Supplementary material. SADA and DESYRE DSSs descriptive classification criteria (main issues related to DSS's)

	DSSs	
	SADA	**DESYRE**
PRODUCER/PRODUCT IDENTIFICATION		
Developer/Vendor	University of Tennessee, Knoxville, being funded by the United States Environmental Protection Agency and the United States Nuclear Regulatory Commission, and Oak Ridge National Laboratory (ORNL, www.ornl.gov) collaboration	Venice Research Consortium (CVR), Ca' Foscari University of Venice, the National Research Council (CNR), Insiel and Thetis S.p.a. Italy
Contact point for more info.	http://www.sadaproject.net/index.html	http://www.veneziaricerche.it/en/consortium.html
Platform	Windows 95/98/NT/2000	Windows 95/98/NT/2000
DSS's FUNCTIONS		
Main Features/Modules	Visualization	Visualization
	Initial Sampling	
	Secondary Sampling	
	Statistical Analysis	
	Geospatial Interpolation	Geospatial Interpolation
	Human Health Risk Assessment	Human Health Risk Assessment
	Ecological Risk Assessment	
	Cost/Benefit Analysis	Socio-economic assessment
		Remedial Process Selection and simulation
	MARSSIM	
Interactive (I) or File Input (F)	F	I
Input/Output		

Tabular Input	.csv, .mdb	Georeferenced database based on Oracle
Tabular Output	.csv, mdb.	.csv
Graphic Input	dxf.; shp., jpeg, gif, tiff	shp.
Graphic Output	dxf.; shp., jpeg, gif, tiff	shp.
Print Report?	Yes	No
Ease of use	SADA has an intuitive graphical interface that allows the analyst to use all of its features. More advanced tasks require training.	DESYRE requests GIS (ArcMap) and Oracle database knowledge in order to run the modules developed inside the DSS.
Usage	Several examples of its use are provided on its web page.	Few case studies done for research and educational purposes.
Stage of development	Mature product that has been available for several years. Continually being updated and improved. Enhanced versions released periodically.	Intermediate version of the DSS available for research and educational purposes at Venice Research Consortium in Venice, Italy.
Costs	Free	Not free
Independent testing	US EPA ETV	No
Potential technical team members	Statisticians	
	Environmental Authorities	Public authorities (municipalities, regional and national administrations)
	Risk Assessors	Risk Assessors
	GIS Users	GIS Users
	Project Managers	Sites owners and developers Services providers
	Academia	Research Institutes and Universities
	Stakeholders	Experts in characterization plan development Hydrologists Chemists
	MARSSIM Analysts	

ANALYTICAL METHODS		
Categories of contaminants		
Organic	√	√
Inorganic	√	√
Radioactive	√	
Contaminant phase		
Aqueous	√	√
Non-aqueous	√	√
Gas		
Solid	√	√
Site environmental characteristics		
Vadose zone	√	√
Saturated zone	√	√
Characterization analysis		
Data management		
Interface with transient codes (transport)		√
Sort and query data	√	√
Data analysis		
Static	√	NA
Transient		√
Spatial dimensions	3	2
Define areas/Volumes of concern	√	√
Calculates mass of contamination	√	√
Address uncertainty in the	√	√

decision variable		
Sampling guidance	√	NA
Data visualization		
Surface structures	√	√
Hydrologic structure	√	√
Subsurface structures	√	√
Contaminant visualization	√	√
Media		
Soil/Sediment	√	√
Soil gas	√	NA
Air	NA	NA
Surface water	√	√
Groundwater	√	√
Exposure scenarios	Industrial	Residential
	Residential	Recreational
	Recreational	Industrial
	Agricultural	
	Excavation	
		Population services Tourist Services for business and firms, these three scenarios used within the socio-economical module.
Exposure pathways	Ingestion	Ingestion
	Inhalation	Inhalation
	Dermal Contact	Dermal Contact
	External (radiation)	Combined exposure
	Food Consumption	

	Combined exposure	