



(a) Original image



(b) HE



(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 10. Contrast enhancement results for image 106025.jpg.



(a) Original image



(b) HE



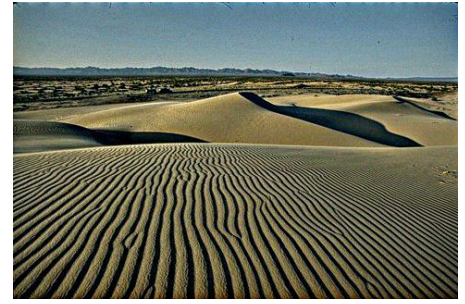
(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 11. Contrast enhancement results for image 178054.jpg.



(a) Original image



(b) HE



(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 12. Contrast enhancement results for image 183055.jpg.



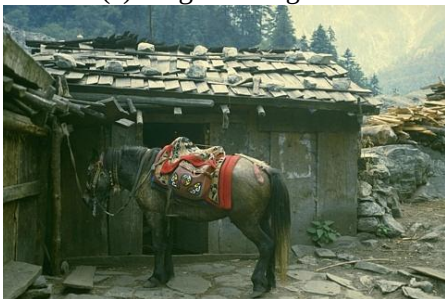
(a) Original image



(b) HE



(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 13. Contrast enhancement results for image 187003.jpg.



(a) Original image



(b) HE



(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 14. Contrast enhancement results for image 118020.jpg.



(a) Original image



(b) HE



(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 15. Contrast enhancement results for image 130034.jpg.



(a) Original image



(b) HE



(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 16. Contrast enhancement results for image 163014.jpg.



(a) Original image



(b) HE



(c) 2DHE



(d) AR

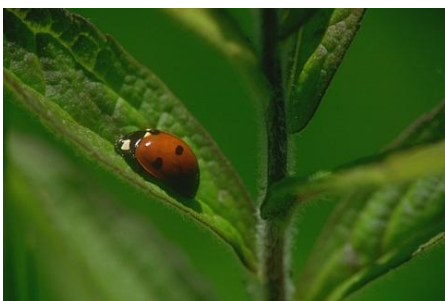


(e) MCE



(f) NGF

Figure 17. Contrast enhancement results for image 172032.jpg.



(a) Original image



(b) HE



(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 18. Contrast enhancement results for image 35058.jpg.



(a) Original image



(b) HE



(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 19. Contrast enhancement results for image 35091.jpg.



(a) Original image



(b) HE



(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 20. Contrast enhancement results for image 161062.jpg.

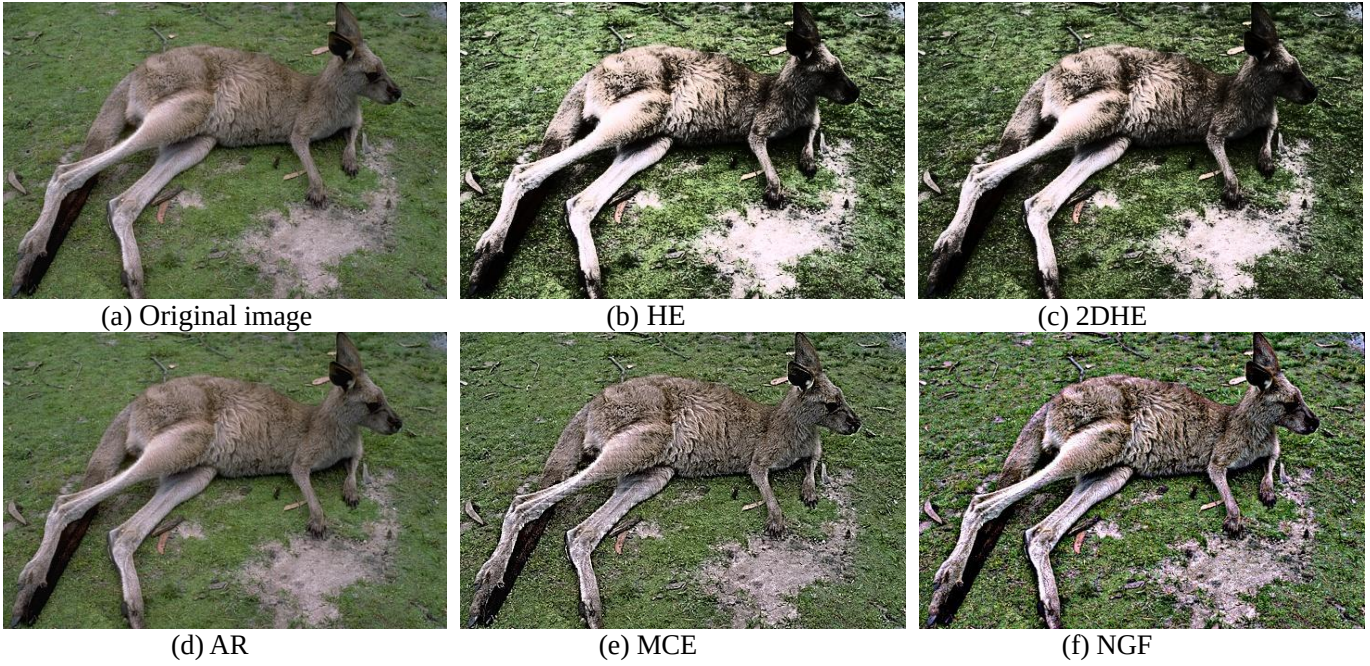


Figure 21. Contrast enhancement results for image 69020.jpg.

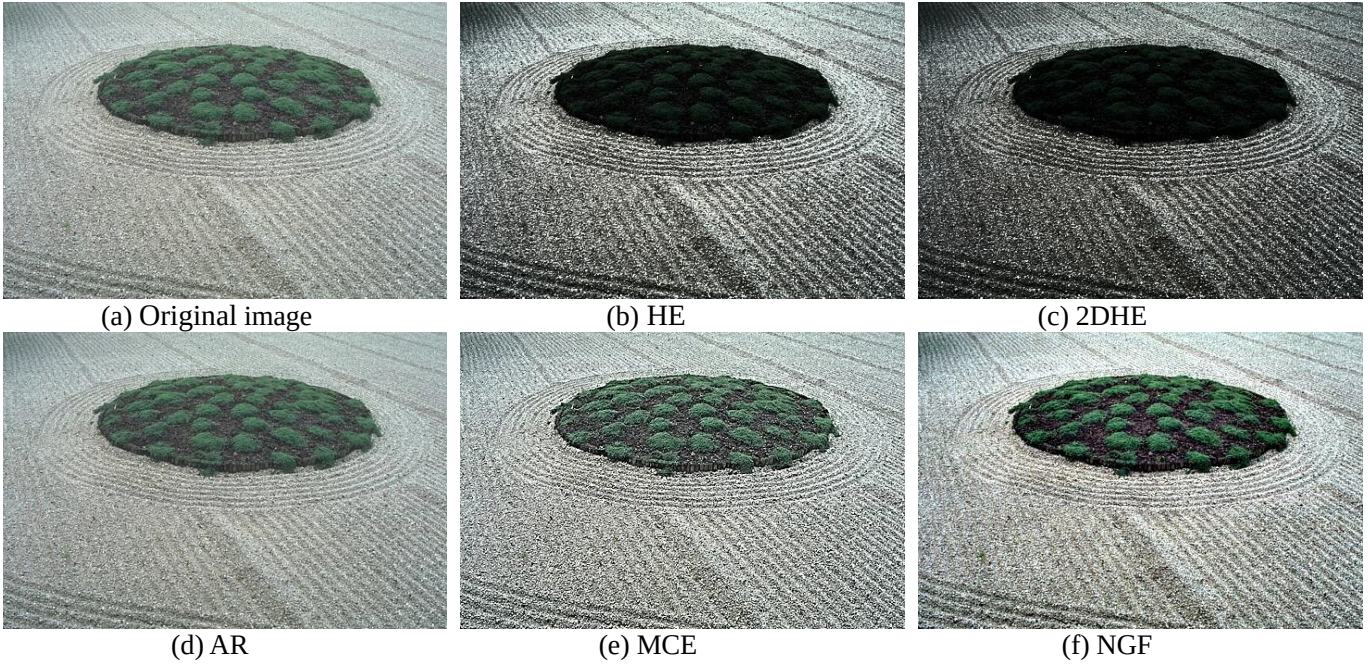
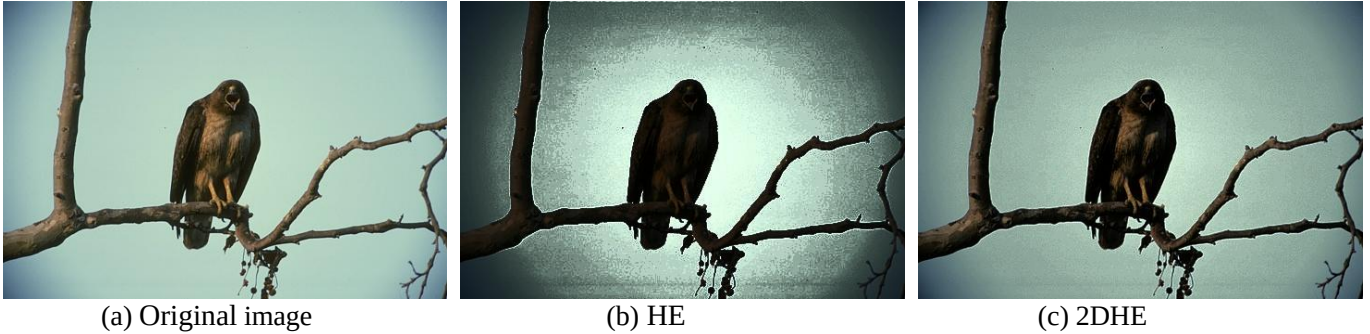


Figure 22. Contrast enhancement results for image 86016.jpg.





(d) AR



(e) MCE



(f) NGF

Figure 23. Contrast enhancement results for image 42049.jpg.



(a) Original image



(b) HE



(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 24. Contrast enhancement results for image 43074.jpg.



(a) Original image



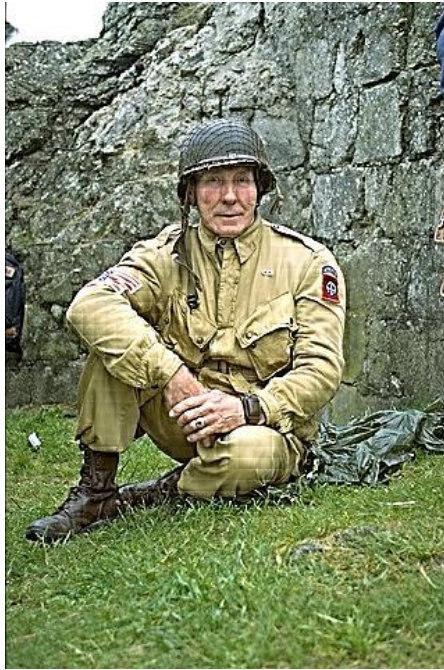
(b) HE



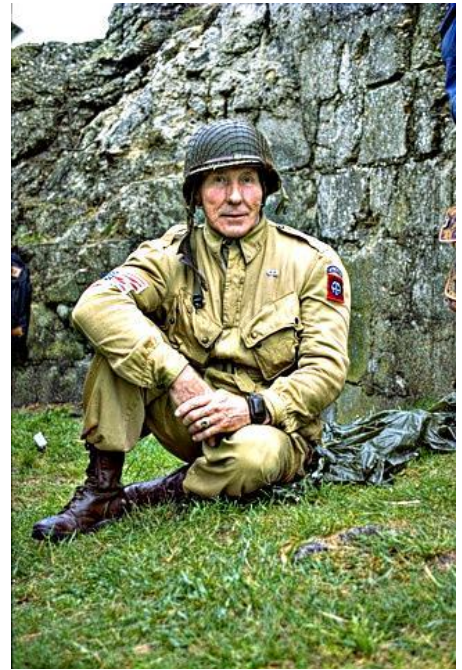
(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 25. Contrast enhancement results for image 376043.jpg.



(a) Original image



(b) HE



(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 26. Contrast enhancement results for image 253027.jpg.



(a) Original image



(b) HE



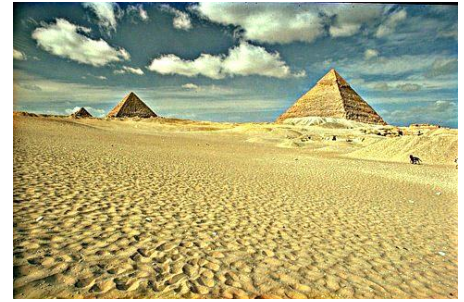
(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 27. Contrast enhancement results for image 260058.jpg.



(a) Original image



(b) HE



(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 28. Contrast enhancement results for image 160068.jpg.



(a) Original image



(b) HE



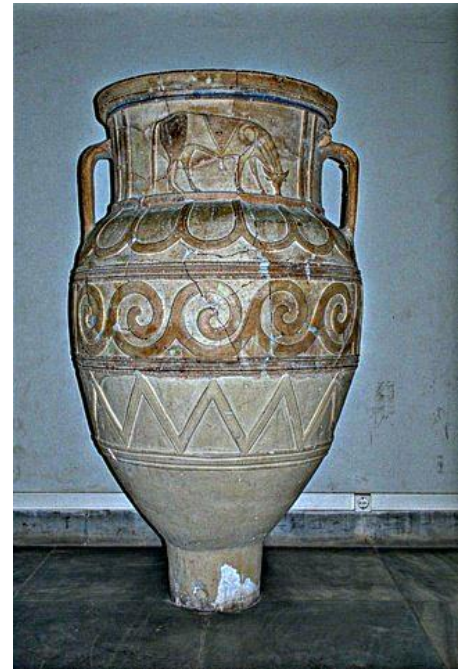
(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 29. Contrast enhancement results for image 227092.jpg.



(a) Original image



(b) HE



(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 30. Contrast enhancement results for image 241004.jpg.



(a) Original image



(b) HE



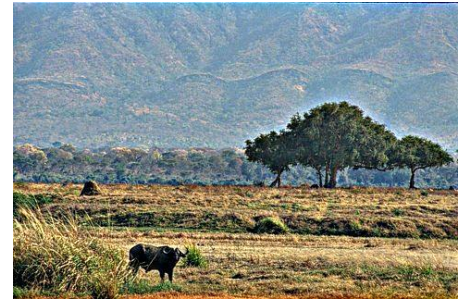
(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 31. Contrast enhancement results for image 296007.jpg.



(a) Original image



(b) HE



(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 32. Contrast enhancement results for image 296059.jpg.



(a) Original image



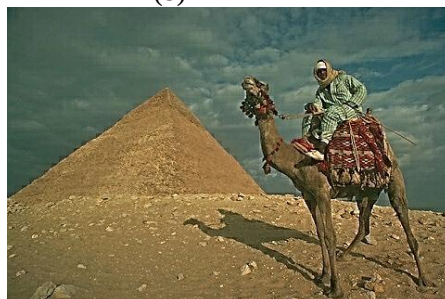
(b) HE



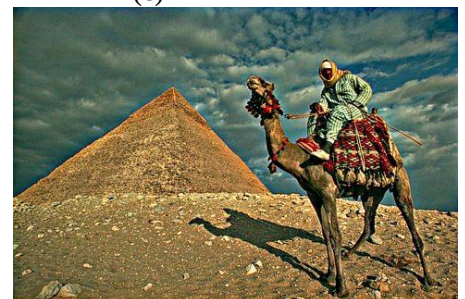
(c) 2DHE



(d) AR



(e) MCE

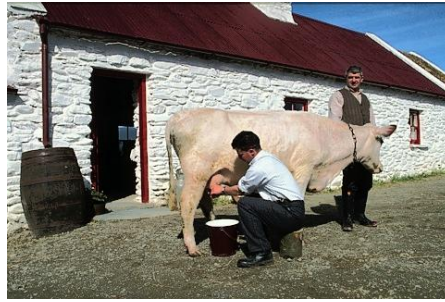


(f) NGF

Figure 33. Contrast enhancement results for image 299086.jpg.



(a) Original image



(b) HE



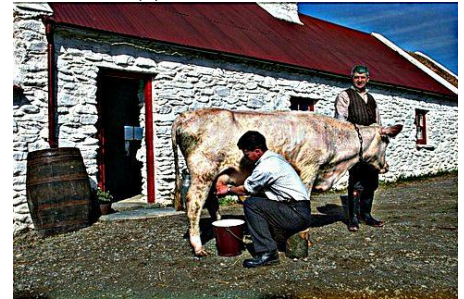
(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 34. Contrast enhancement results for image 385039.jpg.



(a) Original image



(b) HE



(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 35. Contrast enhancement results for image 196073.jpg.



(a) Original image



(b) HE



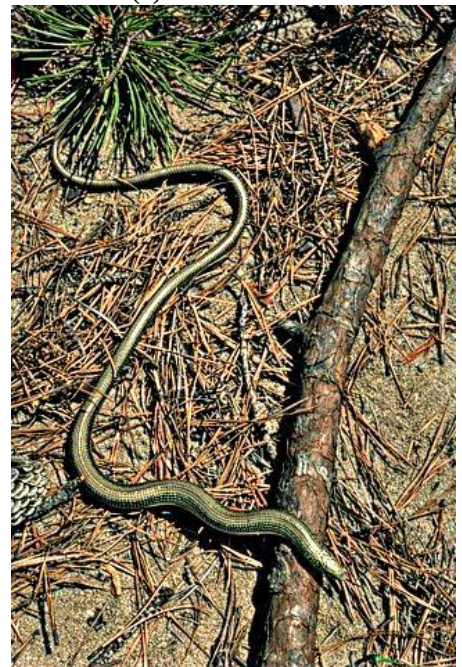
(c) 2DHE



(d) AR



(e) MCE



(f) NGF

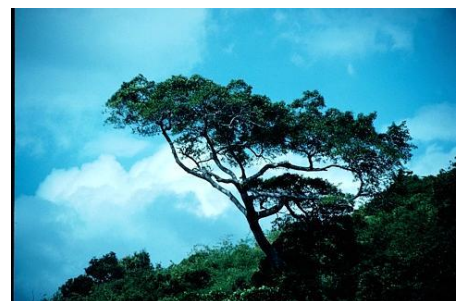
Figure 36. Contrast enhancement results for image 175032.jpg.



(a) Original image



(b) HE



(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 37. Contrast enhancement results for image 147091.jpg.



(a) Original image



(b) HE



(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 38. Contrast enhancement results for image 126007.jpg.



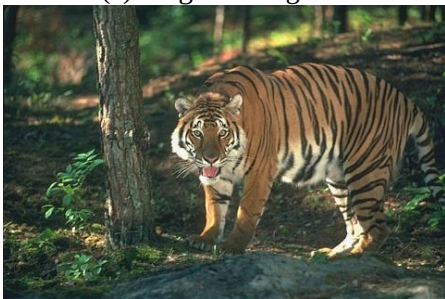
(a) Original image



(b) HE



(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 39. Contrast enhancement results for image 108005.jpg.



(a) Original image



(b) HE



(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 40. Contrast enhancement results for image 103070.jpg.



(a) Original image



(b) HE



(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 41. Contrast enhancement results for image 101085.jpg.



(a) Original image



(b) HE



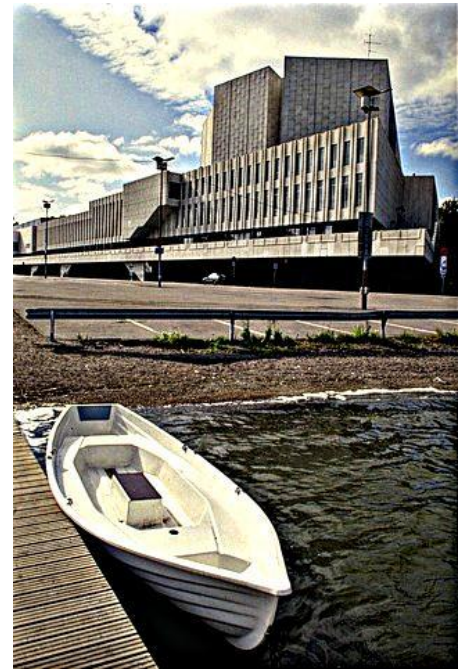
(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 42. Contrast enhancement results for image 78004.jpg.



(a) Original image



(b) HE



(c) 2DHE



(d) AR



(e) MCE

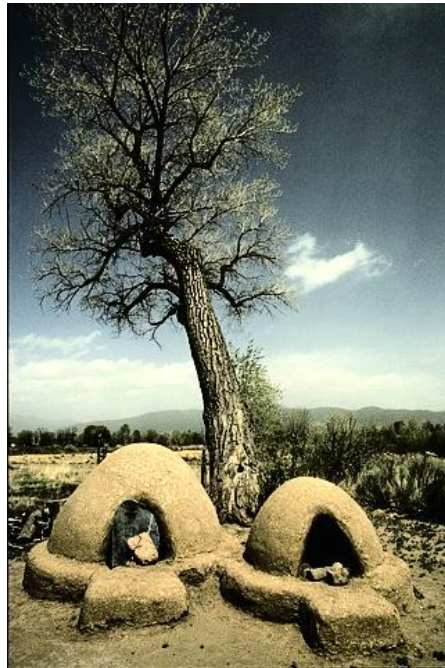


(f) NGF

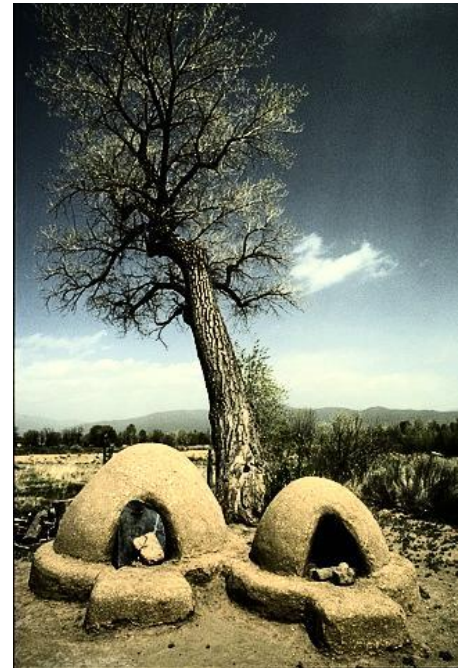
Figure 43. Contrast enhancement results for image 69015.jpg.



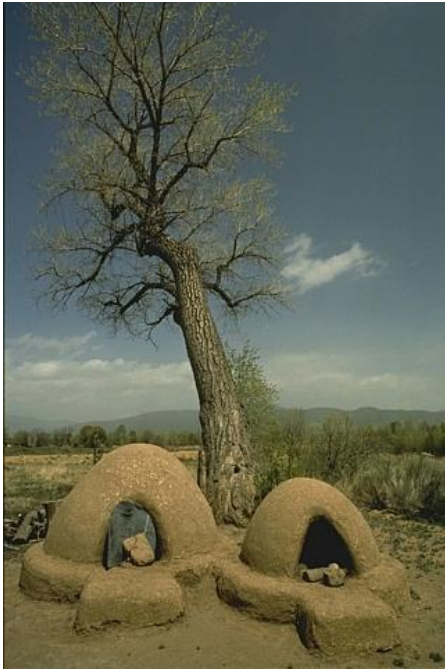
(a) Original image



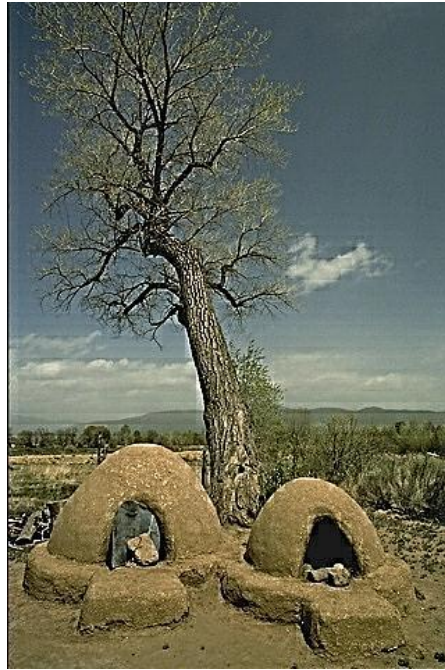
(b) HE



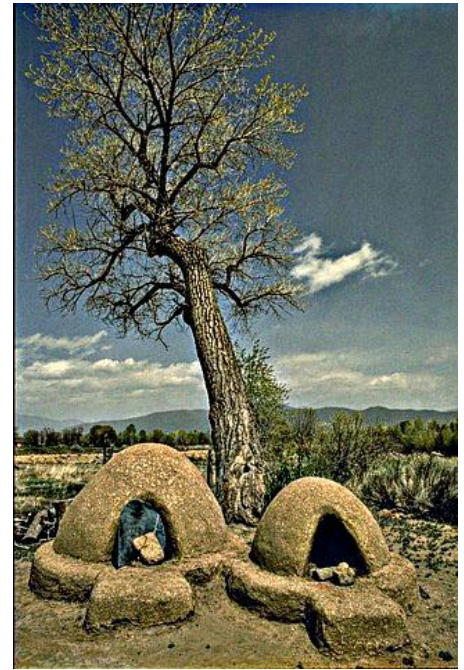
(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 44. Contrast enhancement results for image 54082.jpg.



(a) Original image



(b) HE



(c) 2DHE



(d) AR



(e) MCE



(f) NGF

Figure 45. Contrast enhancement results for image 45096.jpg.

- Extension by combining detail enhancement and Comparison with WLS [4] and EAW [5]



(a) Original image



(b) NGF



(c) EAW



(d) WLS



(e) Combined method 1

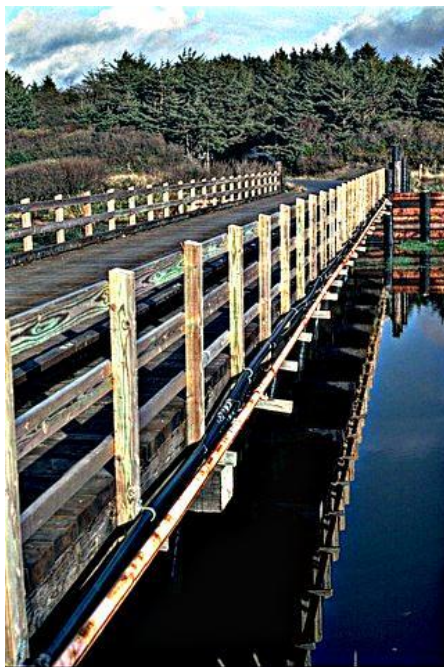


(f) Combined method 2

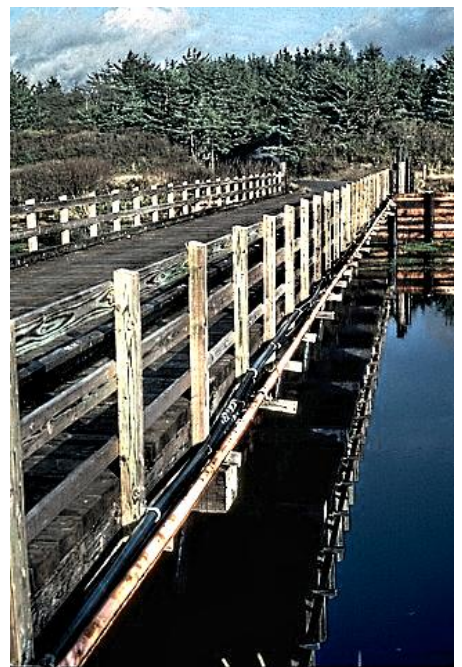
Figure 1. Contrast or/and detail enhancement results for image 4.1.07.tiff.



(a) Original image



(b) NGF



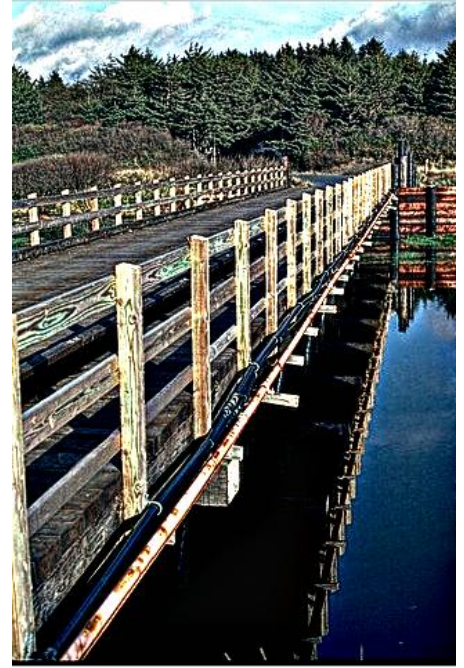
(c) EAW



(d) WLS



(e) Combined method 1



(f) Combined method 2

Figure 2. Contrast enhancement results for image 22013.jpg.



(a) Original image



(b) NGF



(c) EAW



(d) WLS

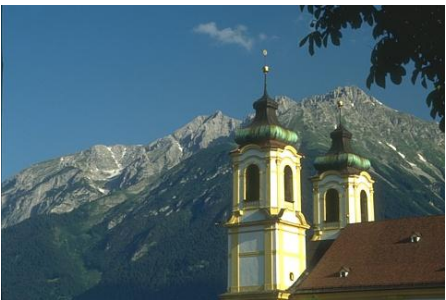


(e) Combined method 1



(f) Combined method 2

Figure 3. Contrast enhancement results for image 183055.jpg.



(a) Original image



(b) NGF



(c) EAW



(d) WLS

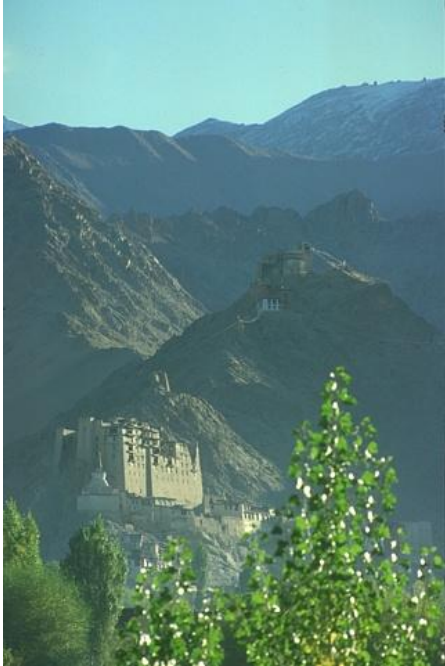


(e) Combined method 1

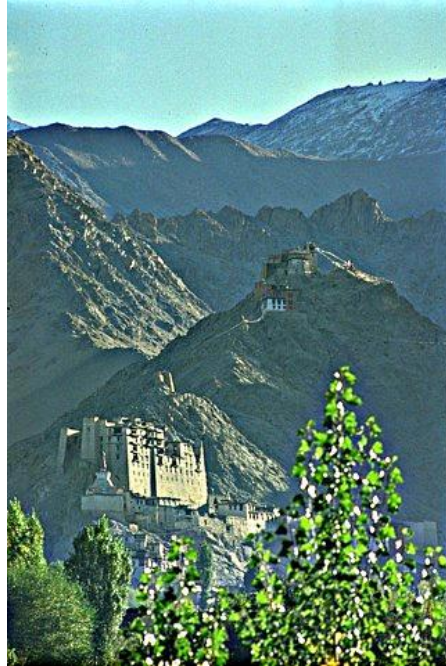


(f) Combined method 2

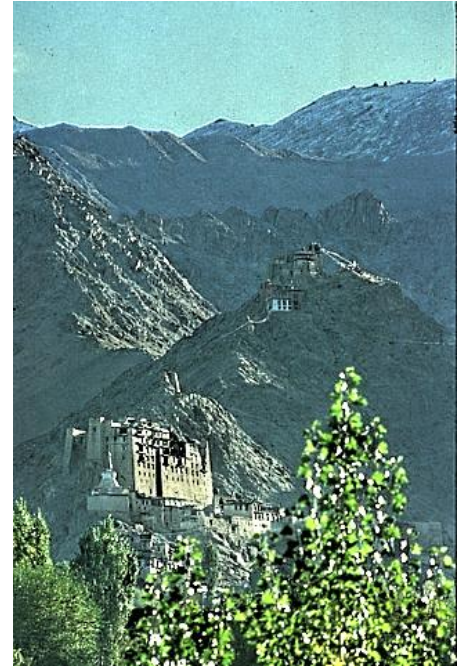
Figure 4. Contrast enhancement results for image 126007.jpg.



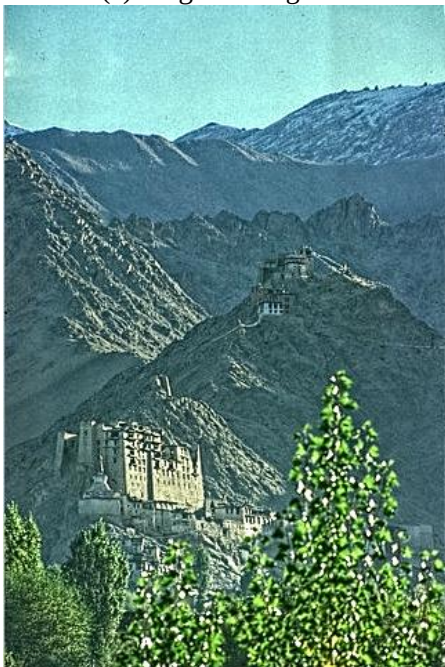
(a) Original image



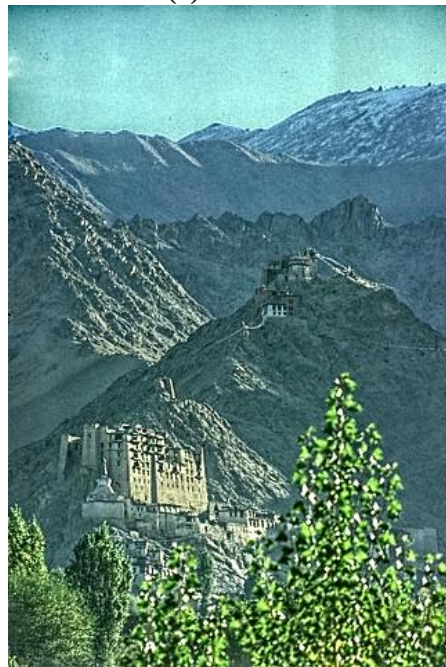
(b) NGF



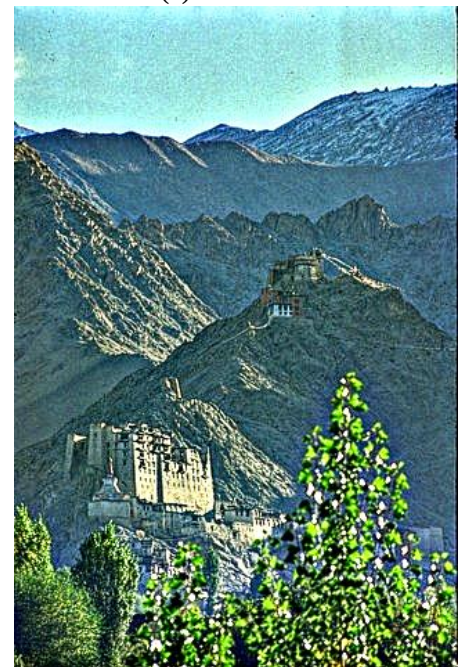
(c) EAW



(d) WLS



(e) Combined method 1



(f) Combined method 2

Figure 5. Contrast enhancement results for image 20008.jpg.



(a) Original image



(b) NGF



(c) EAW



(d) WLS



(e) Combined method 1



(f) Combined method 2

Figure 6. Contrast enhancement results for image 69015.jpg.



(a) Original image



(b) NGF



(c) EAW



(d) WLS



(e) Combined method 1



(f) Combined method 2

Figure 7. Contrast enhancement results for image 296059.jpg.



(a) Original image



(b) NGF



(c) EAW



(d) WLS



(e) Combined method 1

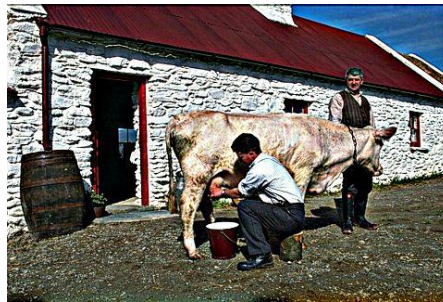


(f) Combined method 2

Figure 8. Contrast enhancement results for image 108005.jpg.



(a) Original image



(b) NGF



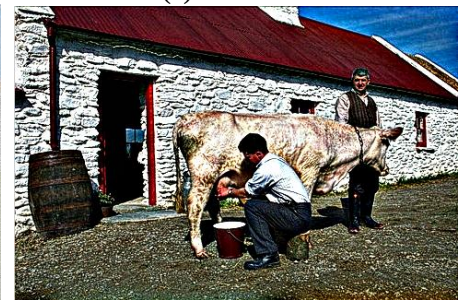
(c) EAW



(d) WLS



(e) Combined method 1



(f) Combined method 2

Figure 9. Contrast enhancement results for image 385039.jpg.