Contents

Forev	word by Jeffrey J. McDonnell	vii
Prefa	ce by Laurent Pfister & Hubert H. G. Savenije	ix
1	INTRODUCTION	1
1.1 1.2	Leonardo Da Vinci Hydrology before and after Leonardo	3 6
2	LEONARDO'S 'TREATISE ON WATER'	11
2.1 2.2 2.3	Leonardo and the "science of water" Leonardo's unfinished "Treatise on Water" The conceptual foundations of Leonardo's "Treatise on Water"	13 15 18
3	THE ATMOSPHERE	25
3.1 3.2 3.3	Structure, constituents and processes Meteorological phenomena Measuring devices	27 28 31
4	THE PHYSICAL STRUCTURE OF THE EARTH	35
4.1 4.2 4.3 4.4 4.5 4.6 4.7	The earth as a support for the water cycle The earth as a living body The structure of the earth Water as a force eroding and shaping the earth's surface The role of sedimentation in the building of landforms Leonardo's concept of erosion and the forces shaping the earth's surface as opposed to the biblical deluge theory Erosion as a constant remodelling force of the earth's surface under the effect of tectonics	37 37 39 41 45 e, 47 49
5	THE WATER CYCLE	51
5.1	The general framework for Leonardo's concept of the water cycle	53

5.2	Leonardo's key questions related to the water cycle		
5.3	Leonardo's concept of the water cycle		55
	5.3.1	The idea of drainage basins	55
	5.3.2	The hydrological cycle	56
	5.3.3	Leonardo's thoughts on 'where does the water go when it rains?' and 'what flow path does it take to the stream?'	59
	5.3.4	The water cycle: salinity of the sea water	63
	5.3.5	Leonardo: the first experimental hydrologist?	63
	5.3.6	On the origin of tides and the link with Leonardo's theory of the hydrological cycle	68
6	THE	STUDY OF WATER IN MOTION	71
6.1	Leona	rdo's motivation for studying moving waters	73
6.2	Traini	ng rivers, or how to raise the economic value of rivers	75
7	LEO	NARDO'S LEGACY	85
References			
Postscript by Laurent Pfister & Lucien Hoffmann			
List of Figures			