

Combating Visitor Pressure: Impact of Tourism on the Conservation of World  
Heritage Sites

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**ABSTRACT**

Combating Visitor Pressure: Impact of Tourism on the Conservation of World

Heritage Sites

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This study described the phenomenon of heavy visitor traffic and its impact on the conservation of World Heritage Sites. This research focused on three World Heritage Sites in Italy: Venice and its Lagoon, the Archaeological Areas of Pompeii, Herculaneum, and Torre Annunziata, and the Rock Drawings at Valcamonica. Recent research has not fully addressed the specific problems visitors bring to heritage sites and what can be done to help mollify these conservation challenges even with the rise in international travel over the past forty years. Through the analysis of the State of Conservation Reports, Periodic Reports, tour guidebooks, and interviews it was determined that heavy visitor traffic played a major role in inflicting damage on World Heritage Sites and that the opening up of other paths, reducing the numbers of tourist in heavy visitation areas, and educating visitors on what can be done to mollify these issues may diminish this damage.

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## INTRODUCTION

The purpose of this case study was to identify and describe the conservation issues resulting from heavy visitor foot traffic and how these issues could potentially be resolved to safeguard World Heritage Sites for the future.<sup>1</sup> This study examined three cultural heritage sites that were undergoing conservation issues related to the impacts of tourism. In particular, this study addressed the following research questions: What were the conservation issues at WHS caused by heavy visitor traffic? What were the contributing factors that have led to these conservation issues? What were some of the possible solutions that site managers could utilize to combat the conservation issues and how could visitors assist in the conservation efforts?

In the wake of the destruction and devastation brought about by World Wars I and II, the United Nations of Educational, Scientific and Cultural Organization (UNESCO) was established to promote peace “in the minds of men” through education and the understanding of cultural diversity.<sup>2</sup> The organization’s goal was to create a lasting peace on the “basis of humanity’s moral and intellectual solidarity”<sup>3</sup>. As part of this ‘intellectual solidarity’, UNESCO adopted the Convention concerning the Protection of the World’s Cultural and Natural Heritage in 1972.<sup>4</sup>

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<sup>1</sup> Heavy visitor foot traffic was defined as large number of people walking in a small confined walkway or infrastructure at World Heritage Sites.

<sup>2</sup> “About Us”, *UNESCO*, <http://en.UNESCO.org/aboutus> (accessed March 3, 2013).

<sup>3</sup> “About Us,” <http://en.UNESCO.org/aboutus>.

<sup>4</sup> “About Us,” <http://en.UNESCO.org/aboutus>.

Within the last two decades, there has been a steady increase in global tourism due to the world's increasing interest in discovering and learning about shared cultural heritage.<sup>5</sup> UNESCO defines heritage as the legacy "from the past, what we live with today, and what we pass on to future generations."<sup>6</sup> Tourism generates both positive and negative connotations concerning the conservation and management at World Heritage Sites (WHS).<sup>7</sup> World Heritage Sites are important because the sites "belong to all people of the world, irrespective of the territory on which they are located."<sup>9</sup> Some benefits for WHS are the social, economical, and environmental gains for UNESCO and the state parties involved.<sup>10</sup> These benefits include additional funds for conservation efforts, raising awareness among visitors about the conservation of the site, and providing alternative income for people living around the protected areas.<sup>11</sup> However, along with beneficial results from tourism there are challenges tourism causes. These drawbacks range from pollution and waste brought to the sites by visitors and to any unplanned or invasive infrastructures that could potentially

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<sup>5</sup> "Travel Forever", *Global Sustainable Tourism Council*, <http://www.gstcouncil.org/> (assessed April 12, 2013).

<sup>6</sup> <http://whc.unesco.org/en/about/> (Accessed February 2014).

<sup>7</sup> United Nations Environmental Programme, *Forging Links Between Protected Areas and the Tourism Sector: How Tourism Can Benefit Conservation* (Paris: United Nations Environmental Programme, 2005). pp 8-10.

<sup>8</sup> A World Heritage Site is a property that has been nominated by a State Party that represents 'outstanding universal value' based on the criteria laid out by the World Heritage Committee and is inscribed on to the World Heritage List.

<sup>9</sup> "About Us" <http://en.UNESCO.org/aboutus>.

<sup>10</sup> Maria Ana Borges, Giulia Carbone, Robyn Bushell and Tilman Jaeger, *Sustainable Tourism and Natural World Heritage: Priorities for Action* (Gland: IUCN, 2011) pp 7-9.

<sup>11</sup> UNEP, 9.

devalue a site.<sup>12</sup> The tourism challenge that framed the direction of this paper was the increase in visitor pressure. This increase in visitor activity created numerous issues for WHS. The issues included: threatening the value of the site (congestion, foot traffic, infrastructure development), pollution (air, water, noise, land) and physical damages or changes due to large numbers of tourists (camping, vandalism, stealth).<sup>13</sup>

This case study investigated three cultural heritage sites in Italy. Cultural heritage sites are defined as tangible physical artifacts such as paintings, sculptures, monuments, archaeological sites, shipwrecks, and underwater ruins.<sup>14</sup> Location was also a criterion for this case study. Three Italian sites were chosen because geographically, the sites were close enough for onsite inspection.<sup>15</sup>

The sites for the study were also selected based on the number of visitors the sites received annually and the conservation issues caused by visitor pressure. Each site presented a State of Conservation Report, a report issued when a conservation issue had occurred at the site, and a Periodic Report, a report done once every six years discussing conservation and management issues, to UNESCO and the World Heritage Convention based on the harm caused by heavy visitor activity within the last twenty-five years.<sup>16</sup> The sites

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<sup>12</sup> Leask and Fyall, 99.

<sup>13</sup> Borges, Carbone, Bushell and Jaeger, 10-11.

<sup>14</sup> "About Us," <http://en.UNESCO.org/aboutus>.

<sup>15</sup> However this onsite visit did not happen. Due to funding, the onsite inspection of the three sites was not feasible.

<sup>16</sup> The World Heritage Convention is a joint organization with UNESCO that was created to protect the world's cultural and natural heritage properties.

chosen were the Rock Drawings at Valcamonica, the Archaeological Areas of Pompeii, Herculaneum, and Torre Annunziata, and Venice and its Lagoon.

Inscribed onto the World Heritage List (WHL) in 1979, the Rock Drawings at Valcamonica was the first of the forty-nine Italian sites to be listed.<sup>17</sup> Located in the Lombardy Valley, Valcamonica is considered a site of outstanding universal value (OUV) because the site is engraved with more than 140,000 symbols and figures that are over 8,000-years-old documenting the customs and beliefs of prehistoric life.<sup>18</sup> Valcamonica is considered one of the world's greatest collections of petroglyphs. These rock faces depict scenes of navigation, dance, war, and plowing.<sup>19</sup>

Valcamonica was chosen for this case study because it was inscribed on the World Heritage List, it is currently undergoing conservation issues caused by tourists, and has high number of tourists that visit the site each year.

Valcamonica was also chosen because in the 2004 Periodic Report, the State Party of Italy announced its first conservation concern that was a direct impact of visitor pressure. At rock No. 27, the old wooden walkway was replaced by a galvanized steel walkway, an installation that was done against the recommendation of the International Council on Monuments and Sites

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<sup>17</sup> The World Heritage List is an inventory of all cultural, natural, and mixed heritage sites nominated by State Parties and inscribed onto the list by the World Heritage Convention.

<sup>18</sup> "The Rock Drawings at Valcamonica," *UNESCO*, <http://whc.unesco.org/> (accessed March 2013).

<sup>19</sup> UNESCO, "The Rock Drawings at Valcamonica," <http://whc.unesco.org/>.

(ICOMOS).<sup>20</sup> The creation of this new metal walkway to sustain heavy traffic flow from tourists has caused more conservation challenges than solutions.<sup>21</sup> Since 2004, the State Party has identified additional conservation issues caused by the increase of visitation at this site.<sup>22</sup>

Located in the Naples area, the Archaeological Areas of Pompeii, Herculaneum, and Torre Annunziata was inscribed as a WHS onto the WHL in 1997. These archaeological areas were considered to be sites of OUV due to the eruption of Vesuvius on August 24, 79 CE that managed to capture a moment in time in the small towns of Pompeii and Herculaneum and the Villa of Oplontis at Torre Annunziata.<sup>23</sup> From the early State of Conservation Reports, these archaeological sites are suffering conservation setbacks due to the high number of visitors that come to the sites each year. It has since been suggested to place Pompeii, Herculaneum, and Torre Annunziata on the World Heritage in Danger List in 2015 due to the ever increasing conservation challenges that tourism brings.<sup>24,25</sup>

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<sup>20</sup> The International Council on Monuments and Sites is a non-governmental international organization dedicated to the conservation of the World's monuments and sites. ICOMOS works closely with UNESCO and the World Heritage Convention to support the reservation of the global cultural heritage.

<sup>21</sup> UNESCO, <http://whc.unesco.org/en/list/94>, (accessed October 2013).

<sup>22</sup> UNESCO, "State of Conservation Report," <http://whc.unesco.org> (Accessed October 2013).

<sup>23</sup> UNESCO, <http://whc.unesco.org/en/list/94>, (accessed October 2013).

<sup>24</sup> "Archaeological Areas of Pompeii, Herculaneum, and Torre Annunziata," UNESCO, <http://whc.unesco.org/>, (accessed February 2014).

<sup>25</sup> The World Heritage in Danger List was created for sites that are in danger of losing their 'outstanding universal value' and the list provides immediate assistance to the sites inscribed onto this list.

Venice and its Lagoon were inscribed on the WHL in 1987. Founded in the 5<sup>th</sup> century CE, Venice and its 118 smaller islands symbolize the development of architecture and monumental arts. Venice also represents a melting pot for the religions, cultures, and artworks between eastern and western Europe.<sup>26</sup> On average Venice has 3.1 million visitors annually, the largest number of visitors out of the three sites chosen for this study. The Piazza San Marco is extremely vulnerable to mass crowding causing numerous conservation issues from visitor traffic.<sup>27</sup><sup>28</sup> This site was chosen for the study because it illustrated the difficulties in finding a solution for conservation issues when dealing with a site that is both an ancient and modern day city.

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<sup>26</sup> "Venice and its Lagoon," *UNESCO*, <http://whc.unesco.org>, (accessed February 2014).

<sup>27</sup> Robert C. and Garry R. Marvin Davis, *Venice the Tourist Maze A Cultural Critique of the World's Most Touristed City* (London: Regents of the University of California, 2004), pp 5-27.

<sup>28</sup> The Piazza San Marco is one of Venice's most popular village square's that houses popular tourist attractions such as Saint Mark's Basilica and the Galleria dell'Accademia.

## LITERATURE REVIEW

This literature review sought to investigate existing resources concerning the impact of heavy visitor traffic on the conservation of World Heritage Sites.

The first section of this literature review describes World Heritage and the steps the World Heritage Convention has taken thus far to protect heritage sites. The second section synthesizes the tourism industry and its role in the protection of WHS. The final section looks at bodies of work on the conservation and preservation of WHS.

### **World Heritage**

Michael Di Giovine in his book *The Heritage-scape UNESCO World Heritage and Tourism* claims that in “today’s rapidly globalizing world” it is imperative that the international community form a “peaceful cultural co-existence.”<sup>29</sup> It was from this idea that UNESCO was formed. In order to create this “peaceful cultural existence,” UNESCO, with the help of the International Council on Monuments and Sites (ICOMOS), the International Union for Conservation of Nature (IUCN), and the International Center for the Study of the Preservation and Restoration of Cultural Property (ICCROM), launched a campaign for the protection of the world’s shared cultural and natural heritage. This campaign became known as the World Heritage Convention.<sup>30</sup> Adopted by UNESCO in 1972, the World Heritage Convention made its first steps in protecting the world’s heritage by creating a Committee that would be dedicated

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<sup>29</sup> Michael A. Di Giovine, *The Heritage-scape UNESCO, World Heritage, and Tourism* (Plymouth: Lexington Books, 2009), pp 33.

<sup>30</sup> UNESCO, <http://whc.unesco.org>.

to the protection of the world's shared heritage. The World Heritage Committee came into full force in 1976 when twenty countries ratified the Convention.<sup>31</sup> As a major international instrument for safeguarding the world's heritage, it is the Convention's mission to "identify, protect, conserve, present and transmit to future generations the world's outstanding cultural and natural heritage" according to the WHC Operational Guidelines.<sup>32</sup> Di Giovine asserts that the WHS are "powerful mediators, which, in very material terms, create, articulate, and replicate a society's situated sense of community."<sup>33</sup> Since the adoption of the Convention, "the international community has embraced the concept of 'sustainable development'" through the protection of cultural and natural heritage.<sup>34</sup> From its early beginnings with 20 State Parties and less than 50 heritage sites, the World Heritage List (WHL) has grown to over five times that number. State Parties are countries that adhered to the World Heritage Convention and by doing so have agreed to "identify and nominate properties on their national territory to be considered for inscription" on the WHL.<sup>35</sup> As of the September 2013, there were 981 cultural, natural and mixed properties within 191 State Parties.<sup>36</sup>

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<sup>31</sup> Anna Leask and Alan Fyall, *Managing World Heritage Sites* (London: Routledge, 2006) pp 6.

<sup>32</sup> "Strategic Action Plan 2012-2022," *UNESCO*, <http://whc.unesco.org>, (accessed April 2014).

<sup>33</sup> Di Giovine, 33.

<sup>34</sup> World Heritage Committee, "Operational Guidelines WHC," *United Nations Educational, Scientific, and Cultural Organization*, January 2014, [whc.unesco.org](http://whc.unesco.org) (accessed October 2013) pp 12.

<sup>35</sup> "State Parties: Ratification Status," *UNESCO*, <http://whc.unesco.org>, (accessed April 2014).

<sup>36</sup> *UNESCO*, <http://whc.unesco.org>.

The World Heritage Committee (WHC) is responsible for the implementation of the World Heritage Convention, defines the use of the World Heritage Fund, and allocates financial assistance to requests by State Parties. According to the UNESCO website, the World Heritage Fund “provides about US\$4 million annual support to activities requested by State Parties in need of international assistance.”<sup>37</sup> Meeting once a year, the World Heritage Committee consists of 21 members that are elected by the General Assembly of State Parties. Committee members’ term of office lasts six years, but “in order to ensure equitable representation and rotation, State Parties are invited by their General Assembly to consider voluntarily reducing their term of office from six to four years.”<sup>38</sup> Douglas Pocock, the author of the article “Some Reflections on World Heritage” argues that the Committee has final say on which properties are inscribed on the WHL or the List of World Heritage in Danger and examines the State of Conservation Reports.<sup>39</sup> It is also the Committee’s duty to increase the World Heritage Fund by reviewing and evaluating the implementation of the Convention and revising the Operational Guidelines.<sup>40</sup>

State Parties play a vital role in the administration of the World Heritage Convention.<sup>41</sup> It is the duty of each State Party to establish management plans, report statements on State of Conservation for each site, and to encourage

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<sup>37</sup> “The World Heritage Fund,” *UNESCO*, <http://whc.unesco.org>, (accessed May 2014).

<sup>38</sup> World Heritage Committee, “Operational Guidelines WHC,” 15.

<sup>39</sup> Douglas Pocock, “Some Reflections on World Heritage,” *Area* (Wiley) 2, no. 3 (September 1997), pp 266-267.

<sup>40</sup> Leask and Fyall, 6-15.

<sup>41</sup> *UNESCO*, <http://whc.unesco.org>.

public awareness for the nominated sites within their own national territory. It is also up to the State Parties to nominate sites within their national territory. Each year, all State Parties create a Tentative List (TL) of at least two sites within their national territory that they feel fits the Convention's definition of OUV.<sup>42</sup> From this list, the Committee will choose which sites to inscribe onto the WHL.<sup>43</sup>

OUV as defined by UNESCO means that the cultural and natural sites are "among the priceless and irreplaceable assets, not only for each nation, but of humanity as a whole."<sup>44</sup> The Committee further states that any loss "through deterioration or disappearance of any of these most prized assets constitutes an impoverishment of the heritage of all the peoples of the world."<sup>45</sup> The nomination process for a property to become a WHS consists of five steps. As previously stated, the first step is the TL. The TL is an inventory of what the State Parties believe are important cultural and natural sites located within their national boundary. The second step is the nomination file. The nomination file consists of the TL that had already been prepared by the State Parties as well as a statement of OUV. This statement of OUV is made up of several different elements such as a brief description of the site, a statement of significance, a statement of authenticity, a statement of integrity, how the site will be protected and managed, and a map of the property.<sup>46</sup> Once the State Party complies the

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<sup>42</sup> World Heritage Committee, "Operational Guidelines WHC," 6-8.

<sup>43</sup> Leask and Fyall, 8-10.

<sup>44</sup> World Heritage Committee, "Operational Guidelines WHC," 12.

<sup>45</sup> World Heritage Committee, "Operational Guidelines WHC," 12.

<sup>46</sup> Lynn Meskell, "UNESCO's World Heritage Convention at 40 Challenging the Economic and Political Order of International Heritage Conservation", *Current Anthropology*, Vol 54, No 4, (Accessed August 2013) pp 483.

TL and statement of OUV, the World Heritage Center sends it in to the Advisory Bodies for evaluation. The Advisory Bodies are nongovernmental international organizations designated to the World Heritage Convention to advise the World Heritage Committee in all matters.<sup>47</sup> The Advisory Bodies are ICOMOS, IUCN, and ICCROM. The World Heritage Center was established in 1992 is the “focal point and coordinator within UNESCO” for the day-to-day management of World Heritage Convention.<sup>48</sup>

Evaluation is the third step within the nomination process. ICOMOS and IUCN are the two Advisory Bodies that independently evaluate the natural and cultural sites provided by the World Heritage Committee. ICCROM, the International Center for the Study of the Preservation and Restoration of Cultural Property, also plays a role during this step by providing the Committee with expert advice on the conservation of the natural and cultural sites. Advisory Bodies other roles are to advise on the implementation of the Convention, assist in the preparation of the Committee’s documentation and the meeting agendas, assist in development of Periodic Reporting, the effective use of the World Heritage Fund, monitor the state of conservation and attend meetings of the Committee. It is also the Advisory Bodies duty to ensure that the WHL is balanced.<sup>49</sup> As argued by Meskell, the WHL is historically predominately European heritage sites and because of this there has recently been efforts to

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<sup>47</sup> “Advisory Bodies,” *UNESCO*, <http://whc.unesco.org>, (accessed March 2014).

<sup>48</sup> “World Heritage Center,” *UNESCO*, <http://whc.unesco.org>, (accessed April 2014).

<sup>49</sup> *UNESCO*, <http://whc.unesco.org>.

“create a more representative inventory.”<sup>50</sup> It now the duty of the Advisory Bodies and the World Heritage Center to ensure that all 191 State Parties are fairly represented on the list.<sup>51</sup> The fourth step is the decision of the World Heritage Committee. Once the site has been nominated and evaluated it is up to the Committee to make the final decision concerning which sites should be inscribed on the WHL.<sup>52</sup> The fifth and final step is that the site must meet at least one out of the ten selection criteria to be of OUV.<sup>53</sup> As stated by the Operational Guidelines for the Implementation of the World Heritage Convention the ten criteria are:

- (i) to represent a masterpiece of human creative genius;
- (ii) to exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;
- (iii) to bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;
- (iv) to be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;
- (v) to be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;
- (vi) to be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance. (The Committee considers that this criterion should preferably be used in conjunction with other criteria);
- (vii) to contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;
- (viii) to be outstanding examples representing major stages of

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<sup>50</sup> Meskell, 485.

<sup>51</sup> Meskell, 485.

<sup>52</sup> World Heritage Committee, "Operational Guidelines WHC," 41- 51.

<sup>53</sup> World Heritage Committee, "Operational Guidelines WHC," 41- 51.

earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features;  
 (ix) to be outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals;  
 (x) to contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.<sup>54</sup>

This selection criterion is regularly reviewed and revised by the Convention to reflect the “evolution of the World Heritage concept itself.”<sup>55</sup> Lynn Meskell states that for State Parties, “having sites inscribed on the Convention’s list garners international and national prestige, enables access to the World Heritage Fund for monetary assistance, and brings the potential benefits of heightened public awareness, tourism, and economic development.”<sup>56</sup> This argument is reiterated in Anna Leask and Alan Fyall’s book, *Managing World Heritage Sites*.<sup>57</sup>

## **Tourism**

Tourism is the world’s largest and fastest growing industry.<sup>58</sup> Di Giovine states that “tourism’s reach is indicative of the same globalizing forces on which UNESCO relies for the creation of an imagined community.”<sup>59</sup> ICOMOS believes “tourism is an irreversible social, human, economic and cultural fact” and that its influence “in the sphere of monuments and sites is particularly important and can

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<sup>54</sup> <http://whc.unesco.org/en/nominations/> (Accessed October 2013).

<sup>55</sup> <http://whc.unesco.org/en/nominations/> (Accessed October 2013).

<sup>56</sup> Meskell, 483.

<sup>57</sup> Leask and Fyall, 9- 24.

<sup>58</sup> “Tourism,” *World Tourism Organization*, <http://www2.unwto.org>, (accessed April 2014).

<sup>59</sup> Di Giovine, 42.

but increase because of the known conditions of that activity's development."<sup>60</sup> Following that, ICOMOS argues "tourism appears to be one of the phenomena likely to exert a most significant influence on Man's environment in general and on monuments and sites in particular."<sup>61</sup> Anthony Clayton, the author of "Strategies for Sustainable Tourism Development: The Role of the Concept of Carrying Capacity" is of the same mind and states that many of today's international travelers are tourists and that they "travel for a variety of purposes including recreational, cultural and educational purposes."<sup>62</sup> Clayton speaks to this "growing awareness of the need to control the impacts (of tourism) and manage the industry on a more long-term basis."<sup>63</sup>

The tourism industry is comprised of a variety of businesses such as: accommodation, public transport, food/beverages, cultural/social events, and environmental/cultural/heritage resources of destinations.<sup>64</sup> In the table below, with the help of the United Nations Environmental Programme (UNEP) is a summary of the different components of the tourism industry.<sup>65</sup>

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<sup>60</sup> International Council on Monuments and Sites, *ICOMOS International Cultural Tourism Charter*, November 1976, [http://www.icomos.org/tourism/tourism\\_charter.html](http://www.icomos.org/tourism/tourism_charter.html) (accessed April 30, 2014).

<sup>61</sup> International Council on Monuments and Sites, *ICOMOS International Cultural Tourism Charter*.

<sup>62</sup> Anthony Clayton, "Strategies for Sustainable Tourism Development: The Role of the Concept of Carrying Capacity," *Social and Economic Studies* (Sir Arthur Lewis Institute of Social and Economic Studies) 51, no. 1 (March 2002), pp 62.

<sup>63</sup> Clayton, 65.

<sup>64</sup> United Nations Environmental Programme, *Forging Links Between Protected Areas and the Tourism Sector: How Tourism Can Benefit Conservation* (Paris: United Nations Environmental Programme, 2005). pp 9-11.

<sup>65</sup> United Nations Environmental Programme, 11.

TABLE 1 TOURISM SERVICE AND PROVIDERS

Service	Providers
Accommodation	Hotels, Bed and Breakfasts, Campsites, Cruise Ships, etc.
Transportation to and from Destinations	Public Transport (Trains, Planes, Sea Passages)
Food and Beverage	Restaurants, Bars, Grocery Stores, Markets, Cafes
Ground Transport	Car Rentals, Boat Rentals, Gas Stations
Travel Services	Travel Agents
Activities	Excursions, Shopping, Recreational Facilities, etc.
Heritage Resources of Destinations	Excursions, Protected Sites, World Heritage Sites, etc.

Tourism and the money it generates have both positive and destructive impacts on heritage sites. Heritage tourism has the potential to increase the economic development of the surrounding area.<sup>66</sup> Tourism generates money from variety of services. Janet Cochrane and Richard Tapper, author of the article “Tourism’s Contribution to World Heritage Site Management,” agrees that tourism generates money by selling “local products and service” while simultaneously earning the sites “higher revenues and achieve a higher profile nationally.”<sup>67</sup>

Additional funding for conservation is another benefit that tourism can bring to WHS. Other benefits include raising awareness about the profile of heritage sites as well as establishing a closer link with the tourism sector, which allows for greater understandings of conservation among the tour operators

<sup>66</sup> United Nations Environmental Programme, 8-11.

<sup>67</sup> Leask and Fyall, 99.

within the tourist industry.<sup>68</sup> However, just as tourism aids WHS, it also has a price. Managing costs of protecting heritage sites, investment in visitor facilities, and the presence of visitors can be destructive to sites.<sup>69</sup> The more tourists understand the purposes and importance of protected areas, and about appropriate behavior, the more likely they are to value the site and behave in ways that minimize the damage.<sup>70</sup>

Since the time of its conception, UNESCO and the World Heritage Convention has conserved, preserved, and protected the world's shared heritage. Within the last forty years, the Committee has recognized that WHS have become part of the popular tourist travel destinations.<sup>71</sup> Due to this increase in international travel, WHS are experiencing conservation issues resulting from visitor pressure.<sup>72</sup> In 2011, UNESCO implemented the World Heritage and Sustainable Tourism Programme. This Programme represents "a new approach based on dialogue and stakeholder cooperation" for a coordinated and cooperative framework of planning for tourism and site management where the "natural and cultural assets are valued and protected."<sup>73</sup> Facilitating "the management and development of sustainable tourism at World Heritage properties through fostering increased awareness, capacity, and balanced

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<sup>68</sup> United Nations Environmental Programme, 9.

<sup>69</sup> Leask and Fyall, 99-100.

<sup>70</sup> Leask and Fyall, 98-104.

<sup>71</sup> World Tourism Organization, *Sustainable Development of Tourism*, January 2014, <http://www2.unwto.org/> (accessed February 2014).

<sup>72</sup> Leask and Fyall, 98.

<sup>73</sup> UNESCO World Heritage Center, "UNESCO World Heritage and Sustainable Tourism Programme," *United Nations Educational, Scientific, and Cultural Organization*, January 2011, [whc.unesco.org](http://whc.unesco.org) (accessed September 2013).

participation of all stakeholders in order to protect the properties and their OUV whilst ensuring that tourism delivers benefits for conservation of the properties sustainable development for local communities...and visitors” is the Programmes overall mission.<sup>74</sup> No recent studies have yet been done to identify the positive and negative results from this program.

Co-authors of the book *Venice the Tourist Maze*, Robert C. Davis and Garry R. Marvin declare the Piazza San Marco as the heart of the tourist industry in the Italian city of Venice. Piazza San Marco for centuries has been “the symbolic ceremonial core of Venetian self identity.”<sup>75</sup> Di Giovine states that Piazza San Marco is a symbol of Venetian identity because it is “more historic” and valued for its ambiance aiding in the tourist’s “literal retreat into their fantasies of living in another time.”<sup>76</sup> Di Giovine also speaks to the importance of tourist cities such as Venice because Venice plays “background not only to performances of the monotony of daily life, but to the commercial interests of the tourist sector.”<sup>77</sup> With the number of tourists visiting the Piazza increasing, the Piazza has become overcrowded. Davis and Martin go as far as to state that the local population has abandoned the Piazza as a whole to the tourists, except for the few locals who work in the square.<sup>78</sup> Similar to the arguments put forth by Davis and Marvin, David Diliberto, the President to the US based tourist

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<sup>74</sup> UNESCO World Heritage Center, whc.unesco.org.

<sup>75</sup> Robert C. and Garry R. Marvin Davis, *Venice the Tourist Maze A Cultural Critique of the World's Most Touristed City* (London: Regents of the University of California, 2004), pp 58-59.

<sup>76</sup> Di Giovine, 296.

<sup>77</sup> Di Giovine, 295.

<sup>78</sup> Davis and Marvin, 64.

company “Under the Italian Sun,” agrees with Davis and Martin stating Venice’s local population has dropped from roughly 150,000 in the 1980s to around 50,000 as of 2014.<sup>79</sup>

Flocks of tourist visit Venice’s main attractions, the Basilica of San Marco in the Piazza San Marco. Consecrated in 1094, the church still holds mass and is a pilgrimage site to the remains of Saint Mark.<sup>80</sup> However, due to the increasing number of tourists visiting the cathedral, deterioration of the floor mosaics began to occur. Due to the decay, tourists must now walk a designated path that Davis and Martin describe as a “treadmill”.<sup>81</sup> The impact of the increasing number of tourists to the historic center of the Piazza San Marco has led to the decrease in the local population and erosion of floor mosaics, the cities pavement, and the deterioration of the lagoon surrounding the ancient seaport.

Mass tourism has many negative impacts on archaeological sites and as tourism increases, WHS need to be actively protected and managed. Pompeii is one of the most visited WHS and is well known for its “breathtaking preservation.”<sup>82</sup> As a result, the buildings in Pompeii and its sister sites of Herculaneum and Torre Annunziata continue to deteriorate due to the hoards of visitors that flock to the archeological sites each year.<sup>83</sup> Sites such as Pompeii

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<sup>79</sup> David Diliberto, interview by Danielle Hastings, , *Tourism Impact on Venice*, (April 27, 2014).

<sup>80</sup> Davis and Marvin, 19-24.

<sup>81</sup> Davis and Marvin, 77-78.

<sup>82</sup> Karilyn Sheldon, "Presenting Pompeii: Reconciling Relationships Between Configuration and Conservation," *Spectrum*, no. 3 (2012), pp 68.

<sup>83</sup> UNESCO, *Archaeological Areas of Pompei, Herculaneum and Torre Annunziata*, January 2014, <http://whc.unesco.org/en/list/829> (accessed September 2013).

and Herculaneum have specific routes that tourists must follow as they walk through the ancient towns. As a result of the limited space and visitor movement, Alia Wallace author of “Presenting Pompeii: Steps towards Reconciling Conservation and Tourism at an Ancient City,” states “there is excessive overcrowding in certain areas...while others (areas) are over looked and virtually empty.”<sup>84</sup> Overcrowding in certain parts of WHS is a common occurrence. Tour guides, visitor information, and other literature stating certain attractions are a ‘must see’ are the cause of overcrowding. By branding certain buildings as ‘must see’ properties, conservation issues from heavy visitor traffic begin to occur.<sup>85</sup> Wallace argues that if site managers were to offer alternatives to the popular buildings overcrowding could potentially be lessened. Unfortunately, as stated by Wallace, Pompeii does not have the funding or the personnel to open other houses to the public.<sup>86</sup> Since unearthing the Archaeological Areas of Pompeii, Herculaneum, and Torre Annunziata Kathryn Sheldon states, “the relationship between tourism and conservation at Vesuvius sites has been inversely proportional.”<sup>87</sup> Pompeii on average sees about 2.3 million visitors annually. As a result, Sheldon argues the “foot traffic of millions erodes the pavement of the city, and the inadequate surveillance and supervision of tourists allows thousands to explore structures and walk on surfaces in need of conservation...backpacks and tourists rubbing against walls and paintings in narrow entrance halls in house”

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<sup>84</sup> Alia Wallace, “Presenting Pompeii: Steps towards Reconciling Conservation and Tourism at an Ancient City,” *Papers from the Institute of Archaeology* (Ubiquity Press) 22 (2013), pp 120.

<sup>85</sup> Wallace, 122.

<sup>86</sup> Wallace, 122.

<sup>87</sup> Sheldon, 69.

have also contributed to the erosion issues at Pompeii.<sup>88</sup> Sheldon agrees with Wallace's statement that the increase in the number of custodians and better site management could potentially allow for other buildings and houses to become opened to the public, which in turn could mollify the conservation issues occurring at the popular destinations within Pompeii.<sup>89</sup>

Janette Deacon, author of the article entitled "Rock Art Conservation and Tourism" states that there has been an increased interest in rock art tourism within the last thirty years simultaneously with the rise of cultural tourism.<sup>90</sup> She argues, "successful management of rock art tourism is dependent on the different individuals and communities involved in the enterprise agreeing on broad values."<sup>91</sup> ICOMOS states "access to heritage is both a right and privilege and brings with it a duty of respect for the heritage values, interests and equity of the present-day host community, indigenous custodians or owners of historic property and for the landscapes and cultures from which that heritage evolved."<sup>92</sup> Many rock specialists in the field agree that the key to proper care and conservation of the art is to educate the public about the impact of tourism on cultural sites.<sup>93</sup>

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<sup>88</sup> Sheldon, 72.

<sup>89</sup> Sheldon, 74-76.

<sup>90</sup> Janette Deacon, "Rock Art Conservation and Tourism," *Journal of Archaeological Method and Theory* (Springer) 13, no. 4 (December 2006), pp 379.

<sup>91</sup> Deacon, 380.

<sup>92</sup> International Council on Monuments and Sites, *ICOMOS International Cultural Tourism Charter*, November 1976, [http://www.icomos.org/tourism/tourism\\_charter.html](http://www.icomos.org/tourism/tourism_charter.html) (accessed April 30, 2014).

<sup>93</sup> Deacon, 380-381.

Deacon addresses the environmental, social, and economic factors that bind rock art tourism and conservation together. The environmental factors that relate to tourism issues are physical actions of people, plants and animals and the placement of pathways and boardwalks. The second factor is comprised of several social ones such as: visitor facilities and visitors impact the ambiance of the sites, rights of researchers, rights of property owners, and the training of guides, guards and custodians that protect and maintain the ambiance of the sites.<sup>94</sup> Jean Clottes, author of "Rock Art: An Endangered Heritage Worldwide," speaks to the protection of the archaeological artifacts and art on site. Clottes states, particularly at the site of Valcamonica, that tourists frequently take archaeological artifacts such as stone axes, grinders, and arrowheads as souvenirs.<sup>95</sup> Economics is the third and final factor that Deacon speaks to in order to sustain rock art sites and conserve them for the future.<sup>96</sup> To ensure the economic sustainability of rock art tourism there are a variety of factors to consider. These factors are: easy access to the site from roads and other services, the availability of tourism facilities, the income and marketing strategy of tourism, and the extent to which the local people lose or derive income from rock art tourism.<sup>97</sup> Clottes agrees with Deacon's assessment of the impact of making heritage sites more accessible to tourists. Clottes states "building roads would be a criminal waste of a rare priceless heritage" because with the road

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<sup>94</sup> Deacon, 381-383.

<sup>95</sup> Jean Clottes, "Rock Art: An Endangered Heritage Worldwide," *Journal of Anthropological Research* (University of New Mexico) 64, no. 1 (2008), pp 5.

<sup>96</sup> Deacon, 381-383.

<sup>97</sup> Deacon, 382-383.

comes the nuisances of power lines, signs, parking lots, gas stations, and other visitor facilities that ruin the ambiance of the site.<sup>98</sup> This is evident in the State of Conservation Reports that the State Party of Italy has sent to UNESCO and the Committee in hopes of finding a solution.<sup>99</sup>

Simultaneously retaining the significance of the rock art and its location through conservation plans while offering visitors a meaningful experience is the primary objective of the WHC.<sup>100</sup>

### **Site Conservation and Preservation**

Deacon articulates that ICOMOS' International Cultural Tourism Charter provides broad guidelines for conservation issues triggered by mass tourism that are applicable to cultural sites only.<sup>101</sup> Conservation is also assumed to be good because "it reacts against what is perceived to be detrimental impact or malpractice at the other end of the scale."<sup>102</sup> Clottes states that not only is it important for the art and buildings at the sites to be preserved, but "its archaeological and natural environments must be preserved...since the art cannot be separated from its surroundings."<sup>103</sup> Site management must develop strategies or goals relating to the presentation and interpretation of heritage sites, within the context of preserving and conserving the sites.<sup>104</sup> United Nations Environmental Programme (UNEP) agrees with Clottes stating that WHS should

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<sup>98</sup> Clottes, 4.

<sup>99</sup> UNESCO, "World Heritage Convention," *State of Conservation Reports*, January 2014, <http://whc.unesco.org/en/soc> (accessed February 2014).

<sup>100</sup> Deacon, 398.

<sup>101</sup> Deacon, 380.

<sup>102</sup> Deacon, 381.

<sup>103</sup> Clottes, 2.

<sup>104</sup> Leask and Fyall, 102-103.

“be aware of the risk that some tourism personnel” bring to WHS and that some site managers who did not manage the tourist industry properly will lose sight of conservation goals. UNEP believes that tourism should be permissible at the site “when it can be integrated with conservation.”<sup>105</sup> Tourism has the ability to generate a substantial amount of revenue either through entry fees, within site visitor facilities or by boosting the local economy. As such, tourism and the income it generates are necessary for the conservation and preservation of all WHS.<sup>106</sup>

The failure to conserve WHS and its surrounding environment will attract fewer tourists and will lead to loss of income.<sup>107</sup> Money generated by tourism is an important resource in the funding for the conservation of the sites.<sup>108</sup> To prevent the loss of income from tourism, UNESCO and the Convention devised a system to assess the state of conservation and to solve outstanding problems at WHS. This system became known as Periodic Reporting. According to the UNESCO website, Periodic Reporting serves four main purposes:

- 1.) to provide an assessment of the application of the WHConvention by the State Party;
- 2.) to provide an assessment as to whether the World Heritage values of the properties inscribed on the WHL are being maintained over time;
- 3.) to provide an assessment as to whether the World Heritage properties to record the changing circumstances and state of conservation of the properties;
- 4.) to provide a mechanism for regional co-operation and exchange of information and experiences between State Parties concerning

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<sup>105</sup> United Nations Environmental Programme, 23.

<sup>106</sup> Leask and Fyall, 104-105.

<sup>107</sup> Leask and Fyall, 108.

<sup>108</sup> Deacon, 383-384.

the implementation of the Convention and World Heritage conservation.<sup>109</sup> It is broken down into a six-year Periodic Reporting cycle and is done by region. The regions are the Arab States, Africa, Asia and Pacific, Latin America and the Caribbean, and Europe and North America. In cycle I, the examination lasted from 2000 to 2006 with each region being examined in subsequent years beginning with the Arab States in 2000 and ending with Europe and North America in 2005 and 2006. The second cycle of Periodic Reporting began in 2008 and will end with the examination of Europe and North America in 2015.<sup>110</sup> As previously stated, it is the duty of the State Parties to monitor and manage their national World Heritage properties and the State Parties are responsible for the preparation of the Periodic Reports. Once the State Parties submit their reports, the WHC “examines and responds to the State Parties’ periodic reports.”<sup>111</sup>

After the State Parties submit the reports to the WHC, it is their job to examine and respond to the State Parties’ periodic reports and then present its findings to the General Conference of UNESCO. Periodic Reporting is an important aspect for the conservation and preservation of WHS.<sup>112</sup> The information collected during the process of Periodic Reporting contributes to: assessing the State of Conservation (SoC), determining if the OUV of the site has been maintained over time, aiding in solving problems and issues at sites, sharing experiences and best practices between State Parties, encouraging co-

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<sup>109</sup> World Heritage Committee, “Operational Guidelines,” 64.

<sup>110</sup> <http://whc.unesco.org/en/periodicreporting/> (Accessed April, 17, 2013)

<sup>111</sup> <http://whc.unesco.org/en/periodicreporting/> (Accessed April, 17, 2013)

<sup>112</sup> World Heritage Committee, “Operational Guidelines,” 64-67.

operation between partners, providing a decision making tool for State Parties, and raising awareness about the World Heritage Convention.<sup>113</sup> Periodic Reporting is important for an effective long-term conservation of inscribed properties.<sup>114</sup>

Reactive Monitoring is the process of reporting the state of conservation of WHS that are under threat to the Committee by the Secretariat, sectors of UNESCO and the Advisory Bodies. Unlike Periodic Reporting, Reactive Monitoring is a specific report on a specific World Heritage property.<sup>115</sup> According to the Operational Guidelines of the World Heritage Convention, Reactive Monitoring is a reference to properties being inscribed on the List of World Heritage in Danger. The List of World Heritage in Danger is designed to “inform the international community of conditions which threaten the very characteristics for which a property was inscribed” on the WHL.<sup>116</sup> By inscribing a site onto the List of World Heritage in Danger allows for the Committee to allocate immediate assistance, funding and the ability to respond to specific needs of the endangered site.<sup>117</sup>

Conservation is an issue for UNESCO and the World Heritage Convention.<sup>118</sup> By exposing the buildings, frescos, art and houses to the natural elements, the “process of erosion” from open air begins<sup>119</sup> From this literature

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<sup>113</sup> World Heritage Committee, “Operational Guidelines,” 13-18.

<sup>114</sup> World Heritage Committee, “Operational Guidelines,” 64-65.

<sup>115</sup> UNESCO, <http://whc.unesco.org>.

<sup>116</sup> UNESCO, <http://whc.unesco.org/en/158/> (Accessed April 2014)

<sup>117</sup> World Heritage Committee, “Operational Guidelines,” 47-53.

<sup>118</sup> UNESCO, <http://whc.unesco.org/en/158/> (Accessed April 2014)

<sup>119</sup> Sheldon, 70.

review, it can be determined the joint efforts of UNESCO, the World Heritage Committee and its Advisory Bodies are working together to preserve WHS for the future.

## METHODOLOGY

The purpose of this case study was to identify and describe conservation issues from heavy visitor foot traffic and how these issues could potentially be resolved to safeguard World Heritage Sites for the future. This research sought to answer three questions: 1.) What conservation issues at WHS are direct results of heavy foot traffic? 2.) What contributing factors have led to these conservation issues? 3.) What are some possible solutions that site managers can utilize to combat these issues and how can visitors assist in the conservation efforts? For this case study three cultural heritage sites were chosen: the Rock Drawings at Valcamonica, the Archaeological Areas of Pompeii/Herculaneum/Torre Annunziata, and Venice and its Lagoon. These sites were selected based on four parameters. First the chosen sites must be currently dealing with conservation challenges caused by visitor foot traffic. Second the sites must vary in the number of visitors annually. In attempt to represent all 981 WHS, the annual visitation parameter was based on a low, medium and high volume. Third, the sites had to be completely different from each other in order to reflect the various types of sites on the WHL. Fourth, the sites should be within the same geographical area.<sup>120</sup>

The site of the 8,000-year-old rock drawings in Valcamonica is just outside of Milan in the Lombardy Valley in Northwestern Italy. Valcamonica's annual visitation is roughly 60,000 people. This site is important to the case study because it is one of few WHS relating to pre-historic history. This site

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<sup>120</sup> Geographic proximity was important in the beginning for onsite visitation, but financial considerations did not allow it.

represented the lowest number of annual visitors in this study. In the 2004 State of Conservation Report the State Party mentioned the introduction of a galvanized steel walkway drilled directly into the rock to replace an old damaged wooden walkway resulting from heavy visitor traffic.

Southeast of Valcamonica: the second site is the Archeological Areas of Pompeii, Herculaneum, and Torre Annunziata in the Province of Naples, Italy. On average these archaeological areas receive 2.3 million annual visitors. As of 2013, it was recommended by the Committee that in 2015, this site be placed on the World Heritage in Danger List. This listing is meant to bring immediate financial assistance to the conservation and preservation actions in progress at the site. This site represented the second most visited site among the three. These archaeological areas experience the impact of visitor pressure due to overcrowding.

In the Northeast corner of Italy is the site of Venice and its Lagoon. Having the highest number of visitors with an annual visitation around 3.1 million, Venice is a mix of an ancient and modern day city. The most visited area within Venice is the Piazza San Marco. Here millions of tourists and locals flock to shop within the market, people watch and visit Venice's most famous church the Saint Mark's Basilica. With both locals and tourists within this one small space, Venice is facing numerous conservation pressures resulting from heavy foot traffic.

Data for this case study was collected by two methods: documents analysis and formal interviews. Data was analyzed and coded with the help of Microsoft Excel.

Three sets of documents were examined for relevant data for this research: State of Conservation Reports (SoC), Periodic Reports and site-specific tour guide publications. Rick Steves, DK Eyewitness Travel, and Lonely Planet published the tour guides, which were three of the top-selling tour guides as of 2014 according to amazon.com and Barnes and Noble. The data was analyzed and coded with the help of Microsoft Excel.

To better understand the visitors' movements and behaviors at each site, a series of interviews were conducted with six tour guides from each of the three sites. These interviews were done over email and were saved onto a computer hard-drive. Once the research was completed, the emails were deleted. The interview questions related to tourists interacted with the sites, how the guide developed the tour and if there was a relationship between developing the tour and ensuring conservation for the preservation of WHS. The interview questions for the six tour guides were:

- 1.) How many tours do you give daily? And how long are the tours?
- 2.) On average, how many visitors are in your group?
- 3.) Does your site have a set of rules, guidelines or regulations for visitors? If so, what are they? Are they required or suggested? Which ones do visitors more often ignore?
- 4.) Do visitors stay on designated footpaths?
- 5.) How do you choose what artwork/buildings/city sections to highlight on your tour?
- 6.) As part of the tour, do you educate visitors about conservation issues at the site? If so, what do you tell them? Do you think it will help? Why or why not?

The interviews with tour guides were coded and analyzed using Microsoft Excel to identify common themes and patterns.

## FINDINGS AND ANALYSIS

### **State of Conservation Reports**

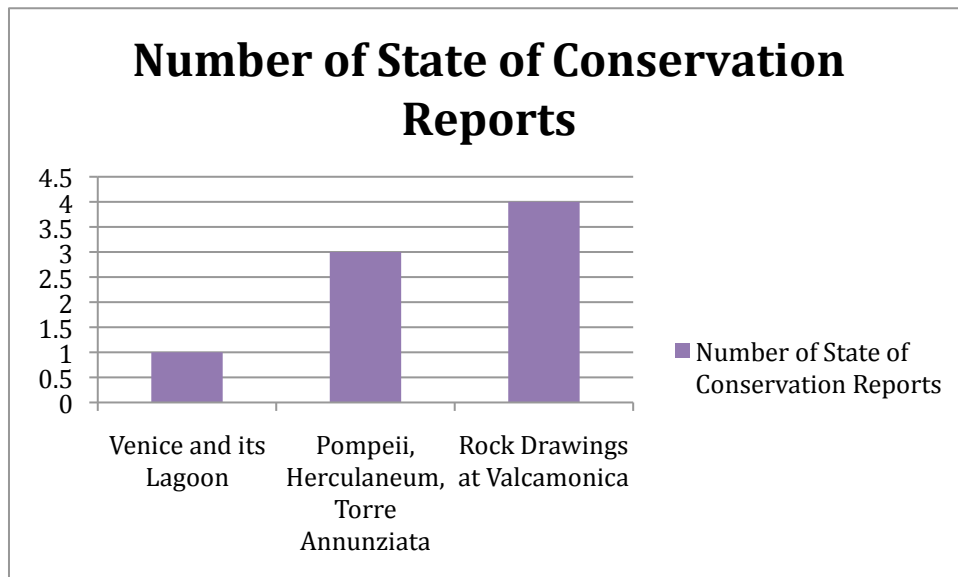
The purpose of this analysis was to identify past and current conservation issues initiated by increasing visitor pressure at Venice and its Lagoon, Pompeii, Herculaneum, and Torre Annunziata, and the Rock Drawings at Valcamonica.

Document analyses were done on all eight (see Figure 1) of the State of Conservation Reports (SoC) from the three selected sites and were coded in Microsoft Excel. All relevant results were coded into two categories

- Current conservation issues
- Missions

The current conservation issues category examined the current challenges that each site was undergoing and documented in the SoC that were sent in to the World Heritage Committee. The mission category identified mission reports, such as Reactive Monitoring reports that the State Party had turned into the World Heritage Committee but were not always available electronically. Venice and its Lagoon, Pompeii, Herculaneum, and Torre Annunziata, and the Rock Drawings at Valcamonica did not have the missions available electronically. The SoC illustrated that a mission was carried out to mollify the conservation issues at the site.

Figure 1: Total Number of State of Conservation Reports



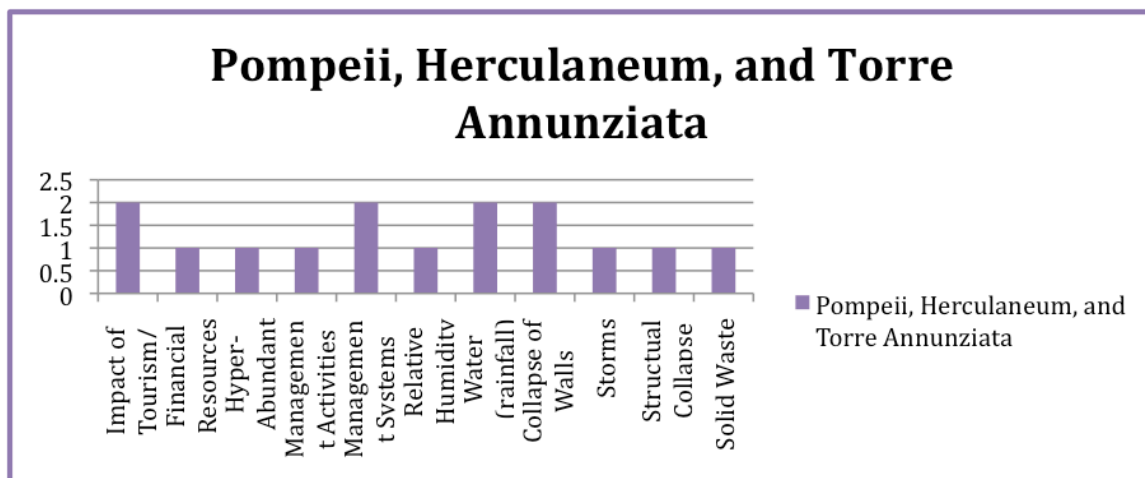
### *Current Conservation Issues and Missions*

At Venice and its Lagoon, one SoC was available for coding and analysis. The latest SoC was from the year 1989. Only one current conservation issue was found and this issue was the impact of tourism, visitor, and recreation. No missions were found for this site.

For the Archaeological Areas of Pompeii, Herculaneum, and Torre Annunziata there were three SoC available for the years 2011, 2012, and 2013. In 2011, the current conservation issues were the lack of financial resources, hyper-abundant species, the impacts of tourism, visitor, and recreation, management activities, management system and management plan, relative humidity, water (rain table), and the collapse of structures. The 2011 SoC stated that the State Party had joint advisory mission with the World Heritage Center and ICOMOS to address the current conservation issues at the archaeological sites. For the 2012 SoC, the main conservation issue was the challenge of

storms that lead to heavy rainfall and the collapse of structures. There were no missions available in the 2012 SoC. In the 2013 SoC current conservation issues were housing, human resources, impacts of tourism, visitor, and recreation, management activities, management systems and management plan, solid waste, and structural collapses (see Figure 2 below for all conservation issues for each SoC). As for missions, it reinstated the previously mentioned mission from the 2011 SoC and added that in 2013 the World Heritage Center and ICOMOS held a Reactive Monitoring mission.<sup>121</sup>

Figure 2: Number of Conservation Issues at Pompeii, Herculaneum, and Torre Annunziata

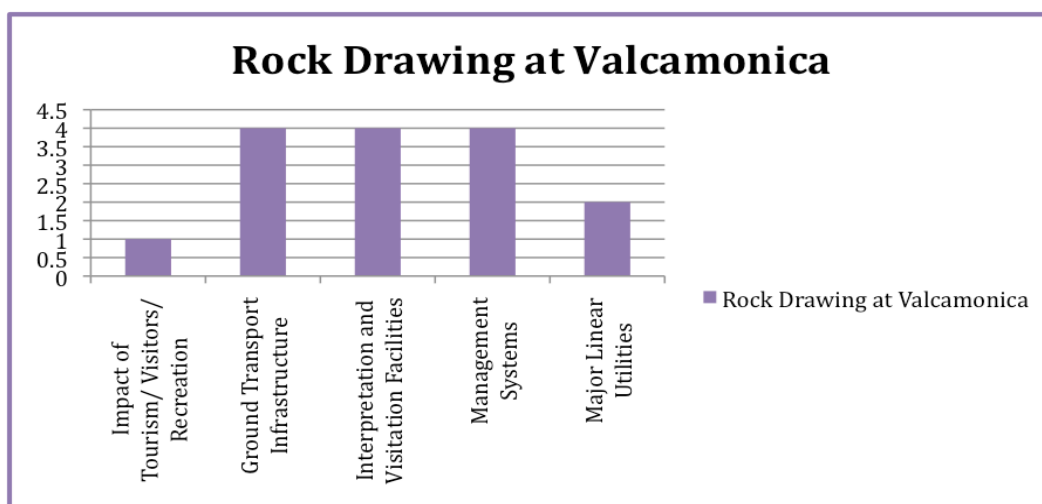


At the Rock Drawings at Valcamonica there were four SoC available. In 2004, the current conservation issues were ground transport infrastructure,

<sup>121</sup> Reactive Monitoring is the reporting by the World Heritage Center, and other sectors of UNESCO and the advisory bodies to the World Heritage Committee on the state of conservation of specific World Heritage properties that are under threat. Reactive monitoring is foreseen in reference to properties inscribed, or to be inscribed, on the List of World Heritage in Danger. The procedures could lead to the eventual deletion of properties from the World Heritage List

impacts of tourism, visitor, and recreation, interpretative and visitation facilities, and management systems and management plans. No missions were available for 2004. In 2005 the current conservation issues were ground transport infrastructure, interpretative and visitation facilities, and management systems and management plan. One mission was available in 2005, the Reactive Monitoring mission, a joint mission between the World Heritage Center and ICOMOS. In 2007, the current conservation issues at the site were ground transport infrastructure, interpretative and visitation facilities, major linear utilities, and management systems and management plan. For the mission, the 2007 SoC reinstated the Reactive Monitoring mission reported in the 2005 SoC. In 2009, the current conservation issues were ground transport infrastructure, interpretative and visitation facilities, major linear utilities, and management systems and management plan (see Figure 3 below). For the mission, the 2009 SoC reinstated the Reactive Monitoring mission reported in the 2005 SoC.

Figure 3: Number of Conservation Issues at Valcamonica.



## **Periodic Reports**

Coding for the analysis of the Periodic Reports was done similar to the SoC. Periodic Reports are submitted to the World Heritage Committee every six years as an assessment of both the state of conservation of the site and if the State Party is following its duties as stated in the ratification of the World Heritage Convention. Document analyses were done for all three of the 2006 Cycle I Periodic Reports for each site and were coded in Microsoft Excel. All relevant results were coded into four categories

- Use of Site
- Financial Resources
- Expertise and Training
- Visitor Facilities

The use of site category revealed how visitors utilize the three sites. For example, the site of Valcamonica was and is still used in religious ceremonies and is also used as a Municipal Park, National Park, and a visitor attraction. Financial resources were a category intended to understand where each site received revenue in order to support conservation work and protect their property for future generations. Expertise and training was a category because knowledge of how to identify and conduct conservation projects was significant for the preservation of heritage sites. The category of visitor facilities was considered because lack of visitor centers, restrooms, water fountains, trashcans and other visitor facilities seemed to correlate to conservation issues resulting from heavy visitor traffic.

### *Use of Site*

In 2006, the first cycle of Periodic Reporting for the site of Venice and its Lagoon was reported to the World Heritage Committee. For the use of site, Venice was seen as an urban center. Urban center is defined as a large densely populated urban area.<sup>122</sup>

In the 2006 Periodic Report for the Archaeological Areas of Pompeii, Herculaneum, and Torre Annunziata the use of site was a visitor attraction. A visitor attraction is defined as places where tourists visit that are of cultural or natural value or for its historical significance.<sup>123</sup>

In 2006, the first cycle of Periodic Reporting for the Rock Drawings at Valcamonica was reported to the World Heritage Committee. Valcamonica's use of site included Municipal Park, National Park, religious use, and visitor attraction. A Municipal Park is a public open space for recreation. A National Park is a historically or scenic important site that is protected by a national government.<sup>124</sup>

### *Financial Resources*

Venice and its Lagoon received funding from three different sources. Those three sources were State Budget, UNESCO's International Campaign, and a Private Association Abroad. Private Association Abroad is funding provided by an anonymous organization that is not within the national territory of Italy. UNESCO's International Campaign speaks to the previously mentioned

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<sup>122</sup> Oxford University, *Oxford Dictionaries*, 2014, <http://www.oxforddictionaries.com/us> (accessed May 2014).

<sup>123</sup> Oxford University, <http://www.oxorddictionaries.com/us>

<sup>124</sup> Oxford University, <http://www.oxorddictionaries.com/us>

World Heritage Fund, which is an annual amount of US\$4 million that support the activities requested by the State Parties.

At the Archaeological Areas of Pompeii, Herculaneum, and Torre Annunziata, the State Party received funding from five sources. The first was from the State Budget. The second was from a Regional Budget, which pertains to the local revenue from the Province of Naples. Third was the tourism industry. The tourism industry included revenue made from entry fees, parking and transportation, and souvenirs bought on site. A sponsor was the fourth revenue for the archaeological areas. Sponsors are people or an organization that provided funding to the site. The fifth source of revenue for Pompeii, Herculaneum, and Torre Annunziata was the European Community. The European Community is the people of Italy that donate money for the conservation and preservation of archaeological areas.

For the Site of Valcamonica there were four sources of revenue and they were the State Budget, the European Union, Municipal Parks, and the Regional Reserve. The European Union is an association of European nations that participate in funding the world's economy. Municipal Parks and the Regional Reserve are similar to the Regional Budget, as funding comes from towns or cities within the local regional government or from local banks.

### *Expertise and Training*

At the site of Venice and its Lagoon there are several specialized expertise and training services available for the site. These services included museum management for conservation of artworks, art, landscape, and

architectural, training for libraries and archives, and organizations for transmission of traditional artistic handcraft. The Periodic Report stated that there was still a need for about learning restoration and conservation of monuments and artworks.

For the site of Pompeii, Herculaneum, and Torre Annunziata there were numerous expertise and training facilities near the site. These facilities included a scientific research center, a museum, a library, an educational center, museum conservation facilities, and a restoration laboratory. The site also had six universities nearby that specialized in libraries, archives, high-qualified research centers and museums.

At Valcamonica, the sources for expertise and training included the Superintendence for Archaeological Heritage.<sup>125</sup> The Periodic Report stated that there was still a need for a training facility to train people onsite to carry out constant monitoring and mapping of the state of conservation and preservation of the engraved rocks.

#### *Visitor Facilities*

According to the 2006 Periodic Report for Venice and its Lagoon, the visitor facilities available at the site were an information point, accommodation, transport, cultural institutions, and facilities that could be found within a major town.

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<sup>125</sup> The Superintendence for Archaeological Heritage is responsible for specialist activities and is in possession of the relevant personnel that are active in the fields of archaeological research, maintenance, restoration, conservation, recording, and development.

The 2006 Periodic Report for Pompeii, Herculaneum, and Torre Annunziata stated that the visitor facilities at the site included an information point, bookshop, audio guides, bar/restaurants, ATM, school booking service, school guided tours and educational documentation for schools, maps and brief guides, thematic routes, periodical exhibitions, special events, theater shows, conferences, and meetings.

In the 2006 Periodic Report for Valcamonica the visitor facilities provided teaching and information classes, information and teaching aids (panels and leaflets), park bookshop, information point, specialist bookshop, and reception centers. See Table 2 below for a comprehensive look at the coding for Periodic Reports for all three sites.

Table 2: Coding for 2006 Cycle I Periodic Reports

World Heritage Sites	Use of Site	Financial Resources	Expertise & Training	Visitor Facilities
Venice and its Lagoon	Urban Center	State Budget	Museum Mangement Conservation of Art Works	Accomodation
		International Campaign- UNESCO	Art, Landscape, Architecture	Transport Major Town Facilities- Found in a metro center
		Private Associations Abroad	Libraries & Archives	Cultural Institutions
Pompeii, Herculaneum, and Torre Annunziata	Visitor Attraction	State Budget	Museums	Informantion Point
		Regional Budget	Scientific & Research Center	Bookshop
		European Community	Education Center	Audio Guides
		Tourist	Restoration Laboratory	Tour Guides
			Universities	Dining Options
				School Activities
				Thematic Routes
Periodical Expeditions				
Special Events				
Conference or Meeting Space				
Map Guides				
Sponsors	Museum Conservation Facilities	ATM on Site		
Rock Drawings at Valcamonica	Religious Use	State Budget	Archaeological Research	Informantion Point
	Municipal Park	Regional Reserve	Maintenance	Bookshop
	National Park	Municipal Parks	Conservation	School Activities
	Visitor Attraction	European Union	Recording	Reception Center
Development			Education Center	

### Tour Guide Publications

The purpose of this analysis of the top three selling Italian travel guidebooks was to discover where popular guidebooks were telling visitors to go at Venice, Pompeii, and Valcamonica. Lonely Planet, DK Eyewitness, and Rick Steves published the guidebooks. Document analyses were done for all three guidebooks and were coded in Microsoft Excel. All relevant results were coded into four categories:

- Tourist Information
- Travel Tips
- Must See Attractions
- Conservation

Tourist information subcategories were entry, parking and transportation, and basic information. Basic information included a telephone number, seasonal hours, and if the site had a website available for visitors. The second category was travel tips. Travel tips included food, beverage, and accommodations near the sites, sites maps, and crowd control. Crowd control was any information the guidebooks offer on avoid large crowds that tend to gather at popular attractions. The category of 'must see' illustrated the top locations nominated by the guidebook for each of the three sites. Conservation was the fourth category for this analysis. Conservation related to any information the guidebooks offered about the conservation issues at the three sites.

#### *Tourist Information*

In Lonely Planet at the sites of Venice and its Lagoon and Pompeii, Herculaneum, and Torre Annunziata the guidebook stated that there was an entry fee for the attractions. For Venice and its Lagoon, entry to the Piazza San Marco and Saint Mark's Basilica were free but there were other costs in certain sections of the church. Lonely Planet did not discuss if there was an entrance fee for the site of the Rock Drawings at Valcamonica. Lonely Planet revealed that there was parking and transportation to and from the site of Valcamonica. Lonely Planet did not mention parking and transportation for the other two sites. Lonely

Planet offered the basic information of a telephone number, seasonal hours, and site website for visitors.

In DK Eyewitness Travel, the sites of Venice and its Lagoon and Pompeii, Herculaneum, and Torre Annunziata had entry costs. There was no mention of entry costs for the Rock Drawings at Valcamonica. DK Eyewitness Travel stated that there was transportation to and from the Piazza San Marco in Venice, Pompeii, Herculaneum, and Torre Annunziata, and the Rock Drawings at Valcamonica, which included ferries, buses and multiple train stations near the sites. DK Eyewitness Travel had the basic information for all three sites. The basic information included a telephone number, seasonal hours, and a site website.

In the Rick Steves guidebook, only two of the three sites were discussed in the guide. The Rock Drawings at Valcamonica was not mentioned. Rick Steves stated that there was an entry fee for Venice and its Lagoon and Pompeii, Herculaneum, and Torre Annunziata. Steves further stated that there was no fee for visiting the Piazza San Marco and the Basilica but there was a cost for entering the treasury, museum, or the golden altar within the Basilica. Steves gave no information on parking and transportation near or around the Basilica. For Pompeii, Herculaneum, and Torre Annunziata Rick Steves mentioned that there was parking and transportation nearby. The Transportation included train stations. Steves gave tourists basic information such as a telephone number, seasonal hours, and a website for the two of the three sites mentioned (see Table 3 below for the coding and analyses of the three guidebooks).

Table 3: Tourist Information

Tour Guides	Sites	Entry	Examples	Parking and Transportation	Examples	Basic Info	Examples
<b>Lonely Planet</b>	Venice and its Lagoon	Y	Church Free; no mention of other church costs	N	N/A	Y	Telephone number, website, seasonal hours
	Pompeii, Herculaneum and Torre Annunziata	Y	Admission, no price given	N	N/A	Y	Telephone number, website, seasonal hours
	Rock Drawings at Valcamonica	N	No admission cost mentioned	Y	Cost is 2 euros for parking	Y	Telephone number, website, seasonal hours
<b>DK Eyewitness Travel</b>	Venice and its Lagoon	Y	Does not mention what visitor is charged for	Y	Ferry Service; does not mention cost	Y	Telephone number, website, seasonal hours
	Pompeii, Herculaneum and Torre Annunziata	Y	Does not mention what visitor is charged for	Y	Train Station; does not mention cost	Y	Telephone number, website, seasonal hours
	Rock Drawings at Valcamonica	N	No admission cost mentioned	Y	Train Station, ferry and bus service; does not mention cost	Y	Telephone number, website, seasonal hours
<b>Rick Steves</b>	Venice and its Lagoon	Y	Church is free; treasury, museum, golden altar piece costs money	N	No info given	Y	Telephone number, website, seasonal hours
	Pompeii, Herculaneum and Torre Annunziata	Y	Cost of Admission and states its cash-only; group cost for all three sites	Y	Train station,; does not mention cost	Y	Telephone number, website, seasonal hours
	Rock Drawings at Valcamonica	N/A	N/A	N/A	N/A	N/A	N/A

### *Travel Tips*

Lonely Planet presented the visitor with black and white maps of Venice and its Lagoon. Including maps of the Piazza San Marco and maps of the Basilica. Lonely Planet also offered a few places to eat and rest near the Piazza San Marco in Venice and at Pompeii, Herculaneum, and Torre Annunziata but

they did not reference dining or accommodation options near the site of Valcamonica. Lonely Planet offered tips on avoiding the crowds at the Basilica in Venice's Piazza San Marco. By booking a tour online, the visitor could skip the queues and head directly to the portal of the Basilica. Lonely Planet also stated that there were many tours available for the Basilica and that they began and end at odd times. If visitors were to arrive at the Basilica at an off time, visitors could potentially miss the mass crowding caused by large tour groups. The guide also asserted that the diocese gave free guided tours of the interior of the church and by reserving a spot in this tour in advance, the visitor received a speedy entry to the central portal.<sup>126</sup> For the site of Pompeii, Herculaneum, and Torre Annunziata, Lonely Planet stated that the best time to visit Pompeii was in the afternoon. Lonely Planet did not share any helpful hints on avoiding mass crowds at the site of Valcamonica.

DK Eyewitness Travel did not reference any restaurants, cafes, or hotel options near the sites of Venice and its Lagoon, Pompeii, Herculaneum, and Torre Annunziata, and the Rock Drawings at Valcamonica. At the bottom of the page in very small print, however, Eyewitness Travel stated that for "hotels and restaurants in this region" turn to a different page, which in this case are more than 200 pages from where the site-specific information is.<sup>127</sup> DK Eyewitness had colored maps for Venice and its Lagoon, the Piazza San Marco in Venice, and of Pompeii, but not the sites of Herculaneum and Torre Annunziata. Eyewitness Travel did not give much information of beating the crowds but it did state that

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<sup>126</sup> Lonely Planet, *Italy* (China: Lonely Planet Publications Pty Ltd, 2014), pp 337.

<sup>127</sup> DK Eyewitness Travel, 112-113.

the Basilica had limited site seeing during services and that visitors should plan visiting the Basilica accordingly. Eyewitness Travel presented helpful hints on how to see some of Pompeii's popular houses quickly and without having to wait in line for the Archaeological Areas of Pompeii, Herculaneum, and Torre Annunziata. For example, the House of Faun is one of the most popular tourist spots at the site. Eyewitness Travel stated that to visit the house it would be beneficial to make a reservation in advance to visit all the private homes on site, without having to wait in line. However, the information about making a reservation for the House of Faun was false for entry to this villa at Pompeii. DK Eyewitness Travel did not share any helpful hints on avoiding mass crowds at the site of Valcamonica.

Rick Steves has black and white maps available for the visitor for the sites of Venice and its Lagoon and Pompeii, Herculaneum, and Torre Annunziata. Rick Steves referenced cafes near the Piazza San Marco in Venice. Steves also mentioned that there was a small cafeteria called Caio within Pompeii, Herculaneum, and Torre Annunziata and that there were small restaurants near the train station. Rick Steves gave one helpful hint for avoiding the entry lines to the site. He stated that during tourist season, May – September, the lines for entry to the site could be up to a thirty-minute wait. To avoid the wait, visitors had the option to buy tickets at the train station instead of at the general entrance. He also warned visitors that there might be some buildings and street closures within the site due to restoration, which might lead to over crowding and

lines in some spots. Rick Steves did not mention the site of Valcamonica in his guidebook.

### *Must See Attractions*

Lonely Planet stated that the Piazza San Marco and the Basilica were a must see attractions in Venice and its Lagoon. Lonely Planet highlighted the *Last Judgment*, the *Dome of Genesis*, *Dome of the Prophets*, *Apostles and the Madonna*, and the *Cupola of the Ascension* at St. Mark's Basilica. Lonely Planet also highlighted must see attractions for Pompeii, Herculaneum, and Torre Annunziata. The must see attractions included the Forum, the House of Faun, and the Brothels. Lonely Planet recommended that the visitor see Rock 1, also known as Roccia Grande, which had various engravings depicting animals, plants, and human figures. Lonely Planet also highlighted the main site of Parco Nazionale delle Incisioni Rupestri, which has the highest concentration of engravings.

DK Eyewitness Travel mentioned the Piazza San Marco and St. Mark's Basilica within as a 'must see' when visiting Venice and its Lagoon. DK Eyewitness highlighted the *Last Judgment*, the *Dome of Genesis*, *Dome of the Prophets*, *Apostles and the Madonna*, and the *Cupola of the Ascension* within the Basilica. At the site of Pompeii, Herculaneum, and Torre Annunziata some of the highlighted must see attractions were the Forum, the House of Faun, and the Brothels. DK Eyewitness stated that the two must see attractions at the Rock Drawings of Valcamonica were the main site of Parco Nazionale delle Incisioni Rupestri and Rock 1, also known as Roccia Grande.

Rick Steves stated that the Piazza San Marco and St. Mark's Basilica were a must see while visiting Venice and its Lagoon. Steves mentioned that within the Basilica, the visitor must see attractions included the *Last Judgment*, the *Dome of Genesis*, *Dome of the Prophets*, *Apostles and the Madonna*, and the *Cupola of the Ascension*. For the site of Pompeii, Herculaneum, and Torre Annunziata the Forum, the House of Faun, and the Brothels were just a few of the highlighted attractions Steves suggests visitors to see. The site of Valcamonica was not mentioned in Rick Steves guide.

### *Conservation*

Rick Steves discusses the issues of conservation for the site of Venice and its Lagoon. He does not mention conservation issues for the site of the Rock Drawings at Valcamonica or Pompeii, Herculaneum, and Torre Annunziata.

Lonely Planet and DK Eyewitness Travel do not mention conservation issues for any of the three sites.

### **Interviews- Tour Guides**

Six tour guides participated in an interview over email. Two local tour guides were contacted at each of the three sites chosen for this study. Each guide was sent six questions order to discover information about where and what visitors were interested in, the number of tours the guides gave daily, and whether the guides educated visitors about the conservation issues at the site. Two out of the six participants responded to the interviews. Both responses came from tour guides at the site of Venice and its Lagoon. The interviews were

analyzed and coded using Microsoft Excel. The responses were organized by question as follows:

- How many tours do you give daily? How long do the tours last?
- On average, how many visitors are in your group?
- Does your site have a set of rules, guidelines or regulations for visitors? If so, what are they? Are they required or suggested? Which ones do visitors more often ignore?
- Do visitors stay on designated footpaths?
- How do you choose what artwork, buildings, or city sections to highlight on your tour?
- As part of the tour, do you educate visitors about conservation issues at the site? If so, what do you tell them? Do you think it will help? Why or Why not?

### *Responses*

The first question asked was “How many tours do you give daily? How long do the tours last?” Both of the participants responded that they gave at least one to two tours per day. The first participant stated that their tours may last anywhere between one to four hours. The other participant stated that their tour lasts between two or three hours.

“On average, how many visitors are in your group?” was the second question proposed to the participants. The first participant wrote that he or she did “mostly individuals or families of 2-4 people” and when groups were involved it was no more than thirty people “as it is too difficult to walk around the narrow

alleys of the town.” The second participant had a similar answer, stating that he or she did both small (4-6 people on average) and larger groups (30 people on average).

The third question referenced to the safety regulations that the tourist industry puts forth to ensure the safety of the site and its visitors. The first participant focused more on the guidelines of how visitors and locals interact while the other participant discussed the rules of visitors in many of the attractions within Piazza San Marco. The question was “Does your site have a set of rules, guidelines or regulations for visitors? If so, what are they? Are they required or suggested? Which ones do visitors more often ignore?” Each of the participants had completely different answers. The first participant stated:

Only guidelines to instruct visitors on how to get around in order to not disturb the inhabitants during their daily life. The rules anyway are not at all visible and completely useless. Most important in our town is that of walking on one side of the street and to behave as a car. People do not think that they are always blocking the way. As there are no cars everybody thinks that they can stand in the middle of bridges and streets rendering the life of inhabitants really stressful, as they always have to push through the crowd. The same reason on the public boats people are just standing in the way taking pictures thinking that the boat is for enjoying the scene and forgetting that it is like getting on the metro at rush hours.

The second participant focused on the rules for the visitors’ in regards to how they interact with visitor’s attractions. Rules regarding taking pictures, checking large bags, wearing appropriate clothes in churches, and walking on designated footpaths were the primary guidelines for the second participant. While the first participant stated that the most ignored rule was visitors not understanding that the streets are streets. The second participant stated that the most ignored rule

was taking photos in areas where this was prohibited.

The fourth question was similar to the third. The third question focused on the guidelines overall. The fourth question asked “Do visitors stay on designated footpaths?” Both of the participants responded that there were no specific designated footpaths within the Piazza San Marco and went into no further detail.

“How do you choose what artwork, buildings, or city sections to highlight on your tour?” was the fifth question in this interview. Each of the participants discussed that the itinerary of the tours were based on the clients’ request and interests. Both of the participants also stated that the itinerary was loosely based on their recommendation of what to see and how to easily avoid areas that were less crowded. The first participant discussed that he or she tried to not to “tell too much” about Venetian history unless asked by the visitors for they “are on holiday and the tour is not a conference and they do not need to hear all that I know.”

The sixth and final question was “As part of the tour, do you educate visitors about conservation issues at the site? If so, what do you tell them? Do you think it will help? Why or Why not?” Each of the participants discussed this issue in all of their given tours. Both discussed that the depopulation of the local population was a major problem and the issue of overcrowding was the leading cause in the loss of Venetian tradition and culture. The first participant went so far as to state that this “transformation of Venice into a museum town, has turned Venice into a new Disneyland.” This same interviewee shared more information about the issue of overcrowding in the city of Venice. According to the

interviewee, local Venetians insult tour guides “at least once a day.” He or she discussed that a colleague of theirs had a “bucket of water thrown on her head on purpose from a local’s window” due to the noise and crowding from the tour group. This participant further stated that they were part of a cultural association whose aim was:

as that of trying to let locals understand that at least among the guides there are educated people and that they do care about their town. We are really trying hard in letting the world understand that Venice is a town that has to be respected.

The second participant had nothing further to add to this question.

## RESULTS AND DISCUSSIONS

### **State of Conservation Reports**

#### *Current Conservation Issues and Missions*

As previously mentioned, the first and second research question was identifying the conservation issues at the three sites and what other contributing factors have led to these issues. The most significant pattern from the SoC analyses was that at least one report from each site mentioned that were currently undergoing issues relating to the impact of tourism, visitation, and recreation. At Venice and its Lagoon the conservation issues resulting from heavy visitor traffic was the limited space of the town, which has made Venice extremely vulnerable to the effects of mass tourism. At Pompeii, Herculaneum, and Torre Annunziata the conservation issues resulting from visitor pressure were the millions of visitors that visit the site each year. This is in contrast to the fact that large areas of Pompeii are not accessible for visitors. As previously mentioned by both Sheldon and Wallace in the literature review, Pompeii and other Vesuvian sites were currently suffering from the effects of over crowding and a way to alleviate the issue was to open other villas to the visitors.<sup>128</sup> For Valcamonica the conservation issues identified in the State of Conservation Reports was the construction of the metal walkway, done against the recommendation of ICCROM, which was drilled directly into the rock face.

The second pattern identified was that both the sites of Pompeii and Valcamonica referenced conservation issues due to a poor management system

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<sup>128</sup> Sheldon, 74-76. Wallace, 122.

and management plan in at least one of the SoC. Pompeii referenced a poor management system and management plan in two separate reports and Valcamonica referenced it all four of their SoC. For Pompeii the lack of an adequate management and coordination among the professionals seemed to have led to improper maintenance, issues with visitor traffic, and an improper monitoring of the state of conservation at the site. Valcamonica appeared to be experiencing the same management and coordination issues as Pompeii, Herculaneum, and Torre Annunziata. Valcamonica's management issues have led to improper monitoring of the state of conservation and issues with visitor traffic.

As discussed in Anthony Clayton's article on strategies for sustainable tourism, he describes that mass tourism has a negative relationship with protected areas.<sup>129</sup> The article written by Wallace stated that sites such as Pompeii, Herculaneum, and Torre Annunziata had designated routes leading to a limitation in space and visitor movement that caused conservation issues from overcrowding.<sup>130</sup> From this analysis, it seemed that a lack of a proper management systems and management plans resulted in conservation issues caused by visitor pressure.

Outliers that related to the impact of tourism in the SoC for the site of Valcamonica were the ground transport infrastructure and electrical power lines that had gone up around the site. Ground transport infrastructure refers to roads and highways built for easy access to the site by visitors. This seemed to be a

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<sup>129</sup> Clayton, 5.

<sup>130</sup> Alia Wallace, 120.

conservation issue for WHS because the addition of roads and power lines had taken away the ambiance and historical narrative of the site. As previously mentioned, Valcamonica was and is still used as a religious site. It appeared that power lines and roads affected the OUV of the site. This was seen in the article by Clottes in which she stated “building roads would be a criminal waste of a rare priceless heritage” because with the road comes the nuisances of power lines, signs, parking lots, gas stations, and other visitor facilities that ruin the ambiance of the site.<sup>131</sup>

The third research question focused on how to mollify these conservation issues and how visitors could aid in the conservation efforts. The findings and analysis suggested that by reducing the number of people allowed into a single area could reduce the impact of overcrowding in popular areas of the sites. This analysis also suggested that if each WHS had a well-planned organized management system, it could potentially mollify the conservation issues caused by tourists.

## **Periodic Reporting**

### *Use of Site*

The only pattern found for use of site was located at the sites of Pompeii, Herculaneum, and Torre Annunziata and the Rock Drawings at Valcamonica. The Periodic Reports mentioned that both sites were used as a visitor attraction. Since the two sites were labeled a visitor attraction it seemed that foot traffic from tourists result in the conservation issues mentioned in the SoC above. As

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<sup>131</sup> Clottes, 4.

previously mentioned in the SoC for Pompeii and Valcamonica, much of the conservation issues caused by visitor traffic appeared to be due to the lack of maintenance, crowd control, and a proper management plan. The Periodic Reports seemed to state that by implementing a management system to lessen the amount of visitor traffic in the popular areas within the site could be mollified.

#### *Financial Resources*

State Budget was the only pattern found during the analyses of the Periodic Reports across all three sites. Though State Budget was an important factor in raising funds to aid in the conservation of the site, the findings and analyses were not relevant to this study.

#### *Expertise and Training*

Much of the site professionals training occurred off site at educational institutions. Representatives from each site have received education about conservation at various conservation facilities relating to the specific needs of their site. Education in conservation, preservation, and restoration appeared to be an important aspect in knowing and understanding the conservation issues, particularly for the sites of Pompeii, Herculaneum, and Torre Annunziata. According to the Periodic Report for Pompeii, Herculaneum, and Torre Annunziata the reports suggested that the archaeological areas had inappropriate restoration methods due a general lack of qualified staff for the restoration and maintenance of the property.<sup>132</sup> Much of the restoration projects for the site were outsourced and the site professionals did not assess the quality

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<sup>132</sup> "Periodic Report", *UNESCO*, <http://whc.unesco.org>, (Accessed March 2014).

of work of the contractors.<sup>133</sup> In the city of Venice, outside of the focus of conservation, site professionals were also educated in art and architecture and archival work. Pompeii, Herculaneum, and Torre Annunziata have numerous educational sites nearby for training, such as: science and research centers, universities, and restoration laboratories. Valcamonica focuses their training on archaeological research, maintenance, development and recording.

### *Visitor Facilities*

The analyses of the visitor facilities within the sites Periodic Reports, only one pattern was found. Two of the three sites had tour guides and audio tours available for the visitors. Though this was an interesting finding, it resulted in no significant findings for this study.

### **Tour Guide Publications**

#### *Tourist Information*

According to the analyses of the published tour guides, all three of the guidebooks state that there was an entrance fee to Venice and its Lagoon and Pompeii, Herculaneum, and Torre Annunziata. Lonely Planet, DK Eyewitness Travel, and Rick Steves mentioned that the entrance to the Piazza and Basilica in Venice was free, but that certain attractions within the Basilica had an entry fee. There is no mention of an entrance fee for Valcamonica in any of the guidebooks.

Lonely Planet and Rick Steves did not mention parking or transportation for the site of Venice and its Lagoon but DK Eyewitness Travel stated that there

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<sup>133</sup> "State of Conservation", *UNESCO*, <http://whc.unesco.org/en/soc/354>, (Accessed April 2014).

was a ferry service available. Two of the three guidebooks stated that there is parking and transportation available for the Valcamonica, but Rick Steves did not mention the site of Valcamonica. All three of the guidebooks stated that there was parking and transportation available to and from Pompeii, Herculaneum, and Torre Annunziata. Three out of the three guidebooks gave the visitor the basic information, though Rick Steves did not mention Valcamonica.

According to these findings, it seemed that all three of the sites generated revenue from the entrance fees, parking fees or both available at each site was a significant finding. As mentioned in the Periodic Reports, funding for the conservation and protection of the three sites comes in part from the State Budget and tourism. Leask and Fyall also stated that tourism and the income it generates were necessary for the conservation and preservation of all WHS.<sup>134</sup> Findings from the analysis of the tour guides supports the findings from the literature review.

### *Travel Tips*

Lonely Planet, DK Eyewitness Travel, and Rick Steves all gave visitors helpful information while visiting each of the three sites.

Rick Steves, DK Eyewitness Travel, and Lonely Planet give some information on ways to beat the long lines and mass crowding. Managing the Piazza San Marco can be difficult for those who do not like large numbers of people. As previously stated in *Venice The Tourist Maze* by Davis and Marvin, they discussed that the Piazza is the number one tourist attraction in Venice,

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<sup>134</sup> Leask and Fyall, 104-105.

therefore the site is constantly full of tourists.<sup>135</sup> The writers of the guidebook DK Eyewitness agree, stating that two of Venice's top tourist attractions, the Basilica and the Palazzo Ducale are both in the Piazza San Marco and attract tourists by the thousands.<sup>136</sup> All three of the guidebooks offer a few short cuts or time management ideas that could save the tourist time. Lonely Planet illustrates that if one books their visit online, one can skip the queues and head directly to the central portal of the Basilica. Lonely Planet also states that there are many tours available for the Basilica and that they begin and end at odd times, so if one was to arrive to the Basilica at an off time, one could potentially miss mass crowding caused by large tour groups. The guide also asserts that the diocese gives free guided tours of the interior of the church and by reserving a spot in this tour in advance, the visitor receives a speedy entry to the central portal.<sup>137</sup> Eyewitness Travel did not present much information about beating the crowds but it does state that the Basilica has limited site seeing during services and that one should plan visiting the Basilica accordingly. As for Rick Steves, he discusses a variety of time saving opportunities in the Piazza.

As for the site of Pompeii, Herculaneum, and Torre Annunziata, all three of the guidebooks offer tips on how to skip crowds at some of the most popular attractions. Mass crowding at popular attractions appeared to be a contributing factor affecting the conservation of the site. This was evident in the article by

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<sup>135</sup> Marvin and Davis, 3-7.

<sup>136</sup> DK Eyewitness Travel, *Italy* (London: Dorling Kindersley, 2014) pp 112.

<sup>137</sup> Lonely Planet, *Italy* (China: Lonely Planet Publications Pty Ltd, 2014), pp 337.

Wallace when she argued that overcrowding within popular attractions at Pompeii have led to conservation issues resulting from heavy visitor traffic.<sup>138</sup>

From these analyses, it seemed that all three of the sites generates revenue from local products and services such as accommodation, food, and beverage sales near each of the three sites. As previously mentioned by Janet Cochrane and Richard Tapper, tourism generated money by selling “local products and service” while simultaneously earning the sites “higher revenues and achieve a higher profile nationally.”<sup>139</sup> This concept of generating revenue from local providers and services also appeared in UNEP’s book about tourist sector and protected sites.<sup>140</sup> It also appeared that guidebooks were meant to direct a visitor on where to go, where to stay, and where to eat with no regards to the conservation and preservation of WHS.

Crowd control seemed to be beneficial for identifying and mollifying the conservation issues caused by heavy visitor traffic because it could potentially alleviate mass crowding in the three sites. It also appeared from the section on traveling tips that by visiting the site later in the afternoon, overcrowding in the three sites could be eased and therefore it could potentially mollify the conservation issues resulting from heavy visitor traffic.

### *Must See*

Each of the three guidebooks has a section entitled must see attractions. All three of the guidebooks mention that the Piazza San Marco and St. Mark’s

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<sup>138</sup> Wallace, 118-121.

<sup>139</sup> Leask and Fyall, 99.

<sup>140</sup> United Nations Environmental Programme, 8-11.

Basilica within are a 'must see' when in Venice. Each of the guidebooks highlights certain mosaics and artwork within the Basilica that a visitor must see. Eyewitness Travel and Lonely Planet agree with Steves and highlight other popular buildings as well. As for the Rock Drawings at Valcamonica, the main attraction highlighted is the main site of Parco Nazionale delle Incisioni Rupestri. Parco Nazionale has the highest concentration of engravings. At this site both Lonely Planet and DK Eyewitness Travel recommend seeing Rock 1, also known as Roccia Grande, which have various engravings depicting animals, plants, and human figures. By highlighting certain 'must see' attractions appeared to be a contributing factor to the conservation issues of WHS.

As previously mentioned, the first two research questions described the conservation issues and what factors had led to the issues. It seemed that by highlighting certain villas and attractions as must see at each of the three sites, it could cause conservation issues resulting from visitor pressure. This was previously mentioned in Wallace's article about Pompeii where she argued that overcrowding causes visitor erosion.<sup>141</sup>

### *Conservation*

Only one out of the three guidebooks discusses conservation issues at the site. Rick Steves states that Venice has been suffering conservation challenges from mass tourism and that the city itself is sinking. Water levels around Venice have been increasing, primarily due to large cruise ships that make port here. Steps have been taken to mollify this issue, including the installation of

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<sup>141</sup> Wallace, 122.

underwater mobile gates, which will hopefully keep Venice's Lagoon levels low and stop the city from frequent flooding.<sup>142</sup> Steves does not discuss conservation issues and the other two sites.

It appeared that tour guide publications did not believe educating the visitors on the conservation issues at the site were important. As previously stated, Janette Deacon and other rock specialists out in the field agreed that the key to proper care and conservation of the art is to educate the public about the impact of tourism on cultural sites.<sup>143</sup>

### **Interviews- Tour Guides**

From the two responses it appeared that Venice and its Lagoon main conservation issue was over crowding. As previously seen in the argument set forth by Davis and Martin, due to the increasing number of tourists visiting the Basilica, deterioration of the floor mosaics began to occur. The impact of the increasing number of tourists to the historic center of the Piazza San Marco has led to the decrease in the local population and erosion of floor mosaics, the cities pavement, and the deterioration of the lagoon surrounding the ancient seaport.<sup>144</sup> The last interview questions asked if the tour guides educated the visitors on the current conservation issues occurring at the site. Both participants stated that they try to educate the tourists on the conservation issues at the site. From this question it seemed that tour guides try to inform the visitors about these issues in hopes to resolve the conservation issues in Venice.

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<sup>142</sup> Steves, 72-73.

<sup>143</sup> Deacon, 380-381.

<sup>144</sup> Davis and Marvin, 77-78.

The third question also discussed what regulation or rule did visitors ignore most often. The participants stated that taking photos and unaware of where to walk within Venice were two of the regulations that visitors most often ignored. Photographs and the lack of understanding where to walk in Venice were two of the contributing factors that led to the conservation issues at Venice and its Lagoon.

## CONCLUSION AND RECOMMENDATIONS

The study sought to identify and describe the conservation issues resulting from heavy visitor foot traffic and how these issues could potentially be resolved to safeguard World Heritage Sites for the future. This study sought to answer these three questions: What were the conservation issues at WHS caused by heavy visitor traffic? What were the contributing factors that have led to these conservation issues? What were some of the possible solutions that site managers could utilize to combat the conservation issues and how could visitors assist in the conservation efforts?

Visitor pressure at the sites resulted in structural collapses, wearing down of walkways, and modern infrastructure intruding on the historical ambiance at the sites. Study results indicated poor management systems and poor management plans were a major contributing factor to the conservation issues resulting from heavy visitor traffic. Poor management systems and management plans led to improper maintenance, inappropriate restoration methods, and inadequate monitoring of the state of conservation at all three sites. However, if the sites created well-organized management systems and plans to resolve the conservation issues, it could potentially safeguard these sites for future generations.

This study suggested that there were issues concerning the management systems and management plans at all three sites. It could be determined that if the State Parties and the site professionals created a well organized

management system and plan, that many of the conservation issues caused by visitor traffic could be appeased.

## LIMITATIONS

This case study had seven limitations. The first limitation was the small sample size. Out of the 981 World Heritage Sites, only three were chosen for this study. If more time was allotted for research, a more comprehensive case study could have made the conclusions of this research more generalized.

The second limitation was that this research only focused on cultural sites. On the World Heritage List there were cultural, natural, and mixed (cultural and natural) properties protected by the World Heritage Convention. While the implications of this study might be applicable to other cultural properties, further research on the conservation issues at natural and mixed heritage properties could provide more specific recommendations for all three types of sites found on the WHL.

Due to financial restraints, the ability to travel to these sites for onsite observations and interviews was the third limitation for this study. The inability to travel to these sites to observe how the visitors interacted with the site and to ask site professionals on hand the current conservation issues resulting from tourism hindered the research process.

The fourth limitation was the inability to come into contact with anyone from UNESCO, the World Heritage Convention, or any of the chosen three properties. Much of the information about the sites management plans and management systems was not available on UNESCO's website. UNESCO and

the Convention was contacted early on in this research requesting a copy of the management plan, of which UNESCO had stated on their website was available upon request. There was no response to this request.

The fifth limitation to this case study was the inability to speak fluent Italian. Emails were received from a few tour guide industries in Italy, but both were written in Italian. It was possible that the translation used for these emails were incorrect.

The sixth limitation was the limited response to the interview portion of the methodology. Six participants were contacted early on in this research process and had agreed to respond to the interview. Only two out of the six responded in time for this case study. While the responses received provided rich data about the contributing factors that led conservation issues at Venice and its Lagoon, the lack of responses from the other two sites did not allow for a cross case analysis across all three sites that was desired for this study.

The seventh and final limitation was from the analyses of the State of Conservation Reports, Periodic Reports, and Tour Guide Publications. Some of the findings did not provide significant results for the purpose of this paper and the three research questions. For example, each of the sites Periodic Reports discussed where the sites received revenue. Though it appeared to be important to discover how sites received revenue for the maintenance and restoration of the site, this finding was not relevant in terms of the three research questions.

## APPENDICIES

Table 1 Tourism Service and Providers

Service	Providers
Accommodation	Hotels, Bed and Breakfasts, Campsites, Cruise Ships, etc.
Transportation to and from Destinations	Public Transport (Trains, Planes, Sea Passages)
Food and Beverage	Restaurants, Bars, Grocery Stores, Markets, Cafes
Ground Transport	Car Rentals, Boat Rentals, Gas Stations
Travel Services	Travel Agents
Activities	Excursions, Shopping, Recreational Facilities, etc.
Heritage Resources of Destinations	Excursions, Protected Sites, World Heritage Sites, etc.

Table 2 Coding for 2006 Cycle I Periodic Reports

World Heritage Sites	Use of Site	Financial Resources	Expertise & Training	Visitor Facilities
Venice and its Lagoon	Urban Center	State Budget	Museum Mangement Conservation of Art Works	Accomodation
		International Campaign- UNESCO	Art, Landscape, Architecture	Transport Major Town Facilities- Found in a metro center
		Private Associations Abroad	Libraries & Archives	Cultural Institutions
Pompeii, Herculaneum, and Torre Annunziata	Visitor Attraction	State Budget	Museums	Informantion Point
		Regional Budget	Scientific & Research Center	Bookshop
		European Community	Education Center	Audio Guides
		Tourist	Restoration Laboratory	Tour Guides
			Universities	Dining Options
				School Activities
				Thematic Routes
				Periodical Expeditions
Special Events				
Conference or Meeting Space				
Map Guides				
Sponsors	Museum Conservation Facilities	ATM on Site		
Rock Drawings at Valcamonica	Religious Use	State Budget	Archaeological Research	Informantion Point
	Municipal Park	Regional Reserve	Maintenance	Bookshop
	National Park	Municipal Parks	Conservation	School Activities
	Visitor Attraction	European Union	Recording Development	Reception Center Education Center

Table 3 Tourist Information

Tour Guides	Sites	Entry	Examples	Parking and Transportation	Examples	Basic Info	Examples
Lonely Planet	Venice and its Lagoon	Y	Church Free; no mention of other church costs	N	N/A	Y	Telephone number, website, seasonal hours
	Pompeii, Herculaneum and Torre Annunziata	Y	Admission, no price given	N	N/A	Y	Telephone number, website, seasonal hours
	Rock Drawings at Valcamonica	N	No admission cost mentioned	Y	Cost is 2 euros for parking	Y	Telephone number, website, seasonal hours
DK Eyewitness Travel	Venice and its Lagoon	Y	Does not mention what visitor is charged for	Y	Ferry Service; does not mention cost	Y	Telephone number, website, seasonal hours
	Pompeii, Herculaneum and Torre Annunziata	Y	Does not mention what visitor is charged for	Y	Train Station; does not mention cost	Y	Telephone number, website, seasonal hours
	Rock Drawings at Valcamonica	N	No admission cost mentioned	Y	Train Station, ferry and bus service; does not mention cost	Y	Telephone number, website, seasonal hours
Rick Steves	Venice and its Lagoon	Y	Church is free; treasury, museum, golden altar piece costs money	N	No info given	Y	Telephone number, website, seasonal hours
	Pompeii, Herculaneum and Torre Annunziata	Y	Cost of Admission and states its cash-only; group cost for all three sites	Y	Train station;; does not mention cost	Y	Telephone number, website, seasonal hours
	Rock Drawings at Valcamonica	N/A	N/A	N/A	N/A	N/A	N/A

Figure 1 Total Number of State of Conservation Reports

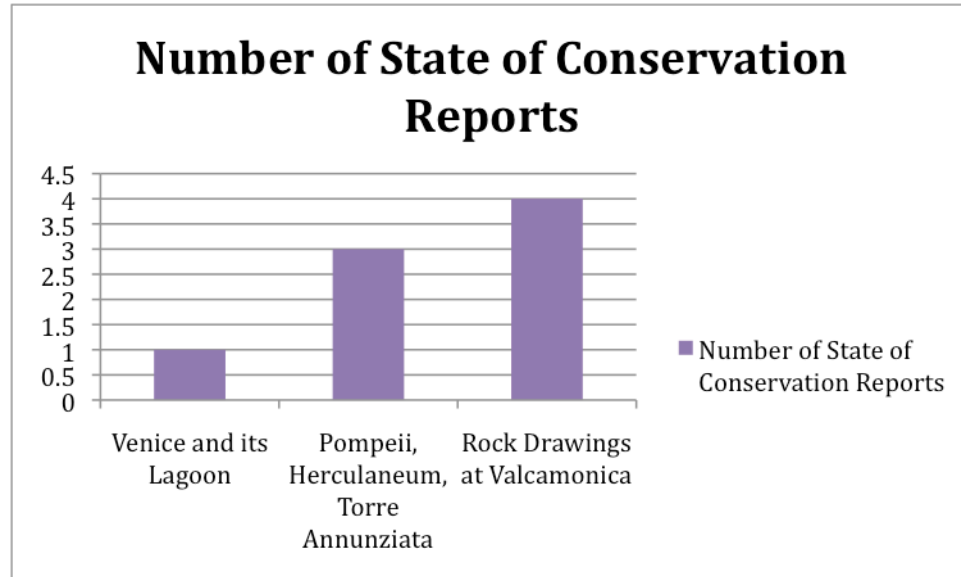


Figure 2 Number of State of Conservation Issues at Pompeii, Herculaneum, and Torre Annunziata

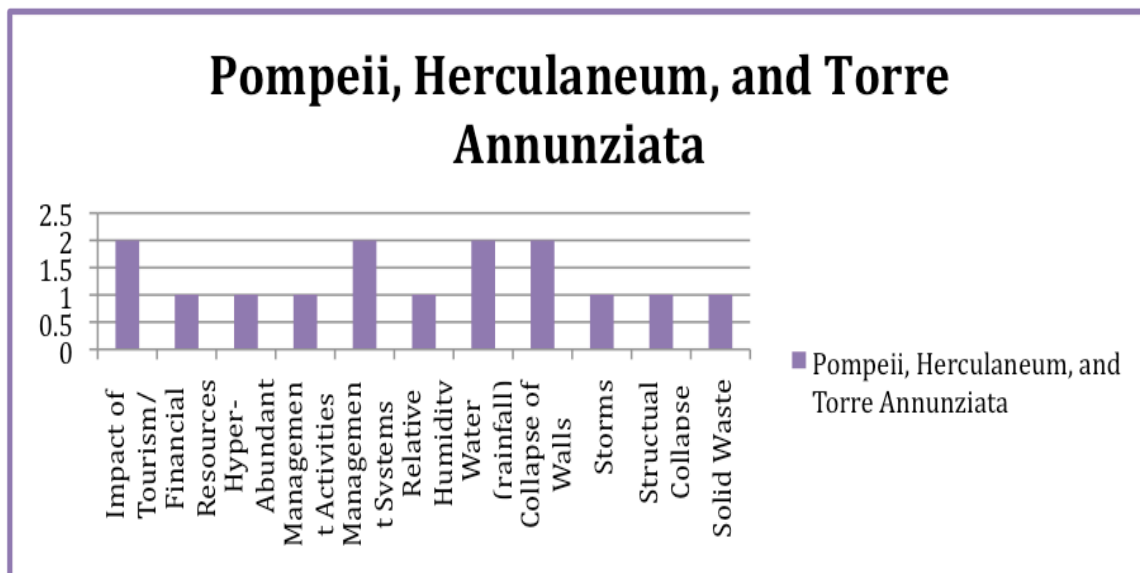
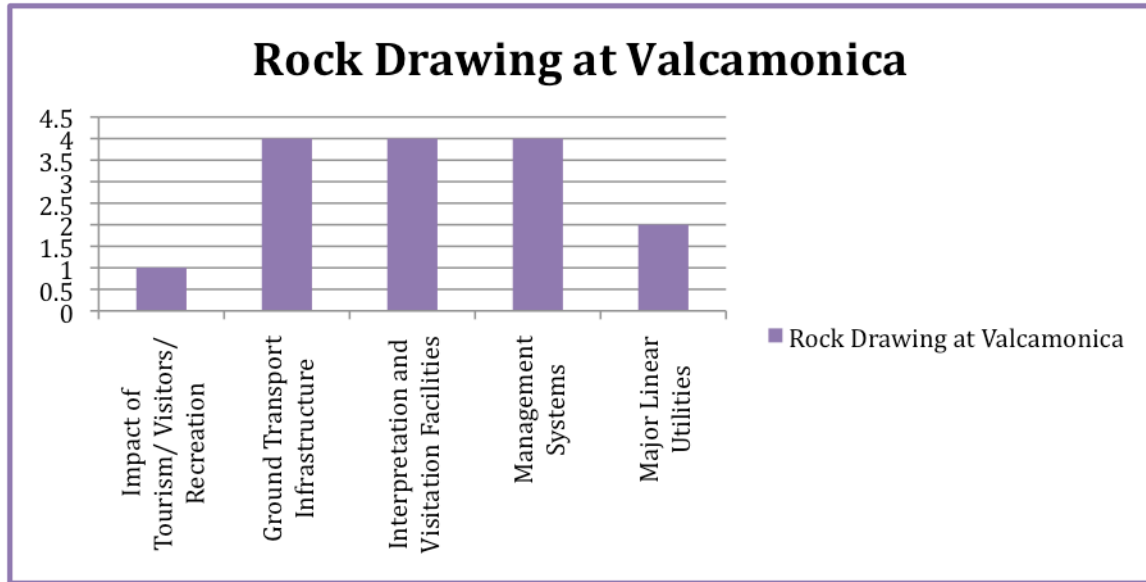


Figure 3 Number of Conservation Issues at Valcamonica



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