

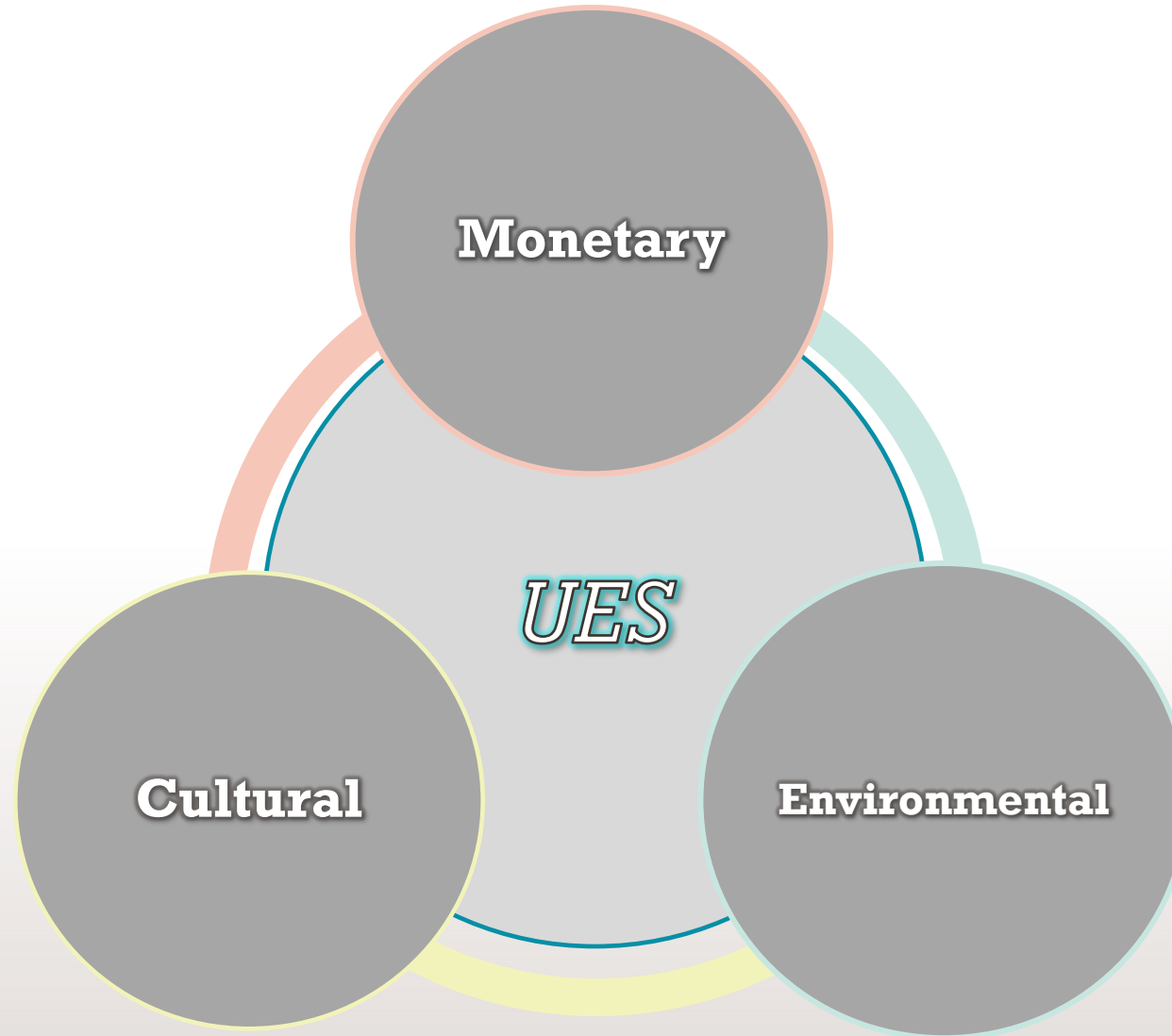
Ecosystem services, monetary value and social sphere: a specific-vegetation software suite on an urban-scale project

Francesco Busca¹ and Roberto Revelli²

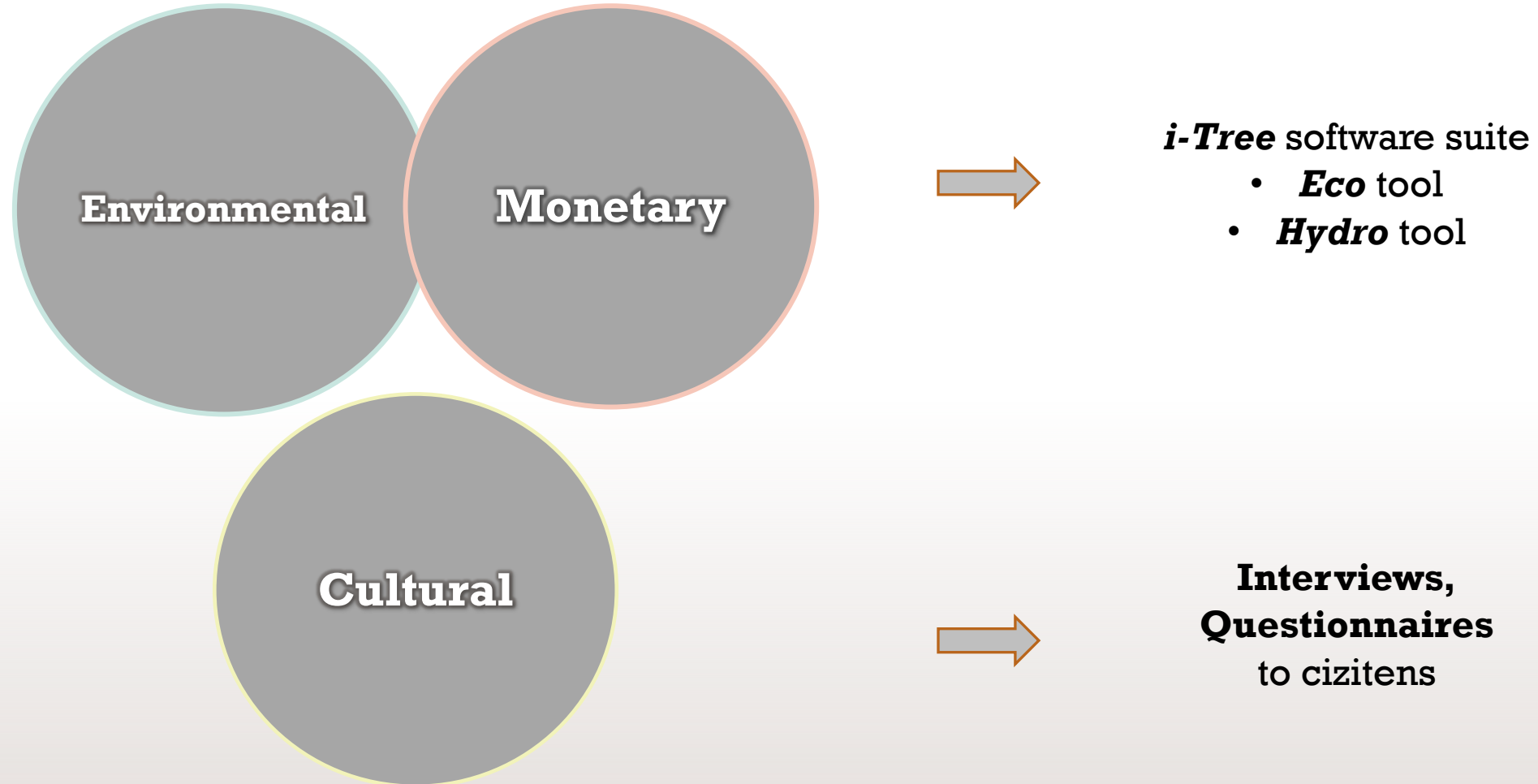
¹Department of Environment, Land and Infrastructure Engineering (DIATI), Politecnico di Torino
francesco.busca@polito.it

²Department of Environment, Land and Infrastructure Engineering (DIATI), Politecnico di Torino
roberto.revelli@polito.it

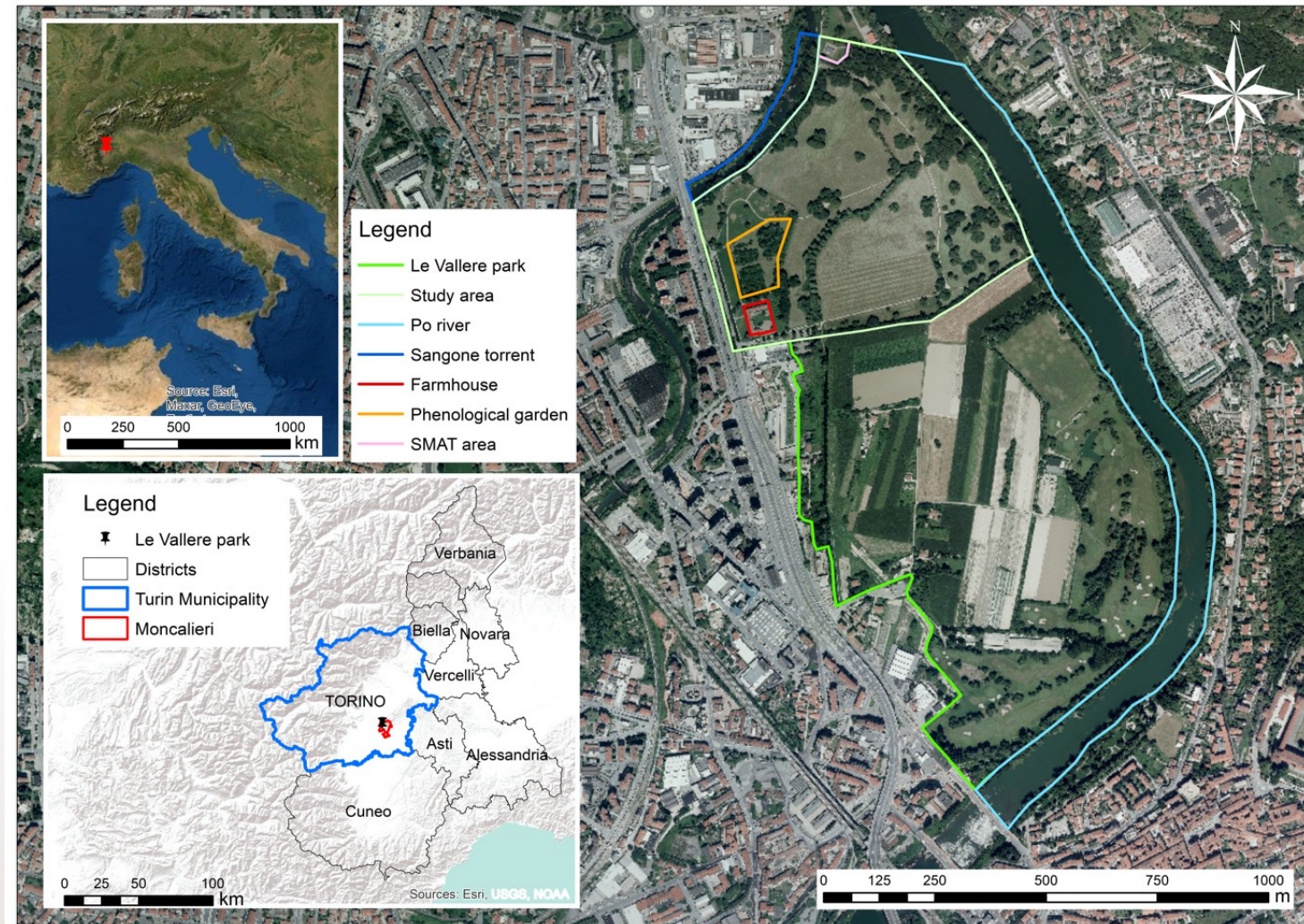
Urban Ecosystem Services (UES): which are the multiple values?



Methodology



UES Quantification – Turin case study

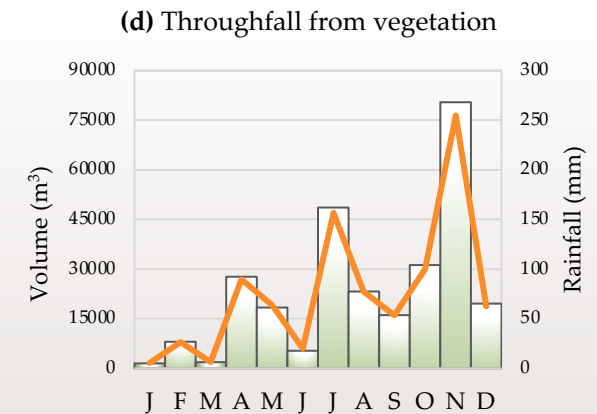
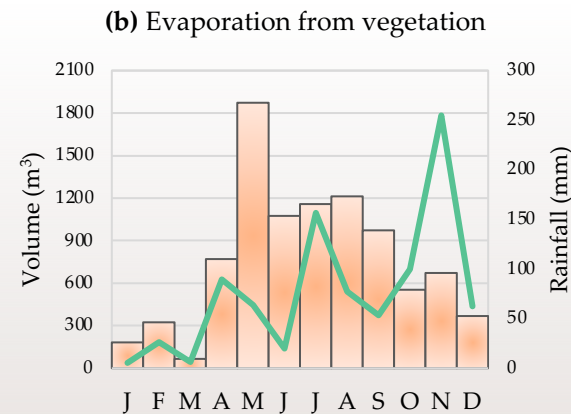
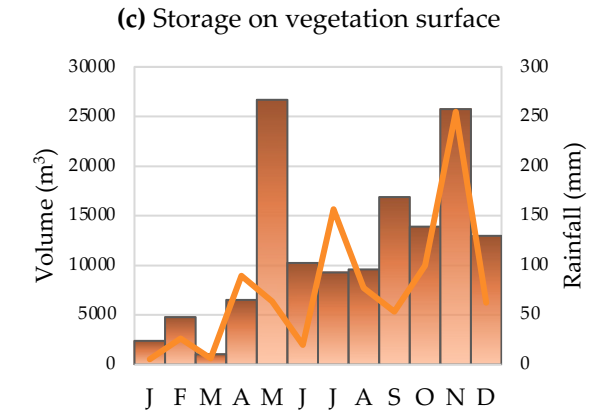
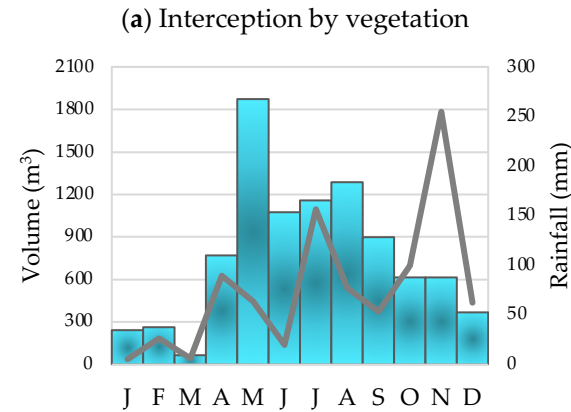


Busca, F., Tinivella, I., Revelli, R. Urban sustainability: the role of ecosystem services provided by an Italian green infrastructure. *Geam. Geoingegneria Ambientale e Mineraria* 2021, 163-164, 46-55

UES Quantification – Turin case study

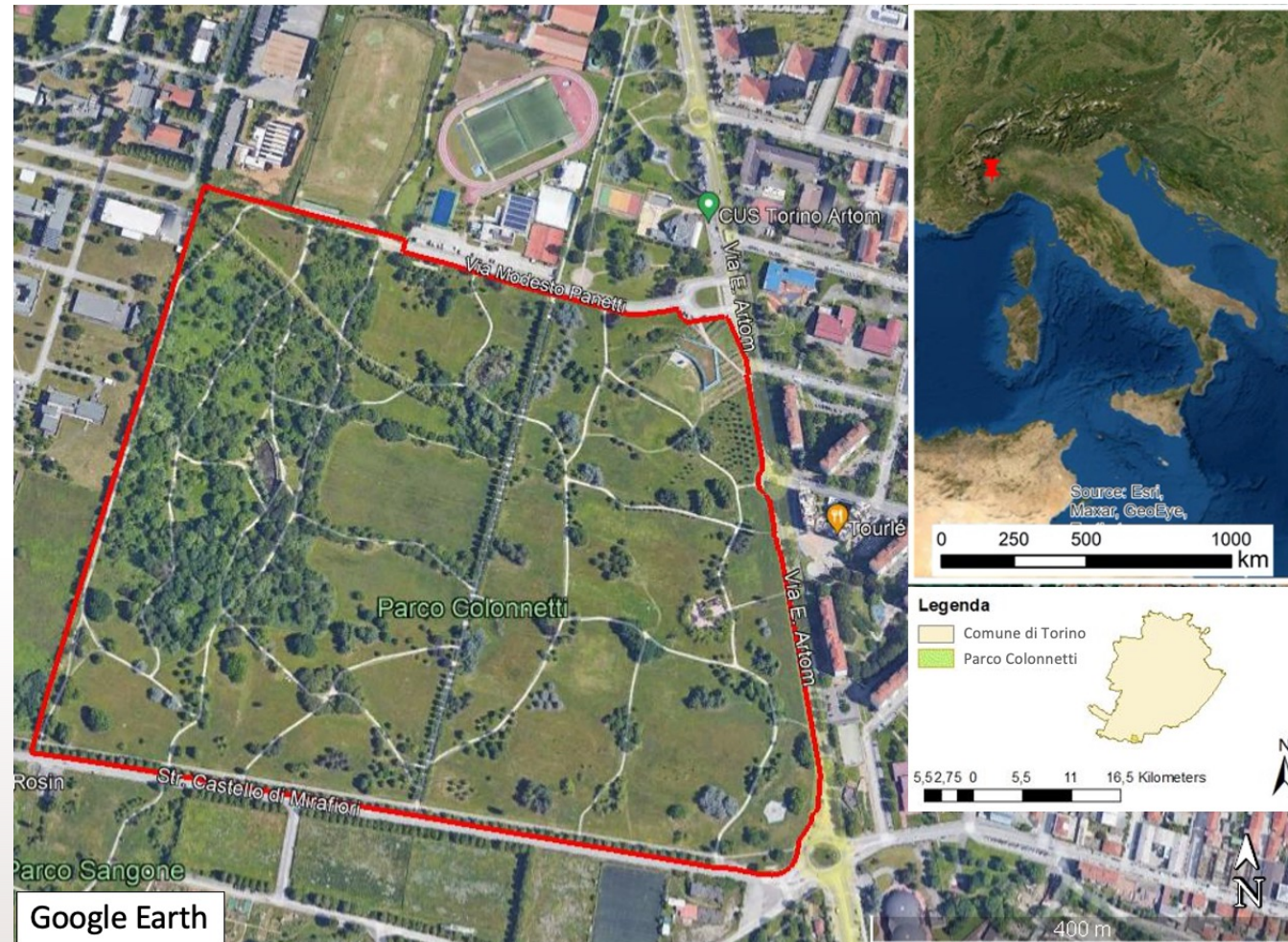


	UM	Yearly amount
Rainfall	mm	914.50
Total flow	m ³ /year	217763.21
Base flow	m ³ /year	852.46
Pervious runoff	m ³ /year	215393.35
Impervious runoff	m ³ /year	1517.40



Busca, F., Revelli, R.. Green Areas and Climate Change Adaptation in a Urban Environment: the Case Study of “Le Vallere” Park (Turin, Italy) Submitted

UES Quantification – Turin case study



Busca, F., Revelli, R. Città resilienti e Servizi Ecosistemici: il Caso Studio di un'Area Verde Torinese. In IDRA2022 – XXXVIII Convegno Nazionale di Idraulica e Costruzioni Idrauliche, Reggio Calabria, Italia, Settembre 2022.

UES Quantification – Turin case study

Ecosystem Service		Quantity	UM	Monetary value [€]
Air Pollutant Removal (annually)	O ₃	556.60	kg	19 330
	NO ₂	246.50	kg	1 278
	SO ₂	60.50	kg	114
	CO	78.50	kg	86
	PM2.5	36.10	kg	43 569
Carbon Storage		614.00	t	37 300
Carbon Sequestration (annually)		19.55	t	1 186
Avoided Surface Runoff (annually)		1080.00	m ³	2 100
O ₂ Production (annually)		52.12	t	-
Total				106 394

Cultural Urban Ecosystem Services (CUES)

CES category (MA, 2005)
Spiritual and religious
Recreation and ecotourism
Aesthetic
Inspirational
Sense of place
Cultural heritage
Educational



Questionario per i cittadini di Torino all'interno del progetto di ricerca di Valuazione dei Benefici Sociali che offrono le Aree Verdi del Comune di Torino.

Para ello le agradeceríamos su colaboración, manifestando su opinión y respondiendo a las preguntas del siguiente cuestionario. Las respuestas son confidenciales y le garantizamos el anonimato de los datos proporcionados por ustedes en virtud de la Ley 12/1989, de 9 de mayo, de la Función Estadística Pública.

TEMPO DI DURATA PREVISTO: 5 min

DATI PERSONALI		
Età	Sesso	Livello di studio
☐ <18 ☐ 18 -29 ☐ 30 - 39 ☐ 40 - 49 ☐ 50 - 64 ☐ Più di 65 anni	☐ Uomo ☐ Donna ☐ Altro	☐ Senza studi ☐ Scuole primarie ☐ Scuole secondarie ☐ Formazione professionale ☐ Studi universitari ☐ Dottorato
A che gruppo appartieni	Stato residenziale	
☐ Lavoratore a tempo pieno ☐ Lavoratore a tempo parziale ☐ Lavoratore occasionale ☐ Studente ☐ Dissoccupato ☐ Altro:.....	☐ Residente nel municipio di Torino ☐ Residente nella provincia di Torino ☐ Residente in Piemonte ☐ Residente in Italia ☐ Europeo ☐ Altra nazionalità:.....	

UTILIZZO DELLE AREE VERDI		
Quartiere di residenza nel Comune di Torino	Quante ore a settimana utilizzi le aree verdi	Con quale frequenza
☐ Centro ☐ Crocetta ☐ San Salvario ☐ San Paolo ☐ Cenisia ☐ Campidoglio ☐ Aurora ☐ Nizza ☐ Vanchiglia ☐ Lingotto ☐ Santa Rita ☐ Mirafiori ☐ Pozzo Strada ☐ Parella	☐ hasta 1 hora ☐ 1 - 3 horas ☐ 3 - 6 horas ☐ más de 6 horas	☐ Ocasional ☐ Mensual ☐ Semanal (lunes a viernes) ☐ Semanal (fin de semana) ☐ Diaria ☐ Otra
	Motivo	Con chi
	☐ Gioco ☐ Riposo ☐ Sport ☐ Passeggiata ☐ Passeggiata con animale domestico ☐ Lettura/studio ☐ Transito ☐ Altro:.....	☐ Con amici ☐ Con la famiglia ☐ Compagni di studio/lavoro ☐ Solo ☐ Altro:.....
Il Parco/Area verde/Orto Urbano di Torino più frequentato		
.....		

Thanks for the attention

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