of the gas. The flow set point is generated by the metering system. The differential pressure between TAP and SRG network is minimized to avoid unnecessary heating of the gas by dispatching.
-  **Metering**: metering is done by ultrasonic flowmeters. There are 2+1 x 50% run for 10 bcm/a (4+1 for 20 bcm/a).
-  **Outlet header**: this is from where the gas is routed to Snam Rete Gas (SRG) network.
-  **Condensate tank**: the purpose of the condensate tank is the collection and storage of all liquids separated in the individual filters/separators until removal by a vacuum truck. It is double skin, trace heated, provided with a flame arrestor and located above ground. Process

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	23 of 143

condensate is collected within the closed drainage system that conveys the condensate into the condensate tank. The collected fluids are removed by a tanker for disposal at licensed third-party facility.

-  **Fuel gas unit:** this provides fuel to the heating medium system. Gas is delivered from the SRG side and routed through a filter where liquids and deposits from the pipeline are removed. After filtering the gas is routed through an electrical heater. In this heat exchanger, the gas is preheated to compensate the temperature loss (due to Joule-Thompson effect). Downstream of the heat exchanger the gas pressure is reduced to the required pressure of approximately 3 barg, with further reduction at the consumer unit.
-  **Analyser system:** the sample points for the Analysers are located on the inlet and outlet of the metering streams. These sample results in conjunction with other operational parameters allow for accurate calculation of the quantity of gas transferred to the SRG system.

Boiler building (Ref. 5)

The boiler building provides space for:

-  Domestic Heating system (Administrative Rooms and Control Room);
-  Heating Medium system;
-  Instrument air Compressor to provide instrument air (three compressors in parallel).

The boiler building contains 2 electrical boilers of 1 MW capacity each, plus 2 additional boilers with methane gas burners of 3.50 MW capacity each. Gas burners can be used only as a backup, in the event electricity supply is missing. It is estimated that gas boilers can be used up to 2% of the time on a yearly basis.

Instrument air system (Ref. 5)

The instrument air system comprises:

-  Oil-lubricated air compressors;
-  One air storage vessel;
-  Instrument air dryer packages;
-  Instrument air storage vessels;
-  Service air distribution network;

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	24 of 143

 Instrument air distribution network.

Vent and blowdown system for emergency depressurization (Ref. 5)

The vent system is designed to allow depressurisation of the station piping down to 6.9 barg within 15 minutes in accordance with EN23251 requirements.

There are 2 Vent Stacks located at the south of PRT site. Sterile area separates the Vent Stack from the next facility (the pipeline area).

Physical Dispatching has the option to isolate the station from SCADA by triggering the ESD option (Emergency Shut down) or safely vent the gas of the station by SCADA ESDD option (Emergency Shut down and depressurize)

A push button is present to allow the operator to force open the control valve. A high-pressure alarm will sound if the pressure in the vent header is greater than 0.5 barg when blowdown has not been initiated. This will indicate if there is a leaking blowdown valve. The gas is routed through a silencer and finally discharged to the vent stack.

Administration/Utility Area (Ref. 5)

The administration and workshop buildings are located in the north side of the plant (exactly diagonally opposite to the location of the vent Stack) for safety reasons, close to the site entrance gate. The guard house is integrated in the administration building and located at its corner. A parking lot is located outside of the gate. The buildings are all on one level. The meeting room, which is located within the administration building, ground floor, is also used as Emergency Response Room.

The Electrical building is directly connected to the Administration building. There is a paved area that surrounds the building from all sides.

Power Transformers are also placed within the electrical Building.

Photovoltaic Plant

A Photovoltaic Plant is installed on the roof of PRT's administration/electrical building, with a total rated output of 64,26 kW. Nearly all the electricity produced by PRT's Photovoltaic Plant is used for self-consumption requirements at the PRT.

Diesel Power generation (Ref. 5)

The auxiliary diesel power generation system at PRT can provide enough power to run the plant if the normal power supply from the grid is interrupted. It is designed for 48-hour continuous use.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	25 of 143

Diesel power generation is installed west of the electrical building and is surrounded by paved roads. The diesel tank is underground whilst the generators have a small tank at their base which is refilled automatically upon consumption of its capacity. This design minimizes risks for fumes, fire and spills. It has direct access to the road and is located on a paved area.

Diesel storage (Ref. 5)

The diesel storage system includes a double walled Diesel Storage Tank with 16m³ capacity, a Diesel Storage Pump, a main double walled Day Tank and 2 Emergency Day Tanks for the power generators and fire water pumps.

The Diesel storage tank is located close to the diesel power generation. All tanks include a leak detection system.

The storage tank is to be filled by road tanker using the road tanker loading pumps via hose connection. The system include an earthing/bonding facility to ensure that there is zero electrostatic potential between the tanker and the storage tank.

An audible and visible high-level alarm will warn the tanker operator when the liquid level is high. A logic prevents loading diesel in the storage tank closing the inlet valve if earth grounding point is not provided, or if high-high liquid level is reached in the tank.

Wastewater / Rainwater system

The PRT is equipped with a wastewater / rainwater collection network that connects to a dispersing lamination basin built for the collection of the following water streams before their discharge into the soil:

-  domestic wastewater from administrative buildings, following a dedicated biological pre-treatment system;
-  rainwater from paved areas and process areas, which are preliminary collected in a first rainwater tank and pre-treated with oil separation and sedimentation (Stormwater system Division A);
-  rainwater run-off from buildings' roofs and unpaved roads (Stormwater system Division B).

Fire Fighting Systems (Ref. 5)

The firefighting system includes:

-  Fire Water System;
-  Foam Extinguishing System;

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	26 of 143

Inert Gas Extinguishing System.

It includes a water tank of about 450 m³ and two fire pumps (one electrical, one diesel-fuelled) which are installed inside a dedicated building (Pump Building). Fire hydrants are available at all main equipment by means of a firefighting ring network and hydrants are available in the building facilities.

HVAC System (Ref. 5)

The HVAC system provides heating ventilation and air conditioning to the buildings. The system is designed to regulate the temperature between 10 and 45°C (depending on building service).

Control Room (Ref. 5)

The Control Room (Supervisory Control Centre “SCC”) is located inside the Administration Building.

The Operators of the SCC will work around the clock (in shifts) in order to pursue:

-  the continuous supervision of the operating parameters (such as pressures, flows, temperatures, signals and alarms from the installations) through the Supervisory Control and Data Acquisition (SCADA) system.
-  the adherence to the natural gas entry and exit transportation programmes, in accordance with the respective nominations of the commercial transportation users (Shippers).
-  enhanced communication and performance of the administration activities with the upstream and the downstream network operators (Adjacent TSOs).
-  the optimization of the operating parameters of TAP’s Natural Gas Transmission System, by means of pipeline network simulation software.
-  the management of faults, gas escapes and other emergencies, including alarms from the SCADA monitoring system.
-  cooperation with the TAP Maintenance personnel, in the event of an equipment malfunction.
-  the support in the Emergency Response Coordination with the Local Authorities (Fire Brigade, Police, Ambulance etc.), in cases of emergency situations.
-  the proper implementation of emergency procedures in case of an emergency and, duly notification of the relevant authorities in the countries in the event of an emergency or of an incident.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	27 of 143

2.2.4 Brindisi facilities

As anticipated, TAP’s organization in Italy include also the facility named “Centro Elaborazione Dati con annessi Uffici e Servizi”) located in Via Carlo Urbani n.3 – Industrial Area, Brindisi (Ref. 15), which houses TAP’s Backup Supervisory Control Centre (BSCC). The unit includes:

Ground Floor:

- Offices,
- Archive,
- Technical Room,
- Server Room,
- No. 2 rooms for UPS/Batteries,
- Switchboard Room,
- Restrooms;

First Floor:

- Data-Processing Room,
- Offices,
- Meeting Room,
- Break Area;

External Area for vehicles stopping, manoeuvring and parking.

The external area is complete of an underground network for the collection of rainwater runoff and of water coming from unit’s rooftop, equipped with grids and inspection wells, with subsequent conveyance to a screening and sandblasting treatment system, followed by a tank (drainage basin) from where the treated water is finally returned into the soil.

The unit is also equipped with a sewage collection system for the management of “similar to urban” wastewater. The sewage collection system is “Imhoff Pit” type, with associated sub-irrigation system.

Finally, a Photovoltaic Plant of 6 kW total rated output is installed on unit’s rooftop, whose electricity is partly intended for self-consumption and partly fed into the distribution grid.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	28 of 143

In September 2023, TAP personnel previously employed at the BSCC has been transferred to the PRT.

However, the BSCC continues to carry out its backup function of the Infrastructure Supervisory and Control Center in the event of conditions that lead to the partial or complete impracticability of the PRT.

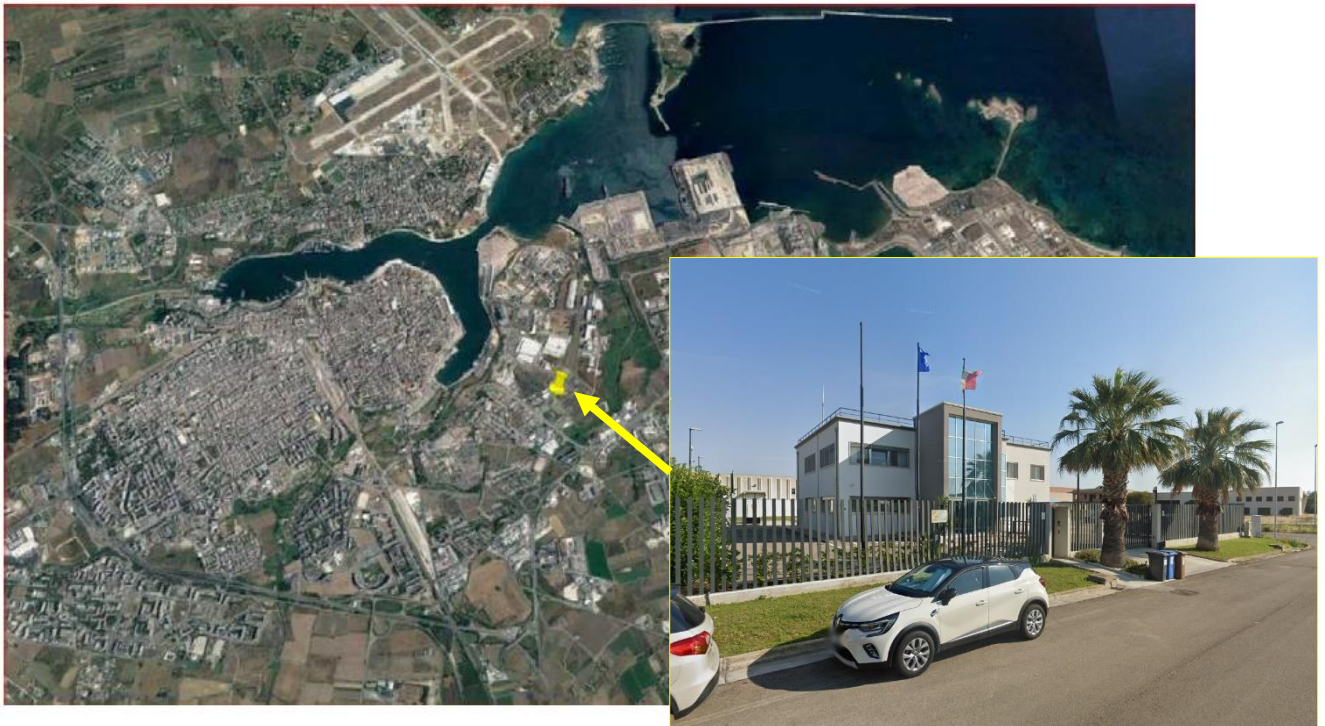


Figure 2.7: Location and detail of the Brindisi Facility (BSCC)

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	29 of 143

3. COMPANY ORGANIZATION

3.1. ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM

TAP has developed and implemented a QHSE Management System aligned with the requirements of ISO 9001, ISO 14001, EMAS and ISO 45001. The details of the integrated management system are provided in the QHSE Management System Manual (Ref. 6), which covers TAP pipeline operations and maintenance and is a high-level document governing the management of QHSE within TAP.

From 27 to 29 March 2024, TÜV NORD CERT GmbH carried out the recertification audit of the management system according to the reference ISO standards. At the date of issue of this Environmental Declaration, the new ISO certifications, which will replace those still valid until 5 July 2024, are still being issued.

As an integral part of the QHSE Management System, the Environmental and Social Management Manual (Ref. 8) provides further details on environmental standards applicable to TAP's operations, management of environmental risks at operational level, key roles and responsibilities for environmental management and defines internal and external environmental reporting requirements.

An overview of QHSE Management System documents and structure is provided in the figure below.

Furthermore, the EMAS Environmental Management System Bridging Document presents the details of TAP AG environmental management system as part of TAP AG integrated QHSE management system to demonstrate its alignment with requirements of Part A and Part B of Annex II of EMAS Regulations (Regulation EC No 1221/2009 of 25 November 2009, as updated by Regulation (EU) 2017/1505 of 28 August 2017 and by Commission Regulation (EU) 2018/2026 of 19 December 2018) in preparation for registration of TAP Italia in accordance with the Eco-Management and Audit Scheme (EMAS).

An Environmental Review (Ref. 5) has been carried out to verify that design, direction, and objectives of the TAP AG environmental management system meet the requirements of Annex I and section A.3.1 of Annex II of EMAS Regulations.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	30 of 143



Figure 3.1: TAP's QHSE Management System

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	31 of 143

3.2. ROLES AND RESPONSIBILITIES

TAP Board of Directors has envisaged a Headquarter (HQ) based in Baar, Switzerland to set the strategic direction for the Company, guide the Company's operational and commercial activities and ensure the Company's adherence to the applicable regulatory framework in force from time to time.

The HQ has supervision for functional and operational activities based in all host TAP countries where TAP Operates. The day-to-day management of the Company is delegated to the Managing Director with the support of the other Leadership Team members. TAP activities are performed according to a three-layered centralised functional model:

-  **Headquarter:** which represents the strategic decision-making centre of the Company;
-  **Hubs:** the execution of activities stemming from HQ's takes place in two distinct structures, Operational Services Hub to support operations of the physical infrastructure across countries and Transportation Services Hub to support physical and commercial dispatching of gas along the pipeline. This Transportation Services Hub is located in Melendugno and Brindisi, Italy.
-  **Countries:** Country Offices, each led by a Country Representative Manager to serve the local, legal and representation requirements and Asset Management Teams, led by Country O&M Managers, are established to ensure reliability of pipeline, compressors and stations, delivering maintenance and operational tasks.

The following figure illustrates the exchange of information and decision-making process across the HQs, Hubs and Countries, ensuring the efficiency of Company management and operations and timely response to critical events.

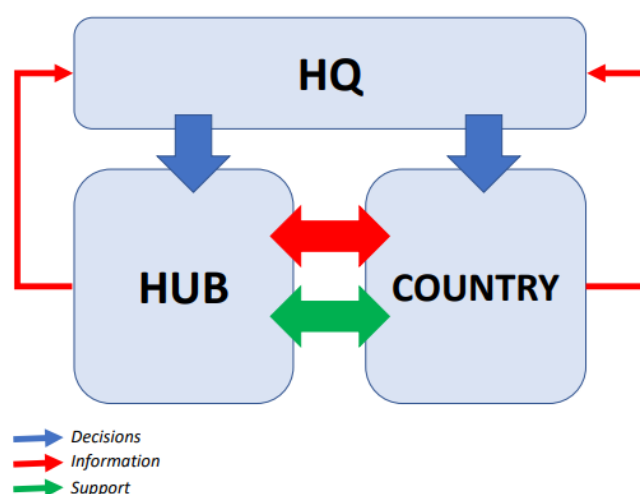


Figure 3.2: TAP's exchange of information and decision-making process across the HQs, Hubs and Countries

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	32 of 143

Detailed TAP’s organizational structure, including TAP Italian Branch organization (TAP Italia), is illustrated on the HR management tool (Success Factor) which provides an overview of the interrelationship between functions and individuals (Ref. 6). An overview of TAP’s organizational structure is illustrated in Figure 3.3 below.

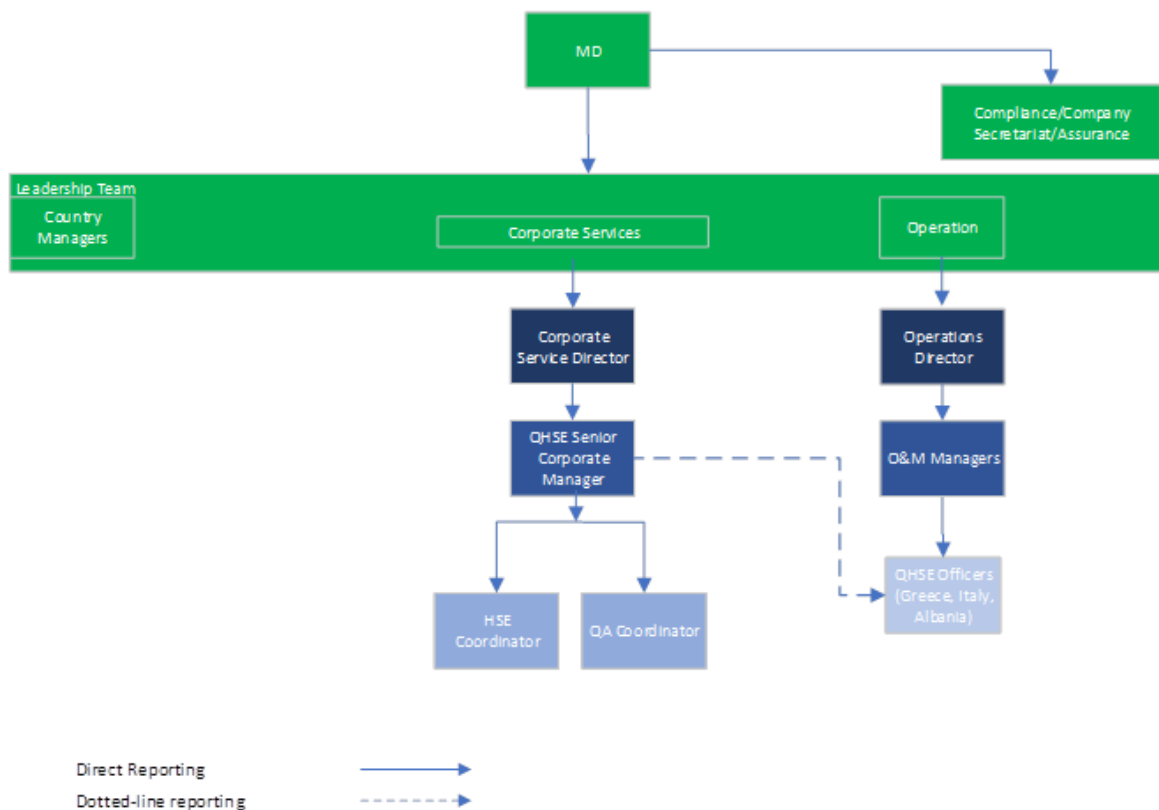


Figure 3.3: TAP’s organizational structure

TAP AG organization includes roles such as the Operations Director, who shall support the roles and responsibilities presented below.

3.2.1. Operations and Maintenance Country Manager(s)

Environmental Management of operation and maintenance of TAP’s pipeline systems in each host country has been delegated to the Operations and Maintenance Country Manager(s), who is responsible for:

- Ensuring compliance with and implementation of TAP AG standards and QHSE Management System, including applicable environmental, urban and land planning legislation, Lenders and ESIA requirements, implementation of practices for the prevention of pollution and management of waste, and operation of facility flood protection, drainage and runoff systems;

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	33 of 143

-  Ensuring implementation of the ESCH Management Controls outlined in Section 3.2 of the ESMM (Ref. 8);
-  Ensuring implementation of the ESCH Compliance Oversight and Assurance Framework outlined in Section 3.4 of the ESMM (Ref. 8).

3.2.2. Corporate QHSE Manager

Specific responsibility for the implementation of the QHSE Management System and reporting on its effectiveness has been delegated to the Corporate QHSE Manager, who is responsible for:

-  Developing and maintaining an operations QHSE management system that details how ESCH risks shall be systematically identified, assessed, avoided, mitigated and managed;
-  Acting as the management representative for QHSE Management System for EMAS in Italy;
-  Ensuring that the QHSE Management System conforms to the requirements of ISO 14001 and to the requirements of EMAS in Italy;
-  Reporting on the performance of the QHSE Management System and opportunities for improvement to the TAP AG Board of Directors;
-  Ensuring that the integrity of the QHSE Management System is maintained when changes to the system are planned and implemented;
-  Ensuring that TAP's processes are delivering their intended outputs and outcomes;
-  Providing adequate and appropriate QHSE resources for implementation of the QHSE management system;
-  Providing the operations leadership team and functional leaders with QHSE management system advice, guidance and assurance;
-  Promoting the standardisation and simplification of QHSE management system plans, processes and procedures;
-  Developing and managing a budget for the QHSE management system team and ensuring that QHSE management system team activities are effectively conducted within the constraints of the budget;
-  Review and update of the ESMM (Ref. 8) to ensure consistency with the TAP AG operations.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	34 of 143

3.2.3. QHSE Officers

The QHSE Officer(s) supports the implementation of the TAP environmental performance standards and is responsible for:

-  Monitoring Contractors' compliance with contractual environmental requirements (e.g., waste control procedure, pollution prevention procedure, etc.);
-  Performing environmental incident investigation and reporting, where needed;
-  Provision of technical environmental advice to TAP AG operations;
-  Facilitation of environmental assurance activities;
-  Reporting on environmental compliance and corrective action implementation.

3.3. QHSE POLICY

TAP has implemented its QHSE Policy (Ref. 9) to provide a framework for TAP's QHSE Management System and delivery of QHSE Objectives. The QHSE Policy is applicable also to TAP's Italian Branch.

Also based on the improvement opportunities defined during the Third Party Audit, conducted from 4 to 6 October 2022 for the verification and validation of the Environmental Statement (first issue dated 30/09/2022), TAP has started the review of the QHSE Policy to integrate the objectives related to Energy Transition aimed at minimizing emissions into the atmosphere related to the production process. At the time of preparing the present document, TAP QHSE Policy Update has been issued on 01/05/2023 (in its English version, with Italian translation in progress). The updated English version of TAP QHSE Policy is reported below.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	35 of 143



Document Title:	QHSE Policy		
Document No.:	CAL00-TAP-QHSE-X-TVO-0001	Rev. 9	
Classification:	PUBLIC		

Appendix 1 QHSE Policy (Statement for Communication to all Stakeholders).

TAP's mission and vision encompass its role in opening the Southern Gas Corridor into Europe, as well as its contribution to a sustainable energy future. TAP provides a cost-effective, energy efficient, safe and sustainable energy transportation route, while supporting local communities and benefitting the wider region.

In pursuit of this vision, TAP follows an integrated approach to managing risks and opportunities. Being aware of its responsibilities and duties towards its shareholders and stakeholders, we are committed to internationally recognized quality, health, safety, environment and energy efficiency standards and the use of best practice. We will act in an ethical and socially responsible manner and operating with safety and sustainable practices, including reducing energy consumption and promoting energy efficiency.

Our ambition is to avoid negative impacts where possible, enhance positive effects and contribute to sustainable development.

This policy applies to all activities of TAP from conceptual design and construction to operations; its principles apply to all personnel working for TAP. As a rule, TAP will aim at agreeing with relevant TAP contractors and suppliers that they abide by this policy.

We are committed to:

- Providing a framework for setting QHSE and other objectives and a management system aimed at their achievement.
- Integrating QHSE in how we do business and demonstrating the QHSE importance through hands-on leadership and behaviour.
- Continually improving our integrated Quality, Environmental and Health & Safety System.
- Identifying critical success factors, monitoring, measuring and seeking to continually improve performance in relation to these via the achievement of associated KPIs as our objectives (e.g. QHSE and energy performance objectives)
- Developing opportunities to continually improve performance against our identified KPIs (with regard to Quality, Health, Safety, Welfare, Environment, biodiversity, Energy efficiency and utilisation of our assets).
- Operating the pipeline safely, protecting people, the environment, communities and assets through the implementation of integrated QHSE Management System.
- Respecting the cultural heritage of countries in which we operate.
- Contributing towards achieving EU's net-zero emission goal by 2050
- Endeavor to meet stakeholder's expectations on providing gas capacity products and gas transportation services
- Comply with applicable laws, regulations, including all applicable health, safety, environment and energy efficiency laws
- Consulting with our workforce and promoting workforce participation.
- Provision of the necessary means, information and resources for the above to meet the related objectives and targets.

How we work:

QHSE is a common responsibility:

- All personnel acting on behalf of TAP are responsible for ensuring that the QHSE policy and principles are understood and implemented at all levels of the organisation ensuring participation and consultation. Managers will be held accountable for QHSE performance.
- Respecting human rights, within our area of influence.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	36 of 143



Document Title:	QHSE Policy	
Document No.:	CAL00-TAP-QHSE-X-TVO-0001	Rev. 9
Classification:	PUBLIC	

QHSE Risk Management

- We work systematically; eliminate hazards, understand and manage risk, undertake improvement processes based on surveys and risk assessments. For any identified QHSE hazards and impacts, measures will be taken to reduce any related risks to As Low As Reasonably Practicable (the ALARP principle).

Safety first

- Safety comes first. Facilities and operations are established, planned and maintained, taking safety parameters into account to prevent accidents. All employees have the duty to stop any works if adequate systems to control risks are not in place.

Environmental protection

- Facilities were designed, constructed and are operated to minimize energy and water consumption, emissions to air, noise, discharges of liquid effluents, and waste generation. The principle of Best Available Techniques (BAT) shall apply.
- We work systematically to reduce energy consumption and associated greenhouse gas emissions, implement cost-effective energy efficiency measures and promote the efficient use of energy.
- We seek to avoid, or minimize the impact of our activities on flora and fauna affected by its activities.
- We implement the Energy Transition Strategy as a global roadmap, which includes a Carbon Management Plan to identify emission sources, emissions targets (GHG and Methane emissions reduction) and detailed initiatives per year to achieve these targets and reduce TAP Carbon footprint

Attitude towards personnel:

- The health and well-being of personnel is important for TAP. We monitor occupational risks of personnel and take appropriate actions. We aim for a safe and attractive working environment characterised by respect, trust and cooperation.
- All personnel will have necessary qualifications and QHSE training for their tasks. QHSE training needs will be evaluated regularly, and relevant training programs established.

Contractors and Suppliers:

- QHSE management of contractors and suppliers shall be done in line with this policy. In addition, we expect our contractors and suppliers to fully comply with this QHSE Policy.

QHSE performance improvement - incident investigation, audits and inspections:

- We want to learn from mistakes and make sure they do not happen again. All individuals, whether contractor or staff, shall therefore report all incidents and near misses. Incident will be investigated to identify actions to be taken to prevent their recurrence. Audits will be conducted to verify implementation of the QHSE policy.

Emergency Response and Business continuity:

- We have emergency systems, Business Continuity Plans and trained personnel for emergency / Business continuity response in place for our activities. Should an accident occur, our emergency preparedness routines and resources will be available to assist in limiting the consequences and restore safe operations ensuring also business system continuity. TAP shall implement our integrated management system via compliance with the associated manual, processes, procedures and work instructions as the primary means of deploying these principles into our everyday working practices, at all levels and locations in the TAP organisation. TAP reserves the right to amend this policy at any time.

Luca Schieppati (Managing Director)

Baar

Revision 9, 01/05/2023

Figure 3.4: TAP AG QHSE Policy

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	37 of 143

3.4. DETERMINATION OF ORGANIZATIONAL CONTEXT AND RISK AND OPPORTUNITIES ASSESSMENT (Ref. 5)

TAP AG organizational context is defined as the business environment in which TAP AG operates; it comprises of internal and external issues and external and internal interested parties. Within TAP AG, it is the Managing Director’s responsibility to provide clarity on internal and external factors with potential to impact TAP AG’s business environment and to ensure that both an initial and current analysis of the business environment are carried out.

The analysis has been carried out in March 2021 by the Corporate QHSE Senior Manager and documented in the TAP Context Analysis – Risk Opportunities and Action Report (Ref. 18) with the purpose of setting direction and objectives of the QHSE Management System for the four countries that TAP operates and ensuring that the system can achieve its intended outcomes, prevent or reduce undesired effects and remain continuously improving.

The context analysis considered external and internal factors that may positively or negatively influence the operational environment of TAP AG and the organizational governance structures on both corporate and business process (country of operation) levels. For each of the identified issues and interested parties, the context analysis identified the source of information, risk/opportunity action and monitoring requirements.

Additional information on the determination of the organizational context, identification of the interested parties and determination of their relevant needs and expectations and assessment of risk and opportunities can be found in the Environmental Review Report (Ref. 5).

3.5. QHSE INTERNAL AND EXTERNAL COMMUNICATION

Internal and external communication in the area of QHSE at TAP AG facilities, including TAP AG Italian Branch (TAP Italia) is managed through the “QHSE - Communication Procedure” (Ref. 23).

TAP AG has identified the necessary internal and external communications that are required for the operation of the environmental management activities and has determined the information that need to be communicated, the frequency of communication, the internal and external recipients, along with the communication tools.

As indicated also in section “Environmental Statement Information” the Italian version of the Environmental Statement, reporting on TAP Italia environmental performances and objectives, is distributed and is made available to anyone who requests a copy. It is also made public on the company website: <https://www.tap-ag.it/la-sostenibilita/la-tutela-ambientale>.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	38 of 143

3.6. PERSONELL TRAINING

Training activities and actions aimed at improving the involvement of the employees (at each level) in the achievement of the environmental objectives defined in the present Environmental Statement (see following Section 0) are managed through TAP AG “QHSE Training Procedure” (Ref. 24).

As reported in the QHSE Management System Manual (Ref. 6), TAP AG has appointed QHSE Ambassadors in each Country where it operates, to facilitate consultation and participation of non-management personnel on a range of issues, including the policy, setting objectives and determining applicable controls for outsourcing, procurement activities and contractors. In particular, QHSE Ambassadors:

-  actively participate in the review of QHSE procedures, when necessary;
-  provide advice to the QHSE Officers on any new HSE risks identified during the execution of the activities or on any little-known dangers;
-  provide advice in the reorganization of activities in relation to HSE aspects and the emergency provisions of TAP offices and structures;
-  participate in the investigation of incidents and non-conformities and in the determination of corrective actions, where necessary;
-  present any points of concern regarding health and safety during the periodic meetings of the HSE Ambassadors, organized by the QHSE Officials at least every two months;
-  make suggestions to improve the HSE system;
-  participate in the review of the management system by providing input on any HSE-related topics that should be taken into consideration;
-  participate in the preparation of the QHSE Activity Plans and Programmes;
-  participate in the drafting/revision of the EMAS Environmental Statement when necessary (Italian team).

Monthly meetings are also held to keep the action plan updated to ensure full implementation of the environmental requirements deriving from the ESIA and from the operating permits for PRT and BSCC. The meetings are held by an Environmental Focus Group, which involves the QHSE Department and the Operations Department of TAP AG (Ref. 26).

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	39 of 143

4. ENVIRONMENTAL ASPECTS

In the Environmental Review Report (Ref. 5) the activities of TAP have all been analysed, and the environmental aspects identified.

The identification and assessment of potential impacts from TAP AG operations in Italy on the environmental components includes:

-  Physical Environment: air quality, noise, surface and groundwater, marine waters, geology, geomorphology, soil quality and seabed, landscape and visual amenity;
-  Biological Environment: flora and vegetation, fauna and habitats and protected areas.

It encompasses potential direct and indirect environmental impacts identified from routine and non-routine operations of TAP and aims to verify that current environmental management system documentation prioritises and addresses significant aspects and impacts.

For the purpose of the assessment, the area of influence for the TAP AG operational activities has been defined as the area in which a direct or indirect impact on the physical and environment might occur. For environmental impacts, the area of influence is defined as a 2 km corridor along the pipeline centre line (1 km wide either side) and 1 km from the boundary of work sites, BVS, PRT. This area is considered sufficient to encompass the area physically affected by operational activities and most offsite environmental impacts (e.g., noise and air quality impacts).

The assessment of the significance of the direct and indirect environmental aspects of TAP activities was carried out based on the criteria described in the following paragraphs.

4.1 CRITERIA FOR SIGNIFICANCE ASSESSMENT OF ENVIRONMENTAL ASPECTS

Methodology for determination and assessment of significant environmental impacts follow the methodology outlined in HSE Hazard – Impact and Risk Assessment Procedure (Ref. 10).

Evaluation of significance is based on the judgement informed by reference to legal standards, national and regional government policy, lenders' requirements, current international good practice/standards and the views of stakeholders.

Criteria for assessing the significance of impacts is defined for each type of impact and considers whether TAP AG operations will:

-  Cause legal or accepted environmental standards to be exceeded, e.g., air, water or soil quality, noise levels, or make a substantial contribution to the likelihood of exceedance

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	40 of 143

-  Adversely affect protected areas or features, or valuable resources, e.g., nature conservation areas, rare or protected species, protected landscapes, historic features, high quality agricultural land, important sources of water supply, other key ecosystem services; and
-  Conflict with established government policy e.g., to reduce CO₂ emissions, recycle waste, etc.

Summary of significance criteria is presented in Table 4-1. The degree of significance attributed to impacts is related to the weight assigned to them for decision making process during operation of TAP AG facilities in Italy.

Table 4-1: Significance Criteria

Risk	Impact Level	Criteria for Management of Risk	Risk Rank
64-256	5	Impact or Risk is unacceptable	High
	4		
	3		
16-32	2	Impact or Risk is acceptable if demonstrated to be as Low as reasonably possible (ALARP)	Significant
1-8	1	Impact or risk is generally acceptable	Low

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	41 of 143

4.2 SIGNIFICANT ENVIRONMENTAL ASPECTS

Based on the results of the significance assessment of environmental aspects, the aspects on which the organization has a direct (direct aspects) and/or indirect control (indirect aspects) have been evaluated. The following table shows all the direct and/or indirect environmental aspects considered significant or in any case of specific interest by the Organization due to their relevance from an environmental point of view. Their level of residual risk is also reported, achievable through the implementation by TAP of appropriate risk mitigation and control measures. These measures are divided between the implementation of monitoring programs or of improvement objectives. The adoption of improvement objectives was favoured when one or more interventions for improving environmental performance were considered feasible by the Organization, while the adoption of monitoring programs was considered when such interventions were already contemplated to measure the environmental performance within the framework of the requirements deriving from current authorizations or from the definitions of the Environmental Management System. For the description of the environmental objectives, please refer to the following Section 7.

Table 4-2: TAP significant direct and indirect environmental aspects

OFFSHORE/ ONSHORE ACTIVITIES	Direct (D) / Indirect (I) Impact	Env. aspect	Description	Initial Risk (pre- mitigation / control)	Residual Risk (post- mitigation / control)	Env. Targets
OFFSHORE	D	Physical alternation of seabed on marine benthos and increase in turbidity in marine benthos (positive significant aspect)	Due to the presence of the pipeline, that enhance the alternation of seabed and so composition and abundance of the benthic community	Significant (positive) (16)	Significant (positive) (32)	Monitoring Programme

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	42 of 143

OFFSHORE/ ONSHORE ACTIVITIES	Direct (D) / Indirect (I) Impact	Env. aspect	Description	Initial Risk (pre- mitigation / control)	Residual Risk (post- mitigation / control)	Env. Targets
ONSHORE	D	Emissions of natural gas	Due to the operation of cold vents (in emergency conditions)	Significant (16)	Low (8)	Improvement Objective
	D	Emissions of NOx and CO	Due to the operation of gas heating system of PRT (in normal condition) and of diesel generator (in emergency conditions)	Significant (16)	Low (8)	Monitoring Programme
	I	Water Consumption	Due to general maintenance activities during the operation of PRT, BSCC and BVS	Low (8)	Low (4)	Improvement Objective
	I	Consumption of energy		Significant (32)	Significant (16)	Improvement Objective
	I	Noise		Significant (32)	Significant (16)	Monitoring Programme
	D+I	Waste production and potential contamination of water resources and soil by spills and hazardous and non- hazardous waste		Significant (32)	Significant (16)	Improvement Objective
	I	Loss of natural vegetation	Due to routine inspections and	Significant (16)	Low (8)	Monitoring Programme

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	43 of 143

OFFSHORE/ ONSHORE ACTIVITIES	Direct (D) / Indirect (I) Impact	Env. aspect	Description	Initial Risk (pre- mitigation / control)	Residual Risk (post- mitigation / control)	Env. Targets
	I	Visual / physical disturbance	repair interventions	Significant (16)	Low (8)	Monitoring Programme
	D	Potential occupation of soil by PRT with limitation of soil functions (habitat, human activities, landscape), soil tamping, increase of waterproof surface	Due to physical presence of PRT, BSCC, BVS	Significant (16)	Low (8)	Monitoring Programme
	D	Physical changes to landscape features	Due to physical presence of PRT, BSCC, BVS	Significant (32)=	Significant (16)=	Monitoring Programme
	D	Visual impact		Significant (32)	Significant (16)	Monitoring Programme

In Chapter 6 the impacts deriving from the identified environmental aspects have been quantified, whenever possible, by calculating environmental performance indicators required by *ANNEX IV, point B, lett. F* of COMMISSION REGULATION (EU) 2018/2026 of 19 December 2018.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	44 of 143

5. LEGAL/COMPLIANCE FRAMEWORK

TAP AG ensures, through the Managing Director and as outlined in the QHSE Policy, that it complies with all applicable laws and regulations, including all applicable compliance obligations set out in environmental legislation in all countries where it operates.

5.1 LEGAL REGISTER (REF. 5)

Evaluation of compliance to legal and other environmental requirements is carried out in accordance with the HSE Legal Compliance Procedure (Ref. 19)

Identification of applicable environmental legislation has been conducted in collaboration with specialised external provider (RINA) and using electronic database Red-On-Line.

The Red-On-Line (ROL) database is updated periodically to ensure it remains reliable and current. Notification on updates to the legislation is carried out automatically to relevant parties within TAP organisation via emails from the database to ensure the awareness of relevant functions of updates that may affect legal obligations of TAP.

Each Legal Entry identifies the subject, title of the legislative act, article reference and detailed compliance requirements (both applicable and for information only) for which timely evidence is provided and the deadlines for any compliance updates are defined where applicable.

The following is a summary of the main environmental regulations applicable to TAP's activities.

Activity / Environmental Aspect	Main reference legislation / regulation
Atmospheric emissions, water discharges, waste management	D.Lgs. 152/2006 and subsequent amendments
Atmospheric emissions, water discharges	Decree of the President of the Republic 13 March 2013, n. 59
Management of equipment containing F-GAS	EU Regulation no. 573/2024
Firefighting	DPR 151/2011
Noise	Law no. 447 of 10/26/1995 Prime Ministerial Decree dated 11/14/1997
Classification, management and transport of dangerous substances	Regulation (EC) n.1907/2006 and subsequent amendments (REACH)

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	45 of 143

	Regulation (EC) no. 1272/2008 and subsequent amendments (CLP) Directive 2008/68/EC and subsequent amendments (internal transport of dangerous goods – ADR)
--	---

5.2 ESIA AND EIA DECREES (REF. 5)

TAP AG operations are required to be performed in line with TAP ESIA for Italy (Ref. 11) and ESIA Approval Decree No. 223/2014 issued by the then Ministry of the Environment and Protection of Land and Sea. Commitments from the TAP Italy ESIA are compiled into the Commitments and Licence to Operate Registers (Ref. 12, 16 and 17).

5.2.1 Compliance framework of Melendugno site (PRT, onshore and offshore section of the pipeline)

The following Decrees set a prescriptive compliance framework comprising of Verification of Compliance (VoC) conditions for various stages of TAP Pipeline design, construction and operations:

 EIA Decree No. 223/14 as modified by Decree No. 72/15, including all the provision coming from:

- EIA Screening Decree No 116/2018 related with microtunnel construction (VoC A.5 of EIA Decree),
- EIA Screening Decree No 327/2019 related with offshore pipe installation in the bioconstruction areas (VoC A.9, A.10 and A.31 of EIA Decree);

 Single authorization for construction and operation (Autorizzazione Unica) Decree of 20/05/2015, which includes also the following environmental authorizations:

- Authorization for atmospheric emissions, valid for 15 years (renewal request to be sent by 01/09/2034),
- Water discharges authorizations for domestic water and rain/washing water, valid for 4 years (renewal request to be sent by 09/29/2023).

On 01.31.2024, TAP produced an application for a Single Environmental Authorization (AUA) at the SUAP in Melendugno pursuant to the Presidential Decree of 13 March 2013, n. 59, aimed at the issuing of authorizations in the field of emissions into the atmosphere (expected only in extraordinary conditions due to the need for heating methane gas and/or activation of diesel generators) and civil and meteoric water discharges onto soil. The AUA, in fact, will replace the two authorizations previously listed.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	46 of 143

On 02/21/2024, the Province of Lecce issued Determination Prot. n. 186 with a positive opinion on the issuing of the AUA relating to emissions into the atmosphere and meteoric water discharges (accompanied by requirements for the monitoring and control of the environmental matrices involved). On 04/24/2024, Determination Prot. no. 511 has then been issued by the Province of Lecce providing a series of clarifications requested by TAP in relation to Determination Prot. n. 186 cited above.

For the issuing of the final AUA, the SUAP of Melendugno is waiting to receive decisions from the competent body (Municipality of Melendugno) regarding the management of civil water discharges.

-  Attestation of compliance with the provisions of fire prevention legislation and with fire safety requirements, Fire Prevention Certificate, issued with Practice No. 33512 dated 29/01/2021 by the Fire Prevention Office of the Lecce Provincial Fire Brigade Command for the pipeline and the PRT. By 25/09/2025, the Certificate of Periodic Renewal of Fire Fighting Conformity must be produced (5 years from the certified reports of the start of activity of the PRT and the gas pipeline, acquired by the Provincial Command of the Fire Brigade of Lecce with prot. n. 0015860 and prot. 0015857 of 25/09/2020).

Compliance to VoC conditions from the above Decrees is managed through Licence to Operate process and with the use of Verification of Compliance Matrix.

Compliance with main national and EU environmental regulations (such as Regulation (EU) 517/2014 on Fluorinated Greenhouse Gases) is tracked through the electronic database Red-On-Line and as summarised in TAP Legal Registers.

5.2.2 Compliance framework of Brindisi site

The Backup Supervisory Control Centre (BSCC) located in Brindisi operates under Single Environmental Authorisation (AUA) Decree No. 13 dated 16/07/2019, issued by the “Sportello Unico Attività Produttive” (SUAP) of Brindisi Municipality. The AUA is valid for 15 years from the aforementioned date of issue of the authorization by the SUAP.

With regards to fire prevention, a “Certified notification of the start of business for fire safety purposes” (Segnalazione Certificata di Inizio Attività ai fini della Sicurezza Antincendio) according to D.P.R. No. 151/2011, Art. 4 has been submitted to the Brindisi Provincial Fire Brigade Command on 22/11/2019 (Fire Brigade Practice No. 19553), which favourably completed the related fire prevention procedure initiated by TAP AG on 20 October 2019 through the SUAP of the Municipality of Brindisi (Dossier n. 12318591000-20102019-2336). For the BSCC, a periodic renewal request for fire compliance is foreseen every five years (next deadline: 22 November 2024).

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	47 of 143

5.3 ENVIRONMENTAL PERFORMANCE STANDARDS

TAP AG complies with and demonstrates Good Industry Practice (GIP) as described in the Common Terms Agreement (CTA) signed with its lenders and continues to align with the standards of international financial institutions such as:

-  The EBRD Performance Requirements (PRs 1 through 6, 8 and 10)² as per EBRD's Environmental and Social Policy (2014);
-  The EIB Environmental and Social Practices and Standards (2013);
-  The IFC Performance Standards (PS 1 through 6 and 8)³ (January 2012);
-  The IFC EHS General Guidelines (2007);
-  IFC Industry-specific Guidelines: the IFC EHS Guidelines for Onshore Oil and Gas Development (2007) and the IFC EHS Guidelines for Offshore Oil and Gas Development (2015);
-  The Equator Principles III (2013);
-  The OECD Common Approaches (2012).

Requirements of the above performance standards are incorporated into the management system documentation, such as ESMM (Ref. 8) and supporting environmental procedures and method statements. The TAP Operations Environmental Standards Manual (Ref. 13) details the performance standards derived from the applicable legislation requirements and standards and principles listed above. Whenever applicable, the most stringent requirement was considered in setting the performance standards.

5.4 ENVIRONMENTAL MONITORING PLAN

An Environmental Monitoring Project for the Italian section of TAP pipeline (Ref. 14) has been approved by the relevant authorities as per Condition A.31 of the ESIA Approval Decree No. 223/2014. The document outlines monitoring requirements for the pre-construction (ante operam), construction and operations phase (post operam). Any relevant environmental limits or standards included in the Environmental Monitoring Project (against which compliance monitoring is required) have been considered in development of the TAP Operations Environmental Standards Manual and Commitment Registers (Ref. 13, 16 and 17). Compliance to Environmental Monitoring Plan is tracked through deliverables trackers for onshore and offshore scopes as well as through ESCH Compliance Register.

² EBRD PR 7 is a performance requirement in relation to Indigenous Peoples and is not applicable to TAP. EBRD PR 9 is a performance requirements for financial intermediaries and is not applicable to TAP.

³ IFC PS 7 is a performance standard in relation to Indigenous People and is not applicable to TAP.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	48 of 143

6. ENVIRONMENTAL INDICATORS

In this chapter environmental indicators will be quantified with reference to the first three years of operation (2021, 2022 and 2023), during which TAP was fully operating.

The quantification is provided for:

-  core environmental performance indicators;
-  specific environmental performance indicators relating to the significant direct and indirect environmental aspects of TAP activities.

Each core environmental indicator is composed of:

-  **Figure A:** indicating the total annual input/output related to the activities;
-  **Figure B:** indicating the quantity of cubic metres of natural gas dispatched from TAP⁴, as the reference value representing the activity of the organisation in the reference period;
-  **Figure R** indicating the ratio A/B.

6.1 NATURAL GAS DISPATCHED

The table and graph below report the total natural gas processed at the PRT in Melendugno. Data are provided in Standard Cubic Meters (Smc).

In the second year of operation, the quantity of gas processed by TAP increased by approximately 40% compared to the previous year, following the full implementation of the entire transport system and the new requests received from European Shippers.

⁴ With reference to waste production, the total number of direct and indirect employees in force at the organization has been also considered as a reference value (see section 6.5 below).

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	49 of 143

Table 6-1: Total natural gas processed at the PRT per year

Measured Gas Flow at the Interconnection Point (IP) of Melendugno

	2021	2022	2023
Gas processed (B) Smc	6.829.121.013	9.693.424.970	9.370.494.288

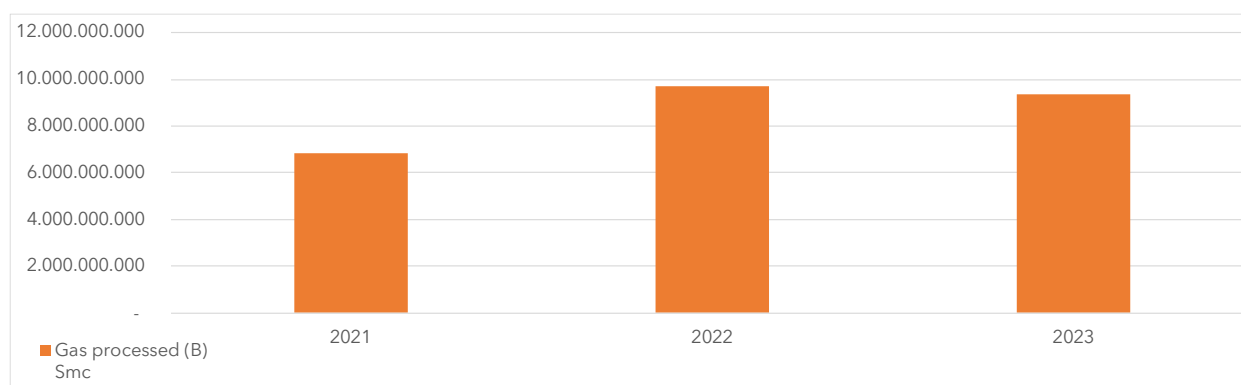


Figure 6.1: Total natural gas processed at the PRT per year

Data source	
Total natural gas processed	Gas flow measured at the Melendugno Interconnection Point (IP) by the Commercial Dispatching Information System

6.2 ENERGY

The energy sources consumed by TAP Italia are:

electricity, for powering electric boilers for gas heating, administrative buildings and fire-fighting system. Electricity is supplied by both the public grid and the photovoltaic plants. The quantity of electricity consumed has been calculated based on information about electricity consumption extracted from the bills of the company that manages the electricity network (ENEL). In

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	50 of 143

- Table 6-2 below, energy consumption data are reported separately for PRT, BSCC and BVS (ILV33). Electric energy consumption in the first three months of 2021 have been partially affected by initial testing activities at the PRT;
- diesel fuel: in the event of a planned lack of electricity from the network, two emergency diesel generators allow to power the essential electrical loads in the event of a blackout in the PRT. There is also an emergency generator for the BSCC. Diesel fuel is stored in the diesel storage system at the PRT. The quantity of diesel fuel consumed has been calculated based on tank refill reporting;
- natural gas, for the supply of gas boilers to support electric boilers for gas heating. Natural gas is supplied by Enet Energy SA, through a specific pipeline for the quantification of the amount of gas provided to TAP for internal use. The quantity of natural gas consumed has been calculated based on the bills of Enet Energy SA.
- gasoline and diesel, to power company vehicles and the vehicles of third-party maintenance service providers. The petrol and diesel consumed by the company vehicles is estimated based on the number of kilometres travelled by the company vehicles, considering an indicative average consumption value for each vehicle, equal to 16 km /l.

In addition, both PRT and Brindisi facilities are equipped with Photovoltaic Plants for electricity production purposes.

Energy consumption data for each energy source are summarised in the table and graphs below, which also provide the total amount of renewable energy generated by the Photovoltaic Plants and of that auto-consumed by TAP facilities in Italy. It should be noted that:

- for year 2021, renewable energy generation and consumption data of the Photovoltaic Plant at Brindisi site have been considered starting from March, month in which the electricity exchange contract with the Italian “Gestore dei Servizi Energetici” (GSE S.p.A.) has been activated (Contract n. SSP00814008 dated 5 March 2021). In the first two months of 2021 the photovoltaic plant at Brindisi site was partially operated to carry out some trial tests, but no specific data are available for that initial testing period;
- for year 2021 and 2022, the value of the portion of renewable energy produced by PRT's photovoltaic plant and which is almost entirely self-consumed by the plants/structures of the terminal itself has been estimated on an annual basis, starting from the data of total self-consumption of renewable energy traceable in the Reports on greenhouse gas emissions available for year 2021 and year 2022 respectively (Ref. 20 and 20a), subtracting the self-consumption of the BSCC and adding a small amount of energy (about 1.6 kWh) produced in excess by the photovoltaic plant of the PRT and fed into the grid (data taken from monthly reports extracted from E-distribuzione portal). It should be noted that, in order to optimize

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	51 of 143

data collection following the improvement opportunities defined during the Third Party Audit, conducted from 4 to 6 October 2022 for the verification and validation of the Environmental Statement (first issue dated 30/09/2022), TAP has prepared a dedicated procedure (Ref. 29) for the collection of data to be integrated into the QHSE Management System, also providing for the recording of data directly on the meter that records the total kWh produced by the photovoltaic of the PRT and that of the BSCC. The data relating to the photovoltaic energy production of the PRT in 2023 were therefore obtained from the readings of the relevant meter (PRT-POD ITP0AE74532369);

-  during 2023 the relocation of continuous air quality monitoring station named "AQ8n" to a new point named "AQ9new" has been completed; the relocation took place in an area owned by TAP close to the PRT and located nearby Masseria del Capitano. A new connection point to the electricity grid with identification code PRT-POD IT001E10633611⁵ is associated to the new monitoring station, which has been active since July 2022 for testing activities in parallel with the monitoring carried out in AQ8n, preparatory to the relocation and effective activation of the new substation following the issuing of dedicated authorization from the competent authorities⁶.

⁵ The document "Environmental Declaration 2022 - 2024, Update 2023, data as of 31/12/2022" incorrectly reported the following information "in July 2022, n. 2 containers for housing the optical fibre have been newly installed, for which the following table shows the consumption recorded in correspondence with the relative connection to the electricity grid (PRT-POD IT001E74472282)." The connection to the electricity grid and the related consumption for housing the optical fiber are related to activities outside the scope of the environmental management system. The data relating to consumption for 2022 was therefore corrected by reporting the consumption relating to the connection of the new air monitoring station, which had not been accounted for in the aforementioned version of the document.

⁶ The authorization from MASE for the relocation of the monitoring point was issued in December 2023 (note MASE.REGISTRO UFFICIALE.USCITA.0203881.13-12-2023).

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	52 of 143

Table 6-2: Energy consumed / generated by TAP facilities in Italy per year with environmental indicators

ELECTRIC ENERGY CONSUMPTION

	2021	2022	2023
Electric energy consumption – PRT kWh	1.555.289	947.822	771.878
<i>PRT- POD IT001E74532368</i>	424	230	328
<i>PRT - POD IT001E74532369</i>	1.465.270	847.554	675.520
<i>PRT - PODITP0AE74532369 (***)</i>	89.595	98.001	91.306
<i>PRT - POD IT001E10633611*</i>	-	2.036*	4.724
Electric energy consumption – BSCC kWh	192.992	189.200	184.037
<i>BSCC-POD IT001E04583507</i>	192.987	189.194	184.032
<i>BSCC -POD ITP0AE04583507</i>	5	6	5
Electric energy consumption – ILV33 kWh	7.008	7.639	7.718
<i>ILV33 -POD IT001E74472282</i>	7.008	7.639	7.718
Total electric energy consumption kWh	1.755.289 (of which around 863.313 from renewable sources)**	1.144.661 (of which around 590.667 from renewable sources)**	963.633 (of which around 501.913 from renewable sources)**

(*) Connection of the new AQ9new air quality monitoring station.

(**) Net of the self-consumption of electricity produced by the photovoltaic systems of the PRT and the BSCC, the share of electricity from renewable sources imported from the grid was considered equal to 46.45% of the total in 2021 and 47.07% in 2022, as deduced from the supplier's invoices (ENEL). These percentage values refer to the composition of the energy mix used for the production of electricity sold by ENEL (final data 2021, pre-final data 2022), reported in the December 2023 invoice of POD IT001E74532369. In the absence of a more updated value, the 2022 pre-final data was also considered for the estimate relating to consumption for 2023.

(***) In the calculation of the PRT's total electricity consumption, the energy produced by the PRT's photovoltaic system and almost entirely consumed by the PRT itself (net of a minimal excess part which is transferred to the grid) was also introduced. By mistake, this item had not been

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	53 of 143

counted in the calculation of total electricity consumption reported in previous updates of the Environmental Declaration.

Table 6-3: Direct energy consumption of TAP facilities in Italy on yearly basis

DIRECT ENERGY CONSUMPTION			
	2021	2022	2023
Electric energy consumption	1.755.289*	1.144.661*	963.633
Diesel consumption kWh (Note 1)	12.440	12.112**	4.475
Diesel consumption -vehicle kWh (Note 1)	2.959	18.099	19.480
Gasoline consumption - vehicle kWh (Note 1)	1.248	6.730	5.840
Natural gas consumption kWh (Note 2)	206.027	NA	3.745
Total energy consumption (A₁) kWh	1.977.963	1.181.602	997.172
Gas processed (B) Smc	6.829.121.013	9.693.424.970	9.370.494.288
Total energy consumption (A₁/B) kWh/Smc*1000	0,290	0,122	0,106

* The indicator has been corrected compared to what is reported in the 2023 update of the environmental declaration, see Table 6.2.

** The indicator has been corrected compared to what was reported in the 2023 update of the environmental declaration: by mistake, in 2022 the quantity of diesel fuel supplied and not the quantity actually consumed was reported.

- (1) Considering a conversion factor from the table of national standard parameters used for the inventory of CO₂ emissions in the UNFCCC national inventory (last update December 13, 2022).
- (2) Data taken from the invoices of the supplier ENET spa

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	54 of 143

Table 6-4: Production and auto-consumption of renewable energy of TAP facilities in Italy on yearly basis

PRODUCTION / AUTO-CONSUMPTION OF RENEWABLE ENERGY

	2021	2022	2023
Renewable energy generation – PRT kWh	89.597 (i)	98.003 (i)	91.314 (iii)
<i>PRT- POD ITP0AE74532369</i>	<i>ND</i>	<i>ND</i>	<i>91.314</i>
Renewable energy generation – BSCC kWh	7.475 (ii)	8.413 (ii)	5.715 (ii)
<i>BSCC-POD IT001E04583507</i>	<i>7.470</i>	<i>8.407</i>	<i>5.711</i>
<i>BSCC-POD ITP0AE04583507</i>	<i>4,7</i>	<i>5,5</i>	<i>4,5</i>
Total renewable energy generation (A₂) kWh	97.071	106.416	97.030
Renewable energy auto-consumed – PRT kWh	89.595 (i)	98.001 (i)	91.306 (iii)
Renewable energy auto-consumed – BSCC kWh	4,7	5,5	4,5
Total renewable energy auto- consumed (A₃) kWh	89.600	98.007	91.311
Gas processed (B) Smc	6.829.121.013	9.693.424.970	9.370.494.288
Total renewable energy generation (A₂/B) kWh/Smc*1000	0,014	0,011	0,010
Total renewable energy consumption (A₃/B) kWh/Smc*1000	0,013	0,010	0,010

- (i) The self-consumption data of the PRT was estimated on annual basis, starting from the data of total self-consumption of renewable energy traceable in the Reports on greenhouse gas emissions available for year 2021 and year 2022 respectively (Ref. 20 and 20.a), subtracting the self-consumption of the BSCC taken from the monthly reports extracted from E-distribuzione portal. The renewable energy produced by the PRT was then estimated by adding to the self-consumption data a small quantity of energy (about 1,6 kWh) produced in excess by

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	55 of 143

the photovoltaic system of the PRT and fed into the grid (also taken from the monthly reports extracted from E-distribuzione portal).

- (ii) BSCC data taken from the monthly reports extracted from the E-distribuzione portal.
- (iii) The data relating to the photovoltaic energy production of the PRT in 2023 was obtained directly from the readings of the relevant PRT-POD ITP0AE74532369 meter. To calculate self-consumption, the amount of photovoltaic energy injected into the grid, which can be deduced from the monthly reports extracted from the E-distribuzione portal, was then subtracted.

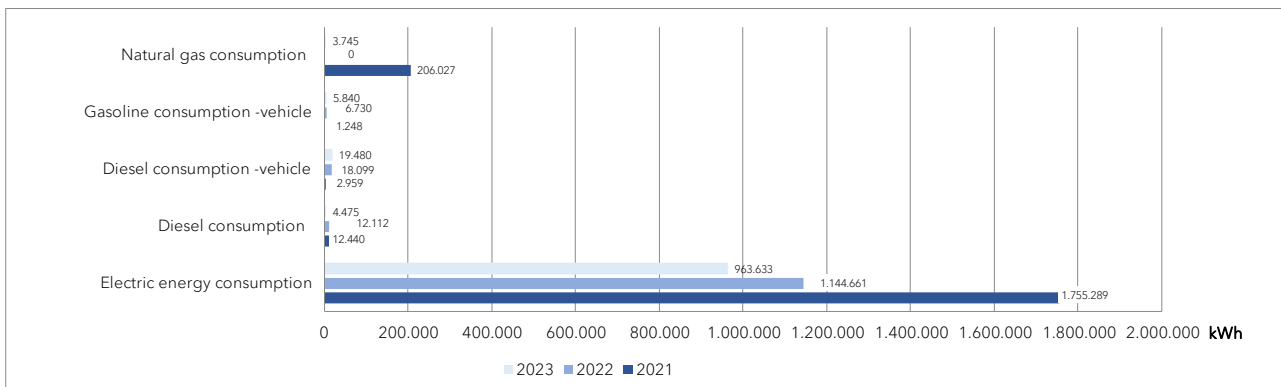


Figure 6.2: Total direct energy consumption

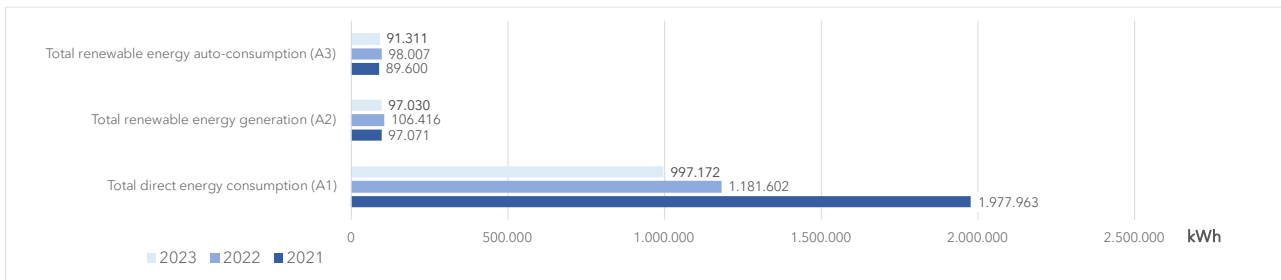


Figure 6.3: Total energy consumption and renewable energy generated/auto-consumed per year

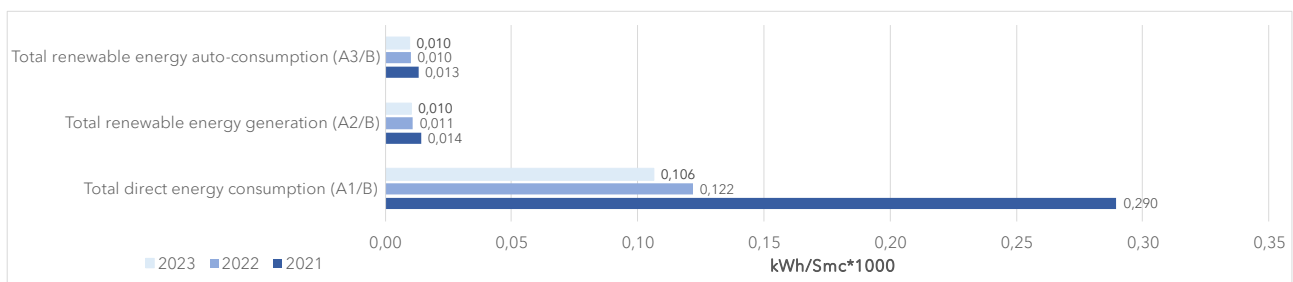


Figure 6.4: Environmental indicators for Energy Consumption / Generation

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	56 of 143

Data source	
Electric energy consumption (PRT, BSCC, ILV33)	Supplier invoices (ENEL) Monthly reports extracted from E-distribuzione portal (from meter records)
Diesel consumption	Tank refill reporting
Diesel and gasoline consumption (vehicle)	Estimated based on the number of kilometres travelled by Company's vehicles (monitoring report)
Natural gas consumption	Supplier invoices (Enet Energy SA)
Total renewable energy generated and self-consumed by the BSCC and excess renewable energy produced fed into the grid by the PRT	Monthly reports extracted from the E-distribuzione portal (from meter records)
Total renewable energy produced for auto-consumption (PRT+BSCC)	Report on greenhouse gases emissions for 2021 Report on greenhouse gases emissions for 2022 PRT photovoltaic system meter readings (PRT-POD ITP0AE74532369) for 2023 Monthly reports extracted from E-distribuzione portal (from meter records)

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	57 of 143

6.3 MATERIAL

The main materials consumed are those used for PRT operation and maintenance.

In particular, the consumption of non-hazardous materials is determined on the basis of the incoming and outgoing material flows recorded on the SAP management system.

With reference to dangerous materials, the materials included in the procurement/inventory system launched from the entry into operation of the PRT are currently registered on SAP, other materials instead come from supplies carried out during the testing phase of the plant or acquired by Snam Rete Gas within the framework of the PRT maintenance contract. Considering the above, as part of the QHSE Management System procedures, an inventory of hazardous materials is kept continuously updated, with a summary document that is issued on a quarterly basis (Ref. 27).

The main hazardous materials stored are oil, grease, gases under pressure and some chemicals. These materials are stored in a dedicated area specifically designed for petroleum materials, chemical products and gas storage, to avoid the dispersion of dangerous substances in the environment.

The table below reports the amount of main material consumed. In 2023 there was an increase in the consumption of materials, attributable mainly to the consumption of spare parts and chemical products as part of the maintenance activities carried out during the year. Among others, during 2023 activities for the replacement of the lighting fixtures with LED lights with lower energy consumption and for the scheduled maintenance of the PRT gas filtering units took place.

Table 6-5: Main material consumed on yearly basis

Material Consumption

Material	Category	Hazardous	2021	2022	2023	Source*
2" PIPE MOUNT PLATE (pieces)	spare part		-	6	-	SAP
2 X 2" U-BOLTSXM6 C/W NUT&WASHER 316SST (pieces)	spare part		-	6	16	SAP
ADIC BIO G (litre)	oils	✓	1,20		20	SAP

	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	58 of 143

Material Consumption

Material	Category	Hazardous	2021	2022	2023	Source*
AHU AIR FILTER 400X500X48 (pieces)	spare part		-	1	1	SAP
AIRCOL SN 100, 20L E4 - 20 L BOTTLE (litre)	oils	✓	40	-	-	SAP
CHROMATOGRAPH HYDROGEN (litre)	gas		-	50	50	SAP
CIRCUIT BREAKER 2 POLE C10 6KA (pieces)	spare part		1	-	-	SAP
CONDENSATE DRAIN (pieces)	spare part		1	1	-	SAP
ETHERNET SWITCH 5X10/100 - 3XMM FO ST (pieces)	spare part		-	1	3	SAP
ENGINE AIR FILTER (pieces)	spare part		-	1	2	SAP
ENGINE FUEL FILTER (pieces)	spare part		1	-	2	SAP
ENGINE OIL FILTER (pieces)	spare part		1	-	-	SAP
FILTER FOR DEW POINT SENSOR/ANALYZER (pieces)	spare part		1	-	-	SAP
HYPOCHLORITE SODIUM (litre)	chemical products		-	140	25	SAP

	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	59 of 143

Material Consumption

Material	Category	Hazardous	2021	2022	2023	Source*
INERT GAS BOTTLE - 80 LTR (litre)	gas	✓	320	-	320	SAP
JUNCTION BOX BARTEC OTB122 (pieces)	spare part		-	6	16	SAP
LEAK FINDER (pieces)	chemical products		-	4	0,5	SAP
LINEAR HALOGEN LAMPS ECO 400W (pieces)	spare part		14	71	75	SAP
LIP-SEAL (pieces)	spare part		1	-	-	SAP
MARKER POST (pieces)	spare part		-	1	-	SAP
MIRROR REPLACEMENT KIT TO IRMAX DETECTOR (pieces)	spare part		-	6	8	SAP
O2 SENSOR MFC A2C (pieces)	spare part		-	2	2	SAP
OIL FILTER (pieces)	spare part		-	2	-	SAP
OIL FILTER CARTRIDGE (pieces)	spare part		3	-	1	SAP
OIL-WATER CARTRIDGE (pieces)	spare part		-	1	-	SAP

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	60 of 143

Material Consumption

Material	Category	Hazardous	2021	2022	2023	Source*
OPTIMA JUNCTION BOX ADAPTOR PLATE (pieces)	spare part		-	6	16	SAP
OPTIMA PLUS GAS DETECTOR HYDROCARBON (pieces)	spare part		-	6	16	SAP
PSV TAG: IPR01-370- PSV-2061 (pieces)	spare part		1	-	-	SAP
QUAD-GAS CALIBRATION GAS CYLINDER (pieces)	Gas cylinder		-	1	-	SAP
SCALANCE XB205-3 MANAGED LAYER 2 IE (pieces)	spare part		1	-	-	SAP
SCAVENGE OIL SIGHT GLASS (pieces)	spare part		-	1	-	SAP
SEAL FOR THE INSPECTION HOLE (pieces)	spare part		-	1	-	SAP
SET OF PUMP PACKING RINGS (pieces)	spare part		-	1	-	SAP
SIMATIC S7, A.I. SM336 6A.I.3849 (pieces)	spare part		-	1	-	SAP
SIMATIC S7-400, BACKUP BATTERY 3.6 V (pieces)	spare part		-	12	-	SAP

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	61 of 143

Material Consumption

Material	Category	Hazardous	2021	2022	2023	Source*
SOFT GOOD KIT MAIN VALVE (pieces)	spare part		-	3	-	SAP
SPIRAL WOUND BODY GASKET (pieces)	spare part		1	-	-	SAP
SPIRAL WOUND SEAT GASKET (pieces)	spare part		2	-	-	SAP
TOTAL COOLELF AUTOSUPRA (kg)	chemical products		-	-	16	SAP
NALCO BIOCIDES CHEMICAL 77352 (kg)	chemical products		-	-	4	SAP
NALCO BIOCIDES CHEMICAL TRAC104 (kg)	chemical products		-	-	25	SAP
1/2" PSV VALVE 14NPT 316 SS (pezzi)	spare part		-	-	1	SAP
3IR FLAME DETECTOR (pezzi)	spare part		-	-	2	SAP
4 CONTACT RELAY 24V DC 7A 250V AC (pezzi)	spare part		-	-	5	SAP
54" BANDLOCK 2 LARGE SECTION SEAL (pezzi)	spare part		-	-	2	SAP
AHU AIR FILTER 287X592X292 (pezzi)	spare part		-	-	3	SAP

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	62 of 143

Material Consumption

Material	Category	Hazardous	2021	2022	2023	Source*
AHU AIR FILTER 400X500X98 (pezzi)	spare part		-	-	1	SAP
AHU AIR FILTER 500X500X98 (pezzi)	spare part		-	-	1	SAP
AHU AIR FILTER 500X525X48 (pezzi)	spare part		-	-	1	SAP
AHU AIR FILTER 500X625X98 (pezzi)	spare part		-	-	1	SAP
AHU AIR FILTER 592X592X292 (pezzi)	spare part		-	-	1	SAP
AMPLIFIER (pezzi)	spare part		-	-	1	SAP
AUX DIESEL FF PUMP BATTERY 12V CCA 1300 (pezzi)	spare part		-	-	6	SAP
AVR FOR THE MAIN DIESEL GENERATOR (pezzi)	spare part		-	-	1	SAP
BATTERY 12V 90AH (pezzi)	spare part		-	-	4	SAP
BLADDER OF EXPANSION VESSEL (pezzi)	spare part		-	-	1	SAP

	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	63 of 143

Material Consumption

Material	Category	Hazardous	2021	2022	2023	Source*
CALL STATION PAVIRO (pezzi)	spare part		-	-	1	SAP
CRB MULTI 15W-40 CI- 4/E7 ER - 20 L BOT (pezzi)	spare part		-	-	1	SAP
DEHYDRATOR FILTER (pezzi)	spare part		-	-	1	SAP
DEWPOINT MEMBRANE FILTER ELEMENTS (pezzi)	spare part		-	-	1	SAP
DIGITAL INPUT MODULE DI 16X24VDC ST (pezzi)	spare part		-	-	1	SAP
DISC (pezzi)	spare part		-	-	1	SAP
DRYER BUTTERFLY VALVE 532-YV 1 1/2" (pezzi)	spare part		-	-	1	SAP
EXCITER STATOR (pezzi)	spare part		-	-	1	SAP
FILTER ELEMENT (pezzi)	spare part		-	-	114	SAP
FILTER FOR MAIN TANK DIESEL BREATHING (pezzi)	spare part		-	-	1	SAP

	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	64 of 143

Material Consumption

Material	Category	Hazardous	2021	2022	2023	Source*
FLAME INTENSITY MONITOR (pezzi)	spare part		-	-	2	SAP
FUSES 10,3 X 38 4A GI (pezzi)	spare part		-	-	10	SAP
HARD DISK FOR IPR01 PH1 SERVER (pezzi)	spare part		-	-	1	SAP
HYDROCARBON DEW-POINT SENSOR CELL ASS. (pezzi)	spare part		-	-	2	SAP
INSULATION KIT DN 40 RTJ 900, ASME B16.5 (pezzi)	spare part		-	-	3	SAP
IR MAX CROWCON FILTER (pezzi)	spare part		-	-	123	SAP
LED PROJECTOR 125W FOR ROAD LIGHTNING (pezzi)	spare part		-	-	79	SAP
LED PROJECTOR 73W FOR FENCE LIGHTNING (pezzi)	spare part		-	-	78	SAP
LIQUID LEAK DETECTOR 8OZ (pezzi)	spare part		-	-	4	SAP
LITHIUM BATTERY 1.2 AA, 3.6 V, 850 MA/H (pezzi)	spare part		-	-	1	SAP

	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	65 of 143

Material Consumption

Material	Category	Hazardous	2021	2022	2023	Source*
M24 BLEED SCREW SEAL HNBR (pezzi)	spare part		-	-	2	SAP
MEDC FIELD EMERGENCY PUSH BUTTON (pezzi)	spare part		-	-	1	SAP
MULTICRITERIA SMOKE/HEAT DETECTORS (pezzi)	spare part		-	-	2	SAP
N2 ACTUAT ASEMB TPED CYL NORM CLOS SWICH (pezzi)	spare part		-	-	1	SAP
OIL SEPARATOR CARTRIDGE (pezzi)	spare part		-	-	2	SAP
POINT INFRARED SENSORS (pezzi)	spare part		-	-	2	SAP
PRESSURE GAUGE 0/160 BAR (pezzi)	spare part		-	-	1	SAP
PROTECTED EMERGENCY BUTTON (pezzi)	spare part		-	-	1	SAP
PSV 8109/8209 SIZE 1 1/2" F1 2" 16 BARG (pezzi)	spare part		-	-	1	SAP

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	66 of 143

Material Consumption

Material	Category	Hazardous	2021	2022	2023	Source*
PSV TAG: IPR01-370-PSV-3061 (pezzi)	spare part		-	-	1	SAP
PSV TAG: IPR01-370-PSV-X061 (pezzi)	spare part		-	-	5	SAP
RESISTOR HS50 180 50W +-5% (pezzi)	spare part		-	-	2	SAP
RIBBON FOR PRINT (pezzi)	spare part		-	-	1	SAP
RING JOINT GASKET DN 200 - 600# R49 OVAL (pezzi)	spare part		-	-	1	SAP
RUPTURE DISK 18MM 230BAR STAINLESS STEEL (pezzi)	spare part		-	-	5	SAP
SNOOP LEAK DETECTION FLUID 8OZ (pezzi)	spare part		-	-	4	SAP
SOLENOID VALVE ICO3S (pezzi)	spare part		-	-	1	SAP
THERMOM. 0-100°C, THERMOWELL INSERTION (pezzi)	spare part		-	-	1	SAP

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	67 of 143

Material Consumption

Material	Category	Hazardous	2021	2022	2023	Source*
THERMOM. 0-60°C, THERMOWELL INSERTION (pezzi)	spare part		-	-	1	SAP
V30812-A5020-A71 POWER SUPPLY 90- 264VAC (pezzi)	spare part		-	-	1	SAP
WATER DEW POINT SENSOR UNIT CALIBRATED (pezzi)	spare part		-	-	2	SAP
SIP ANALYTICAL - 2.5% METHANE IN AIR - 68 BAR COMPLETO DI REGOLATORE - 0,5 KG (litre)	gas	✓	-	1,6		HM Inventory
WEICON ANTI-SEIZE ASSEMBLY PASTE (g)	grease	✓	450	-		HM Inventory
WURTH VASELINE GREASE (mg)	grease	✓	750	-	750	HM Inventory
CASTROL SPHEEROL EPL 2 GREASE (kg)	grease	✓	0,4	-	3,6	HM Inventory
TRIBOL GR 3020/1000-1 PD GREASE (kg)	grease	✓	36	-		HM Inventory

	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	68 of 143

Material Consumption

Material	Category	Hazardous	2021	2022	2023	Source*
MOLYKOTER ANTI-SEIZE PASTE FOR HIGH TEMPERATURES (kg)	grease	✓	8	-	2	HM Inventory
VAL-TEX LUBRICANT (kg)	grease	✓	18	-	-	HM Inventory
CASTROL SPHEEROL AP3 GREASE (kg)	grease	✓	-	-	18	HM Inventory
CASTROL CRBO MULTI 15W-40 CI-4/E7 MOTOR OIL (litre)	oils	✓	20	-	43	HM Inventory
HF95T ENERPAC HYDRAULIC OIL (litre)	oils	✓	46	-	-	HM Inventory
5-56 Super LUBRICANT (ml)	oils	✓	300	-		HM Inventory
WD-40 LUBRICANT (g)	oils	✓	8	-		HM Inventory
AIRCOL SN 100 LUBRICANT	oils	✓	-	-	40	HM Inventory
PARAGEL ANTIFREEZE (kg)	chemical products	✓	150	-	-	HM Inventory
MAURER BLACK SPRAY PAINT (ml)	chemical products	✓	800	-	400	HM Inventory
AMBERSIL CLEANING WIPES (kg)	chemical products	✓	-	40,5	-	HM Inventory

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	69 of 143

Material Consumption

Material	Category	Hazardous	2021	2022	2023	Source*
ACCA s.p.a. PARAGEL HC59500 (kg)	chemical products	✓	-	-	40	HM Inventory
MULTIPURPOSE HAND CLEANING PASTE (kg)	chemical products	✓	-	-	4	HM Inventory
CRC ECO LEAK DETECTOR (g)	chemical products	✓	-	-	2,5	HM Inventory
CFG Copper Paste (kg)	grease	✓	-	-	0,5	HM Inventory
MAURER WHITE SPRAY PAINT (kg)	chemical products	✓	0,8	-	1,6	HM Inventory
DRYER FILTER (pieces)	spare part	✓	2	-	-	HM Inventory
International Interbond 2340UPC Grey Part A (litre)	oils	✓	-	-	5	HM Inventory
NALCO - TRASAR TRAC104 Mix Sodium Molybdate (kg)	chemical products	✓	-	-	70,2	HM Inventory
NALCO 77352 Mix with Magnesium nitrate and Magnesium Chloride (kg)	chemical products	✓	-	-	70,4	HM Inventory
PROTEC P1281 Diesel fuel stabilizer (kg)	chemical products	✓	-	-	10,5	HM Inventory

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	70 of 143

Material Consumption

Material	Category	Hazardous	2021	2022	2023	Source*
ROCOL WD Spray (litre)	oil	✓	-	-	1,8	HM Inventory
SOLO 25 Liquid Anticogelante (kg)	chemical products	✓	-	-	40,0	HM Inventory
TOTAL COOLANT GLACELF MDX (kg)	chemical products	✓	-	-	78,5	HM Inventory

(*) Where not available in the SAP management system, the data on the consumption of hazardous materials was estimated based on the data reported in the Inventory of Hazardous Materials (Ref. 27), analysing the variations that occurred on a quarterly level in the quantities of stored material.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	71 of 143

Table 6-6: Indicators related to materials consumption

Material Category	2021	2022	2023
Spare parts consumption (A1) n. of pieces	30	136	653
Oils consumption (A2) litre	107	-	110
Greases consumption (A3) kg	63	-	24
Chemical products consumption (A4) kg	151	219	386
Technical gases consumption (A5) litre	320	62	370
Processed Gas (B1) Smc	6.829.121.013	9.693.424.970	9.370.494.288
Spare parts consumption (A1/B) kg/Smc*100.000.000	0,44	1,40	6,97
Oils consumption (A2/B) litre/Smc*100.000.000	1,57	-	1,17
Greases consumption (A3/B) kg/Smc*100.000.000	0,92	-	0,26
Chemical products consumption (A4/B) kg/Smc*100.000.000	2,21	2,26	4,12
Technical gases consumption (A5/B) litre/Smc*100.000.000	4,69	0,64	3,95

Data source	
Hazardous / Non-hazardous materials consumption	Extraction of warehouse movements data from SAP management system
Hazardous materials consumptions	Where not already present in SAP: Hazardous Material Inventory

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	72 of 143

6.4 WATER

The water is used for:

-  civil uses in administrative buildings;
-  irrigation of green areas (only for maintenance);
-  power supply to the fire-fighting system.

The water consumed is supplied by the aqueduct.

The core indicator on total annual water use has been calculated based on water consumption data extracted from bills of the Company that manages the aqueduct network (Acquedotto Pugliese S.p.A.).

In 2022 there was an overall reduction in water consumption, in particular thanks to the repair of a leak detected at the BSCC and TAP's awareness campaigns against water waste.

Starting from 2023, the monitoring of the consumption of water from irrigation wells, used for the maintenance of environmental and landscape mitigation works, in particular for the irrigation of olive trees, has also been introduced.

It should also be noted that, at the end of 2023, the process of updating the monthly monitoring procedure of the quantity of water withdrawn from the water network was completed, with implementation of monthly readings starting from 2024.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	73 of 143

Table 6-7: Water consumption data per year with environmental indicator

Water consumption

	2021	2022	2023
Water consumption – PRT mc	635	680 ⁱⁱ	895 ⁱⁱⁱ
Water consumption – BSCC mc	2.272 ⁱ	1.878 ⁱ	168 ^{iv}
Water consumption (A1) mc	2.907	2.558	1.063
Consumption of water from irrigation wells for mitigation works (A2) mc^v	-	-	6.000
Gas processed (B) Smc	6.829.121.013	9.693.424.970	9.370.494.288
Water consumption (A1/B) mc/Smc*10.000.000	0,43	0,26	0,11
Consumption of water from irrigation wells for mitigation works (A2) mc/Smc*10.000.000	-	-	0,64

- (i) The water consumption of the BSCC includes the contribution of the irrigation system of the green areas.
- (ii) The water consumption of the PRT refers to the consumption ascertained from 01/01/2022 to 16/08/2022, to the estimated consumption from 17/08/2022 to 31/12/2022. The data of consumption ascertained for the latter period is not yet available at the time of drafting this document and, therefore, the 2022 water consumption data may be subject to revision in the next update of the Environmental Statement.
- (iii) The PRT water consumption for 2023 refers to the presumed consumption from 01/01/2023 to 11/12/2023, available from the supply invoices. Consumption from 12/12/2023 to 12/31/2023 was estimated based on the average daily consumption of the previous period. The data relating to confirmed consumption for this last period is not yet available at the time of preparation of this document and, therefore, the 2023 water consumption data may be subject to revision in the next update of the Environmental Declaration.
- (iv) BSCC water consumption for 2023 refers to consumption ascertained from 01/01/2023 to 12/29/2023, available from supply invoices. Consumption from 12/30/2023 to 12/31/2023 was estimated based on the average daily consumption of the previous period. The data relating to confirmed consumption for this last period is not yet available at the time of preparation of this document and, therefore, the 2023 water consumption data may be subject to revision in the next update of the Environmental Declaration.
- (v) Quantification introduced starting from 2023.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	74 of 143

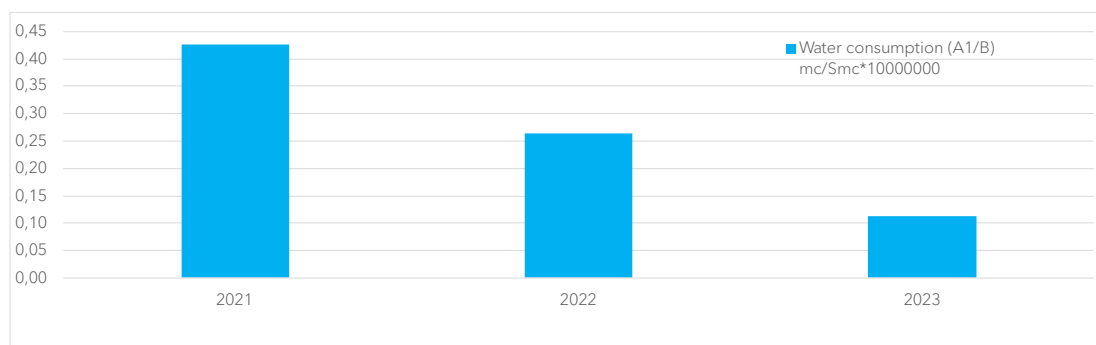


Figure 6.5: Environmental indicator for Water Consumption



Figure 6.6: Environmental indicator for consumption of water from irrigation wells for mitigation works

Data source	
Water Consumption	Supplier invoices (Acquedotto Pugliese S.p.A.)
Water consumption from irrigation wells for mitigation works	Communications of water withdrawn by the contractor in charge of maintenance of the greenery

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	75 of 143

6.5 WASTE

In 2021, 2022 and 2023 only municipal and special waste from the activities carried out in the administrative buildings located at the PRT and in Brindisi has been produced.

The municipal wastes produced are all non-hazardous waste and belong to the following categories:

-  Mixed wastes
-  Plastic
-  Paper
-  Organic
-  Glass
-  Steel scrap

The only special waste produced is non-hazardous, it has been produced in 2022 and belongs to the category:

-  Toner and printer cartridges (08.03.18)

The wastes generated by operation and maintenance activities are special waste and managed directly by the contractors, as producers, and in particular by SNAM for plants maintenance services at the pipeline receiving terminal and by Shelter S.r.l. for the execution of environmental monitoring.

The special wastes produced are hazardous and non-hazardous wastes and belong to the following categories:

-  Used Batteries (non-hazardous, EER code 16.06.04, produced by SNAM);
-  Dirty cotton wipes (hazardous, EER code 15.02.02* and non-hazardous, EER code 15.02.03, produced by SNAM);
-  Motor oil (hazardous, EER code 13.02.05*, produced by SNAM);
-  Spray cans (hazardous, EER code 15.01.11*, produced by SNAM);
-  Discarded equipment (hazardous, EER code 16.02.13* produced by SNAM);
-  Purge water from sampling activities (non-hazardous, EER code 16.10.02, produced by Shelter S.r.l.).

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	76 of 143

In 2023 the following wastes were occasionally produced:

-  Exhausted lead batteries for maintenance work on UPS equipment (hazardous, code EER 16.06.01*, produced by BORRI S.p.A)
-  Diesel generator coolant for generator maintenance work (hazardous, code EER 16.03.05*, produced by SNAM)
-  Purge water resulting from the extraordinary cleaning of the domestic wastewater recovery tank and some tanks of the rainwater treatment plant (non-hazardous, code EER 16.10.02, produced by SNAM).

The indicator about the generation of waste has been calculated based on both the monitoring records of municipal wastes generated at PRT and Brindisi facilities and from the “Modello Unico di Dichiarazione ambientale” (MUD) declared by SNAM for year 2021, data obtained from SNAM’s loading and unloading register for 2022 and BOORI and SNAMS’s for 2023. In the calculation of the 2022 indicators, the production of purge water produced by Shelter S.r.l. has not been considered, as this is configured as an extemporaneous production, not foreseen for subsequent years and which inclusion in the calculation of the indicators would not allow an adequate reading of the production of waste associated with the activities which are normally carried out by TAP contractors in Italy.

The following tables and figures show the separate data for the waste produced by TAP Italia and that produced by contractors.

It should be noted that, in addition to the ratio with the total of natural gas dispatched (see Par. 6.1 above), for the purpose of calculating the indicators, the production of waste has been also compared with the total number of internal and external workers employed by the organization.

In 2023 the quantity of waste produced directly by TAP remained substantially unchanged compared to 2022, in relation to both the quantity of gas processed and the number of employees.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	77 of 143

Table 6-8: Waste produced by TAP AG Italy, Branch

Waste production – TAP AG Italy, Branch

Category of waste	Type (*)	Hazardous	2021	2022	2023
Mixed kg	U	NO	1.842,96	1.063,00	870,00
Plastic kg			336,52	185,00	248,00
Paper kg			488,45	311,00	474,00
Organic kg			381,05	522,00	710,00
Glass kg			31,15	20,00	9,00
Steel scrap kg			88,39	30,00	20,00
Toner and printer cartridges (08.03.18) kg	S		-	37,00	-

(*) U = Urban; S = Special

Total generation of waste (A₁) kg	3.169	2.168	2.331
Total generation of hazardous waste (A₂) kg	-	-	-
Tot generation of non-hazardous waste (A₃) kg	3.169	2.168	2.331
Gas processed (B₁) Smc	6.829.121.013	9.693.424.970	9.370.494.288
Internal and external workers in force at the organisation (B₂)	54	59	62
Tot. generation of waste (A₁/B₁) -TAP kg/Smc*100.000.000	46,40	22,37	24,88
Tot. generation of waste (A₁/B₂) -TAP kg per capita	58,68	36,75	37,60
Tot. generation of hazardous waste (A₂/B₁)-TAP kg/Smc*100.000.000	-	-	-
Tot. generation of hazardous waste (A₂/B₂)-TAP kg per capita	-	-	-
Tot. generation of non-hazardous waste (A₂/B₁)-TAP kg/Smc*100.000.000	46,40	22,37	24,88
Tot. generation of non-hazardous waste (A₂/B₁)-TAP kg per capita	58,68	36,75	37,60

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	78 of 143

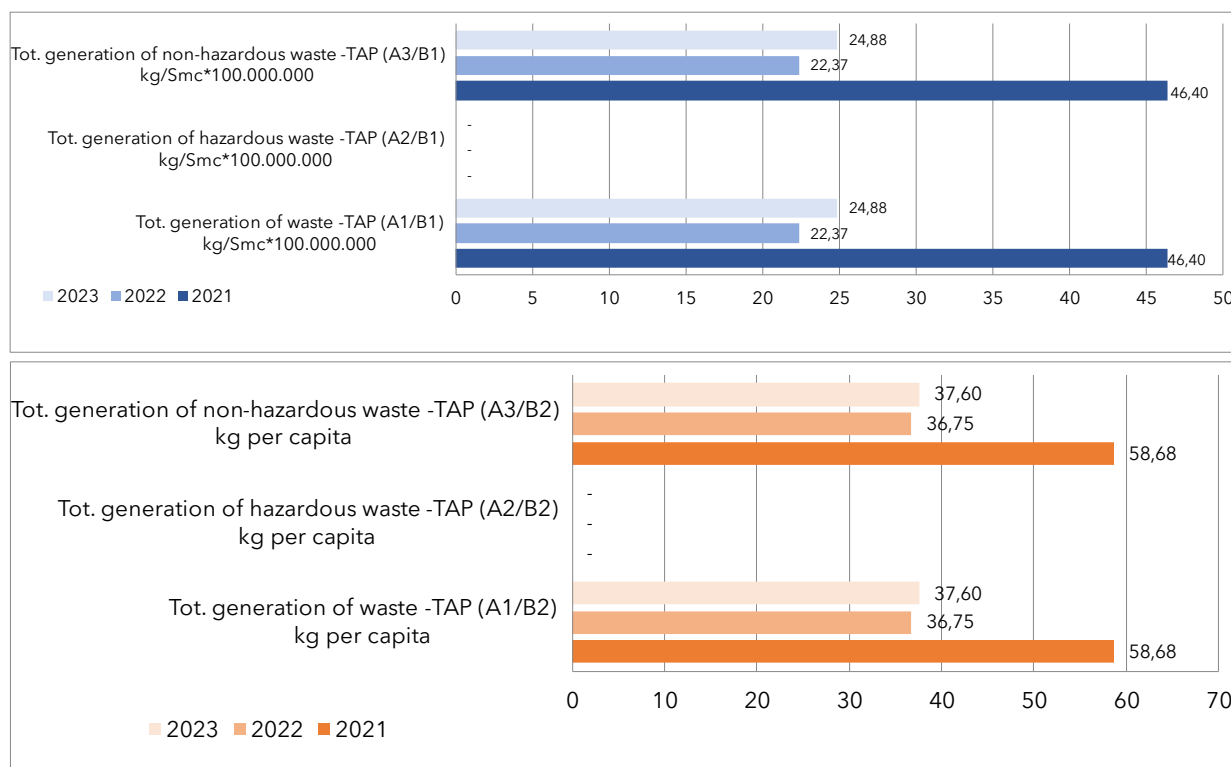


Figure 6.7: Environmental indicators for waste produced by TAP Italia

As regards the waste produced by contractors, in 2023 the quantity increased significantly compared to 2022, following the first cycles of activities envisaged by the preventive and ordinary maintenance plan of the plants or extraordinary maintenance which led to the increase or new production of the following waste:

-  gas filter cartridges: they were replaced after checking the condition of the cartridges themselves. This activity was carried out for the first time on filters 1 and 2 in 2023 which were dirty following commissioning, and will therefore be repeated again in the coming years depending on the cleanliness of the filters themselves;
-  diesel generator coolant: this waste was generated for the first time following periodic maintenance, it will therefore be generated again in the coming years;
-  purge water: in 2023 these relate to the wastewater resulting from the extraordinary cleaning of the domestic wastewater recovery tank and some tanks of the PRT water treatment plant.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	79 of 143

Table 6-9: Waste produced by TAP Italia's contractors

Waste production – Contractors

Type of waste	Hazardous	2021	2022	2023
Purge waters from piezometers' sampling activities (16.10.02) kg	NO	-	6.990*	36.140**
Used Batteries (16.06.04) kg		4	1	-
Non-contaminated cotton wipes (15.02.03) kg		-	30	40
Contaminated cotton wipes (15.02.02*) kg	YES	44	11	30
Motor oil (13.02.05*) kg		20	34	425
Spray cans (15.01.11*) kg		3	-	32
Discarded equipment (16.02.13*) kg		4	2	-
Total generation of waste (A₁) kg		75	78* (7.068)	37.532
Total generation of hazardous waste (A₂) kg		71	47	1.322
Tot generation of non-hazardous waste (A₃) kg		4	31* (7.021)	36.210
Gas processed (B₁) Smc		6.829.121.013	9.693.424.970	9.370.494.288
Internal and external workers in force at the organisation (B₂)		54	59	62
Total generation of waste (A₁/B₁) – contractors kg/Smc*100.000.000		1,10	0,80*	400,53
Total generation of waste (A₁/B₂) – contractors kg per capita		1,39	1,32*	605,35
Total generation of hazardous waste (A₂/B₁) – contractors kg/Smc*100.000.000		1,04	0,48*	14,11
Total generation of hazardous waste (A₂/B₂) – contractors kg per capita		1,31	0,80*	21,32

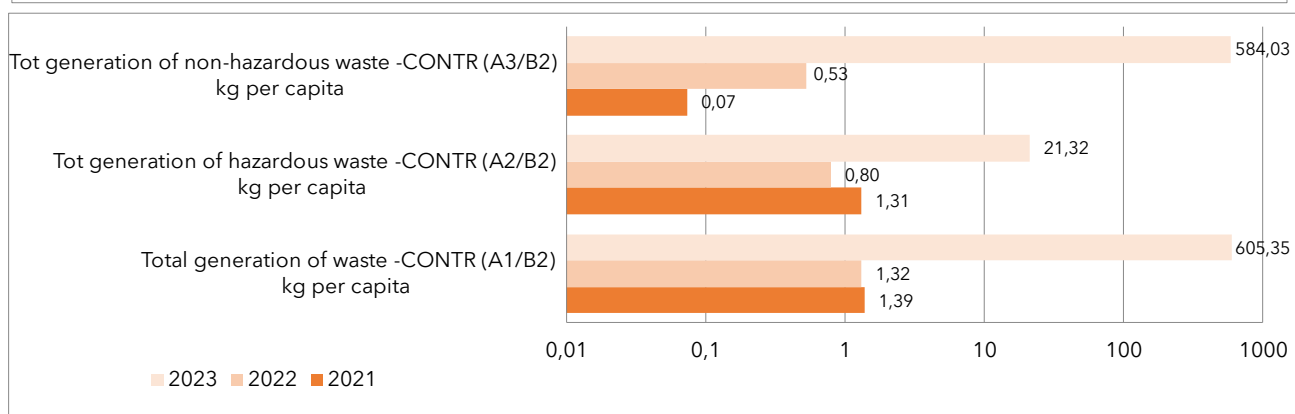
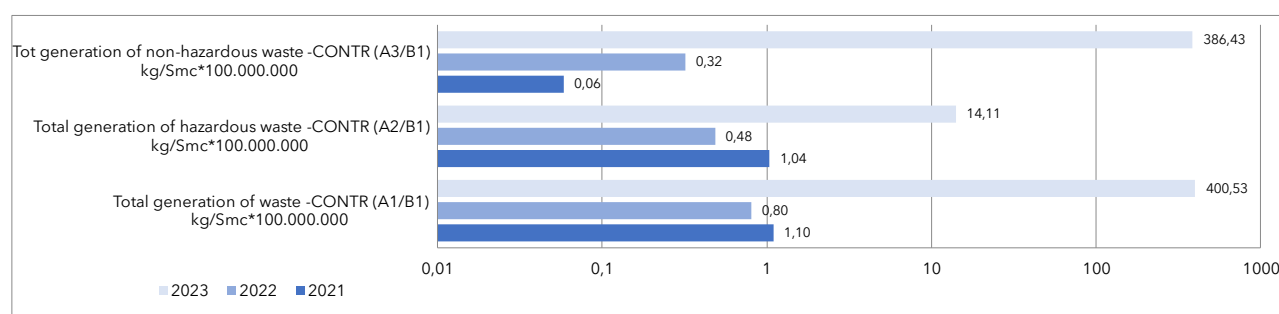
 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	80 of 143

Waste production – Contractors

Type of waste	Hazardous	2021	2022	2023
Total generation of non-hazardous waste (A₃/B₁) – contractors kg/Smc*100.000.000		0,06	0,32*	386,43
Total generation of non-hazardous waste (A₃/B₂) – contractors kg per capita		0,07	0,53*	584,03

(*) The production of purge water from piezometer sampling is extemporaneous and not foreseen for subsequent years. It was therefore not taken into account in the calculation of the indicators, as it would not allow an adequate reading of the production of waste associated with the activities normally carried out by TAP contractors in Italy.

(**) The production of purge water in 2023 is attributable to the wastewater deriving from the extraordinary cleaning of the domestic wastewater recovery tank and some tanks of the PRT water treatment plant.



Note: considering the significant increase in the value of the indicators recorded in 2023, attributable to the production of waste from the execution of specific maintenance activities, in order to allow the visualization of the values associated with the years 2021 and 2022 a logarithmic representation scale has been adopted.

Figure 6.8: Environmental indicators for waste produced by TAP Italia's contractors

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	81 of 143

The following figures show the breakdown of waste produced directly by TAP Italia and that produced by TAP Italia contractors.

It can be observed that the waste produced directly by TAP Italia was only non-hazardous waste in the entire three-year period under consideration.

The figure related to waste produced by contractors in 2022 does not show the production of purge water from piezometer sampling which, as anticipated, would not allow an adequate reading of the production of waste associated with the activities normally carried out by TAP contractors in Italy. Instead, it is observed that, in 2023, the purge waters deriving from the extraordinary cleaning activities of the PRT tanks alone represent approximately 96% of the total waste production of TAP Italia's contractors.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	82 of 143

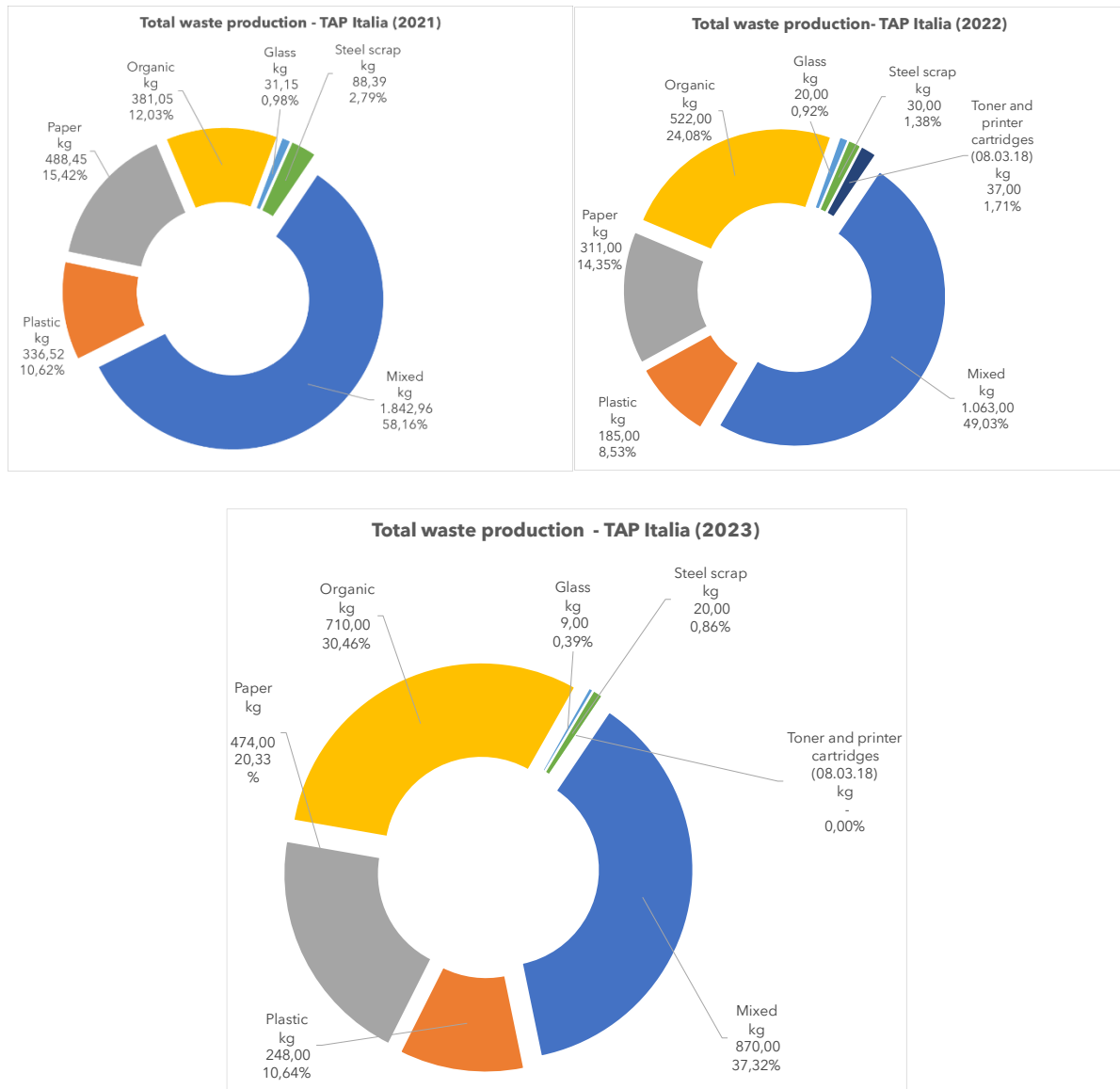


Figure 6.9: Type of wastes produced by TAP Italia in the three-year period 2021-2023

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	83 of 143

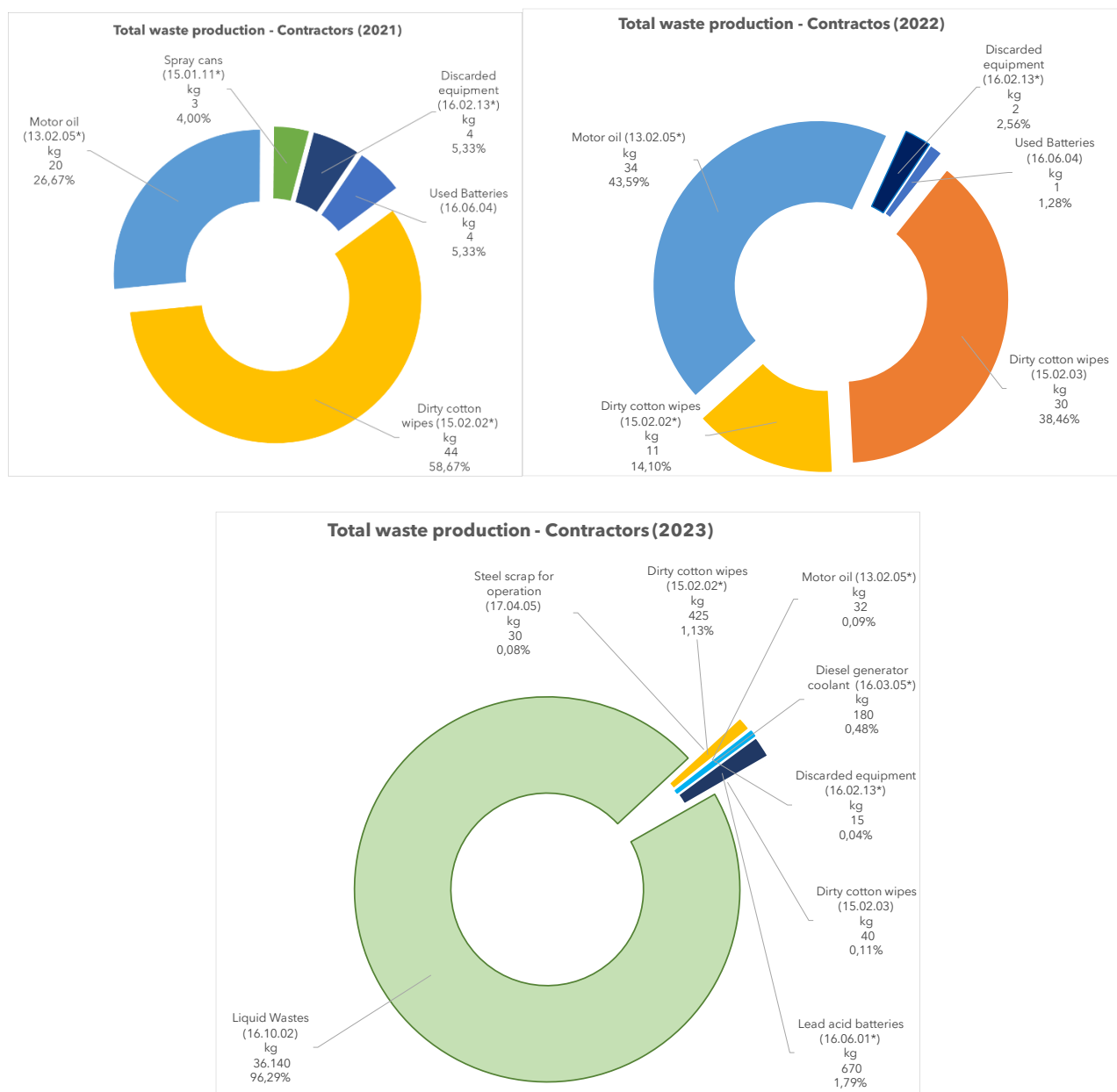


Figure 6.10: Type of wastes produced by TAP Italia’s contractors in the three-year period 2021-2023

Data source	
Municipal waste (produced by TAP Italia)	Internal wastes production monitoring
Special waste (produced by TAP Italia’s contractors)	Annual declaration (MUD) submitted by the contractor (2021) and contractor’s load and unload register / FIR (2022 and 2023)

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	84 of 143

6.6 WASTEWATER

Water discharged from the lamination basin at the PRT (see section 2.2.3) must comply with the limits set out in Legislative Decree 152/2006 and subsequent amendments, Part III, Annex 5, Table 4, to which reference should be made in full.

In the Single Authorization, as well as in the ESIA Decree and in the Environmental Monitoring Plan (VoC A.31), approved by the authorities, there is no requirement regarding the sampling frequency of the final discharge and relevant reporting nor does the national / regional legislation provide indications about. However, to ensure compliance with the discharge limits, TAP has set the sampling of the discharge system on a quarterly basis, in order to carry out a complete analysis of all the parameters referred to in Table 4, Annex 5, Part III of Legislative Decree 152/2006 and subsequent amendments.

It should be noted that the sampling and subsequent analyses, in order to be representative, must be carried out only in the presence of an active first and second flush rainwater discharge. Optimal sampling conditions were never found during the monitoring campaigns performed in 2021, 2022 and also in 2023, due to low rainfall and the absence of active flow in the inspection wells; therefore, the measurements were not considered representative of the state of the different sampling points. Having established the non-feasibility from a technical-economic point of view of proceeding with the installation of continuous sampling systems at the final discharge point of the PRT, TAP has taken steps to allow, starting from 2024, the execution of sampling in inspection wells in conjunction with meteorological events with sufficient active flow where they occurred during the year⁷.

⁷ However, as of the date of publication of this document, no meteoric events that guarantee the implementation of ad hoc sampling, during or within 48 hours of the meteor event itself, have been recorded.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	85 of 143



Figure 6.11: Wastewater sampling activities performed at the PRT

As regards the wastewater of the BSCC, in compliance with the provisions contained in the related Single Environmental Authorization Decree (AUA) no. 13 of 07/16/2019, TAP is authorised to:

-  the discharge onto the ground of wastewater assimilated to domestic wastewater, effluents from the treatment systems consisting of the Imhoff pit and sub-irrigation system (see also the previous Par. 2.2.4) serving the BSCC;
-  discharge into the surface layers of the subsoil, through a drainage basin, and reuse for watering the green areas of runoff rainwater from the waterproofed surfaces and roofs of the BSCC, after screening and sand removal treatment.

As reported in the AUA, which identifies, inter alia, the coordinates of the aforementioned authorized discharge points, it should be noted that:

-  the collection, treatment and final disposal systems of runoff rainwater and wastewater assimilated to domestic wastewater comply with the principles established by Regional Regulation no. 26/2013 and subsequent amendments and by the Regional Regulation 12 December 2011, n. 26, as amended by the Regional Regulation 26 May 2016, n. 7;
-  for wastewater, assimilated to domestic wastewater, pursuant to art. 3 of the Regional Regulation 26 May 2016, n. 7, coming from settlements with a size of up to about 50 Equivalent Inhabitants, no discharge limits are required to be respected, without prejudice to verification of compliance with the minimum sizing requirements and compliance with the obligations for the discharge owner;

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	86 of 143

- on an annual basis, groundwater monitoring is carried out in no. 2 wells located one upstream and one downstream of the area affected by the discharge of wastewater assimilated to domestic wastewater. The results of the monitoring must be transmitted every four years (immediately in the case of ascertaining a state of pollution) to Service 4 Environment and Ecology of the Province of Brindisi, through the SUAP of the Municipality of Brindisi. The test reports must contain the results of the chemical-bacteriological analyses (parameters: pH, Total Nitrogen, Ammoniacal Nitrogen, Total Phosphorus, Total Surfactants, Escherichia Coli), the identification data of the monitored well, as well as the depth at which the sampling related to the analyses has been performed.

Starting from 2023, the monitoring of an indicator relating to the quantities of wastewater coming from the BSCC and the PRT respectively has been introduced. In particular:

- for the BSCC, the quantities of waste water purified and discharged onto the ground with a "sub-irrigation" system are considered, which are reported in the "Annual communication of the quantity of withdrawn water and of the overall quantity of waste water purified/discharged onto the ground" (Doc . TAP LT-TAPIT-ITSK-02481 of 29 January 2024), equal to 185 m³ for 2023;
- for the PRT the quantities of waste water purified and discharged onto the ground were estimated for 2023 with the same calculation carried out for the annual discharges of the BSCC and re-proportioned according to the number of annual accesses to the two facilities (in 2023: 4,406 at the BSCC , 11,027 to the PRT), thus obtaining a value equal to approximately 463 m³ of waste water.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	87 of 143

Table 6-10: Quantities of wastewater discharge

Wastewater discharge

	2021	2022	2023
Water discharged (A) mc	ND	ND	648
Water discharged - PRT mc	ND	ND	463 ⁸
Water discharged - BSCC mc	ND	ND	185 ⁹
Gas processed (B1) Smc	6.829.121.013	9.693.424.970	9.370.494.288
Internal and external workers employed by the organization (B2)	54	59	62
Water discharged (A/B1) mc/Smc*10.000.000	ND	ND	0,069
Water discharged (A/B2) mc/per capita	ND	ND	10,5

Data source

Wastewater discharge	Annual reporting of the quantity of water withdrawn and the overall quantity of purified/discharged wastewater to the ground (BSCC) Counting of the number of annual admissions to the PRT and BSCC
-----------------------------	---

⁸ The quantity of waste water associated with the PRT was estimated starting from the annual discharge data declared for the BSCC, re-proportioned according to the different number of accesses to the two facilities (in 2023: 4,406 at the BSCC, 11,027 at the PRT).

⁹ From "Annual communication of the quantity of water withdrawn and the overall quantity of purified/discharged wastewater to the ground" (Doc. TAP LT-TAPIT-ITSK-02481 of 29 January 2024)

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	88 of 143

6.7 LAND USE IN RELATION TO BIODIVERSITY

The areas used by TAP include:

-  areas occupied by buildings, streets and facilities at PRT site and areas that are nature oriented, which include internal green areas, areas involved by environmental mitigation and external agricultural areas that are managed by TAP, as per following figure and table.



Figure 6.12: Mapping of land use in the PRT area (Source TAP Archive)

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	89 of 143

Table 6-11: Land use type of areas at PRT site, including green external environmental mitigation areas and external agricultural areas managed by TAP

Land use

PRT	2021	2022	2023
Buildings sqm	4.239,22	4.275,42	4.286,70
Paved areas sqm	4.672,97	4.672,97	4.672,97
Asphalt roads sqm	5.149,16	5.149,16	5.149,16
Albino asphalt roads sqm	10.900,32	10.900,32	10.900,32
Gravel areas sqm	73.170,63	73.170,63	73.209,35
Unpaved streets sqm	5.654,28	5.654,28	5.654,28
Rural architecture preserved sqm	152,41	152,41	152,41
Green internal areas sqm	6.995,45	6.959,25	6.959,25
Green external areas (environmental mitigation) sqm	76.398,35	76.398,35	76.398,35
External agricultural area sqm	444.012,96	444.012,96	443.962,96

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	90 of 143

- areas occupied by buildings, paved areas and streets at Brindisi site, as per following figure and table.



Figure 6.13: Mapping of land use in the BSCC area (Source TAP Archive)

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	91 of 143

Table 6-12: Land use type of areas at BSCC site

Land use	
BSCC	2021-2023
Buildings sqm	294,86
Paved areas sqm	261,14
Asphalt roads sqm	1.279,38
Green internal areas sqm	809,24

 area occupied by buildings, paved areas and streets at BVS site, as per following figure and table.



Figure 6.14: Mapping of land use in the BVS area (Source TAP Archive)

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	92 of 143

Table 6-13: Land use type of areas at BVS site, including green external environmental mitigation areas

Land use	
BVS	2021-2023
Gravel areas sqm	122,43
Paved areas sqm	29,01
Green external areas (environmental mitigation) sqm	160,75
Gravel street sqm	213,64

Regarding the core indicators:

-  the total sealed areas correspond to the sum of buildings areas, paved areas, asphalt roads and albino asphalts roads (roads that are sealed but of a clear colour to mitigate the environmental impacts of the road);
-  the total nature-oriented area on site correspond to the green internal areas, while the total nature-oriented area off site correspond to sum of the areas for environmental mitigation and the external agricultural area.
-  the remaining areas used by TAP are unpaved streets, rural architecture preserved (corresponding to typical dry-stone walls) and gravel areas.

The total land used by TAP has not changed from 2021 to 2022. The variation in the values of the areas occupied by buildings and internal green areas within the PRT is attributable to the installation of no. 2 containers for housing the optical fibre and did not lead to a change in the overall occupied area. Net of this variation, between 2021 and 2022 values of the fundamental indicators related to land use change due to the variation in the quantities of gas processed (figure B).

The change in 2023 in the surfaces of the areas occupied by buildings, gravel areas and agricultural areas outside the PRT is attributable to the installation of the new air quality monitoring station “AQ9new”, which authorization process concluded positively in December 2023 with the issuing of the relevant authorization by MASE. The monitoring point includes two cabins (one serving as

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	93 of 143

backup to the other) located in an uncultivated area owned by TAP near the PRT, near the environmental and botanical-vegetation mitigations carried out in Masseria del Capitano.



Figure 6.15: Location of the new AQ9new air quality monitoring station (replacing AQ8n monitoring point from 2024)

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	94 of 143

Table 6-14: Total land use per year (in terms of soil occupation) associated with TAP AG Italy, Branch

Land use

	2021	2022	2023
Buildings sqm	4.534	4.570	4.582
Paved areas sqm	4.963	4.963	4.963
Asphalt roads sqm	6.428	6.428	6.429
Albino asphalt roads sqm	10.900	10.900	10.900
Gravel areas sqm	73.507	73.507	73.545
Unpaved streets sqm	5.654	5.654	5.654
Rural architecture preserved sqm	152	152	152
Green internal areas sqm	7.805	7.768	7.768
Green external areas (environmental mitigation) sqm	76.559	76.559	76.559
External agricultural area sqm	444.013	444.013	443.963
Total use of land (A) sqm	634.516	634.516	634.516

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	95 of 143

Land use

	2021	2022	2023
Total sealed area (A) sqm	26.826	26.826	26.874
Total nature-oriented area on site (A) sqm	7.805	7.768	7.768
Total nature-oriented area off site (A) sqm	520.572	520.572	520.522
Gas processed (B) Smc	6.829.121.013	9.693.424.970	9.370.494.288
Total use of land (A/B) sqm/Smc*1000000	92,91	65,46	67,71
Total sealed area (A/B) sqm /Smc*1000000	3,93	2,77	2,87
Total nature-oriented area on site (A/B) sqm/Smc*1000000	1,14	0,80	0,83
Total nature-oriented area off site (A/B) sqm/Smc*1000000	76,23	53,70	55,55

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	96 of 143

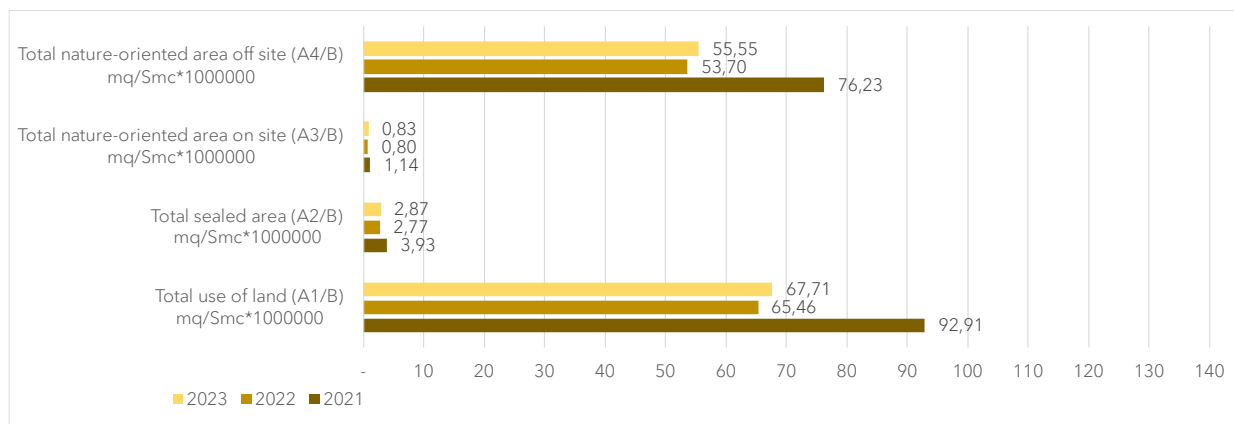


Figure 6.16: Environmental indicators for Land Use

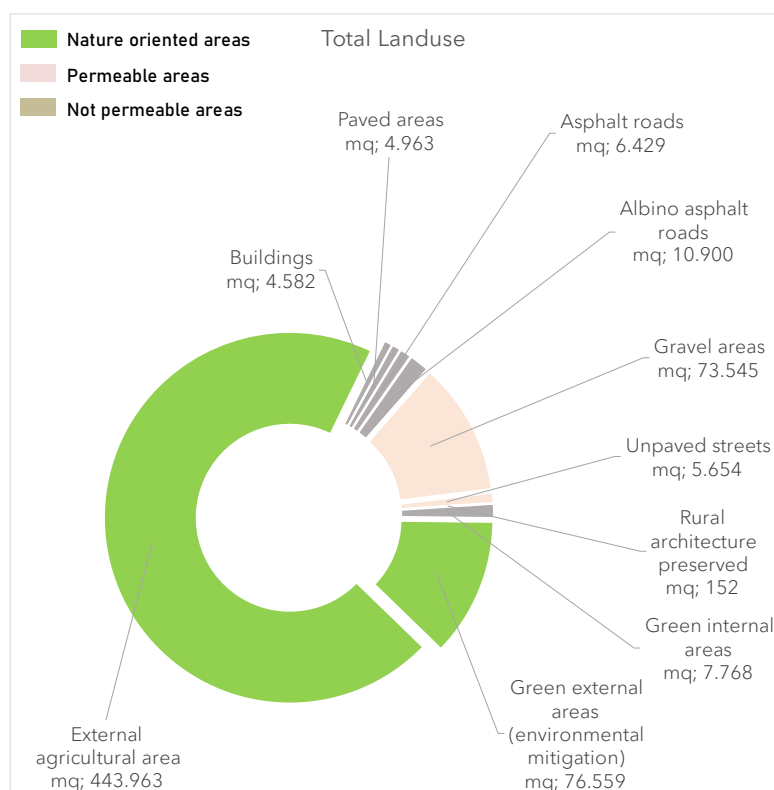


Figure 6.17: Repartition of Land Use between nature-oriented and non-nature oriented (permeable / non-permeable) areas as of 31/12/2023

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	97 of 143

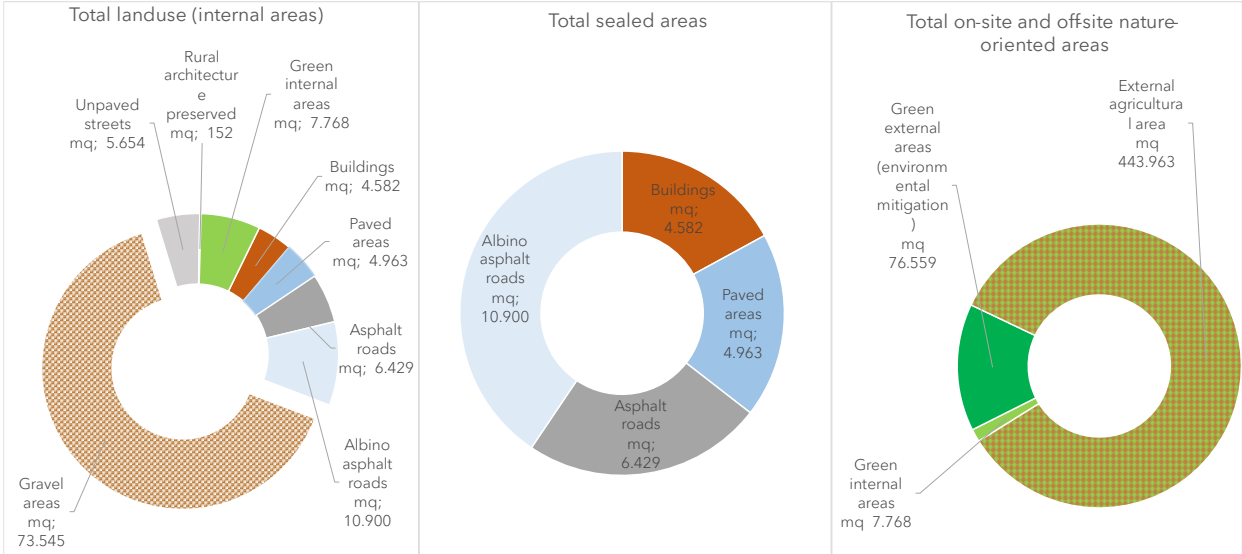


Figure 6.18: Classification of land use types (total internal areas, total sealed areas and total nature-oriented areas) as of 31/12/2023

Data source	
Land use	Measurement of areas used by TAP Italia through the corporate mapping system developed with GIS platform

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	98 of 143

6.8 EMISSIONS

The emissions associated to TAP facilities in Italy are:

Table 6-15: Type of emissions associated to TAP AG Italy, Branch facilities

Direct emissions	
1. Direct emissions deriving from stationary combustion	emissions of CO ₂ , NO _x and dust deriving from diesel generators, one of which is auxiliary due to a programmed lack of electricity of 1,000 kVA and two for emergency in the event of a blackout of 125 kVA each (emission points E5, E6 and E7)
	emissions of CO ₂ and NO _x deriving from the two 3,5 kW gas boilers fired by natural gas (emission points E1 and E2)
2. Direct emissions deriving from mobile combustion	emissions of CO ₂ , NO _x and dust from vehicle fleet
3. Convoyed emission	emissions of CH ₄ deriving from the cold vents system, installed inside the PRT; emissions of CH ₄ deriving from maintenance activities
4. fugitive emissions	potential fugitive emissions of CH ₄ spread by the distribution network
	potential emissions of F-GAS from equipment containing it
Indirect emissions	
1. Imported electricity	Emissions deriving from the electricity consumption of TAP Italia

TAP has established a greenhouse gas inventory, based on calculation of the consumption of fuels used as energy source and on measurement of CH₄ emissions.

Based on report's results it was possible to calculate the core indicator of total direct annual emission of greenhouse gases; on the contrary, it was not possible to report on total annual emissions of NO_x and PM, considering that only one monitoring conducted in May 2021 is available for gas heating boilers emissions, which has been carried out in accordance with the provisions of "Environmental Monitoring Project Italy" (Ref. 14) that meets the requirements of prescription A.31 of the EIA Decree (no monitoring has been carried out for 2022, because the gas heating boilers have not been put in operation).

The 2022 update of the GHG report highlighted a decrease in greenhouse gas emissions for all emission sources considered.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	99 of 143

In 2023 emissions remained substantially in line with those of 2022. More in detail, there was a significant decrease in fugitive emissions, which fell from 262.27 t CO₂eq in 2022 to 66.90 t CO₂eq in 2023. On the contrary, there was an increase in emissions from vents due to routine maintenance activities (which increased from 191.58 t CO₂eq in 2022 to 472.67 t CO₂eq in 2023).

The table shows also an indicator related to CO₂ equivalent emissions avoided, calculated on the basis of the quantity of renewable energy produced directly by TAP, considering the equivalent CO₂ emission factor for 2021 reported in the report titled "European Residual Mixes Results of the calculation of Residual Mixes for the calendar year 2021, Version 1.0, 2022-05-31" (European Residual Mixes 2021 Association of Issuing Bodies). This emission factor has not changed for the two subsequent years 2022 and 2023.

It can be noticed that, thanks to the improvement measures implemented, greenhouse gas emissions in 2022 and 2023 decreased significantly compared to 2021.

Table 6-16: Yearly Green House Gases (GHG) emissions associated to TAP Italia facilities

Emissions

	2021	2022	2023
Vents t CO₂eq	846,02	191,58	472,67
Fugitive emissions t CO₂eq	500,96	262,27	66,90
Structure t CO₂eq	40,85	3,25	1,88
Vehicles t CO₂eq	3,29	7,26	8,77
GHG Emissions (A₁) t CO₂eq	1.391	464,36	550,22
Avoided CO₂ equivalent emissions (A₂) t CO₂eq	44	49	44
Gas processed (B) Smc	6.829.121.013	9.693.424.970	9.370.494.288

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	100 of 143

Emissions

	2021	2022	2023
GHG Emissions (A₁/B) t CO₂eq/Smc*1000000	0,20	0,05	0,06
Avoided CO₂ equivalent emissions (A₂/B) t CO₂eq/Smc*10000000	0,06	0,05	0,005

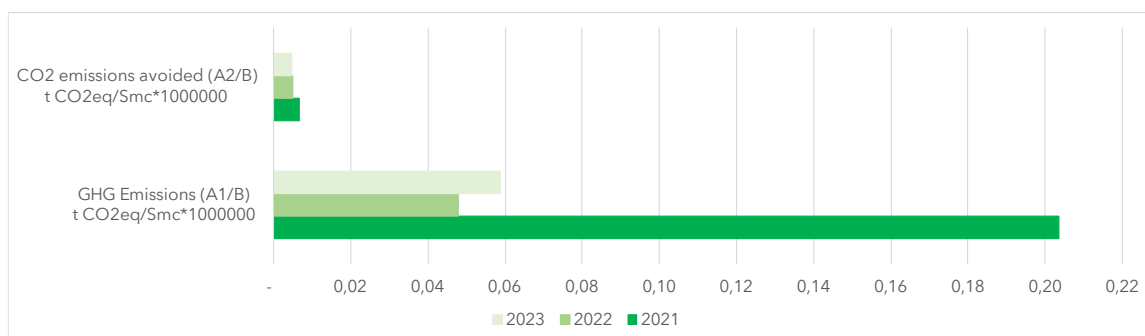


Figure 6.19: Environmental indicator on GHG emissions

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	101 of 143

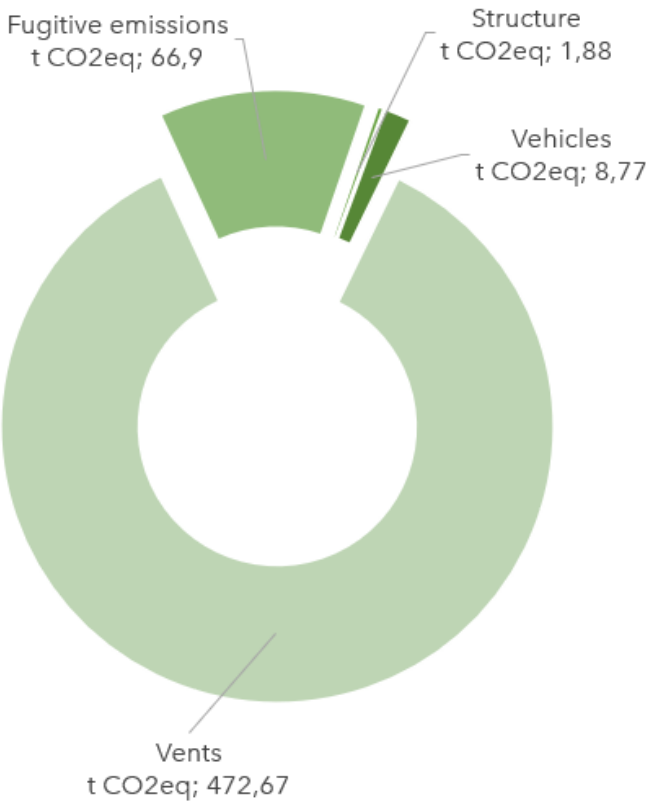


Figure 6.20: GHG emissions (expressed in CO₂eq) associated with TAP Italia activities (year 2023)

Data source	
Emissions	“Report sulle emissioni di gas serra per il 2021”, 20-04-2022. “Report sulle emissioni di gas serra per il 2022”, 02-05-2023. “Report sulle emissioni di gas serra per il 2023”, 31-03-2024
Avoided Emissions	European Residual Mixes Results of the calculation of Residual Mixes for the calendar year 2021, Version 1.0, 2022-05-31

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	102 of 143

6.9 SPECIFIC ENVIRONMENTAL PERFORMANCE INDICATORS

Since 2015, TAP has been regularly monitoring the environmental conditions of the territory and the marine environment interested by the initiative, to ensure the timely assessment of any element of attention both in the onshore and offshore sections.

The environmental components have been monitored both in the ante-operam and during the construction phases and a monitoring plan is in place also for the operational phase, in compliance with the approved Environmental Monitoring Plan in agreement with the supervisory bodies.

The Environmental Monitoring Plan in the operational phase began in 2021 and includes:

Off-shore monitoring:

- water and sediments monitoring
- biocenosis monitoring
- bioconstructions monitoring
- fish fauna monitoring

On-shore monitoring:

- surface waters and water level of the Cassano swamp monitoring
- underground waters monitoring
- avifauna monitoring
- herpetofauna and amphibians monitoring
- olive trees, flora and spontaneous vegetation monitoring
- landscape and soil quality monitoring
- atmosphere and air quality monitoring
- noise monitoring

The following paragraphs provide a summary of the results of the environmental monitoring plan, with reference to the monitoring carried out in 2023.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	103 of 143

Data source	
Environmental performance indicators	Reports on Environmental Monitoring Plan Results submitted to public authority

6.9.1. Water and sediments monitoring

Water and sediments monitoring consists in monitoring every 3 years the quality of water and sediments near the pipeline route, with specific reference to the quality of organic matter, phytoplankton, microbiology and nutrients, the presence of pesticides, hydrocarbons, metals and other chemical compounds. In 2022 and 2023 no water and sediment monitoring has been carried out. The next monitoring is scheduled for 2024 as per the timing identified in the Environmental Monitoring Plan; therefore, this will be highlighted in the next update of the Environmental Declaration which will report the updated data as of 12/31/2024.

6.9.2. Biocenosis monitoring

Biocenosis monitoring consists in mapping of the biocenosis in the dredging areas and adjacent areas: video and photographic survey along the trench areas, sampling of marine sediments. The plan is also aimed at the recovery of Posidonia Alga.

Environmental Monitoring Plan includes one monitoring campaign of biocenosis safter construction, and after 1 and 3 years since the end of construction.

During the 2022 monitoring, the introduction of species from the Eastern Mediterranean was detected due to the increase in water temperature, recorded in recent years in the Adriatic basin.

In the 2022 monitoring, both the growth of cymodocea surfaces and the positive effects of the installation of anti-trawl bollards as a deterrent to illegal fishing were noticed.

The next monitoring is expected in 2024.

In 2023, the Posidonia O. transplant foreseen by the Posidonia Recovery Plan was carried out, which represents a pilot project for the transplantation of Posidonia included in a multi-year plan started in 2021 aimed at identifying the areas suitable for transplantation and providing a work methodology which foresees the use of rhizomes of Posidonia Oceanica detached from the substrates present in the same area due to the effect of bottom currents and the monitoring program.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	104 of 143

Once approved by the authorities concerned, the experimental transplant activities were started and completed in May 2023 on an area of 50 m² to verify its feasibility and effectiveness, as well as the possibility of an extension of the transplant project.

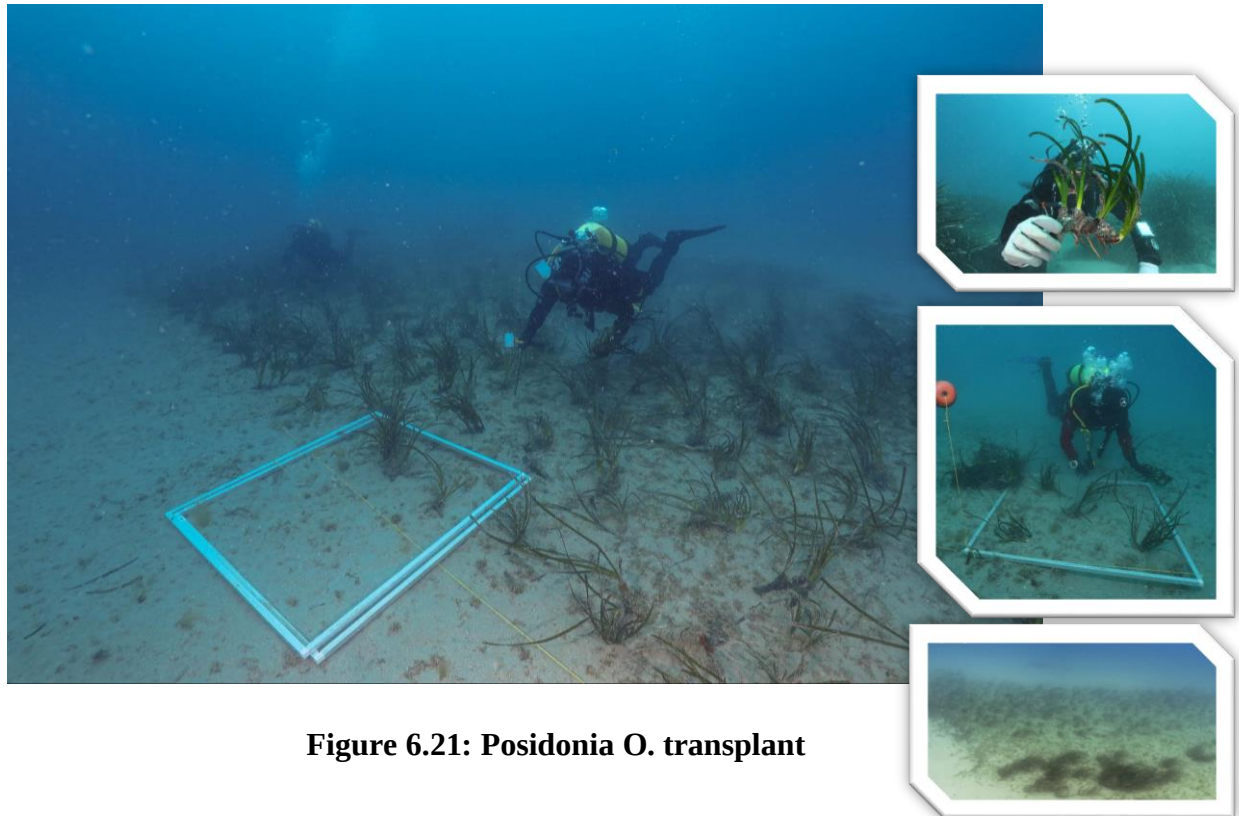


Figure 6.21: Posidonia O. transplant

6.9.3. Bioconstructions monitoring

Bioconstructions monitoring consists in:

-  Geophysical survey to confirm the state of the bioconstructions after the laying of the pipeline;
-  Monitoring of the evolution of transplanted bioconstructions and comparison with adjacent ones;
-  For bioconstructions subject to cleaning: monitoring of the state of the nuclei after cleaning and identification of potential new accumulations of fishing gear or other waste.

Environmental Monitoring Plan includes a whole monitoring campaign of bioconstruction after construction, and then an annual monitoring campaign on the transplanted and interfered bioconstructions during the first 10 years from the start of operations.

In autumn 2022, surveys were carried out to evaluate the state of the bioconstructions present along the route of the pipeline and those transplanted onto it.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	105 of 143

The habitat is in good condition also in consideration of the attractive power developed on fish species. Insignificant reductions in coverage have been detected due to the deposit of sediments and dead leaves of *Posidonia oceanica*, due to the conditions of the bottom currents and in general, to the adverse marine weather conditions of the current year.

In June 2023, the monitoring carried out revealed conditions completely similar to previous monitoring and, in general, the complete restoration of the conditions of use of the affected body of water. The next monitoring will be conducted in 2024.



Figure 6.22: Off-shore bioconstructions monitoring

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	106 of 143

6.9.4. Fish fauna monitoring

Fish fauna monitoring consists in visual censuses and fishing activities in order to determine the biodiversity of the fish species present, number, size, sex and sexual maturity as well as the status of the environmental mitigations putted in place by TAP like the installation of anti-trawling bollards.

The Environmental Monitoring Plan includes 3 surveys (spring, summer, autumn) annually for 2 years and 1 hard bottoms survey in spring annually for 2 years after construction.

In autumn 2022, the monitoring of the anti-trawl bollards was carried out, to evaluate both their effects in relation to the fish population and the colonization by hard-bottom habitats. Even in this case the well-known attractive power developed on fish species was already evident from the first samplings. Added to this, the establishment of bryozoans on new substrates with significant coverage was also noticed.

The second monitoring of anti-trawling deterrents was conducted between April and May 2023. Hard bottom habitats have demonstrated exceptional development and increase compared to previous samplings. The presence of a stable community of dolphins that frequents the area continuously was also found.

In the summer and autumn of 2023, it was observed that hard bottom habitats continued to demonstrate exceptional development and increase compared to previous sampling.

In relation to the fish fauna, the expected seasonal variations were observed in terms of species typical of coastal soft bottoms and debris bottoms; in the areas affected by the installation of anti-trawling bollards, instead, a fair presence of species of commercial interest is observed (the Wide-eyed flounder “*Bothus podas*”, the Pandora fish “*Pagellus erythrinus*”, the Atlantic stargazer “*Uranoscopus scaber*”), whose general performance, in terms of biomass of the catch is increasing compared to previous monitoring.

The next and final monitoring will be conducted in 2024.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	107 of 143

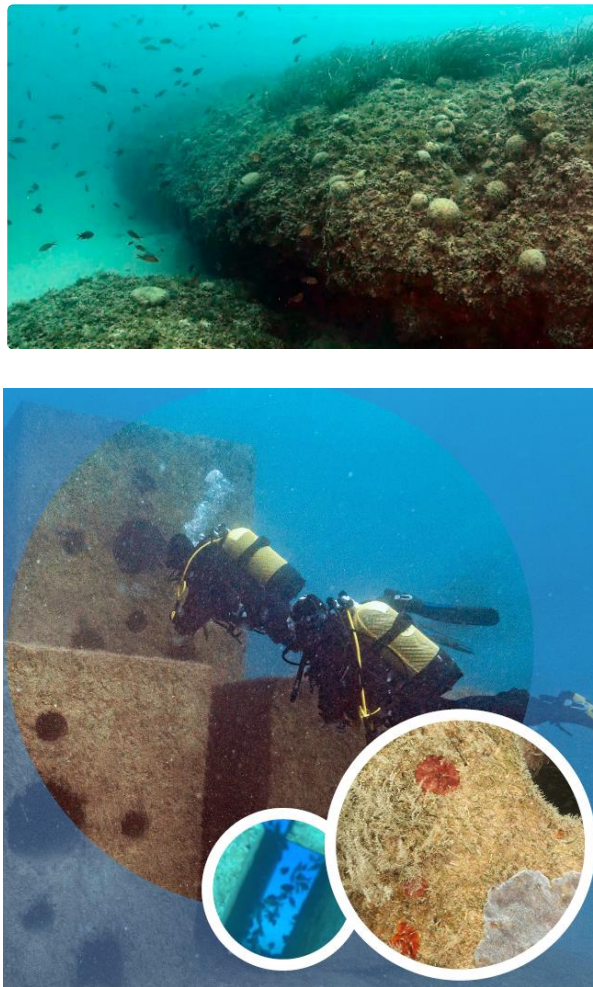


Figure 6.23: Off-shore fish fauna monitoring

6.9.5. Surface waters and water level of the Cassano swamp

The monitoring of surface water quality is carried out in line with the provisions of Legislative Decree 152/2006 and the guidelines prepared by ISPRA.

The chemical-physical and bacteriological parameters are analysed, as required by the Italian and international technical regulations (IRSA-CNR standard and EPA standard).

Environmental Monitoring Plan includes quarterly monitoring of surface waters for the first 2 years after the end of construction activities and monthly monitoring of the Cassano swamp for the first 3 years.

The results of the monitoring campaign reveal that no excesses have ever been found in surface waters except for some values due to the low water level during the summer periods or to the total absence of water such as to make sampling infeasible or invalidate the results with particular reference to the

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	108 of 143

Ph or to the presence of suspended solids and coliforms (also due to the proximity to Melendugno's Phyto-Depuration Plant).

In the second half of 2022, effects due to the lack of rainfall were observed in the flow rate decrease of the canal that connects the Palude di Cassano to the sea and the consequent lowering of the average levels of groundwater. No anomalous values were highlighted in the chemical-physical components being monitored compared to what was observed in previous campaigns.

As required by the approved Environmental Monitoring Plan (PMA), this monitoring concluded at the end of 2022. At the time being, no critical issues have been detected in the parameters recorded for the post-operation phase.



Figure 6.24: On-shore surface water monitoring

6.9.6. Underground waters

The monitoring aims to characterize the quality of groundwater and aquifer by sampling piezometers and wells located near the project areas.

Groundwater quality monitoring activity is carried out under the supervision of the Control Bodies and any deviation is promptly reported and managed in consultation with the Competent Authorities.

For the operational phase, the Environmental Monitoring Plan for underground waters includes:

-  for the microtunnel, quarterly monitoring of piezometer levels and of chemical-physical and quality parameters for the first 2 years from the end of construction / start of operational phase;
-  at PRT area, annual monitoring of chemical-physical and quality parameters, throughout the entire PRT lifecycle at well 'PZ2' and for the first 2 years of operation in correspondence of other wells (PZ1, PZ3N, PZ10N and PZ5N).

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	109 of 143

The results of the monitoring campaigns conducted both during the pre-construction / construction phases and for the first two years of operation revealed some localized exceedances of threshold concentrations (CSC of Table 2 Annex 5 to Title V of Legislative Decree 152/2006), mainly for some metals such as iron, nickel, manganese and arsenic. These exceedances have been managed, as required by the law, through notification to the Control Bodies (ex art. 244, 245 and subsequent amendments of Legislative Decree 152/06) and the institution of a Technical Commission by Authorities.

The exceedances detected during pre-construction / construction phases appeared to be related to the presence of a natural / anthropic background not attributable to TAP Project construction activities.

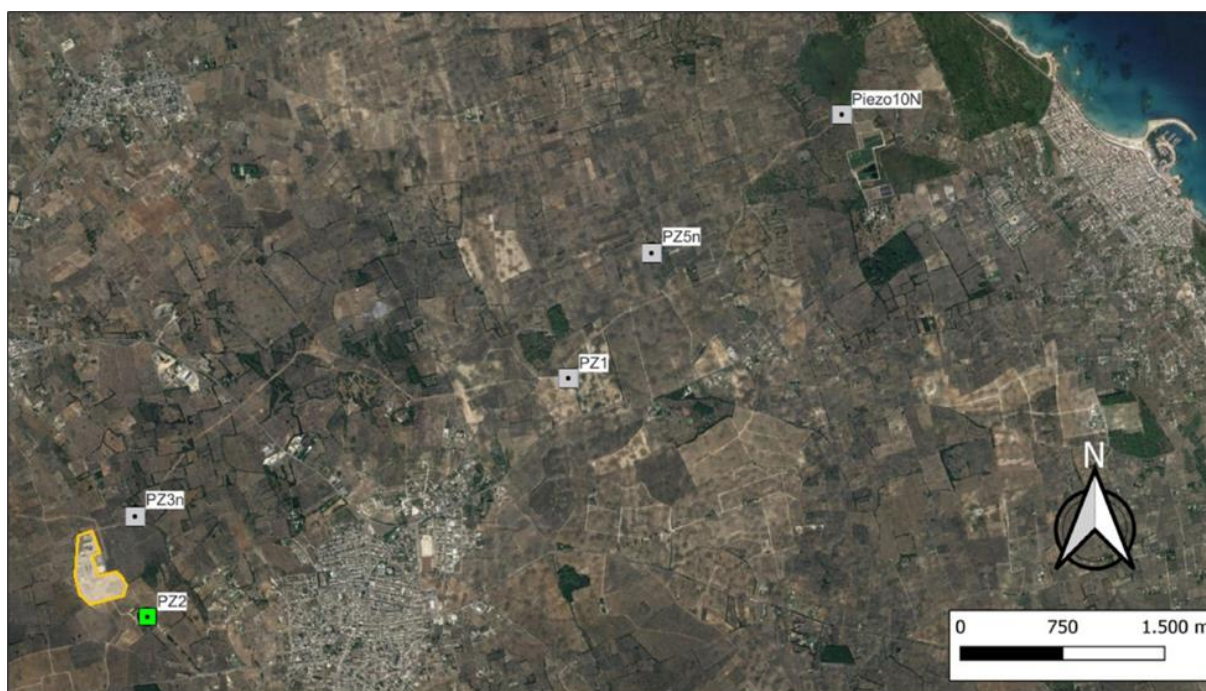
For the first two years of operation, the analytical results of onshore underground waters monitoring activities carried out at the piezometers indicated in the figure below were consistent with the data from previous monitoring carried out during the pre-construction / construction phases. Even if such exceedances in metals have demonstrated the consistency with the natural background of the project's areas, the monitoring have demonstrated the absence of an impact to groundwater quality attributable to the operation of TAP Project.

In the second half of 2022, no anomalous values were highlighted in the chemical-physical components being monitored compared to what was observed in previous campaigns.

In accordance with the approved PMA, no further post-operation monitoring campaigns were planned for the microtunnel area, therefore the monitoring campaign ended in 2022.

In 2023, therefore, only the annual monitoring of the PZ2 well in Masseria del Capitano was carried out, which analytical results are consistent with the data from previous monitoring and highlight the absence of impacts on the environmental component of the attributable "groundwater". to the operation of the TAP Project and the PRT in particular.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	110 of 143



-  Monitoring points no longer used
-  Monitoring points (POST OPERAM)
-  Project route (onshore)
-  PRT

Figure 6.25: On-shore underground water monitoring points

6.9.7. Avifauna

Birdlife monitoring is performed throughout the year and includes monitoring of nesting and sedentary birds, as well as monitoring of migratory birds and wintering birds at the Cassano Marsh and at Melendugno's Phyto-Depuration Plant.

The monitoring involved carrying out surveys for the observation and identification of the species and number of specimens of wintering avifauna, nesting birds and migratory birds.

The investigations carried out in 2022 testify that the construction site activities of previous years had no negative impact on the birdlife component.

In 2023, monitoring campaigns were conducted on nesting and resident birds, migratory birds and wintering birds. In the campaigns conducted in 2023, it is observed that the number of wintering bird specimens spotted during the wintering period of the during construction "*Corso d'Opera*" (CO) and after construction "*Post-Operam*" (PO) phases is decidedly higher even than the one observed in the before construction "*Ante-Operam*" (AO) phase. The ongoing works therefore appear not to have

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	111 of 143

affected the reception of the wetland during the wintering period. It should be noted that as required by the approved PMA, the monitoring of avifauna was completed with the winter monitoring of 2023.



Figure 6.26: On-shore avifauna monitoring

6.9.8. Herpetofauna and amphibians

The monitoring of the herpetofauna consists in surveying and mapping the species with the method of linear transects, set by favouring, where possible, monitoring along the dry-stone walls.

The monitoring of amphibians is carried out instead in all the humid environments present in the survey area, with particular reference to the Cassano Marsh and the Melendugno constructed wetland plant.

The investigations carried out in 2022 and 2023 show that the construction site activities of previous years, as well as the start of the operational phase, had no negative impact on the herpetofauna and amphibians.

In accordance with the approved PMA, no further post-operation monitoring campaigns are planned for this component after 2023.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	112 of 143



Figure 6.27: On-shore herpetofauna monitoring

6.9.9. Olive trees, flora and spontaneous vegetation

Monitoring of olive trees aims to verify the effectiveness of the operations of replanting the removed plants and the degree of recolonization of the spontaneous vegetation present in the replanted olive groves. The monitoring parameters include the investigation of health conditions, the inspection of the foliage, the trunk, the flowers and of the fruits with the estimate of the quantity of olives produced and the annual growth rate of the aerial part. The presence of parasitic agents (eg *Xylella fastidiosa*, insects, pathogenic fungi), vegetative regrowth and any post-implantation mortality rate are also checked.

Flora monitoring is carried out in places that have been subject to the removal of humus and in areas of particular floristic importance.

As part of the monitoring of the spontaneous vegetation crossed by the pipeline route, the effectiveness of the compensation measures and ecological indicators for autochthonous arboreal / shrub vegetation are verified, with particular reference to habitats of community interest such as pseudo-steppe and forests of holm oaks (*Quercus ilex* and *Quercus rotundifolia*).

From the field surveys of 2022, a clear improvement in the physiological conditions of the olive trees is confirmed with many plants that have come to bear fruit.

In the same way, the spontaneous vegetation resulted in a clear improvement, following the replacement of the faults, completed at the beginning of the first half of 2022. The new faults identified have been traced back to the physiological percentages of the replacements carried out.

Monitoring conducted between April and June 2023 confirmed the progressive return to productive conditions of the olive trees with numerous plants in flowering and fruit set. The olive trees previously

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	113 of 143

stored in the canopies during the construction phase and then repositioned along the gas pipeline work path are gradually reconstituting the aerial apparatus, returning to their natural productive condition.

The spontaneous vegetation, then, benefited from very favorable climatic conditions, given by the frequent rainfall during the spring period. The growth trend of the restored vegetation is consistent with the data from previous monitoring, while the flaws identified are consistent with those already mapped in the previous monitoring of 2022.

Monitoring conducted between October and November 2023 recorded the ripening and harvesting of olives in numerous lands where, in addition to the maintenance carried out by TAP, the owners have implemented good agronomic practices.

In some areas, however, signs of parasitic attacks have been observed and, in particular, the first signs of infection by the *Xylella fastidiosa* bacterium.

Regarding spontaneous vegetation, the annual program for the replacement of non-rooted plants was launched, with the aim of balancing the share of physiologically lost plants.

In particular, in the area of the new forest nucleus in Masseria del Capitano, these interventions were carried out using dedicated naturalistic engineering techniques, in order to encourage the growth of the roots of the new seedlings to guarantee their long-term survival.



Figure 6.28: On-shore olive trees, flora and spontaneous vegetation monitoring

6.9.10. Landscape and soil quality

Landscape monitoring aims to establish a visual comparison between the state of the post-construction landscape with respect to the results of the investigations conducted in the pre-construction phase, with particular reference the planting of the transplanted olive trees, the

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	114 of 143

morphological restoration of the work areas, the restoration of dry-stone walls and the quality and effectiveness of environmental mitigation characterized by green areas in the area around the PRT.

Soil quality monitoring is aimed at comparing the chemical-physical properties of the soils recorded in the pre-construction phase and those detected at the end of the construction and restoration phases.

Similarly, humus monitoring has the purpose of determining the maintenance of the pedological characteristics of the soils during the restoration phase, in order to identify (if necessary) any corrective action such as fertilization, harrowing, ploughing, etc.

In May 2023, soil sampling was conducted in the PRT area (samples) and top-soil along the former gas pipeline work strip. The purpose of this monitoring is to verify the absence of any soil contamination and the correct restoration of the pedological characteristics of the land crossed during the works.

In the sampling carried out so far, no critical issues of any kind have been found that would require fertilization, harrowing or plowing operations connected with the agricultural function of the land.

In the fourth quarter of 2023, soil sampling was conducted along the route of the onshore gas pipeline for the purposes of monitoring the Biological Quality of Soils (QBS).

The aim of this monitoring is to verify the biodiversity levels of the biotic component of the soil in a given period (post-operam phase), comparing it with that detected before the construction activities (ante-operam phase).

The data found so far highlight a limited level of anthropogenic disturbance, with QBS values on average high; the comparison between the ante-operam and post-operam monitoring data does not reveal a significant alteration in the Biological Quality of the Soil attributable to the construction site activities, testifying to the quality and effectiveness of the measures implemented to preserve the quality of the layer superficial (humus layer).

The next monitoring campaign is scheduled for 2024 as per the timing identified in the Environmental Monitoring Plan.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	115 of 143



Figure 6.29: On-shore soil quality monitoring

6.9.11. Atmosphere and air quality

The monitoring of air quality in the PRT area is carried out by comparing the data relating to the atmosphere in the operational phase with those recorded ante-operam, in order to identify and report any exceedance according to the current legislation and manage it, if necessary, in agreement with the supervisory bodies.

The air quality monitoring is conducted both throughout continuous monitoring and discontinuous monitoring.

The continuous monitoring consists in the continuous analysis of air quality component through a mobile laboratory installed at a location name 'AQ8n' (see picture) for the determination of the concentration of:

-  Particulate matter (PM10 and PM2.5), with collection of daily data;
-  Carbon monoxide (CO), with collection of hourly data;
-  Nitrogen dioxide (NO2), with collection of hourly data;
-  Sulphur dioxide (SO2), with collection of hourly data;
-  Ozone (O3), with collection of hourly data.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	116 of 143



Figure 6.30: On-shore continuous air quality monitoring sites (Ref. 21)

The average of the daily concentrations measured in each monitoring campaign starting from 2021 is reported here below. The average concentrations are always lower than the legal limits established by the Legislative Decree 155/2010.

Table 6-17: Results of continuous air quality monitoring campaigns carried out from 2021

Air Quality – CONTINUOUS MONITORING

	Fine dusts PM10 µg/mc	Fine dusts PM2,5 µg/mc	Carbon Monoxide (CO) mg/mc	Nitrogen Dioxide (NO2) µg/mc	Sulfur Dioxide (SO2) µg/mc	Ozone (O3) µg/mc
Limit Value	40	25	10	40	20	120
03-2021	19,70	16,00	0,36	21,40	3,70	75,00
04-2021	17,90	13,70	0,30	32,40	4,10	79,10
05-2021	21,60	12,80	0,35	15,60	5,10	83,20
06-2021	39,10	22,00	0,37	17,70	3,90	85,00
07-2021	30,40	19,70	0,30	23,60	3,90	85,80
09-2021	22,60	12,40	0,68	5,40	4,50	67,00
10-2021	16,30	10,10	1,00	5,00	4,50	53,70
11-2021	19,60	12,30	1,58	4,30	6,60	49,90
01-2022	17,40	12,90	0,38	5,50	2,20	53,50

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	117 of 143

Air Quality – CONTINUOUS MONITORING

	Fine dusts PM10 µg/mc	Fine dusts PM2,5 µg/mc	Carbon Monoxide (CO) mg/mc	Nitrogen Dioxide (NO2) µg/mc	Sulfur Dioxide (SO2) µg/mc	Ozone (O3) µg/mc
Limit Value	40	25	10	40	20	120
02-2022	16,10	12,30	0,54	6,00	0,20	62,80
03-2022	27,40	19,50	0,23	6,40	0,20	70,50
04-2022	20,60	10,00	0,19	4,30	0,60	75,60
05-2022	23,80	11,60	0,30	4,80	<0,05	75,60
06-2022	32,20	14,70	0,37	5,30	<0,05	76,00
07-2022	23,80	12,40	0,50	5,10	6,10	6,00
08-2022	21,50	11,60	0,24	5,70	1,60	84,00
09-2022	14,60	7,00	0,45	4,50	2,30	69,90
10-2022	16,10	4,20	0,42	4,80	2,00	55,20
11-2022	19,40	6,60	0,50	5,80	2,30	45,60
12-2022	25,10	18,00	1,00	7,40	3,80	39,20
01-2023	21,70	14,70	1,09	6,90	4,40	46,10
02-2023	28,60	19,60	1,36	6,60	4,90	54,90
03-2023	18,10	11,70	1,70	5,00	4,30	62,50
04-2023	13,60	8,80	2,02	4,10	4,20	65,90
05-2023	19,40	11,20	0,40	3,60	0,70	67,80
06-2023	17,60	9,80	0,59	4,60	0,70	68,60
07-2023	29,40	13,40	0,86	5,30	1,00	73,00
08-2023	22,40	13,80	0,28	4,30	1,70	77,80
09-2023	25,90	12,70	0,32	4,20	0,70	80,50
10-2023	24,20	13,60	0,27	5,10	1,00	63,10
11-2023	13,60	7,80	0,25	4,60	1,90	55,10
12-2023	22,00	16,00	0,22	7,50	6,40	51,60

During 2023, the process for the relocation of the continuous air quality monitoring point "AQ8n" was completed at a new station called "AQ9new", in an area owned by TAP close to the PRT located near Masseria del Capitano.

The air quality monitoring activities in AQ9new, replacing AQ8n, became fully operational in 2024, therefore this will be highlighted starting from the next update of the Environmental Declaration (the first of the three-year period 2025-2027, which will report the updated environmental data to 12/31/2024).

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	118 of 143

The discontinuous monitoring activities of the air quality component is performed using passive samplers at monitoring point AQ5n, AQ6n, for the determination of the concentration of:

-  NO₂ concentration, though monthly passive sampling using the Radiello® sampler
-  PM₁₀ (as atmospheric dusts) concentration, though monthly passive sampling by means of a depo-bulk type deposimeter;
-  carbon monoxide (CO) instant measurements of the concentration, at the start, at the middle and at the end of the measurement campaign.



Figure 6.31: On-shore discontinuous air quality monitoring sites (Ref. 21)

The concentrations measured in each monitoring campaign starting from 2021 are reported here below. The concentrations are always lower than the legal limit established by the Legislative Decree 155/2010. About dust, according to the classification of Law 615/66, (5 classes for 30-day sampling), the dust monitored on site is very low, falling into class I, that means a condition of “practically absent dust” (less than 100 µg/m³). A higher value was found only in correspondence with the fourth monitoring in AQ6n of 2022. However, it should be noted that this monitoring is carried out in an agricultural area, distant from the PRT and not under the control of TAP, whose land was promptly returned to the direct owners following the construction of the onshore section of the gas pipeline.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	119 of 143

Table 6-18: Results of discontinuous air quality monitoring campaigns carried out from 2021

Qualità dell'Aria – MONITORAGGIO DISCONTINUO

		Nitrogen dioxide (NO ₂) µg/mc		Deposited Atmospheric dust µg/mc		Deposited Carbon monoxide (CO) mg/mc	
Punto di campionamento		AQ5n	AQ6n	AQ5n	AQ6n	AQ5n	AQ6n
Valore Limite		40				10	
Post operam quarters	II-2021	7,70	4,90	19,00	21,00	N.D.	N.D.
	III - 2021	6,00	4,00	21,00	22,00	<1,6	<1,6
	IV - 2021	4,40	4,10	22,00	15,00	<2,3	<2,3
	V - 2022	3,60	3,90	4,90	23,00	<2,3	<2,3
	VI - 2022	1,10	0,60	27,00	47,00	<2,3	<2,3
	VII - 2022	<0,5	<0,5	21,00	43,00	<2,3	<2,3
	VIII - 2022	1,50	1,00	30,00	250,00	<2,3	<2,3
	IX - 2023	<0,5	<0,5	21,00	42,00	<2,3	<2,3
	X - 2023	<0,5	<0,5	56,00	58,00	<2,3	<2,3
	XI - 2023	<0,3	0,60	7,50	12,00	<2,3	<2,3
	XII - 2023	0,55	0,95	50,00	20,00	<2,3	<2,3

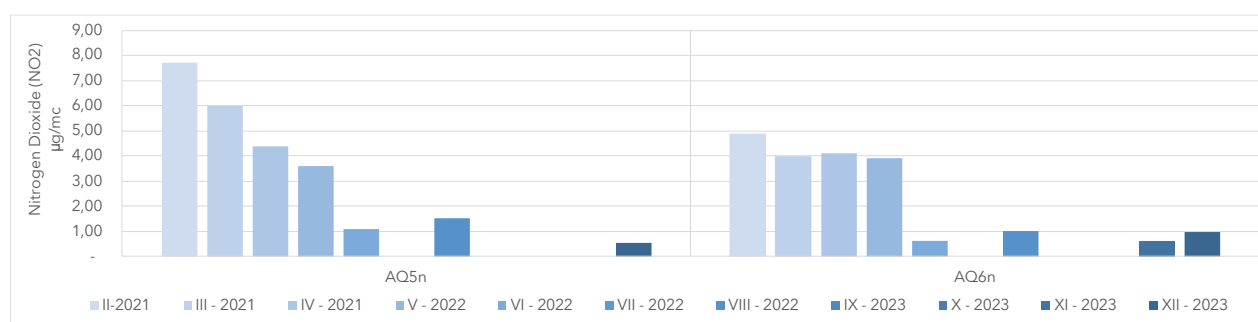


Figure 6.32: Results of the discontinuous monitoring campaigns of Nitrogen Dioxide carried out from 2021

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	120 of 143

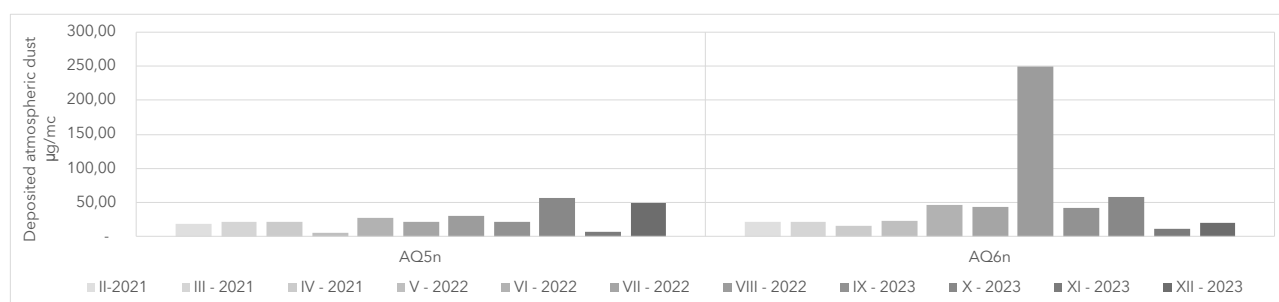


Figure 6.33: Results of the discontinuous monitoring campaigns of deposited atmospheric dust carried out from 2021

For a comparison with ante-operam conditions, the table below reports the outcome of continuous monitoring activities performed by TAP in 2017 in correspondence of two mobile stations located at sampling points MS and AQ8 as per Figure 6.34 below and monitoring PM10, PM2,5 CO, NO2 and Benzene.

Figure 6.34 shows also the location of passive samplers monitoring sites (points from AQ3 to AQ7). The outcomes of ante-operam discontinuous air quality monitoring activities with passive samplers are not reported in the table below and can be found in the “Ante Operam air quality monitoring Reports” (Ref. 22).

Table 6-19: Results of Ante-Operam continuous air quality monitoring performed in 2017

Air Quality – ANTE OPERAM

	Limit value	Sampling point	01-2017	02-2017	03-2017	04-2017
Particulate matter PM10 µg/mc	40	MS	18,00	27,00	17,00	22,00
		AQ8	16,00	16,00	13,00	12,00
Particulate matter PM2,5 µg/mc	25	MS	11,00	15,00	11,00	12,00
		AQ8	9,00	9,00	8,00	8,00
Carbon monoxide (CO) mg/mc	10	MS	1,20	1,60	2,10	2,97
		AQ8	1,20	1,40	0,80	0,45
Nitrogen dioxide (NO2) µg/mc	40	MS	6,70	2,90	2,10	1,10
		AQ8	9,00	7,20	5,10	2,90
Benzene µg/mc	5	MS	0,90	0,80	0,90	0,70
		AQ8	0,90	0,90	0,80	1,10

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	121 of 143



Figure 6.34: Location of mobile stations (MS, AQ8) for ante-operam continuous air quality monitoring activities (Ref. 22)

The comparison between ante-operam and post-operam air quality data show that the air quality in the PRT area does not seem to be affected both by Project (construction activities) and by the operation of TAP facilities (PRT in particular). In particular, the following figures show the comparison between the AO monitoring data recorded at the AQ8 monitoring location and the PO data recorded at the AQ8n monitoring location. On the other hand, the MS monitoring point was not considered, as it is representative of the microtunnel construction area, not subject to air quality monitoring in the PO.



Figure 6.35: Comparison between PM10 Ante Operam (AO) and Post Operam (PO) monitoring at continuous monitoring points

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	122 of 143

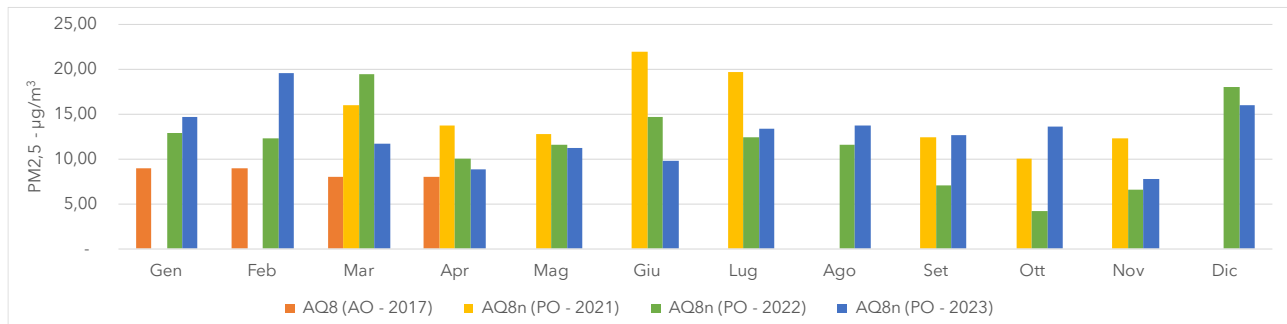


Figure 6.36: Comparison between PM2.5 Ante Operam (AO) and Post Operam (PO) monitoring at continuous monitoring points

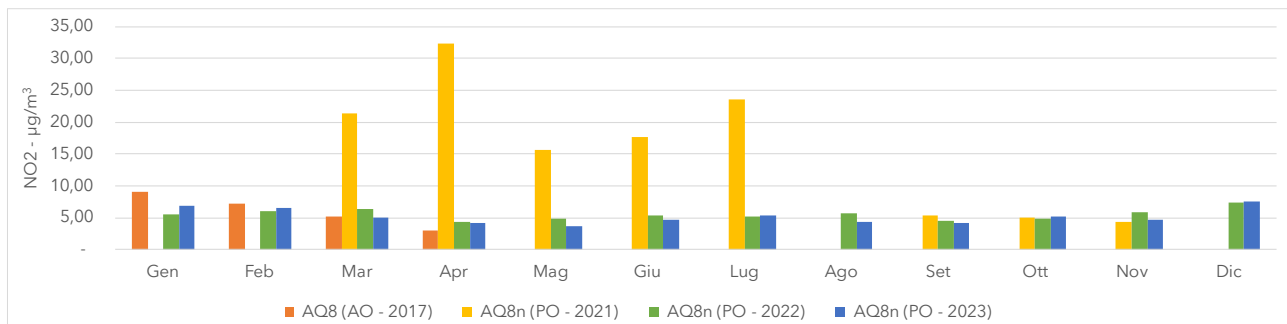


Figure 6.37: Comparison between NO2 Ante Operam (AO) and Post Operam (PO) monitoring at continuous monitoring points

6.9.12. Noise

Noise emissions expected during PRT's operation are connected to the continuous operation, both during day and night, of the various process units and in particular of the following components:

-  measuring stations;
-  shut-off valves;
-  control valves;
-  filters;
-  heat exchangers;
-  generators.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	123 of 143

The structures located at the Brindisi site (BSCC) are not subject to specific requirements on the monitoring and management of noise and the acoustic climate.

The acoustic climate is monitored though:

-  1 continuous monitoring station (N3n) in correspondence with the receptor closest to the PRT (Masseria Capitano, about 470 m away), potentially subject to the highest levels of noise during PRT's operation;
-  4 discontinuous monitoring point (N2n, N1, N11n, N12n).

The results of the continuous noise monitoring are reported here below, and in particular the equivalent sound pressure level (L_{eqA}) during day-time (06:00-22:00) and night-time (22:00-06:00).

The data collected show compliance with the regulatory limits applicable for both temporalities.

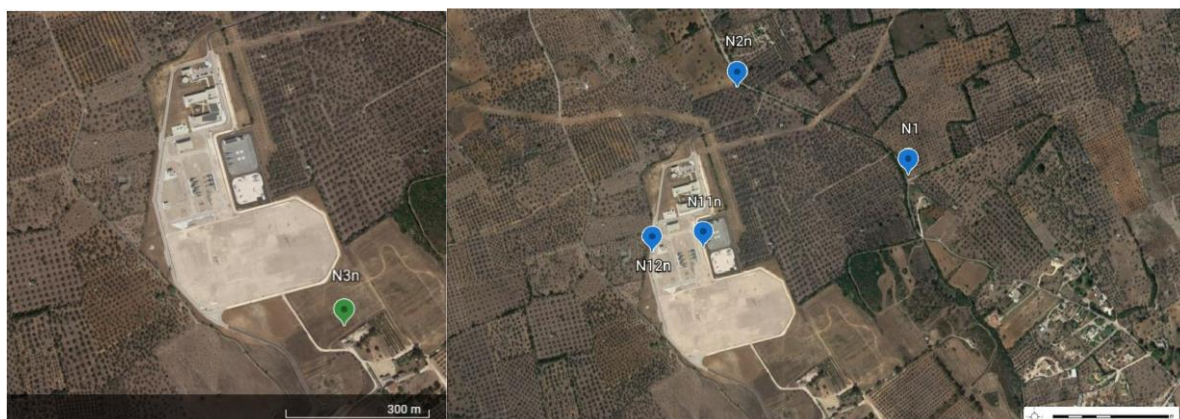


Figure 6.38: Location of continuous (left) and discontinuous (right) noise monitoring points

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	124 of 143

Table 6-20: Results of continuous noise monitoring (point N3n) carried out from 2021

Noise – CONTINUOUS MONITORING

	Night (dBA)	Day (dBA)
Limit value*	60	70
01-2021	55,5	46,5
02-2021	59,5	43,0
03-2021	51,0	41,0
04-2021	44,5	34,5
05-2021	46,5	33,0
06-2021	47,5	42,0
07-2021	47,0	53,5
08-2021	46,1	51,8
09-2021	47,0	49,0
10-2021	44,0	47,0
11-2021	43,0	52,0
12-2021	40,0	43,5
01-2022	41,0	51,0
02-2022	42,6	46,5
03-2022	37,5	42,0
04-2022	37,0	45,5
05-2022	35,5	46,5
06-2022	39,5	47,0
07-2022	45,5	55,0
08-2022	36,0	44,0
09-2022	50,5	52,0
10-2022	45,0	49,0
11-2022	44,0	48,5
12-2022	42,5	43,0
01-2023	42,5	47,0
02-2023	40,5	53,5
03-2023	38,5	44,5
04-2023	40,0	42,5
05-2023	34,5	44,5
06-2023	49,9	45,5
07-2023	54,0	59,5
08-2023	41,5	44,5
09-2023	44,5	45,5
10-2023	41,0	46,0
11-2023	41,0	46,5
12-2023	40,5	43,0

(*) Given the absence of an Acoustic Zoning Plan in the Municipalities of Melendugno and Vernole, the noise limits in force are those established by the DPCM 01/03/91.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	125 of 143

The results of discontinuous noise monitoring are reported here below, and in particular the equivalent sound pressure level (LeqA) during day-time (06:00-22:00) and night-time (22:00-06:00).

The data collected are always compliant with the applicable regulatory limits.

As foreseen by the PMA, the discontinuous noise monitoring campaign formally ended in 2022; therefore, there is no discontinuous noise monitoring data for 2023.

Table 6-21: Results of discontinuous noise monitoring carried out from 2021

Noise – DISCONTINUOUS MONITORING								
	Day (dBA)	Night (dBA)	Day (dBA)	Night (dBA)	Day (dBA)	Night (dBA)	Day (dBA)	Night (dBA)
Point	N1		N2n		N11n		N12n	
Limit Value	70	60	70	60	70	60	70	60
02-2021	39,8	26,5	41,4	31,8	75,3	41,7	44,9	38,4
03-2021	50,5	46,0	40,5	31,5	46,5	38,5	44,0	43,0
05-2021	41,0	34,5	47,5	32,5	47,5	42,5	44,0	40,0
09-2021	45,5	43,0	51,5	30,0	49,0	44,5	53,5	52,0
05-2022	48,0	41,0	41,0	43,5	49,5	43,0	44,5	42,5
08-2022	45,0	37,0	55,5	36,0	57,5	40,5	48,0	45,5
12-2022	37,0	32,0	37,5	28,5	67,0	44,0	64,0	57,0



Figure 6.39: Noise monitoring station

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	126 of 143

7. ENVIRONMENTAL OBJECTIVES

7.1 GHG EMISSIONS REDUCTION

Although TAP has already implemented several emission reduction initiatives during the design and construction phases, it has committed, as part of the Environmental Monitoring Project, to implement an annual monitoring plan for Methane Fugitive Emission and Green House Gases as well as TAP has to develop a 2022-2025 Carbon Management Plan in 2022 as part of a broader Short to Medium Energy Transition Roadmap that will implement the following actions:

-  reduction of direct CO₂ emissions with various initiatives focused on energy efficiency;
-  reduction of methane emissions through the Methane Emissions Reduction Plan, where interventions are identified to combat fugitive emissions, vents or incomplete combustion;
-  optimization of electricity consumption and promotion of the use of renewable energies;
-  interventions to reach the OGMP2.0 gold standard.

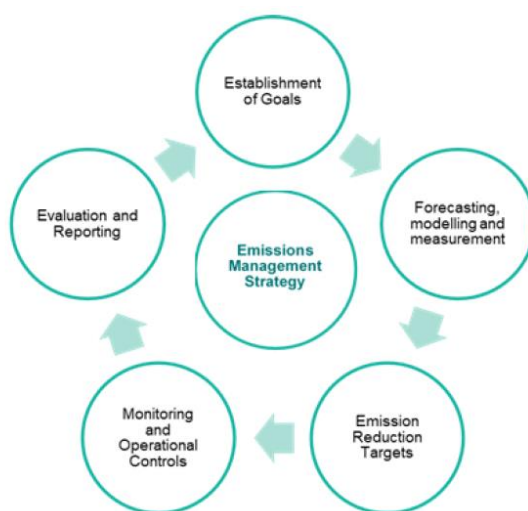


Figure 7.1: Emissions Management Strategy

In particular, the **fugitive emissions management process** will develop in three phases:

-  **Year 1** – Detailed Fugitive Emissions Survey and Target Setting;
-  **Year 2** – Target Setting and Testing and Emissions Reductions Opportunities
-  **Year 3** and later – Monitoring of Agreed Targets.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	127 of 143

As already done for 2021 and 2022, a detailed survey on fugitive emissions was also conducted in 2023 called “*HLDAR Campaign 2023 results report (measurement and quantification of fugitive emissions) in TAP facilities (Italy) for Enagas Services Solutions, S.L.U.*”.

During the 2023 HLDAR campaign, a total of 36 components with the presence of fugitive emissions were identified which, after carrying out parallel repairs, were reduced to 5 emission points, for a total emission quantified at 3,48 tCH₄/year. This figure is a clear improvement compared to the 17,9 tCH₄/year quantified in 2021.

The reduction of fugitive emissions has been also possible thanks to the implementation of the following measures which had been envisaged in the first issue of the Environmental Statement (Rev. 0 dated 30/09/2022):

-  Completion of total or partial shutdown of the affected system;
-  Depressurization of the affected system;
-  Complete replacement of the valve to which the leak is associated.

The following table summarizes the improvement objectives, with an indication of the related planned actions, budget and hours required with regard to the reduction of methane gas emissions discussed above and the overall reduction of greenhouse gas emissions, expressed in terms of CO₂ equivalent (within a range of 5% in the three-year period 2022-2024).

The interventions implemented as of 12/31/2023 are highlighted **in bold** and the current state of objectives achievement, based on the monitored indicators, is also reported.

As regards the improvement objectives in the reduction of greenhouse gas emissions, in 2023 the improvement interventions made it possible to reach the set targets, with a reduction in consumption in absolute value of 55% compared to 2021 with regards to fugitive emissions of methane (-54% with reference to the tCH₄ emitted per Smc of processed natural gas) and 56% with regard to fugitive emissions of equivalent CO₂ (-68% with reference to the tCO_{2eq} emitted per Smc of processed natural gas).

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	128 of 143

Table 7-1: TAP Italia's improvement objectives to reduce greenhouse gas emissions (three-year period 2022-2024)

ENVIRONMENTAL ASPECT	OBJECTIVE	MONITORING PARAMETER	REFERENCE YEAR (2021)	2022	2023	2024	PLANNED ACTIONS TO BE IMPLEMENTED (*)	RESPONSIBLE	Budget/Man Hours required (*)
GHG EMISSIONS	Methane Emissions Reduction	Amount of methane fugitive emissions (expressed in t CH ₄)	17,89 tCH ₄ ----- (2,6 x 10 ⁻⁹ tCH ₄ /Smc)	 -50% (compared to 2021)	 -28% (compared to 2022)	 -8% (compared to 2023)	- Optimize testing control and scheduling to minimize related emissions. - Design features to reduce methane emissions, such as the use of low-emission flange joints and control valve gland. - Operational measures such as a proactive repair, maintenance and replacement program. - Leak Detection And Repair (LDAR) Program of fugitive emissions. - Use of portable recompressor unit to reduce/avoid methane from vents operations during maintenance activities in order to reduce/avoid methane emissions from planned blowdown in 2022 in PRT (short-terms) and for any venting activity planned at transmission network of compressor stations (long-terms). - monitoring and reporting of greenhouse gas (GHG)	Operation Department (O&M Manager, O&M Engineers) QHSE Department	230K Budget planned: - Use of portable recompressor unit to reduce/avoid methane venting from planned blowdown in 2022 in PRT (short-terms): 180k - Leak detection (LDAR) and reporting of fugitive emissions and GHG emissions: 30K - Maintenance and operational activities for emission reducing: 20K 1500 Man/hours forecasted (e.g. analysis, monitoring and maintenance)
				 7,80 tCH ₄	 3,48 tCH ₄				
				0,8 x 10 ⁻⁹ tCH ₄ /Smc	3,7 x 10 ⁻¹⁰ tCH ₄ /Smc				
				-56 % (absolute value vs 2021)	-55% (absolute value vs 2022)				
				-69 % (tCH ₄ /Smc vs 2021)	-54% (tCH ₄ /Smc vs 2022)				

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	129 of 143

ENVIRONMENTAL ASPECT	OBJECTIVE	MONITORING PARAMETER	REFERENCE YEAR (2021)	2022	2023	2024	PLANNED ACTIONS TO BE IMPLEMENTED (*)	RESPONSIBLE	Budget/Man Hours required (*)
GHG EMISSIONS	CO2 Emissions Reduction	Amount of CO2 emissions (Scope 1 + Scope 2) expressed in t CO2eq	1.963,61 tCO2eq ----- 2,88 x 10 ⁻⁷ tCO2eq/Smc	 Performance improvement within a range not lower than 5% (vs 2021)			emissions to support energy efficiency performance improvements. - Perform a Gap Analysis and implement relevant Action Plan for achieving OGMP Level 2 (2022), Level 3 (2023) and Level 4 (2024) - analysis and implementation (if applicable) of the substitution of diesel car fleet for electrical/natural gas vehicles and evaluate installation of charging points at the stations and TAP facilities.	Operation Department (O&M Manager, O&M Engineers) QHSE Department	230K Budget planned: - Use of portable recompressor unit to reduce/avoid methane venting from planned blowdown in 2022 in PRT (short-terms): 180k - Leak detection (LDAR) and reporting of fugitive emissions and GHG emissions: 30K - Maintenance and operational activities for emission reducing: 20K 1500 Man/hours forecasted (e.g. analysis, monitoring and maintenance)
				 843,54 tCO2eq 0,87 x 10 ⁻⁷ tCO2eq/Smc	 868,12 tCO2eq 9,26 x 10 ⁻⁷ tCO2eq/Smc				
				-57 % (absolute value vs 2021)	-56 % (absolute value vs 2021)				
				-70 % (tCO2eq/Smc vs 2021)	-68 % (tCO2eq/Smc vs 2021)				

(*) The planned actions and the required budget/man hours are common for the identified improvement objectives.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	130 of 143

7.2 ENERGY CONSUMPTION REDUCTION

The following table shows TAP Italia's improvement objective, with an indication of the related planned actions, the budget and the hours required in order to achieve a performance maintenance/ improvement objective over a range of 10% of annual energy consumption.

The interventions implemented as of 12/31/2023 are highlighted **in bold** and the current state of achievement of the objectives, based on the monitored indicators, is also reported.

As regards the improvement objectives in reducing electricity consumption, in 2023 there was a reduction in consumption in terms of absolute value of 50% compared to 2021 (-63% as energy consumption in kWh per Scm of processed natural gas). The reduction in consumption is largely due to the implementation of plant processes but also thanks to personnel awareness actions already implemented in 2022.

It should be noted that the improvement objective associated with monitoring the quantity of energy produced and consumed by the PRT photovoltaic system, envisaged as part of the first issue of the Environmental Declaration (Rev. 0 of 09/30/2022) has been re-evaluated and deemed not applicable, since the photovoltaic system is already operating at its maximum potential and it is therefore not currently possible to pursue further performance improvements on this indicator. This objective was therefore removed from the following Table 7.2 except that, as previously planned, starting from 2023 the monthly monitoring of the amount of energy produced and consumed by the PRT photovoltaic system has been implemented (see previous section 6.2).

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	131 of 143

Table 7-2: TAP Italia's improvement objectives to contain energy consumption (three-year period 2022-2024)

ENVIRONMENTAL ASPECT	OBJECTIVE	MONITORING PARAMETER	REFERENCE YEAR (2021)	2022	2023	2024	PLANNED ACTIONS TO BE IMPLEMENTED	RESPONIBLE	Budget/Man Hours required
ENERGY CONSUMPTION	Energy consumption reduction	Annual consumption of energy (kWh)	1.977.963 kWh	 Maintaining/improving of the performance within a range of +/- 10% (vs 2021)			- Perform Energy Audit in compressor stations and pipeline receiving terminal according to EU Energy Efficiency Directive with the purpose of obtaining adequate knowledge of the existing energy consumption profile and identifying and quantifying cost-effective energy savings opportunities. - Analysis of implementation of ISO 50001 - Awareness campaign to all employees to switching off all electrical equipment (including it equipment, air conditioning, coffee machines, etc.) and lighting wherever premises and equipment is not in use (e.g., when leaving the office for lunch or attending meetings, end of shifts and during leave and public holidays); - awareness campaign to security guards to walk through the premises at the end of working days to ensure non-essential lighting is switched off; - setting temperature limits (19/20 degrees for winter period and 25/26 degrees for summer period) and disabling further changes to thermostat controls where heating / cooling in individual premises can be controlled by a thermostat; - Define and implement (if practicable) the possibility to use the backup line located in the Boiler House building in PRT to provide cold water instead of the heating pumps during the hot season to the Administration, workshop and security buildings, cooling down the water using the process gas; - implement a plan for substitution of current bulbs with more efficient ones (LED); - Mandating that all new replacement lighting is energy efficient. "	- Operation Department (O&M Manager, O&M Engineers) - QHSE Department (QHSE Officer) - Security Department (Security Services CTR)	102K Budget forecasted: - substitution of current bulbs with more efficient ones (LED): 80K - disabling further changes to thermostat controls: 2K - Define and implement (if practicable) the possibility to use the backup line to provide cold water: 20K 400 Man/hours forecasted (e.g. audit, analysis, monitoring and awareness campaign)
				 1.181.602* kWh 0,122 x 10 ³ kWh/Smc	 997.172 kWh 0,106 x 10 ³ kWh/Smc				
				-40 % (absolute value vs 2021)	-50 % (in valore assoluto vs 2021)				
				-58 % (kWh/Smc vs 2021)	-63 % (kWh/Smc vs 2021)				

* Data corrected (see section 6.2)

	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	132 of 143

7.3 WATER CONSUMPTION REDUCTION

The table below shows TAP Italia's improvement objective, with an indication of the related planned actions, the budget and the hours required in order to achieve a performance maintenance/improvement objective over a range of 5% of annual water consumption.

The interventions implemented as of 12/31/2023 are highlighted **in bold** and the current state of achievement of the objectives, based on the monitored indicators, is also reported.

As regards the improvement objectives in reducing water consumption, in 2023 the pre-set targets were largely achieved, with a reduction in consumption in terms of absolute value of 63% compared to 2021 (-73% as water consumption in cubic meters per cubic meter of gas natural processed). In particular, in 2022 interventions were carried out to identify and repair a leak at the BSCC structures, which led to a consequent reduction in water consumption recorded compared to the previous year.

The table also shows the objectives related to the monthly monitoring of the quantity of water withdrawn from the water network (mc) and to the annual monitoring of the quantity of water discharged at the PRT and BSCC site, new environmental performance indicators envisaged as part of the first issue of the Environmental Statement (Rev. 0 dated 30/09/2022) and which is implemented starting from 2023 through the adoption of a dedicated calculation procedure (see previous section 6.6).

At the end of 2023, the process of updating the monthly monitoring procedure of the quantity of water withdrawn from the water network was also completed, with monthly readings implemented starting from 2024 (see also previous section 6.4). Net of the implementation of the aforementioned monthly monitoring procedure, the related objective of maintaining/improving performance on a range of no less than +/- 5% envisaged in the context of the first issue of the Environmental Declaration (Rev. 0 of 30/09 /2022) has been re-evaluated and deemed not applicable. The monthly monitoring of water withdrawals, in fact, is configured as an improvement action in relation to the control of water consumption but does not represent itself an environmental performance indicator to be monitored over time; therefore, the objective has been removed from the following Table 7.3.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	133 of 143

As part of the renewal of the PRT discharge authorizations, the construction of a tank was also envisaged, with a useful capacity of 20 m³, for the purpose of collecting the purified water coming from the first rain rainwater treatment plant serving of the plant section not characterized by water coming from surfaces potentially contaminated by hydrocarbons.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	134 of 143

Table 7-3: TAP Italia's improvement objective to contain water consumption (three-year period 2022-2024)

ENVIRONMENTAL ASPECT	OBJECTIVE	MONITORING PARAMETER	REFERENCE YEAR (2021)	2022	2023	2024	PLANNED ACTIONS TO BE IMPLEMENTED	RESPONSIBLE	Budget/Man Hours required
WATER CONSUMPTION	Water consumption reduction	Annual water consumption (mc)	2,907 mc ----- 4,26 x 10 ⁻⁷ mc/Smc	 Maintaining/improving of the performance within a range of +/- 5% (vs 2021)			- Perform a Gap Analysis and implement relevant Action Plan (if applicable) in order to identify the measures to reduce the water consumption in TAP facilities with reference to the irrigation sources of the grass areas, the fire fighting system refilling as well as any possible recovery of the rainwater from roofs of buildings. - Awareness campaign to all employees on water saving (eg. do not let water flow from the tap unnecessarily, use dishwashers only when fully loaded, optimize the use of running water and use, where possible, recycled water, placing reminder stickers to switch taps off). - Implement operational measures such as check that there are no leaks in the systems and implement a proactive repair, maintenance and replacement program.	Operation Department (O&M Manager, O&M Engineers) QHSE Department (QHSE Officer)	250 Man/hours forecasted (e.g. analysis, monitoring and awareness campaign, maintenance)
				 2,558 mc	 1,063 mc				
				2,55 x 10 ⁻⁷ mc/Smc	1,13 x 10 ⁻⁷ mc/Smc				
				-15 % (in valore assoluto vs 2021)	-63 % (in valore assoluto vs 2021)				
				-40 % (mc/Smc vs 2021)	-73 % (mc/Smc vs 2021)				

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	135 of 143

ENVIRONMENTAL ASPECT	OBJECTIVE	MONITORING PARAMETER	REFERENCE YEAR (2023)*	2024	PLANNED ACTIONS TO BE IMPLEMENTED	RESPONSIBLE	Budget/Man Hours required
WATER CONSUMPTION	Monitoring the amount of discharged water	Amount of discharged water at PRT and BSCC site (mc)	648 mc	 Maintaining/improving of the performance within a range of +/- 5%	Monitor the amount of municipal wastewater discharged on an annual basis	QHSE Department (QHSE Officer)	40 Man/hours expected (e.g. awareness campaign)
			0,069 mc/Smc*10 ⁷				

			10,5 mc per-capita				

* monitoring of this indicator has been introduced starting from 2023

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	136 of 143

7.4 WASTE REDUCTION

The following table shows TAP Italia's improvement objective, with an indication of the related planned actions, the budget and the hours required in order to achieve a performance maintenance/improvement objective over a range of 5% of annual waste production and related fraction of hazardous waste.

The interventions implemented as of 12/31/2023 are highlighted **in bold** in Table 7.6 and the current state of achievement of the objectives, based on the monitored indicators, is also reported.

In relation to the waste produced, it is observed that:

-  The waste produced directly by TAP decreased by 26% in absolute value compared to 2021 (-46% as kg per Scm of processed natural gas, -36% as kg per-capita);

Table 7-4: Trend of the total amount of waste produced directly by TAP (2021-2023)

ENVIRONMENTAL ASPECT	OBJECTIVE	MONITORING PARAMETER	REFERENCE YEAR (2021)	2022	2023
WASTE PRODUCTION	Minimization/ Reduction of waste production	Amount of total and hazardous waste produced (kg)	3.169 kg TOT.	 Maintaining/improving of the performance within a range of +/- 5% (vs 2021)	
			4,64 x 10 ⁻⁷ kg/Scm	 2.168 kg	 2.331 kg
			-----	2,24 x 10 ⁻⁷ kg/Scm	2,49 x 10 ⁻⁷ kg/Scm
			58,68 kg per-capita	36,75 kg per-capita	37,60 kg per-capita
			(produced by TAP)	-32 % (absolute value vs 2021)	-26 % (absolute value vs 2021)
				-51 % (kg/Scm vs 2021) -37% (kg per-capita vs 2021)	-46 % (kg/Scm vs 2021) -36% (kg per-capita vs 2021)

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	137 of 143

Net of the production of purge water from piezometer sampling (see section 6.5 above), the waste produced by TAP suppliers in 2022 increased by 4% in absolute value compared to 2021, therefore in line with the maintenance objective set. However, this absolute increase is associated with a reduction in relative terms, equal to 27% as kg/Scm of natural gas processed and 5% as kg per-capita. In 2023, instead, there was a significant increase in TAP suppliers waste production compared to previous years. As anticipated in section 6.5, this increase is attributable to the first cycles of activities envisaged by the preventive and ordinary maintenance plan of the plants or extraordinary maintenance which involved the increase or new production of waste. In particular, the following interventions are worth mentioning:

- gas filter cartridges: they have been replaced after checking the condition of the cartridges themselves. This activity was carried out for the first time on filters 1 and 2 in 2023 which were dirty following commissioning, and will therefore be repeated again in the coming years depending on the cleanliness of the filters themselves;
- diesel generator coolant: this waste was generated for the first time following periodic maintenance, it will therefore be generated again in the coming years;
- purge water: in 2023 they relate to the wastewater resulting from the extraordinary cleaning of the domestic wastewater recovery tank and some tanks of the PRT water treatment plant.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	138 of 143

Table 7-5: Trend of the total amount of waste produced by TAP suppliers (2021-2023)

ENVIRONMENTAL ASPECT	OBJECTIVE	MONITORING PARAMETER	REFERENCE YEAR (2021)	2022	32023
WASTE PRODUCTION	Minimization/ Reduction of waste production	Amount of total and hazardous waste produced (kg)	75 kg TOT.	 Maintaining/improving of the performance within a range of +/- 5% (vs 2021)	
			1,10 x 10 ⁻⁸ kg/Smc	 78 kg	 37.532 kg
			-----	0,80 x 10 ⁻⁸ kg/Smc	4,0 x 10 ⁻⁶ kg/Smc
			1,39 kg per-capita	1,32 kg per-capita	605,35 kg per-capita
			(produced by TAP's contractors)	+4 % (absolute value vs 2021)	+49.943% (absolute value vs 2021)
				-27% (kg/Smc vs 2021) -5% (kg per-capita vs 2021)	+36.371% (kg/Smc vs 2021) +43.451% (kg per-capita vs 2021)

Net of the production of waste by TAP contractors, which, as can be deduced from the above, is strictly related to the need to carry out maintenance activities of the TAP plants, also aimed at maintaining/improving the environmental performance and efficiency of the plants, the direct production of waste by TAP is almost entirely made up of non-hazardous waste similar to urban waste, for which both in 2022 and 2023 there was an improvement in terms of reduction compared to the quantities produced in 2021. As it can be seen from the actions planned and undertaken by TAP (see the following Table 7.6), it is on this type of waste that the main measures that the organization can implement are concentrated, in order to reduce the production of waste attributable to the activities to the bare minimum carried out daily by staff working at TAP's Italian offices.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	139 of 143

Table 7-6: TAP Italia's improvement objective to contain waste production (three-year period 2022-2024)

ENVIRONMENTAL ASPECT	OBJECTIVE	MONITORING PARAMETER	REFERENCE YEAR (2021)	2022	2023	2024	PLANNED ACTIONS TO BE IMPLEMENTED	RESPONSIBLE	Budget/Man Hours required
WASTE PRODUCTION	Waste production minimization / reduction	Amount of total and hazardous waste produced (kg)	3,244 kg TOT. (71 kg hazardous)	 Maintaining/improving of the performance within a range of +/- 5% (vs 2021)			- Awareness campaign to discouraging employees from printing documents; - Applying double-sided printing mode on network and individual printers and scanners; - Offsite refill of empty cartridges; - Provision of durable ceramic or plastic cup/mugs and glasses to reduce the use of disposable cups in order to discontinue the use and the procurement of disposable tableware and food containers, and provision of reusable alternatives; - Provision of drinking water in dispensers as opposed to plastic bottles; - Reuse of wooden and cardboard packaging on site or segregating for offsite recycling; - Provision of dispensers for hand soap, sanitisers, detergents and disinfectants as opposed to small disposable plastic containers	QHSE Department (QHSE Officer)	5K Budget forecasted 100 Man/hours forecasted (e.g. awareness campaign)
				 2,246 Kg (47 kg hazardous)	 39.863 Kg (1.322 kg pericoloso)				
				2,31 10 ⁻⁷ kg/Smc ----- 38,07 kg per-capita	4,25 10 ⁻⁶ kg/Smc ----- 642,95 kg per-capita				
				----- 60,07 kg per-capita	-31% (absolute value vs 2021)	+1.129% (absolute value vs 2021)			
				-51% (kg/Smc vs 2021)	+796% (kg/Smc vs 2021)				
				-37% (kg per-capita vs 2021)	+970% (kg per-capita vs 2021)				

* The total waste production was calculated by adding the waste produced by the contractors (Table 7.5) to the waste produced directly by TAP (Table 7.4)

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	140 of 143

7.5 OTHER MEASURES FOR REDUCING AIR EMISSIONS

As part of the first issue of the Environmental Declaration (Rev. 0 of 09/30/2022), the implementation of the following actions to reduce emissions into the atmosphere was envisaged, complementary to those indicated in previous section 7.1:

-  Reduction of CO_{2eq} emissions into the atmosphere associated with the vehicle fleet supplied to TAP staff, through the execution of periodic maintenance activities and the encouragement of the use of electric cars (e.g. possible installation of charging stations);
-  Management of reports received from TAP personnel of any defects/malfunctions of the equipment (e.g. air conditioning systems and/or other systems constituting potential sources of pollutant emissions).

These actions were also associated with an objective of maintaining/improving environmental performance over a range of no less than +/- 5%.

Since it turned out that the implementation of the aforementioned actions is not immediately implementable it has been considered, at the moment, to suspend these objectives. In the long term, the feasibility of installing charging stations for electric vehicles will however be verified. In any case, currently all vehicles are subject to periodic preventive maintenance and the system for reporting faulty equipment and malfunctions is already in place.

7.6 CONTROL OF MATERIAL CONSUMPTION

An indicator was introduced in 2022 (reporting the classification also for 2021) aimed at monitoring the quantity of material consumed grouped by category (see previous section 6.3), as foreseen in the first issue of the Environmental Declaration (Rev. 0 of 09/30/2022), in order to keep the quantities of material consumed by the organization grouped by category under control (distinguishing between spare parts, oils, greases, chemical products and technical gases).

However, the objective of indirectly reducing waste production through the optimization of monitoring material consumption resulted difficult to apply, precisely because this production is directly related to ordinary maintenance activities, which will increase with the operation of the plant and those of extraordinary maintenance which in some cases are related to interventions to improve environmental performance (for example, the replacement of lighting

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	141 of 143

fixtures). Therefore, it has been decided to remove this objective, while maintaining the environmental performance indicator relating to material consumption, which will allow to keep track of the different types of material consumed.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	142 of 143

8. REFERENCES

<u>Ref. No.</u>	<u>Document Title / Source</u>	<u>Document Number</u>
1	Modello di Organizzazione Gestione e Controllo 231	IAL00-TAP-COL-X-TVO-0001, Rev. 2 – Appendix 1
2	TAP website: https://www.tap-ag.com/about-tap	-
3	TAP website: TAP website: https://www.tap-ag.com/infrastructure-operation/how-tap-operates	-
4	TAP website: https://www.tap-ag.com/about-tap/taps-regulatory-compliance-programme	-
5	Environmental Review Report	IAL00-TAP-QHSE-Y-TRF-0001
6	QHSE Environmental Management System Manual	CAL00-TAP-QHSE-X-TMQ-0002
7	TAP website: https://www.tap-ag.com/sustainability/quality-health-safety-environment/integrated-qhse-management-system	-
8	Environmental and Social Management Manual	CAL00-TAP-QHSE-Y-TMT-0001
9	Quality, Health, Safety and Environmental (QHSE) Policy	CAL00-TAP-QHSE-X-TVO-0001
10	HSE Hazard – Impact and Risk Assessment Procedure	CAL00-TAP-QHSE-X-TPA-0016
11	TAP Italy Environmental and Social Impact Assessment	IAL00-ERM-643-Y-TAE-1011
12	ESIA Commitments Register	IAL00-PMT-601-Y-TLX-0001, Rev. 1
13	TAP Operations Environmental Standards Manual	CAL00-TAP-QHSE-Y-TMT-0002
14	Environmental Monitoring Project Italy	IAL00-ERM-643-Y-TAE-1028
15	Nuovo Centro Elaborazione Dati con annessi Uffici e Servizi – Relazione Tecnico Descrittiva, Rev. 1	-

 Trans Adriatic Pipeline	TAP AG Doc. no.:	IAL00-C37050-000-S-TRY-0002	Rev. No.:	0
	Doc. Title:	TAP Italia Environmental Statement 2022 – 2024 2024 Update (data as of 31/12/2023)	Page:	143 of 143

<u>Ref. No.</u>	<u>Document Title / Source</u>	<u>Document Number</u>
16	License to Operate (LTO) Level 2 Compliance Register Italy	IAL00-TAP-AMA-X-TLX-0001
17	License to Operate (LTO) Level 3 Compliance Register Italy	IAL00-TAP-AMA-X-TLX-0002
18	TAP Context Analysis – Risk Opportunities and Action Report	CAL00-TAP-QHSE-X-TRF-0005
19	HSE Legal Compliance Procedure	CAL00-TAP-QHSE-X-TPA-0020
20	Report sulle emissioni di gas serra per il 2021”, 20-04-2022	-
20a	Report sulle emissioni di gas serra per il 2022”, 02-05-2023	-
21	Post Operam Monitoring Reports of the “atmosphere” component	IAL00-C37052-601-Y-TRX- (+ Sequential Number of quarterly reports)
22	Ante Operam air quality monitoring Reports in compliance with prescription A.31) of D.M. No. 223 of 11/09/2014	IAL00-C5577-601-Y-TRS- (+ Sequential Number of quarterly reports)
23	QHSE – Communication Procedure	CAL00-TAP-QHSE-X-TPA-0014
24	QHSE Training Procedure	CAL00-TAP-QHSE-XTPA- 0006
25	TAP Carbon Management Plan 2022 - 2025	CAL00-TAP-QHSE-Y-TTA-0001
26	2022 QHSE Activity Plan and Programs and KPI's	CAL00-TAP-QHSE-X-TTA-0005
27	Pollution Prevention Procedure	CAL00-TAP-QHSE-Y-TPA-0001 – Appendix 2
28	(Hazardous Material Inventory)	CAL00-TAP-QHSE-Y-TPA-0007 - Appendix 5
<u>29</u>	ESCH Performance Data Management Procedure	CAL00-TAP-QHSE-X-TPA-0025